

THIS FILE IS MADE AVAILABLE THROUGH THE DECLASSIFICATION EFFORTS AND RESEARCH OF:

THE BLACK VAULT

THE BLACK VAULT IS THE LARGEST ONLINE FREEDOM OF INFORMATION ACT / GOVERNMENT RECORD CLEARING HOUSE IN THE WORLD. THE RESEARCH EFFORTS HERE ARE RESPONSIBLE FOR THE DECLASSIFICATION OF THOUSANDS OF DOCUMENTS THROUGHOUT THE U.S. GOVERNMENT, AND ALL CAN BE DOWNLOADED BY VISITING:

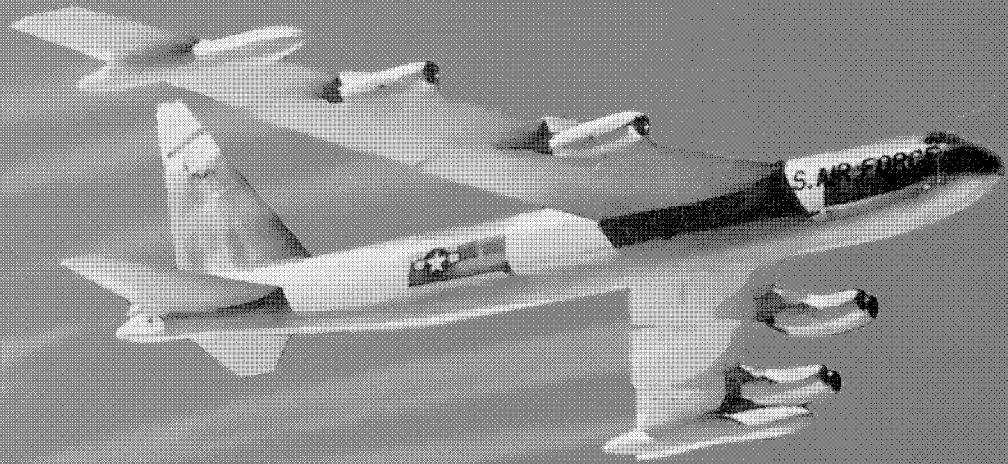
[HTTP://WWW.BLACKVAULT.COM](http://www.blackvault.com)

YOU ARE ENCOURAGED TO FORWARD THIS DOCUMENT TO YOUR FRIENDS, BUT PLEASE KEEP THIS IDENTIFYING IMAGE AT THE TOP OF THE .PDF SO OTHERS CAN DOWNLOAD MORE!

AIR COMBAT COMMAND

and the Legacy of the

COLD WAR



UNITED STATES AIR FORCE AIR COMBAT COMMAND and the Legacy of the Cold War:

A Systematic Study of Air Combat Command Cold War Material Culture

INTRODUCTION TO THE REPORT SERIES ON CD-ROM

Overview

This compact disk (CD) contains the results of a study of material culture at 27 United States Air Force (USAF) Air Force bases (AFB) located throughout the contiguous United States and Panama. The study was designed to evaluate historic properties (real property, personal property, records, documents, and sites) that date to the Cold War era (1946-1989). The study was undertaken in compliance with Section 110 of the National Historic Preservation Act of 1966 which requires federal agencies to identify properties under their control which may be eligible for nomination to the National Register of Historic Places (NRHP). Being less than 50 years of age, the properties in the present study may be considered for nomination to the NRHP only if they are shown to be "exceptionally significant"; this study develops a methodology to assess such significance within the historic context of the Cold War. The bases included in the study are those which were under the operational authority of the Air Combat Command (ACC) in late 1993. ACC is the successor to the Strategic Air Command, Tactical Air Command, and other major commands that played key roles in the Cold War. The 27 bases and their associated Air Force Ranges (AFR) are:

- Barksdale AFB, Louisiana
- Beale AFB, California
- Cannon AFB, New Mexico
- Castle AFB, California
- Davis-Monthan AFB, Arizona
- Dyess AFB, Texas
- Ellsworth AFB and Badlands AFR, South Dakota
- Fairchild AFB, Washington
- Griffiss AFB, New York
- Holloman AFB and Melrose AFR, New Mexico
- Homestead AFB, Florida
- Howard AFB and Balboa AFR, Panama
- Sawyer AFB, Michigan
- Langley AFB, Virginia
- Little Rock AFB, Arkansas
- Loring AFB, Maine
- MacDill AFB and Avon Park AFR, Florida
- McConnell AFB, Kansas
- Minot AFB, North Dakota
- Moody AFB and Grand Bay AFR, Georgia
- Mountain Home AFB and Saylor Creek AFR, Idaho
- Nellis AFB, Nevada and Cuddeback AFR, California
- Offutt AFB, Nebraska
- Pope AFB, North Carolina
- Seymour Johnson AFB and Dare County AFR, North Carolina
- Shaw AFB and Poinsett AFR, South Carolina
- Whiteman AFB, Missouri

The results of this study were originally intended to be presented in a series of 29 hardcopy documents of limited distribution. The series was to include one introductory report containing an historic context and a methodology, 27 individual reports with results from each of the ACC bases, and one summary

report presenting conclusions. To facilitate wider distribution, each of these 29 reports has now been converted to electronic format and has been included in this CD.

Each of the 29 documents is presented in Portable Document Format (PDF) and may be accessed using the Adobe Acrobat Reader (AcroRead), which is included on this CD. Once AcroRead is running, you may retrieve any of the 29 documents by using the “File” option on the AcroRead menu bar or by clicking on the file name or file icon. Any document page may be magnified or reduced by using the magnify icon, or by choosing an option under the “View” utility. The documents may be searched for key words using the “Find” utility and any page or range of pages may be printed. Further guidance to using AcroRead may be found in the program’s README.WRI file.

Organization of the Report Series

The first document in the series is the *Historic Context and Methodology for Assessment*. This report begins with a discussion of the dramatic effect the Cold War had on the individual American psyche and on society and the culture as a whole. The historic context focuses on developments in United States government policy and military strategy during the Cold War era, the evolution of the Air Force, and, finally, the development of USAF material culture within the context of the various missions of the Cold War era. Four themes are developed - (1) national policy and military strategy, (2) technology, (3) military architecture and engineering, and (4) United States society and culture. This discussion provides a basis against which to evaluate the significance of ACC Cold War material culture and its role in the development of the Cold War and its ideologies. The methodology offers a strategy for evaluating the significance of ACC properties based on NRHP criteria and methods to determine which properties possess exceptional significance. The methodology includes the establishment of temporal parameters, identification of primary ACC property types, prioritization of ACC cultural resources, a comparative analysis of individual ACC installations, and NRHP eligibility requirements.

The next 27 documents present the results at each of the ACC bases. During the on-site physical inspections, each property was classified according to five Cold War property types - (1) operational and support installations, (2) combat weapons and support systems, (3) training facilities, (4) materiel development facilities, and (5) intelligence facilities. Each property was also ranked for six criteria: (1) directness of relationship to the Cold War; (2) contextual theme; (3) temporal phase within the Cold War; (4) importance; (5) integrity; and (6) current threats. For each installation, the resulting data were structured in a priority matrix. The report structure is the same for each installation and includes a description of the base, an overview of its history and military mission, study results, evaluation of the inventoried historic properties, and a photographic appendix.

Finally, the 29th document contains the *Summary Report and Final Programmatic Recommendations*. This document examines patterns in base layout and historic land use, describes the resources selected for evaluation, and summarizes the findings for each installation. The priority ranking system is discussed along with the results. Finally, a programmatic approach to management and treatment of the evaluated resources is provided.

Study Background

The end of the Cold War in 1989 brought with it a restructuring of the Department of Defense. The ACC came into existence on June 1, 1992, incorporating assets from the Strategic Air Command (SAC), Tactical Air Command (TAC), and Military Airlift Command (MAC). During the Cold War, SAC and TAC had the primary responsibility of enforcing United States policies around the world through the deployment of air power, especially to contain and deter communism. Air Defense Command (ADC; renamed Aerospace Defense Command in 1968) and SAC had the primary responsibility for deterrence and air defense of the continental United States; TAC supported this mission. The bulk of the USAF ACC real property holdings are related to SAC, ADC, and TAC activities. Although the USAF missile program was transferred to the United States Space Command, under the operational authority of the North American Aerospace Defense Command in July 1993, the missile fields remain under the administration of ACC through the individual bases.

In the late summer of 1992, Vandenberg AFB, then a part of ACC, began a program to modify some of its missile systems. The base consulted with the State Historic Preservation Office in California to determine whether any effects to historic properties from the Cold War era were involved. In the course of resolving this action, the matter of Cold War era historic properties came to the attention of Mr. Gary Vest, then Deputy Assistant Secretary of the Air Force for Environment, Safety, and Occupational Health (SAF/MIQ).

On October 9, 1992, Mr. Vest asked the USAF Civil Engineer to coordinate with the Advisory Council on Historic Preservation to develop a policy regarding Cold War resources and scientific and technical equipment. SAF/MIQ also directed USAF bases to consult with SHPOs under Section 106 of the NHPA until a coordinated policy could be fully implemented. After consulting with numerous agencies, the Air Force issued interim guidance for the treatment of Cold War historic properties in June 1993. Immediately thereafter, ACC embarked on a command-wide baseline assessment of its potential Cold War historic resources.

Acknowledgments

The study was funded by ACC with general oversight provided by Dr. Paul Green, HQ ACC, Langley, Virginia. Additional limited funding for selected study components was provided by the Department of Defense Legacy Program. The study was conducted by TRC Mariah Associates Inc. under contract DACA63-92-D-0011, Delivery Order 15, with the U.S. Army Corps of Engineers, Fort Worth District. The Corps Technical Representative was Joseph Murphey. The project was managed by Dr. Nicholas Trierweiler, and the cultural resource specialists who conducted the study included Katherine Roxlau, Karen Lewis, James Lowe, Patience Patterson, Blake Roxlau, David Staley, Lori Rhodes, John Evaskovich, Jason Marmor, and Toni Goar. The CD cover was adapted from a poster created by Mina Yamashita and conversion of the hardcopy reports to CD was accomplished by Cochran Software Solutions.

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME I: HISTORIC CONTEXT AND
METHODOLOGY FOR ASSESSMENT**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

By

**Karen Lewis
Katherine J. Roxlau
Lori E. Rhodes
Paul Boyer
Joseph S. Murphey**

With contributions by

**Paul R. Green
James A. Lowe
R. Blake Roxlau
David P. Staley**

MARIAH ASSOCIATES, INC.

Under

Contract DACA63-92-D-0011

Delivery Order No. 0015

For

**United States Army Corps of Engineers
Fort Worth District**

December 1995

**United States Air Force
Air Combat Command**

LIST OF ACRONYMS

AAC	-	Alaskan Air Command
AAM	-	Air-to-Air Missile
ABM	-	Anti-Ballistic Missile
ACC	-	Air Combat Command
ACHP	-	Advisory Council on Historic Preservation
ACM	-	Advanced Cruise Missile
ADC	-	Aerospace Defense Command
ADC	-	Air Defense Command
AEC	-	Atomic Energy Commission
AFB	-	Air Force Base
AFCC	-	Air Force Communications Command
AFCON	-	Air Force Controlled (Commands)
AFCS	-	Air Force Communications Service
AFLC	-	Air Force Logistics Command
AFMC	-	Air Force Materiel Command
AFRES	-	Air Force Reserve
AFROTC	-	Air Force Reserve Officer Training Corps
AFSC	-	Air Force Systems Command
AIDS	-	Acquired Immune Deficiency Syndrome
ALCM	-	Air Launched Cruise Missile
ALCS	-	Airborne Launch Control System
AMA	-	Air Materiel Areas
AMC	-	Air Materiel Command
AMC	-	Air Mobility Command
ANG	-	Air National Guard
ARDC	-	Air Research and Development Command
ASAT	-	Anti-Satellite
ATC	-	Air Training Command
AU	-	Air University
AWADS	-	Adverse Weather Aerial Delivery System
BADGE	-	Base Air Defense Ground Environment
BMD	-	Ballistic Missile Division
BMEWS	-	Ballistic Missile Early Warning System
BRAC	-	Base Realignment and Closure Committee
CAA	-	Civil Aeronautics Administration
CAC	-	Caribbean Air Command
C ³ I	-	Command, Control, Communications, and Intelligence
CIA	-	Central Intelligence Agency
CINCSAC	-	Commander in Chief of Strategic Air Command
CONAC	-	Continental Air Command
CONAD	-	Continental Air Defense Command
CONUS	-	Continental United States
CRAF	-	Civil Reserve Air Fleet
DEW	-	Distant Early Warning
DoD	-	Department of Defense

LIST OF ACRONYMS (Continued)

DoE	-	Department of Energy
ERCS	-	Emergency Rocket Communications System
ERDA	-	Energy Research and Development Agency
EUCOM	-	European Command
FAA	-	Federal Aviation Administration
FAS	-	Federation of Atomic Scientists
FBI	-	Federal Bureau of Investigations
FEAF	-	Far Eastern Air Forces
FHA	-	Federal Housing Administration
GOC	-	Ground Observer Corps
GPES	-	Ground Proximity Extraction System
GPS	-	Global Positioning System
HUAC	-	House Un-American Activities Committee
ICBM	-	Intercontinental Ballistic Missile
IRBM	-	Intermediate Range Ballistic Missile
JUW	-	Joint Unconventional Warfare (Forces)
LAPES	-	Low-Altitude Parachute Extraction System
MAC	-	Military Airlift Command
MAD	-	Mutually Assured Destruction
MAI	-	Mariah Associates, Inc.
MATS	-	Materiel Air Transportation Service
MIDAS	-	Missile Defense Alarm System
MIRV	-	Multiple Independently-Targetable Reentry Vehicle
MIT	-	Massachusetts Institute of Technology
MOA	-	Memorandum of Agreement
MRBM	-	Medium Range Ballistic Missile
NACA	-	National Advisory Committee for Aeronautics
NARA	-	National Archives and Records Administration
NASA	-	National Aeronautics and Space Administration
NATO	-	North Atlantic Treaty Organization
NEACP	-	National Emergency Airborne Command Post
NHL	-	National Historic Landmark
NHPA	-	National Historic Preservation Act
NORAD	-	North American Aerospace Defense Command
NPS	-	National Park Service
NRB	-	National Register Bulletin
NRHP	-	National Register of Historic Places
NSC	-	National Security Council
PA	-	Programmatic Agreement
PACAF	-	Pacific Air Force
PACCS	-	Post-Attack Command and Control System
PAVE PAWS	-	Position Acquisition Vehicle Entry Phased Array Warning System
PBV	-	Post-Boost Vehicle
RAND	-	RAND Corporation
SAC	-	Strategic Air Command

LIST OF ACRONYMS (Continued)

SAF/MIQ	- Secretary of the Air Force for Environment, Safety, and Occupational Health
SAGE	- Semi-Automatic Ground Environment
SAINT	- Satellite Interceptor
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SEATO	- Southeast Asia Treaty Organization
SHPO	- State Historic Preservation Office
SIOP	- Single Integrated Operational Plan
SLBM	- Submarine Launched Ballistic Missile
SOA	- Separate Operating Agency
SRAM	- Short Range Attack Missile
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
USAF	- United States Air Force
USAFE	- United States Air Force Europe
USAFSC	- United States Air Force Southern Command
USSPACECOM	- United States Space Command
USSTRATCOM	- United States Strategic Command
WACS	- White Alice Communications System

TABLE OF CONTENTS

	<u>Page</u>
LIST OF ACRONYMS	i
1.0 INTRODUCTION	
<i>Karen Lewis and Katherine J. Roxlau</i>	1
1.1 PROJECT OVERVIEW	1
1.1.1 Air Combat Command	2
1.1.2 Bases To Be Evaluated	3
1.2 PREVIOUSLY EVALUATED PROPERTIES	3
1.3 DOCUMENT ORGANIZATION	5
2.0 CHALLENGES OF COLD WAR CULTURAL RESOURCES	
<i>Joseph S. Murphey</i>	7
2.1 TYPES OF COLD WAR RESOURCES	7
2.2 THE NATIONAL REGISTER OF HISTORIC PLACES	8
2.3 THREATENED RESOURCES	9
2.4 TEMPORAL PERSPECTIVE	9
2.5 RESOURCE SIGNIFICANCE	10
2.5.1 Exceptional Significance	10
2.5.2 State and Local Significance	11
2.5.3 Symbolic Values and Perception v. Reality	11
2.6 GESTALTEN AND FRAGMENTATION	12
2.7 SECURITY CLASSIFICATION	12
2.8 RESOURCE INTEGRITY	13
2.9 BALANCING MILITARY MISSIONS AND HISTORIC PRESERVATION NEEDS ..	13
2.10 EFFECTIVE STEWARDSHIP	14
3.0 EFFECTS OF THE COLD WAR ON AMERICAN SOCIETY AND CULTURE	
<i>Paul Boyer and Joseph S. Murphey, with contributions by</i>	
<i>James A. Lowe and Katherine J. Roxlau</i>	15
3.1 IMPACT ON THE ECONOMY	16
3.2 THE AMERICAN PSYCHE DURING THE COLD WAR	16
3.3 IMPACT ON THOUGHT AND CULTURE	18
3.3.1 The Early Cold War: 1945-1962	18
3.3.2 The Sixties and Beyond: Cold War Culture in Transition	20
4.0 HISTORIC CONTEXT OF THE COLD WAR FROM THE PERSPECTIVE OF AIR POWER	
<i>Karen Lewis and Katherine J. Roxlau, with contributions by</i>	
<i>R. Blake Roxlau and David P. Staley</i>	23
4.1 UNITED STATES STRATEGY AND POLICY DURING THE COLD WAR	24
4.1.1 Phase I: Inception of the Cold War	25
4.1.2 Phase II: Nuclear Technology Escalation	30
4.1.3 Phase III: Detente	40
4.1.4 Phase IV: A New Deterrence	47

TABLE OF CONTENTS (Continued)

	<u>Page</u>
4.2 DEVELOPMENT OF THE AIR FORCE DURING THE COLD WAR	51
4.2.1 AFCON Major Commands	52
4.2.1.1 Primary Operational Commands	52
4.2.1.2 Other Operational Commands	58
4.2.1.3 Support Commands	59
4.2.1.4 Operational Component Commands	60
4.2.2 Related Organizations	61
4.3 THE RESULTING ACC COLD WAR MATERIAL CULTURE	63
4.3.1 The Evolution of USAF Material Culture	64
4.3.1.1 USAF Installation Development	65
4.3.1.2 Research and Development	67
4.3.1.3 Communications and Reconnaissance	69
4.3.1.4 Strategic Deterrence	75
4.3.1.5 Air Defense	84
4.3.1.6 Tactical Operations	89
4.3.1.7 Air Mobility	102
4.3.2 Associated Property Types	106
5.0 METHODOLOGY	
<i>Lori E. Rhodes, with contributions by Paul R. Green</i>	108
5.1 OVERVIEW OF METHODOLOGY	108
5.2 TEMPORAL PHASES	109
5.2.1 Phase I - July 1945 to January 1953	109
5.2.2 Phase II - January 1953 to November 1963	109
5.2.3 Phase III - November 1963 to January 1981	109
5.2.4 Phase IV - January 1981 to November 1989	109
5.3 IDENTIFICATION OF PRIMARY ACC PROPERTY TYPES	110
5.3.1 Definitions and Evaluative Tools	110
5.3.1.1 General Categories Established by the Legacy Program	110
5.3.1.2 Relationship of National Register Terminology to ACC Resources	111
5.3.1.3 USAF Cold War Property Types	112
5.3.2 Application	113
5.4 EVALUATION OF ACC CULTURAL RESOURCES	114
5.4.1 Definitions and Evaluative Tools	114
5.4.1.1 Legislative Setting	114
5.4.1.2 Legacy Program and Air Force Evaluative Tools	119
5.4.1.3 Evaluative Tools for Recently Significant Properties	120
5.4.1.4 Evaluative Tools for Highly Scientific/Technological Resources	122
5.4.1.5 Definition of Integrity and Condition for Property Types	124
5.4.2 Application	124

TABLE OF CONTENTS (Continued)

	<u>Page</u>
5.5 PRIORITIZATION OF ACC CULTURAL RESOURCES	125
5.5.1 Definitions and Evaluative Tools	125
5.5.1.1 Priority Ranking Matrix	125
5.5.1.2 Base Cold War Material Culture Inventory Reports	125
5.5.2 Application	129
5.6 COMPARATIVE ANALYSIS OF ACC INSTALLATIONS	130
5.6.1 Definitions and Evaluative Tools	130
5.6.2 Applications	130
5.7 REGISTRATION REQUIREMENTS OF THE NRHP	131
5.7.1 Definitions and Evaluative Tools	131
5.7.1.1 Federal Guidelines	131
5.7.1.2 Existing National Register Listings	131
5.7.2 Application	132
6.0 REFERENCES CITED	134

LIST OF FIGURES

Figure 1.1	ACC Headquarters, Langley AFB, Virginia	1
Figure 1.2	Location of ACC Bases	4
Figure 4.1	US/USSR Strategic Nuclear Weapons Build-up	25
Figure 4.2	Cold War Defense Budgets	25
Figure 4.3	The Technology Race	26
Figure 4.4	Ground Observer Corps Areas	31
Figure 4.5	NORAD Cheyenne Mountain Complex	35
Figure 4.6	AFCON Commands Lineages	53
Figure 4.7	Relationship of AFCON Commands to Outside Organizations, 1949	55
Figure 4.8	Relationship of AFCON Commands to Outside Organizations, 1958	55

TABLE OF CONTENTS (Continued)

	<u>Page</u>
Figure 4.9 Relationship of AFCON Commands to Outside Organizations, 1966	56
Figure 4.10 Relationship of AFCON Commands to Outside Organizations, 1982	56
Figure 4.11 Unified Command Structure: Europe	57
Figure 4.12 Special Operations Forces Operational Chart	57
Figure 4.13 Unified Command Structure: Latin America	62
Figure 4.14 Unified Command Structure: Pacific	62
Figure 4.15 USAF Chain of Command During War	69
Figure 4.16 SAGE Communications System	70
Figure 4.17 BMEWS Communications System	70
Figure 4.18 PAVE PAWS Communications System	71
Figure 4.19 Primary SAC Communications During Air Defense Emergency	72
Figure 4.20 Lockheed U2-R: High Altitude Reconnaissance Aircraft	73
Figure 4.21 Lockheed SR-71 <i>Blackbird</i> : High Altitude Reconnaissance Aircraft	73
Figure 4.22 Chronology of Selected Strategic Aircraft	76
Figure 4.23 Selected Strategic Bomber and Reconnaissance Aircraft	76
Figure 4.24 Boeing B-52 <i>Stratofortress</i> : Strategic Bomber	79
Figure 4.25 Boeing B1B <i>Lancer</i> : Strategic Bomber	80
Figure 4.26 ICBMs: 1957-1994	81
Figure 4.27 Titan I Complex	82
Figure 4.28 SAC Missile Locations: 1959-1988	84
Figure 4.29 F-106 <i>Delta Dart</i> : Fighter-Interceptor	85

TABLE OF CONTENTS (Continued)

	<u>Page</u>
Figure 4.30 ADC Lashup Radar Sites: 1950	86
Figure 4.31 ADC SAGE Installations	86
Figure 4.32 Air Defense Radar Lines and Air Defense Identification Zones	87
Figure 4.33 PAVE PAWS Locations and Coverage	88
Figure 4.34 NORAD Operational Nike Battalions: 1959	90
Figure 4.35 Air Defense Sectors: July 1948 to March 1949	90
Figure 4.36 Air Defense Sectors: 1958	91
Figure 4.37 Air Defense Sectors: 1966	91
Figure 4.38 Air Defense Sectors: 1977	92
Figure 4.39 Air Defense Sectors: 1986	92
Figure 4.40 Operational Fighter Interceptor Force: 1959	93
Figure 4.41 Operational Fighter Interceptor Force: 1963	93
Figure 4.42 Operational Fighter Interceptor Force: 1973	94
Figure 4.43 Fighter Interceptor Alert Locations: 1985	94
Figure 4.44 Fighter Interceptor Alert Locations: 1990	95
Figure 4.45 Tactical Employment of Nuclear Weapons	96
Figure 4.46 Chronology of Selected Tactical Aircraft	97
Figure 4.47 Selected Tactical Bomber and Fighter Aircraft	97
Figure 4.48 A-10 <i>Thunderbolt II</i> : Attack Aircraft	98
Figure 4.49 F-100 <i>Super Sabre</i>	99
Figure 4.50 F-111A: Tactical Fighter Aircraft	100

TABLE OF CONTENTS (Continued)

	<u>Page</u>
Figure 4.51 F-4E <i>Phantom II</i> : Tactical Fighter Aircraft	100
Figure 4.52 F-15 <i>Eagle</i> : Tactical Fighter Aircraft	101
Figure 4.53 C-130 <i>Hercules</i> Aircraft Drops U.S. Army Paratroopers During Training	104
Figure 4.54 A Pair of UH-60 <i>Black Hawk</i> Helicopters are Loaded Aboard a C-5 <i>Galaxy</i> Aircraft	105
Figure 5.1 The Section 106 Review Process	117

1.0 INTRODUCTION

Karen Lewis and Katherine J. Roxlau

1.1 PROJECT OVERVIEW

In the late summer of 1992, Vandenberg Air Force Base (AFB), then a part of Air Combat Command (ACC), began a program to modify some of its missile systems. The base consulted with the State Historic Preservation Office (SHPO) in California to determine whether any effects to historic properties from the Cold War era were involved. In the course of resolving this action, the matter of Cold War era historic properties came to the attention of Mr. Gary Vest, then Deputy Assistant Secretary of the Air Force for Environment, Safety, and Occupational Health (SAF/MIQ).

On October 9, 1992, Mr. Vest asked the United States Air Force (USAF) Civil Engineer to

coordinate with the Advisory Council on Historic Preservation (ACHP) to develop a policy regarding Cold War resources and scientific and technical equipment. SAF/MIQ also directed USAF bases to consult with SHPOs under Section 106 of the National Historic Preservation Act (NHPA) until a coordinated policy could be fully implemented.

After consulting with numerous agencies, the Air Force issued interim guidance for the treatment of Cold War historic properties in June 1993. Immediately thereafter, ACC embarked on a command-wide baseline assessment of its potential Cold War historic resources (Figure 1.1).

To implement the baseline assessment, Mariah Associates, Inc. (MAI) was contracted to locate,

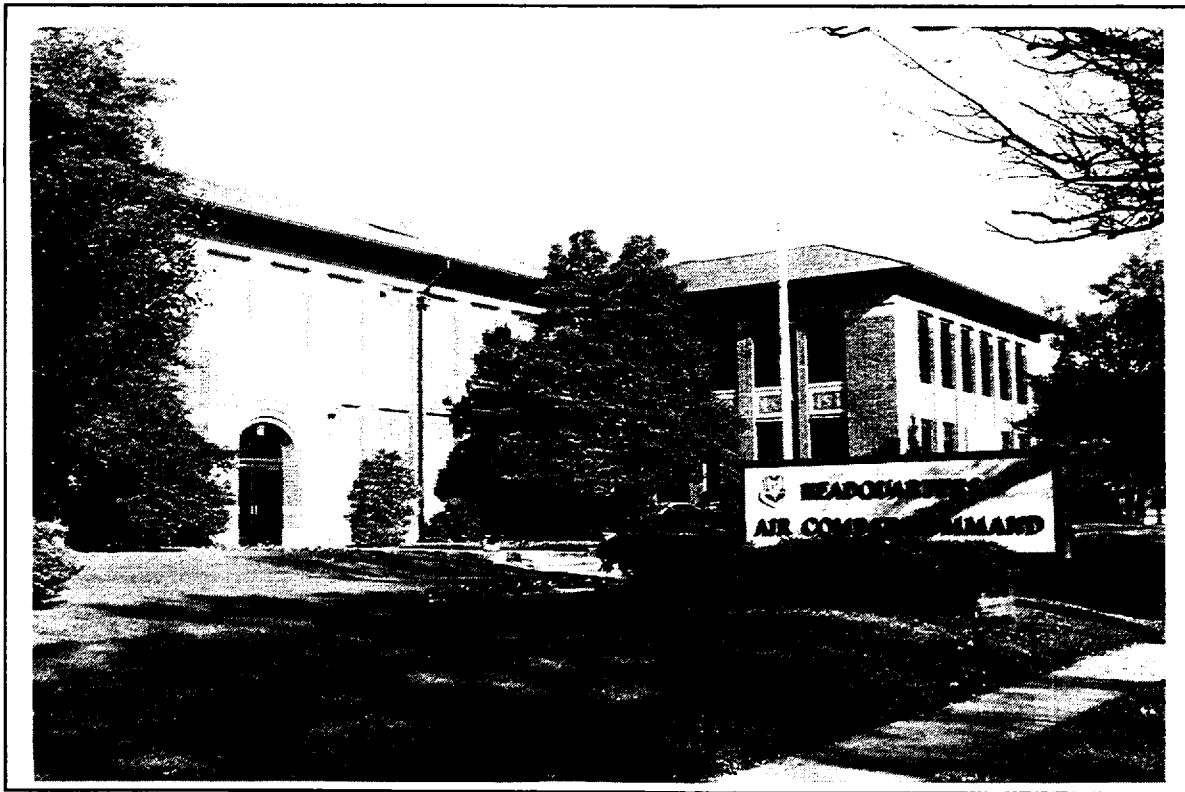


Figure 1.1 ACC Headquarters, Langley AFB, Virginia.

evaluate, interpret, and prioritize ACC material culture at 27 bases within the continental United States and Panama. The project is funded by ACC, with partial funding from the Department of Defense (DoD) Legacy Program, and the contract is managed by the U.S. Army Corps of Engineers (ACE, formerly COE), Fort Worth District. The study is designed to evaluate real property, personal property, and records and documents sites that may be exceptionally significant due to their relationship to the Cold War, thus allowing properties that are less than 50 years of age to be considered for nomination to the National Register of Historic Places (NRHP).

The ACC installations are to be evaluated within a newly developed Cold War historic context and through the use of a rigorous and consistent methodology applied on a nationwide basis. Accordingly, MAI developed a historic context for evaluation of ACC property and a conceptual methodology to guide determinations of the historical significance of individual properties. This document presents this consistent approach, including both the historic context and the methodology.

Within the historic context, four themes are developed under which the properties and sites are to be evaluated, including: (1) national policy and military strategy; (2) technology; (3) military architecture and engineering; and (4) United States society and culture. Cold War historical events (such as the Soviet atomic capability, the Korean War, Sputnik, the 1960 U-2 incident, the Cuban Missile Crisis, the war in Vietnam, and the achievement of parity by the Soviets in strategic nuclear weapons) and the perceptions of these events held by the United States government and public in general, all helped to shape United States policy and military strategy. This not only resulted in advances in technology, architecture, and engineering, but also affected United States society and culture in general.

The methodology uses five Cold War property types including operational and support

installations, combat weapons and support systems, training facilities, materiel development facilities, and intelligence facilities. During on-site physical inspections, each property is ranked for six criteria: (1) directness of relationship to the Cold War; (2) contextual theme; (3) temporal phase within the Cold War; (4) importance; (5) integrity; and (6) current threats. The resulting data are structured in a priority matrix for each installation and are presented in an installation assessment report.

After the 27 bases have commented on the draft assessments, the revised list of ACC properties will be forwarded through channels to SAF/MIQ for approval. This will constitute the working list of exceptionally significant ACC properties from the Cold War (1945-1989). Other properties identified by the baseline assessment as likely candidates for eventual listing on the NRHP will also be identified.

The impact of the Cold War was clearly worldwide; however, this study focuses on the effects within the USAF and principally within the continental United States (CONUS).

1.1.1 Air Combat Command

The end of the Cold War in 1989 brought with it a restructuring of the DoD. The ACC came into existence on June 1, 1992 incorporating assets from the Strategic Air Command (SAC), Tactical Air Command (TAC), and Military Airlift Command (MAC). During the Cold War, SAC and TAC had the primary responsibility of enforcing United States policies around the world through the deployment of air power, especially to contain and deter communism. Air Defense Command (ADC), which was renamed Aerospace Defense Command (ADC) in 1968, and SAC had the primary responsibility for deterrence and air defense of the CONUS; TAC supported this mission. The bulk of the USAF ACC real property holdings are related to SAC, ADC, and TAC activities. Although the USAF missile program was transferred to the United States Space Command (USSPACECOM), under the operational

authority of the North American Aerospace Defense Command (NORAD) in July 1993, the missile fields remain under the administration of ACC through the individual base installations.

1.1.2 Bases To Be Evaluated

The USAF ACC bases evaluated under this project are located throughout the contiguous United States and in Panama (Figure 1.2) and include:

- Barksdale AFB, Louisiana
- Beale AFB, California
- Cannon AFB/Melrose AFR, New Mexico
- Castle AFB, California
- Davis-Monthan AFB, Arizona
- Dyess AFB, Texas
- Ellsworth AFB/Badlands AFR, South Dakota
- Fairchild AFB, Washington
- Griffiss AFB, New York
- Holloman AFB/Melrose AFR, New Mexico
- Homestead AFB, Florida
- Howard AFB/Balboa AFR, Panama
- K.I. Sawyer AFB, Michigan
- Langley AFB, Virginia
- Little Rock AFB, Arkansas
- Loring AFB, Maine
- MacDill AFB/Avon Park AFR, Florida
- McConnell AFB, Kansas
- Minot AFB, North Dakota
- Moody AFB/Grand Bay AFR, Georgia
- Mountain Home AFB/Saylor Creek AFR, Idaho
- Nellis AFB, Nevada/Cuddeback AFR, California
- Offutt AFB, Nebraska
- Pope AFB, North Carolina
- Seymour Johnson AFB/Dare County AFR, North Carolina
- Shaw AFB/Poinsett AFR, South Carolina
- Whiteman AFB, Missouri

1.2 PREVIOUSLY EVALUATED PROPERTIES

At present, the DoD Legacy Program has undertaken the task of funding several projects to

assess Cold War properties around the country. For example, the history department at the University of South Carolina is working with DoD Legacy to evaluate Cold War properties at all defense installations in that state. A proposal by the National Park Service (NPS) was approved by Legacy in 1992 to inventory, evaluate, and document Minuteman II and Nike missile launch facilities in the midwestern United States. Finally, the Army Corps of Engineers is presently developing documentary information on the Nike missile defense system as part of its installation restoration program.

Cold War assets belonging to the Air Force already regarded as exceptionally significant and placed on the NRHP include: USAF Facility Missile Site No. 8 (571-7), Military Reservation (Titan Missile Museum), near Tucson, Arizona; the Space Launch Complex 10/Thor, Vandenberg AFB, California; launch pads 5, 6, 13, 14, 19, 26, 34, and Mission Control Center, Cape Canaveral Air Force Station, Patrick AFB in Florida; and Launch Complex 39 at Patrick AFB.

Other properties regarded as exceptionally significant and determined eligible for NRHP status include the Minuteman II Intercontinental Ballistic Missile (ICBM) systems at Ellsworth AFB, South Dakota, and Whiteman AFB, Missouri; and the Bomarc Missile Site at McGuire AFB, New Jersey.

Patrick AFB, Florida underwent an evaluation in 1993 to determine the historic significance of the base and its architecture in relation to World War II and the Cold War era. Included within the report is the research methodology and a historical overview detailing the inception, growth, and importance of Patrick AFB and its subsequent relationship with Cape Canaveral in early missile development during the 1950s. The first Titan I was launched from Patrick AFB in February 1959, and in the following years, Patrick AFB figured significantly in the Apollo space program and development of the Minuteman and Titan II generation missiles. It ultimately became the

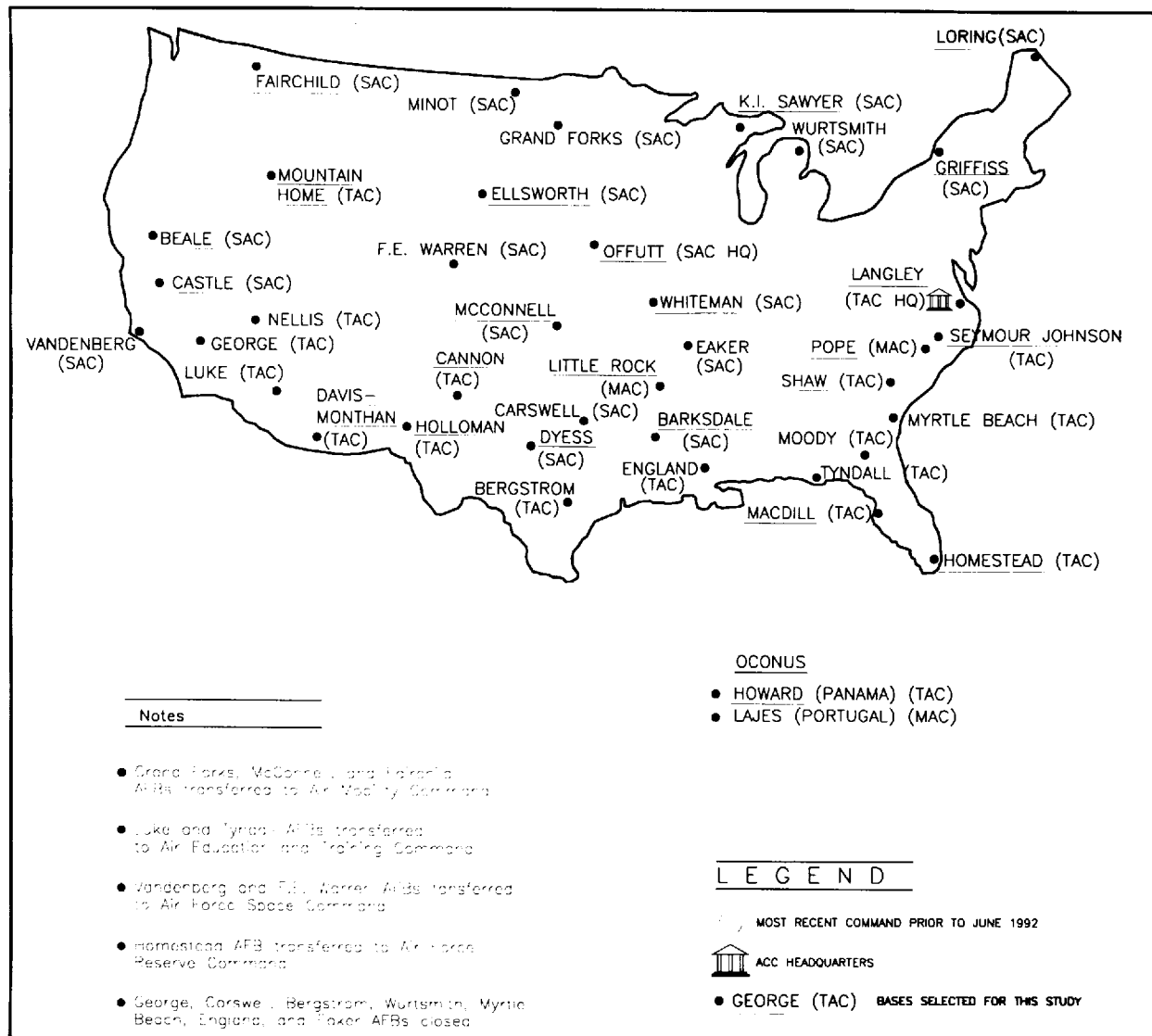


Figure 1.2 Location of ACC Bases.

Eastern Test Range. All facilities and properties at Patrick AFB (n=150) were documented with photographs and the base history was thoroughly researched. By placing the buildings within their historic context, ten were found to represent early base development and Cold War era significance (Tri-Services 1994). This is in addition to several sites at the base that were previously included on the NRHP.

The White Alice Communications System (WACS) was constructed in Alaska to augment and improve

existing radar warning and communication systems already in place--the Distant Early Warning (DEW) and Pinetree Lines, and Aircraft Control and Warning Systems. Originally, there were 31 WACS facilities, with the first two stations completed in 1956. Between 1956 and 1959, another segment of the system was completed that supported the Ballistic Missile Early Warning System (BMEWS), allowing two corridors of communication south to the contiguous 48 states and linked to NORAD headquarters in Colorado. By the mid-1960s, there were 71 WACS stations

in operation throughout the far reaches of Alaska, a portion of which connected the DEW line through the Alaskan peninsula and the Aleutian Islands. Originating under the auspices of the military, WACS increasingly serviced the civilian community in Alaska. The advent of satellite technology doomed WACS to obsolescence (Reynolds 1988).

The WACS was determined to be historically significant because of its communication and military importance that was vital for national defense during the 1950s and 1960s. It exemplifies a technology that progressed from the developmental phase to one that became outdated in just ten years. It is also a significant example of how far the United States would go to avoid another surprise attack like the one on Pearl Harbor in 1941. The WACS installations reflect the high level of alert status maintained by the Air Force during the first decades of the Cold War (Reynolds 1988).

The DEW Line originated because of the need to protect United States cities and military installations in North America from enemy attack by the Soviet Union over the polar region. By 1952, enemy airborne capabilities for delivering atomic weapons threatened the United States and Canada. Research scientists from Massachusetts Institute of Technology (MIT) were consulted about alleviating the threat. They recommended the creation of a distant early warning radar and communication system as close to potential enemy air bases as possible. The Alaskan segment of the line was finished in 1953. When completed, the line extended 2,500 miles from Alaska to the eastern edge of Canada with stations established 50 miles apart across the continent. In 1957, segments were added that tied Alaska's Aleutian Islands to the system, as well as Greenland. The system was later extended in the mid-1960s to include Iceland.

The Alaskan segment of the line and its numerous stations were evaluated in 1986 for their historic Cold War significance. These installations were

found to be nationally significant within the following categories: military, politics and government, invention, engineering, and communication (Peterson AFB/NRHP Nomination 1986).

1.3 DOCUMENT ORGANIZATION

This document begins with a discussion of the dramatic effect the Cold War had on the individual American psyche and on society and culture as a whole. The historic context focuses on developments in United States government policy and military strategy during the Cold War era, the evolution of the Air Force, and, finally, the development of USAF material culture within the context of the various missions of the Cold War era. This discussion provides a basis against which to evaluate the significance of ACC Cold War material culture and its role in the development of the Cold War and its ideologies.

The methodology created for this project offers a strategy for evaluating the significance of ACC properties based on NRHP criteria and methods to determine which properties possess exceptional significance. This methodology will then be available in the future for evaluating other USAF/ACC bases not included in this project. The methodology includes the establishment of temporal parameters, identification of primary ACC property types, prioritization of ACC cultural resources, a comparative analysis of individual ACC installations, and eligibility requirements for future NRHP status.

2.0 CHALLENGES OF COLD WAR CULTURAL RESOURCES

Joseph S. Murphey

A peculiar and inescapable problem of Cold War material cultural interpretation is the cavernous gap between created, and thus anticipated, images of a fantastic, scientific destruction of the world, widely disseminated in Western popular culture through fictional stories, plays, books and movies. The realities of simple buildings and structures belie the public's symbolic imagery...We anticipate something more than what is physically to be found.

Karen Weitze (1995:10)

Even when I placed limits on my study [*By the Bomb's Early Light: American Thought and Culture at the Dawn of the Nuclear Age*], I soon found myself overwhelmed by the wealth of evidence...The problem was not finding material, but deciding when to turn off the tap. The real challenge was how to organize and interpret this Niagara of evidence.

Paul Boyer (1985:xix)

As the bipolar world order of the Cold War era recedes into the past, historians and cultural resource specialists have begun to look between the two iconographic endpoints of the period - "Trinity" (the first atomic test in 1945) and "the Wall" (the end of communism symbolized by the fall of the Berlin Wall in 1989) - to identify and preserve the tangible manifestations of this worldwide geopolitical struggle. When future generations reflect upon the most significant scientific achievements of the twentieth century (e.g., computers, communications, aerospace, and nuclear power), themes will emerge that are integrally tied to the military response during the Cold War era.

The end of the Cold War and resulting reconfiguration of the American military have had dramatic impacts on DoD properties. Military missions in the post-Cold War era require a substantially different force structure for national defense and to support U.S. policy around the globe. This mammoth restructuring has the potential to impact many Cold War cultural resources.

The military played a crucial role in the diplomatic maneuvering of the Cold War. Installations and forces present around the globe gave physical evidence of the U.S. resolve to defend its rights and commitments, to contain Soviet expansion in Europe, and to check communist influence in the third world.

The Department of Defense

SIZE:

A total of 25 million acres (the size of the State of Kentucky) containing 250,000 buildings and structures

CHRONOLOGICAL BREAKDOWN:

- 10% Predate World War II (pre-1939)
- 41% Built During World War II (1939-1945)
- 49% Built During the Cold War (1945-1989)

With the end of the Cold War, cultural resource managers now face assessment of material culture that occupies a highly complex, albeit recent, period in U.S. history. These resources present a unique challenge to cultural resource identification and evaluation, and to

assessing the effects of and mitigating the impacts to Cold War historic properties.

2.1 TYPES OF COLD WAR RESOURCES

Approximately half of the current DoD real estate inventory was constructed during the Cold War period. Many properties built prior to 1945 were later adapted to Cold War missions.

Military Cold War properties differ dramatically from their pre-World War II counterparts. High-technology offensive and defensive programs, weapons, and systems abound, including: SAC alert facilities with "moleholes" and "Christmas trees," airborne command posts, air and space defense systems, anti-aircraft missiles, nuclear bombers, high-technology aircraft, military satellites, ICBMs, and Intermediate Range Ballistic Missiles (IRBMs).

Other less obvious resources were also integral parts of the Cold War military complex. Among these are intelligence facilities, computer complexes, training complexes, aircraft hangars, weapons storage and maintenance, runways, and the vast military research and development network. These facilities often required a wide variety of support buildings such as power houses, water treatment plants, towers, storage sheds and tanks, guard houses. In addition, Cold War military personnel required support buildings such as chapels, barracks, military family housing, schools, shopping areas, and recreation facilities.

Cultural resources of the Cold War are not limited to buildings and structures: monuments, landscapes, objects (e.g., aircraft), scientific and military equipment, artwork, and even signage are considered cultural resources.

The products of the Cold War were not just military hardware. The Cold War permeated American life and culture with varying intensity throughout the latter half of the twentieth century. A 1952 National Security Act funded the interstate highway system, whose initial purpose was to aid evacuation of cities under threat of nuclear attack and to assist rapid movement of troops. The Defense Educational Act of 1958 reformed the educational system to provide an emphasis on math and sciences after Sputnik shook confidence in American schools. Likewise, today's Internet is a direct outgrowth of 1950s military research to create a computer network that would operate without a central command point and therefore survive nuclear attack. These are just a few of the government programs that were justified in terms of

national security during the Cold War and that forever changed the U.S. geographic and social landscape.

The response to the imperative to identify and evaluate Cold War properties has generally been crisis driven and idiosyncratic. Decisions regarding resource eligibility have often hinged on agency or SHPO interest in Cold War resources or have been unduly swayed by the uniqueness of a property. Only when a resource has been threatened has an agency made an eligibility assessment, often doing so with little or no baseline data.

No single discipline is qualified to evaluate the wide diversity of Cold War properties. SHPOs lack experience with Cold War resources and are often puzzled when confronted with this unusual resource type. Historic and industrial archeologists, historic architects, and social/military/technology historians individually lack evaluation skills required for assessing highly technical facilities found in Cold War material culture. Each discipline brings its own perspective and bias. To effectively evaluate these diverse resources, professionals must join together in an interdisciplinary effort to arrive at sound conclusions regarding significance.

2.2 THE NATIONAL REGISTER OF HISTORIC PLACES

While all properties are considered cultural resources, only properties of *exceptional* Cold War significance are currently eligible for the NRHP. Despite their recent age, Cold War properties that meet the criteria of exceptional significance must be treated in compliance with the regulations set forth under the NHPA of 1966 when a government undertaking has the potential to affect their historic value.

The NRHP focuses on the *places* associated with human creation and use of the built environment, and these are usually equated with real property. However, cultural resources of the Cold War

challenge the narrow definitions set forth in the NRHP for buildings, structures, objects, and sites.

People, often among the most overlooked resources, provide a rich source of oral history that can greatly enhance our understanding of the material culture of the era. As the present generation dies out, much of the Cold War story will be irretrievably lost. Responding to this, the Department of Energy's Sandia Laboratory on Kirtland AFB in Albuquerque, New Mexico, is currently conducting oral histories on the "weaponeers" of the Cold War era. These histories will preserve important data on weapon design and development and on the people who created the U.S. nuclear arsenal.

Photographic archives, literary remains such as documents, and architectural and engineering documents are also potentially eligible to the NRHP. Architectural and engineering drawings and documents are often invaluable for mitigation efforts, providing detailed information about the resource. Some drawings (e.g., the work of a master architect or engineer) can be significant for the artistic values present in the drawings themselves.

2.3 THREATENED RESOURCES

Military commands and programs, along with the facilities that supported them, are quickly changing. USAF SAC kept strategic balance between the superpowers through its bombers and missiles, forming two legs of the U.S. nuclear triad. Operational from 1946 to 1992, the command is now an icon of American military history. After 30 billion dollars of research and development, the 1980's Strategic Defense Initiative (SDI), which once promised a protective missile defense space canopy as technological salvation from nuclear holocaust, now lies inert, a victim of the collapse of the Soviet threat. SAC alert facilities, which once stood ready to mount a nuclear defense in a matter of minutes, using intercontinental bombers, now often serve as aircraft storage and administrative offices. All Minuteman II nuclear missile silos are inactive, awaiting dismantlement under Strategic

Arms Reduction Talks (START) provisions. In 1995, the Base Realignment and Closure Committee (BRAC) entered its fourth round of base closures, with even more reductions and consolidations expected by the end of the twentieth century.

As the DoD downsizes, interest in preservation of Cold War resources increases. In 1989, a Titan II missile silo was opened as a museum in Green Valley, Arizona. The NPS is now considering making a Minuteman II silo and launch control center near Rapid City, South Dakota a national park. Numerous documentation efforts are underway on diverse Cold War resources such as NIKE missile batteries, electromagnetic and phased pulse nuclear blast simulators, and even communication complexes with classified missions.

Cold War resources as a whole face loss of integrity at a very high rate. A large number of the Cold War scientific and technical properties, sold to private interests, no longer enjoy the protection of federal historic preservation laws, leaving an information gap for future historians whose database will rely heavily on the results of Section 106 compliance.

2.4 TEMPORAL PERSPECTIVE

Evaluating a Cold War property is complicated by the fact that evaluators bring their own memories of Cold War experiences into a process that aspires to objectivity. History is seen through the filter of current agenda and the lens of contemporary culture; it is the amalgam of many individual points of view. To distill these views into an objective representation of history is a major challenge in assessment of Cold War properties.

The heated controversy surrounding the National Air and Space Museum's 1995 exhibition on the atomic bombing of Hiroshima vividly exemplifies the difficulty that can be encountered when interpreting recent events. The exhibit's content

so enraged veterans and divided historians that the event was canceled and the museum director resigned after it sparked a national debate. The subject of nuclear weapons and their use - a central theme of the Cold War - is so morally charged that dispassionate historical interpretation becomes difficult if not impossible.

2.5 RESOURCE SIGNIFICANCE

2.5.1 Exceptional Significance

Properties that have achieved significance within the last 50 years may be listed on the NRHP, according to the National Register Criteria for Evaluation, only if they are of "exceptional importance" or if they are integral parts of districts that are eligible for the National Register. The National Register criteria do not describe exceptional, nor should they. Exceptional, by its own definition, cannot be fully cataloged or anticipated. The NRHP 50-year rule-of-thumb for assessing historic significance was deliberately devised as a temporal filter to allow sufficient historical perspective for evaluation.

The complexity of the Cold War makes defining exceptional significance challenging. Most previous definitions have been amorphous because so many exceptions have arisen with every statement that has attempted to narrow the focus.

A common approach to the problem of defining exceptional significance is to identify a wide array of properties as exceptionally significant, arguing the rapid loss of resources will erode the opportunity for future interpretation. This approach automatically assumes eligibility for most Cold War properties if sufficient integrity is present, and the treatment of the property (preserving or documenting) is considered critical, not the question of eligibility.

This line of reasoning is counterproductive to long term historic preservation efforts. Under this assumption, limited manpower and funding is absorbed to mitigate impacts on resources of marginal historical value, leaving properties of true

exceptional significance to languish. Embracing virtually all Cold War material culture as highly significant is to defend everything and save nothing.

A more stringent approach is required. The database of Cold War resources is so enormous that it will challenge generations of scholars. Losses of significant resources will occur regardless of measures taken. Hard choices must be made with limited temporal perspective to select the most fragile and significant resources that yield the greatest information critical to understanding Cold War ideology and its tangible manifestations.

The Cold War was a confrontation between nations with diametrically opposed ideologies who battled for control of western Europe and global geo-political influence. Fueled by mutual fear and mistrust, conflict arose ideologically, politically, socially, militarily, scientifically, and economically in a didactic crusade presented in dichotomous terms (e.g., good/evil, free/oppressed). For a military Cold War property to be considered exceptionally significant, it must *vividly* illustrate a key aspect of the progression from ideology to policy to military endeavor and it must do so in a direct, clear, fundamental manner obvious to a general audience with minimal understanding of the Cold War context.

Cold War properties can possess symbolic, technological, and social values of exceptional significance. However, significance for military Cold War properties primarily centers around the protection of American citizenry through a technological imperative arising from fear and mistrust of the Soviet Union. Offensive and defensive weapons research, design, testing, and deployment were the diplomatic and political weapons used to fight the Cold War, regardless of actual military strength of the weapon or system. This technological imperative was significant for its symbolic values as well as its engineering

achievements, having social impacts that echoed throughout American life.

2.5.2 State and Local Significance

State and local significance is sometimes argued on the basis that a property is the only such building type in the area or that the property is unique. Virtually all military structures (e.g., missile silos, hangars, alert facilities) are unique on a state or local level. Whether or not a property is unique is not a consideration in the evaluation of its significance within the context. Uniqueness is only a concern in the management of a historic property.

Every military installation existed in some part due to the Cold War. Does every building on every base become exceptionally significant on a local or a state level simply because it collectively helped form the community's tie to the Cold War and is the only facility of its kind locally or within the state? The answer is clearly no. While "exceptional importance does not *necessarily* mean national significance, it is a measure of a property's significance *within the appropriate historic context*" (NPS 1990:6). The geographic contextual scale of the Cold War is global. The national context is the lowest level at which Cold War resources can be effectively evaluated.

Military bases and facilities, like all large industries, had impacts on local and state economies throughout the Cold War. The military spending shaped community demographics, growth patterns, and ultimately the community identity. The state and local significance of an installation is economic and social: it provided jobs and often the lifeblood of the community.

While the state and local issues are significant, they are not exceptionally significant in the Cold War context. The Cold War was not primarily about local economic and social impacts of installations; it centered on mutual fear and mistrust of opposing ideologies and the U.S. investment in technology for strategic advantage over the Soviet Union.

2.5.3 Symbolic Values and Perception v. Reality

Many Cold War properties are significant primarily for their symbolic value. Diplomacy, political maneuvering, fear, and mistrust are intangibles not easily tied to specific places or material culture.

Symbolic value resides in the eye of the beholder - individually and collectively - and is not easily mitigated through traditional means (preservation or recordation) when the historic property's primary significance is intangible. The value is intertwined with the highly diverse experience and emotion of the visitor who assigns exceptional meaning to the building, structure, or site. Symbolic value combined with the lack of temporal perspective makes the interpretation of Cold War properties extremely volatile.

The Cold War was also a study in perception. Concern over superior Soviet military hardware drove the American military response to the Cold War as much or more than what did or did not actually lie behind the Iron Curtain. Throughout the Cold War, concerns constantly arose over perceived Soviet military advantages when the actual technological lead clearly belonged to the United States. In the late 1950s and early 1960s, mythical U.S.-Soviet bomber and missile gaps provided the basis for increased budgets for weapon programs. Perception proved to be as persuasive as reality in driving the U.S. military response.

Military imagery such as bombers, silos, and war rooms often took root deep in the psyche of the American public, becoming definitive symbols of the conflict. However, these images were formed not by the military, but by Hollywood. For example, Stanley Kubrick's 1963 movie classic *Dr. Strangelove, Or: How I Stopped Worrying and Learned to Love the Bomb* portrays the underground war room as a dimly lit, austere, sleek, techno-utopian environment, and this portrait formed an indelible image in the public

psyche, far different from the blander reality found in an actual war room.

On the whole, most military Cold War properties look plain in contrast to what is expected. Reinforced concrete, painted concrete block, and hurricane fencing are not as glamorous as the materials one would expect to find, even though the sophisticated technology they often packaged was far from mundane.

Writer Tom Clancy underscores the distinction between expectation and reality when he describes the new SAC command post (built in 1989) in his book, *The Sum of All Fears* (1991): "A capacious room, local wags joked it had been built because Hollywood's renditions of such rooms was better than the one SAC had built for itself, and the Air Force had decided to alter its image to fit a fictional reality." The public's perceptions are often the most enduring, revealing more about the intangibles of the Cold War than the actual military objects or places.

Assessment of a Cold War property must take into account symbolic values as well as the role perception played in the Cold War. For example, intermediate range nuclear weapons had little strategic military value in western Europe, but were placed primarily as a symbolic demonstration of resolve of U.S. commitments to North Atlantic Treaty Organization (NATO). Thus its exceptional significance derives from its function as a tool of Cold War diplomacy. Preserving or recording missile hardware (the missile itself and the tools to launch it) conveys none of this significance, only its engineering value as an example of technology. Exceptional meaning for much Cold War material culture lies not in the physical characteristics of the resource but in its perceived symbolic and political values.

2.6 GESTALTEN AND FRAGMENTATION

The German term "gestalt" defines the condition of the whole being more than the sum of its parts.

Understanding Cold War properties involves application of this concept.

Cold War properties, on the whole, are extremely fragmented. Research, development, and production of high-technology components were spread throughout the United States due to the adoption of a method of parallel development (where separate subcontractors were hired for major subsystems). This process greatly expanded the military-industrial base and complicates determining exceptional significance by creating a tangled web of scientifically and technologically related properties across the country, few of which independently demonstrate exceptional achievement, but together represent America's defense commitment. The point at which these incremental steps become a critical mass that exhibits exceptional significance is a crucial one. To mitigate each individual piece as a distinct entity will exhaust funding and tax the Section 106 process.

Properties cannot be viewed piecemeal when assessing Cold War significance. At many bases, no one property alone embodies the principal ideals of the period. A hangar, a vehicle wash-rack, a base theater, a storage shed, or a barracks on a former SAC alert base may not be individually exceptionally significant. While the individual property may not, the base as a whole may be of exceptional significance because it symbolizes the U.S. commitment to maintaining the military force structure as a deterrent to real or perceived Soviet aggression.

A key to assessing material culture of the period lies in understanding Cold War *gestalten*, that the role of the individual property has value in a unified physical, psychological, and symbolic configuration that does not reside within the individual property.

2.7 SECURITY CLASSIFICATION

The assumption that classified resources are exempt from historic preservation law is

erroneous. Classified resources are sometimes rendered the most fragile and short-lived by the very nature of the secrecy mandate.

Access to classified information can be a critical issue in evaluating both classified and unclassified Cold War resources. The Cold War era is rife with properties for which access to classified information is essential to understanding the resource in context. Unfortunately, few cultural resource managers and contractors have sufficient security clearance to access top secret level information to evaluate and record highly classified resources.

Because material is classified does not mean it is historically important. It only means access to it is restricted because a classifier perceived the information to be of importance to the national defense. Department of Defense files are full of classified documents that no longer pose a threat to national defense, and that are vital to understanding the Cold War context.

An estimated one-half trillion pages of Cold War era documents remain classified, a staggering 2,000 pages per U.S. inhabitant. Executive Order 12958, entitled National Security Information, dated April 17, 1995, establishes a template for security classification in the post-Cold War world. One important section calls for declassification of security information more than 25 years old (with nine important exceptions). The order provides "a greater opportunity to emphasize our commitment to open government."

Fortunately, a large percentage of Cold War material is classified only in the technical details that protect against duplication by hostile forces. The importance of the programs and weapons thus documented is that they existed due to the Cold War, and the technical minutiae often is not germane to the historic record in terms of understanding the symbolic nature of the material culture.

Much of the Cold War story will not be known for many years, when declassification of materials sheds

new light and the passage of time grants temporal perspective. While information about the American covert missions during the Cold War is just beginning to surface, virtually nothing is known of the other half of the Cold War epic - the Soviet perspective.

2.8 RESOURCE INTEGRITY

Integrity of Cold War resources presents another unique challenge. These resources are often scientific facilities that experienced constant modification of equipment to meet the demands of accelerating scientific advancement, usually resulting in smaller, faster, and more powerful military hardware. Due to these modifications, the scientific equipment integral to a property's Cold War significance may be gone when the time comes for assessment. Ironically, the very fact that the apparatus was modified rapidly demonstrates one crucial aspect of the Cold War: the technological imperative for strategic advantage resulted in constant upgrading, and the very act of modification establishes the property's significance not loss of its integrity.

2.9 BALANCING MILITARY MISSIONS AND HISTORIC PRESERVATION NEEDS

Most Cold War material culture is located on active military posts with missions that put ever-changing demands on the physical infrastructure of the installation. Inclusion of Cold War properties in resource management expands what commonly comes to mind when thinking of historic buildings and structures.

Many installation commanders wrongly assume a historic designation will make it impossible to meet the continuing need to upgrade facilities or will effectively turn their facilities into stagnant museums. Historic preservation law seeks consensus through consultation to ensure that actions affecting historic properties are not undertaken haphazardly. Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800, promote complete preservation of a

property as only one of several treatment options available to manage a historic resource. What the NHPA does require is that mitigation of adverse effects be reached through a consultation process between the agency, the state, and interested parties (and, when National Historic Landmarks [NHL] are involved, the ACHP).

Section 106 of the NHPA is a compliance process that applies to all federal undertakings on all properties regardless of their age. Taking a proactive approach today toward National Register-eligible Cold War properties will aid compliance by completing the first step in cultural resource management - to identify, inventory, and evaluate - and will avoid impeding future military missions.

2.10 EFFECTIVE STEWARDSHIP

The Cold War era left a rich legacy of material culture in its wake. The problem arises in how to sort what Paul Boyer (1985) calls "a Niagara of evidence." After all, the Cold War envelops the history of the world since 1945, and separating and assigning priorities can be overwhelming. To distill the essence of the period in terms of its material culture requires confronting distinct challenges in the assessment process.

Regardless of the methodology chosen, endless arguments will erupt over what is exceptionally significant about the Cold War. Decisions over what is significant enough to be preserved and what should be documented and allowed to be modified or destroyed will be contested. Despite these methodological conflicts, effective stewardship of Cold War properties is vital, especially at a time when their integrity is increasingly threatened.

Preservation and/or recordation of representative properties enriches our understanding of the Cold War and therefore are greatly needed. But because not all resources can be preserved (nor should be, even if funds were unlimited), establishing what constitutes exceptional significance for Cold War properties and adhering to the methodology must be the first steps taken toward effective stewardship;

mitigation efforts must focus on selected resources rather than embracing all resources equally; and hard choices must be made with limited temporal perspective. In the end, the resources selected may be those which are most fragile and whose significance is most threatened as well as those which yield the most information about and most tangibly manifest Cold War ideology.

3.0 EFFECTS OF THE COLD WAR ON AMERICAN SOCIETY AND CULTURE

*Paul Boyer and Joseph S. Murphey, with contributions by
James A. Lowe and Katherine J. Roxlau*

The history of the Cold War has been the history of the world since 1945.

Martin Walker (1994:1)

Nuclear weapons have not and never will be an inert presence in American life. Merely by existing they have already set off chain reactions throughout American society and within every one of its institutions.

Robert Manoff 1984 (Boyer 1985:xv)

The Cold War affected American society and culture in numerous ways and with fluctuating intensity. Between the 1945 explosion of the first atomic bomb at the Trinity site in the New Mexico desert and the symbolic death of communism with the fall of the Berlin Wall in 1989, the United States and the Soviet Union struggled in a great ideological and economic battle resulting in the collapse of the communist system.

Diametrically opposed political systems, democracy and communism, fought overtly and covertly for nearly half a century to gain strategic advantage in filling the power vacuum left by Nazi Germany in postwar Europe.

Fought politically on a global battleground with accusations, brinkmanship, denunciations, propaganda coups, treaties, the proxy wars of Korea and Vietnam, invasions, alliances, arms races, space races, subversion, spying, clandestine meetings, covert organizations, and veiled and unveiled threats, the Cold War was characterized largely by "nonevents" without direct military confrontation (Korea and Vietnam were "proxy" wars), hence the name of the titanic struggle. The superpowers held the world deadlocked in a permanent state of tension. The Cold War was not only a struggle for power and influence--it became a grand morality play of good versus evil fueled by fear and mistrust. The only common ground was the mutual fear of annihilation.

In the constant shadow of the Cold War lay the ultimate technological trump card, atomic and

thermonuclear warheads attached to a variety of delivery systems which became known in the popular lexicon as "the bomb." The bomb's unmitigable power lay in the combination of its massive destructive capability and the lack of an effective defense except for numerical equality. The bomb alone kept the Cold War cold through the concept of mutually assured destruction (MAD).

Defense intellectuals from Harvard, Princeton, and Yale, together with think-tanks like the RAND Corporation (RAND), composed endless scenarios of the final conflict and ways to avoid it--usually in the form of a full-scale technocratic response.

While intellectuals fought the battles of the imagination and stimulated the formation of weapons programs with their reports, fear of the bomb waxed and waned in the minds of the American public throughout the Cold War era.

Herman Kahn taught the American public about *Thinking About the Unthinkable* in his 1962 book. The nuclear threat was not a constantly overt presence, but instead lay deep within the national psyche, manifesting itself throughout American culture. Bernard Weisberger stated in *Cold War, Cold Peace* that Americans were not so much bored by the nuclear threat as numbed by it, or rather the constant fear it generated (1984).

The first Soviet satellite, a 13-inch diameter sphere called Sputnik, launched a technological imperative in the United States in the late 1950s.

Education, health, social equality, science and technology, military strength, and economic growth were all united in a common national purpose under the larger umbrella of the Cold War. Aggressive and centralized technocratic management and the large-scale marriage of government and private industry (the military-industrial complex) became the tools to combat communism. Whole new industries arose as military research and development created new weapon systems. Education reform was required to shift emphasis to science and math to produce engineers needed for future technologies. Just as missiles and bombers served military purposes during the Cold War, school textbooks also became social weapons used to combat the "red threat."

3.1 IMPACT ON THE ECONOMY

The postwar American economy was healthy due to the total collapse and destruction of the industrial capabilities of western Europe, a void filled by increased American production. The economy took an even greater leap forward with the Truman administration's 1947 European Recovery Program (Marshall Plan) to rebuild western Europe with the fruits of capitalism. The economy was further stimulated by the massive increase in defense spending called for by National Security Council (NSC) in 1949.

President Eisenhower began to cut the defense budget following his election in 1952 and the subsequent truce in Korea in 1953. His New Look policy focused increasingly on a strategic nuclear force to deter the Soviet nuclear threat and on a plan to balance the federal budget. The end of the Korean War and subsequent cutbacks in government military spending triggered a brief recession that ended in mid-1954 due to fiscal and monetary controls (Divine 1985:60-61, 80).

The economy suffered another decline during 1960-1961, but Kennedy's administration advocated the Keynesian economic concept of enlarging the economy through increased production and deficit spending. This production included a build-up of

America's military capabilities for a foreign policy of Flexible Response. Industrial contracts associated with the manned-flight space program of 1961 also had a stimulating effect on the American economy. During Johnson's administration, the escalation of the "hot" war in Vietnam and increased military spending further stimulated the economy, but also brought an increase in the rate of inflation (Divine 1985:110, 157; McDougall 1985:305).

The expansion of the Air Force played an important economic role in the states where the bases were located. The construction of base housing, hospitals, command centers, runways, and missile silos, among other various projects, provided contracts and jobs to regions with proximity to the bases. Labor relations and work stoppages were part of a complex symbiotic relationship between bases and nearby communities. Capital flowed continuously from the pockets of servicemen to local businesses.

The economic toll of the Cold War on both the United States and the Soviet Union was immense. Between 1947 and 1987, the United States alone spent \$7.62 trillion on the military, an amount roughly equal to the value of the nation's entire civilian infrastructure of buildings, factories and equipment (Semour Melman, December 17, 1989, *New York Times*). At the height of the Cold War, about one in every eight workers was involved in the defense industry, accounting for about 10% of the gross national product. In the Soviet Union, the diversion of resources to the military, required in order to keep pace with the United States, ultimately lead to economic and social collapse of the communist system.

3.2 THE AMERICAN PSYCHE DURING THE COLD WAR

Although the defeat of Japan relieved tensions in the United States, the circumstances behind its unconditional surrender caused grave concern and a fear of nuclear weapons. At first apprehensive following the atomic destruction of Hiroshima and

Nagasaki in 1945, Americans over the next five years gradually accepted the presence of nuclear weapons and the possibility of nuclear war.

After atomic bombs destroyed the Japanese cities, Americans at home echoed a question posed by the U.S. Strategic Bombing Survey in conducting damage assessment: what if the bombs had been dropped on American cities? Journalists, scientists, and religious leaders called for an end to atomic research, and some advocated the creation of a world government in response to the bomb's enormous destructive capabilities and geopolitical ramifications.

The atomic tests conducted at Bikini Atoll during 1946 resulted in public concern over the threat of radiation poisoning and nuclear weapons (Boyer 1985:90-91). The postwar period also witnessed increased concern over communism, especially after the Soviets perfected their own atomic weapon. Concern evolved into hysteria, not over the atomic bomb itself, but out of the perception that communist espionage had allowed the Russians to develop the bomb. Investigations by the House Un-American Activities Committee (HUAC) concerning the loyalty of Americans led to a rapid political change in America. This change was fueled when Alger Hiss was accused of espionage activity, and events such as the fall of China to the communists and the Soviet achievement of nuclear capability were both thought to be accomplished by espionage. This fear of communism displaced the concern voiced by the scientific community over nuclear weapons. Outspoken scientists were now considered disloyal or subversive for speaking out against a nuclear buildup (Divine 1985:30-33; Boyer 1985:101-04).

The American psyche accepted the logic emanating from Washington after 1950: instead of international control of nuclear research and weapons, the most promising security would come from American atomic superiority and a robust program of civil defense (Boyer 1985:177). President Truman created the Federal Civil Defense Administration in 1950, and American cities

organized committees and forums advocating civil defense strategies. Booklets printed for the public advised what to do and how to survive in a nuclear attack; theologians were consulted about their role in the aftermath of a nuclear exchange; and the National Security Resources Board was created to ensure that industrial production continued after an atomic attack (Boyer 1985:322-333). Some city planners even advocated the restructuring of American cities to make them less vulnerable to nuclear attack and to facilitate civilian evacuation (Boyer 1985:152).

Nuclear research continued during the decade of the 1950s, with both the United States and Soviet Union completing the construction of a hydrogen bomb and deploying strategic weapons systems. Still, for Americans, the atomic threat was not as immediate as one's job, family, or the cost of living (Boyer 1985:293). Public concern over radiation exposure increased again due to atmospheric testing of thermonuclear weapons by both the United States and Soviet Union, and this resulted in a national movement to prevent further nuclear testing. Emphasis on civil defense peaked with the 1961 Berlin situation when President Kennedy publicly urged that a massive fallout-shelter program be initiated in the United States (Boyer 1985:352-53).

During the 1950s and early 1960s, a spate of books and movies theorizing nuclear Armageddon entered American mainstream. While nuclear war and its devastating potential were not daily in the minds of Americans, the concept still pervaded the American psyche (Boyer 1985:101, 352-55).

Soviet intimidation through the threat of nuclear weapons decreased after the 1962 Cuban Missile Crisis, and with it, the abject fear of nuclear war. After the Soviets reached nuclear parity in 1969, the 1970s saw the superpowers restrained by the knowledge that each would suffer immeasurably from a nuclear weapons exchange. The concept was not lost on the American people and resulted in their continued ambivalence about the threat of nuclear war, now three decades old.

3.3 IMPACT ON THOUGHT AND CULTURE

The Cold War and the nuclear arms race that it spawned profoundly affected American thought and culture. Arising in the aftermath of World War II, the titanic struggle between the United States and the Soviet Union touched every facet of American life and manifested itself at all cultural levels, from the work of social thinkers, historians, and theologians to the realm of movies, television, and popular music.

But the Cold War's cultural fallout was not a constant. It fluctuated over time and varied in intensity with distinct temporal phases. The monolithic block of years from 1945 to 1989, commonly designated as "the Cold War Era," actually saw wide fluctuations in the level of United States-Soviet hostility and the intensity of focus from the general public. The Cold War of 1950 differed radically from that of 1963, 1975, or 1982. Any assessment of the Cold War's intellectual and cultural impact must acknowledge these fluctuations and at the same time recognize the continuities that characterize the era as a whole.

3.3.1 The Early Cold War: 1945-1962

The years from 1945 to 1962 saw the Cold War reach its maximum intensity and its greatest cultural influence. Stalin's actions in the Middle East and Eastern Europe convinced Washington that the Soviet ally was the Soviet foe, with objectives that directly threatened American interests, and U.S. foreign policy and strategic thinking were reshaped accordingly. George Kennan's containment doctrine, elaborated in an internal government document and then in a 1947 *Foreign Affairs* article, provided the initial ideological framework for Washington's Soviet policy. NSC-68, the 1950 planning document drafted by Paul Nitze, offered an even more alarming picture of the global Soviet menace and urged full mobilization of the nation's diplomatic, military, and ideological resources. The fall of China to the communists and the Soviet A-bomb explosion in 1949 added urgency to the evolving consensus in Washington. In quick

succession came the Marshall Plan, the foundation of NATO, civil-defense planning, and the development of thermonuclear weapons and delivery systems, including bombers and missiles.

These unsettling developments, publicized by leaders' speeches and by the media, quickly penetrated all levels of American society and shaped the cultural climate. The 1950s were characterized by a stark sense of enveloping menace that resulted in: a tendency toward black-and-white analyses of global realities; suspicions of subversion, radicalism, and nonconformity; a celebration of traditional values including the "nuclear" family; and nervous fears that the Cold War could turn hot at any moment, possibly even unleashing nuclear destruction of the kind witnessed at Hiroshima and Nagasaki.

Magazines such as Henry Luce's *Time* and *Life* alerted Americans to the Soviet menace in stark and graphic terms. On the ideological plane, intellectuals like historian Arthur Schlesinger, Jr. and theologian Reinhold Niebuhr articulated the nation's Cold War mission. Schlesinger's *The Vital Center* (1949) offered an anticommunist creed around which liberals like himself could rally. Niebuhr, a Marxist in the early 1930s, espoused a firmly anticommunist position in his postwar writings and in his journal *Christianity and Crisis*. For conservatives, vigorous anticommunism, as articulated by William F. Buckley, Jr. and others, brought cohesion and passion to a movement that might otherwise have succumbed to internal ideological disputes between laissez faire libertarians and Burkean traditionalists.

A broad spectrum of intellectuals, including historians, culture critics, and novelists, responded to the Cold War ideological climate. In the Depression decade of the 1930s, radical intellectuals had repudiated a faltering capitalist system and portrayed a nation torn by class conflict. Now, in the altered climate of the Cold War, intellectuals viewed America more benignly. Focusing on that which distinguished the United

States from the totalitarian system behind the Iron Curtain, they stressed the growth of democratic and liberal values, hailed the abundance of consumer goods provided by the free-enterprise system, and played down negative or divisive features of the American experience. Critics shifted their focus from the economic and political arenas to the safer realm of culture. Sloan Wilson's novel *The Man in the Gray Flannel Suit* (1955) and sociologist David Riesman's *The Lonely Crowd* (1950), a study of the American character, deplored postwar conformity but did not explore its sources in Cold War ideology.

In the early 1950s, the nation began to reel from anticommunist hysteria. Although Truman issued an executive order in 1947 establishing the Federal Employee Loyalty Program which scrutinized federal employees for security purposes, the Red Scare was promoted chiefly by Senator Joseph McCarthy and HUAC in Congress. The scare stemmed to a large degree from the key events of 1949: the fall of China to Mao Tse-Tung and the Soviet's success in building a nuclear bomb. Both were thought to have occurred due to foreign espionage and pandering to liberals, intellectuals, and, of course, members in the communist party. In September 1950, Congress passed the McCarran Internal Security Act which further restricted the civil liberties of many U.S. citizens. People were banned from working in the federal government or defense plants if they belonged to the communist party or communist-sponsored groups. The government also withheld individual passports. Overall, this heightened anticommunist hysteria, or "red baiting," adversely affected members of Hollywood's film community, university and college professors, members of the Jewish faith, and U.S. diplomats, especially those dealing with the Soviet Union and its satellites during the early 1950s (Boyer 1985:103; Divine 1985:30-34, 38; Goldberg 1981:36). Liberal churchmen were denounced as "pinkos," and noted scholars were pilloried for writings that seemed "soft on communism." Loyalty-oath requirements spread fear in the nation's schools, colleges, and universities.

Ideological mobilization even seeped into the realms of art and music. Luce's publications promoted Abstract Expressionist painters like Jackson Pollock to contrast American artistic freedom with the conformity imposed on artists in Stalinist Russia. The State Department sponsored European jazz concerts by Dizzie Gillespie and others as part of the Cold War ideological struggle. Government agencies clandestinely funneled money to supposedly independent journals of opinion and to organizations such as the National Student Association that were deemed useful in the cultural confrontation with Moscow.

The Cold War mind-set affected mass culture as well. Radio, television, and show-business personalities targeted in such right-wing publications as *Red Channels* found themselves jobless. Periodic investigations of Hollywood by HUAC not only ferreted out the "Hollywood Ten" (communist-leaning writers and directors), but created a broader climate of apprehension and caution. The allegorical *High Noon* (1952) portrayed a community paralyzed by fear and conformist thinking, but movies willing to tackle controversial themes became increasingly rare.

Cold War preoccupations surfaced explicitly in such movies as *My Son John* (1952), in which an American Legion member finds the communist taint in his own family; *Big Jim McCain* (1952), featuring John Wayne as an HUAC investigator tracking communist spies in Hawaii; and *Strategic Air Command* (1955), in which Jimmy Stewart answers his government's call. Other films introduced Cold War motifs more subtly. In *On the Waterfront* (1954), director Elia Kazan offered a fictionalized apologia for his decision to "name names" as a friendly witness before HUAC.

With the Soviet atomic bomb, hydrogen-bomb tests, and the advent of intercontinental ballistic missiles, nuclear fear intensified. School children huddled under desks, following the advice to "duck and cover" offered in civil-defense films such as *Bert the Turtle*. SANE, the National

Committee for a Sane Nuclear Policy, ran newspaper ads featuring pediatrician Benjamin Spock with a small child under the caption: "Dr. Spock is Worried." Tom Lehrer, a college favorite, wove images of nuclear destruction and radioactive fallout into his satirical songs. *Mad* magazine offered a post-nuclear "Hit Parade" featuring the songs young lovers of the radioactive future would croon as they strolled "arm in arm in arm." Science fiction tales like Walter Miller, Jr.'s *A Canticle for Leibowitz* (1959) and television series such as Rod Serling's popular *Twilight Zone* offered scenarios of nuclear war and its aftermath. A wave of mutant movies such as *Them!* (1954), *It Came From Beneath the Sea* (1955), and *The Incredible Shrinking Man* (1957) imagined the horrifying genetic consequences of nuclear tests. Stanley Kramer's *On the Beach*, based on Nevil Shute's novel about nuclear-war survivors doomed to death by radiation poisoning, unsettled audiences in 1959.

Cold War preoccupations also shaped American religious life in the 1950s. Public leaders promoted civic religion, a blend of patriotism and piety aimed at beefing up the nation's spiritual armor in the struggle with the Soviets. In 1954, Congress added "Under God" to the Pledge of Allegiance and "In God We Trust" to coins and currency. As the Advertising Council promoted prayer and church attendance, an aura of generic, ecumenical religiosity pervaded the culture.

Throughout the 1950s, evangelist Billy Graham wove warnings of atomic danger into his calls of repentance. "An arms race unprecedented in the history of the world is driving us madly toward destruction!" Graham thundered; "Time is desperately short...Prepare to meet thy God" (Boyer 1985:239). Norman Vincent Peale offered more soothing remedies. In *A Guide to Confident Living* (1948) and *Faith is the Answer* (Peale and Blanton 1950), Peale advised Americans rattled by the Cold War and the bomb: "Say confidently to yourself: 'Through God's help and the application of simple techniques, I will be free from fear.' Believe that--practice it, and it will be so" (Boyer 1985:351).

In short, wherever one probes, from the most rarified to the most popular levels, 1950s American thought and culture reveals tell-tale traces of the influence of the Cold War and the nuclear arms race.

3.3.2 The Sixties and Beyond: Cold War Culture in Transition

The early 1960s brought changes in the Cold War and thus in its cultural ramifications. Initially, President John Kennedy yielded to no one in his Cold War militancy. Kennedy's 1961 call for fallout-shelter construction amid his sparring with Soviet premier Nikita Khrushchev over Berlin exacerbated nuclear fears and stirred poets like Robert Lowell to address the theme directly. "All autumn, the chafe and Jar / of nuclear war," begins Lowell's poem "Fall 1961" (Boyer 1985:355). *Fail-Safe*, a 1962 novel by Eugene Burdick and Harvey Wheeler, offered a scary scenario of how a nuclear war might begin unintentionally. Experts challenged the novel's premise, but millions of readers and movie viewers absorbed the alarming message. For a few days in October 1962, the Cuban missile crisis sharply focused the free-floating nuclear anxiety pervading American life.

But a series of developments—including post-Stalinist changes in Moscow, the China-Soviet split, a shifting political climate in the United States, and growing recognition of the need to reduce the nuclear threat—all contributed to a gradual easing of tensions. An early tangible result was the Limited Nuclear Test Ban Treaty of 1963. Despite periodic setbacks and even the trauma of Vietnam, superpower relations slowly improved. Profound differences remained, but diplomatic contacts, grain exports, culture exchanges, and limited de facto cooperation under the rubric of detente softened the Cold War's harsher contours. The U.S. and Soviet nuclear arsenals remained and even grew more menacing with Multiple Independently-Targetable Reentry Vehicle (MIRV) and other technological advances. But the Strategic Arms Limitation Treaty (SALT) I and Anti-Ballistic Missile

(ABM) treaties of 1972, along with other arms-control agreements, brought a degree of stability to the competition, easing nuclear fears. However, if the Cold War and nuclear fear played a less overt cultural role from 1963 to 1980, their still influence continued. Indeed, the nonfiction bestseller of 1970, Hal Lindsey's *The Late Great Planet Earth*, found both nuclear war and Russia's destruction foretold in biblical prophecies.

In the early 1980s, the Cold War and nuclear anxieties briefly resurged in the American psyche. President Ronald Reagan's anti-Soviet blasts (as when he characterized Moscow as "the focus of evil" in the world) resonated in the culture. However, in contrast to the 1950s, skepticism and dissent now found more open expression. Millions applauded Reagan's forthright views, but millions of others, including many artists, writers, and media figures, deplored what they saw as a dangerous revival of Cold War stereotypes. Theodore Gesell even published a Dr. Seuss children's story that reduced the Cold War to a dispute on which side bread should be buttered.

The military build up and anticommunist rhetoric of 1981-1983 drove nuclear anxiety to levels not seen for thirty years. While SANE dusted off its mailing lists, activists rallied to the "Nuclear Freeze" banner, and the culture and the mass media gave voice to long-submerged anxieties. Even the sketchiest of overviews conveys the pervasiveness of the theme. Writer Jonathan Schell captured the cultural *Zeitgeist* with his antinuclear tract *The Fate of the Earth* (1982). Poets, artists, photographers, and novelists wove nuclear themes into their work. Tim O'Brien's novel *Nuclear Age* (1985) evoked a 1950s childhood shadowed by the bomb, and Bernard Malamud's *God's Grace* (1982) begins with a world-destroying nuclear war between two superpowers thinly disguised as "the Djanks and the Druzhkies." Movies like *War Games* (1983), in which a teenager computer hacker narrowly prevents World War III, and the television drama *The Day After* (1983) imagined scenarios of nuclear destruction. Rock musicians, always drawn to the apocalyptic, also contributed to the nuclearization of popular culture. A 1983 Pink Floyd song, for

example, imagined "two suns in the sunset" as omens of "the holocaust to come."

By the mid-1980s, this latest intrusion of the Cold War and nuclear fear into the culture was fading. President Reagan preempted the nuclear-freeze movement with his 1983 Strategic Defense Initiative speech. More important, in the late 1980s and early 1990s, dramatic changes in Mikhail Gorbachev's Soviet Union heralded sweeping nuclear-arms agreements, the Cold War's demise, and--most amazing of all--the actual break-up of America's long-time adversary, the Soviet Union.

As the Cold War came to closure, historians assessing its meaning emphasized that it had not been only a military and diplomatic phenomenon. This protracted period of confrontation and danger had also sunk deep roots in the American psyche, shaping the culture in ways that Americans are only beginning to document and understand.

4.0 HISTORIC CONTEXT OF THE COLD WAR FROM THE PERSPECTIVE OF AIR POWER

*Karen Lewis and Katherine J. Roxlau,
with contributions by R. Blake Roxlau and David P. Staley*

For good or ill air mastery is today the supreme expression of military power, and fleets and armies, however necessary and important, must accept a subordinate rank. This is a memorable milestone in the march of man.

Sir Winston Churchill (Glines 1963:01)

The greatest current threat to the United States is posed by the Soviet Union. Armed with a combative ideology whose declared political objective is the eradication of "capitalism," which justifies war as an integral part of political action, the Soviets have developed a military might that threatens vital U.S. interests....We must therefore be prepared to meet the test of force if the United States and worldwide security is to be maintained.

Tactical Air Command (TAC 1978:2-1)

The greatest asset of air power is its flexibility. The main factors in determining the degree of flexibility are the methods of command and control, the range of aircraft, and the mobility of supporting equipment.

Field Marshall Viscount Montgomery (Glines 1963:108)

The geopolitical balance of power in the world, especially in Europe, was severely altered with the conclusion of World War II. The Grand Alliance (United States, Britain, and Soviet Union) had defeated the Axis powers (Germany, Japan, and Italy). However, the immediate postwar period witnessed a rapid reversal in the political relationship between the United States and the Soviet Union. The polarization of the ideological and political objectives of the two countries culminated in what came to be known as the Cold War, which was waged with varying intensity between 1945 and 1989 (Goldberg 1981:1-9).

The political and military strategies advanced by the various United States' administrations during the Cold War era were based on perceptions. Robert McNamara, Secretary of Defense for Eisenhower, Kennedy, and Johnson, refers to some of these perceptions as "myths" (McNamara 1986:75). In the earlier years, when reconnaissance was poor, the United States' perception of the Soviet Union was one of intense fear, mistrust, and suspicion. Even after Eisenhower divulged the reconnaissance

information that showed the "missile gap" to be false, people preferred to believe in the gap because it agreed with their perception that the Soviets were bent on developing a first-strike force and that their forces were superior to those of the United States. This made it obvious that quality reconnaissance would be needed to limit not only mythical perceptions, but also the proliferation of nuclear weapons.

The United States' perception of the Soviet Union after Nixon became president and detente was in place seemed to become more amicable but fear and mistrust were still evident. An example is the Limited Test Ban Treaty. The reason for its limitations was that the United States government did not believe the Soviets could be trusted to halt underground testing without intrusive verification methods. President Reagan went to extremes to rekindle mistrust of the Soviet Union, accusing its leaders of lying and cheating (Newhouse 1989:337).

Deterrence itself is based on each side's perception of the opponent's preparedness for a first-strike or a retaliatory strike. In any crisis situation, and the entire Cold War can be considered a crisis, it matters what the other side believes about their enemy, not what is objectively true (McNamara 1986:52), for this belief is eventually translated into action.

The Air Force in particular played an extremely important role in guiding the United States government's perceptions, which were used to promulgate a strategy of national defense and containment of communist expansion and aggression around the world. The evolution and advancement of missile and aviation technology that occurred during the Cold War resulted in the modern, postwar material culture of the Air Force and ACC.

The various facets of technology, architecture, and engineering related to the evolutionary development of individual air defense systems nationwide are of major importance to the historical development of ACC resources. These facets originated with the fluctuations in United States foreign policy and defense strategies vis-a-vis the Soviet Union, communist ideology, and concern for the changing balance of power in a new Cold War world. The Cold War and associated development of more destructive nuclear weapons also had a great psychological impact on the civilian population of the United States and on its civil defense preparations.

The proliferation of conventional armed forces and strategic nuclear offensive and defensive systems also altered the domestic economy due to each administration's defense budget during the decades of the Cold War. During the early years, the United States was trying to ameliorate a burgeoning domestic social revolution dominated by civil rights for minorities in the 1950s, and for women in the 1960s. These civil rights issues permeated the branches of the armed forces as well, resulting in the inclusion of racial minorities and women into integral roles within the military. These new social concerns had to be addressed in terms of USAF policy, the deployment of personnel within the Air

Force, and the construction of base accommodations.

4.1 UNITED STATES STRATEGY AND POLICY DURING THE COLD WAR

Among the lessons of [this] story is the danger of entrusting political decisions, above all those made in the nuclear age, to politically unaccountable officials and bureaucrats; their goals--often narrow and reflecting limited insight--may collide with large, longer term national interests.

Newhouse 1989:16

For the purpose of this study the Cold War has been divided into four phases. This structure provides a means by which to digest the large amounts of information available about the Cold War and a method to aid in the evaluation of material culture on individual bases. The following four phases are used in this document and for the evaluation of resources:

Phase I: July 1945 to January 1953

Phase II: January 1953 to November 1963

Phase III: November 1963 to January 1981

Phase IV: January 1981 to November 1989

Section 4.1 follows this division with a brief characterization of the phases followed by a chronological listing of events and policies that were important during each phase. Each event or policy is followed by a short description. This section is constructed to provide an overall sense of policies and strategies and how they changed throughout the Cold War. In the next two sections, these policies and strategies are described in relation to the development of the Air Force and its material culture. During the field evaluation of properties, these policies and strategies will be tied to resources to aid in determining significance.

Cold War funding, the arms race, and policy and strategy led to the construction of facilities on USAF installations. Figures 4.1, 4.2, and 4.3 show the United States/USSR weapons buildup, the United States military budget, and the United

States/USSR arms race respectively. These figures depict the overall patterns of military activity reflecting the policies and strategies outlined in this section.

4.1.1 Phase I: Inception of the Cold War

Phase I is identified by the United States' desire to contain communism, to keep military spending at bay, and to initiate deterrence as national military policy. This phase begins with the Trinity nuclear explosion and ends with Eisenhower's "New Look," a policy that focused on maximum military effectiveness at a minimum cost. This is the point at which the United States invested its military power in nuclear weapons, because they were less expensive than conventional weapons.

The destructive capabilities of nuclear weapons, as witnessed by the devastation wrought on Japan, convinced world governments that nuclear weapons should not be used in the future. Although the nascent concept of deterrence through strength in military technology was in existence before the dropping of the atomic bombs on Japan, it became the forefront of strategy and policy of both the Soviet Union and the United States during the Cold War. The incorporation of deterrence into national policy and strategy was the primary force behind the escalation of the arms race.

In 1949, the Soviet Union developed a fission atomic bomb, causing United States foreign policy and defense strategies to be reevaluated. Truman had planned to cut the military budget for FY 1950, but in reaction to this development, he approved SACs recommendation to deploy more B-36s and decided to fund development of the hydrogen bomb.

In 1950, NSC document No. 68 (NSC-68) advised a massive military buildup to counteract the increasing threat posed by the Soviet Union. This, combined with the communist invasion of South Korea, released any remaining budgetary constraints and defense spending tripled. Research and development for aircraft and weaponry underwent significant expansion during the last two years of Truman's administration.

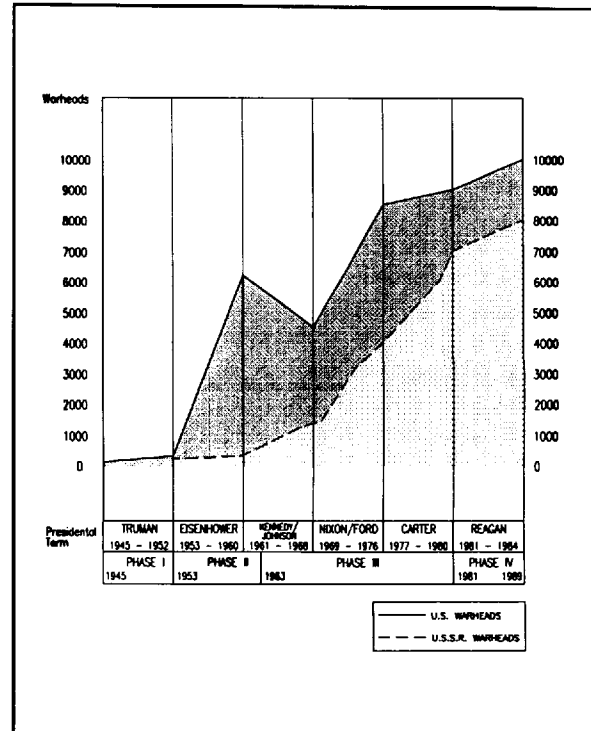


Figure 4.1 US/USSR Strategic Nuclear Weapons Build-up. Source: Mayers 1983:27.

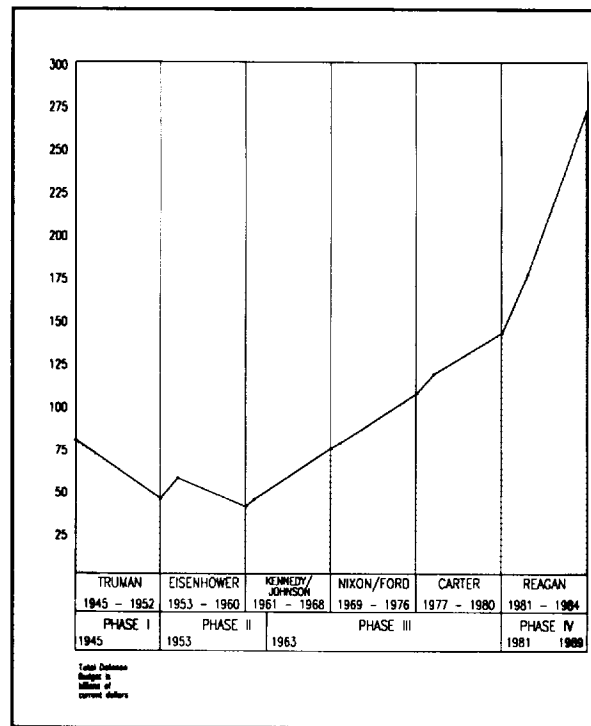
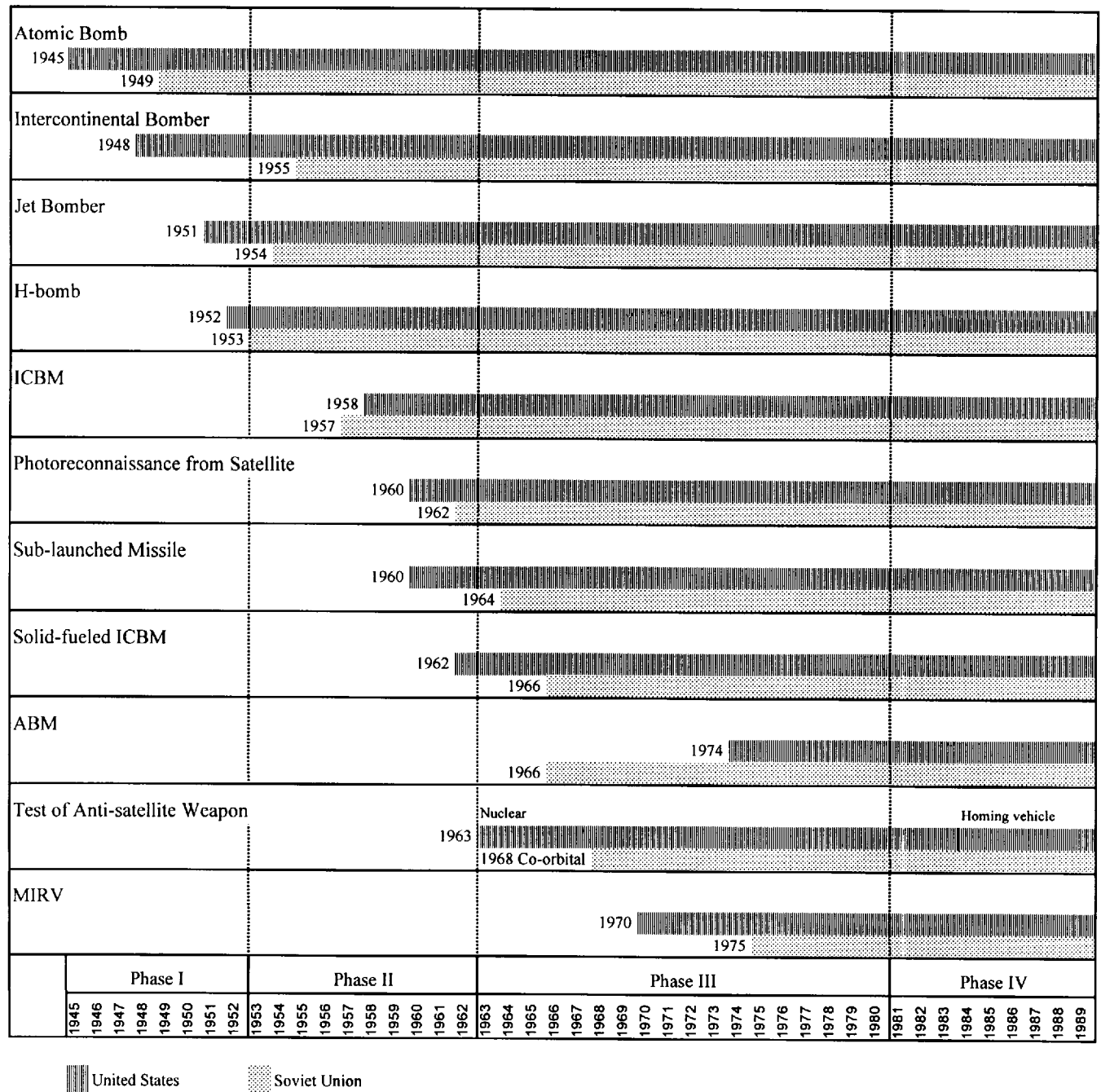


Figure 4.2 Cold War Defense Budgets. Source: Mayers 1983:27.



Two lines are shown to represent when each of the superpowers tested or deployed military technological innovations.

Figure 4.3 The Technology Race. Source: McNamara 1986:151.

Phase I of the Cold War and Truman's presidency were characterized by the President's concern to hold back the spread of communism and with his desire to reduce military spending. Truman's containment policy began with economic intervention in Europe and ended with an unprecedented military buildup. By the end of his presidency, the concept of deterrence of nuclear war through military strength had been fully embraced.

1945

- **Trinity.** United States exploded the first atomic bomb at Alamogordo, New Mexico. The code name was Trinity.
- **Stalin's Statement to His Comrades After Hiroshima.** "Provide us with atomic weapons in the shortest possible time. You know that Hiroshima has shaken the whole world. The *balance* has been destroyed. Provide the bomb -- it will remove a great danger from us" (Newhouse 1989:53, emphasis added).

United States foreign policy and defense strategies (McDougall 1985:89). The panel was originally started in 1946 by Douglas Aircraft and separated from that company in 1948.

- **McMahon Act.** This act placed tight controls on the export of United States nuclear technology and created the Atomic Energy Commission (AEC) to develop and regulate nuclear technology.
- **Army Air Force Commands.** The following commands were created in March by the War Department, predecessor of the DoD: SAC, TAC, MAC, and ADC (USAF 1990:3).
- **RAND Report.** RAND released a study entitled "Preliminary Design for an Experimental World-Circling Spaceship" which addressed the use of satellites as scientific instruments and potential military applications of satellites, including reconnaissance.

1946

- **The Baruch Plan.** Immediately following World War II, the leading governments of western Europe and the Soviet Union appeared to favor the concept of United Nations regulation of nuclear technology (Divine 1985:12-13). In response, the United States and President Truman sponsored the Baruch Plan to turn over all fissionable material and nuclear weapons capabilities to the United Nations. The plan proved a failure. The United States was wary of turning over its scientific technology as Josef Stalin and the Soviets refused to allow foreign inspection to ensure compliance with the plan. Both nations lacked sufficient faith in the United Nations to completely entrust their security to it.
- **The RAND Corporation.** This was the first federally funded think tank for research and development, and was created to evaluate

1947

- **National Defense Act.** In July, this Act created the Air Force as a separate branch of the armed forces, as well as the office of the Secretary of Defense, the Joint Chiefs of Staff, the NSC, and the Central Intelligence Agency (CIA). The Act designated authority for strategic missile development to the Air Force and tactical missile development to the Army (McDougall 1985:90-91; Wolk 1984:275-292; Goldberg 1957:102-03).
 - **Federal Employee Loyalty Program.** This program, established by executive order, coordinated by the Loyalty Review Board, was created to investigate government employees with regard to communist activities. It was meant to diffuse the postwar communists-in-government issue and became the foundation for McCarthyism.
-

-
- **Balance of Power.** After the defeat of Germany and Japan, the United States feared the economic and political vacuum in western Europe would be filled by the Soviet Union. Government officials, especially President Truman, Secretary of State George Marshall, and George Keenan, believed that the United States should sponsor the reconstruction of western Europe through a massive infusion of United States capital, expertise, technology, and influence.
 - **The Truman Doctrine.** An economic depression in Europe caused the British to relinquish their economic and military aid to Greece and Turkey (Goldberg 1981:10; Gaddis 1982:22-23, 41; 1978:185; Divine 1985:13-14), leaving these two countries open to Soviet influences. The United States' response to the British decision to vacate the Balkan region was the Truman Doctrine, which called for economic support of the area. This Doctrine was the beginning of the United States containment policy to stem Soviet influence in Europe.
 - **The Marshall Plan (Economic Recovery Plan).** This plan was offered to all European countries to rebuild Europe, and by doing so, strengthen the independence of those countries not yet under the Soviet sphere of influence (Newhouse 1989:65). The additional takeover of Hungary (1947) and Czechoslovakia (1948) by communist governments strengthened the resolve of the United States toward its policy of containment through economic means. Aid to eastern bloc countries was refused by Soviet foreign minister Molotov on Stalin's orders (Goldberg 1981:10-11; Divine 1985:13-16; Gaddis 1978:184-189).
 - **"Strongpoint Defense" - George Kennan.** Kennan proposed focusing the containment policy on those areas deemed vital to the United States, rather than trying to stop communism wherever it emerged around the world. This focused approach allowed the containment policy to function within the United States' economic and military limitations. A

strongpoint defense was not meant to allow the United States to dominate in power centers around the world, only to make certain no other country would dominate either (Gaddis 1982:58-64).

- **Military Funding.** Truman concentrated on the operational strength of SAC's B-29, B-36, B-47, and B-50 bombers to enforce containment policies. This reduced the effort and funds allocated to long-term research and development, resulting in the cancellation of an experimental ICBM (the MX-774) and the temporary abandonment of missile research and development.
-

1948

- **Berlin Crisis.** The Soviets blockaded all land routes leading into West Berlin through East Germany. This precipitated the involvement of the Air Force, MAC, and United States Air Force Europe (USAFE) in the Berlin Airlift (Goldberg 1957:147-48; Divine 1985:20-21).
 - **Election.** Truman was reelected.
-

1949

- **Soviet Fission Atomic Bomb.** After the first Soviet atomic bomb was detonated on August 29, United States foreign policy and defense strategies were reevaluated. Truman authorized development of the hydrogen bomb, rapid deployment of long-range bombers, and additional reconnaissance.
 - **Mao Tse-tung's Regime 1948-1976.** Many in the United States at this time believed that world communism and ideology were monolithic in nature, and that it was controlled from Moscow (Divine 1985:26-30). The creation of a Chinese communist regime in 1948 added to the United States' fear of the Soviet Union and communism.
-

-
- **North Atlantic Treaty Organization (NATO).** NATO was formed in 1949 to defend ten nations of western Europe located in an arc from Norway to Italy (Divine 1985:26; Newhouse 1989:82). The United States entered into NATO to bolster the positive effects of the Marshall Plan.
 - **National Security Council (NSC).** NSC declared deterrence as the national military strategy (McDougall 1985:95). Deterrence is based on the ability of each superpower to inflict an unacceptably destructive retaliatory strike against an aggressor (Semler, Benjamin and Gross 1987:193). At this time, the relatively small size of each military force was such that the aggressor would not be capable of disabling the enemy's force in a first strike, thus making retaliation probable.
 - **SAC and Global Power.** A SAC B-50 completed a non-stop, air-refueled flight around the world on March 2, proving that the Air Force had the technology and capabilities of global power.
 - **Military Funding.** Cutbacks in the defense budget had decreased military spending from approximately \$45 billion in 1946 to \$13 billion by 1949, with the Army and Navy experiencing the most drastic cuts. Strategic defense of the United States was chiefly in the hands of the Air Force by 1949.
 - Congress an increase in defense spending up to \$50 billion.
 - **Perimeter Defense.** As a result of NSC-68, the United States' containment policy shifted from a strongpoint defense to a perimeter or symmetrical defense around the world. The policy also changed from European economic intervention to a military buildup (NSC 1950:13-65; Gaddis 1978:198-202; 1982:91; Divine 1985:28-30; McDougall 1985:104).
 - **McCarthyism.** Senator Joseph McCarthy addressed the Women's Republican Club of Wheeling, West Virginia and claimed that traitorous actions and a State Department infested with communists were to blame for a powerful communist underground in the United States.
 - **South Korea.** Southern Korea was invaded by northern Korea on June 29, and by November, China had engaged itself in the conflict. The situation in Korea established the reality of a communist threat, released many budget constraints, and resulted in a tripling of United States defense spending. In response to the recommendations made in NSC-68, Truman increased the number of United States conventional forces and then committed these troops to a police action in Korea to contain what appeared to be Soviet expansion by piecemeal aggression (Divine 1985:34-35).
-

1950

- **National Security Council Document No. 68 (NSC-68).** NSC-68 concluded that the Soviet Union was bent on world domination and would neutralize the United States atomic advantage by 1954. Based on this conclusion, NSC-68 maintained that the United States must embark on a massive program to build up its conventional military capabilities and to develop and produce the thermonuclear hydrogen bomb. President Truman was urged to seek from
 - **RAND and Space.** RAND completed many documents in the 1950s that outlined and guided United States space policy and the use of satellites for reconnaissance.
-

1951

- **Japan Peace Treaty.** The United States signed a peace treaty with Japan to solidify United States influence and deter communist expansion in Asia (Gaddis 1978:202).
-

- **Rosenbergs.** Julius and Ethel Rosenberg were found guilty in the summer of 1951 of conspiracy to commit espionage. They were executed in 1953.
- **Research and Development - 1951-52.** Research and development programs grew as a result of the Korean War and NSC-68 recommendations. Weapon system developments during this time included the first nuclear submarine, the Quail air-launched missile program, and the nuclear hydrogen device.

1952

- **Vietnam Defense Pact.** Truman began this relationship with Vietnam to solidify United States' influence and deter communist expansion in Asia (Gaddis 1978:202). This relationship, entered into force on January 3, soured after the 1954 defeat of the French by Ho Chi Minh's freedom fighters at Dien Bien Phu.
- **McCarthy.** Truman denounced McCarthy's anti-communist tactics in June after McCarthy went after General George C. Marshall.
- **Election.** Dwight Eisenhower was elected president. Victory in the presidential election brought with it an attempt to reevaluate United States defense strategy. Eisenhower was even more preoccupied than Truman with balancing the budget, while he was equally concerned with maintaining a strong military force. In FY 1952, over half of the federal budget was allocated to the Pentagon (McDougall 1985:113), which led to the development of Eisenhower's "great equation" to balance the United States' global military commitments with its finite fiscal resources (McDougall 1985:113). During his first term, Eisenhower was able to reduce military spending by 30%. However, despite his best efforts to curb a growing defense budget, the military's nuclear weapons arsenal nearly tripled during

Eisenhower's second term (Newhouse 1989:124).

- **Ground Observer Corps (GOC).** The GOC began the round-the-clock SKYWATCH program under Continental Air Command (Figure 4.4). This program, comprised of civilian observation posts and filter centers, involved low altitude surveillance. The program was designed as an early warning surveillance system until a radar system was in place.
- **New Look.** Eisenhower told the public in May of his "New Look" plan for United States defense and its focus on maximum effectiveness at minimum cost. Nuclear weapons were cheaper than conventional weapons and by focusing on nuclear striking power, the United States could reduce the size of its conventional military forces. This was based on Secretary of State John F. Dulles' suggestion that the United States rely chiefly on its nuclear superiority and the threat of massive retaliation to thwart Communist aggression (Divine 1985:53). Eisenhower achieved a balanced budget three times during his 1953-1960 administration using these ideas.

4.1.2 Phase II: Nuclear Technology Escalation

Policy and strategy during Phase I focused on air defense, maintenance of economic and military stability in Europe, and deterrence as the issues at the core of the Cold War. During Phase II, through the policy of deterrence, the concept of MAD became a reality. The development and operation of nuclear weapons, the B-52 *Stratofortress*, ICBMs, and satellites was the physical manifestation of the military escalation of nuclear technology required to maintain deterrence.

In Phase I, Eisenhower's "New Look" was developed to reduce expensive conventional forces and increase the less-expensive nuclear forces in order to provide maximum effectiveness at minimum cost. Phase II began with the

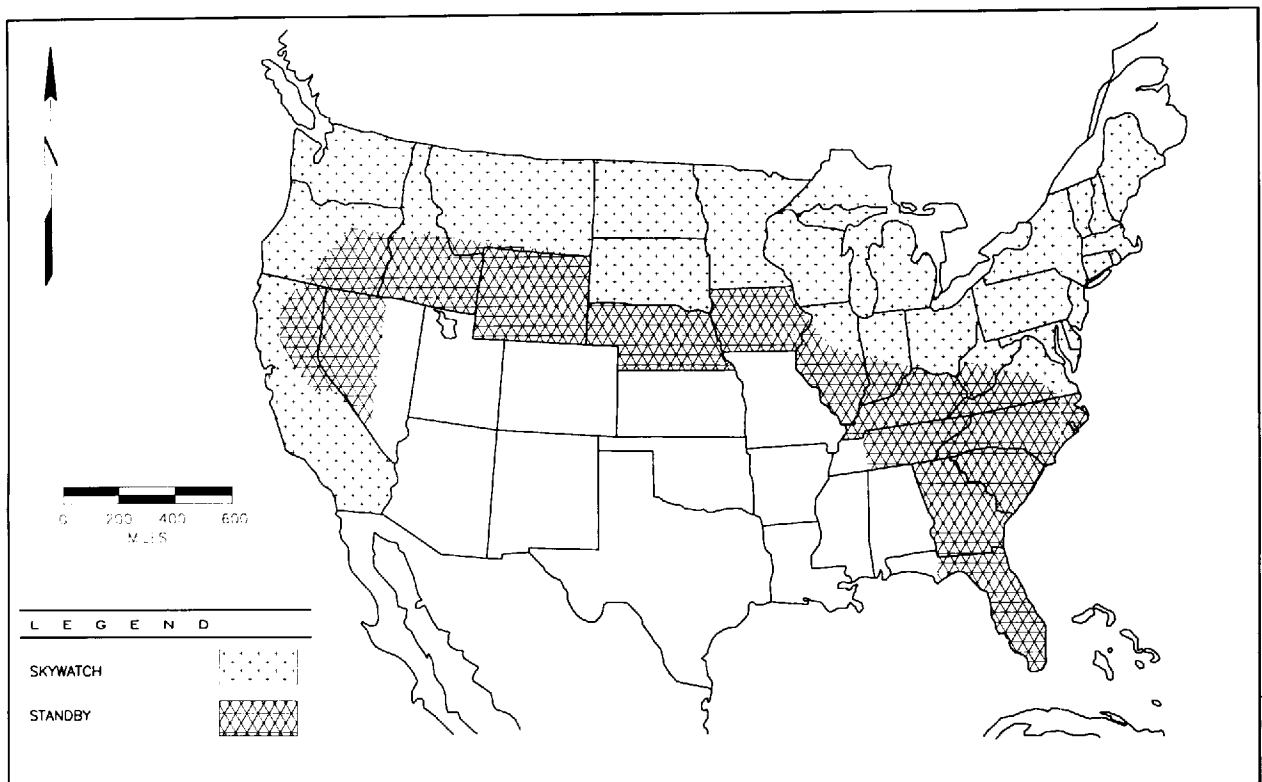


Figure 4.4 Ground Observer Corps Areas. Source: Schaffel 1991:158.

formalization of this policy in 1953 by NSC document No. 162/2. This document signified a distinct increase in the United States' military investment in nuclear technology. Because nuclear weapons were less expensive, the policy resulted in the reduction of military spending by 30% over the following four years, while increasing the military's nuclear forces. Although military funding was reduced for the other military branches, the Air Force was spared cutbacks because it provided the main military nuclear force (NSC 1953:18-25; McDougall 1985:113-114; Gaddis 1982:149-152).

meeting Eisenhower's goal of reducing the United States' conventional forces. The policy included the threat of massive retaliatory power and the willingness to use it if necessary in conjunction with indigenous forces and United States strategic air and naval power (Newhouse 1989:94).

- **Nuclear Threat.** Eisenhower felt that owning and threatening to use nuclear weapons would be an acceptable and successful deterrent to communist aggression (Newhouse 1989:91-92).

1953

- **National Security Council Document No. 162/2 (NSC-162/2).** This document formulated the official, top secret version of the New Look in United States defense strategy. The criteria advocated by NSC-162/2 focused on the establishment of indigenous forces around the world to resist communist aggression, thus

- **End of Korean War.** The death of Stalin and the concept of absolute deterrence were both factors that led to the end of the Korean War. Stalin's death triggered uncertainty in the Chinese concerning future Soviet foreign policy (Divine 1985:54-55; Gaddis 1978:214-15). Third party Indian diplomats received hints from Secretary of State John Dulles that a policy of "absolute deterrence" or an all-out

nuclear attack to prevent enemy aggressions (Semler, Benjamin and Gross 1987:1) might be employed against the Chinese. Soon after, Armistice was signed ending the Korean War.

- **Soviet Union Hydrogen Device Detonation.** When the Soviet Union gained hydrogen bomb capability on August 12, the United States became uneasy and reassessed its military capacity to deter the possibility of a Soviet first-strike attack.

1954

- **The Killian Report.** This report, also referred to as the Surprise Attack Study, was undertaken to assess the capability of the United States to maintain deterrence, and was presented to the NSC in March. The report was developed by the Surprise Attack Panel, which was created by Eisenhower and chaired and assembled by James R. Killian.

The report cited its findings in a projected timetable. During Phase 1 (1954-1955), the United States would hold an advantage in nuclear airstrike capability but would be vulnerable to a surprise attack due to the lack of an early warning system, inadequate air defense, and a growing Soviet bomber force. During Phase 2 (1956-57 to 1958-60), due to the New Look buildup in nuclear weapons capabilities and SAC, the United States would maintain a lead in strategic bomber capability. During Phase 3 (beginning in 1958-60), the Soviets would have an increase in jet bombers, possibly earlier than United States defense systems would be operational. The report claimed that there was no certainty that a stalemate could be alleviated by science and technology, dispelling the myth that United States technology would easily keep its forces superior to those of the Soviet Union.

- **The Killian Report and Missiles.** The report recommended that the highest national priority be placed on the development of the USAF

ICBM program, IRBM capabilities for land and shipboard launch, construction of an early warning system in the Arctic, and research and development into a possible anti-missile system.

- **The Killian Report and Reconnaissance.** To monitor Soviet nuclear capabilities, especially their ICBM development, the Killian Report also recommended that the most advanced technology be utilized for intelligence gathering. The result was the development and use of the high-flying U-2 photo-reconnaissance plane by 1956, and the highest priority and approval for project WS-117L, the development of reconnaissance satellites (McDougall 1985:115-117).
 - **The Killian Report and Bombers.** The Killian Report also recommended that the long-range bomber force be dispersed across the country and that some remain on airborne alert to insure survivability and the ability to retaliate. Survivability and retaliation were two important elements of deterrence.
 - **Mutually Assured Destruction (MAD).** The Killian Report concluded by recommending the study of limited nuclear war as an alternative to massive retaliation and the New Look. The report foresaw that the nuclear arms race would result in a stalemate (deterrence) based on the idea that a first-strike by either side would result in retaliation and MAD (Semler, Benjamin and Gross 1987:145). Limited nuclear war was a means by which MAD could be avoided. This concept allowed for successful military exchanges, or an intercontinental counterforce strike, without leading to a strategic exchange involving deliberate nuclear attacks on cities.
 - **Bikini Atoll.** The United States exploded a hydrogen bomb capable of rocket or aircraft delivery at Bikini Atoll on March 1.
 - **Geneva Accords.** These accords, signed in July, ended French colonialism in southeast Asia and divided Vietnam at the 17th parallel.
-

- **Communist Control Act.** The communist party was outlawed in the United States when Eisenhower signed this act on August 24.
- **Senator McCarthy.** On December 2, the U.S. Senate condemned McCarthy, ending the McCarthy era.

1955

- **National Security Council Document No. 5520 (NSC-5520).** This document called for the development of a satellite reconnaissance program (NSC 1955:1-13; McDougall 1985:120-21).
 - **Air Research and Development Command (ARDC).** The Atlas ICBM program became an autonomous unit within the ARDC and the ICBM was given the highest national priority by President Eisenhower. In May, the Air Force authorized the development of the Titan ICBM (McDougall 1985:115-16).
 - **General Curtis LeMay, Commander in Chief of Strategic Air Command (CINCSAC).** General LeMay maintained a skeptical attitude toward missiles and insisted that the ARDC demonstrate reliable and accurate launching and performance prior to SAC acceptance of the missiles. LeMay felt that until the missiles met these requirements, they would only serve as penetration aids for manned bombers and as "political and psychological weapons" (Neufeld 1990:121, 142).
 - **B-52 Stratofortress.** On June 29, the B-52 became operational, joined the SAC force, and was deployed to Castle AFB.
 - **Pinetree and DEW Lines.** The continental air defense radar system was authorized (Watson 1994:147). This air defense system consisted of three chains of early warning radars designed to detect bombers and missiles traveling over the Arctic Circle toward the United States. The system was augmented by Navy surveillance ships, radar platforms off the Atlantic Coast, and the GOC. The DEW Line was the most northern line of warning; the next line was the Mid-Canada Line; the southernmost line was the Pinetree Line, a joint system between Canada and the United States which was located near the border.
 - **Southeast Asia Treaty Organization (SEATO).** The United States had military advisors in South Vietnam by 1955, and established the SEATO to deter communist influence, chiefly Chinese, in the region (Hammond 1969:82-83, 183; Divine 1985:64-65, 68).
 - **"Bomber Gap."** The Soviet development of the Bear and Bison long-range bombers led the United States to believe that there may be a "bomber gap" between the two countries (Goldberg 1981:774-75). The Soviets were so good at secrecy and at hiding their weaknesses, United States intelligence became convinced that the Soviets were gaining an advantage (Newhouse 1989:109). Eisenhower was familiar with the tendency to exaggerate the enemy's forces. He realized that the estimates were based on testing programs, rather than on production and deployment. Although Eisenhower did not believe in a "bomber gap," the press managed to acquire the Air Force's estimates and present them to the public. The resounding outcry resulted in an additional allocation of \$928 million to the USAF budget for the production of more B-52 bombers (Newhouse 1989:111).
 - **Open Skies Policy.** At the Geneva Summit Conference, Eisenhower proposed to Khrushchev a policy whereby the United States and Soviet Union could, through aerial surveillance, observe each other's capabilities as a form of disarmament and deterrence. Khrushchev disagreed, feeling that such a program would only allow the United States to target Soviet installations more easily (McDougall 1985:127-28, 177, 180; Divine 1985:70-71).
-

-
- **Warsaw Pact.** On May 14, this organization was formed in Warsaw, Poland to assure mutual defense of the Soviet Union and Eastern European communist nations. The countries included Poland, Hungary, Bulgaria, Czechoslovakia, East Germany, Romania, and the Soviet Union.
 - **California Policy.** Missile testing was moved away from the coasts to spread out government contracts and make the programs less vulnerable (Neufeld 1990:130).
 - **IRBMs.** Eisenhower assigned the highest national priority to the development of the IRBM programs (USAF 1990:11), and soon thereafter, the Air Force developed the Thor IRBM.
 - **Reconnaissance.** Numerous U-2 missions for reconnaissance were being flown over the Soviet Union by June of 1955.
-

1956

- **Research and Development.** By June of 1956, the DoD's priority list for research and development included the Polaris and Atlas missiles, and satellite reconnaissance (McDougall 1985:129).
- **Khrushchev.** Khrushchev made his "We will bury you" statement to Western diplomats.
- **Suez Crisis.** Egyptian leader, Gamal Nasser, nationalized the Suez Canal, although the canal was owned chiefly by British and French stockholders. These countries relied heavily on the flow of middle east oil through the canal and promised to use force to reopen it. On election day in the United States, French and British troops landed near Port Said and advanced on the Suez Canal. Eisenhower, running for reelection, put United States forces on worldwide alert and threatened to use nuclear weapons to force the Egyptians, who were backed by the Soviets, to back down.

France and Britain agreed to a cease fire and the crisis broke the same day. (Divine 1985:76-77; Gaddis 1982:153, 179-80).

- **Election.** Eisenhower was reelected.
 - **Operation Try Out.** SAC formulated strategies for having up to one third of its bombers and tankers at individual bases on continuous 24-hour alert status. Exercises conducted from November 1956 to March 1957, known as Operation Try Out, proved that this strategy was feasible. Successive operations conducted at Little Rock AFB in November 1957, and Mountain Home AFB in September 1957, worked out problems identified in Operation Try Out.
-

1957

- **SAC Command and Control.** In January, SAC Headquarters and Command Post moved into a new state-of-the-art complex at Offutt AFB.
 - **North American Aerospace Defense Command (NORAD).** NORAD, a joint United States-Canada air defense command, was created in 1957. This joint command, housed inside a mountain in Colorado Springs, is linked directly with a variety of radar and satellite monitoring systems that alert NORAD immediately of a potential enemy attack (Figure 4.5). Once an attack is identified, NORAD alerts the National Command Authorities (Semler, Benjamin and Gross 1987:186).
 - **Sputnik I and II.** The Soviets successfully placed satellites into orbit around the Earth in October, leading the United States public to a "crisis of confidence" (Newhouse 1989:118). Sputnik itself was harmless enough, but to United States military forces, the important ramification was that the Soviets now possessed an ICBM capable of carrying a hydrogen warhead 5,000 miles to the United
-

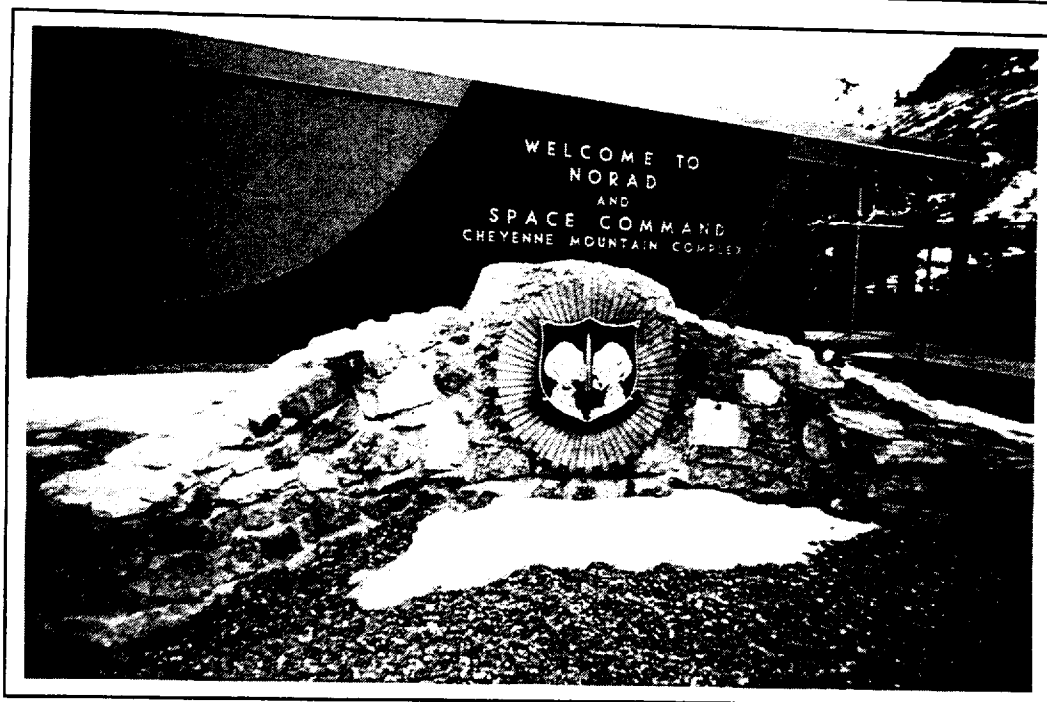


Figure 4.5 NORAD Cheyenne Mountain Complex. Source: DoD Still Media Records Center.

States, something more powerful than any ICBM currently deployed by the United States (Divine 1985:85; McDougall 1985:131-134).

- **The Gaither Report.** This report, originally a study on civil defense that swelled into an assessment of the nation's defense capabilities, was presented to the NSC. The report claimed that the Soviets might possess the capability of a first-strike against the United States as early as 1959.
- **The Gaither Report and the "Missile Gap."** The Gaither Report led to the belief that the Soviets had achieved technical superiority over the United States. The report estimated that the Soviets would be far ahead of the United States in missiles in the years 1960 and 1961 (Newhouse 1989:122). However, Eisenhower knew from the CIA's secret U-2 flights over the U.S.S.R. that the Soviets had stopped testing ICBMs in 1957 and that there was no Soviet deployment of ICBMs in Russia. The "missile gap" was a myth, though only a few people knew of these findings.
- **The Gaither Report and Bomber Dispersal.** The Gaither Report stated that a first strike could only be decisive if it succeeded in wiping out and crippling the enemy's retaliatory strike capability (Power 1958:174). Recommendations were made to spread the existing bombers out across the United States (echoing the same recommendation made by the Killian Report in 1954) and to start a massive program of fallout shelter construction to ensure survivability.
- **The Gaither Report and Eisenhower.** The report stressed the need for a survivable nuclear force and this meant a drastic increase in the military budget. Though Eisenhower agreed that a survivable nuclear force was of the utmost importance to sustain deterrence, he rejected the report's findings of a "missile gap" and insistence on major increases in military spending. He did, however, increase funding slightly for the missile programs and attempt negotiations for arms control (Semler, Benjamin and Gross 1987:109). The same night the Gaither Report was presented

(November 7), Eisenhower addressed the American people and discussed the United States military capabilities, including some of the report's information (McDougall 1985:151; Divine 1985:85).

- **Missile Funding.** Eisenhower refused to commit large sums for first-generation, liquid-fueled missiles such as the Atlas and Titan. He devoted most of the funding to second-generation weapons such as the solid-fueled Polaris Submarine Launched Ballistic Missile (SLBM), and the Minuteman ICBM. Solid-fueled weapons had a better safety record and could be buried in deep, concrete silos, thus giving the United States the advantage of two types of missiles that were considered survivable in a first-strike situation.
- **Khrushchev.** Khrushchev became Soviet premier, as well as first secretary to the communist party, on June 23. This was the first time one man held both positions, and was an example of Khrushchev's power (Medvedev and Medvedev 1976).
- **Inquiry into Satellite and Missile Programs.** Democratic Senator Lyndon Johnson organized and chaired this inquiry committee to determine the real state of United States defense. The committee met for nearly one month between November 25, 1957 and January 23, 1958. Their recommendations called for strengthening SAC, accelerating missile production and anti-missile research and development, and reorganizing the DoD.

1958

- **Explorer I Satellite.** Finally, after a series of launch failures, the United States succeeded in placing a satellite in orbit around the Earth on January 31, restoring somewhat the public's confidence in the assumed technological superiority of the United States (McDougall 1985:168-69).

- **Defense Triad.** Eisenhower viewed the Polaris and Minuteman missiles, coupled with the B-52 bombers, as the United States defensive triad, stabilizing the United States and Soviet forces in a condition of deterrence as the decade of the 1950s came to an end (McDougall 1985:151-155; Divine 1985:85-86).
- **DEW Line and the Pinetree Line.** The new radar early warning systems came on line in North America's northern periphery.
- **National Aeronautics and Space Act.** Enacted on July 29, provisions of this act state that all space activities of the United States shall be devoted to peaceful purposes for the benefit of mankind (Glines 1963). From this act the National Aeronautics and Space Administration (NASA) was established.

1959

- **Airborne Alert.** SAC developed a system of airborne alert with bombers and tankers in the air 24 hours a day "ready to go to target."
- **"Kitchen Debate."** Senator Nixon visited the Soviet Union. He and Khrushchev conducted what became a heated debate over the merits of capitalism and communism in the kitchen of a model American home set up at a Moscow fair.
- **Fidel Castro.** Castro emerged as the new leader in Cuba and steadily drifted toward the Soviet sphere of influence.

1960

- **"Looking Glass."** SAC began testing an auxiliary airborne command post. The system consisted of periodically placing one of five specially configured KC-135 aircraft in the air on 15 minutes notice to serve as an alternate
-

command post. The airborne alert operation mirrored the activities of the command post on the ground, thus the name "Looking Glass" (USAF 1991a:1-13).

- **U-2 Reconnaissance and Francis Gary Powers.** On May 1, 1960, the Soviet Union shot down a U-2 reconnaissance aircraft and captured the pilot. Eisenhower took full responsibility for the incident, as few in the government knew of the U-2 flights. It was because of the U-2 flights that Eisenhower had known that there was no "missile gap" after Sputnik, as feared by members of Congress, the press, and the public. After the capture of Francis Gary Powers, Eisenhower released information about the U-2 and the reality of the Soviet missile situation. However, even with the new data, the campaigning Democrats and the media clung to the belief of a "missile gap."
- **The RAND and Reconnaissance.** The RAND think tank stated that reconnaissance planes were a temporary solution, and that satellites would be the permanent answer for reconnaissance (McDougall 1985:117). This was confirmed when Francis Gary Powers was shot down over the Soviet Union. Eisenhower realized that reliable reconnaissance was imperative, both to the stability of deterrence and to arms control verification (McDougall 1985:112).
- **Eisenhower and the Space Age.** Eisenhower realized that the advent of satellites opened up a new frontier in international airspace and the regulations governing it. He recognized the need to politically ease into the Space Age and his administration took great caution in reducing the publicity of DoD space launches (McDougall 1985:191).
- **National Security Council Document No. 5918 (NSC-5918).** Eisenhower approved NSC-5918, which drove the space program forward by presenting the importance of the psychological impact of space achievements by either superpower. This document had major budgetary consequences, namely huge increases in allocated funds for the space program for FY 1961.
- **Satellite Interceptor.** In his last months as President, Eisenhower approved development of a Satellite Interceptor (SAINT), mainly because he did not want the Soviet Union to initiate one first (McDougall 1985:226).
- **Eisenhower/Khrushchev Negotiations.** Since 1958, both the United States and the Soviet Union had refrained from above-ground nuclear testing. Eisenhower recognized that trying to limit nuclear arms would require a lessening of tensions, so he began negotiations with Premier Khrushchev for a ban on all types of nuclear testing. One of the obstacles of the negotiations was the knowledge that any type of ban could not be based on trust and would have to be verifiable. Neither side wanted to grant the other the weapons system access required to provide verification. The Francis Gary Powers incident and Eisenhower's refusal to halt further U-2 flights led to the cancellation of a summit meeting in Paris between Eisenhower and Khrushchev.
- **Election.** John F. Kennedy was elected president. In Eisenhower's farewell address, he warned the United States public to prevent the military-industrial complex from acquiring too much influence over national policy and issues (Newhouse 1989:90). During his administration, as military spending increased, Eisenhower had become increasingly concerned with the power of the military-industrial complex. Kennedy won the 1960 election by a narrow victory. During the campaign, the Democrats had made issues out of the imaginary "missile gap" and the Soviet lead in space, a lagging economy, and the idea that it was time for new leadership (Divine 1985:98). The Kennedy administration was determined to move the United States ahead economically and be decisive and flexible in terms of foreign policy and national defense (Gaddis 1982:202-03; Divine 1985:102-03). Despite

the administration's efforts to replace the strategy of massive retaliation with one of Flexible Response, the applicability of both strategies to crisis situations was debated (Glynn 1984:28-29). The debate continued from the Kennedy administration to the end of the Cold War, and the two strategies were incorporated side-by-side.

1961

- **"Massive Retaliation" and Kennedy.** The massive retaliation defense strategy of the Eisenhower administration concerned Kennedy. He felt that the strategy left only two choices for reaction: do nothing or retaliate in full against the enemy, thereby inviting the destruction of the United States (Newhouse 1989:162).
 - **Limited Nuclear War and Kennedy.** This Eisenhower option of a nuclear war that would not result in MAD was also found to be improbable by the Kennedy administration.
 - **"Flexible Response."** Kennedy and his advisors developed this strategy, whereby different potential crisis situations would be matched with an equal number of potential options for reaction. Flexible Response recommended "that if deterrence did fail, nuclear weapons should be used selectively. The initial targets would be enemy bomber and missile sites, of which there were, fortunately, not many" (Newhouse 1989:163). It was made clear that the United States would only use massive nuclear force in retaliation to a first-strike.
 - **Flexible Response and the Nuclear Threshold.** Flexible response would result in raising the "nuclear threshold," the point at which nuclear weapons would be used (Newhouse 1989:23). The administration had realized that nuclear weapons were no longer a usable military power.
 - **"Wars of Liberation" and Flexible Response.** Khrushchev's wars of liberation were considered piecemeal aggression by the United States. In response to Khrushchev's strategy, Kennedy favored strengthening the military establishment so the United States would be prepared to function in a modern world complete with numerous interventions. Flexible Response would be able to gauge the amount of force needed while tailoring the response to the political and geographical nature of the individual crisis that arose.
 - **Flexible Response and McNamara.** Secretary of Defense Robert McNamara set about getting United States forces in a position to enforce Flexible Response. The United States' deterrent was now based on the knowledge that United States bombers and missiles were better, more numerous, and survivable, so McNamara recommended the allocation of funds to produce more submarines, Polaris missiles, and Minuteman missiles. He also put more bombers on ground alert.
 - **"The McNamara Revolution."** McNamara rid the DoD of developments which he felt would never come to fruition (Newhouse 1989:163). One of these was the X-20 Dyna-Soar, a precursor of today's space shuttle (McDougall 1985:325).
 - **Flexible Response and the Military Budget.** The new strategy required an increase in military funding to support the increase in conventional forces which would be used in response to aggression. Kennedy and his advisors believed that the United States could increase its military spending by supporting a Keynesian economic policy of expanded economic growth and full employment.
 - **Flexible Response and Missiles.** The administration wanted to change the focus of defense strategy from its reliance on strategic bombers to one possessing a larger missile capability. Kennedy advocated the increase of United States nuclear missile capability
-

with a goal of 1,000 ICBMs and up to 656 SLBMs (Gaddis 1982:199-236; Divine 1985:104-05).

- **The Berlin Wall.** The problem of what to do about Berlin reemerged in the spring and threatened to become a full scale confrontation between the United States and the Soviet Union. The Soviets had chafed at the fact that for more than a decade, Berlin had served as the escape route for thousands of talented East Germans and they wanted desperately to put a stop to it. Through various maneuvers, Kennedy signaled that the United States would be willing to risk nuclear war over Berlin. After two weeks of high anxiety, Khrushchev ameliorated the situation by ordering a wall to be built separating East and West Berlin, and the crisis gradually faded (Dinerstein 1976:127-135; Kaufman 1964:256-59; Hammond 1969:160-62; Divine 1985:110-112).
- **Southeast Asia.** Kennedy, after conferring with the Joint Chiefs, decided against air strikes in Laos to close the Ho Chi Minh trail--the supply line that reinforced the Vietcong. After being told by Generals Douglas MacArthur and Charles de Gaulle that it was "an entanglement without end," Kennedy felt the United States should support the regime of Ngo Dinh Diem in South Vietnam. Kennedy decided against sending United States troops to South Vietnam, and hoped instead, through counterinsurgency methods and 400 Green Berets, to be able to stabilize the country and hold free elections (Gaddis 1982:245-46; Divine 1985:106-07).
- **Looking Glass.** The SAC airborne command post tests were successful and began to pull continuous alert.

enough against Castro's new communist supported regime; therefore, he supported the invasion of Cuba. His decision not to intervene using United States troops was based on the premise that Khrushchev would probably have moved against West Berlin (Hammond 1969:157-59; Divine 1985:106-07).

- **Post-Attack Command and Control System (PACCS).** Kennedy's administration established the PACCS to better control the massive buildup in military firepower. The PACCS was a system of aircraft, equipped with command and control facilities, that served as a command post in the event the ground posts were destroyed. The system consisted of Looking Glass operated from Offutt AFB by SAC, the National Emergency Airborne Command Post (NEACP - pronounced knee-cap) operated from Andrews AFB by the National Command Authority, and auxiliary posts and support squadrons. The auxiliary posts were located at Barksdale AFB, Louisiana; Westover AFB, Massachusetts; and March AFB, California. The support squadrons were located at Mountain Home AFB, Idaho; Lincoln AFB, Nebraska; Lockbourne AFB, Ohio; and Plattsburg AFB, New York.
- **The National Military Command System.** This system was designed to gather information from satellites, communications systems, and other technology, and then transmit communications and order launches (Semler, Benjamin and Gross 1987:180-181).
- **"Gold Codes."** Another procedure started by the Kennedy administration was the use of secret codes that would authorize the use of United States nuclear weapons. The codes were changed daily and submitted to the White House and each installation containing nuclear weapons. The use of the Gold Codes enabled a quick presidential decision to launch nuclear weapons (Semler, Benjamin and Gross 1987:113).

1962

- **Bay of Pigs.** Without the aid of air power, CIA-trained Cuban nationals failed in their attempt to overthrow Castro. Kennedy had criticized Eisenhower for not being aggressive
-

-
- **Titan and Atlas Missiles.** The Titan missile became operational and joined the SAC alert force in April, and the Atlas F came on line in August.
 - **Airborne Command.** In July, SAC augmented its airborne command operations with the addition of three auxiliary airborne command posts. SAC organized four support squadrons equipped with B-47s modified with communications equipment (USAF 1991a:13-15).
 - **Cuban Missile Crisis.** The Cold War tension between the United States and the Soviet Union reached its height in the fall of 1962 when Khrushchev sought to even the arms race by placing IRBMs and Medium Range Ballistic Missiles (MRBMs), of which the Soviets had many, in Cuba.
 - **Cuban Missile Crisis and Reconnaissance.** U-2 flights discovered signs of missile sites under construction in Cuba. Although willing to accept defensive surface-to-air missiles, the United States would not allow offensive, ground-to-ground missiles deployed so close to the United States.
 - **Cuban Missile Crisis and SAC Alert.** Kennedy was fully prepared to go to the brink of nuclear war to halt the Soviet objective. Kennedy addressed the nation concerning the missile site construction in Cuba, but prior to his public announcement, SAC had already begun to intensify its defense posture. SAC deployed B-47 bombers, put aircraft on full alert, and armed all bombers with nuclear weapons in accordance with emergency plans. B-52 airborne training was expanded to actual alert status, and the ICBM force, including Atlas and the first Minuteman missiles, was brought into alert configuration. Before the crisis ended, SAC was poised to strike with the most lethal array of weapons ever assembled (USAF 1991a:16). If there had been a nuclear response to this crisis, it would have been a massive retaliation.
 - **Cuban Missile Crisis Resolution.** As Soviet ships proceeded toward Cuba with their cargo, the United States Navy set up a blockade to deter their arrival, and at the last minute, the Soviet ships changed course away from Cuba. Khrushchev and Kennedy had reached an agreement whereby the United States would withdraw its outdated missiles from Turkey (something that was already planned) and would not invade Cuba. This resolution put an end to the Soviet policy of detente through intimidation (Dinerstein 1976:152-229; Gaddis 1978:232-240).
 - **First-Strike Capabilities.** A USAF document supported development of forces enabling first-strike capabilities for the United States. Secretary of Defense McNamara opposed the recommendation and Kennedy accepted his judgement (McNamara 1986:51). Instead, development centered around deterrence and reinforcing the survivability of command and control systems.
-

4.1.3 Phase III: Detente

During Phase II, the escalation of nuclear weapon technology intensified. This was accompanied by developments that would ensure the survival of nuclear forces for retaliation, including "hardened" missile silos, airborne command and control, and the dispersal of nuclear bombers. While Phase III continued to develop nuclear technology, the developments were incremental compared to the activity of Phase II. Phase III is characterized by developments in the areas of negotiations and arms limitation treaties leading to detente.

Detente is a policy of lessening tension in relations between countries based on peaceful coexistence. The seeds of detente were sown in 1963 with the Limited Test Ban Treaty. By 1969, the major players, the United States, China, and the Soviet Union, all became favorable to the concept.

Also in Phase III, the United States disengaged from Vietnam. China ended its Cultural Revolution, and experienced hostilities with the Soviets along their common border on the Ussuri River.

Meanwhile, the Soviets achieved strategic parity with the United States. However, in maintaining their military strength, the country coped with the financial difficulty of meeting the demand for consumer goods. There was a widening economic gap between themselves and the West in terms of technology and managerial skills. As part of detente, Nixon acquired most favored trade status for imports from the Soviet Union and initiated the sale of United States machine parts and grain in return. By 1974, Kissinger viewed reciprocal trade agreements as one important way to integrate the Soviet economy into the world economy, fostering an interdependence that would result in more stability in the world political situation (Gaddis 1978:260-62). Nixon and Kissinger believed that this concept of economic and political "linkage" might help keep the global balance of power intact (Gaddis 1978:263-65; 1992:38).

The understanding of this linkage and the desire for world stability were the underlying principles that led to detente. Detente was characterized by negotiations and treaties that were meant to reduce and limit the development of the superpowers' nuclear arsenals. Although there was a lessening of tensions between the Soviet Union and the United States, there was continued development and maintenance of nuclear technology within the negotiated parameters of the Phase III treaties.

1963

- **Limited Test Ban Treaty.** A treaty between the United States, Britain, and the Soviet Union to limit the testing of nuclear weapons was ratified by Congress. The voluntary test ban of 1958 had ended during the Berlin Crisis in 1961, when the Soviets conducted a series of atmospheric tests. Agreement on a total ban was stalled due to arguments over on-site

inspections. Detente is believed to have been started between the United States and the Soviet Union with this treaty (Semler, Benjamin and Gross 1987:74).

- **"Hot Line."** This was a direct teletype link between the White House and the Kremlin.
- **Titan and Atlas Missiles.** SAC General LeMay approved a plan to phase out Atlas D and E and Titan I missiles.
- **Minuteman and Titan II.** Second generation missiles went on alert. The Titan IIs were located at Davis-Monthan AFB, Arizona and the Minuteman missiles were located at Ellsworth AFB, South Dakota.
- **Johnson.** President Kennedy was assassinated on November 22 and Lyndon Johnson assumed the presidency.

1964

- **Election.** Johnson was elected president. What Kennedy had called his New Frontier for Americans became, in fact, Johnson's Great Society. Kennedy had not possessed the backing of the conservative Southern Democratic block and failed during his administration to get his domestic program, which addressed Medicare, aid to education, and civil rights, passed into legislation. Johnson, who had this necessary support, added his own fight against poverty to the program (Divine 1985:141, 145). When he became president, Lyndon Johnson pushed Kennedy's domestic policies through Congress. The decisions made by the Kennedy administration to implement the strategy of Flexible Response, to improve command and control over the forces, and to implement changes to the United States nuclear arsenal continued into Johnson's term.
 - **Khrushchev's removal.** The new Soviet leadership of Leonid Brezhnev and Alexei
-

Kosygin refused to negotiate an arms control agreement from a position of inferiority. They instead embarked on a vigorous program to reach strategic parity with the United States.

- **The Gulf of Tonkin Resolution.** This was passed by Congress on August 7 after a North Vietnamese attack on a United States destroyer. It gave Johnson the power needed "to repel any armed attack against forces of the United States and to prevent further aggression" (Divine 1985:139). This in effect gave the president the power to wage full-scale war in Vietnam. Johnson's goal of implementing his domestic program was increasingly impeded by the substantial spending needed to fight an escalating war in Vietnam.

1965

- **Operation Rolling Thunder.** This was a policy of limited bombardment which increased the bombing of North Vietnamese positions over the next three years. The number of troops in Vietnam climbed from a few thousand in 1964 to 200,000 by the end of 1965 and to 485,000 by the end of 1967. At home, civil unrest escalated with a series of race riots in northern cities and increased outcry and protest by United States citizens who were against the war.
- **Dominican Republic.** Johnson sent troops to the Dominican Republic to "prevent another communist state in this hemisphere."
- **SAC Airborne Command Posts.** These were upgraded to EC-135s and assumed both the Looking Glass and auxiliary airborne command post missions (USAF 1991a:20-23).

1966

- **Anti-Ballistic Missile System (ABM).** The Soviets again issued a "first" by deploying an ABM system, called "Galosh," surrounding the

city of Moscow. This caused great concern around the world because ABM systems deployed around cities were seen as ruling out the possibility of a successful retaliatory strike, thus upsetting the balance of terror (Newhouse 1989:200). Proponents of the system said that if the enemy knew their missiles would be destroyed that they would never bother to strike. Skeptics of the system said that because ABM systems could be overwhelmed with more firepower, the systems would only serve to ignite a resurgence of the nuclear arms race (Newhouse 1989:201).

- **Multiple Independently-Targetable Reentry Vehicle (MIRV).** At the same time that ABM systems were being deployed, MIRVs were being developed and were seen as the answer to the ABM system. MIRVs could overwhelm an ABM system and were cheaper than missiles with only one warhead, thus giving each individual missile "more bang for the buck" (Newhouse 1989:202).
- **Minuteman II.** This system first went on alert at Grand Forks AFB, North Dakota early in 1966.

1967

- **MC 14/3.** After much debate, the NATO adopted the Flexible Response strategy, inscribing it into a document known as MC 14/3.
 - **Outer Space Treaty.** This treaty limited military use of space, and was signed by the United States, Soviet Union, and 60 other nations.
 - **PACCS.** PACCS received the Airborne Launch Control System (ALCS), which enabled ICBM launch or launch override from the PACCS aircraft.
-

1968

- **Strategic Deterrence.** As the USAF role in the Vietnam War increased between 1965-1968, SAC became hard pressed to maintain its primary function--strategic deterrence. By 1968, 40% of its bombers and 100% of its missiles were required to be on alert, but as SAC assets were sent into combat, air units found it difficult to maintain alert lines. Even with an increase in troops, some of the bombers and tankers could not be placed on alert due to crew shortages. Some crews even rotated between combat tours in Southeast Asia and alert status in the United States, demanding extraordinary effort and sacrifice to fill the need for manpower (USAF 1991a:24-25).
 - **ICBMs and Parity.** Throughout the 1960s, the United States intelligence estimates tended to underestimate the Soviet systems and to misjudge the direction they would go with future developments (Newhouse 1989:197). While the United States was concentrating on new submarines, the B-1 bomber, and smaller, solid-fueled missiles, the Soviets were making huge liquid-fueled ICBMs their first priority. At first, the United States thought that the Soviets would follow their lead, and experts estimated that the Soviets would stop production of new missiles once they achieved parity. In actuality, the Soviets intended on having more missiles and launchers than the United States (Newhouse 1989:198).
 - **Strategic Arms Limitation Treaty I (SALT I).** Before he left office, Johnson participated in the first SALT I talks and tried to negotiate an arms agreement with the Soviets to limit ICBMs and ABM systems and to ban any further proliferation of nuclear weapons. The negotiations were initiated partly in response to the Soviet deployment of an ABM system and the impending development of MIRVs. The Soviet invasion of Czechoslovakia in August 1968 postponed any further negotiations concerning arms control between the two nations.
 - **Nuclear Arms Nonproliferation Treaty.** This was the first agreement aimed at controlling the horizontal and vertical proliferation of nuclear weapons. It was signed by 60 nations, including the United States and the Soviet Union. The treaty states that the signatories will not transfer nuclear weapons or the technology for building them to a country that does not already have that technology. It also states that the United States, Soviet Union, and Britain are the only countries allowed to maintain a nuclear force and that they will pursue agreements to implement nuclear disarmament (Semler, Benjamin and Gross 1987:186). France, India, and China, who also have nuclear weapons, still have not signed this treaty.
 - **Election.** Due in large part to the war and increased defense spending, Johnson's hopes to create a Great Society in America failed and he decided not to run for reelection (Divine 1985:149-155; Gaddis 1982:259-273). Richard Nixon was elected President. President Nixon and Henry Kissinger, his National Security Advisor and, later, Secretary of State, both had long careers of being outspoken against communism. Despite this, they began a lengthy series of negotiations that would culminate in the SALT I treaty. Nixon wanted to lower the defense budget in response to the slowing down of the war in Vietnam. However, he was adamant that the United States not fall behind the Soviets militarily, especially with the possibility of a SALT agreement in the future.
-

1969

- **Nixon Doctrine.** Nixon ordered the first troops out of Vietnam and called on the Third World to assume responsibility for their own security.
 - **Strategic Parity.** The Soviets reached virtual strategic parity with the United States by
-

1969 through their continued development and production of offensive and defensive nuclear weapons (Rostow 1972:370-71; Gaddis 1978:248-54; 1982:268-69; Divine 1985:168).

- **"Safeguard."** When President Nixon approved the establishment of the United States ABM system "Safeguard," the public and Congressional outcry against deploying it around a city was great enough that it was deployed near Grand Forks AFB, North Dakota to guard a Minuteman II missile complex (Newhouse 1989:215). Nixon and Kissinger used the deployment of an ABM system to draw the Soviets to the bargaining table for the SALT negotiations.

1970

- **Minuteman III (complete with MIRVs).** This system was deployed and on alert at Minot AFB, North Dakota in August.
- **PACCS.** PACCS was reorganized and airborne command and control squadrons were moved from Westover, Barksdale, and March AFBs to Offutt, Grissom, and Ellsworth AFBs.

1972

- **SALT I.** SALT I began in 1969 and resulted in two agreements, both of which were signed and ratified by the Senate in 1972. SALT I was not only an arms agreement between the United States and Soviet Union, but an attempt by Nixon and Kissinger, through negotiations, to make the Soviets feel secure enough to continue trying to resolve outstanding issues between the two countries (Gaddis 1978:258-59).
- **Interim Offensive Weapons Agreement.** As the first agreement in SALT I, this agreement set numerical limits on the number of strategic missile launchers that could be deployed over the following five years. The Soviets were

allowed higher limits than the United States to compensate for the technological advantage of the United States. The United States' limit for ICBMs was set at 1,054, which was the number of missiles already deployed in 1972, thus ICBM deployment was stalemated. However, advances in missile technology, such as the size of missiles and the use of MIRVs, were not addressed in the treaty. Therefore, existing missiles could be replaced with larger missiles or with missiles carrying MIRVs.

- **Anti-Ballistic Missile Treaty.** This is the second agreement in SALT I. This agreement allows each superpower to deploy two ABM systems designed to defend against nuclear missiles, one to protect the nation's capital and one to protect a missile site. The treaty prohibits technological advances in ABM systems (Semler, Benjamin and Gross 1987:245).
- **Nixon's Budget.** Allocations reflected the slowing down of the war in Vietnam, however he didn't want the United States to fall behind the Soviets militarily (Newhouse 1989:230). Nixon added \$1.25 billion to the budget for strategic arms, but most of this allocation went to development of the Trident submarine. The SAC bomber force was augmented with the addition of the FB-111 bomber in 1969.
- **Short Range Attack Missiles (SRAMs).** SRAMs added to the effectiveness of the FB-111s and the B-52s when they were deployed in September (USAF 1991a:25-29).
- **Election.** Nixon was reelected.

1973

- **Paris Accords.** The signing of this peace agreement established a cease-fire and political settlement of the Vietnam War.
-

- **War Powers Act.** With the passage of this act, Congress limited the president's ability to wage undeclared wars.
- **Nixon's Resignation.** Nixon resigned his presidency and Gerald Ford became President. During the Ford and Carter presidencies, continued attempts at negotiations between the super powers of the east and west helped to minimize global tensions. SALT I and II, the Vladivostok Accords, and the ABM Protocol were all implemented during the Ford and Carter administrations. This was achieved at a time when international events such as the Arab-Israeli war (1973), the conclusion of the Vietnam conflict (1975), the Soviet invasion of Afghanistan (1979), and the Iranian hostage situation (1979-1980) strained east-west relations. The 1970s are known for the steady development of detente between the two superpowers despite these events. During this time, new weapons development and deployment were dramatically low, especially when compared to the activity present during earlier administrations.
- **Arab/Israeli War.** SAC forces were put on alert as part of an effort to keep the Arab-Israeli conflict from escalating into a superpower confrontation (USAF 1991a:29-30).
- **"Schlesinger Doctrine."** Developed by Secretary of Defense James Schlesinger, this doctrine completely replaced massive retaliation with a Flexible Response strategy. As a result of the Schlesinger Doctrine, Limited Nuclear War became the United States official strategy (Semler, Benjamin and Gross 1987:250).

1974

- **Vladivostok Accords.** The Accords amend the SALT I Interim Offensive Weapons Agreement by establishing numerically equal limits on the number of nuclear weapons deployed by each country and limiting nuclear weapons equipped with MIRVs. It also establishes that the Soviets

can deploy heavy missiles in exchange for the United States maintaining a nuclear missile force in Western Europe (Semler, Benjamin and Gross 1987:303).

- **ABM Protocol.** The Protocol amends the SALT I Anti-Ballistic Missile Treaty by reducing the number of permitted defensive missile systems from two to one. It also allows each country to move their ABM system once.

1975

- **Helsinki Accords.** These were signed pledging the United States and Soviet Union to accept European borders, protect human rights, and promote trade.
- **PACCS.** The NEACP E-4 aircraft and the 1st Airborne Command and Control Squadron were moved from Headquarters Command and Andrews AFB, Maryland to SAC and Offutt AFB, Nebraska.

1976

- **Nuclear Test Treaty.** The United States and Soviet Union signed a peaceful nuclear explosion treaty limiting the size and nature of underground tests.
 - **Election.** Jimmy Carter was elected President. President Carter was most concerned with the problems surrounding command and control. When he became president, the command and control structures were designed so that the President (flying in NEACP) would relay messages and launch codes to SAC (flying in Looking Glass), who would then relay the messages and codes to Minuteman launch control centers, bombers in flight, and submerged submarines. If any of these links was destroyed, then mayhem would rule (Newhouse 1989:285). Carter was the first president to test the defense system
-

to the point of going aloft in the airborne command post. Due to his concerns with command and control, Carter integrated communications redundancies and had the Single Integrated Operational Plan (SIOP) revised so that procedures were included to ensure the United States communications network used for command and control would function properly while under attack (Semler, Benjamin and Gross 1987:260). Carter also removed uncertainties by developing procedures to follow in a crisis so that people would have an idea of what would happen in a certain situation.

1977

- **Tomahawk Missiles.** In May 1977, Carter announced that he was cancelling the B-1 bomber program in favor of cruise missile development. His reasoning was that the cruise missile, launched from a B-52, had a better chance of making its target than a bomb dropped from the B-1, and it could do so with much less expense. The Tomahawk was a cruise missile that was cheaper to build and maintain, and could be made for both the Air Force and the Navy.
- **MX Missile.** The Air Force, disappointed at not having a new bomber (the B-1), responded to Carter's Tomahawk endorsement by endorsing the MX (missile experimental) missile. This missile would answer their needs by being a "silo-buster" and survivable (if they could design a new storage system). The silo-busting abilities of the MX bothered many strategists, including Congress, because any weapon designed to destroy silos and the missiles in them was also seen as a first-strike weapon. The addition of a first-strike weapon would produce an unstable atmosphere. However, the Soviet missile SS-18, a silo-buster, was already deployed and about to receive an improved guidance system.

1979

- **MX Missile.** Carter finally approved the MX missile in 1979 and allocated funds for its development. Attention then turned to how the missile would be deployed and stored.
 - **"Window of Vulnerability."** This phrase was coined during the late 1970s to describe the time between the Soviet's improvements to the existing SS-18 and the time when the United States deployed a silo-busting missile of their own (the MX) (Newhouse 1989:320).
 - **SALT II.** From 1972 through 1979, negotiations and talks were started and stalled in trying to develop a new SALT agreement. In 1979, Carter and Brezhnev both signed the SALT II agreement, which attempted to attain parity between the superpowers by establishing numerically equal limits on nuclear weapons. The treaty also restricted modernization of existing weapons systems, the number of nuclear missiles equipped with more than one warhead, and development of new ICBMs to only one (Semler, Benjamin and Gross 1987:246-47). This agreement was held up by the Senate during ratification hearings.
 - **Soviet Invasion of Afghanistan.** Ratification of the SALT II agreement was stymied by quick changes in Soviet leadership and postponed indefinitely with the 1979 Soviet invasion of Afghanistan. SALT II ratification was pulled from the Senate by Carter on January 3, 1980 because of the invasion (Newhouse 1989:331). However, both parties promised to abide by the provisions of the Treaty until 1986.
 - **China.** The United States and China announced restoration of full diplomatic relations.
 - **Operation Global Shield 79.** One of the most comprehensive nuclear war exercises ever conducted was SAC's first attempt at exercising its complete role within the SIOP
-

short of nuclear warfare. It included hundreds of bombers, tankers, and missiles put on alert status. Global Shield became a regular exercise in preparedness, which increased in scope throughout the 1980s (USAF 1991a:34).

1980

- **Presidential Directive 59.** Carter re-established Limited Nuclear War as the official United States military strategy through Presidential Directive 59. In the directive, Carter introduced "countervailing strategy," which emphasizes flexibility in the use of nuclear weapons, giving the President many options on whether and how to use them (Semler, Benjamin and Gross 1987:60-61; Glynn 1984:28-29). It also emphasized the need to develop military options between MAD and doing nothing, whereby the reaction would be equivalent to the initial action (Glynn 1984:28).
- **SIOP and the Soviet Union.** Directive 59 had a major effect on the Defense Department's SIOP by introducing the option to strike at the Soviet command structure, since that was what Carter felt the Soviets would do to the United States. Many people disagreed with this option because it was necessary to talk to the other side's command structure during the war, or there would be no way to end it short of running out of weapons (Newhouse 1989:286).
- **Command and Control Redundancy.** Carter invested heavily in upgrading the command structure and offsetting vulnerability by adding redundant communications systems. This also resulted in a loosening of central control over the command system, something with which Eisenhower and Kennedy had been concerned (Newhouse 1989:286).
- **Election.** Ronald Reagan was elected President.

4.1.4 Phase IV: A New Deterrence

Phase IV is marked by a dramatic change from the foreign policy of the late 1970s under President Carter. The former two presidents had worked for and achieved a state of parity between the two superpowers' nuclear arsenals. This in turn strengthened the state of deterrence for "parity (or at least the perception of parity) is essential if the superpowers are to be deterred from initiating a nuclear war" (Semler, Benjamin and Gross 1987:215). President Reagan, however, believed the Soviet Union was given a military advantage through the treaties and suspected that they did not adhere to them. As a result of his suspicions, Reagan suspended the SALT limitations, thus removing parity. He advocated an all out military buildup as the only way to bargain with the Soviets. This foreign policy, which characterizes Phase IV, sought to exhaust rather than reform the Soviet Union with an intensive military buildup.

Reagan also introduced the ultimate anti-missile system, SDI. This system was based on the belief that if incoming missiles could be destroyed, nuclear weapons would be obsolete. The SDI was considered by Reagan as the way to rid the world of ballistic missiles. Instead of avenging lives through retaliation, the United States would be saving lives, and Reagan believed this was a much more moral cause.

Reagan ignored Robert McNamara's lectures on how defensive systems would simply initiate a massive buildup of missiles until there were enough to saturate the existing defensive system (Newhouse 1989:359-360). As Newhouse describes it, "Overnight, nuclear deterrence, the policy that had anchored peace for decades and defined relations between big governments was out and defense of some radical kind was in" (1989:361).

1980s

- **Soviet Succession.** After the 1970s, there was a rapid evolution of leadership in the Soviet Union. The death of Brezhnev in November 1982, followed in quick succession by the deaths of Yuri Andropov and Konstantin Chernenko, culminated with the progressive Mikhail Gorbachev coming to power.
 - **Soviet Economy.** The economic stagnation that enveloped the Soviet Union during the final Brezhnev years continued until the mid-1980s. The new United States military buildup imposed increasing burdens on a Soviet economy straining to provide domestic commodities, while trying desperately to develop new technology for increasingly sophisticated weapons systems. This resulted, for the first time since 1917, in the Soviets realizing that they must have new systems of economic and political organizations to stem the recurring cycle of backwardness prevalent in Russian economic history.
 - **Reagan's Perception of the Soviet Union - 1980s.** Reagan's administration was under the misperception that the Soviets cheated on their treaties and were able to get ahead through the agreements the United States sponsored with them (Newhouse 1989:341). McNamara points out that the Soviets act in their own self-interest, as does the United States, and arms control agreements would not be entered into unless they were in the interest of the signatories. If the Soviets did not want to comply, they would not sign an agreement (McNamara 1986:68).
 - **Margin of Safety - 1980s.** Reagan suspended the SALT limitations so that he could create a "margin of safety" through a series of nuclear weapon procurement decisions that would restore the United States' measure of superiority. By destroying parity, he was close to upsetting the balance of deterrence, and this made both Americans and Soviets nervous (Newhouse 1989:337-338).
 - **SDI and the 1972 ABM Treaty.** The development of SDI violated the terms of the 1972 ABM Treaty in its narrow and traditional interpretation. As soon as Reagan announced his plans for SDI, he had policy advisors reinterpret the treaty to find any loopholes that would allow development of Reagan's "space shield." The new interpretation said that under the treaty, systems could be tested and developed, but not deployed. In Reagan's second term, this reinterpretation was declared official policy.
 - **Reinterpretation of the ABM Treaty.** The promotion of SDI replaced any strategic arms negotiations with debates on a new ABM treaty. The Soviets wanted to come to an agreement on limiting ABM and Anti-Satellite (ASAT) systems in space, both of which seemed to them to unbalance deterrence. Such a treaty was regarded as the backbone to any future arms reduction talks (Newhouse 1989:384).
-

1981

- **Zero Option.** The Zero Option was part of the Intermediate Nuclear Forces talks in which the Reagan administration called for the elimination of Soviet IRBMs. The talks were opened with the United States/NATO stance that 572 Pershing and cruise missiles would be deployed in Europe unless the Soviets agreed to the Zero Option.
-

1982

- **Strategic Arms Reduction Talks (START).** The United States and the Soviet Union resumed nuclear arms negotiations. President Reagan felt that the only thing which would justify resuming negotiations with the Soviets would be steep reductions, rather than just limitations, in the number of nuclear weapons each side deployed (Newhouse 1989:344).
-

Neither side could agree on which weapons to reduce.

- **Window of Vulnerability.** Until early 1982, Reagan honored both SALT I (which had expired) and SALT II (which had never been ratified) limits, as did the Soviets. This resulted in the United States retaining advantages in strategic forces (Newhouse 1989:340). Though the "window of vulnerability" was losing credibility, the option of deploying the MX missile and the B-1 bomber was reawakened, and the B-2 Stealth bomber, a cruise missile with stealth technology, and a Trident II missile system were all being developed.
- **MX Missile.** Congress would not allocate funds for MX missile development until a basing scheme was chosen, which put the viability of developing the missile into question. Reagan created a panel of defense strategists to make recommendations about the proposed buildup of nuclear weapons. The panel recommended deploying 100 MX missiles, developing the Midgetman missile (a small, mobile, thus survivable ICBM), and making certain changes to the administration's position in the START negotiations. The panel also decided that there was no "window of vulnerability," thus the MX missiles could be deployed in existing modified Minuteman silos (Newhouse 1989:358-359), solving the basing problem.

incoming ballistic missiles and their warheads. Proponents believed that the system would eliminate the threat of nuclear war by disarming any attempted nuclear strike. Others claimed that it would destroy the strategic balance and thereby increase the risk of nuclear war (Semler, Benjamin and Gross 1987:271). As with the ground-based, anti-ballistic missile systems built during the Nixon and Ford administrations, offensive weapons were seen to stabilize deterrence, while defensive weapons were seen to destabilize deterrence.

- **Hoffman Study.** Reagan authorized this study to determine the policy implications of building a ballistic missile defense system. The study concluded that such a system would reduce the likelihood of a nuclear war, however, it also recommended that the United States maintain its strong and modern arsenal of weapons (Semler, Benjamin and Gross 1987:125).
- **Grenada Invasion.** The small Caribbean island of Grenada, once a British colony, had been run by a socialist government since 1979. The country began to move closer to Cuba and the Soviet Union as it accepted human and material aid from Cuba. Relations between the United States and Grenada degenerated to the point where the United States stopped all economic aid to the small country.

1983

- **Soviets Walk Out of START.** The Soviets walked out of the negotiations when it was discovered that the United States was deploying Pershing II ballistic missiles and Tomahawk cruise missiles in western Europe (Semler, Benjamin and Gross 1987:269).
- **Strategic Defense Initiative (SDI).** On March 23, Reagan revealed a plan for a multi-billion dollar research program to determine if a defensive shield could be built to destroy

On October 12, 1983, the leader of the government of Grenada, who was starting to improve relations with the United States, disputed with more radical members of his government, resulting in open conflict and his execution a week later. Grenada's unstable condition and the probability that a communist government would take control convinced President Reagan that the lives of over 600 American students, tourists, and residents were in danger. He was also concerned about the presence of another communist country in the western hemisphere.

On October 19, the U.S. Joint Chiefs of Staff developed military plans for a noncombatant evacuation operation. However, the Organization of Eastern Caribbean States asked the United States to join them in a military action in Grenada to restore political stability and democracy. The president agreed, and a revised plan was developed on October 21. The invasion of Grenada, called Operation URGENT FURY, began on October 25. It was announced that hostilities on Grenada had successfully ended on November 2 (Sunshine and Wheaton 1984; USAF 1991a:180-182).

1984

- **Election.** Reagan was reelected.

1985

- **Korean Airlines 007.** The Soviets shot down Korean Airlines flight 007. Reagan used this apparently aggressive act as incentive for Congress to reestablish funding for the MX missile deployment (Newhouse 1989:367).
- **Mikhail Gorbachev.** Gorbachev succeeded Chernenko as Soviet General Secretary. He understood the reality of the Soviet economy, and reversed their anti-western viewpoint by inviting Western advice on how to organize a democratic government and a market economy (Gaddis 1992:43-44, 119-132).
- **Geneva Summit.** Reagan and Gorbachev issued a joint statement on cooperation in arms reductions with the goal of 50% reductions in nuclear arms.

1986

- **Reykjavik Summit.** Gorbachev-Reagan arms talks stalled over Reagan's refusal to limit SDI research and testing. There were many meetings where the two sides would come very close to

an agreement on arms reduction, only to leave with nothing because Reagan would not allow any concessions on SDI.

1987

- **Congress and SDI.** By 1987, belief in the feasibility for a space shield was waning rapidly. Congress, clearly against it, denied any defense spending for projects that would violate the 1972 ABM Treaty in its traditional interpretation (Newhouse 1989:403).
- **Nuclear Risk Reduction Center Agreement.** This agreement was signed by the United States and the Soviet Union to promote communication and to build confidence between the countries.
- **Intermediate-Range Nuclear Forces Treaty.** This treaty eliminated all mid-range missiles and some short-range missile systems and identified certain facilities on each side for verifying inspections.

1988

- **Nuclear and Space Talks.** Talks resumed in Geneva with the United States and Soviet Union working on a joint draft START Treaty.
- **Glasnost.** Gorbachev told the Communist Party that key elements of the communist doctrine were outdated, and the party attempted to advance Glasnost policies.
- **Election.** George Bush was elected president.

1989

- **Fall of the Berlin Wall.** The Berlin Wall was opened and hundreds of thousands of East Germans streamed into West Berlin.
-

- **Solidarity Party in Poland.** In April, the communist regime in Poland legalized Solidarity. This party was given a block of seats in the existing parliament, and a second chamber of the legislature was created for members chosen in free and open elections. For the first time in the communist world, legal opposition to the reigning government came into being.
- **Panama Invasion.** From December 17, 1989 through February 14, 1990, all branches of the U.S. Armed Forces took part in a large-scale military offensive in Panama. The circumstances leading up to the offensive centered around Panamanian strong-man Manuel Noriega. The United States considered the Panama Canal and the surrounding area of vital national interest; however, animosity between the U.S. and Panama escalated during the late 1980s, culminating in an American indictment in February 1988 against Noriega for drug trafficking. The U.S. delivered political and economic sanctions against the country to force Noriega from power, but this backfired into violence against Americans living and working in Panama.

The Panamanian presidential election in May 1989, during which Noriega's candidate was heavily defeated, was nullified by Noriega, causing protest marches and riots. Noriega's personal army reacted with force. President Bush recognized the threat to the safety of the Panama Canal and the 51,000 Americans living in Panama. Starting in May 1989, President Bush began a series of military operations designed to protect Americans living in Panama and to evacuate those who would leave the country.

After a failed coup attempt against him in October, Noriega acted even more aggressively, managing to instigate a declaration of war against the U.S. by the Panamanian National Assembly. American leaders solidified plans for a military intervention, and all branches of the U.S. military began preparations on December 17. On December 20, paratroopers

were airdropped at Torrijos/Tocumen Airport near Panama City, marking the beginning of the invasion called Operation JUST CAUSE.

The United States restored the legitimate government of President Guillermo Endara, who was duly elected in the elections nullified by Noriega. Also, in support of the new government, economic sanctions against the country were lifted and Panamanian assets frozen in the U.S. began to be released. On January 3, 1990, after living in asylum in the residence of the Vatican representative in Panama, Noriega surrendered to American forces. The last American troops returned to the U.S. on February 14, 1990. Operation JUST CAUSE was the largest U.S. military operation since the Vietnam War (USAF 1991a:195-198).

4.2 DEVELOPMENT OF THE AIR FORCE DURING THE COLD WAR

The following discussion will provide context for the field study of material culture specifically on ACC installations. The nature of the study requires a focus on facilities that are owned by ACC at the initiation of this project, thus this context focuses on the primary operational commands whose resources, in whole or in part, were reassigned to ACC. These commands were SAC, TAC, and MAC. In 1980, ADC was inactivated and its resources divided between SAC and TAC; and in 1992, the resources of SAC, TAC, and MAC were merged into ACC.

The information presented here is a basic description of the missions of the Air Force Controlled (AFCON) commands and related outside agencies during the Cold War. This is intended to give a basic overview of the interrelationships and roles which developed the material culture that is now the property of ACC. This section is not intended to cover every aspect or change in mission of the commands, but to provide an overall understanding of the Cold War role of each command.

4.2.1 AFCON Major Commands

In order to understand the material culture of USAF bases, it is necessary to know the missions of the major commands assigned to an installation. The following is a discussion of the major commands, related agencies, and their primary roles during the Cold War. This section is meant to provide a basic concept of the major commands and the interrelationships that existed to complete the task of defending the United States. To aid in this, Figure 4.6 shows the lineage of the AFCON major commands and related organizations. Figures 4.7 through 4.10 show the interrelationships of the AFCON major commands and the related organizations throughout the Cold War; these diagrams do not show every connection, but are meant to illustrate the primary relationships.

The commands have been divided into four types to aid in understanding their role during the Cold War. These types are Primary Operational Commands, Other Operational Commands, Support Commands, and Operational Component Commands. Operational Commands included strategic, tactical, or defense forces and were responsible for deterrence and global air operations. For the purposes of this study, the Primary Operational Commands were operational commands whose resources eventually became part of ACC, while Other Operational Commands were operational commands whose resources were important during the Cold War, but did not become a part of ACC. In order to maintain combat readiness, the operational commands required support. The Support Commands include weapons development, supplies, support systems operation, maintenance, training and education.

The other type of command is the Operational Component Command. This command is the USAF component which has been assigned to a unified command. A unified command is established and designated by the President, is composed of two or more of the United States military services, and has a broad continuing mission. An example of a unified command is the European Command (EUCOM), which consists of Air Force, Army, and

Navy forces. The Air Force Component Command under EUCOM is the USAFE (Figure 4.11).

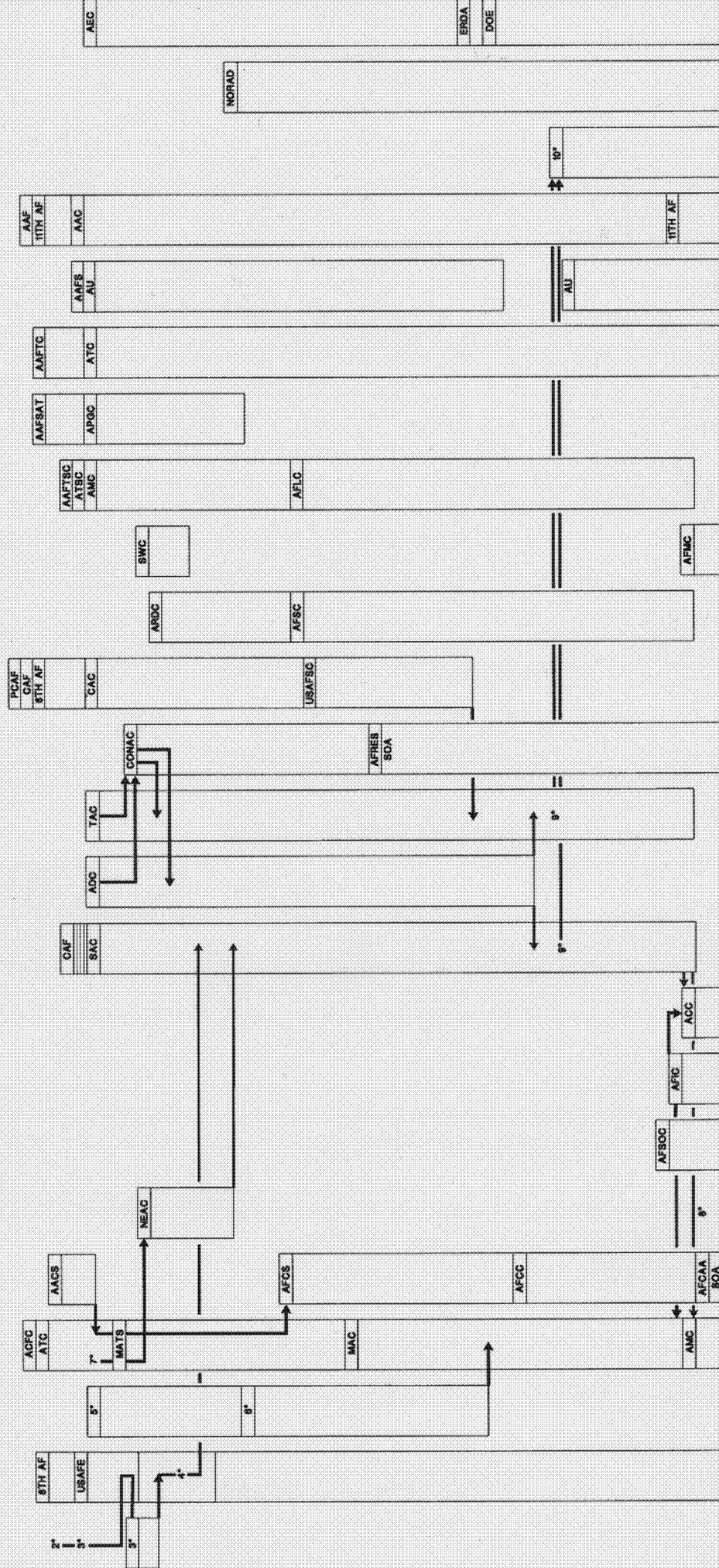
During the Cold War, most of the operational commands were under the command of the Joint Chiefs of Staff, with the exception of ADC which was under the operational command of NORAD. In times of national emergency, SAC was in direct contact with the National Command Authority, ADC was in direct contact with NORAD, most of the Operational Commands were under the Joint Task Force Commander, and the special USAF nuclear forces were under the command of the Joint Unconventional Warfare Forces (JUW) (Figure 4.12). In times of emergency, SAC and ADC maintained their structure, while the other operational forces resources were allocated as required to meet the operational goals. With this in mind, the following is a brief description of each of the major commands during the Cold War; those that were created after 1989 are not discussed.

4.2.1.1 Primary Operational Commands

Strategic Air Command (SAC)

SAC's initial Cold War role was to "prepare to conduct strategic warfare" (Yenne 1985:5). The primary role of SAC throughout the Cold War was to provide a long-range strategic strike force. SAC maintained strategic bombers and ICBMs ready for deployment, provided aerial refueling, and maintained high-performance reconnaissance aircraft.

During the Cold War, SAC's motto was "Peace is Our Profession." Through the willingness to carry out MAD, the initiation of a nuclear conflict was avoided. Toward this mission, SAC often kept bombers on 24-hour alert, maintained the airborne command post, provided reconnaissance for strategic planning, and kept ICBMs continually ready for launch. In times of national emergency, SAC answered directly to the National Command Authority. In 1992, SAC resources and personnel were transferred to ACC.



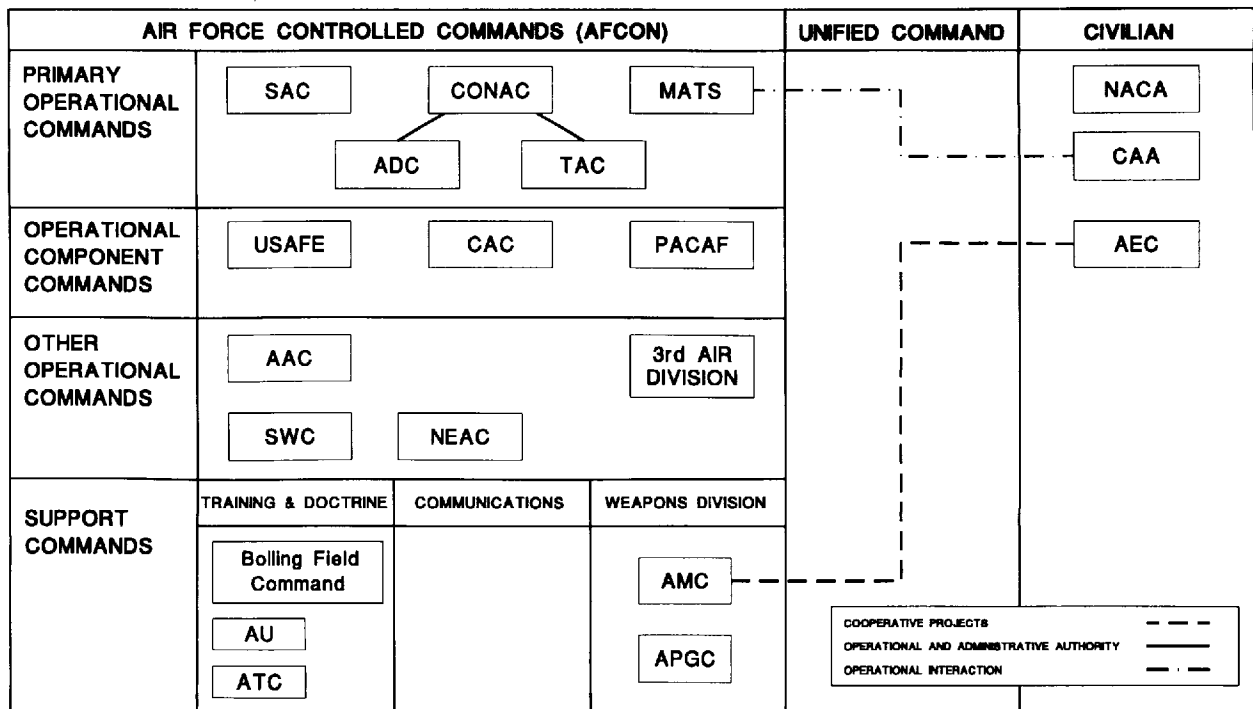


Figure 4.7 Relationship of AFCON Commands to Outside Organizations, 1949.

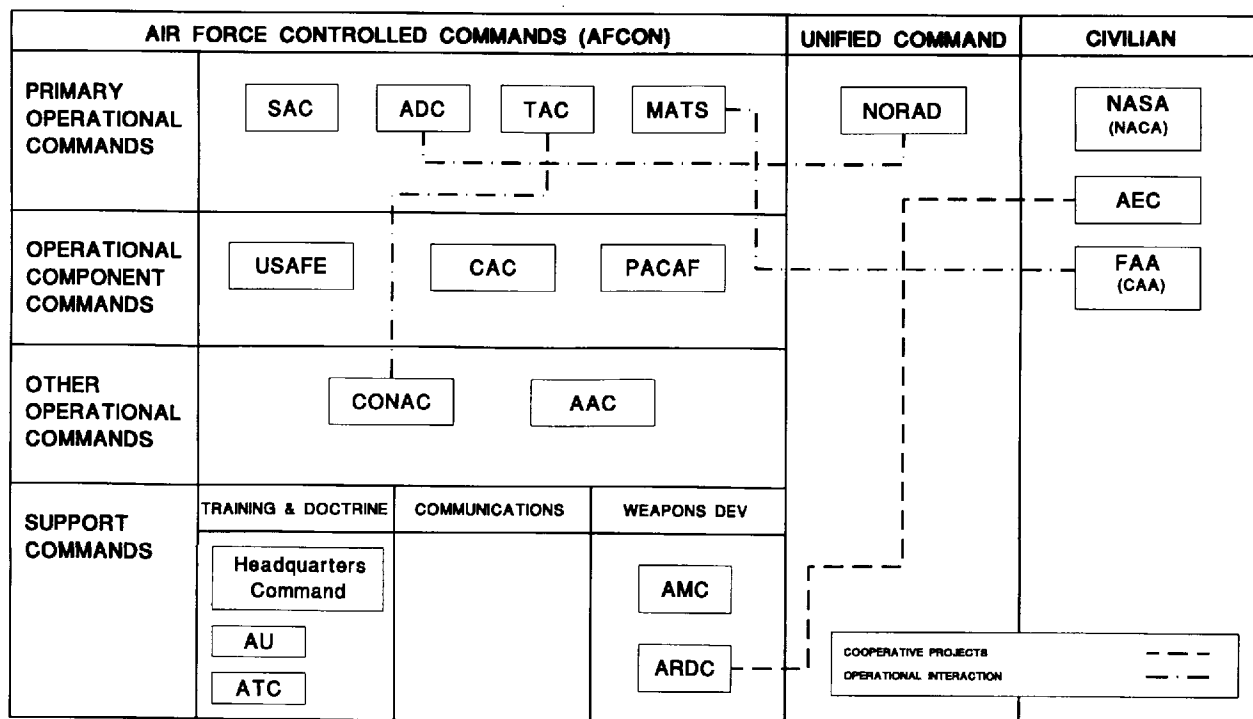


Figure 4.8 Relationship of AFCON Commands to Outside Organizations, 1958.

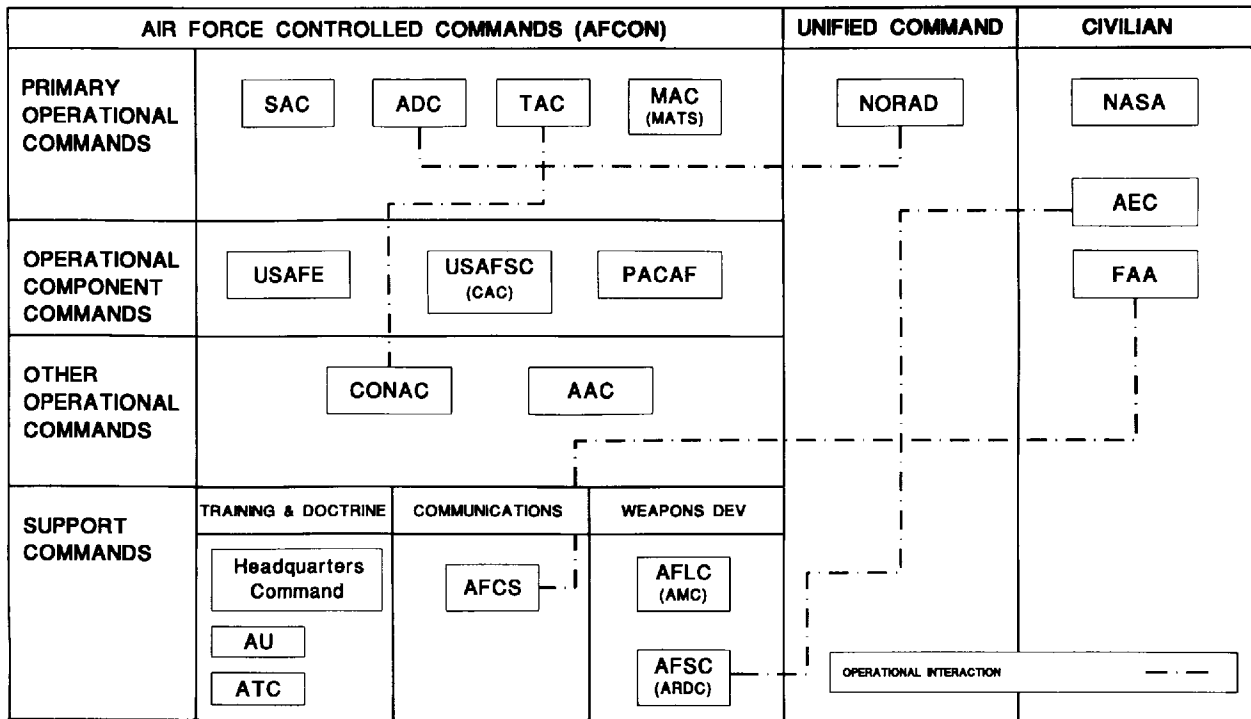


Figure 4.9 Relationship of AFCON Commands to Outside Organizations, 1966.

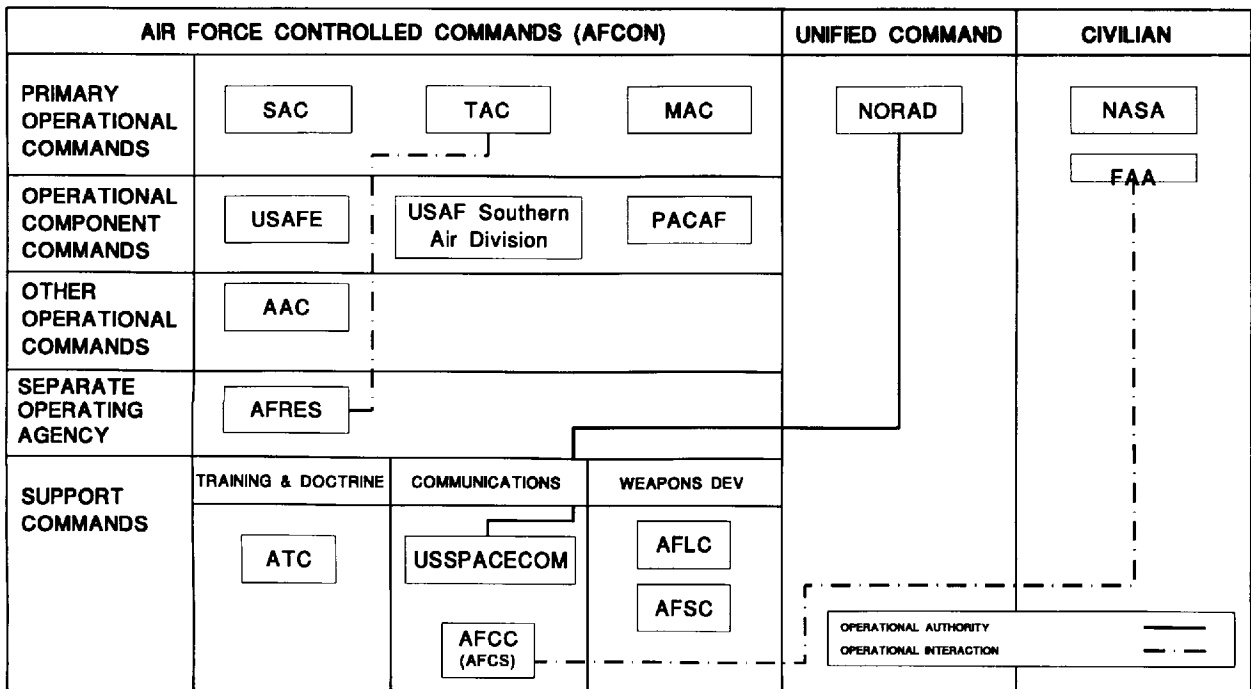


Figure 4.10 Relationship of AFCON Commands to Outside Organizations, 1982.

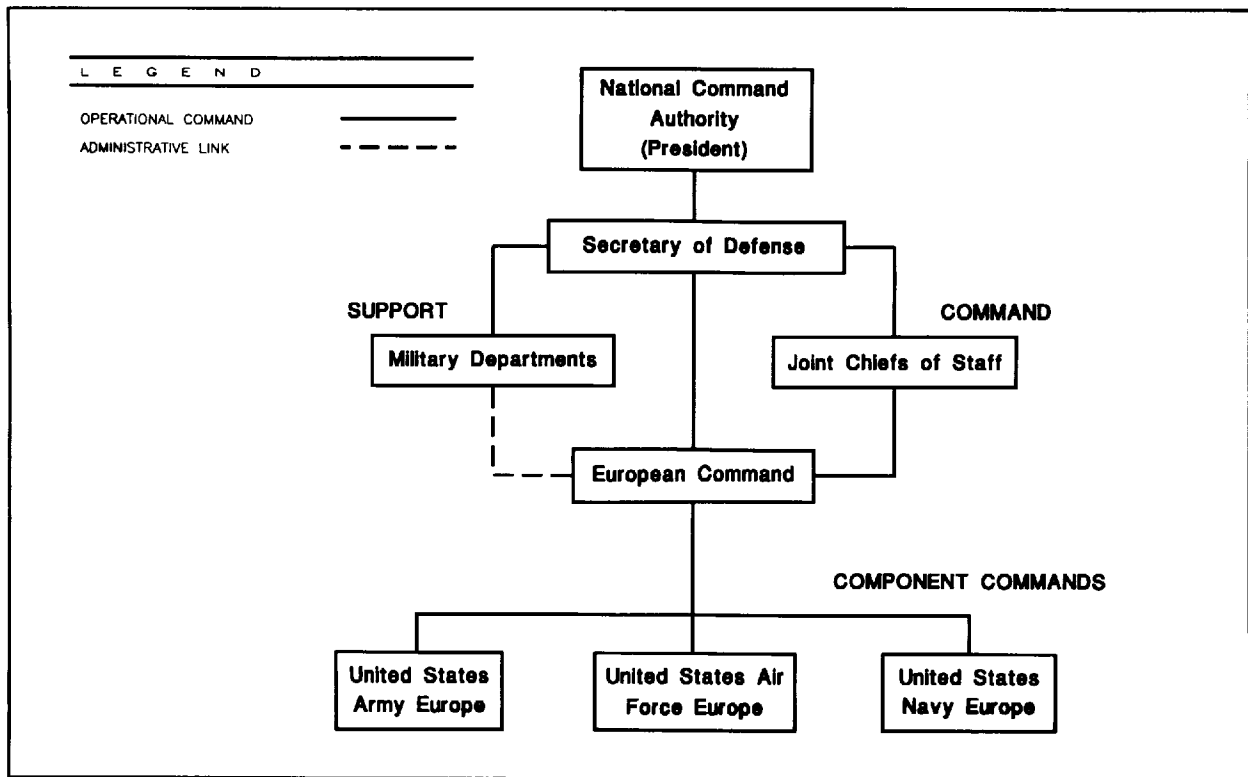


Figure 4.11 Unified Command Structure: Europe. Source: TAC 1978:11-5.

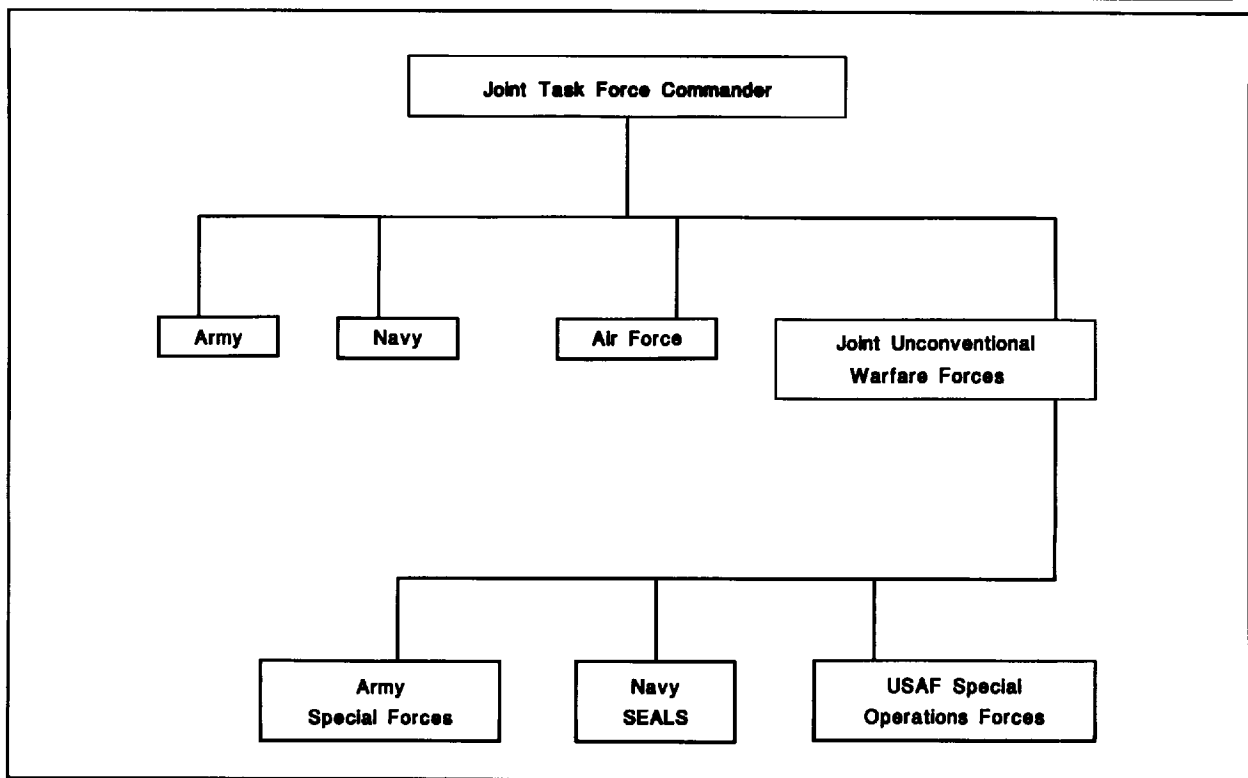


Figure 4.12 Special Operations Forces Operational Chart. Source: TAC 1978:4-55,4-56.

Aerospace Defense Command (ADC)

The overall role of ADC during the Cold War was to defend the United States in the event of a nuclear attack by the Soviet Union. This role included early warning systems and fighter interceptors. The early warning systems were usually developed by outside agencies or groups working in conjunction with ADC, and when ready, installed by the communications command. Once the system was online, ADC was responsible for its operation. The main early warning systems included the DEW Line, Pinetree Line, Semi-Automatic Ground Environment (SAGE), and other various radar and satellite systems.

ADC also maintained and operated fighter interceptors. These planes were usually on a five-minute alert, ready to intercept Soviet bombers in the event of an attack on the United States. In 1980, the resources and personnel of ADC were split between SAC and TAC, with some functions going to NORAD.

Tactical Air Command (TAC)

TAC's primary mission throughout the Cold War was "Preparation to deploy and employ adequate forces to deter war and if deterrence fails, provide the margin of excellence to win" (TAC Manual 2-1 1978:i). TAC maintained fighter forces toward the implementation of this mission, as well as tactical reconnaissance aircraft for development of tactical mission planning. The reserves were an important part of TAC during the Cold War in that they fulfilled "ready to respond" requirements for tactical airpower in times of war or national emergency.

In 1980, when ADC was disbanded, much of the fighter interceptor mission was transferred to TAC. In 1992, the resources and personnel of TAC were transferred to ACC.

Military Airlift Command (MAC)

This command was formerly known as the Materiel Air Transportation Service (MATs). A primary function of MAC was the support of SAC and TAC. The overall mission throughout the Cold War

was to conduct resupply of military forces throughout the world, aeromedical support, special air missions, operational support airlift, combat rescue, special operations, audiovisual documentation, and weather services. Early in the Cold War, MATs airlifted aircraft that were not equipped with inflight refueling capabilities. In addition to the airlift missions, MAC was responsible for Air Weather Service, photo-mapping and documentation, and Air Rescue.

In 1992, this command was renamed the Air Mobility Command (AMC) and received some of SACs air refueling resources and personnel, while transferring some functions, resources, and personnel to ACC.

4.2.1.2 Other Operational Commands

Continental Air Command (CONAC)

CONAC was created in 1948 to consolidate TAC and ADC. The consolidation of the two commands became necessary in order to allow operational flexibility within the tight budget (Schaffel 1991:95). During the years of active air defense, CONAC was responsible for coordinating flight plans with the Federal Aviation Administration (FAA). In 1950 and 1951, respectively, TAC and ADC returned to their major command status and CONAC became primarily responsible for the Air National Guard (ANG) and the Air Force Reserve (AFRES). In this capacity, its primary mission was support in civil and defense emergencies. In 1968, CONAC was inactivated and replaced by the AFRES, a Separate Operating Agency (SOA) within the Air Force.

One interesting Cold War support function of CONAC was the "Ready-now" recovery force. This force was based on the concept that to survive and prevail in a nuclear exchange, the Air Force required the ability to recover quickly. The recovery force was responsible for reconstruction of facilities to enable the regular force to regain combat capability after the initial attack. This mission included the maintenance of alternate airstrips to guide returning aircraft in and get

them airborne again as quickly as possible (Glines 1963:114).

Alaskan Air Command (AAC)

During the Cold War, the AAC was responsible for aircraft identification, air intercept, Alaskan aircraft control, and manning early warning systems (Glines 1963:116). AAC operated the Aleutian DEW line and the Missile Detection and Alarm System (MIDAS), an infrared seeking, data transmitting satellite that could track ballistic missiles above 50,000 feet.

AAC supported SAC at Elmendorf and Eielson AFBs by providing launching platforms, maintenance, and air defense for the two bases. AAC was also responsible for the Arctic Aero-Medical Laboratory, which researched how men could better work and survive in arctic climates (Glines 1963:118). In 1991, AAC became the 11th Air Force and currently reports to Pacific Air Force (PACAF).

4.2.1.3 Support Commands

Air Force Systems Command (AFSC)

This command was formerly known as ARDC. In 1961, ARDC was changed to AFSC in a reorganization to resolve a procurement conflict with AMC. AFSC was given the responsibility for research and development, as well as procurement as it related to research and development activities (Neufeld 1993:6).

The overall mission of the ARDC/AFSC during the Cold War was to complete USAF long-range research and development programs. These programs included basic research, applied research, advanced development, and weapons systems development. The command also distributed documents to scientists which described major areas in which the Air Force required information. This was done to encourage non-military institutions to contribute to the research and development requirements of the Air Force (Glines 1963:42). The AFSC was inactivated in 1992 and its resources

and personnel went to the newly created Air Force Materiel Command (AFMC).

Air Force Logistics Command (AFLC)

This command was formerly known as the Air Materiel Command (AMC). In 1961, AMC was changed to AFLC in a reorganization to resolve the procurement conflict with ARDC. As AFLC, the command was responsible for logistics, maintenance, and supply functions (Neufeld 1993:6), as well as the preparation and publication of technical instruments and manuals (Glines 1963:113).

During the Cold War, the AFLC managed spare parts of all military weapon systems and ensured that USAF weapons systems had the parts and equipment required to perform their wartime roles at all times. To this end, the command was divided into Air Materiel Areas (AMA). For example, during the early 1960s, the Oklahoma City AMA was responsible for SAC long-range bombers and KC-135s, while the San Bernadino AMA was responsible for the Atlas, Titan, and Thor missiles (Glines 1963:112). In 1992, the AFLC was inactivated and the resources and personnel were transferred to the AFMC.

Air Force Communications Command (AFCC)

This command was formerly called the Air Force Communications Service (AFCS). The command was responsible for air traffic control, long-distance communications, installation of early warning systems, and mobile communications systems. Most major commands had their own communications systems and personnel until 1961, when AFCS became the single manager of all USAF communications and integrated the systems. SAC and ADC avoided the integration until the late 1970s (AFCC Office of History 1991:80).

This command was responsible for the installation of early warning systems such as Base Air Defense Ground Environment (BADGE), SAGE, and project WACS, which included the BMEWS, DEW Line, Labrador-Newfoundland Air Defense

System, and the Alaskan Air Defense System (AFCC Office of History 1991:71).

One of the main advances early in the Cold War was the command's work with air traffic control. By automating the system and including ground approach radar, instrument landing systems, and other systems, they were able to vastly improve safety and allow the Air Force to fly 24 hours a day in all kinds of weather. This command also coordinated air traffic through cooperation with the FAA (formerly the Civil Aeronautics Association) and the recordation of flight plans. In 1993, the AFCC ceased to be a major command and became a SOA.

Headquarters Command, USAF

This command was formerly called the Bolling Field Command. The main responsibilities for the command were to "provide administrative and logistic support for the many Headquarters, USAF and Air Force units in the Washington area" (Glines 1963:127). The command also administered Air Attache and military mission offices throughout the world, as well as provided ceremonial units. This command was inactivated in 1976 and many of its functions went to MAC.

United States Space Command (USSPACECOM)

In 1980, when ADC was inactivated, the space defense function moved to SAC. In 1982, USSPACECOM was activated with administrative functions under the Air Force, but with operational reporting to NORAD.

Air Training Command (ATC)

This command was responsible for recruiting, education and weapons systems, technical, and flight training. The primary flight training consisted of five main areas: prospective pilots, primary jet, supersonic, navigator, and pilot instructor training. ATC training was carried out on almost 20 bases throughout the Cold War, with approximately 10 devoted to flight training. This command was instrumental in maintaining the capabilities of the

operational commands. ATC is still an operational, major command.

Air University (AU)

During the Cold War, AU was responsible for the development of USAF operational doctrine, as well as the coordination of subject matter for all USAF manuals. AU's first approach to the doctrine was to look at SAC and TAC as part of the same entity, "A clear-cut differentiation between the strategic missions and tactical missions is neither desirable nor possible" (Futrell 1971:191). A lengthy official doctrine was finally accepted by the respective generals of SAC and TAC, which included statements that protected the responsibilities of each command, but allowed for cooperation between the two.

The AU is the professional educational center for the Air Force, which comprises a series of postgraduate schools. The major schools include training in staff duties for lieutenants and captains at the squadron and group level; training for majors and lieutenant colonels at the wing, air division, and major air command levels; and training for lieutenant colonels and colonels in the concepts of national power and effective development and deployment of air forces. Other functions include training in understanding the capabilities of warfare systems and the administration of the Air Force Reserve Officer Training Corps (AFROTC) which offers air force education to undergraduates at civilian universities. Once the candidates have completed the coursework, they are commissioned as officers and placed on active duty (Glines 1963:181-82). The AU is still a major command.

4.2.1.4 Operational Component Commands

United States Air Force in Europe (USAFE)

During the Cold War, USAFE was a component command under a unified command, EUCOM (Figure 4.11). USAFE was the primary instrument in the Western line of air defense. Its mission was to remain constantly alert as a combat-ready force and to train and maintain its

units for a possible defense from Soviet attack. Throughout the Cold War, USAFE provided logistical support for other major commands in Europe including SAC, TAC, MAC, AFLC, and AFCC. USAFE is still an operational command.

USAF Southern Command (USAFSC)

This command was formerly referred to as the Caribbean Air Command (CAC) and in 1978, when it was deactivated, it became the USAF Southern Air Division under TAC. Prior to becoming a division, USAFSC was a component command under a unified command, the United States Southern Command (Figure 4.13). The overall mission of this USAF component command during the Cold War was to advance interest and policies of the United States within Latin America. The area of responsibility was South America and Central America, but did not include Mexico or the Antilles.

Some of the primary responsibilities of the command were carried out through the Military Assistance Program. This program provided training to Latin American military forces. Logistical support was provided for USAF missions and training in the area, Air Attaches, and government agencies in Latin America. This command also provided air traffic control in the Canal Zone (Glines 1963:118-120).

Pacific Air Force (PACAF)

This command was formerly known as the Far Eastern Air Forces (FEAF). PACAF is a component command under the authority of a unified command, the Pacific Command (Figure 4.14). The primary mission of this command was to assist in the defense of the Far East by providing air defense, military strike forces, troop carrier operations, air traffic control, early warning, aerial reconnaissance, construction of air bases, and the support of SAC and TAC (Glines 1963:121).

This command was very active in the Korean War and its F-86 aircraft knocked out 802 Russian MiG-15s, while losing only 58 PACAF aircraft. Throughout the Cold War, the PACAF supported a

Mobile Strike Force which was ready for quick action in Asia and would be supported by the TAC composite strike force in the event of an emergency (Glines 1963:122). The PACAF remains an operational command.

4.2.2 Related Organizations

Atomic Energy Commission (AEC)

The AEC was created through the McMahon Act in 1946, which stated that only the AEC could develop fission bombs. This commission was created as a civilian organization with five commissioners appointed by the President and a Military Liaison Committee (Boyer 1985:52; McDougall 1985:83). Those who created the AEC wanted "domestic management" rather than military control of atomic energy. An earlier bill, the May-Johnson bill which put atomic energy in the hands of the military, was defeated through heavy lobbying by the Federation of Atomic Scientists (FAS).

Although the commission was in civilian hands, the nature of the material they were regulating required secrecy and all employees were required to have Federal Bureau of Investigations (FBI) clearances (Boyer 1985:144). This led to intense public debate over whether information regarding atomic energy and weapons development should be made public. Over time, the AEC worked at making nuclear developments palatable to the public, while the military increased its strategic reliance on nuclear weaponry. In 1975, the AEC became the Energy Research and Development Agency (ERDA) and in 1977, ERDA became the Department of Energy (DoE).

North American Aerospace Defense Command (NORAD)

NORAD was created through an agreement between the United States and Canada. During the Cold War, the mission of NORAD was to defend the United States, Alaska, and Canada against air attack. The NORAD commander in chief had operational control over all component commands and air defense units in the United

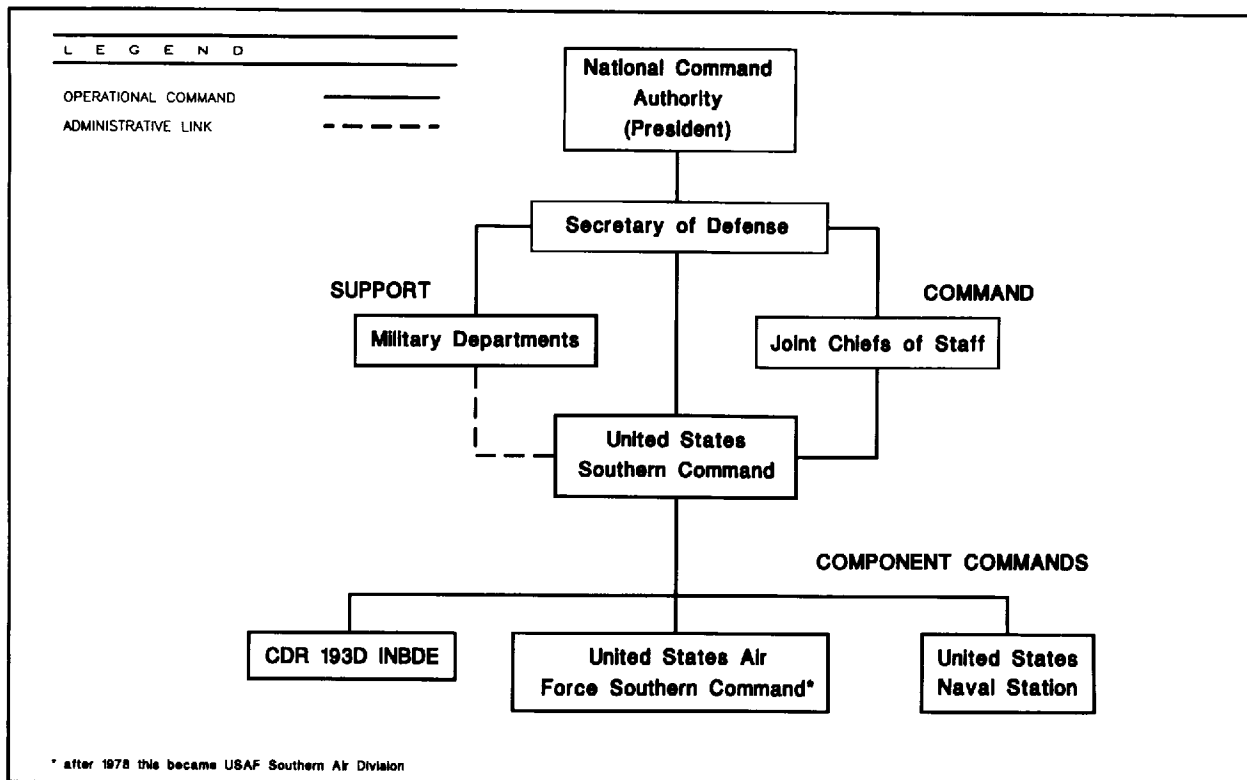


Figure 4.13 Unified Command Structure: Latin America. Source: TAC 1978:11-41 through 11-43.

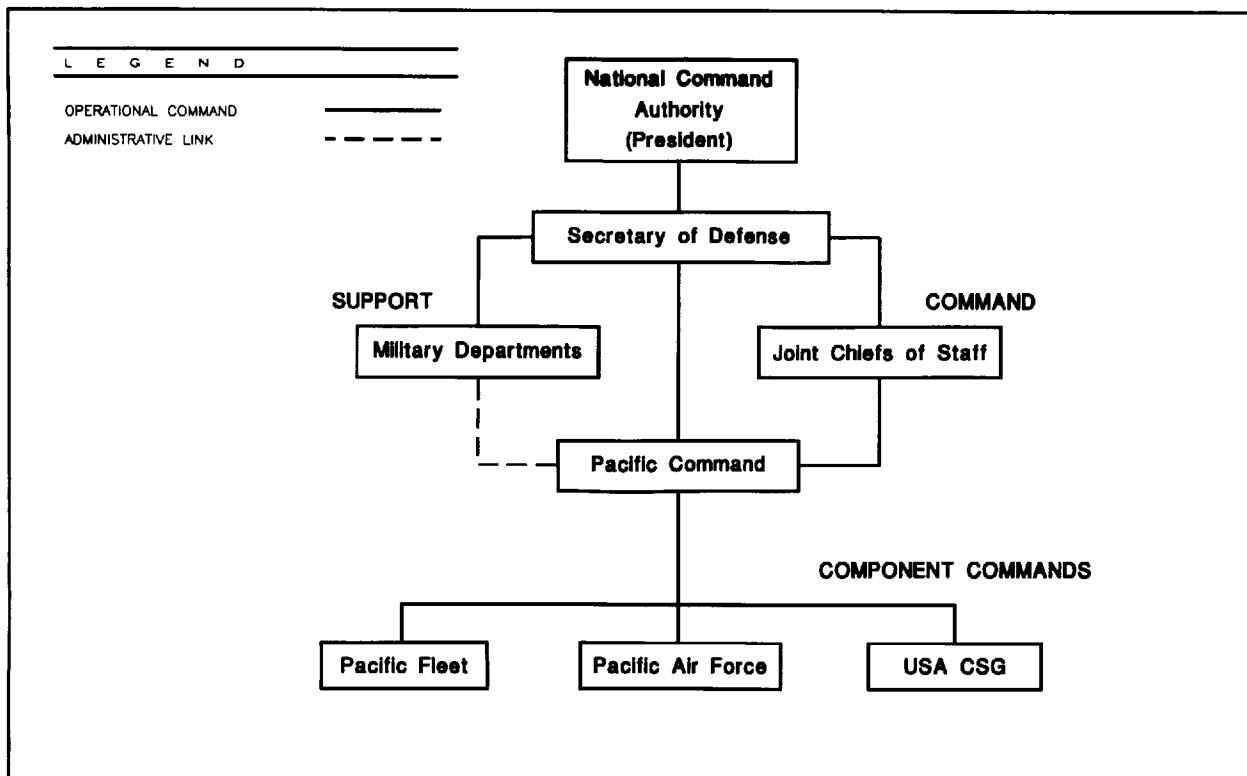


Figure 4.14 Unified Command Structure: Pacific. Source: TAC 1978:11-6.

States, Alaska and Canada, while the United States Naval Forces Continental Air Defense Command (CONAD) had responsibility for areas outside of NORAD's command (McDougall 1985:252).

Canada usually contributed between 8% and 12% of the air defense budget and the United States constructed air bases and early warning systems in Canada. ADC and Space Command coordinated their early warning and communications with the NORAD headquarters in Cheyenne Mountain, Colorado. NORAD is still an active command and coordinates its efforts with United States Strategic Command (USSTRATCOM).

National Aeronautics and Space Administration (NASA)

In 1958, NASA replaced the National Advisory Committee for Aeronautics (NACA) which was created in 1915 as a rider to the Naval Appropriations Bill with a mission to keep the United States abreast of the latest aviation technology (McDougall 1985:75). In 1958, when NASA replaced NACA, the mission and goals were changed to increase capabilities and options for future spaceflight, as well as convince the public of the value of space flight. By 1960, NASA had a primary responsibility for space research and development, with a program that focused on large launch vehicles (McDougall 1985:196, 208). The main contribution to the Air Force during the Cold War was the use of NASA wind tunnels to enhance aircraft design and the NASA design of reentry vehicles for ICBMs. NASA remains an operational agency.

Federal Aviation Administration (FAA)

This organization was originally known as the Civil Aeronautics Administration (CAA). In 1958, the CAA became the FAA, an organization which remains in operation today. The FAA coordinates air traffic control with military aviation entities. During the Cold War, civilian flight plans were required to be logged with the FAA when aircraft were flying into Air Defense Identification Zones. This information was then forwarded to NORAD which would track the aircraft on radar once it

entered the zone. If the radar noted a significant deviation from the logged flight plan, interceptors would be sent to make a visual identification. If there had been early warning of an attack, the FAA would have cooperated with NORAD to ground or divert civil and nontactical military aircraft to provide the safe passage of SAC aircraft (Glines 1963:104).

The FAA wrote the basic regulations under which the AFCC and military air traffic control operated. The military communications command contributed to overall air traffic control through coordinated planning, facility operation, and the maintenance of USAF air traffic control facilities (AFCC Office of History 1991:104).

Research and Development Corporation (RAND)

This group began in 1946 as a joint industry-government, long-range strategic planning "think tank" at Douglas Aviation (McDougall 1985:89). In 1948, the group split from Douglas and operated as an objective group that could analyze technology and strategy, and recommend new weapon systems. The corporation was devoted to research in the areas of aircraft, economics, electronics, mathematics, missiles, nuclear physics, social sciences, and other areas related to national policy (Glines 1963:33) and is still in existence.

4.3 THE RESULTING ACC COLD WAR MATERIAL CULTURE

"In the face of the challenge confronting us in the world today, the U.S. Air Force must not only maintain powerful forces in being, it must also develop, as rapidly as possible, the new weapons systems capable of meeting the potential aerospace threat of tomorrow--and the day after tomorrow."

General Bernard A. Schriever (Glines 1963:31)

It would seem evident that the policies and strategies promulgated by the various administrations during the Cold War would have a direct, causal effect on the types of weapons

systems researched and developed by the DoD. In fact, the relationship between the two was usually opposite. When developing policy and strategy, administrations would look to the DoD to see what types of weapons were already deployed and what types were currently being developed. Thus weapons systems were not developed to fit strategies, but rather strategies were designed around weapons systems. The one effect policy and strategy did have on weapons systems research and development was financial. When budgets were reduced or expanded, ramifications were felt in the amount of funding for research and development of new systems. The one exception to this was the ABM system deployed at Grand Forks AFB, North Dakota during the Nixon administration.

The deployment of operational weapons systems had a closer relationship with policy and strategy. As with research and development, budgetary fluctuations affected the number of weapons deployed within each system. While administrations looked to defense research and development when developing policy and strategy, the policy and strategy decisions determined which systems were deployed, which were cancelled prior to deployment, and which were gradually phased out to be replaced with new, more powerful systems.

Unlike weapon systems, the research and development and deployment of reconnaissance and communications systems had a direct cause-and-effect relationship with administration policies and strategies. After a new system was developed during the Cold War, the need for the new system was identified, funds were allocated for the project, and the system was deployed.

New technology in aviation, weapon systems, reconnaissance, and communications resulted in required changes in architecture and engineering to accommodate the new technology. Policy and strategy also had an effect on architecture and engineering throughout USAF installations to modernize runways, housing, mission-related facilities, and infrastructure.

Through the interrelationships between policy and strategy, budgetary constraints, research and development, deployment, and installation construction, the Cold War material culture of USAF bases and the development of the bases themselves evolved. The primary operational commands of the Air Force, such as SAC, ADC, MAC, and TAC, were not directly responsible for technological developments. These commands made requests, offered suggestions, and cooperated with support commands and outside agencies to bring the systems into operation. Support commands, such as ARDC and AMC, were responsible for research and development, installation, and, in many cases, maintenance of new systems.

4.3.1 The Evolution of USAF Material Culture

The United States-Soviet arms race was a major symptom of the ideological conflict between the two countries and a crucial element of the Cold War. At the end of World War II, the United States had the atomic bomb. By 1949, the Soviets possessed an atomic bomb. The development of a United States hydrogen bomb in 1952 was matched by the Soviets in 1953. Though the Soviets demonstrated the early lead in ballistic missile development with the successful launch of Sputniks I and II, the United States sustained an accelerated program of missile development by the 1950s. Since that time, the nuclear arms race has been a continuous game of catch-up, usually with the United States initiating the technology and the Soviet Union soon matching the innovation (Figure 4.3).

The Air Force and its worldwide defense network has grown to comprise the principal strategic deterrent of the United States. This evolutionary process has required the construction of training, combat, combat support, and maintenance facilities; longer and stronger runways; and extensive housing and community facilities for personnel and their dependents. Developments and trends in USAF properties during the Cold War era are related to several factors. These include the number and condition of facilities inherited from the Army Air Corps after World

War II, fluctuations in the size of the Air Force, progressive requirements on facilities driven by the evolution of weapon and communication system technology, and human resources concerns.

Numerous aircraft, most operational in several variants, were used by the Air Force during the Cold War. Arguably, all of those aircraft have had important roles and in the long run, have led to newer, faster, and more reliable weapon systems. Although the scope of this project does not allow for an in depth discussion of all USAF airplanes or the history of their development, this chapter presents several aircraft used by the Air Force throughout the Cold War. The aircraft that have been chosen are a sampling of the major types of planes employed by the Air Force and are meant to reflect development of weapons systems over time and to demonstrate improvements in mission capabilities of newer airplanes in relation to their predecessors. Technical information is limited to performance ranges and is not intended to reflect a particular aircraft variant unless specifically stated.

The following discussion focuses on the primary operational commands and developments that affected USAF properties which eventually became part of ACC. In order to understand Cold War properties, the section can neither focus solely on those owned by ACC nor cover all aspects of each major command. It is intended to provide an overview with salient information to aid in the evaluation of Cold War material culture. This section is devoted to understanding the primary commands, missions, and weapon systems which may have resulted in Cold War resources, and will aid in analyzing properties located on CONUS, and Panama, ACC installations.

4.3.1.1 USAF Installation Development

At the end of World War II, the Army Air Corp maintained 1,895 air installations, and of these, 1,333 were CONUS. By 1948, the Air Force had reduced the number of bases to 290 worldwide with 112 CONUS. Of these, only 90 were active (Goldberg 1957:189).

In 1948, due to budgetary constraints, the Air Force dropped plans to enlarge the force structure to 70 wings and instead reduced the existing 55 wings to 48. This reduction revised and gradually consolidated the existing USAF base construction plans and activities at 180 bases worldwide. Funds were allocated to modernize and maintain existing bases rather than to build new bases. Between 1945 and 1950, emergency repairs and base modifications consumed the majority of funds available for base development (Goldberg 1957:189-190).

In 1949, the NSC declared deterrence as the national military strategy. With this came SAC's new global deterrence mission, the heightened air defense requirements of the ADC, and the global strike force mission of TAC. The missions of these primary operational commands required strategically located bases. This, combined with the 1950 outbreak of war in Korea, resulted in the expansion of the Air Force. The Air Force planned to expand from 48 wings to 95 wings by 1951, and in 1951, the planned expansion was modified to include 143 wings. As a result, a frenetic emergency construction program to adapt to the expanding force was initiated. Through this program, existing bases were extensively renovated and modernized, and new bases were developed (Goldberg 1957:189). Modernization of existing bases included the development of housing, operations, administration, fuel storage, and medical facilities.

President Truman, jolted by the construction costs related to the first year of the Korean War, directed the Air Force to modernize existing bases or acquire bases from other services in preference to the construction of new bases. Over \$1.9 billion of USAF construction appropriations were suspended in 1953 by Eisenhower (Goldberg 1957:191). As a result, the USAF goal of 143 wings was reduced to 120 wings. This caused changes in plans for 14 CONUS bases and 6 overseas bases. The Air Force cancelled many construction projects, some of which had already begun (Goldberg 1957:191).

At the end of World War II, housing for personnel and their families was a critical problem for the Air Force. The overall postwar shortage of housing was exacerbated by the location of many bases away from large urban areas which could absorb some of the military need. The situation was no better ten years after the end of World War II; government quarters were not available for 55,000 officers and enlisted men who were legally entitled to housing. Another 63,000 personnel were in desperate need of family housing. The housing shortages contributed to low morale, a reduction in combat effectiveness, and the exodus of USAF professionals from the service (Goldberg 1957:189-190, 194).

Housing construction between 1945 and 1950 did not satisfy the incredible need for shelter for the Army Air Force and then USAF personnel. The National Housing Act (Wherry-Spence Act) of 1949 established the Federal Housing Administration (FHA) to insure private financing of homes on or adjacent to military installations. At this time, the Air Force planned to construct 26,595 units at 49 bases, an amount that would have satisfied less than half of the housing need. Actual construction was begun on 4,292 units by June of 1950 (Goldberg 1957:190; Armstrong 1976:633).

By 1954, the Air Force required 185,000 housing units, but possessed only 64,000 units including trailers (Goldberg 1957:194). The Capehart Amendment to the National Housing Act was passed in August of 1955, authorizing the use of quarters allowances to pay off Wherry housing mortgages. The Air Force contracted for standardized housing not exceeding \$13,500 per unit, and in 1956, planned to construct 46,500 of these units at 88 bases. Construction was initiated at Dyess AFB, Texas and at Eglin AFB, Florida, and by 1957, construction had begun on over 9,000 units on 15 other bases (Goldberg 1957:194; Armstrong 1976:633).

The USAF housing construction programs in the United States were curtailed or postponed during the Vietnam War due to the reallocation of funds. Yearly programs for family housing, improvements, and minor construction were stalled, deferred, and kept under close budgetary control during this time.

Real estate acquisitions and holdings records during the Vietnam War indicate a general trend toward the reduction in USAF properties (Armstrong 1976:636).

Throughout the Cold War, the development and operation of new aircraft and weapons contributed to the construction, redesign, and renovation of runways and taxiways. Between 1950 and 1957, asphalt pavement was commonly used for the construction of runways, taxiways, and aprons. Although this material was generally less expensive, it failed under the stresses of repeated takeoffs and landings of heavier aircraft, and dissolved when subjected to jet fuel spills. As planes became heavier and missions more frequent, failed asphalt runways became more numerous. In 1956, the Air Force decided that all combat and combat support airfield pavement would be constructed of portland cement concrete and that thicknesses of the pavement would be increased to support heavier aircraft. The design of heavy-load pavements was changed to support greater weights, shock, and strain (Goldberg 1957:195).

The new jet aircraft also required more space. Fighter take-off necessitated a 10,000-foot runway that was 200 feet wide while bombers required an 11,000-foot runway with a 300-foot width. Approach and takeoff corridors were designed to be seven miles long and four miles wide, as most of the accidents associated with takeoffs and landings occurred within this zone. The acquisition of this amount of space required the Air Force to select base locations a minimum of 15 miles from the nearest community (Goldberg 1957:195).

Air traffic safety, weapons storage, and noise were the three main issues that the civilian population was concerned about with reference to the location of bases. Locating bases away from local communities and airports exacerbated the housing problem, but the distance combined with the design of takeoff and approach corridors addressed the concerns of civilians and military air traffic controllers regarding the hazards of high speed flight in and around public air space

(Goldberg 1957:195). The distance of bases from local communities also addressed the issues of conventional and nuclear weapons storage, as distance afforded a good measure of protection. Finally, one of the greatest concerns of citizens appeared to be noise pollution generated by aircraft stationed at the bases, and again, distance was the only way to address this problem.

New engineering technology was needed to keep pace with aircraft and weapons development. The construction of new control tower facilities and the installation of increasingly sophisticated tracking and communications systems kept pace with aircraft and weapons technology. The new weapon systems also required the construction of fire and explosion-safe transfer, assembly, maintenance, and storage buildings. The Corps of Engineers expended considerable efforts revamping ordnance handling and storage facilities during the Cold War to deal with problems associated with the nuclear weapons stored on base (Ferrell 1992:120).

The infrastructure and design of USAF installations changed during the Cold War due to technological advancements of aircraft and weaponry, engineering and material advancements in the construction industry, and facility requirements of the commands. These advancements will be important to this study through specific connections with facilities, weapons, command and control, and special missions that embody the Cold War.

4.3.1.2 Research and Development

The first concerted military aeronautical research and development program was initiated during the 1930s. Commercial mail carriers were suspected of fraud and collusion in government contracts, therefore President Roosevelt directed the Army Air Corp to carry the mail. Air Corp pilots and aircraft had difficulty navigating over unfamiliar terrain and through inclement weather due to inadequate aircraft and navigation equipment. Their mounting losses precipitated investigations and ultimately recommendations to conduct research and development directed toward modernization of the aircraft. The National Defense Research Committee was established as an advisory group to all branches

of the military, coordinating research on navigation, radar, and communications (Neufeld 1993:1, 19-25).

The type of controlled research and development, which was available through groups such as the National Defense Research Committee, was hampered during World War II by the necessity to mass produce aircraft. Although research was slowed, much progress was made in the fields of atomic energy, rockets, jet aircraft, and electronics due to the immediate requirements of the war.

The National Security Act of 1947 established the DoD and created the Air Force as a separate military branch equal to the Army and the Navy. The Army Air Forces, the Army Air Corps, and the Air Force Combat Command were all transferred to the jurisdiction of the Air Force (Goldberg 1957:99-103).

Through the efforts of General Henry H. "Hap" Arnold, research and development activities had continued beyond the war as an operation within the Army Air Force. General Arnold pressed for the establishment of the Army Air Forces Scientific Advisory Group to preserve the relationship between scientific academics and the military. Arnold also commissioned Theodore von Karman to evaluate the technological advances made during the war and to plan for future developments to be undertaken by the Army Air Forces. Karman's review and projections identified the importance of technological progress for the success of the Army Air Force and its importance for the defense of the country. Karman's efforts in science and technology predictions were continued within the Air Force in a series of forecasting programs (Gorn 1988; Neufeld 1993:2-3, 35-38).

In spite of a concentration on maintaining readiness and a bomber force structure, research and development within the Air Force became stagnant between 1946 and 1949 due to budgetary constraints and problems related to the USAF organization. The situation changed when retired Lt. Gen. James H. Doolittle became an advocate for research and development. Doolittle prompted

the establishment of a major research and development command, the ARDC; hired a new deputy chief of staff (Trevor Gardner); and initiated a series of reorganizations within the Air Force. The Korean War further stimulated research and development spending in 1950 (Neufeld 1990:2, 65; 1993:3-5).

The National Security Act of 1947 had also reorganized the War Department's research and development programs (Goldberg 1957:99-103). As a result, Watson Laboratories, a premier Army research and development facility, was divided, with some of the Army Radiation Laboratory going to the Cambridge Research Lab in Massachusetts and a portion of computer development going to Rome, New York. In Rome, a close relationship developed between the lab and Griffiss AFB that generated significant advances in electronic and computer technology at what became the Rome Air Development Center. Research at the Cambridge Research Laboratory and at the remaining Watson Laboratories focused upon improving the Air Force's night fighter capability, air to ground communications, and airborne intercept equipment (Neufeld 1993:3-4).

In 1955, Eisenhower assigned the highest national priority to the USAF ICBM program. For that program, the Air Force created a revolutionary management approach that incorporated concurrent development and the associate contractor method. The procedure afforded a streamlined integrated operation that separated the development process into engineering, procurement, acquisition, and deployment. The new approach enabled the Air Force to have the first flight of Minuteman missiles on alert status only four years after the program had begun. The management approach was eventually adopted by the ARDC and ultimately the DoD. However, once adopted at the scale of DoD, the approach became cumbersome and inefficient (Neufeld 1993:5).

One of the major inefficiencies of the USAF research and development program was related to institutional animosities between the AMC and the ARDC. The center of this squabble focused on procurement and acquisition duties. The Kennedy

administration in 1961 coerced the Air Force to settle the AMC and ARDC rivalry with the promise of being assigned the space mission research and development. The USAF solution was to dissolve the two commands and create two new commands, AFSC and the AFLC. The AFSC controlled research, development, and acquisition, and the AFLC was responsible for logistics, maintenance, and supply (Neufeld 1990:4; 1993:4-6, 68-70).

The USAF research and development program implemented several management and contracting approaches during the last decades of the Cold War. These included fixed-price, cost-plus, multiyear, fly before buy, prototyping, and total package procurement. During the post-Vietnam Ford and Carter administrations, USAF research and development appropriations declined (Neufeld 1993:7, 79-92). The Reagan administration then increased funding of research and development with the SDI.

An important concept in understanding USAF and DoD research and development is the fact that much of the research was not driven by any grand overall plan or requirements. The Air Force conducted a series of technology forecasts (Gorn 1988), but these forecasts looked at what was possible and not what was necessary. Even the later, more practical military-based forecasts did not focus on specific necessities.

The 1947 establishment of the USAF Aircraft and Weapons Board, the brainchild of SAC General LeMay, provided an element of control or direction for research and development. This board was to constantly survey the research and development program to insure that proper weapons were emphasized, developed, and deployed. By 1948, this board had evolved into the USAF Board of Senior Officers, though the practical strength of this guidance panel was shortlived (Futrell 1971:108).

The pervasive requirement to stay at the cutting edge of weapons science drove United States military research and development to the point where it became an all out race to have the first

and best weapons. This was supported by one of SACs objectives "to establish and maintain a global offensive capability of such superior striking power that it minimizes the need for using it" (Power 1958:171). The drive for the first and best of anything and everything tended to dissipate research and development into a broad spectrum of programs, the majority of which did not come to fruition.

Research and development is an important aspect of the Cold War and will be manifested in material culture through the resulting laboratories, testing facilities, and operational weapons and communications systems. Those facilities and systems that became operational and were important in the roles of strategic deterrence, air defense, or tactical operations will be included in the material culture study.

4.3.1.3 Communications and Reconnaissance

Communications and reconnaissance played important roles throughout the Cold War. Communications processes and systems were updated and adjusted to assure survival of the command and control system during a nuclear attack, while reconnaissance provided important information about Soviet Union movements and nuclear capabilities. Reconnaissance aided mission planning and the development of USAF weapons systems.

Survival of command and control required integration of the National Command Authority, early warning systems, and strategic force communications. The three commands involved in the primary communication network during time of war were the President (by way of the Secretary of Defense), NORAD, and SAC. During war, other commands and forces were under the jurisdiction of the Joint Chiefs of Staff and the Joint Task Force Commander (Figure 4.15). Although the basic chain of command remained the same throughout the Cold War, the integration and methods of the command and control system were altered by changes in the presidency and updating and installation of new systems.

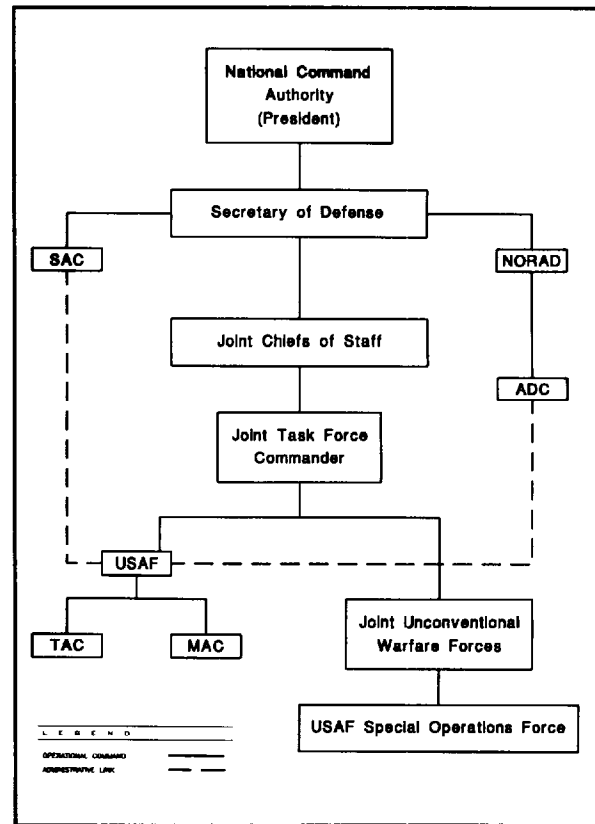


Figure 4.15 USAF Chain of Command During War.

The early warning systems evolved from radar and manual control of information; to the SAGE system, a semi-automated, digital data system which could control aircraft in flight (Figure 4.16); to a satellite transmission of information to BMEWS stations with tropospheric scatter capabilities (Figure 4.17); to the Position Acquisition Vehicle Entry Phased Array Warning System (PAVE PAWS) electronic phased array, satellite and missile identification and tracking systems (Figure 4.18). The most important element of the early warning systems in reference to communications with NORAD, and the subsequent dissemination of early warning information, is that each early warning update made the system more efficient. This was achieved through the operation of equipment which could process more data at a faster rate and the reduction of the number of channels through which information had to pass.

During the 1950s, the Soviet Union improved their ability to send nuclear missiles to the United States. Due to the increased nuclear threat, Eisenhower became concerned with the survivability of the various command centers. In the last half of the 1950s, he supported an increase in military allocations to bolster the command and control phase of the United States' nuclear deterrent.

As a result of this presidential support, SAC moved into a new command center at Offutt AFB, Nebraska in 1957. This state-of-the-art complex was self-contained with its own power, water, and rations supply. The Command Post was located underground in a concrete reinforced section in the core of the building. The Post contained a communications center, the Worldwide Military Command and Control System, and planning staff. From this installation, the entire SAC force could be contacted instantaneously (Figure 4.19) (Pringle and Arkin 1983:135-137; Office of the Historian, Headquarters, SAC 1991a:9).

In the event of a surprise attack that destroyed the SAC Command Post or individual installation command posts, SAC developed a series of redundant command posts to preserve its ability to command, control, and communicate with its forces. An airborne command post, installed in five specially configured KC-135s, was tested and developed in 1960. By 1961, the airborne command post "Looking Glass," was continuously flying with a SAC general and a staff of controllers and communications experts on board.

By 1961, with the nuclear attack force becoming larger and larger, the existing command, control, and communications system was found to be inadequate. President Kennedy and Secretary of Defense McNamara established a new command and control system placing the primary post in the main operations room of the Pentagon, with alternate command posts in a mountain in Raven Rock, Pennsylvania, and in Cheyenne Mountain in Colorado Springs, Colorado. These three posts were linked to all the early warning systems and to the SAC and Polaris nuclear forces. The entire system was in turn linked constantly to the President (Pringle and Arkin 1983:124-125).

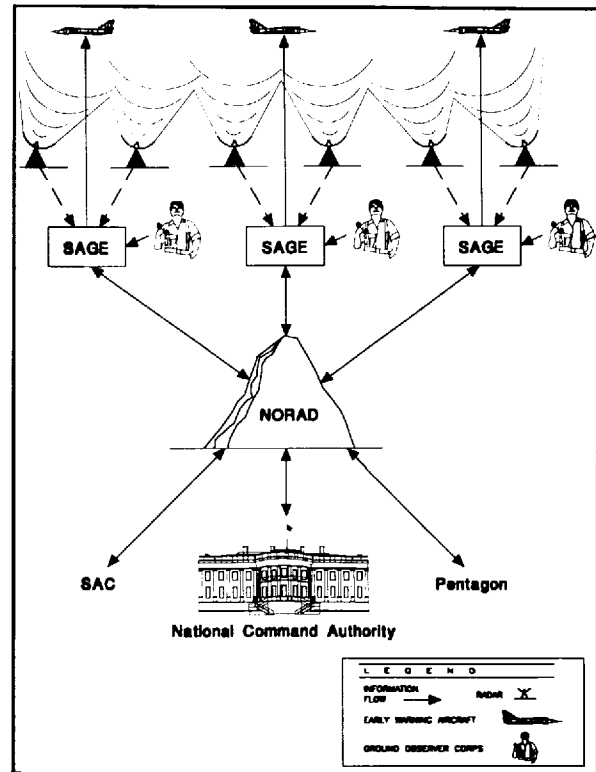


Figure 4.16 SAGE Communications System.

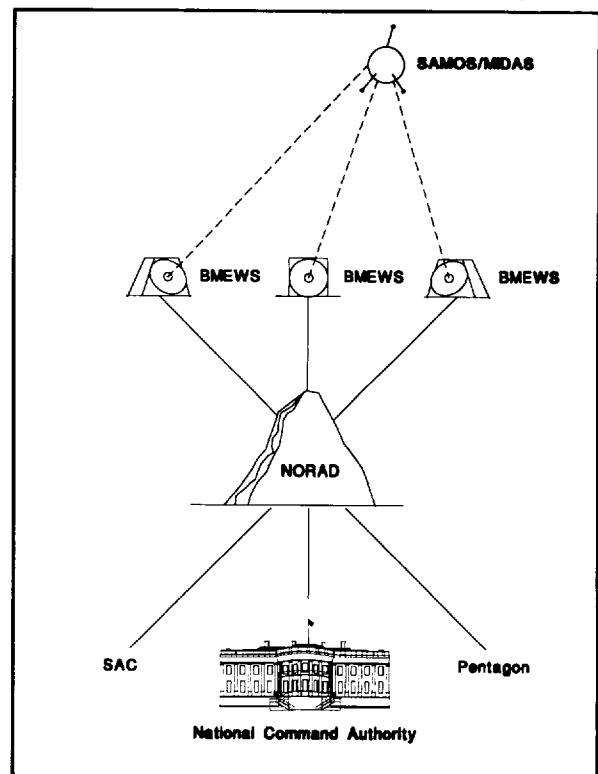


Figure 4.17 BMEWS Communications System.

President Kennedy also developed PACCS in 1962. This system, which expanded the Looking Glass airborne command post operations, consisted of three EB-47L aircraft, which were modified B-47s with electronic communications equipment. These NEACP airborne command posts were established at Barksdale AFB, Louisiana, Westover AFB, Massachusetts, and March AFB, California. Supporting PACCS squadrons were stationed at Mountain Home AFB, Idaho, Lincoln AFB, Nebraska, Lockbourne AFB, Ohio, and Plattsburgh AFB, New York.

Another innovation of redundant command, control, and communications was the Blue Scout Junior rockets. These missiles became operational in 1963 and were capable of sending force execution messages from UHF recorders to all units within line of site of the rocket's flight. These missiles were based at Wisner and West Point, New York, and Tekamah, Nebraska. In 1967, the Blue Scout Junior Rockets were replaced with the Emergency Rocket Communications System (ERCS). Developed for the same mission, this system was installed in Minuteman II missiles at Whiteman AFB, Missouri (Office of the Historian, Headquarters, SAC 1991b:20).

Of Cold War presidents, Carter took the most interest in the command, control, and communications aspect of the nation's forces. Though he did not develop any new systems, President Carter allocated funds for modernizing the command structure and adding redundant communications systems. This increase in redundancy, however, resulted in a loss of centralized command.

Under President Reagan's authorization, SAC received a new command post at Offutt AFB, Nebraska, which became operational in 1989. Constructed next to the 1967 command post, the new center houses state of the art computers and communications equipment that is shielded from electromagnetic interference. The new communications network includes redundant telephone, satellite, and radio systems, and connections to warning systems that detect ballistic missile attacks (Office of the Historian,

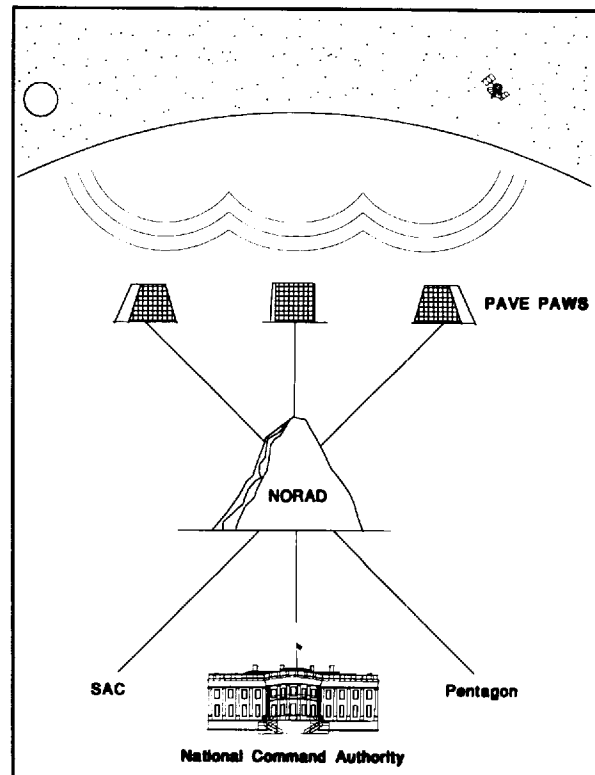


Figure 4.18 PAVE PAWS Communications System.

Headquarters, SAC 1991a:42). At the end of the Cold War, this facility stood down from 24-hour alert and became the command center for USSTRATCOM.

Satellites were an important development for communications and reconnaissance during the Cold War. Into the 1970s and 1980s, satellites became an increasingly important element of the long distance and secure communications networks throughout the Air Force.

In 1950, a RAND document outlined the use of satellites for reconnaissance and in 1954 the Killian Report called for reconnaissance improvements to make the United States militarily secure. There were two systems by which reconnaissance could occur, aircraft and satellites. It was recognized that satellites would be preferable because of their survivability, but because of the complexities surrounding their development, aircraft systems were also developed

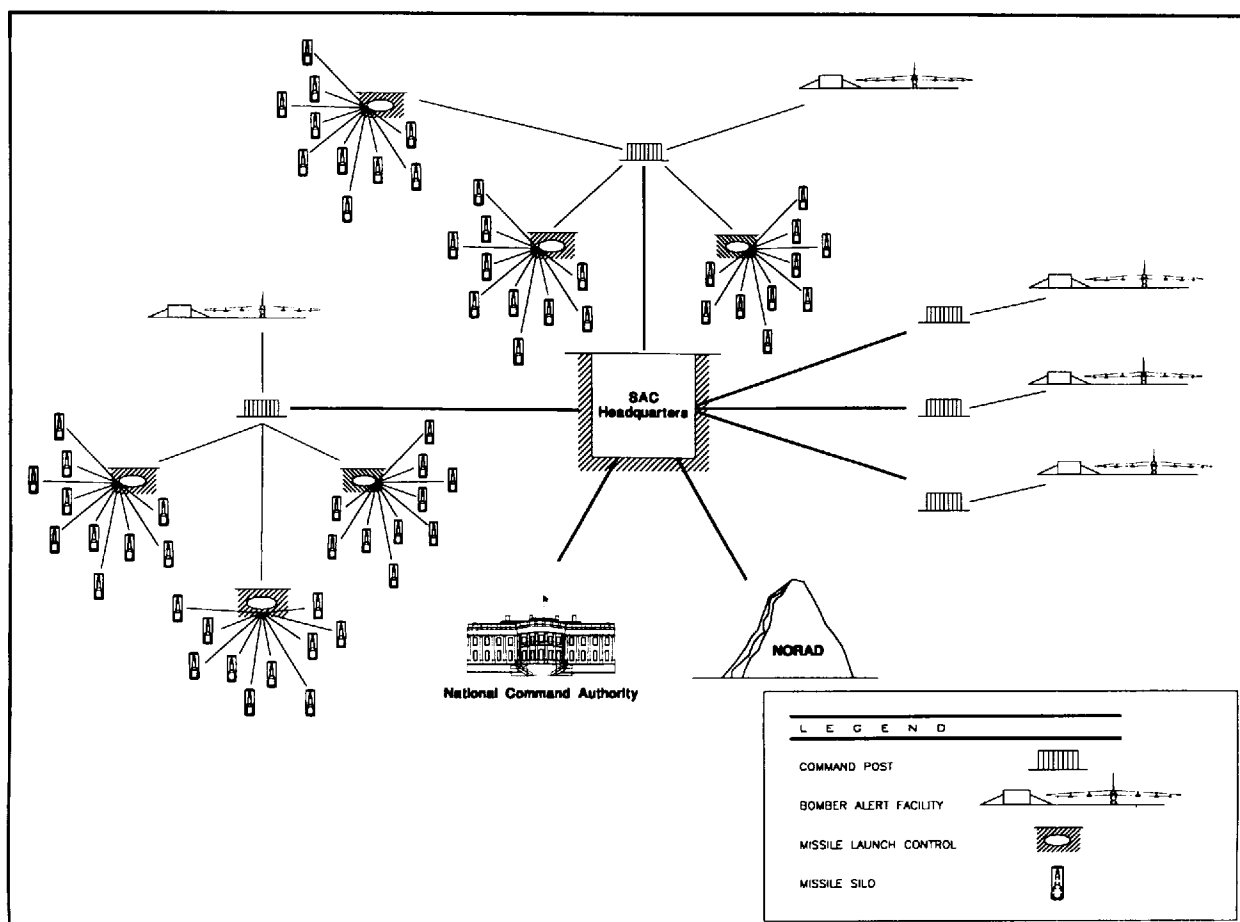


Figure 4.19 Primary SAC Communications During Air Defense Emergency.

to provide required information until satellites were fully deployed.

Strategic reconnaissance aircraft began flying for SAC in the 1950s. Their Cold War mission involved intelligence gathering and the surveillance of enemy strategic positions and installations. There were two aircraft developed during the Cold War to serve solely for reconnaissance missions, the U-2 and the SR-71.

The Lockheed U-2 (Figure 4.20) was developed as a secret SAC spy plane intended to make long, unrefueled intelligence gathering flights over the Soviet Union. The U-2 can travel at approximately 430 miles per hour and remains in operation under ACC at Beale AFB. A glider-like structural design and special engines allow the U-2 to fly for extremely long distances at very high altitudes,

which enables them to avoid interception and anti-aircraft missiles. The U-2 can carry several data gathering devices including cameras, which can record photographs over a 125 mile wide by 2,200 mile long area, and electronic intelligence gathering equipment, which monitors radar and radio transmissions from the ground (Chant 1981:128)

The U-2 historic flights include the 1960 detection of Soviet ICBM installations, the 1962 detection of the presence of missiles in Cuba, and the shoot-down of Francis Gary Powers over the Soviet Union in 1960 (Polmar and Laur 1990; Chant 1981).

The Lockheed SR-71 *Blackbird* (Figure 4.21) was designed as a high altitude reconnaissance aircraft to replace the U-2 in the 1960s. It was originally

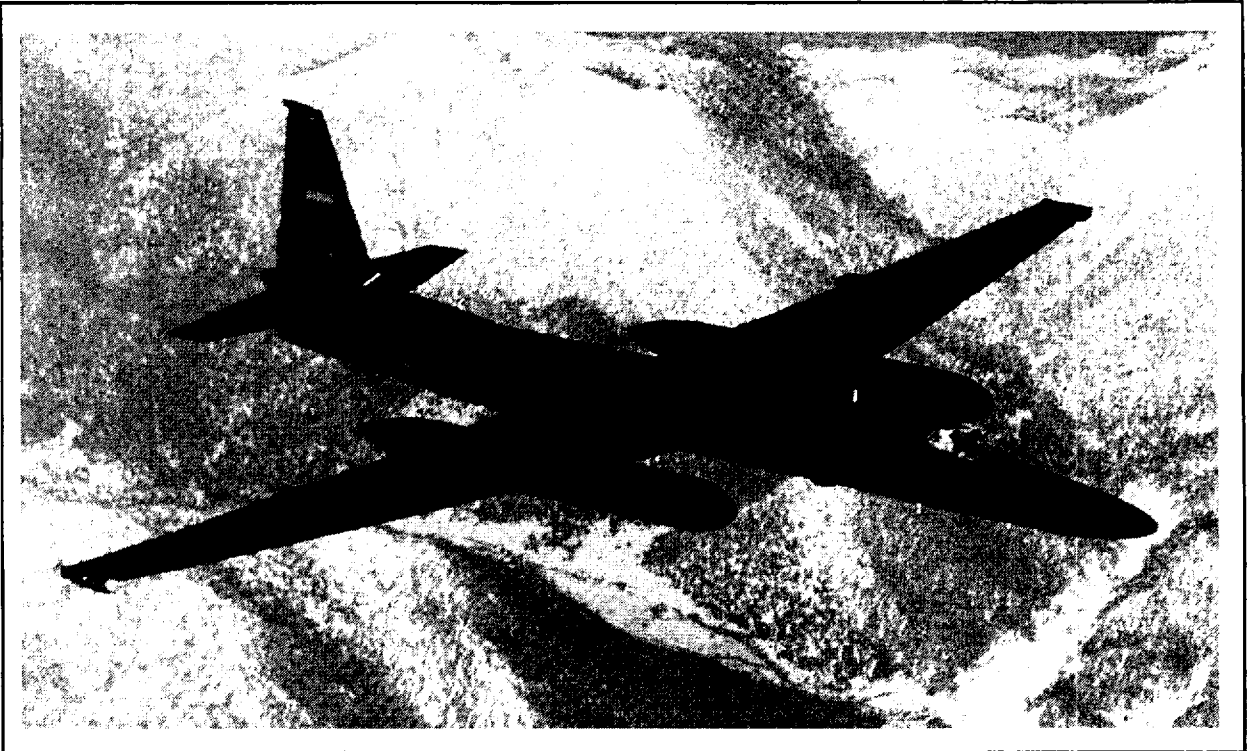


Figure 4.20 Lockheed U2-R: High Altitude Reconnaissance Aircraft. Source: Lockheed.

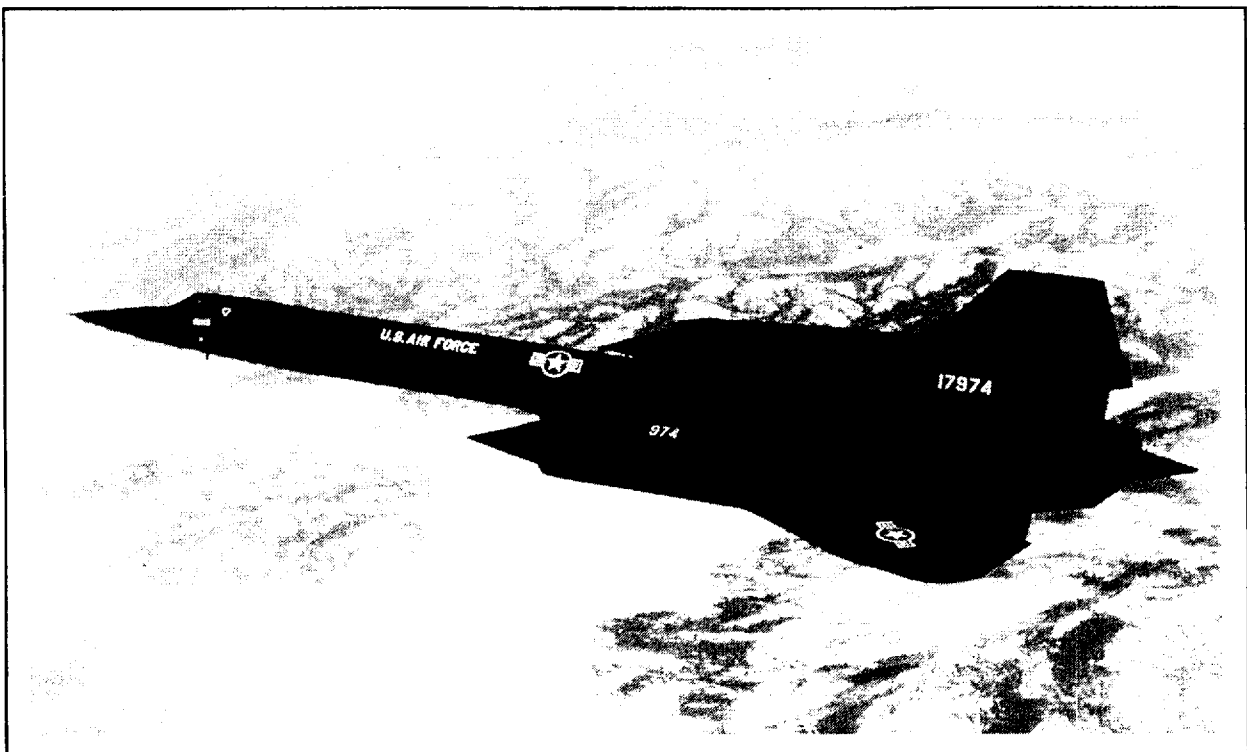


Figure 4.21 Lockheed SR-71 *Blackbird*: High Altitude Reconnaissance Aircraft. Source: DoD Still Media Records Center.

designed as the YF-12 fighter, but was never used in a combat role. The SR-71 is capable of extremely high speeds and high altitude flight that make it less vulnerable than the U-2 to enemy interceptors or missiles. It can achieve speeds of close to 2,000 miles per hour and fly at 80,000 feet. Specific mission data of the SR-71s is classified, but they are assumed to have gathered intelligence over the Soviet Union and world trouble spots. The SR-71 entered service in 1966 with the 9th Strategic Reconnaissance Wing at Beale AFB, California (Chant 1981:125).

As noted in the 1954 Killian Report, satellites were the preferable method of reconnaissance due to their survivability. In 1955, the Air Force began development of a reconnaissance satellite. This project was designated Weapons System 117L, a program for production of a satellite that would provide continuous observation of Earth from a station in space (McDougall 1985:111, 117-120, 155, 166, 183, 190; Neufeld 1990:181; Steinberg 1983:23; Pringle and Arkin 1983:93). A year after it began, the program was moved from Wright Development Center to ARDC's Western Development Division and was subsequently subsumed under ARDC's Ballistic Missile Division (BMD) at Vandenberg AFB (Newhouse 1989:144, 181).

The Killian Panel forecast that with the advent of satellites in space, operational anti-satellite weapons would not be very far into the future. SAC General LeMay also predicted that the development of reconnaissance satellites would invariably lead to the Soviet deployment of anti-satellite systems (Steinberg 1983:20), and that immediate development of a United States system would achieve a state of deterrence in space: if the United States had an anti-satellite system at the same time as the Soviets, then the Soviets would be much less likely to use theirs against the United States satellites (Steinberg 1983:31). However, Eisenhower decided to wait until the technology of satellites was solved to deal with the question of anti-satellites.

The first successful United States satellite, Explorer I, was launched in 1958, and in 1959, the first of

many Discoverer satellites was launched. In 1960, Tiros I was successfully launched by a Thor-Able missile (Taylor and Mondey 1972:112). The Tiros I satellite was officially designated as a weather satellite, however, in essence, this was the United States' first reconnaissance satellite. That same year ten more Tiros satellites, the Transit 1B navigation satellite, the Echo communications satellite, and MIDAS 2 were successfully launched. The MIDAS 2 was the first satellite to be officially designated as a reconnaissance satellite, as it could detect the launch of an ICBM with infrared sensors (Pringle and Arkin 1983:93; Taylor and Mondey 1972:112-113). From MIDAS 2 on, satellites became more technologically complex and capable, with developments that allowed penetration of clouds, ground cover, camouflage, and darkness.

Satellites also became an important part of the Air Force and National Command Authority's communications systems. In 1967, the AFCS activated the first communications satellite. This was called the Initial Defense Communications Satellite Program and was activated at Clark AFB in the Philippines (AFCC Office of History 1991:99). From that point on, satellites were increasingly integrated in the long distance communications and command and control redundancy systems. Between 1970 and 1976, satellite communications became a reality through the Tactical Satellite Communications Systems, which provided high-priority satellite communications for tactical operations and other military command systems (AFCC Office of History 1991:170).

In the late 1970s and early 1980s, tactical ground terminals and the Air Force Satellite Communications System were developed to provide SAC and other high-priority users with secure links between ground and airborne terminals. Also developed during this time was the NAVSTAR Global Positioning System (GPS) and the Air Force Meteorological Satellite Program. The NAVSTAR GPS was used as a precise navigational aid to determine accurate relationships of enemy and friendly forces, and

the meteorological satellite was used to accurately predict and report weather conditions (AFCC Office of History 1991:171). The AFCC developed the GPS satellites and terminals, and SAC became the operational manager.

Satellites were initially developed as reconnaissance systems and then aided the development of ICBMs. Later, satellites entered the USAF inventory as secure communications systems, and finally, during the Reagan administration, were seen as antimissile defense systems. The development of satellites aided the Air Force in the gathering of intelligence essential to the mission of deterrence. It was felt that in the event of a nuclear attack, the command and control of USAF forces would continue through this secure system, and a United States retaliatory nuclear strike would follow. Thus satellites aided deterrence through survivability. During Reagan's administration, through the concept of SDI, a satellite ABM system, satellites became one of the strategic elements that brought the Cold War to an end.

Communication facilities for early warning systems, fighter-interceptor alert, and command and control will be a part of the Cold War material culture study. While many of the earlier systems were removed to be replaced by newer, updated systems, the facilities may still embody the Cold War through their construction or other physical attributes. Command and control centers will be updated from their early Cold War configuration and will most likely have been moved from the original facility. While the above may be true, these facilities may still exhibit the characteristics of a specific period or phase of the Cold War.

4.3.1.4 Strategic Deterrence

Strategic deterrence was the primary mission of SAC. Throughout the Cold War, SAC carried out this mission with crew readiness for long-range bombers and ICBMs. In the late 1940s and 1950s, SAC bombers provided the only delivery system for nuclear weapons. Through the continuing long-range bomber mission and the addition of ICBMs, SAC became a vital part of the United States deterrence triad composed of land-based missiles,

submarine-based missiles, and airborne, manned bombers.

Figures 4.22 and 4.23 show the chronology of selected strategic aircraft used during the Cold War and their ceilings and ranges, which aided in their role of deterrence.

Each of the USAF strategic bombers of the Cold War era were designed for the same purpose: the delivery of nuclear weapons to targets in the Soviet Union, or other enemy, as efficiently and reliably as possible. Bomber aircraft have evolved from the propeller-driven World War II vintage B-29 *Superfortress*, which could carry a single, small nuclear bomb and had only a limited range, to the modern, long-range, supersonic B-1B *Lancer* and the highly complex, radar-evading B-2 *Stealth* bomber, which is capable of penetrating enemy airspace to deliver a host of nuclear or conventional weapons.

From 1946 to 1958, fighter aircraft were assigned to SAC as escorts for bomber aircraft such as the B-29, B-50 *Superfortress*, and the B-36 *Peacemaker*. The slow bombers of that period were vulnerable to enemy fighter attack and depended heavily on the escorts for defense. In 1946, SAC's fighter inventory consisted entirely of World War II P-51 *Mustangs*. Over the years, SAC operated the F-82 *Twin Mustang*, which was propeller-driven, and early jet fighters, including the F-80 *Shooting Star*, the F-84 *Thunderjet*, and the F-86 *Sabre*. Primary bases for SAC fighters included Larson, Malmstrom, and Tinker AFBs. F-86s were the last SAC fighters and were stationed at Moron and Torrejon AFBs in Spain for base defense (Office of the Historian, Headquarters, SAC 1988).

As aircraft became faster they no longer required fighter escort and instead were fitted with defensive and offensive weapons to aid in survivability and the role of deterrence. Air-launched missiles were developed to ensure SAC manned bombers would penetrate enemy territory. Technological improvements to the air-launched missiles were stimulated by improvements in

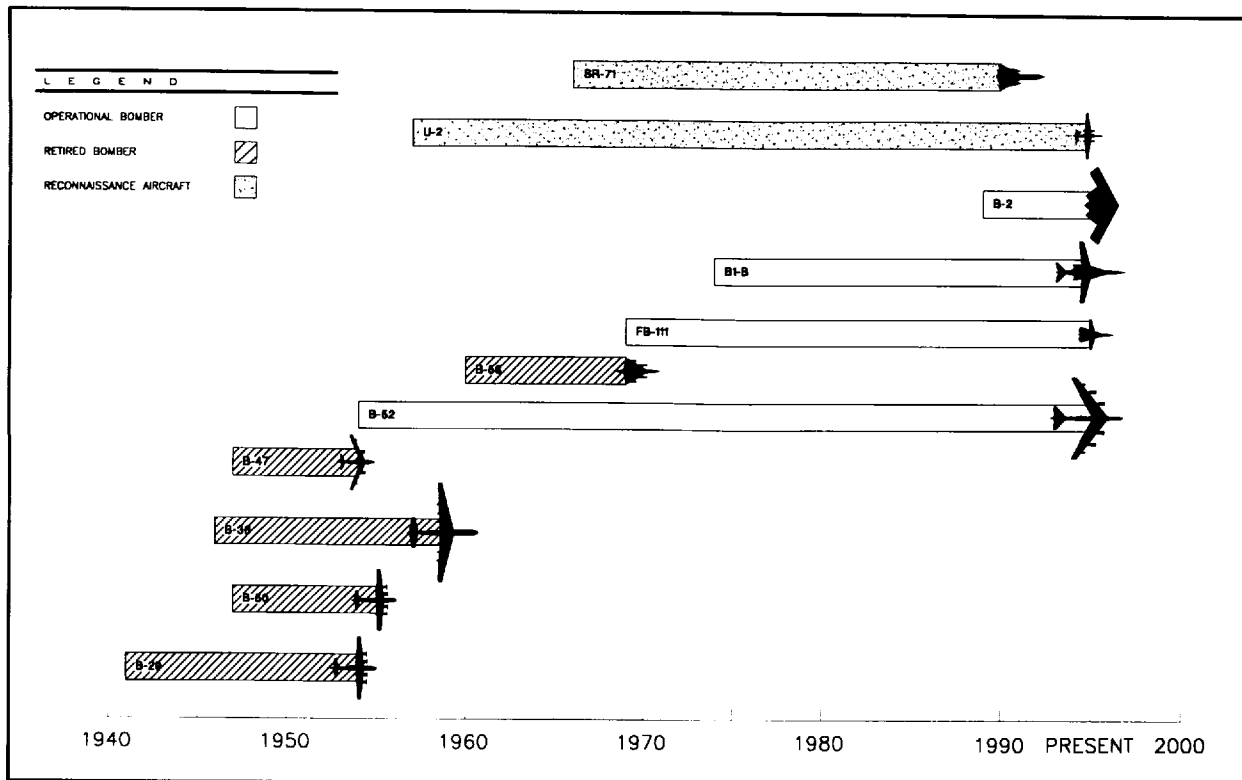


Figure 4.22 Chronology of Selected Strategic Aircraft. Source: Polmar and Laur 1990.

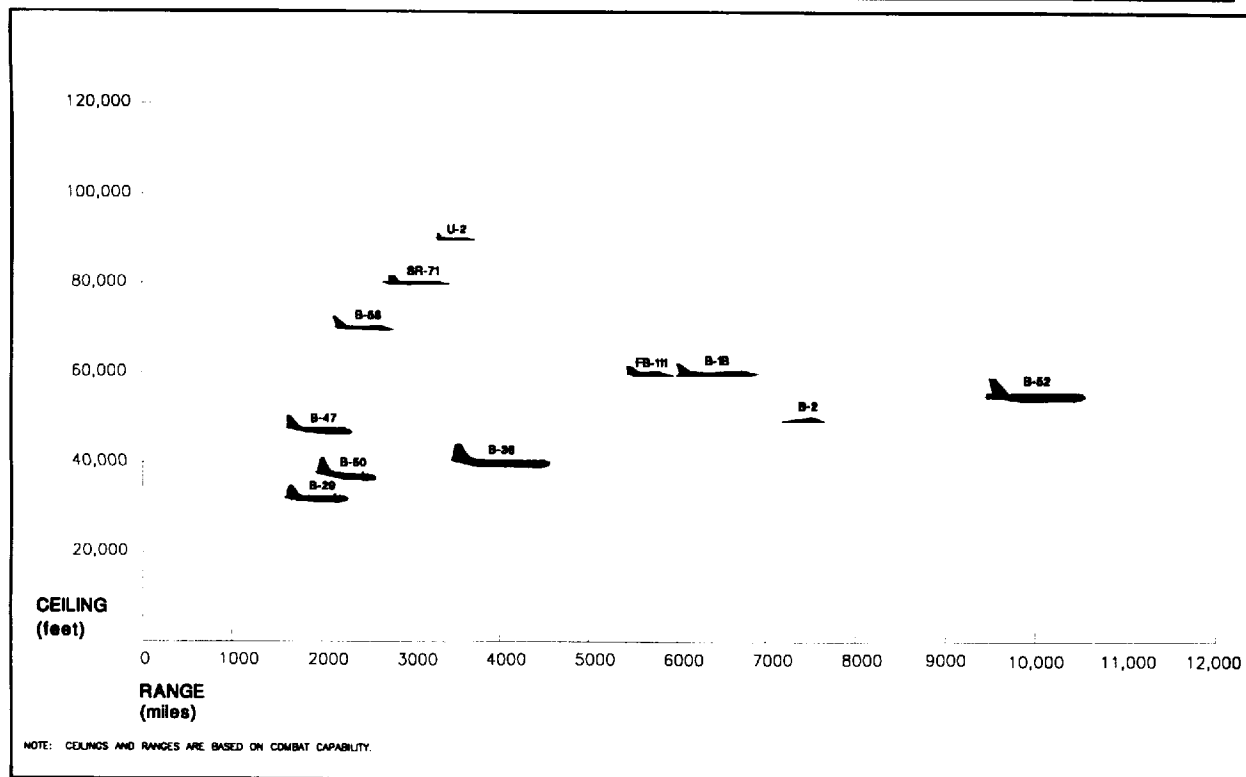


Figure 4.23 Selected Strategic Bomber and Reconnaissance Aircraft. Source: Polmar and Laur 1990.

aircraft of the United States and in the Soviet air defense system. Air-launched missiles deployed by the SAC include the Quail, Hound Dog, SRAM, Air Launched Cruise Missile (ALCM), Advanced Cruise Missile (ACM), and Harpoon.

The Quail air-launched missile was manufactured by the McDonnell Aircraft Company with development beginning in 1952. As the only decoy missile in the USAF arsenal, its function was to confuse, dilute, saturate, and otherwise degrade enemy radar systems. It accomplished this by using reflectors, chaff, electronic repeaters, and infrared simulators which made the missile appear to be a B-52 bomber in enemy detection systems. A B-52 could carry four of these single-engine missiles. The first Quail missiles were deployed at Eglin AFB in 1960, becoming operational in 1961. Ultimately, 14 B-52 squadrons were operationally equipped with Quail missiles. The last missile was delivered from the manufacturer in 1962, and it remained operational until 1978 (Office of the Historian, Headquarters, SAC 1991b:63; Polmar and Laur 1991:311).

The Hound Dog was a stand-off, air-to-surface missile capable of carrying a nuclear weapon. The missile was manufactured by North American Aviation and was powered by a single Pratt and Whitney jet engine. Two Hound Dog missiles could be carried beneath the wings of B-52G and H series bombers and their engines could be used to boost bomber take off. The Hound Dog was to be used to attack enemy defense systems, hopefully limiting losses of manned bombers. The program was initiated in 1956, the first missile delivered in 1959, and the full operational B-52 force of 29 squadrons was equipped with Hound Dog missiles by 1963. The Hound Dog was eventually inactivated, the last one being destroyed at Loring AFB in 1978 (Office of the Historian, Headquarters, SAC 1991b:63-64; Polmar and Laur 1990:300).

In 1963, the Boeing Aerospace Company began to develop the SRAM, which remains operational in the 1990s. The solid-propellant fueled missile carries a nuclear warhead and an inertial guidance system. Each SAC B-52 G and H bomber can carry up to 20 SRAMs. The FB-111 can carry 6 SRAMs, and the B-1B can carry 24 SRAMs. The

mission of SRAMs is to defend bombers by attacking surface-to-air installations and also to destroy selected strategic targets. The first B-52 and FB-111 units to receive operational SRAMs were based at Loring AFB and Pease AFB in 1972 and 1973, respectively (Office of the Historian, Headquarters, SAC 1991b:64; Polmar and Laur 1990:315).

The ALCM was developed and manufactured by Boeing. The development of this missile began in 1974 and required technological breakthroughs in the field of computers. The reduction in size and the expansion of computer capabilities allowed the creation of a self-guided, low-flying, terrain-hugging weapon capable of attacking ground targets. The first deliveries of ALCMs were to Griffiss AFB in 1981. Later that year, Griffiss AFB received the first B-52 G bomber modified to carry 12 ALCMs. The bomber was also outfitted with an Offensive Avionics System which improved launching and targeting the missiles. In December of 1982, Griffiss AFB had the first combat-ready, ALCM-equipped wing. In 1985, Carswell AFB received the first ALCM-modified B-52 H bombers. Boeing ultimately produced and delivered 1,715 ALCMs (Polmar and Laur 1990:296; Office of the Historian, Headquarters, SAC 1991b).

The ACM was developed by the Convair Division of General Dynamics in 1983. This missile was an improvement over the ALCM in terms of range, penetration, and accuracy. The first delivery of this system was in July 1988 at K. I. Sawyer AFB, and it is still operational today (Office of the Historian, Headquarters, SAC 1991b:69-71; Polmar and Laur 1990:295).

SAC tested its Harpoon anti-ship missile in 1982 to support its own maritime mission. The Harpoon was a liquid-fueled cruise missile already in use by the Navy. This missile could be launched from aircraft, ships, or submarines, and would travel along the surface of the water to its target. Bombers from Mather AFB tested the Harpoon missile in 1983. In 1984, Loring AFB hosted the first operational B-52G wing with

aircraft modified to carry the Harpoon (Office of the Historian, Headquarters, SAC 1991b:69-71).

Some of the bomber aircraft used early in the Cold War which required fighter escort were the B-29, the B-50 and the B-36. The Boeing B-29s brought World War II to an end with the bombing of Hiroshima and Nagasaki. The B-29 was the largest combat aircraft used in World War II, the first airplane in the world capable of carrying and delivering a nuclear bomb, and the only strategic bomber in operation when the Air Force was established as a separate service in 1947. As the first strategic bomber, the B-29 had a limited range and could not be refueled in flight (Polmar and Laur 1990).

The Boeing B-50 was an improved version of the B-29 with more powerful engines. The B-50 became operational in 1948 with the 43rd Bombardment Wing at Davis Monthan AFB, Arizona (Knaack 1988:169). The bomber could carry one gravity nuclear bomb or 20,000 pounds of conventional weapons. Several variants of the B-50 were produced including trainer, reconnaissance, missile launch platform, and tanker versions. The B-50 continued in service until 1955 when it was replaced by the jet powered B-47 (Polmar and Laur 1990; Knaack 1988).

The need for a large, long range, nuclear capable bomber was met by the Convair B-36 when it entered service in 1948 with the 7th Bomb Wing at Carswell AFB, Texas (Knaack 1988). The B-36 dwarfed its predecessors and could carry four gravity nuclear bombs or 72,000 pounds of conventional weapons (Polmar and Laur 1990). The plane was powered by six piston-pusher engines; the late models carried four additional turbojet engines (Polmar and Laur 1990).

The Boeing B-47 *Stratojet* was a medium bomber, did not require a fighter escort, and was the first swept-wing, jet-powered aircraft produced in large numbers. The plane was powered by six, wing mounted turbojet engines and could carry one gravity nuclear bomb or 10,000 pounds of conventional bombs. B-47s could reach a speed of over 600 miles per hour which was much faster

than previous piston engine bombers. The higher speeds allowed the B-47 to have a crew of only three, since the need for defensive gunners was made redundant by defensive speed. Over 2,000 B-47s were produced and operated by the Air Force (Knaack 1988).

The Boeing B-52 (Figure 4.24) was the most reliable and long-lived bomber in the SAC inventory, and remains in active operation with ACC. It was originally conceived in the late 1950s as a turboprop replacement for the B-50, however, the newly designed J57 jet engines allowed production models to be jet-equipped. The bomber has eight engines and a maximum speed of 650 miles per hour with a range of 10,000 miles. Multiple types of nuclear weapons including SRAMs, cruise missiles, and gravity bombs, as well as conventional weapons, can be carried by the B-52 (Chant 1981).

In the late 1950s, base overcrowding, the threat of Soviet missile attack, and the Gaither and Killian Report recommendations resulted in dispersal of B-52s throughout the country. It was thought that the B-52 force was more survivable if it was located at more bases, thus giving the Soviets more targets and making it more difficult to destroy the force. Aircraft were dispersed in small groups to numerous bases (Knaack 1988; Goldberg 1957).

In the early 1960s, it became apparent that Russian anti-aircraft missiles could hit high altitude planes, which resulted in the Air Force calling for low-level flight modifications to B-52s. This series of modifications, referred to as "Big Four," included the addition of electronic countermeasure equipment and improved electronics that allowed the aircraft to fly at lower levels and still elude radar detection (Knaack 1988:252, 253).

The B-52s were used in Southeast Asia during the Vietnam War and some were modified to improve conventional strategic mission capabilities. The requirement for increased conventional bombing resulted in modifications allowing for storage of more bombs (Knaack 1988).

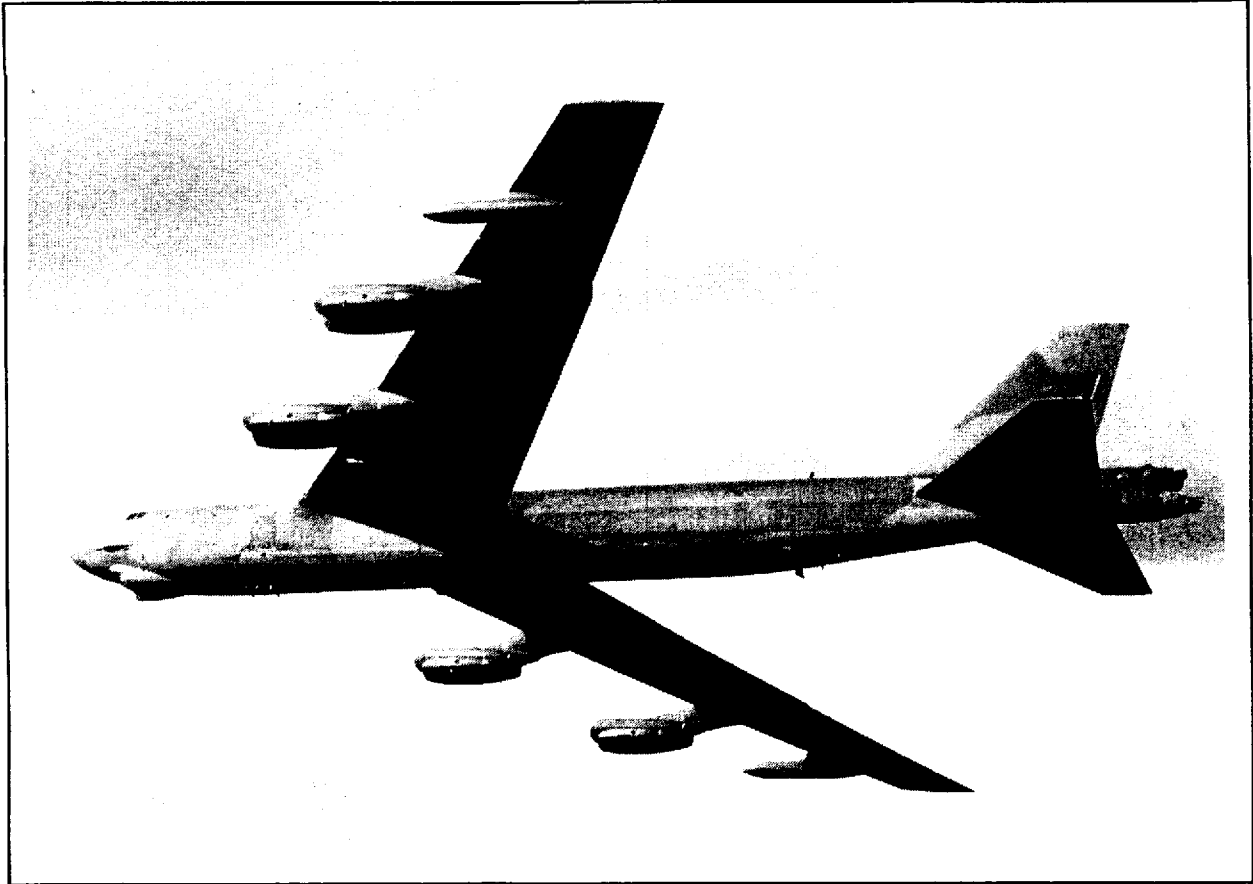


Figure 4.24 Boeing B-52 *Stratofortress*: Strategic Bomber. Source: DoD Still Media Records Center.

The Convair B-58 *Hustler* was the United States first supersonic bomber; a relatively small, delta-wing bomber. It had four turbojet engines mounted under the wings and carried its bombload and extra fuel in an under-fuselage pod which was designed to be jettisoned after attack. The B-58 carried a crew of three and could reach maximum speeds of 1,600 miles per hour. Despite the impressive speed, its maximum range was only 2,470 miles--much less than the larger bombers (Polmar and Laur 1990). The plane was operated from 1960 to 1969. Its relatively short life was due to several maintenance problems and its short range.

The FB-111 is a medium-range strategic bomber that was adapted from the F-111 tactical fighter design. The plane is a supersonic twin-engined attack bomber with a crew of two and a maximum speed of 1,450 mph. The FB-111 is capable of

supersonic speeds at very low altitudes. It carries terrain-following radar which allows it to penetrate enemy airspace and radar. Armament includes four SRAMs or conventional bombs (Chant 1981; Polmar and Laur 1990).

The B-1 bomber (Figure 4.25) was designed in the late 1960s to replace the aging B-52. It was cancelled by President Carter in 1976, but a modified design (the B-1B) was reinstated by President Reagan in 1981. The plane is a supersonic, swing-wing aircraft designed to penetrate enemy airspace at low levels and evade radar detection. It has a crew of four, can reach speeds of 750 miles per hour with a range of over 6,400 miles, and can carry an assortment of nuclear weapons including gravity bombs, SRAMs, cruise missiles, as well as conventional weapons (Polmar and Laur 1990:254-258).

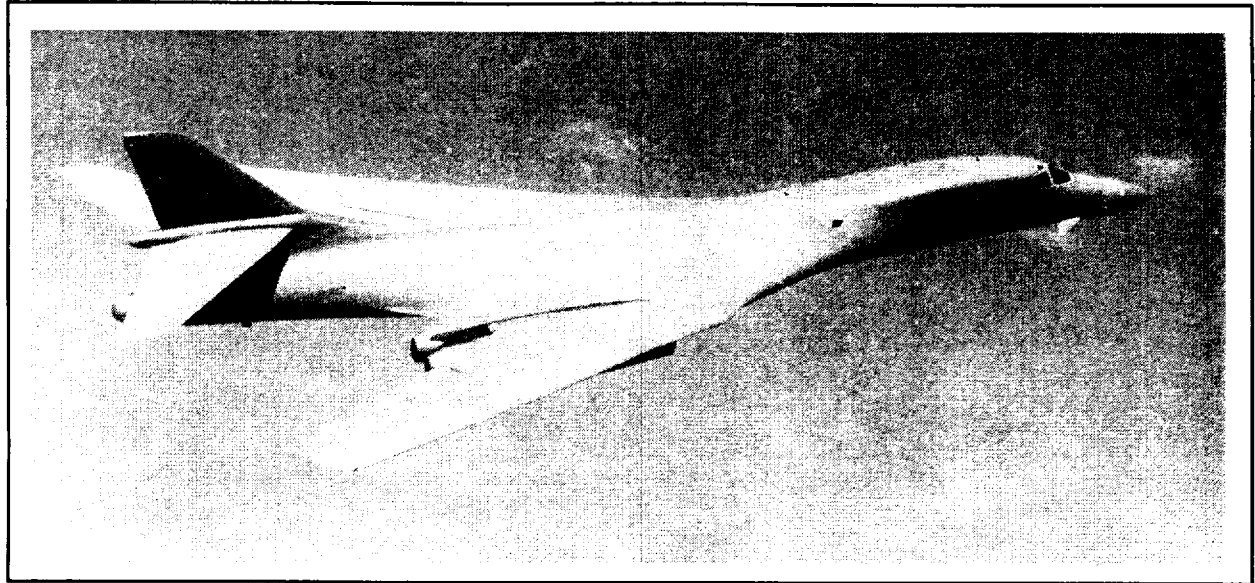


Figure 4.25 Boeing B1B *Lancer*: Strategic Bomber. Source: DoD Still Media Records Center.

The B-2 bomber is the most recent addition to the ACC inventory. While a post-Cold War addition, it has been argued that its development during the Reagan era helped convince the Soviet Union to end the Cold War. The B-2 has a "flying wing" design intended to be invisible to enemy radar. The cross section of the plane is very thin and radar absorbing materials are used in the construction to further lessen radar detection. Over 200 computers are used on each B-2 bomber. The mission of the aircraft is to attack enemy command and control and mobile ICBM installations (Polmar and Laur 1990). The plane carries a crew of two, can reach speeds of Mach .85, slightly less than 600 miles per hour, and can deliver a variety of gravity bombs, SRAMS, and conventional bombs.

Missiles were another part of the "Defensive Triad." The land-based missiles, ICBMs, were assigned to SAC (Figure 4.26) and the submarine-based missiles, SLBMs, were the responsibility of the Navy. The development of the first-generation ICBMs was initiated during a period when the United States felt relatively secure in its strategic advantage over the Soviet Union. Increasing intelligence reports of Soviet missile advances, and ultimately the success of Sputnik I, provided the impetus to complete development and deploy the

first generation ICBMs. The Atlas and Titan I systems contributed significantly to President Kennedy's strategic posture taken during the Cuban Missile Crisis.

Three operational versions of the Atlas, "D," "E," and "F," were developed by the Convair Division of General Dynamics and had a range of 6,500 nautical miles. The series "D" craft was a one and a half stage, liquid-fueled, rocket-powered missile equipped with a radio-inertial guidance system and a nuclear warhead. Subsequent series saw technological developments such as all-inertial guidance, improved engines and thrust capability, improved fuel storage and delivery systems, and larger nuclear warheads. The Atlas was originally stored in a horizontal, unprotected, or "soft," above-ground launcher. The Atlas launch system evolved from this soft launcher, to a semi-hard coffin-type launcher, to a hard silo-lift launcher that stored missiles vertically and protected them from nuclear blasts (Neufeld 1990:187-199; Office of the Historian, Headquarters, SAC 1991b:7; Polmar and Laur 1990:299).

The Titan, developed by the Glenn L. Martin Company, had a 5,500 nautical mile range and

was seen as an alternate or backup to the Atlas missile (Office of the Historian, Headquarters, SAC 1991b:7; Polmar and Laur 1990:320-321). The Titan system was two-staged, liquid-fueled, and rocket-powered with both radio and all-inertial guidance. Similar to the later versions of the Atlas missile, the Titans were stored in a "hard," vertical silo, which was raised to the surface by an elevator before firing. Titan I complexes were constructed below grade and comprised of three missile silos, a central guidance facility, and several underground utility buildings (Figure 4.27). The utilities included propellant storage and handling facilities, powerhouses, and water and fuel storage facilities. These Titan I launch facilities were joined by over a half mile of connecting tunnels (Hayes 1962:402).

Atlas and Titan I missiles were found to have several technological deficiencies. Most of these related to the propellant delivery and loading system. Liquid-fueled rockets were prone to accidents during loading and often the resulting fires were allowed to burn themselves out to avoid further losses. Also, both the soft and hard launch systems of Atlas and Titan I exposed the missiles to enemy attack. Finally, the missile systems and complexes were expensive to operate and maintain. A phase-out of these first generation missiles was initiated in 1964 and completed in 1965 (Neufeld 1990:215-218; Office of the Historian, Headquarters, SAC 1991b:18; Polmar and Laur 1990:299).

The shortcomings of the Atlas and Titan I, their cost, unreliability, and vulnerability, were alleviated in the next generation of ICBMs. The development of the next generation of missiles was spurred on by the 1957 "missile gap." The perceived missile gap accelerated the completion of the first generation Atlas and Titan I programs, and influenced the initial development of the Titan II and Minuteman series. The Titan II and Minuteman systems were designed to preserve nuclear deterrence. The deployment of the Minuteman was thought to erase any potential Soviet ballistic missile advantages (Neufeld 1990:227). Soon after the Kennedy administration took office, the missile gap crisis dissipated, but not before budgets and accelerated ICBM programs were approved.

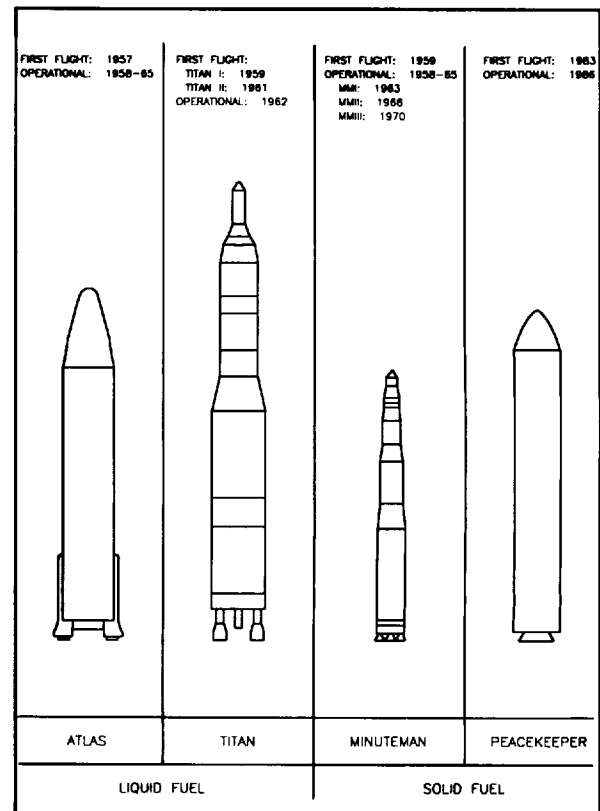


Figure 4.26 ICBMs: 1957-1994. Source: Polmar and Laur 1990.

The development of the Titan II was approved by the Air Force in 1959 and the missile, with a 5,500 nautical mile range, was manufactured by the Martin Company (Office of the Historian, Headquarters, SAC 1991b:23). The Titan II was a two-stage, liquid-fueled, rocket-powered ICBM with more powerful engines, larger warheads, improved all-inertial guidance system, and an improved fuel system. Launch of the Titan II was directed by a connected underground launch capsule and could occur from the bottom of an underground-silo launcher, without the aid of an elevator. The auxiliary areas, including power generators and propellant storage facilities, were located around the silo (Hayes 1962:402).

Minuteman research and development, known originally as Weapon System Q, began in 1955. The missile system was conceived as a safer, more effective, more flexible, and less expensive alternative to the other ICBMs (Neufeld

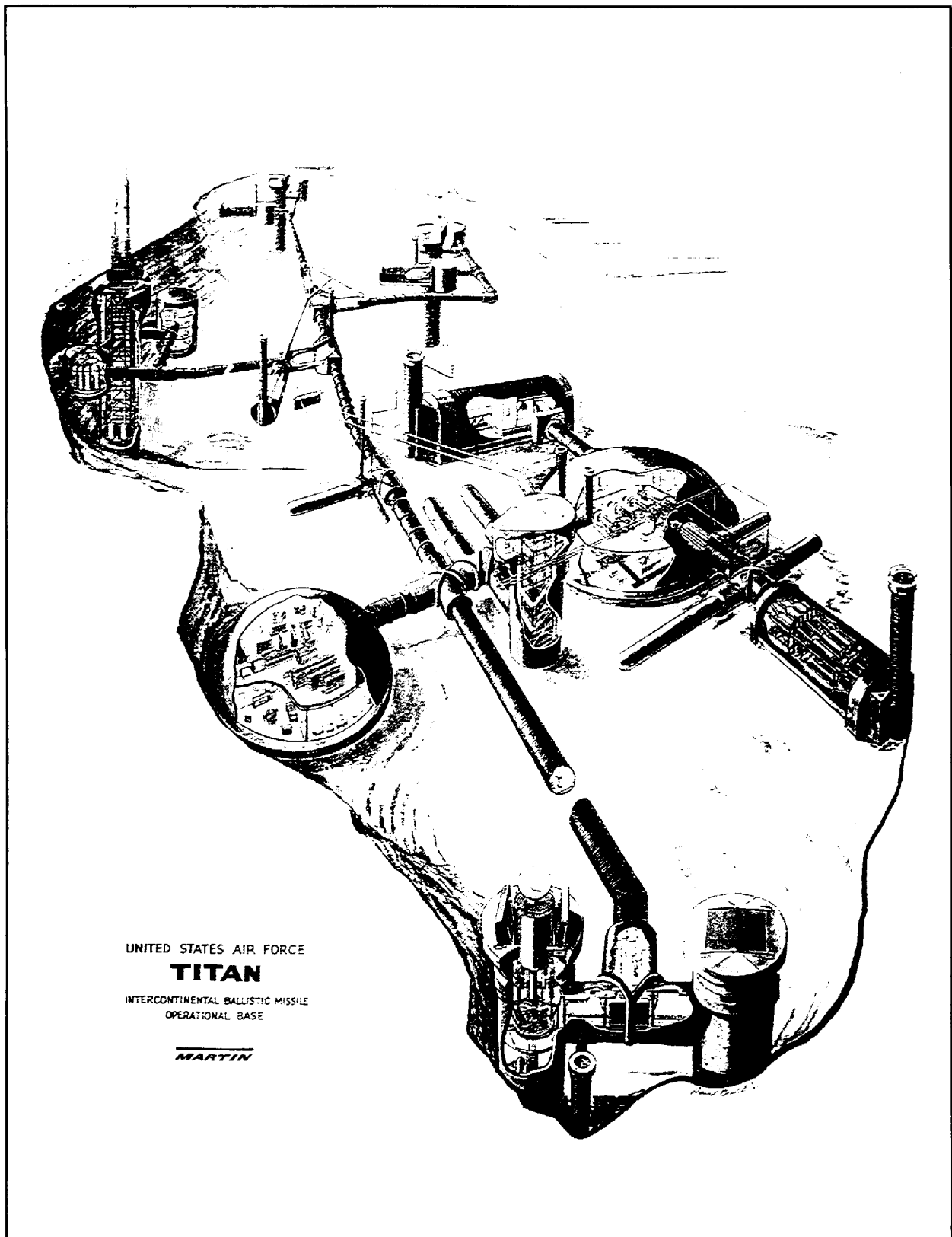


Figure 4.27 Titan I Complex. Source: Martin Company.

1990:227). The Air Force began development of the Minuteman in 1958. This missile was a smaller three-stage, solid-propellant, rocket-powered ICBM with an all-inertial guidance system capable of being fired from hardened, widely-dispersed, underground silos. The missile had a range of 5,500 nautical miles. Each of the four models of Minuteman, Minuteman I "A" and "B," Minuteman II "F," and Minuteman III "G," was an improvement over its predecessor. In general, each model had an improved guidance system, load capacity, range, accuracy, and nuclear survivability. Minuteman III used modified I and II silos and featured penetration aids. However, the most important modification of the Minuteman III was its capacity to carry MIRVs (Office of the Historian, Headquarters, SAC 1991b:25; Polmar and Laur 1990:304-307).

As the Minuteman IIIs were being deployed, SAC began plans for the third-generation of ICBMs. The third generation ICBM became known as the Peacekeeper, and was initiated as Missile-X, or the MX, in 1971. The Peacekeeper was developed to preserve strategic deterrence with greater range, greater accuracy, greater survivability, and the ability to carry multiple warheads. Funding difficulties impeded SAC efforts to develop and deploy this system (Office of the Historian, Headquarters, SAC 1991b:41).

The Peacekeeper was a four-stage missile capable of carrying ten independently-targetable reentry vehicles. Advanced technology was incorporated into the fuel system, guidance, nozzle design, and motor construction. The motorcases of the three solid propellant stages were made of Kevlar epoxy. The fourth stage was a Post-Boost Vehicle (PBV) powered by a liquid bi-propellant fuel. The missile also featured a fully-independent navigation system.

The Peacekeeper used a cold launch technology. The missile is ejected from the silo in a canister prior to its actual ignition launch. This technology allowed SAC to use Minuteman silos even though the Peacekeeper was three times larger than the Minuteman (Office of the Historian, Headquarters, SAC 1991b:41; Polmar and Laur 1990:308). Figure 4.28 shows the locations of the United States

operational ICBM missile sites from Atlas to Peacekeeper, by missile type.

Aircraft, ICBMs, and their nuclear capabilities were the cornerstone of strategic deterrence. This manifested itself on USAF installations in the form of bomber alert, command and control, and missile facilities. The SAC's operation of these facilities and maintenance of combat-ready forces provided the Soviet Union with evidence that the United States was prepared for a conflict. The numbers and development of strategic missiles were a continual element of arms negotiation discussions throughout the Cold War.

The varying political climates of the Cold War can easily be seen in the development of the United States bomber force. Two of these political climate milestones were the decision to halt B-1 production in favor of cruise missiles during the Carter era and the earlier cancellation of the B-70, which resulted in the long-term reliance on the B-52. The B-52 has been continuously updated to provide reliable deterrence, and a limited number of B-1B bombers were eventually produced as part of the Reagan-era defense buildup. Development of the B-2 bomber during the Reagan years may have helped terminate the Cold War since the financially struggling Soviets could not produce a counterpart.

The United States trends in bomber development of the 1960s and 1970s are in sharp contrast to the development of a bomber force in the Soviet Union. While United States supersonic bombers were cancelled or delayed, the Soviet Union placed a heavy emphasis on intercontinental bombers and produced the fast Blinder, Backfire and Blackjack bombers in large numbers.

The material culture of the USAF strategic deterrence role will primarily be related to the operational missiles and the B-52. While the Soviets were developing newer and faster bombers, the United States was continuing to rely on the strength of the B-52 bombing and alert capabilities. While the B-52 was the mainstay of the SAC bomber force, there will also be facilities

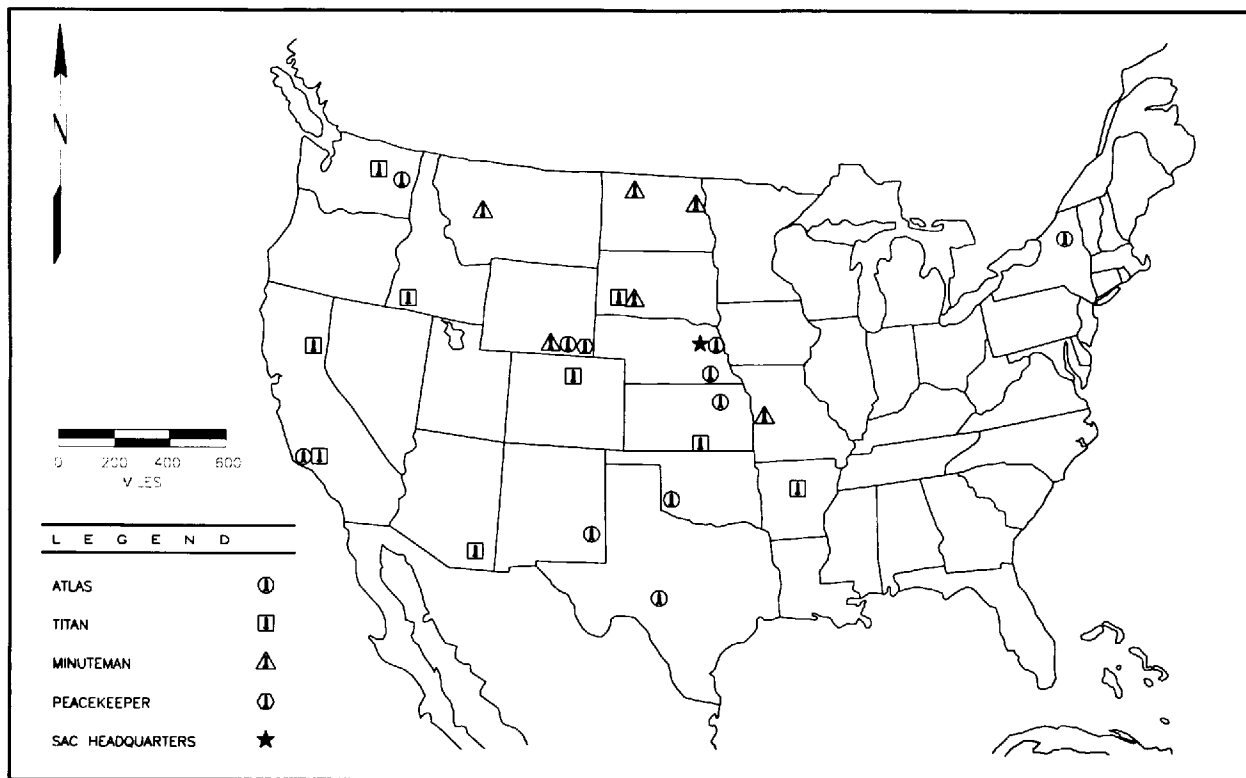


Figure 4.28 SAC Missile Locations: 1959-1988. Source: USAF 1990:105-108.

related to other highlight aircraft such as the B-36, B-1, and the B-2 which may exemplify the Cold War. Also of import will be the operational missile facilities, such as the Atlas, Titan, and Minuteman, which will include launch control facilities, crew support, and launch facilities.

4.3.1.5 Air Defense

The communist seizure of Czechoslovakia in February 1948 prompted fiscal support of planned air defenses in the United States. In addition to some World War II radar sites being reopened, the Air Force proposed to construct a system of 75 early warning radar stations and ten control centers within the CONUS and Alaska. The 1949 Soviet detonation of the fission bomb added further fiscal commitment to these early warning projects. The Air Force quickly constructed a system of 44 radar stations in California and operationalized a plan for dispersal of interceptor aircraft to alternate bases (Armstrong 1976:630).

One of the few fighters specifically designed for use as an interceptor was the F-106 *Delta Dart* (Figure 4.29), which could reach speeds up to 1,519 miles per hour. Most F-106 aircraft were stationed in coastal regions or in the northern U.S. to defend against a much-feared Soviet bomber attack from the north. The aircraft was a redesign of the F-102 *Delta Dagger* which had been used as a less sophisticated interim interceptor before the F-106 was delivered (Chant 1981). ADC originally operated the F-106 and it was later assigned to TAC when the former command was deactivated. The single-engine, delta-wing aircraft was controlled on intercept missions by the SAGE system. This system was a ground station which electronically guided the plane to its intercept location and automatically launched air-to-air missiles (AAM) against targets with the pilot monitoring the various systems (Jones 1975). The F-106 could carry armament including nuclear-tipped Genie AAMs with some aircraft equipped with 20 mm cannons. The aircraft was

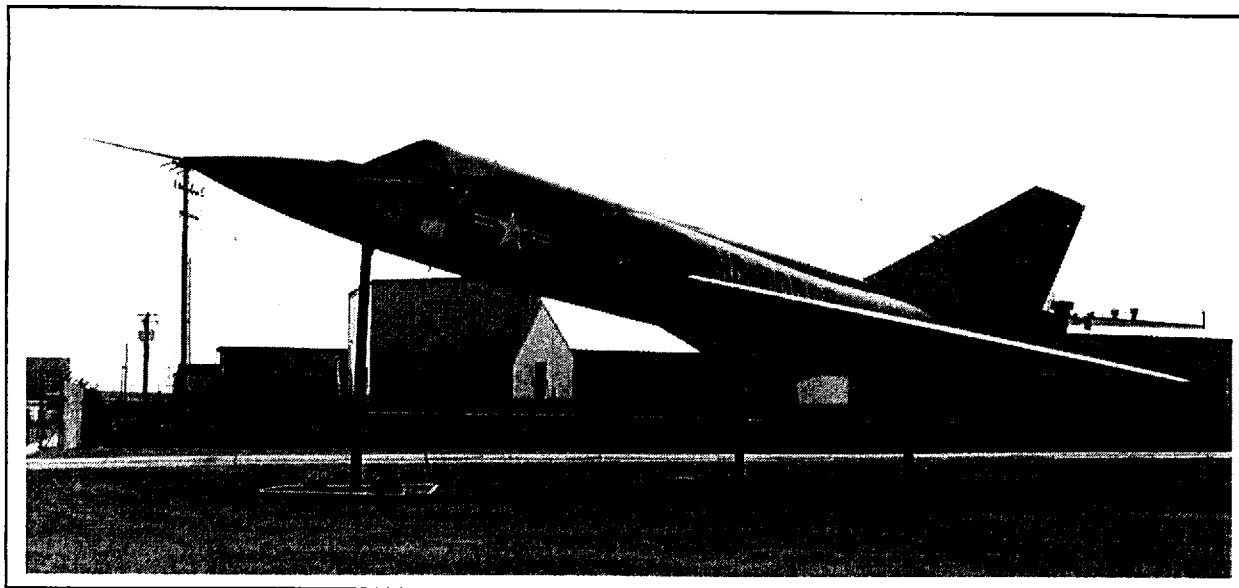


Figure 4.29 F-106 *Delta Dart*: Fighter-Interceptor.

first flown in late 1956 and continued in service into the mid-1980s (Polmar 1976; Chant 1981).

Prior to the construction of permanent radar systems to aid in air defense, the Air Force organized emergency measures such as temporary radar and the GOC. The temporary radar systems were referred to as Lashup and were constructed with funds originally intended for construction of permanent radar sites. These temporary sites were to be used as models, as well as to provide immediate defense until the permanent system could be operationalized. These temporary sites were located throughout the Northeast and the West Coast (Figure 4.30).

In 1951, one of the recommendations made by RAND was to develop defense against low-level attack (Schaffel 1991:149). Until the Air Force could develop low-level radar systems, it relied on the GOC. The northernmost sector was part of SKYWATCH and the southern sector was on standby (Figure 4.4). The GOC was a civilian operation and was not always quick to respond, but at the time, the Air Force and United States citizens felt the GOC was vital to fill gaps in the radar system.

By 1958, a system that could not only warn of incoming aircraft, but had electronic data links with interceptor aircraft was in operation (Figure 4.16). This system was the SAGE and was developed by MIT Lincoln Laboratories in cooperation with the ADC. The SAGE was a data-processing system related to the USAF air defense system and was used to coordinate all air defense components. It was the first major computerized defense system and could process radar signals, coordinate battle plans, and control air-to-air weapons (Schaffel 1991:197-208; Pringle and Arkin 1983:91). The first SAGE Direction Center opened at McGuire AFB, New Jersey in 1958 (Goldberg 1957:193-194). Figure 4.31 shows SAGE locations from 1956 to 1962.

To answer the Killian Report's call for an early warning radar system, two lines were developed and deployed by 1958. The Pinetree Line, operationalized in 1954, is a joint United States-Canadian radar system that can detect attacking enemy bombers and notify command authorities of an impending attack (Figure 4.32). This chain of radar stations is located in the pine forests just north of the United States-Canadian border, concentrated along both sea coasts.

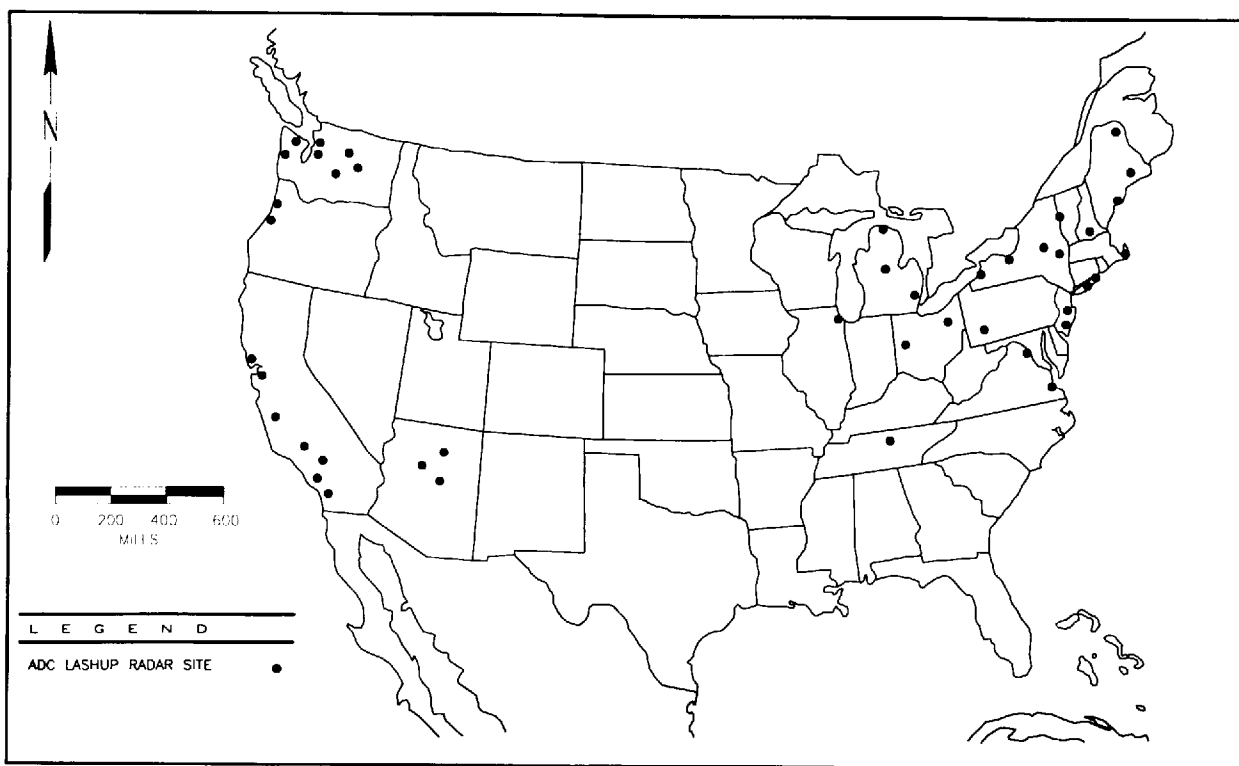


Figure 4.30 ADC Lashup Radar Sites: 1950. Source: Schaffel 1991:93.

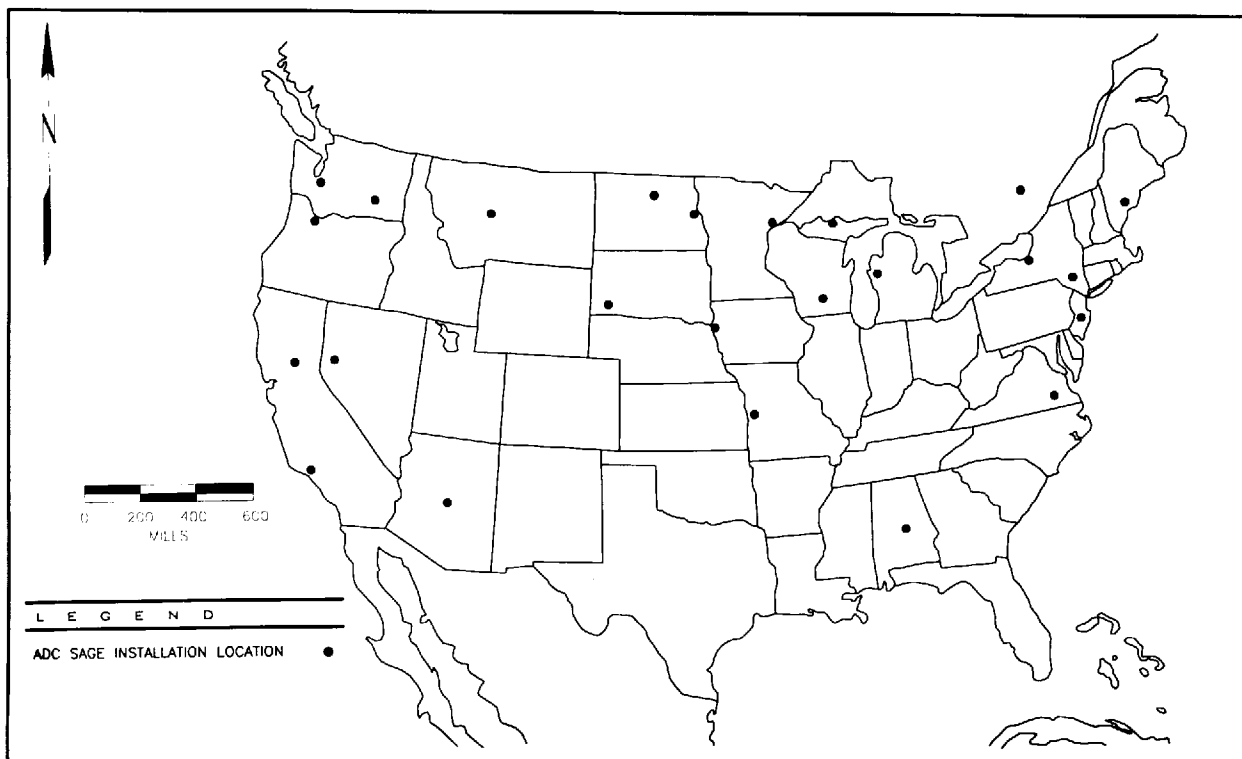


Figure 4.31 ADC SAGE Installations. Source: IBM SAGE Sector Shipping List and MAJCOM SAGE Location and Present Use List.

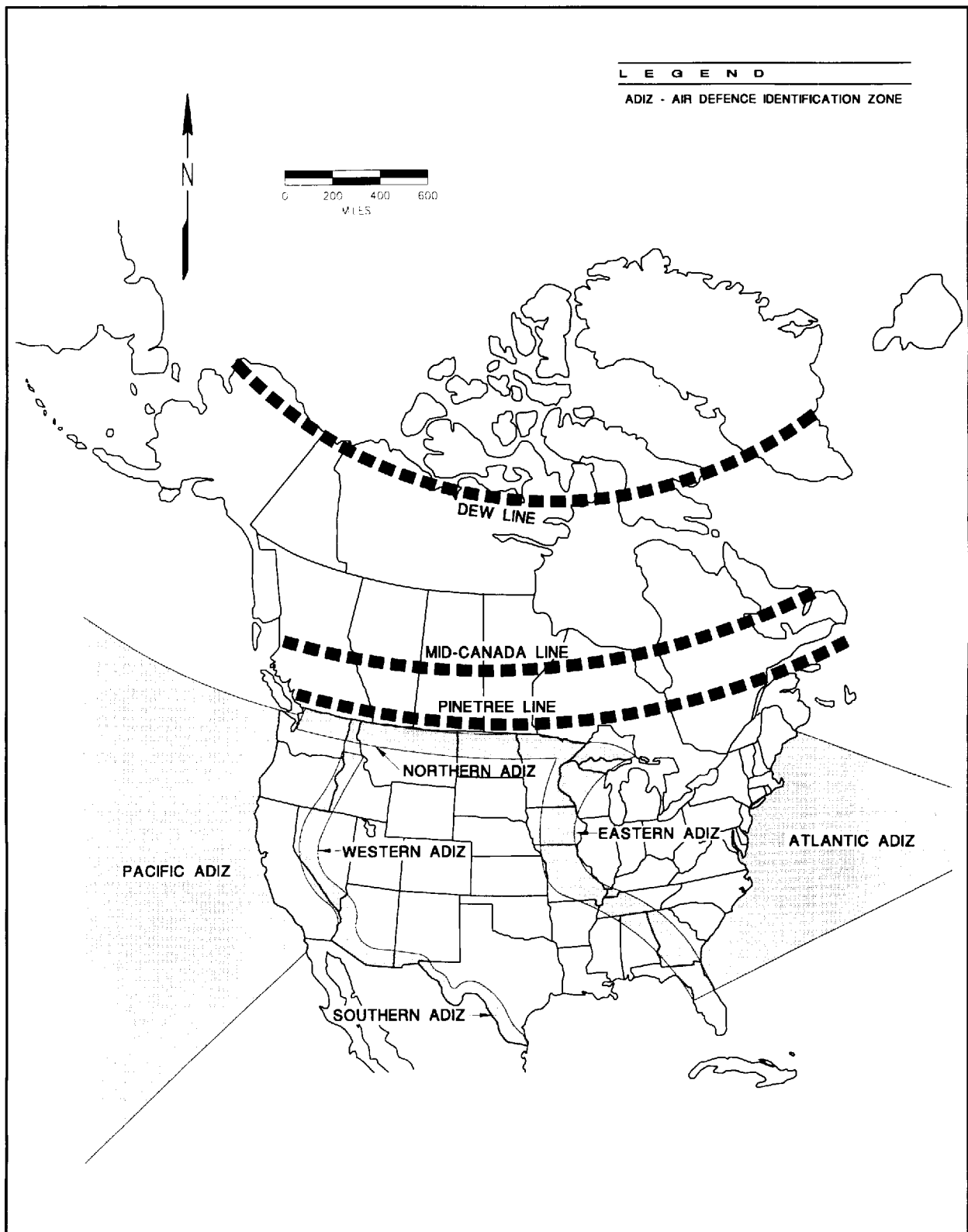


Figure 4.32 Air Defense Radar Lines and Air Defense Identification Zones. Source: Schaffel 1991:211; Goldberg 1981:134.

The DEW Line is a United States radar system operationalized in 1958. This system detects bombers, is being upgraded to detect incoming cruise missiles, and can notify command authorities six hours before an impending attack. The line consists of over 50 radar stations stretching across the Arctic Circle from the Aleutian Islands of Alaska to Iceland. Both systems are part of the NORAD, which is centered in Cheyenne Mountain in Colorado Springs, Colorado. The WACS system linked the DEW Line and the Aircraft Control and Warning System to relay communications back to the Alaskan AFBs, Elmendorf and Eielson. This system also linked the BMEWS to NORAD in Cheyenne Mountain, Colorado (Reynolds 1988:6).

The PAVE PAWS was added to the NORAD early warning communications network in 1980. This system is continually in operation, tracks and logs items orbiting the earth, and provides low-level surveillance. Its primary mission during the Cold War was to identify and warn of incoming ICBMs and SLBMs. The PAVE PAWS system consists of four units located in Northern California, Texas, Georgia, and Massachusetts; they cover CONUS and Southern Canada (Figure 4.33). The system uses a phased array technology which can track more targets more accurately and at a greater range than mechanical radar systems. This is made possible through computer-transmitted signals to thousands of small antenna

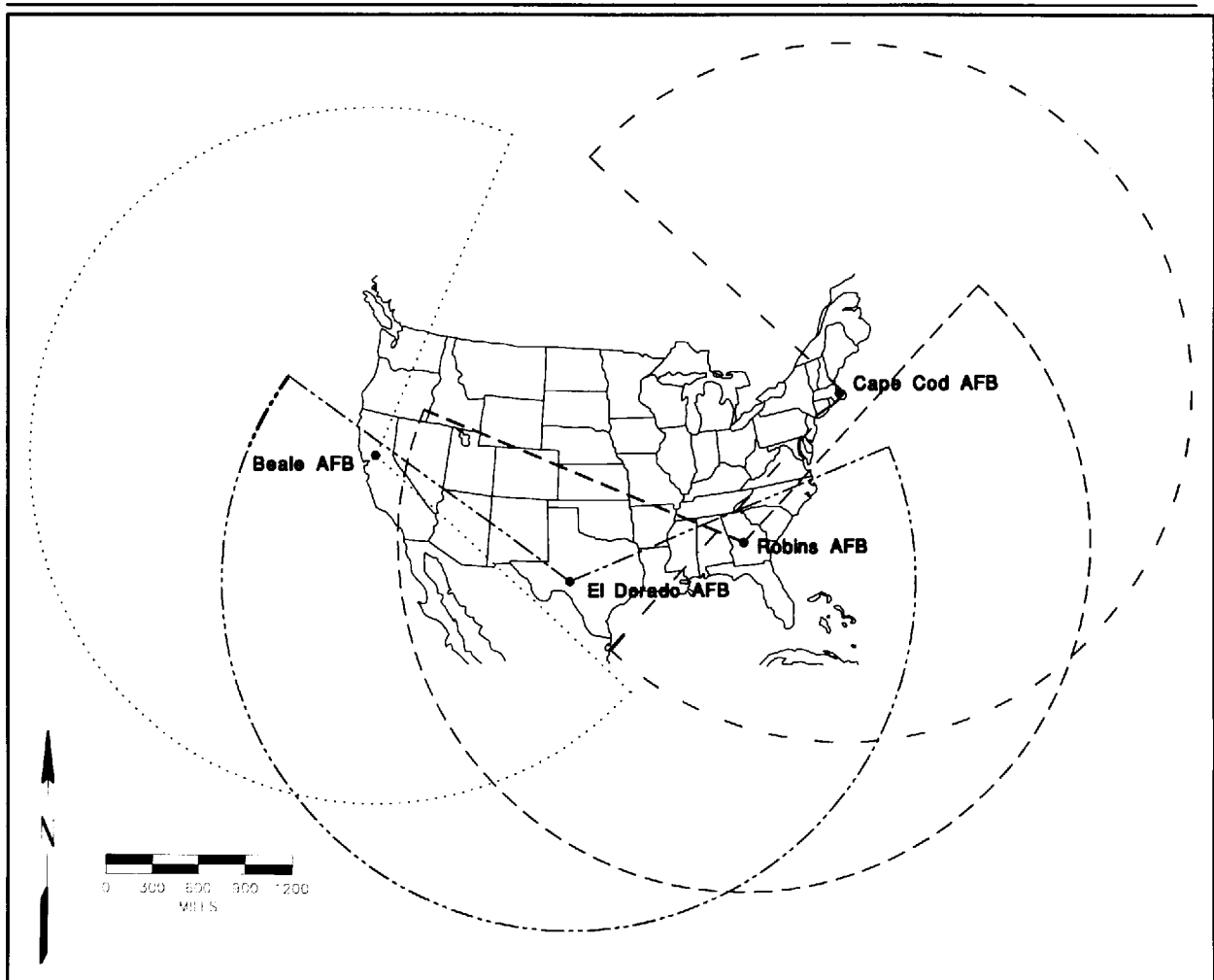


Figure 4.33 PAVE PAWS Locations and Coverage. Source: USSPACECOM.

elements, which form precise patterns to allow the phased array system to detect and track multiple targets moving at very high speeds. While a mechanical radar system can move from one area to another in a manner of seconds, the PAVE PAWS can move its beam in a matter of milliseconds.

During Phases I and II of the Cold War, the Army's Nike series missiles were an important part of air defense (Figure 4.34). The Nike missile was originally designed as a point defense, but eventually developed into an area-defense network. Nike was developed to down guided missiles and it was believed, before ICBMs were operational, that it would also provide defense against ICBMs. There was an ongoing discussion between the Air Force and the Army as to which agency should be responsible for ICBM defense. The Air Force believed that the only defense against ICBMs was to develop offensive ICBMs as a deterrent, while the Army believed that the Nike system would provide an adequate defense.

Throughout the Cold War, CONUS air defense was divided into sectors. The sectors developed into more complicated divisions during Phases II and III of the Cold War then began to simplify toward Phase IV (Figures 4.35 through 4.39). During the beginning and middle of the Cold War, fighter-interceptor facilities were located throughout the country. By the 1970s, the air defense and fighter-interceptor force became a perimeter defense unit (Figures 4.40 through 4.44).

During the Cold War, the fighter and fighter-interceptor forces included ADC, CONAC (ANG and AFRES), and the Canadian Air Force. These forces were on alert, ready to intercept unknown aircraft within USAF-protected aerospace. Incoming aircraft were identified by the early warning systems and the coordination of flight plans logged with the FAA. If there had been a national air defense emergency, national command authority communications systems would have swung into action and a wartime chain of command would have come into operation (Figure 4.15).

Throughout the Cold War, air defense played an important role in protecting the CONUS and in

aiding deterrence. Through the combination of air defense and communications systems, the Soviet Union was aware that the United States would know of an attack and be capable of providing retaliation, either through a Flexible Response and limited nuclear war or through the fulfillment of MAD.

4.3.1.6 Tactical Operations

TAC was the primary operational command responsible for maintaining a combat-ready tactical operations force. During a national emergency, the tactical force was under the command of the Joint Task Force Commander, and resources would be deployed as required to meet the needs of the mission (Figure 4.15), whereas SAC and ADC retained their command authority. Knowing how missions are coordinated leads to understanding the role of tactical operations, which will aid in evaluating associated resources.

The primary principle of tactical operations is centralized control and decentralized execution. This requires the integration of command, control, communications, intelligence and interoperability to relay efficient, well planned missions to aircraft. To produce properly executed results, TAC divided tasks into four levels which allowed for centralized decisions and efficient operations. The first level was the Joint Task Force Level, which provided overall strategy and appointed percentages of resources to be allocated for missions. The second task level was the Air Component Level, which provided the gross tasking and maneuvering of forces by allocating the numbers of specific resources to be used. The third task level was the Execution and Control Level, which translated the tasking into detailed plans and orders. And the fourth task level was the Unit Level, which would apply the tactics and weapons systems through air operations (TAC 1978:3-4).

Tactical and Sector Operations Centers aided in all task levels of daily operations. These centers generated the daily tasking orders, monitored their execution, and developed detailed theater

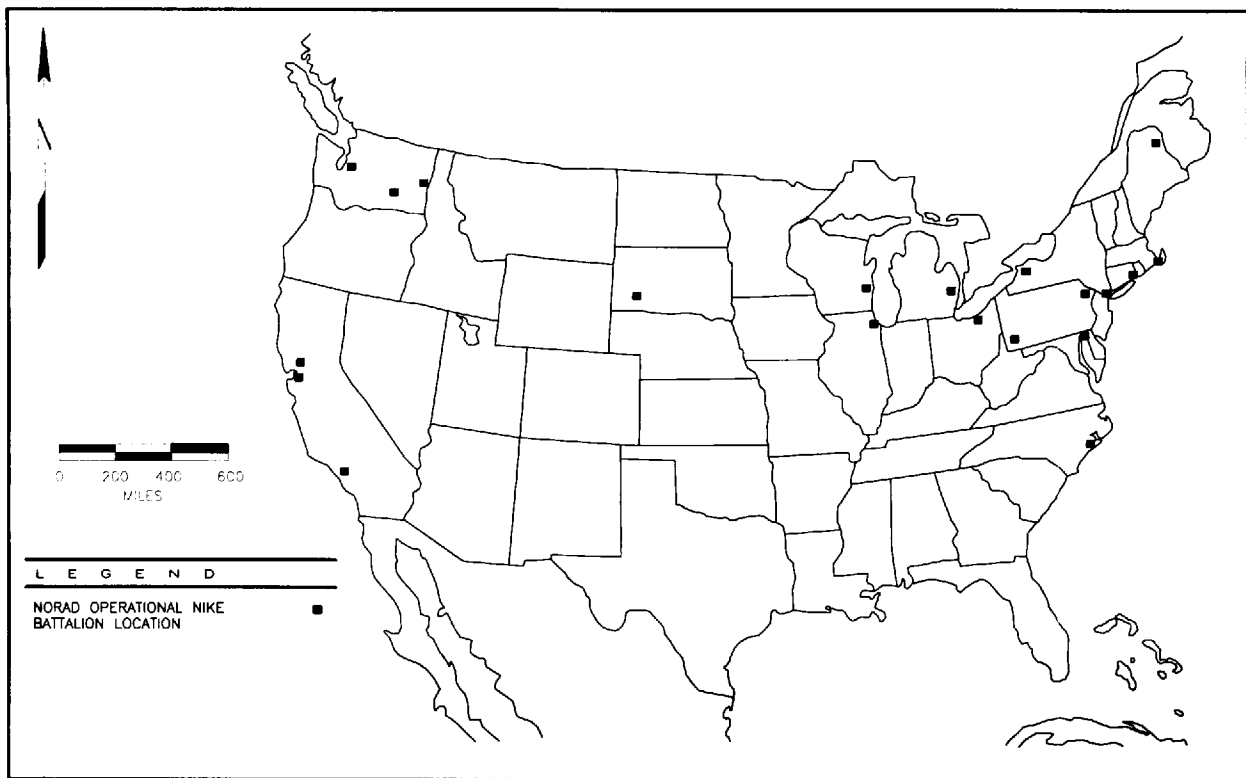


Figure 4.34 NORAD Operational Nike Battalions: 1959. Source: Schaffel 1991:248.

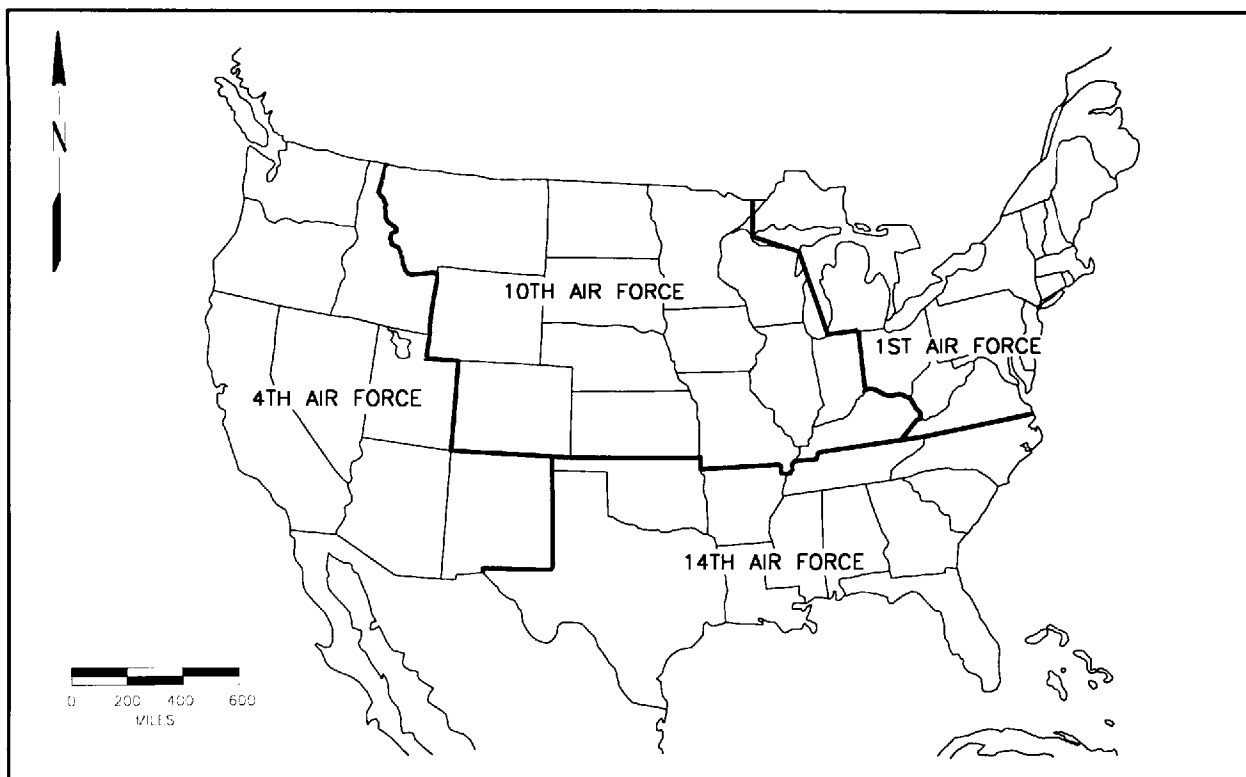


Figure 4.35 Air Defense Sectors: July 1948 to March 1949. Source: Schaffel 1991.

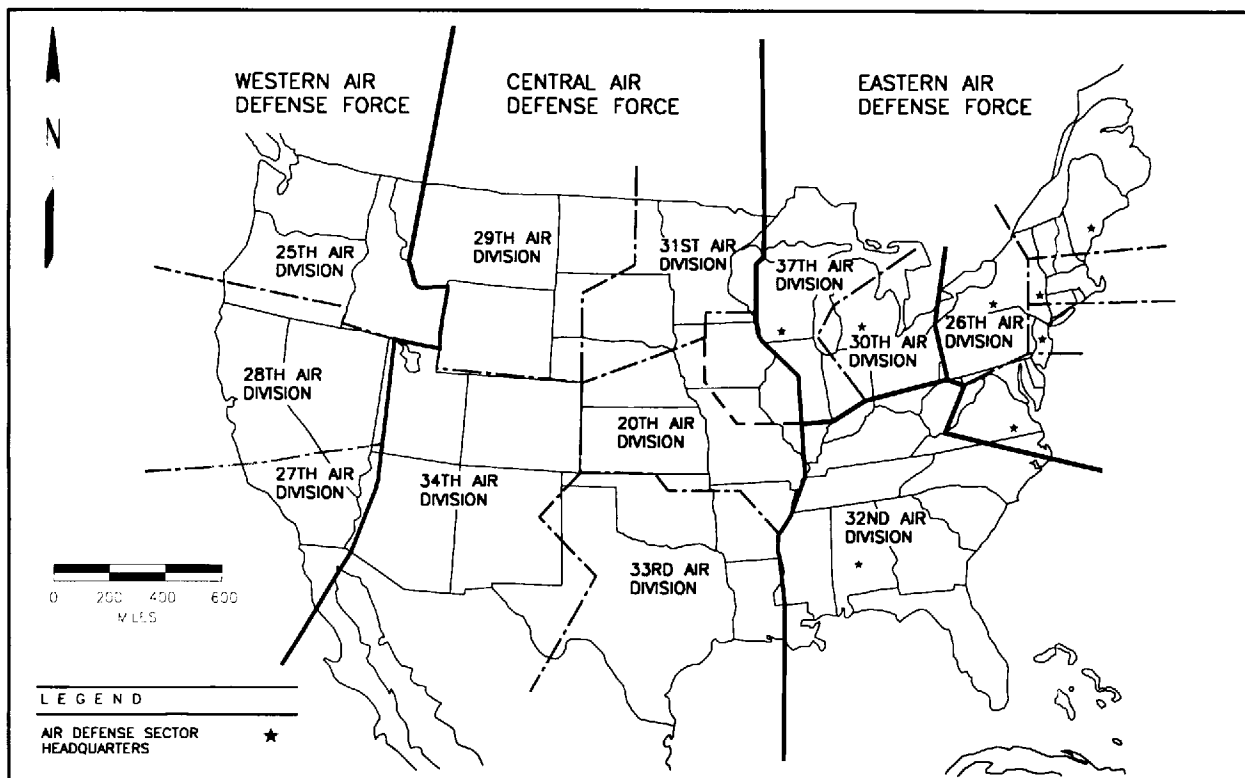


Figure 4.36 Air Defense Sectors: 1958. Source: MAJCOM Historian's Office, Langley AFB.

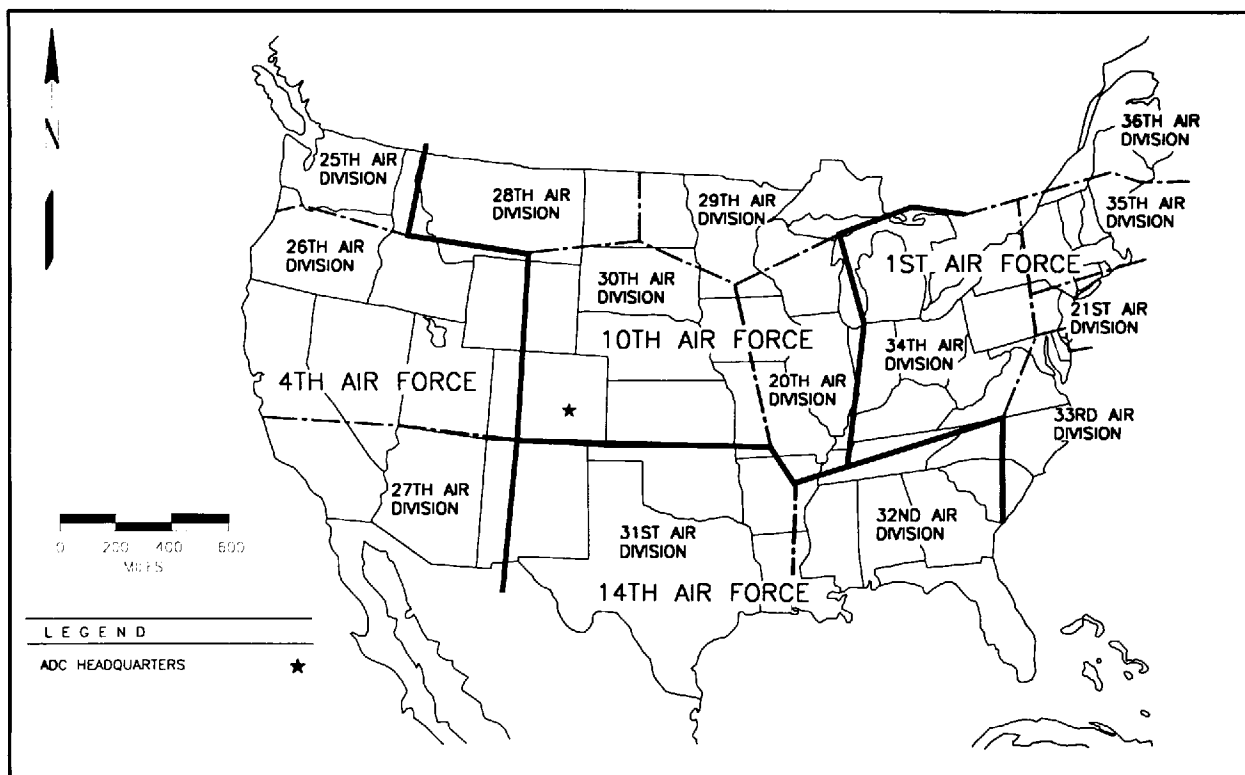


Figure 4.37 Air Defense Sectors: 1966. Source: MAJCOM Historian's Office, Langley AFB.

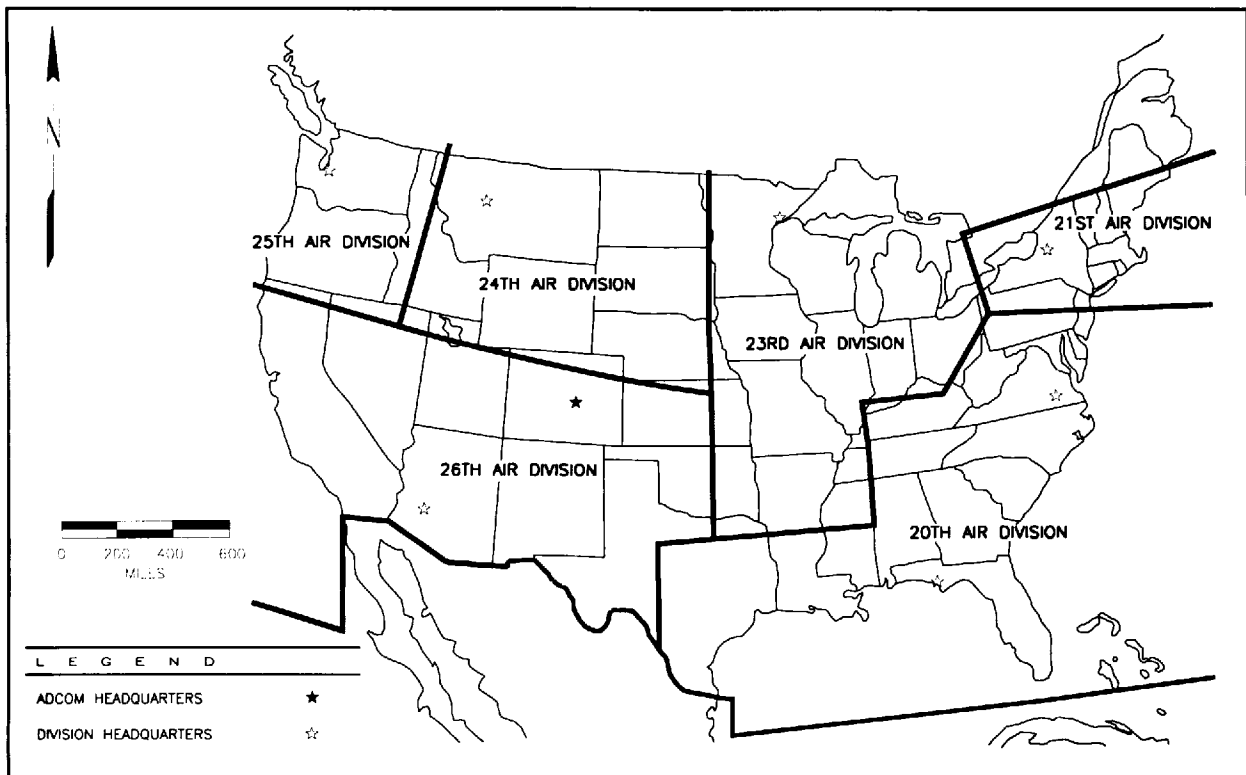


Figure 4.38 Air Defense Sectors: 1977. Source: MAJCOM Historian's Office, Langley AFB.

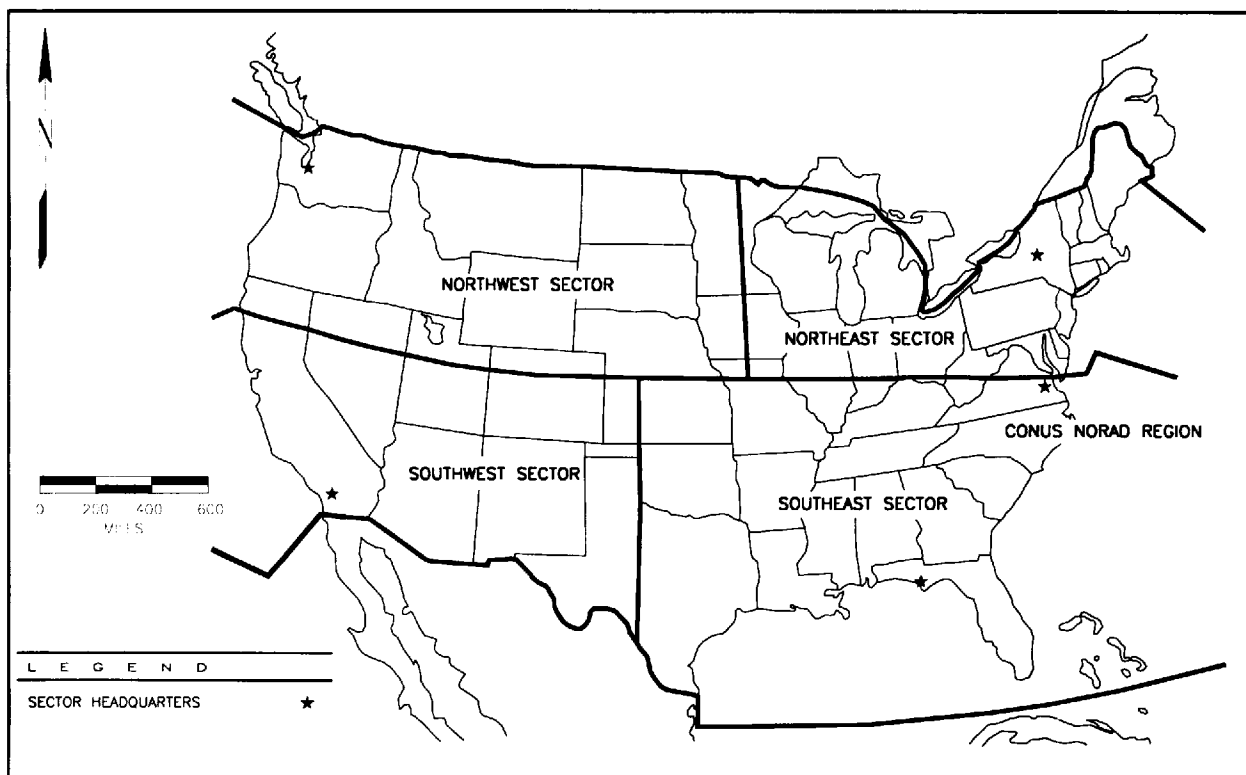


Figure 4.39 Air Defense Sectors: 1986. Source: MAJCOM Historian's Office, Langley AFB.

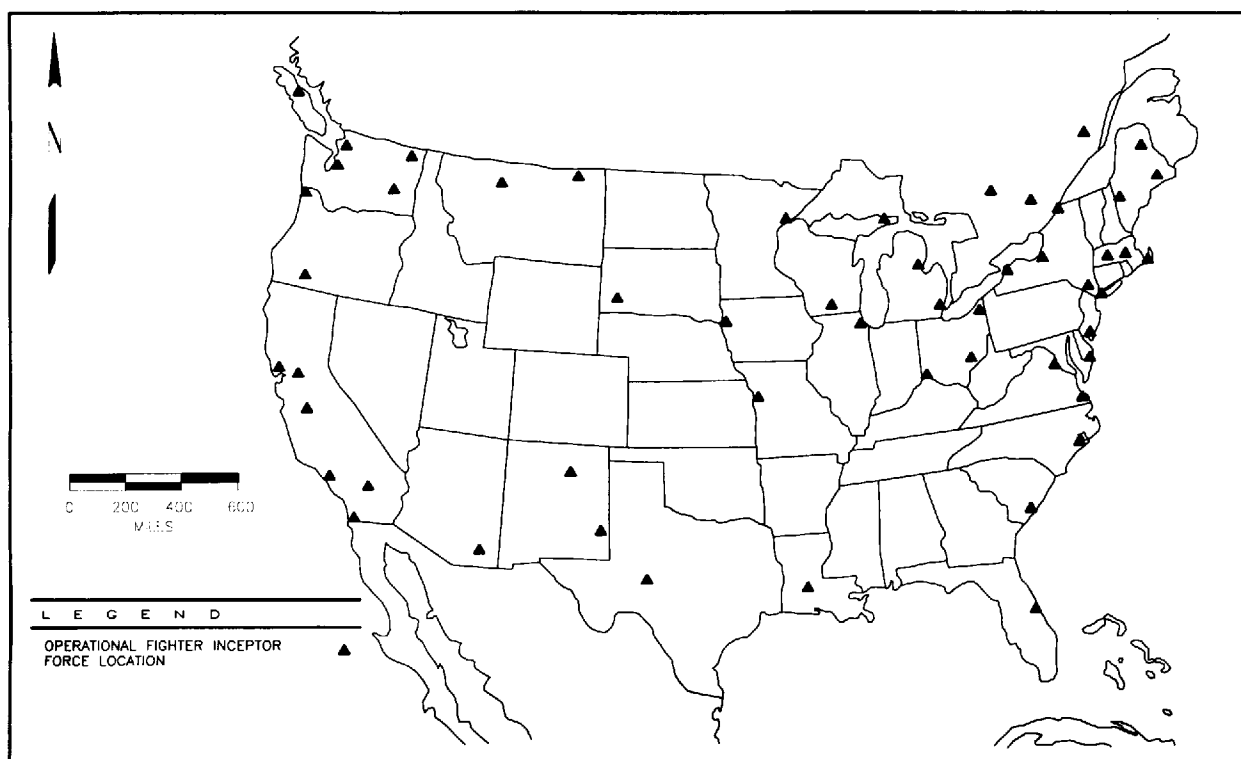


Figure 4.40 Operational Fighter Interceptor Force: 1959. Source: Schaffel 1991:230.

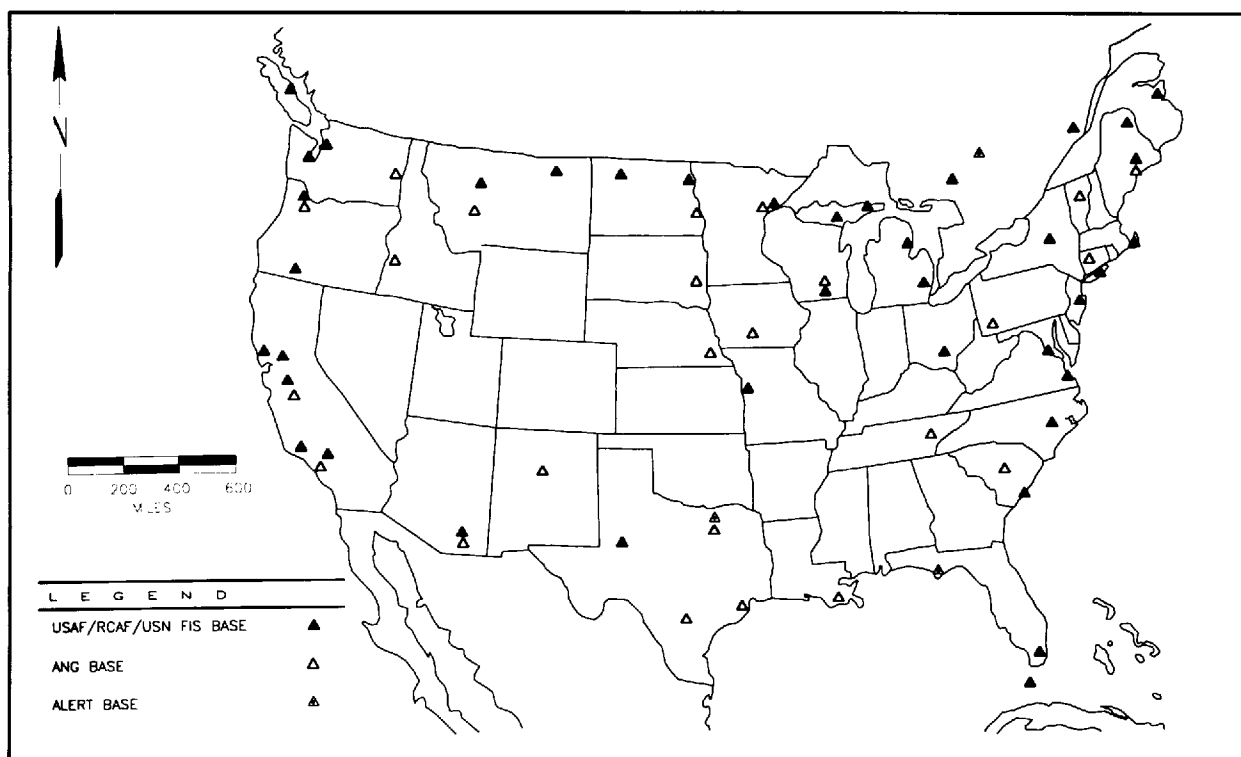


Figure 4.41 Operational Fighter Interceptor Force: 1963. Source: MAJCOM Historian's Office, Langley AFB.

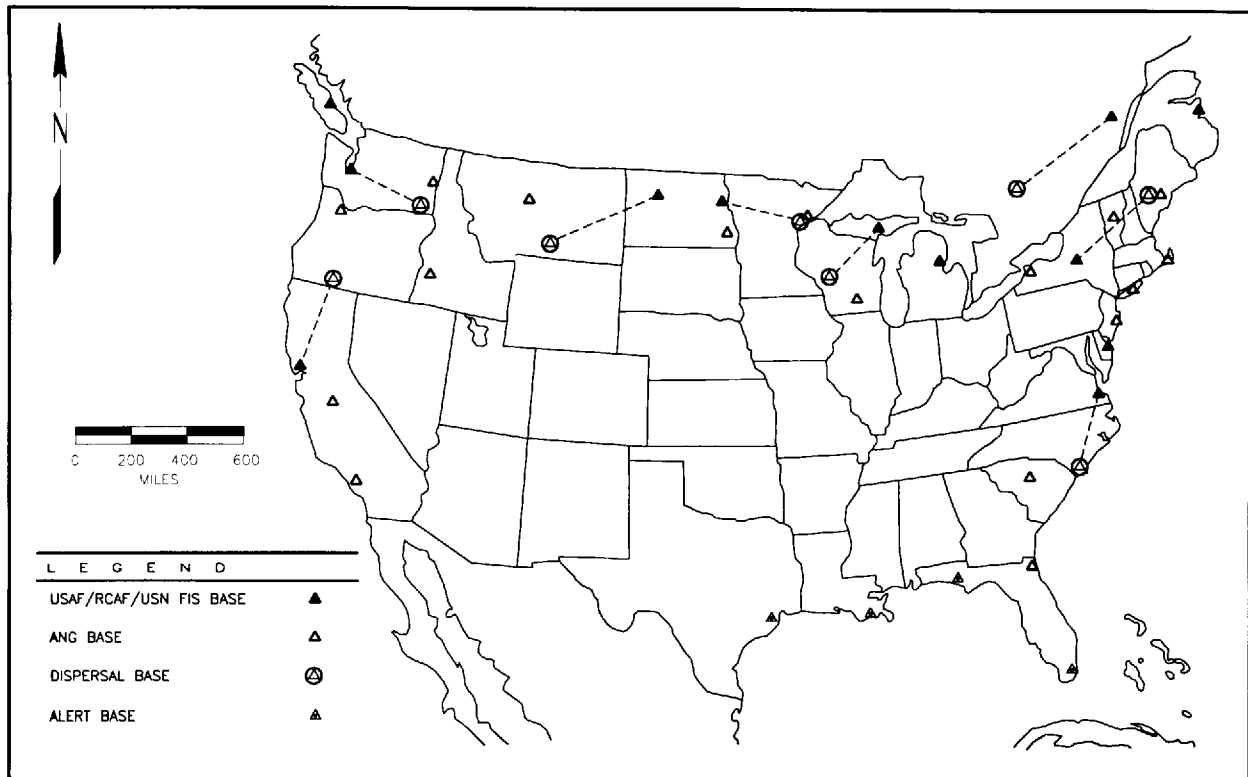


Figure 4.42 Operational Fighter Interceptor Force: 1973. Source: MAJCOM Historian's Office, Langley AFB.

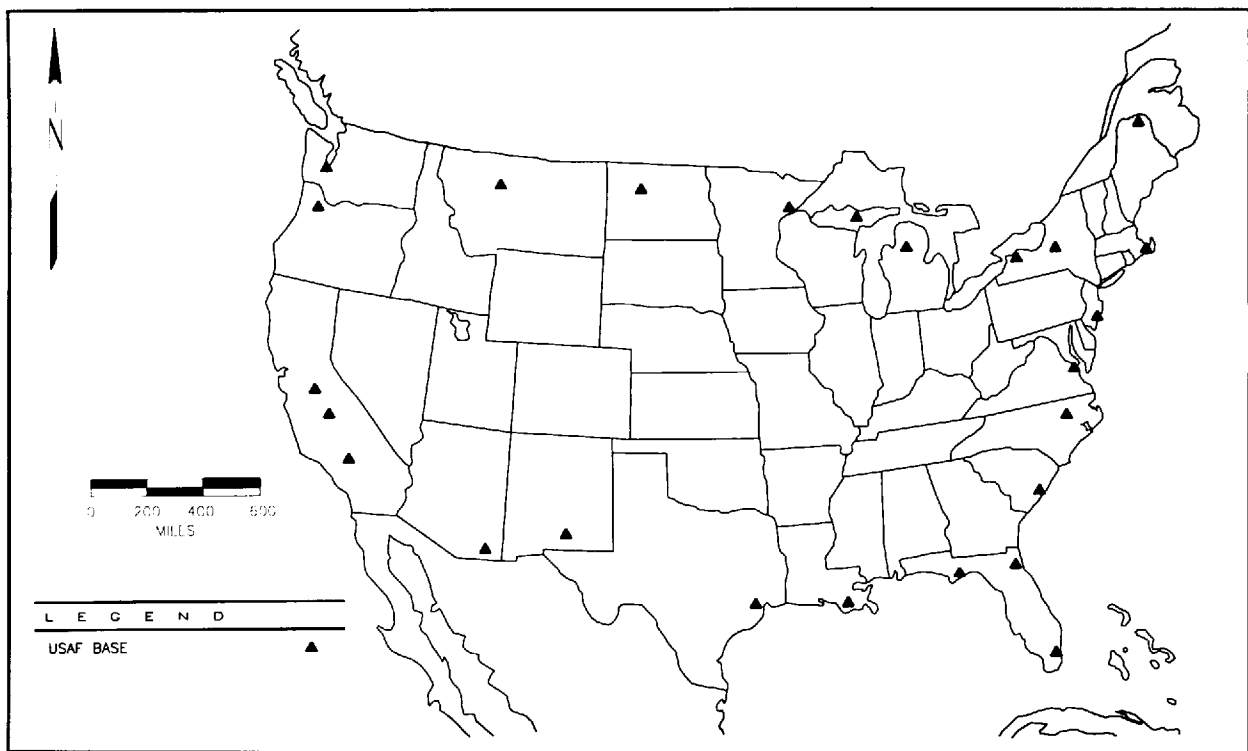


Figure 4.43 Fighter Interceptor Alert Locations: 1985. Source: USAF 1990.

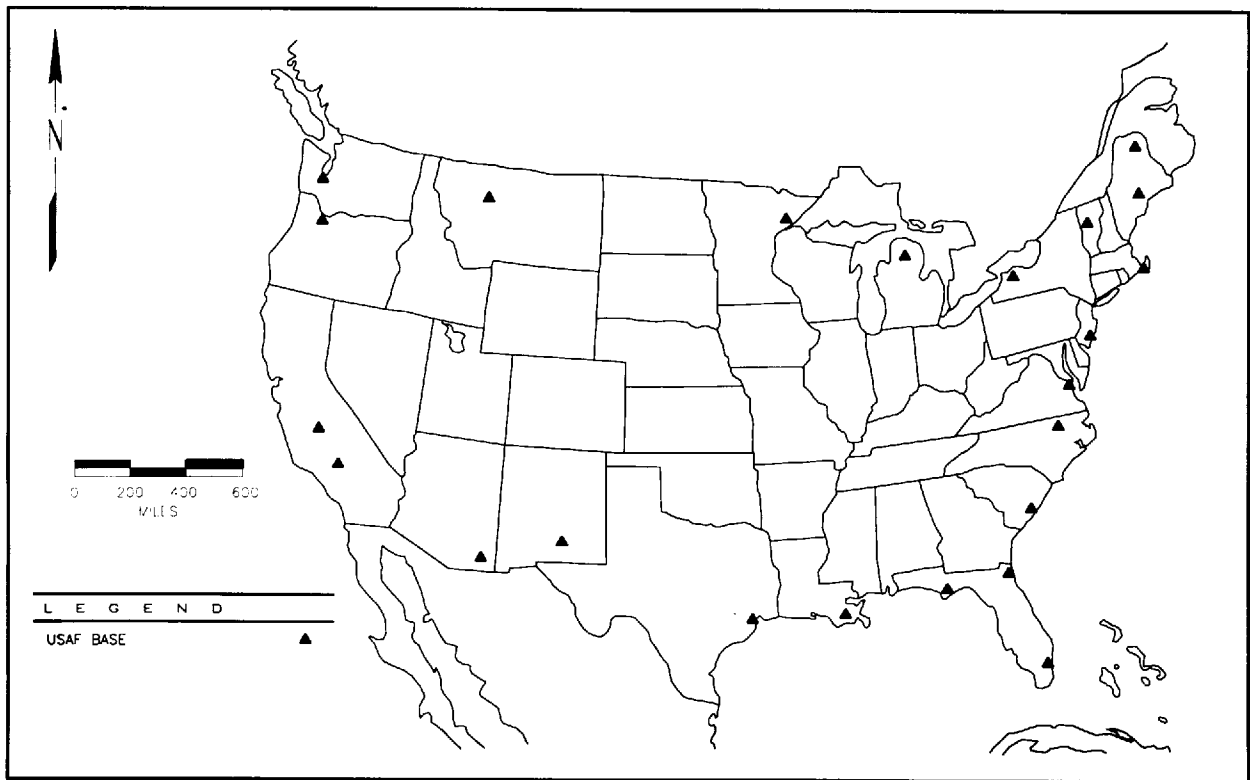


Figure 4.44 Fighter Interceptor Alert Locations: 1990. Source: USAF 1990.

procedures for air support and coordination. They also provided information to the upper command levels by determining the threats to friendly forces, generating intelligence reports with photo imagery and operational analysis, and developing immediate strike and reconnaissance nominations (TAC 1978:3-6).

There are six types of tactical operations: Counter Air, Air Interdiction, Close Air Support, Tactical Airlift, Air Reconnaissance, and Special Air Operations. The first four operations are of primary concern to regain control of ensuing conventional and nuclear conflicts. Counter Air operations protect friendly combat power and freedom of movement through neutralizing an enemy surface-to-air threat. Air Interdiction operations ensure that the ground force ratio favors friendly forces rather than the enemy. Close Air Support operations provide aerial firepower against enemy air forces which are directing their firepower against friendly

forces. Tactical Airlift operations provide the means to quickly deploy to, or within, the operational area.

Air Reconnaissance and Special Air Operations were of primary importance with regard to deterrence, although Air Reconnaissance is an important element of an ongoing conflict as well. Air Reconnaissance operations provide information about the enemy operations in sufficient time and in a format which allows the commanders to use the information to influence the operation with favorable results. There are two approaches to gathering information, surveillance and reconnaissance. Surveillance used passive capabilities to cover large areas and reconnaissance used active collection methods to concentrate on the areas of greatest interest (TAC 1978:4-3).

Special Operations Forces are organized to carry out unconventional warfare. The function of this TAC force was to "...provide airlift resupply,

radio relay, reconnaissance, surveillance and firepower in the areas where deployment of conventional air operations might not be considered desirable" (TAC 1978:4-54).

If deterrence had failed and the Special Operations Forces had been required during the Cold War, the Joint Task Force Commander would have become the separate operational component overseeing the Army, Navy, Air Force, and the JUF (Figure 4.12). The JUF commander would have organized specialized forces from each military service and directed the components as required to achieve the operation objectives. Coordination between the different JUF military branches would have been carried out through liaison officers. The USAF component commander would have planned and conducted nuclear operations under the direction of the Joint Force Commander, within the limitations established by the President of the United States (Figure 4.45). At the conclusion of the conflict, the joint special operation forces would have returned to their respective conventional service command.

While strategic aircraft were designed primarily to deliver nuclear weapons, tactical aircraft provide a variety of functions to facilitate the six types of tactical operations. Figures 4.46 and 4.47 show the life of selected tactical aircraft used during the Cold War, and their ceilings and ranges respectively. Three tactical bombers were developed and operated by TAC. They were intended to provide close air support for ground troops using conventional weapons. The B-45 *Tornado* was modified to carry tactical nuclear weapons.

The North American B-45 was delivered in 1948 and was first operational with the 47th Bombardment Wing at Barksdale AFB, Louisiana (Knaack 1988). The plane was plagued with design and technical problems throughout its lifetime and was retired from service in 1955. The twin-engined light bomber was the first United States jet bomber and the first plane to carry tactical nuclear weapons (Knaack 1988).

The Martin B-57 *Night Intruder* was a light tactical bomber adapted from the English Electric Canberra B.2 design. The twin jet-engined plane could reach

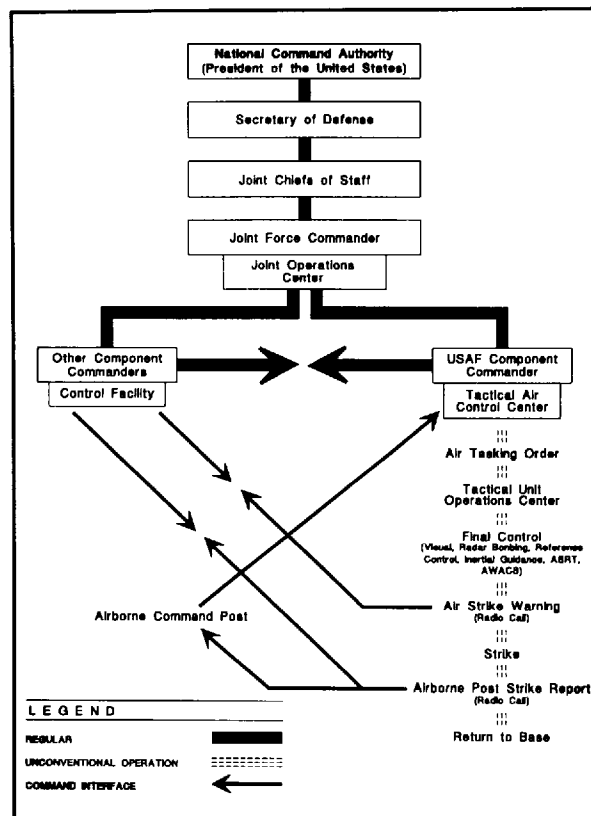


Figure 4.45 Tactical Employment of Nuclear Weapons. Source: TAC 1978:6-7.

a speed of 580 miles per hour and could carry a variety of offensive machine guns and conventional bombs for use in ground support and attack missions (Chant 1981:129, 130). The B-57B became operational in 1954 with the 424th Bomb Wing, Light, at Langley AFB, Virginia (Knaack 1988:321). Most B-57s were phased out in 1959, although a few remained in service in the Pacific and flew missions in Southeast Asia during the Vietnam War (Chant 1981; Knaack 1988).

Beginning in the 1960s, most of the duties accomplished by light or medium bombers were assumed by what were labeled "attack" aircraft or by fighters that had attack capabilities. Missions included close air support and interdiction. In a large-scale conventional combat scenario, like those envisioned with the Soviet Union in Europe during the Cold War, attack aircraft would have been used to strike supply areas, troop

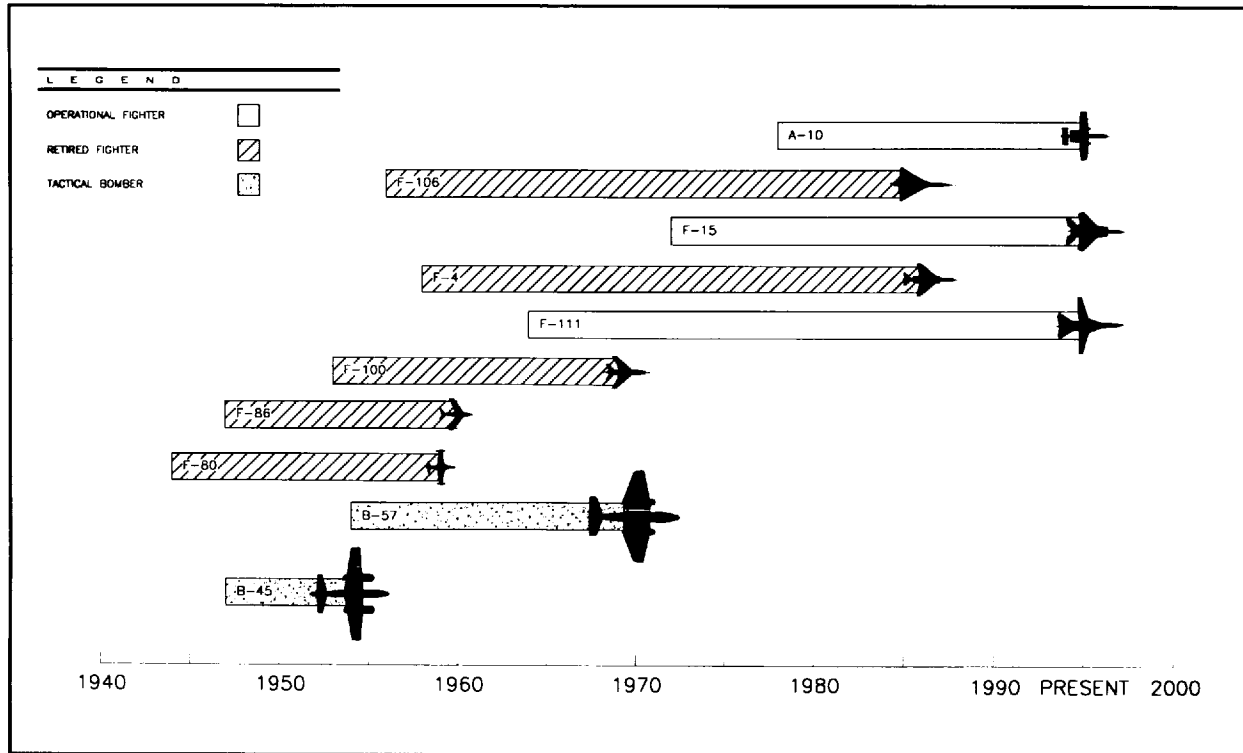


Figure 4.46 Chronology of Selected Tactical Aircraft. Source: Chant 1981; Polmar 1976; Jones 1975.

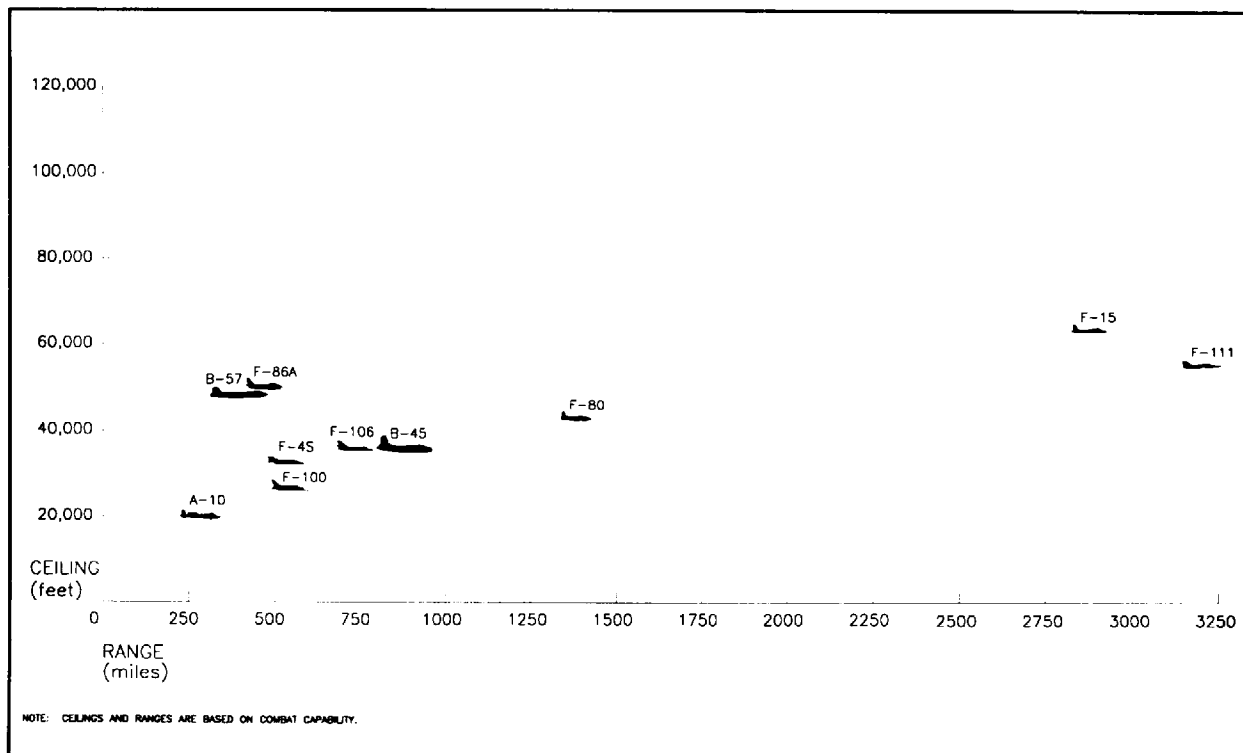


Figure 4.47 Selected Tactical Bomber and Fighter Aircraft. Source: Chant 1981; Polmar 1976; Jones 1975.

concentrations, tanks, and other armored vehicles in attempts to halt or slow down enemy attacks. Many aircraft that were capable of attack missions could have also carried tactical nuclear weapons which might have been used to stop massive enemy attacks if conventional means failed. Numerous fighter aircraft such as the F-105 *Thunderchief* and F-4 *Phantom* were used by the Air Force in attack roles during the Vietnam War.

The A-10 *Thunderbolt II* (Figure 4.48) is one of the few aircraft specifically designed for an attack role. The A-10 is a single seat, twin jet-engine, somewhat clumsy looking airplane that can travel at speeds of 400-500 miles per hour, depending on the payload. It is heavily armored around the cockpit and other

vital areas for the purpose of surviving heavy battle damage. It can carry a wide variety of bombs and rockets, along with a 30 mm cannon designed to destroy tanks (Chant 1981; Robinson 1980). It was considered an equalizer to vast numbers of tanks the Soviets would have against outnumbered NATO armor in any theoretical European conflict. As an attack plane, the A-10 has the ability to loiter for an extended period during a conflict, while fighters make quick, sweeping attacks. The A-10 can remain in a combat situation for up to two hours, depending on its weapon load, which allows the plane to make numerous attacks in the same area. The first A-10s were deployed in 1978 and continue in service with ACC.

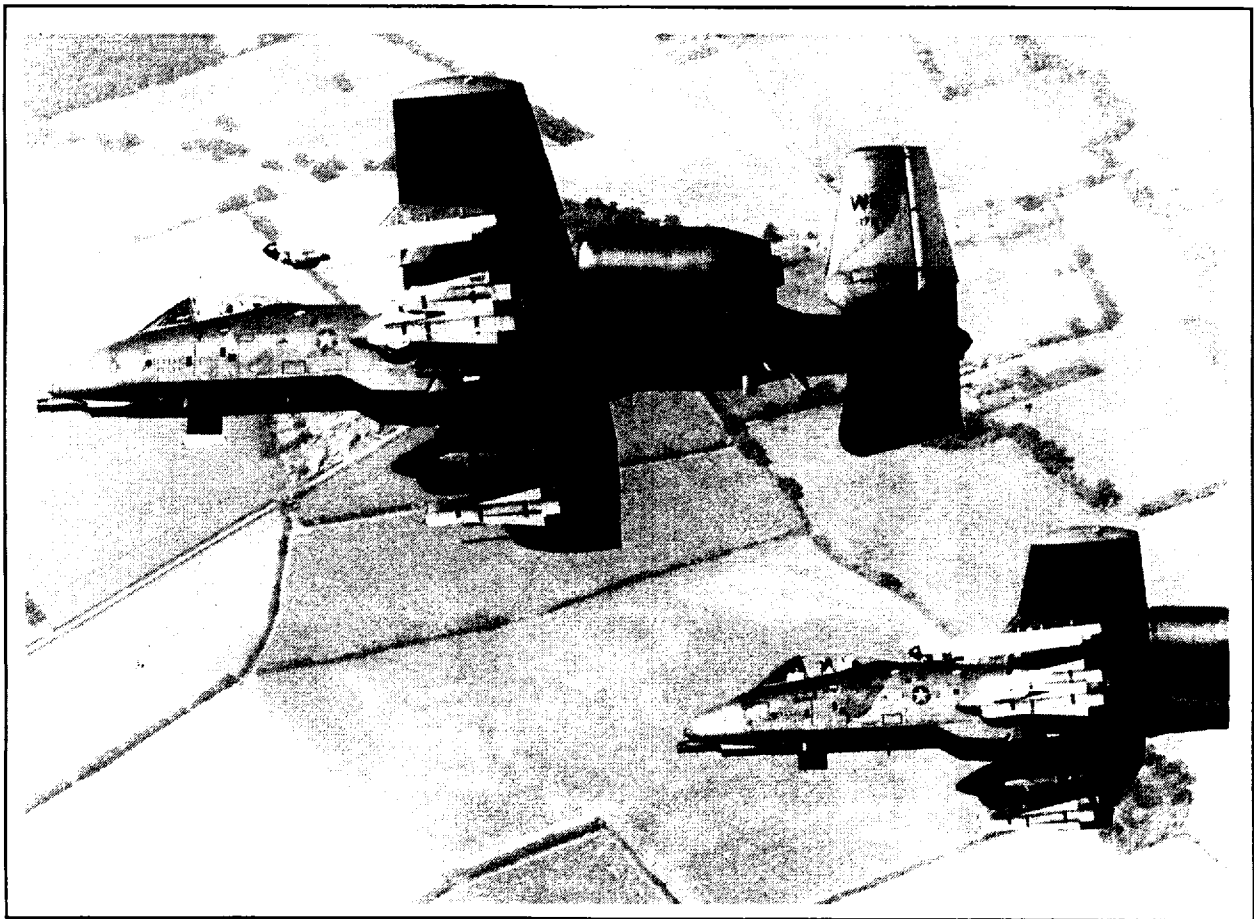


Figure 4.48 A-10 *Thunderbolt II*: Attack Aircraft. Source: DoD Still Media Records Center.

Numerous fighters have been developed for use with TAC. Fighters are deployed in a number of missions including interception, air superiority, close air support, and interdiction. Some aircraft, like the F-106 interceptor, had a single mission while others, like the F-15 *Eagle*, include multiple mission capabilities. Advances in fighter designs have concentrated on improvements in speed, range, maneuverability, and larger, more effective armament.

One of the first TAC fighters, and the United States' first operational jet, was the Lockheed F-80 which first flew in 1944. The F-80 was designed for use in World War II but was not completed in time to see action. The small single-seat, single-engine fighter could reach maximum speeds of 580 miles per hour, much faster than previous piston engine planes. An F-80 is credited with the first jet-to-jet combat kill when it shot down a MiG-15 during the Korean War. Over 1,700 F-80s were produced, while close to 5,700 T-33s, a two seat trainer version, were produced for the Air Force (Jones 1975).

Another incredibly successful fighter was the F-86 which could travel at 670 miles per hour and was first flown in 1947. It was the first U.S. swept-wing fighter and the first fighter to break the speed of sound. The F-86 could be used in air-superiority, interception, and ground-attack roles, and could carry tactical nuclear weapons (Polmar 1976). The F-86 proved itself in combat when it entered the Korean War in 1950, achieving a 14 to 1 kill ratio against enemy aircraft (Jones 1975). Over 4,000 F-86 aircraft were produced for U.S. service through the late 1950s and into the 1960s.

The F-100 *Super Sabre* (Figure 4.49) was the first United States aircraft designed to operate at sustained speeds above Mach 1 (Jones 1975). The single-engine, swept-wing fighter, first flown in 1953, experienced a number of aerodynamic problems due to the aircraft industry's inexperience with supersonic performance. These problems were resolved with later versions of the aircraft and eventually over 2,200 F-100s (all models) were produced for the Air Force (Chant 1981). The F-

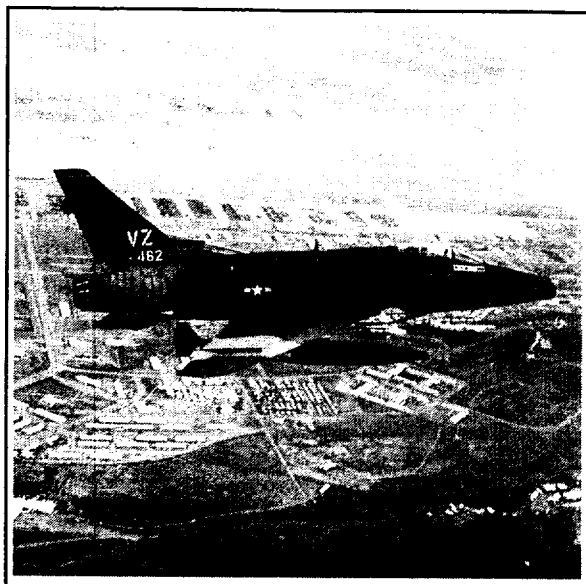


Figure 4.49 F-100 *Super Sabre*. Source: DoD Still Media Records Center.

100 was used extensively in an attack role during the Vietnam War (Polmar 1976).

An example of a fighter designed for multiple types of missions is the F-111 (Figure 4.50). The two-seat, twin-engine F-111 is also the first variable-geometry, or swing-wing, aircraft to be used in the world (Jones 1975). The fighter's wings can be set at a straight position for economical cruising speeds or swept back for high speed performance. The F-111 can attain speeds up to 1,450 miles per hour depending on the payload and altitude. Although the fighter, which first flew in 1964, had major design and performance problems early in its career, these were corrected in later production versions (Chant 1981). A variety of weapons including AAMs and numerous nuclear or conventional bombs can be carried allowing both fighter and bomber missions. The planes carry an advanced terrain-following radar which allows a stealthy approach to bombing targets. Some F-111s were converted to FB-111s for deployment as medium nuclear bombers.

The F-4 (Figure 4.51), another multi-purpose fighter, was one of the most widely used and successful fighter aircraft of the Cold War era. It

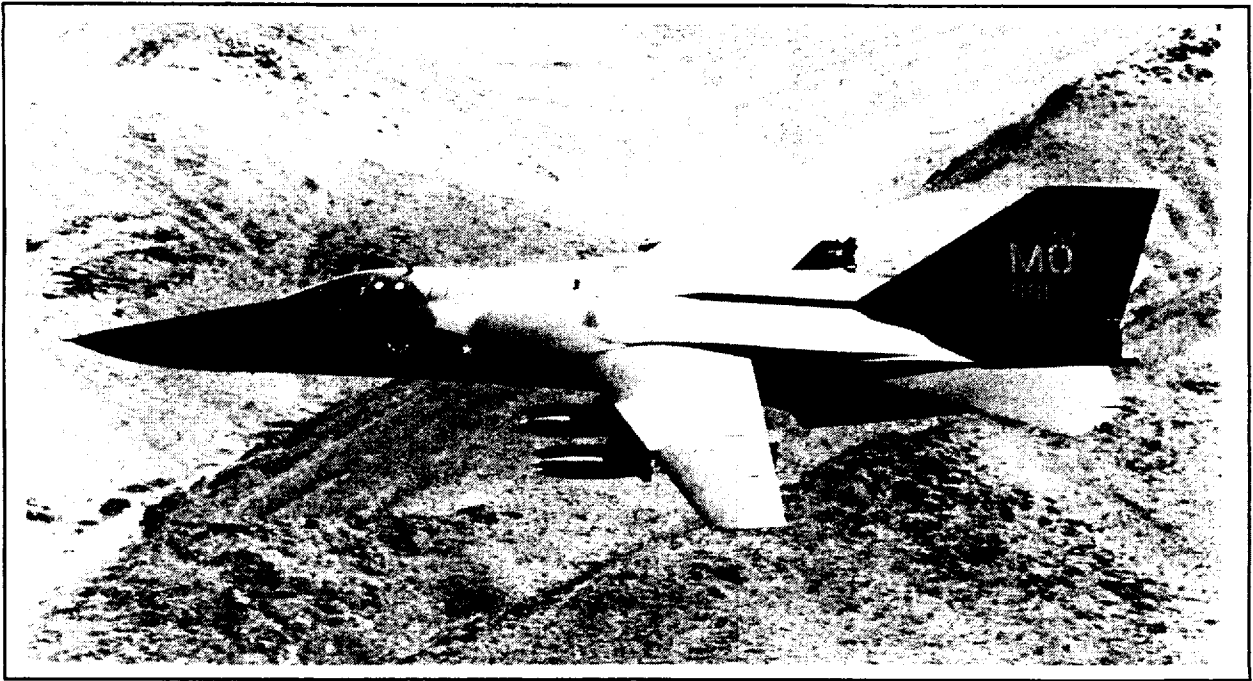


Figure 4.50 F-111A: Tactical Fighter Aircraft. Source: DoD Still Media Records Center.

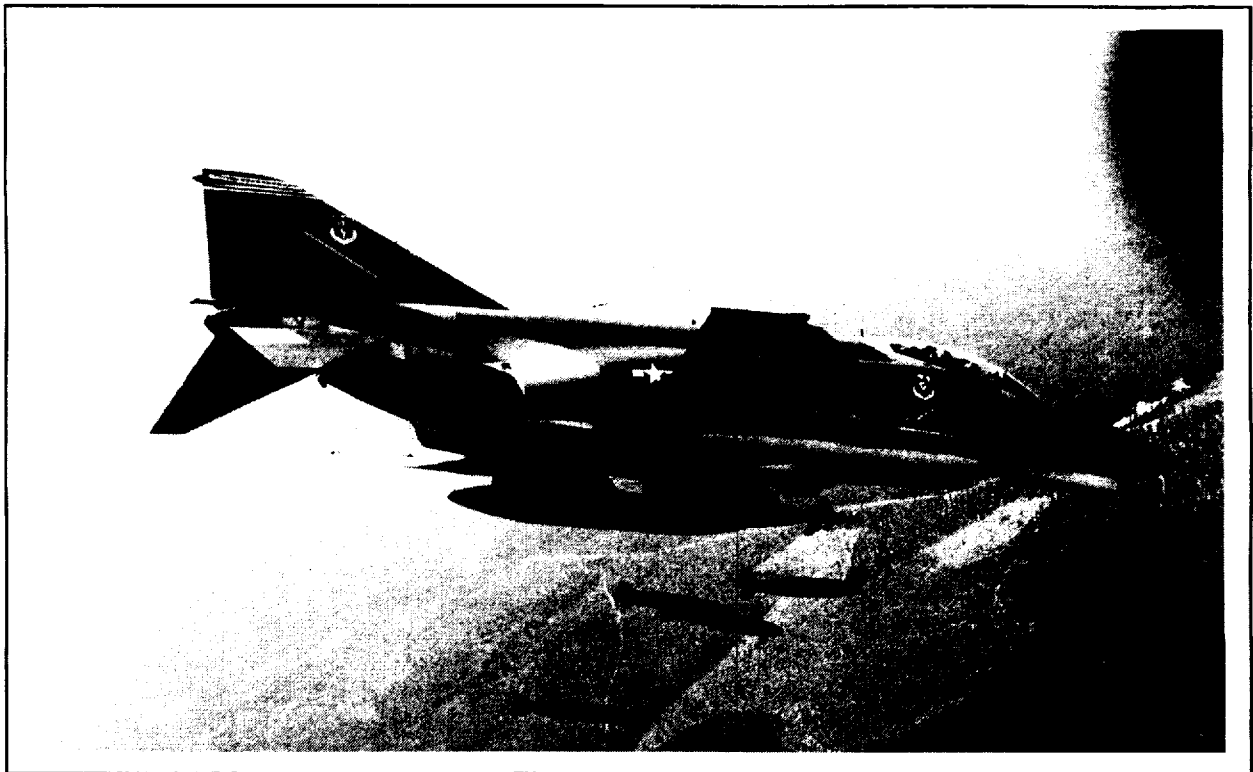


Figure 4.51 F-4E *Phantom II*: Tactical Fighter Aircraft. Source: DoD Still Media Records Center.

first flew in 1958, and from the beginning was considered a success. The plane was originally designed for the Navy, but was eventually used in greater numbers by the Air Force. The F-4 was fast, had a powerful radar, and was reliable. It could carry medium- and short-range AAMs, and later models carried a 20-mm cannon as well as numerous bombs and missiles in the attack role (Polmar 1976). Over 2,600 F-4s were ordered over the years for the Air Force, with a total of close to 5,200 aircraft produced for other services and export customers (Chant 1981). The F-4 was used by the Air Force extensively in Vietnam as both a fighter and attack aircraft.

One of the last TAC fighters, and still the mainstay of the ACC fighter force, is the F-15 (Figure 4.52). This aircraft was designed in the late 1960s in direct response to the Soviet MiG-23 and -25 fighters (Chant 1981). These Soviet planes were very maneuverable and the MiG-25 was faster than any available NATO fighter. The F-15 was designed to be a fast, maneuverable, and easy to fly air-superiority fighter, that could dogfight, outfly, and destroy any opposing fighter. The F-15 is capable of speeds up to Mach 2.5 and has a high rate of

climb enabling it to catch up to any aircraft. While primarily an air-superiority fighter, the F-15 has also been used as an interceptor and F-15E models have strike capabilities. The F-15 was first flown in 1972 and was delivered to active units in 1974 (Polmar 1976).

Improvements and new designs of tactical aircraft, in both the United States and Soviet Union, were often driven by perceptions of what the potential rival fighters were capable of achieving. The advancements in fighter design are clear reflections of the arms race between the Soviet Union and the United States. It was always necessary for the two superpowers to ensure that their respective aircraft were available in sufficient numbers and had the capability to counter the opponent's forces.

Experience with the MiG-21 against the F-4 in Vietnam proved that the F-4 was lacking in dogfight capabilities against the more maneuverable Soviet designed fighter (Jones 1975). This led to the installation of a 20 mm cannon on F-4E models and toward the development of planes like the F-15, which had

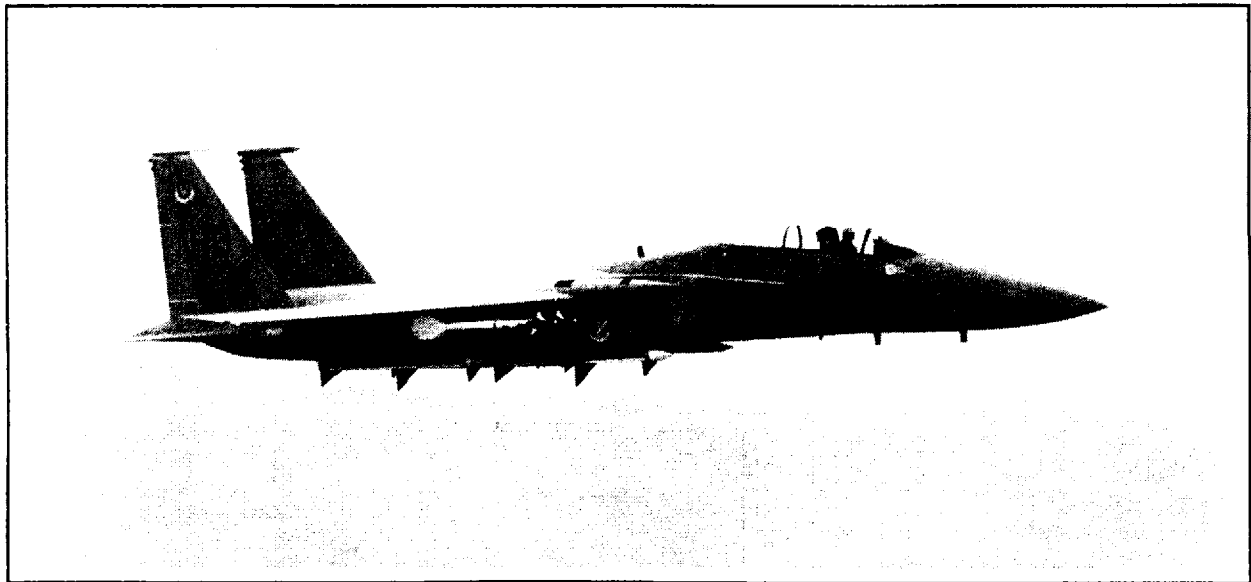


Figure 4.52 F-15 *Eagle*: Tactical Fighter Aircraft. Source: DoD Still Media Records Center.

improved dogfighting capability. The development of the F-15 was the United States' response to the Russian MiG-23 and -25 (Chant 1981). The MiG-25 had been produced by the Soviet Union to counter and intercept the United States' high-flying B-70 Valkyrie bomber. Although the MiG-25 was designed in response to the B-70, the B-70 was never put into production. Another Russian aircraft that was developed from United States' design is the MiG-29. The sleek, maneuverable MiG-29 clearly borrows heavily from the U.S. F-15, -16, and -18 designs.

This continual advancement of aircraft technology, a symptom of the arms race, ensured the concept of deterrence. As long as neither force had a long-term advantage in firepower or other tactical capabilities, the balance would be held in place. The wartime command structure, tactical combat operations, and development of aircraft are the framework for the analysis of material culture within TAC. Unlike facilities related to strategic deterrence and air defense, the facilities that relate to Cold War tactical operations are not clearly defined. The tactical mission is of a more ephemeral nature, because the role of tactical forces was more flexible, both in command structure and the use of weaponry. The material culture embodiment of the USAF tactical Cold War role will be related to mobility, command, fighter alert, and special training operations.

4.3.1.7 Air Mobility

The Cold War caused United States' air mobility to be carried out on a scale which had never been seen before. Prior to the Cold War, large equipment and numbers of troops were primarily transported to areas of combat by ship. During the Cold War, the necessity for rapid deployment of weapons and troops on a global scale became the essence of mobility. The fastest way to deploy was by air, so large cargo aircraft and methods to quickly load and unload cargo and troops were developed.

Mobility of troops and resources was an important issue in deterrence, and was of prime concern with regard to Khrushchev's "wars of liberation." The ability to respond to a crisis rapidly and conduct

operations globally would aid in deterring Soviet "piecemeal aggression." Mobility preparedness of United States forces required advancements in airlift aircraft, development of mobile air bases which could be constructed rapidly anywhere in the world, and mobility centers on each installation to aid in deployment of troops and cargo.

Airlift provided the means by which USAF cargo and troops were moved around the world and within theaters of operation. The airlift component of mobility was important both for strategic deterrence and tactical operations. Strategic airlift provided the capability to deploy rapidly to any worldwide theater of operation. Tactical airlift provided intratheater mobility from air terminals to specific areas of need (TAC 1978:4-47).

The MAC became responsible for all DoD airlift, although SAC and TAC both possessed a certain number of airlift aircraft to aid them in daily operations. The Command's airlift role included many types of missions, some of which did not fall within the traditional definition of air mobility. The primary responsibilities of MAC included deployment and redeployment of combat forces, air logistic support of combat and daily operations, delivery and recovery of personnel, aeromedical evacuation, aerial search, rescue, and recovery, unconventional and psychological warfare, weather reconnaissance and atmospheric sampling, presidential airlift, and combat, operational, and technical audiovisual documentation (USAF 1988). It also supported its airlift force with its own in-flight refueling aircraft.

A large portion of missions conducted in recent years have been humanitarian in nature. Worldwide missions conducted in the 1980s have included providing aid to earthquake victims in at least nine different countries, supplying seven different countries with food and drinking water during periods of famine, and airlifting medical supplies and equipment for Acquired Immune Deficiency Syndrome (AIDS) research in Zaire in 1984. Domestic crises have also draw support

from MAC, such as returning 52 American hostages to the United States in 1981, providing cleanup support for the Exxon Valdez oil spill in Alaska in 1989, and airlifting supplies to the east coast and Caribbean Islands after Hurricane Hugo in 1989. Humanitarian missions not only served to relieve suffering, but also trained units for wartime roles and served as an important instrument for advancing the United States national policy objectives.

As with other commands, there was a succession of numerous fixed-wing aircraft used to complete the MAC mission of airlift, although only two (the C-141 *Starlifter* and the C-5 *Galaxy*), were developed specifically for the MAC airlift mission.

The C-47 *Skytrain* was first developed in 1935 as a luxury sleeper aircraft for civilian use. The Army Air Force soon realized its potential for air transport and acquired the first military version in 1941. The C-47 served well in virtually all operations requiring air mobility during World War II. The plane measures 64 feet in length with a wing span of 95 feet, and is powered by two piston engines. It can fly at 230 miles per hour with a range of approximately 2,000 miles. Its airlift capability is 7,600 pounds or 27 passengers. After the war ended, the C-47 continued to be the mainstay of the Air Force airlift fleet. The USAFE relied upon the C-47 during the Berlin airlift, and this aircraft was still in military use during the Korean War (as a troop carrier) and during the Vietnam War (as air transport and converted gunship). In 1969, the Air Force retired both the airlift and gunship versions of the C-47 from service (USAF 1991b).

The C-130 *Hercules* was originally designed as a short-range assault transport to support the Army's airborne operations, and is perhaps the most successful and versatile transport aircraft ever used. First flown in 1954, it was delivered to the USAF in 1956, and is still in active service with AMC.

The C-130 has a wingspan of 132 feet, is 97 feet in length, and is powered by four turboprop engines. The cargo hold measures 41 feet in length by 10 feet in width. It is capable of airdrop, airland, and parachute extraction missions of both troops and cargo (Figure 4.53). This aircraft can carry up to

42,000 pounds of cargo, or 92 passengers, or 64 fully equipped combat troops, or 74 patients on stretchers (Chant 1981; USAF 1991b). The range of the C-130 is 2,000 to 2,300 miles, and it does not have refueling capabilities. The plane was designed for intratheater operations, thus it can land on unimproved landing strips, is capable of short take-offs and landings, and has truck-bed, rear loading capabilities (USAF 1991b).

The C-130 has been refitted and modified into variants to meet many missions, including weather reconnaissance, photo mapping, search and rescue, air-snatch satellite recovery, survey and reconnaissance, tracking of missiles and spacecraft, and retrieval of space capsules upon reentry. A gunship version was tested during the Vietnam War, a ski-tipped version was developed for use in the Antarctic and other snowbound areas, and some C-130s have been developed for use as air refueling tankers for helicopters.

The C-135 *Stratolifter*, a military version of the Boeing 707 commercial jet, was first configured as a refueling tanker for SAC and then adapted for air transport. The Air Force accepted their first in June 1961. This aircraft was the first jet powered transport. The first version was powered by four turbojet engines, but the next version switched to turbofan engines which are more fuel efficient. The aircraft measures 134 feet in length, with a wing span of 130 feet, and has a maximum speed of 600 miles per hour. Its range with the fuel efficient engines is more than 5,000 miles, and its cargo capabilities are 173,000 pounds (Chant 1981), or 126 troops, or 44 stretchers plus 54 sitting casualties. This aircraft was a major improvement over the then current transport fleet as it was capable of non-stop, over-ocean range, had twice the speed and altitude of the rest of the fleet, and could carry three times as much cargo. Unfortunately, as it was developed from a commercial airline, some features are not preferable for military use, such as the side loading door. Multiple versions of the C-135 were developed for other MAC missions such as photo mapping, VIP transport, and long-range weather reconnaissance (Chant 1981; USAF 1991b).

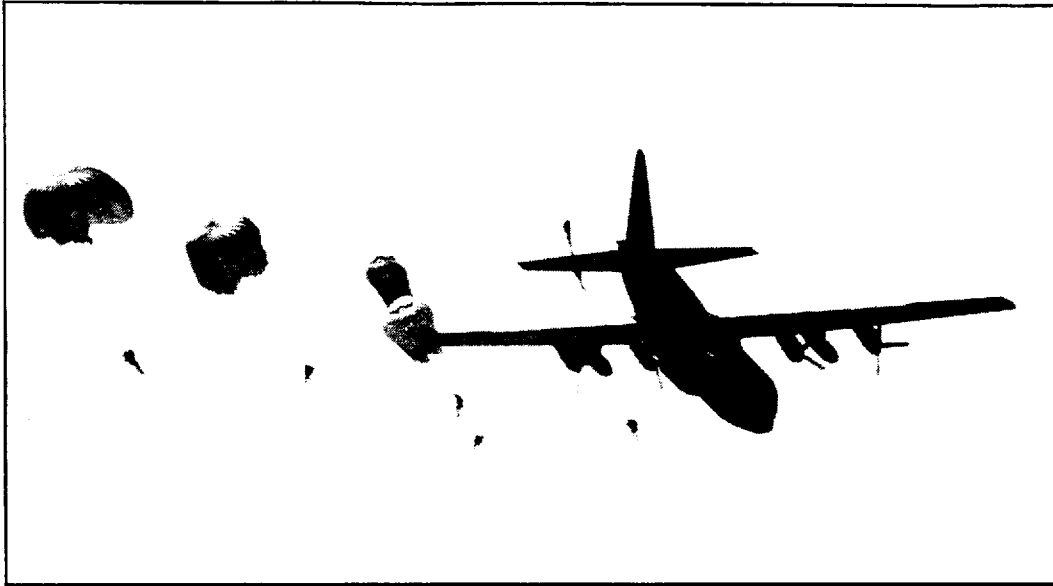


Figure 4.53 C-130 *Hercules* Aircraft Drops U.S. Army Paratroopers During Training. Source: DoD Still Media Records Center.

The C-141, which became operational in April 1965, was designed as a medium transport to carry troops and cargo and maintain airdrop capabilities (USAF 1991b). After the fleet was delivered to the Air Force, it was noted that when the cargo compartment of the aircraft was fully loaded, the aircraft had not reached its maximum cargo-carrying capability. The Air Force remedied this situation starting in 1976 by having all 270 C-141s in the fleet modified. The modifications included stretching the fuselage by 23.3 feet and adding an in-flight refueling capability to extend its range infinitely. The modified aircraft measures 168 feet in length with a wing span of 159 feet, and is capable of speeds over 500 miles per hour. It is powered by four turbofan engines and has a range fully-loaded of 4,000 miles, though with its air refueling capabilities range is actually unlimited. The C-141 can carry 200 fully equipped troops, or 155 paratroopers, or 103 stretcher patients, and has a maximum payload capability of 89,000 pounds (Chant 1981). Several aircraft in the fleet were also modified to carry the Minuteman ICBM in its special transport container.

The C-5 long-range transport is the largest operational plane in the world, with a wing-span of 222 feet and length of 247 feet. The first was delivered to MAC in December 1969. Its huge cargo bay, over 121 feet long and 19 feet wide, allows it to carry outsized cargo such as tanks, self-propelled howitzers, personnel carriers, or helicopters (Figure 4.54), currently something that no other USAF plane except the aging C-133 is capable of accomplishing (Chant 1981). This aircraft can carry up to 265,000 pounds and, with in-flight refueling capability, MAC C-5 transports could move any DoD units and their equipment rapidly to any location in the world (USAF 1991b). The C-5 is still in service with AMC.

Helicopters played a significant role in the MAC rescue and recovery mission, as well as the troop transport and cargo transport missions, and improvements were made with each succeeding model. In 1960, the Air Force retained only one type of helicopter, the HH-43 *Husky*. With a very short range of only 220 miles, the need for development of a new helicopter with greater range was evident (USAF 1991b).

The HH-3 was developed as a long-range transport. First delivered to the Air Force in 1963, this helicopter has a range of 500 miles and endurance of 4.5 hours. It features a hydraulically-operated door and ramp at the rear of the cabin to allow easy loading of wheeled vehicles without the need for other support equipment. It can carry a crew of 2 plus 25 fully equipped troops, or 15 stretchers, or 5,000 pounds of cargo (Chant 1981). In November of 1965, an upgrade of this helicopter became available for use by the Air Force. The HH-3E *Jolly Green Giant* is very similar to the HH-3, with the addition of titanium armor over vulnerable areas, defensive armament, a rescue hoist, auxiliary fuel tanks which increase the helicopter's range to 650 miles, and in-flight refueling capability which essentially gives it unlimited range (Chant 1981; USAF 1991b). The cargo capacity was also increased to 8,000 pounds. The HH-3E was used extensively in the Vietnam War to rescue pilots and other troops requiring rescue and recovery.

The HH-53 was originally designed for the U.S. Marine Corps, but was adapted for use by the Air Force and entered USAF service in 1968. This helicopter, nicknamed the *Super Jolly Green Giant*, is equipped similarly to the HH-3E with auxiliary fuel tanks, in-flight refueling capability, automatic flight control, and a rescue hoist. The HH-53 is the fastest, largest, and most powerful helicopter in the USAF inventory (USAF 1991b). It can carry 38 passengers or 24 stretchers and 4 attendants, and has a range of 500 miles without refueling (Robinson 1980). In 1980, this helicopter received electronic modifications enabling it to complete night search and rescue missions (Chant 1981).

In 1973, the Air Force received the HH-1H *Iroquois*, a variant of the UH-1H built for the U.S. Army. This helicopter is used for a variety of missions including casualty evacuation, instrument training, and general utility duties. Multiple versions were eventually designed to adapt the helicopter to different missions. It is capable of carrying a pilot and 14 fully equipped troops, or 6 stretchers, or 4,000 pounds of cargo (Chant 1981).

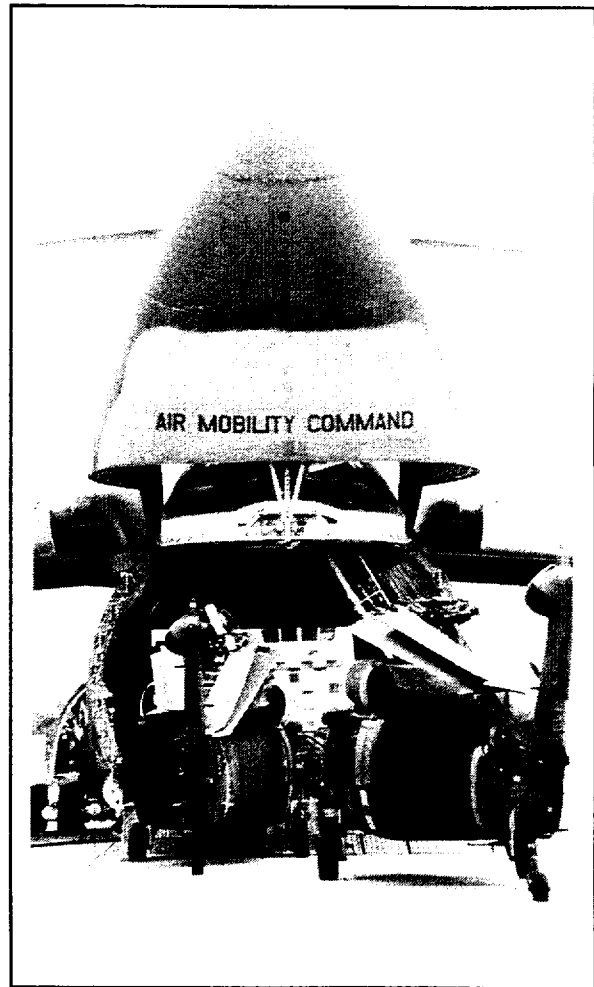


Figure 4.54 A Pair of UH-60 *Black Hawk* Helicopters are Loaded Aboard a C-5 *Galaxy* Aircraft. Source: DoD Still Media Records Center.

In addition to developments and advancements in fixed-wing and helicopter aircraft, the air mobility mission was also improved through innovations in various retrieval, loading, and unloading systems. These innovations include the development of the personnel hoist, the rail systems inside cargo transports to make loading easier and faster, the ground proximity extraction system (GPES), and the low-altitude parachute extraction system (LAPES). In a LAPES airdrop, the aircraft flies just above the ground with the rear loading ramp open. A parachute connected to the cargo opens, pulling the cargo from the bay. The cargo slides off the loading ramp, falls a short distance, and

impacts on the ground (USAF 1994). Another innovation which improved the military's airlift capabilities is the Adverse Weather Aerial Delivery System (AWADS). The AWADS provides aircrews with a sophisticated radar that allows airdrops without visual ground reference points. This technology facilitates accurate airdrops during adverse weather conditions and at night, thus greatly expanding the operational capabilities of airlift operations.

Soon after the end of World War II, it was realized that the military could not maintain enough airlift capability during peacetime to respond to wartime requirements. A concept was developed in the late 1940s for a partnership to be established between the commercial airlines and the military whereby the military could call on the airlines to provide airlift capabilities. In 1951, the DoD and the Department of Commerce approved the plan, and in 1952, the plan was implemented and the Civil Reserve Air Fleet (CRAF) was born. The military would be able to rent the use of aircraft in situations where the president had declared a national emergency. Because the airlines would volunteer aircraft when crises or contingency operations occurred and required more aircraft than the military was able to provide, the need for the CRAF never arose during the Cold War. However, the CRAF was implemented during the massive airlift operation during Desert Shield.

As with tactical operations, the missions associated with airlift and air mobility were of a somewhat ephemeral nature because MAC's role was flexible and the command provided mobility and airlift not only for other USAF commands, but also for the other services under the DoD. The material culture embodiment of the USAF's Cold War air mobility role will be related to key facilities for mobilization of troops, research and development of loading, unloading, and retrieval systems, mobile base centers, and mobilization operation centers.

4.3.2 Associated Property Types

A property type is a grouping of individual buildings, structures, or properties that is based upon a shared characteristic. Property types link the

historic context with actual historic properties that illustrate this context. Below is a listing of the property types which may be found at the ACC bases under study.

Properties associated with research and development installations include laboratory buildings, facilities to maintain test animals, launch facilities, guidance and tracking facilities, and rocket testing apparatus such as sleds and tracks. Research and development installations tend to be found on the east and west coasts (i.e., Patrick AFB, Florida; Cape Canaveral, Florida; Griffiss AFB, New York; and Vandenberg AFB, California) with test facilities located at more isolated interior locations such as Nellis AFB, Nevada and Holloman AFB, New Mexico. Research and development facilities, due to their continued scientific use, are continuously being modified to incorporate top-of-the-line equipment, as are some of the basic properties found on air bases such as hangars, weapons storage buildings, and dormitories.

A wide variety of property types might be expected to be associated with missiles and missile technology, and range from common to highly specialized. Surface-to-surface missile properties would include missile silos, launch and command centers, hardened communications links, dorms, munitions storage and maintenance structures, specialized munitions transportation equipment, and structures such as docks and railroad transfer stations. Air-launched missiles would also require special transfer and storage facilities. The modification of bombers might also trigger modifications of hangars.

On a national scale, the pattern of surface-to-surface missile associated bases is a distribution of installations across the country with concentration in the central heartland. The later Minuteman bases were all located in the northern midwest. At an intrabase level, Atlas and Titan missiles were more clustered while Minuteman facilities were more dispersed across the landscape. The relationship of launch control to missile launcher also changed through time from a single control for one launcher to the

Minuteman pattern of single control for ten silo launchers.

The condition of these properties is unknown due to deactivation or modification. Many of the properties associated with the first-generation ICBMs were dismantled and deactivated during the early to mid 1960s. Many others have been subsequently retrofitted, adapting to new weapons systems. The Atlas and Titan systems were deactivated in 1965 and 1966, and many of the generators at these launch sites were shipped to Vietnam to be used in that conflict (Neufeld 1990:237). Minuteman missile properties, namely silos and launch control complexes, have undergone almost constant modifications and conversions, matching each new missile development. Peacemakers have also been installed in modified Minuteman silos. Many other properties are being or have recently been deactivated due to arms negotiations and the end of the Cold War. Many of the other properties associated with missile systems have also been reused, recycled, and modified through time.

Property types associated with the various strategic bomber and reconnaissance aircraft include hangars, runways, dormitories, munitions loading areas, munitions storage, fuel storage, and alert facilities.

Property types representing command, control, and communications would of course include both of the SAC Command Centers at Offutt AFB, Nebraska, the one built in 1957 and the one operationalized in 1989. Command centers should also be found at the bases supporting numbered air forces. Properties associated with these facilities include subterranean concrete reinforced structures, communications facilities, antennae, satellite dishes, and buried phone cables. The SAGE facilities were normally housed in a square concrete building. Properties associated with the airborne command posts, both for SAC and the National Command Authorities, might include alert facilities, ground communications systems, dormitories, and perhaps specialized hangars. Properties associated with the Blue Scout Junior rockets and the ERCS might include launch facilities and silos similar to the properties specified for missile systems.

Specific property types associated with reconnaissance and intelligence systems include special hangars, such as those required for the SR-71. Nonspecific properties might include runways, dormitories, photographic laboratories, satellite launching facilities, and satellite communications facilities.

5.0 METHODOLOGY

Lori E. Rhodes, with contributions by Paul R. Green

5.1 OVERVIEW OF METHODOLOGY

The Legacy Program fulfills a legislative mandate "to determine how to better integrate the conservation of irreplaceable biological, cultural, and geophysical resources with the dynamic requirements of military missions" (DoD 1993:3). The Legacy Program has nine legislative purposes that relate to these three main types of resources. Specific to this ACC study is the Legacy Program's responsibility to "inventory, protect, and conserve the DoD's physical and literary property and relics" associated with the origins and development of the Cold War at home and abroad (DoD 1993:3).

The Cold War Task Area (Task Area) was organized to oversee compliance with this portion of the mandate (DoD 1993:4). Between 1991 and 1992, the Task Area completed the following activities: development of Cold War resource definitions; survey of Cold War preservation activities in progress; evaluation of legal regulations covering Cold War resources; consideration of the applicability of the arbitrary 50-year rule for characterizing Cold War resources as historic; assessment of United States used or owned Cold War resources overseas; organization of a multi-agency conference to examine the accessibility of Cold War documents; and co-sponsorship of a conference uniting government agencies and private contractors to discuss public access to Cold War records (DoD 1993:5-6).

Building on these endeavors, the Task Area began in 1993 to isolate the role it could feasibly play in the inventory and management of Cold War resources. The Task Area narrowed its primary focus to that of overseeing a network of preservation activities relevant to Cold War resources from a management perspective, with less emphasis placed on directly commissioning inventories. The Task Area primarily serves as a clearinghouse for information and guidance. Its concern is not only with the protection of material culture but also with the cultivation of human resources that can assign them meaning. An

emphasis on the preservation of documents through declassification and management is stressed, since records often can substantiate or help to interpret material culture use and modification (DoD 1993:6-8).

Task Area activities that began in 1993 and continued into 1994 relate to the following general topics: theme and context studies, surveys, management guidelines formulation, records and collections management, and international studies. Theme/context studies and surveys are activities pursued by the Task Area through so-called demonstration projects that can be used as tools and case studies to guide future research. They may also provide the public and historians with unique documentary data to aid in understanding the Cold War. The Task Area has selected two studies, the DoD Missile Program Study and the Germany Cold War Study for direct participation (DoD 1993:8-10). The Legacy Program has either fully or partially funded 26 Cold War-related demonstration projects since 1991, many of which, like the current study of ACC bases, are just beginning (DoD 1993:Appendix B).

Results of theme/context studies and surveys are intended for use as baseline data to aid in the development of criteria and procedures for identifying, evaluating, and protecting Cold War historic properties. Records management activities planned by the Task Area focus on declassification demonstration projects at the National Archives and Records Administration (NARA) and the Naval Historical Center (DoD 1993:10).

The Air Force has proven to be an active participant in the endeavor to evaluate Cold War resources with its publication *Interim Guidance, Treatment of Cold War Historic Properties for Air Force Installations* (USAF Interim Guidance) (USAF 1993). The following methodology proposed for the ACC Cold War study is

structured utilizing many of the ideas presented in that document.

Because the ACC Cold War study represents one facet of research within the broad spectrum of the Legacy Program, a knowledge of and coordination with that organization, as well as with the proponents of concurrent studies, is crucial. Whenever available, relevant studies have been consulted and integrated into the structure of the ACC Cold War project methodology.

5.2 TEMPORAL PHASES

This section includes a general discussion of the temporal phases spanned by the ACC Cold War context. The phases were chosen based on significant Cold War events and related developments in United States government policy and military strategy. Phases are only briefly described here, since more specific details and justification for their selection has previously been presented in Section 4.1.

The relationship of resources to the phases will help guide research efforts throughout the identification, evaluation, and prioritization process. Prior to each base visit, the installation's primary Cold War role and related phase(s) will be determined, so that recorders will be prepared to identify material culture reflecting that role and phase(s).

5.2.1 Phase I - July 1945 to January 1953

Phase I begins on July 16, 1945, when the United States exploded the first experimental atomic bomb at Alamogordo, New Mexico. Code named "Trinity," the event spurred a period of intense technological experimentation. Policy/strategy developments characterizing the beginning of Phase I include the bombing of Hiroshima and Nagasaki by the United States, which led to the surrender of Japan less than a month after the Trinity experiment. This phase spans the Truman administration and represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

5.2.2 Phase II - January 1953 to November 1963

Phase II begins with the Eisenhower administration and ends with the signing of the Limited Nuclear Test Ban Treaty by Kennedy just before his death. Phase II is characterized by a continued massing of nuclear and then conventional forces, and an associated explosion in defense technology, all aimed at deterring the Soviet threat. During this time, deterrence through intimidation was the driving force behind the United States strategy. With the signing of the test ban treaty, both superpowers leaned toward a more amiable co-existence, and a condition of detente between the United States and U.S.S.R. was born.

5.2.3 Phase III - November 1963 to January 1981

Phase III begins with the Limited Nuclear Test Ban Treaty and ends with the inauguration of Reagan. This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Presidents Johnson, Nixon, Ford, and Carter managed to get SALT I, the Vladivostok Accords, the ABM Protocol, and SALT II signed by the leaders of both nations and saw that they were honored well into the 1980s. Phase III ends with the termination of this period of detente.

5.2.4 Phase IV - January 1981 to November 1989

Phase IV begins with the start of Reagan's administration and ends, as does the ACC Cold War study, with the opening of the Berlin Wall. This phase is characterized by a massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to nuclear arms reduction talks. Detente was demolished while deterrence through intimidation was renewed, with a focus on the threat of SDI ("Star Wars"). This phase of renewed instability ended shortly after Reagan's administration with the removal of the

Berlin Wall, which until this time had epitomized the ideological struggle of the Cold War.

5.3 IDENTIFICATION OF PRIMARY ACC PROPERTY TYPES

In the Fall of 1992, ACC was faced with the challenge of assessing the historical value of literally its entire real property inventory at more than 40 installations in the United States and overseas. The project that was developed to meet this challenge and described here is only a beginning. Given constraints of time and funding, the guiding principle is to focus on buildings, structures, and other properties that the layperson can readily identify with Cold War operations of the Air Force. Facilities such as those that housed or supported bombers, fighters, missiles, and vital intelligence, radar, or reconnaissance systems are to be closely examined for potential significance under the NHPA. This initial inventory will provide a baseline from which to assess potential impacts from mission changes, base realignments, and closures under Section 106 of the NHPA. However, full understanding of the potential historic importance of these and other properties (housing, transportation, warehousing, etc.) awaits completion of detailed contextual studies for each property type.

The identification of Cold War resources may be problematic due to the quickly changing nature of the entities that manage them. The USAF Interim Guidance (USAF 1993), for instance, notes that only a few physical assets may remain from an entire weapons system. These remains could be in a museum, or tucked away in a corner of a large testing or semiactive facility, and only a physical inventory might identify such properties (USAF 1993:12). In addition, records and documents that pertain to real property and objects may have been transferred off-base, away from where the physical remains are actually stored, thus making the records themselves as well as the information they contain more difficult to locate.

The ACC Cold War study methodology involves the completion of a physical, reconnaissance level inventory for selected USAF bases. Specifically, the study is structured to identify and document, at

the reconnaissance level, Cold War material culture at ACC bases within the United States and Panama. The methodology for identification incorporates temporal considerations, with a focus on resources associated with the historic context previously presented. The following tools, which include established Legacy Program categories, NRHP terminology, and proposed USAF property types, are used to structure the identification portion of the ACC Cold War study.

5.3.1 Definitions and Evaluative Tools

5.3.1.1 General Categories Established by the Legacy Program

The Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records or documents (USAF 1993:3-4). Resources within any of these categories may be historically significant. Real property typically includes buildings, structures, sites, and landscapes. Objects were added to this list, to accommodate USAF owned items that do not fall under either the personal property or record/document categories. Personal property may include such items as a relic of battle or other military activity, a piece of military equipment, weapon, clothing, flag, work of art, or other moveable object. Record/documents are historical, oral-historical, ethnographic, or architectural documents that may provide a record of the past but are not necessarily associated with real property. Research and development documents, including administration records as well as documentation of the actual scientific study, also are important. Record/documents specifically may include photographs, videotapes, digital tapes, optical disks, manuscripts, books, reports, brochures, oral histories, and architectural drawings (DoD 1993:13).

Although the above-listed categories constitute the primary focus of the Legacy Program, a fourth category of resources also is recognized. Community resources and lifeways include those properties to which a community or interest group may ascribe cultural value. Such resources would

normally be of a real or personal property nature (DoD 1993:13) and, if identified during the ACC Cold War study, could be categorized appropriately. United States military holdings overseas that bear a Cold War relationship are also included under the Legacy Program's legislative purposes, but are beyond the scope of the current ACC study.

5.3.1.2 Relationship of National Register Terminology to ACC Resources

The NHPA of 1966 (as amended) established the NRHP as a listing of resources important for their historical value on the national, state, or local level. Both the Legacy Program and the Air Force utilize NRHP terminology and definitions to structure their studies and to categorize individual resources. This strategy allows the integration of military property types into the existing NRHP categories, which include buildings, structures, objects, sites, and districts. The following definitions for each category are derived from the USAF Interim Guidance (USAF 1993:4-5), with some additions and limited restructuring that followed initial field visits to USAF installations.

Buildings are defined as those edifices created principally to shelter any form of human activity. A building must be considered in its entirety, in that all significant features should be identified and its parts should not be evaluated independently. Examples of building types in the Air Force inventory may include: administration buildings, chapels, dormitories, family housing, garages, hangars, launch control centers, libraries, and radar stations (USAF 1993:4).

Structures are normally distinguished from buildings by being made for purposes other than sheltering human activity. Again, all extant structural elements should be considered before an eligibility assessment can be made. Examples of structures in the USAF inventory may include: bridges, fences, missiles and their silos, launch pads and associated weaponry, railroads, roads, runways, water towers, and wind tunnels (USAF 1993:4).

Objects refer to works that are primarily artistic in nature or that are relatively small in scale and

simply constructed. Although often moveable, an object is associated with a specific setting or environment. Examples of objects in the USAF inventory may include: fountains, monuments, or statuary (USAF 1993:4), as well as art work, signage, trophy cases, and individual static displays of aircraft.

Sites are locations of significant events, missions, or activities, although physical remains need not necessarily be present. Examples of sites in the USAF inventory may include: locations of early rocket testing or test tracks (that are now dismantled), nuclear testing ranges, treaty signing locations, aircraft wreck sites, and nuclear manufacturing facilities (USAF 1993:5), as well as training areas. National Register Bulletin (NRB) 15 characterizes a designed landscape as an example of a specific type of site (NPS 1991:5). For the current study, landscape is recognized as a separate resource category, in order to distinguish places of significant happenings (sites) from locations associated with everyday events and activities. The definition proposed for landscape, then, is a property that is designed for human use and is distinguishable through the purposeful layout of elements for human activity, information, and/or enjoyment. Examples of landscapes in the USAF inventory may include: recreational parks, playgrounds, static display parks, and arrangements of signage and other physical elements to portray a meaning (entrances to bases or ranges) or create scenery.

Districts, lastly, possess a significant concentration of buildings, structures, and other cultural resources united historically or aesthetically by plan or physical development. Examples of districts in the USAF inventory may include groups of buildings that may lack any significant architectural or engineering merit but either hosted a crucial code breaking or intelligence gathering activity or were built for nuclear weapons testing (laboratories). An entire installation constructed for a specific Cold War mission could also qualify, as could historically significant bases, airports, and support facilities (USAF 1993:5).

5.3.1.3 USAF Cold War Property Types

The USAF Interim Guidance suggests five property type groups which may adequately characterize Cold War assets. They include:

- 1) Operational and support installations;
- 2) Combat weapons and support systems;
- 3) Training facilities;
- 4) Materiel development facilities; and
- 5) Intelligence facilities.

A list of USAF property type subgroups within these overarching groups also is compiled (USAF 1993:78).

The USAF groups and subgroups were used to structure the initial ACC base visits to Holloman and Cannon AFBs in New Mexico. The results of those visits were tabulated and a comprehensive list of inventoried resource types was developed. The original USAF groupings were thus supplemented, creating a more extensive list. The revised groupings include:

Group 1: Operational and Support Installations

- Base and Command Centers
- Missile Stations
- Launch Complexes
- Housing
- Storage
- Base Retail
- Recreation
- Infrastructure
- Mess/Social
- Memorial
- Communications
- Documentation

Group 2: Combat Weapons and Support Systems

- Missiles
- Alert Facilities
- Ground Vehicles and Equipment
- Maintenance Docks/Hangars
- Communications
- Storage
- Memorial
- Weapons Platforms
- Documentation

Group 3: Training Facilities

- Base Support
- Flight Training
- Intelligence Training
- Combat Training
- Combat Support Training
- Launch Complexes
- Combat Training Ranges
- Impact Areas and Targets
- POW Training Camps
- Communications
- Documentation

Group 4: Materiel Development Facilities

- Research Laboratories
- Manufacturing Sites
- Test Sites
- Proving Grounds
- Communications
- Documentation

Group 5: Intelligence Facilities

- Radar Sites
- Spy Satellites
- Listening Posts
- Communications
- Documentation

It is postulated that numerous combinations of Legacy Program categories (real property, personal property, record/documents) and NRHP resource types (buildings, structures, objects, sites, districts) could be subsumed under these USAF property type groupings. Serving as a starting point for the Cold War study, the groupings will remain flexible so that new subgroups may be added as necessary, or deleted as more bases are studied and they prove not applicable and/or redundant.

The above-listed property type groups and subgroups are geared toward real property, in particular buildings and structures. In practice, however, objects, personal property and record/documents also are integral to the understanding and interpretation of the real property groups. These resources often are found either inside or in direct association with real property. For instance, personal property of Cold

War interest could certainly be encountered at a training facility, particularly in a residential area. Also, record/documents, such as plans, maps, illustrative models, even videotapes, which provide valuable information regarding real property, could be located at design or test facilities. The ACHP (1991:61) notes that objects, such as the sleeping hammock of a shuttle astronaut, and documents, including detailed printed information about rocket design, missions, and hardware are often of most interest to the general public, although they may not necessarily warrant NRHP consideration within the parameters of the current study.

5.3.2 Application

The tools presented above will serve as a baseline for categorizing Cold War resources that may be encountered during visits to ACC bases. The methodology for identifying and documenting resources at ACC bases is specified below, followed by a description of the general inventory form designed for the study. A Field Guide (Lewis and Higgins 1994) has been developed to assist recorders and to help standardize the inventory procedures.

Base visits will begin with a number of informal, oral interviews with key base personnel (such as the Point of Contact [POC]), who may have information regarding Cold War resources. During, or immediately following an initial base tour, contacts will be initiated at the Base or Wing History Office, Real Property Departments (Facility Management), Civil Engineering Drawing Room, Resource Management Division, Community Planning Office, and Public Affairs Office. Attempts will be made to solicit pertinent information from technical personnel (scientists, managers) as much as possible during the identification process to help narrow the focus on those properties most suitable for further documentation. Security personnel also will be included in the reconnaissance inventory procedures, particularly when the team must access sensitive areas such as the flight line.

In order to identify real property, certain documentation will be sought. This may include

building inventories, architectural drawing file indices, written histories and management documents, base maps, aerial photographs, and completed NRHP nominations for base properties. Identification of personal property and record/documents will be less straightforward, with strategy relying heavily on oral interviews and base contacts.

The reconnaissance inventory will document representative types of real property, personal property, and record/documents. Included will be buildings, structures, sites, landscapes, and objects, with data on individual resources entered into a database via laptop computer. Each of these resources will be assigned a unique number, generally described in a Data Log, and the majority will be photographed. If there are numerous examples of the same property type (i.e., ten hangars all of identical construction), the group may be assigned a single number and a representative example photographed. These data will appear in tabular format in each base specific report, thereby providing a comprehensive overview of the type and number of Cold War materials managed on a given base.

Those resources identified as having an important association with the role the base played within the Cold War context will be recorded in further detail and will be preliminarily evaluated. Inventory forms developed specifically for the ACC study and translated to computer screens for the field will be completed for each of these evaluated resources. The following section details the procedures for selecting resources for full documentation and evaluation. A Property Management Screen, which details data regarding resource identification, description, associations, location, reference information, property type, evaluation of importance, and management recommendations will be completed. A component screen, which includes information deemed relevant to the particular type of resource being recorded, will then be selected for completion. Component screens include: Building-Structure Screen, Landscape/Site Screen, Object Screen, and Record-Document Screen.

5.4 EVALUATION OF ACC CULTURAL RESOURCES

Evaluating the historical significance of Cold War resources can be as problematic as identifying them, although for different reasons. The two main issues hindering evaluation include:

- 1) A lack of historical perspective because Cold War resources are of relatively recent origin; and
- 2) An absence of baseline data for comparative evaluation because most Cold War studies are in their initial phases and have yet to produce synthetic research reports.

The ACC Cold War study methodology was developed in consideration of a small but growing body of data applicable to the evaluation of the resources in question. Tools have been assembled to aid in the evaluation of Cold War resources. They include standard legislative stipulations, as well as guidance offered by the Legacy Program, the National Park Service Interagency Resources Division, and the ACHP.

5.4.1 Definitions and Evaluative Tools

5.4.1.1 Legislative Setting

Although the evaluation of significance for Cold War resources is a relatively new process, it is essentially driven by the existing federal historic preservation program. The main components of that program are described in the following sections. Other applicable regulations that apply primarily to objects and record/documents are then discussed.

National Register Program

The NRHP is the nation's official list of important historic resources and includes over 52,000 buildings, structures, objects, sites, and districts (ACHP 1991:28). The criteria for evaluating cultural resources for the NRHP are discussed in the following sections.

Significance

Cultural resources are defined as manifestations of past human activity, occupation, or use. This definition includes prehistoric and historic sites and objects, as well as locations of traditional cultural or religious importance to specified social/cultural groups. Ordinarily properties must be at least 50 years old in order to be deemed historic; however, exceptions can be made for properties that have not reached the 50-year threshold. The concept of exceptional significance for these properties is discussed in the following section. The importance or significance of individual cultural resources lies in their eligibility for inclusion in the NRHP, which, as previously discussed, contains buildings, structures, objects, sites and districts of national, state, and local importance. Resources may be considered eligible for inclusion in the NRHP if they are deemed important in American history, architecture, archeology, engineering, or culture. They also must possess integrity of location, design, setting, materials, workmanship, feeling, and association, as appropriate, and meet at least one of four criteria:

- a) are associated with events that have made a significant contribution to the broad patterns of our history;
- b) are associated with the lives of persons significant in our past;
- c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; and/or
- d) have yielded, or may be likely to yield, information important in prehistory or history (36 CFR Part 60.4).

According to the NHPA, a *historic property* is a cultural resource that either is included in, or eligible for inclusion in, the NRHP. The term

includes artifacts, records, and remains that are related to and located within such properties. The term "eligible for inclusion in" includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet NRHP listing criteria, as specified above (ACHP 1986:51). For example, a historic World War II hangar is a cultural resource but it may or may not be a historic property according to NHPA terminology.

Exceptional Significance

The evaluation of significance for Cold War resources is more complex than the basic evaluation process for resources that are 50 years of age or older. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical significance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990:3).

When the original regulations for listing resources in the NRHP were compiled, exceptions were made for resources that are not yet 50 years old and for those that may be older but only achieved their significance during the past 50 years. Listing of recently significant properties is allowed if they are of **exceptional** importance or significance.

To date, approximately 3% of all NRHP properties were listed before they reached the 50 year age threshold. For military properties, missiles and nuclear facilities, such as the Trinity Site, Launch Complex 33 at White Sands Missile Range, and the Mission Control Center at Cape Canaveral and several of its associated launch pads, have been listed. Other Cold War assets have either been determined to be eligible or are considered potentially eligible (DoD 1993:15).

The Cold War is undeniably an event that was significant on the national, as well as state and local levels. The end of the Cold War has brought about a restructuring of the DoD away from its focus on Soviet containment. Through this restructuring, key

resources defining the era and its ideology could be lost by destruction, lack of adequate maintenance, or complete neglect. In light of the rapid technological changes of the twentieth century, a high priority must be placed on protecting the physical environment that manifested the Cold War and, in some cases led to the end of the Cold War and the accompanying revisions in political policy. Federal agencies in charge of scientific research should take on a leadership role in the stewardship of such resources under the NHPA (ACHP 1991:ix). Due to the nature of the resources involved and the fact that the Air Force is an especially quickly changing agency, experience has shown that waiting 50 years before engaging in the historic preservation quest may well result in the loss of many Cold War resources.

National Historic Landmark (NHL) Program

While NRHP-listed and NRHP-eligible properties can be significant at the national, state, or local levels, NHLs include only those historic properties that are nationally significant. Properties that have been deemed eligible for NRHP listing do not necessarily qualify for NHL status; they are only eligible to be **considered** for such designation. Conversely, NHLs, once designated, are automatically listed on the NRHP. As of 1991, the listing of NHLs included 1,942 entries (ACHP 1991:28).

The criteria for NHL designation are in part abstracted from NRHP criteria, with an emphasis placed on the concept of national importance. NHL criteria state that the quality of national significance is ascribed to buildings, structures, objects, sites, and districts that possess **exceptional** value or quality in illustrating or interpreting the heritage of the United States in history, architecture, archeology, engineering, and culture; that possess a **high** degree of integrity of location, design, setting, materials, workmanship, feeling, and association; and:

- 1) that are associated with events that have made a significant contribution to, and are identified with, or that outstandingly

represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained;

- 2) that are associated importantly with the lives of persons nationally significant in United States history;
- 3) that represent some great idea or ideal of the American people;
- 4) that embody the distinguishing characteristics of an architectural type specimen exceptionally valuable for the study of a period, style or method of construction, or that represent a significant, distinctive, and exceptional entity whose components may lack individual distinction;
- 5) that are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition but collectively compose an entity of exceptional historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture; and/or
- 6) that have yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States. Such sites are those which have yielded, or which may reasonably be expected to yield, data affecting theories, concepts, and ideas to a major degree (36 CFR 65.4).

Section 106 Review Process

The Section 106 review process, established under the corresponding section of the NHPA and outlined in ACHP regulations for the "Protection of Historic Properties" [36 CFR 800], consists of a step-by-step sequence that includes the ACHP in the decision-making process regarding treatment of historic properties (again, those resources that either are listed or have been officially determined eligible for

the NRHP) once they are identified using the criteria presented above. The review process, which is warranted for all federal undertakings (federally assisted, licensed, and/or permitted actions), is intended to help balance agency and preservation goals, and lead to creative conflict resolution rather than to block or inhibit the undertaking (Figure 5.1).

The principal steps in the Section 106 process include:

- 1) Identification and evaluation of all historic properties (both listed and eligible for listing in the NRHP) that may be affected by a project: if no historic properties are identified, the SHPO and interested parties are notified by the agency and the project proceeds; if historic properties are found the process goes to Step 2.
- 2) Determination of the effect the proposed undertaking may have on the identified historic properties: if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process goes to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect: this step either results in the development and execution of a Memorandum of Agreement (MOA) in which case the process goes to Step 4, or if no MOA is developed consultation is terminated at this point.
- 4) ACHP comments on the project: this step may result in the project proceeding, either with the agency implementing the terms of the MOA or with the agency considering the ACHP's comments and notifying the ACHP of their decision to proceed.

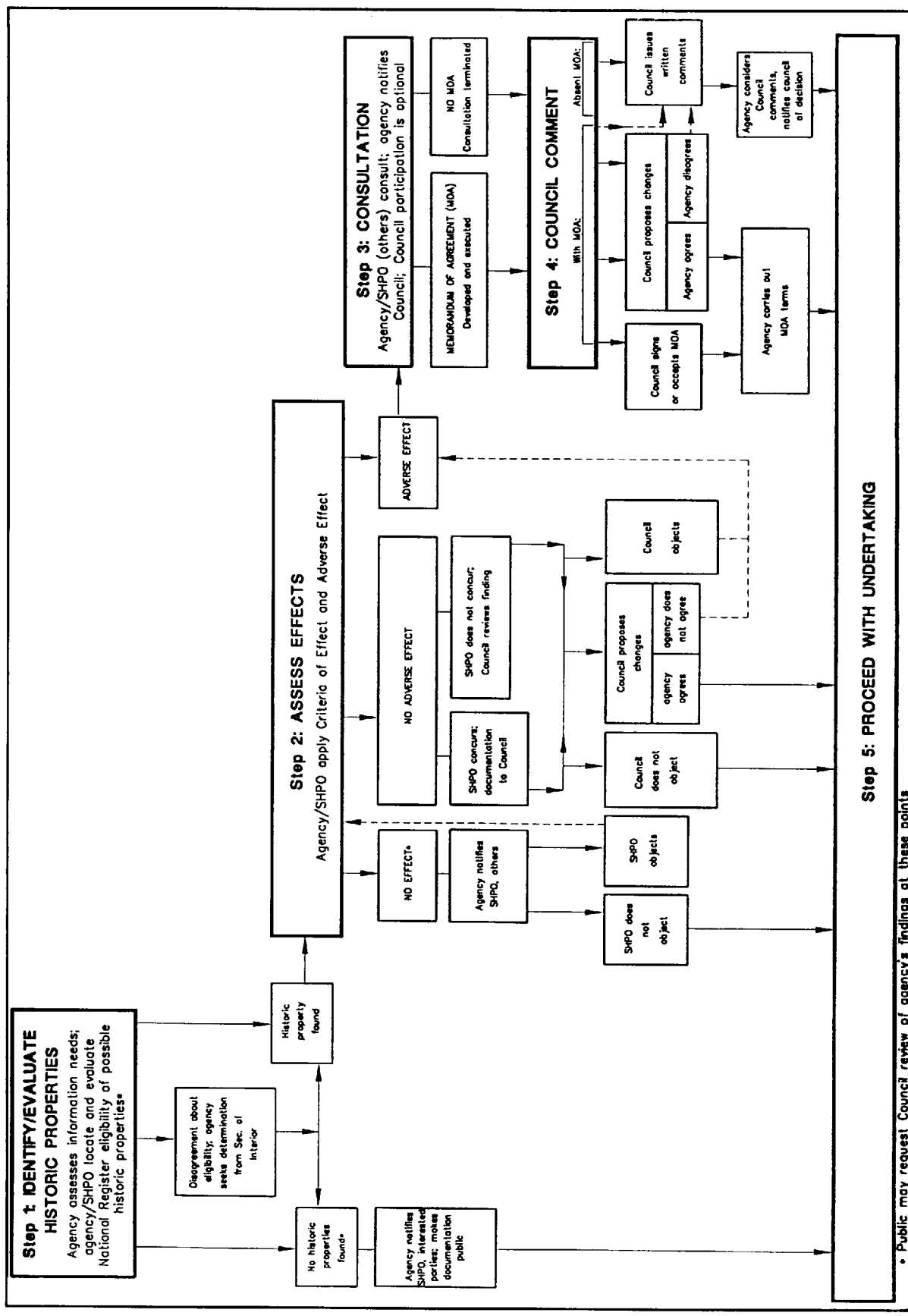


Figure 5.1 The Section 106 Review Process.

Finally, a Programmatic Agreement (PA) can help streamline the Section 106 review process for federal agencies in certain situations. These agreements that involve the appropriate consulting agencies as full parties and are particularly useful to simplify and expedite the Section 106 review process in two instances:

- 1) For large, complex projects that involve many land-managing agencies, and
- 2) For one land-managing agency that engages in numerous undertakings of a similar nature.

A PA can be specifically tailored to an agency's needs and often result in saving time, while simultaneously improving the agency's historic preservation review procedure. In fact, the ACHP advises military base managers to consider the execution of PAs for undertakings on the lands they oversee.

Although flexible in terms of its results, Section 106 is a linear review process that, most importantly, separates the evaluation of a property's historical significance from the decision-making process with regard to effects and treatment. It is during the latter stages of the Section 106 review process and consultation (Steps 3 and 4) that comparative evaluation becomes critical and identification of the "best" example of a property type may assist in the assessment of appropriate treatments for individual historic properties.

Section 110

While Section 106 is a project specific and mandated process for federal agencies, the purpose of Section 110 of the NHPA is more broad-based. Its aim is to establish an on-going consideration of historic properties into a federal agency's projects and programs. Essentially, a federal agency can meet its Section 106 obligations to "take into account" the effects of their undertakings on historic properties by fully implementing the provisions of Section 110. However, budgetary and other constraints rarely allow an agency to fully address its Section 110 responsibilities. The following

mandates, specified under Section 110, require the federal agency to:

- 1) Assume responsibility for the preservation of historic properties owned or controlled by the agency, and utilize such properties where available and feasible;
- 2) Establish programs to identify, inventory, and nominate all resources under the agency's ownership or control that appear to qualify for inclusion on the NRHP, and assure that any such property that might qualify for inclusion is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly;
- 3) Document for future use and reference any historic properties that must be substantially altered or demolished by an agency action;
- 4) Designate a Federal Historic Preservation Officer to coordinate the agency's preservation activities under the NHPA;
- 5) Carry out agency missions in a manner consistent with the intents and purposes of the NHPA;
- 6) Request that the Secretary of the Interior review plans for treatment of surplus federally owned historic properties when transferred from agency control; and
- 7) Undertake planning efforts and actions to minimize harm to National Historic Landmarks.

Other subsections that are less relevant to the ACC study discuss allocation of money to help agencies comply with Section 110, the applicability of Section 110 requirements to other policies, and an exclusion for compliance in emergency situations.

Federal Museum Regulations

The DoD has not issued department-wide regulations that outline museum practices on an interservice basis. Regulations issued for the Air Force will be the focus of this discussion. They include the USAF Handbook 190-4, which sets out how USAF Museums are to be organized, and the USAF responsibilities (DoD 1993:22).

The USAF museum system is the only one among the services that is not affiliated with its own departmental historical office. The USAF museums are administered by the Office of Public Affairs through the USAF Museum Program. The USAF Museum is located at Wright-Patterson AFB. The museum serves as the point of contact for museum activities throughout the service and is responsible for all historic properties at all installations. Still, the museum relies heavily on individual installations for information regarding specific resources. Military hardware is assigned to commands with a separate acquisition track for such material. Attempts are being made to bring the USAF program closer in alignment with the Army system (DoD 1993:22-23).

Federal Records Act

The Federal Records Act, administered by the NARA, protects federally generated records regardless of format. Federal records managers for each agency develop guidelines for the management, retention, dispersal, and disposal of federal records. Although requirements for safeguarding national security information are considered, they do not encompass all Cold War-era paper records. The Cold War Task Area of the Legacy Program focuses not only on those records covered by the Federal Records Act, but also on a broad range of reference material, including textual and nontextual materials that document such topics as events, real property, and social issues (DoD 1993:26).

The American system of security classification itself is seen as an artifact of the Cold War (DoD 1993:27). The Army and Air Force have projects underway that are meant specifically to declassify

Cold War records. In addition, the Air Force Historical Research Agency plans to make records more accessible to outside scholars through the development of the Inferential Retrieval Indexing System, designed to ease research into USAF documentary collections. Issues are still unresolved regarding the complex issues of gaining public access to records held by government contractors as well as those administered by NATO (DoD 1993:32).

5.4.1.2 Legacy Program and Air Force Evaluative Tools

The Legacy Program has established methods for evaluating Cold War properties that are contingent on the general category of the resource. First, for real property, a resource must be built, used, or associated with critical events or persons corresponding to the temporal parameters established in the phased approach presented above and described in the Historic Context. In addition, the resource must possess exceptional historic importance to the United States or be an outstanding example of technological or scientific achievement. For personal property, historical or cultural significance must be ascribed through professional evaluation of historic associations to persons, events, places, eras, or with military organizations, again pertinent to the Cold War. Also through professional evaluation, records or documents must be determined to contain significant information (USAF 1993:3).

The USAF Interim Guidance (1993) has outlined specific criteria that can be used to evaluate the historical significance of Cold War properties. These criteria are essentially an elaboration of NRHP criteria which have been combined with concepts from NHL criteria and applied to Cold War resources in particular. The NRHP Criterion (d) is not identified in the USAF Interim Guidance as one that is particularly applicable to Cold War properties. Still, it should be acknowledged that some Cold War resources (for example, locations of plane crashes) may be manifested as archeological sites depending on their history of use and reuse. Other types of

resources, such as record/documents, can contain important information, therefore meeting Criterion (d) as well.

According to the USAF Interim Guidance (USAF 1993:6), exceptionally significant properties include those buildings, structures, objects, sites, or districts that:

- 1) Possess exceptional value or quality in illustrating or interpreting the Cold War heritage of the United States;
- 2) That possess a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association, and
- 3) That meet at least one of the following criteria:
 - a) That portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of United States Cold War history and aid in understanding that pattern;
 - b) That portray a direct and important association with the lives of persons nationally significant in United States Cold War history;
 - c) That embody the characteristics of an architectural, engineering, technological, or scientific type specimen exceptionally valuable for understanding a component of United States Cold War history or representing some great idea or ideal of United States citizenry embodying the Cold War; or
 - d) Have yielded or may be likely to yield information of exceptional importance to United States Cold War history.

The significance criteria presented above emphasize the evaluation of resource importance at the national

level of Cold War history. This is due to the fact that most Cold War material culture is not yet 50 years of age and, therefore, must be evaluated as exceptionally significant if it is to be considered immediately eligible for NRHP listing. Additional tools for applying the criteria of exceptional significance are discussed in the following section. Theoretically, Cold War resources should be evaluated not only for national importance, but for their potential significance at the state and local levels as well (DoD 1993:16). Such consideration, however, is beyond the scope of the current study.

5.4.1.3 Evaluative Tools for Recently Significant Properties

The somewhat complex task of determining exceptional significance is addressed by NRB 22. A number of tools are suggested, including: use of a historic context (such as the one developed for the current ACC study and presented in Chapter 3.0); emphasis on scholarly evaluation; time considerations; and comparative evaluation of the significance of a property. Also, guidance is offered regarding associations with living persons, the identification of properties in historic districts, the consideration of fragile or short-lived resources, and the justifications necessary to present the importance of properties that have achieved significance within the last 50 years.

A historic context (including historical themes, time, and geographical areas) refers to all of those historic circumstances and factors from which a property emerges. Evaluation within a property's context ensures an understanding of its role and helps in making comparisons among similar resources (NPS 1990:3).

A lack of existing data may inhibit the evaluation of recently significant resources. For that reason, previous NRHP nominations may assist in establishing appropriate context themes and providing additional scholarship. Papers presented at conferences also may contain research and analysis useful for evaluating resources of recent origin or significance (NPS 1990:4).

Since the 50-year threshold is arbitrary and our understanding of history occurs in blocks rather than year by year, evaluation will be structured in periods when applying the criteria for exceptional significance. For example, an entire war is more easily understood when viewed as a single unit rather than as a series of year by year events. Individual resources, therefore, will be evaluated with regard to the blocks of history they reflect rather than considering them one by one as they reach 50 years of age. This is the point at which the distinction is made between construction date and the date the resource achieved significance. In practice, a resource is most accurately evaluated in terms of the period of its relationship to historical events and/or important individuals. For the ACC study, individual resources will be evaluated for exceptional significance only after all base inventories are complete and a large enough set of properties has been assembled to understand the Cold War as a historical unit. A final consideration is that the more recently a property has achieved significance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990:5).

After theme and time or period are determined for a historic context, its geographic limits must be established. To evaluate and justify exceptional significance, it is critical to identify all properties in a geographical context that portray the same associations and determine those that "best" illustrate or represent the historical, architectural, cultural, engineering, or archeological values in question (NPS 1990:6).

Nomination of properties for their association with living persons is strongly discouraged in order to avoid use of the NRHP listing to endorse the work or reputation of a living person (NPS 1990:7). NRB 6 offers further guidance in this regard. This situation could apply to Cold War resources; however, an exception might be an association with a living person who is no longer involved with the Cold War. Living persons important in Cold War history, because they are generally not artisans, stand little chance of benefit from the listing of resources associated with them.

Further guidance from NRB 22 states that properties which are integral parts of a district do not need to be individually eligible for the NRHP or of individual exceptional significance, regardless of their age. The integral nature of the resource is the key concept.

Some resources acquire the quality of historicity before 50 years, either because they were not built to last that long, or, by their nature, are subject to circumstances that destroy their integrity before 50 years have elapsed (examples include temporary World War II housing). An evaluation factor is whether a type or category of resources, as a whole, has faced loss at such a rate that relatively young survivors can be viewed as exceptional and historic. This could very well apply to Cold War resources, some of which may be sole surviving members of a class or type of facility or resource.

Justifications of exceptional significance for the NRHP must address two issues. First, using the four criteria for listing, a straightforward description of why the property is historically significant must be presented with direct reference to the relevant NRHP criteria previously outlined. A second section should contain a justification of exceptional importance discussing the context used to evaluate the property and demonstrating that the context and the resources associated with it can be judged to be "historic." The existence of sufficient research or evidence to permit a dispassionate evaluation of the resource must be documented. The statement must use the background presented to summarize the way in which the resource is exceptional. In summary, the NRHP program and criteria for listing historic properties require that nominations for resources less than 50 years old demonstrate that sufficient historical perspective and scholarly, comparative analysis exist to justify the claim of exceptional significance (NPS 1990:9). The ACC study is of sufficient magnitude that, once all base visits are complete, the set of resources that are documented and known will be adequate to allow such comparisons.

The USAF Interim Guidance (1993) indicates that the comparative evaluation of property significance is problematic for Cold War resources because studies, although initiated, have not yet progressed to the point of establishing adequate baseline data. Therefore, the Air Force proposes an initial set of property types as having good potential for meeting the criteria of exceptional significance and hence eligibility for immediate NRHP listing (USAF 1993:6-8). Critical factors to be considered are the degree of recognition of the resource by the public at large, or the degree to which a resource reflects elements of common national memory and identity from the Cold War era.

In fact, Murphey (1993) suggests that until appropriate temporal perspective is achieved in future decades, properties of exceptional Cold War significance should be those that will provide tangible manifestations to today's generation with which to interpret the ideological differences extant in the Cold War era. The focus for assigning exceptional significance, then, is to limit that category to those resources that graphically convey the ideological differences in U.S.-Soviet relations in an obvious manner. Murphey offers four primary themes of the Cold War era to help establish this direct relationship (personal communication, Joseph S. Murphey, December 4, 1995). He suggests that a material artifact must illustrate one or more of these themes which convey the ideological differences:

- 1) The bipolar battle of opposing economic and political ideologies, present in the struggle for geo-political power in western Europe and the containment of Soviet expansionism and influence in the Third World;
- 2) The massive American investment in research and development of technology to battle real and perceived strategic military challenges with the Soviet Union (e.g., the arms race, the bomber gap, the missile gap), for political leverage (i.e., for use in treaties), and for the psychological comfort of the nation's citizenry, forever changing the economic, geographic, and social

landscape of the nation (e.g., the military-industrial complex, the interstate highway system, and the computer);

- 3) The deployment of offensive/defensive systems and development of readiness programs for protection against an attack by the Soviet Union and to ensure the survivability of military installations and the general civilian population; or
- 4) The omnipresent potential to use nuclear devices, keeping the Cold War cold through such concepts as mutually assured destruction.

The Berlin Wall, Murphey notes (1993), is a property of exceptional significance as the supreme symbol of the clash of opposing ideology. Certainly this approach to evaluating exceptional significance which emphasizes the importance of national recognition corresponds to NRB 22, where the concept of exceptional is characterized as reflecting the extraordinary impact of a political or social event, reflected in a range of resources for which a community (in this case, the United States) may have an unusually strong associative attachment. For purposes of the ACC study, resources that may be of the correct era, but fail to convey this relationship, are not a primary focus. Conversely, operational missions and equipment of unmistakable national importance with a direct link to such a relationship are identified as the highest priority, while less emphasis is placed on more covert, or less obvious support complexes that lay behind the "frontline" combat or intelligence units. This selectivity is essentially a management decision based on funding constraints that necessarily limit the scope of this particular study.

5.4.1.4 Evaluative Tools for Highly Scientific/Technological Resources

In studying and evaluating Cold War scientific/technological resources, as for other highly scientific and technological properties, a

primary concern is to balance two very different but not necessarily opposing interests:

- 1) The need to preserve the physical reminders of United States scientific legacy; and
- 2) The continual need to upgrade scientific and technical research facilities that are still in operation.

Certainly for active scientific/technological facilities, the continual upgrading of obsolete equipment is necessary to keep properties functioning, thus maintaining the effectiveness of the mission. These modifications, over time, can compromise the historical integrity of the resource. It is an obvious necessity that members of both the historic preservation community and the scientific/technological community continually assist one another to achieve historic preservation concurrently with facility operation and successful promulgation of the facility mission(s) (ACHP 1991:61). Inactive facilities present a different set of challenges, such as the need to guard against the neglect or vandalism of historic resources.

The ACHP (1991:28) notes that it is difficult to judge the universe of historic facilities that are extant, have had relatively few modifications to historic features, and are worthy of study and recognition. Several key issues are identified that must be considered in evaluating the significance of scientific/technological properties. They include age, representativeness v. uniqueness, integrity, and the qualifications of the evaluator and persons consulted to assist in the evaluation.

The age of a facility or its equipment must be considered although, as previously discussed, the exceptional significance rule for NRHP eligibility is applicable to many Cold War resources. A key variable mentioned by the ACHP (1991:31) is whether or not properties are recognized by "consensus" to be significant.

When compared to other similar properties, the representativeness of a facility, structure, or object will be factored into the decision-making process. Still, it is important to remember that Section 106

addresses this factor **after** an initial eligibility assessment has been made. The property is thus considered as an individual, stand-alone entity. In theory, then, the number and condition of similar properties should not enter into decisions about whether or not a resource is significant, but should instead come into play during consultation regarding what is to be done with the resource (ACHP 1991:32). This is a complex issue, since in actuality, some properties are preserved because they are the "best" example of their kind and others because they are "one-of-a-kind." The general rule for NHLs has been to favor uniqueness as the most critical factor, whereas NRHP properties often are selected for preservation because of their representativeness and not necessarily their uniqueness. Of course, these concepts are not necessarily mutually exclusive. In fact, the ACHP (1991:32) states that virtually all pieces of scientific equipment in "historic" facilities are both representative and unique in some ways, especially on a state and local level.

A third consideration suggested by the ACHP (1991:32-33) is the integrity exhibited by a property in light of continuing alterations that may have taken place at scientific and technological facilities. There is a convincing case made that continuity in function leads to continuity of integrity, whether intentional or not. This is based on the rationale that if a facility is utilized for a similar function through the years it is more likely to retain original operating parts than if its function is entirely changed. The amount of original historic fabric, including materiel and equipment, that is extant determines integrity.

The qualifications of persons making the evaluations for highly scientific/technological resources is problematic, since often those persons specializing in historic preservation have limited knowledge of the scientific pursuits behind the physical properties being evaluated, and vice versa. The ACHP (1991:33) places a high priority on including technical personnel and scientists in all phases of resource identification, evaluation, and prioritization. For the ACC study,

these will be the persons who are familiar with the role a certain resource may have played in the Cold War and can knowledgeably comment on its significance. The ACHP particularly encourages consultation with those persons who have worked in the industry for a number of years and who may be on the verge of retirement, since they represent a valuable yet disappearing resource. Such consultations will be treated as oral histories. There seems to be some concern, and rightfully so, by scientists who question **what** is historic about their facilities and **who** should be making these determinations of significance. When the process of historic preservation is explained to scientists and facility managers, and their views are solicited, our understanding of the historic context of the property and the scientific contributions it made can both be enhanced.

5.4.1.5 Definition of Integrity and Condition for Property Types

For NRHP purposes, "integrity" is defined as retaining enough physical presence to enable a preservable entity to communicate relative significance. Authenticity of a properties' historical identity, evidenced by the survival of physical characteristics that existed during the property's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it significant, whether that association is with historical patterns, persons, architectural or engineering design, science and technology, or information about a culture or people (NPS 1991:44).

As explained in the NRHP criteria for listing historic properties, seven qualities of integrity are important. They include integrity of location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes, then, enables a property to maintain a direct link with the past and convey the relationship making it historically important. Normally a property must meet at least two of the seven to be considered eligible for NRHP listing (ACHP 1991:32).

A difference is recognized between the concepts of change and alteration when judging the integrity of highly scientific/technological resources. Functional changes (usually major) in the character or use of a scientific property are distinct from qualitative changes (usually minor) that accompany ongoing improvements to structures and equipment that enable the facility to keep functioning at its original purpose. For example, the Yerkes and Hale telescopes have undergone changes in appurtenants, drive mechanisms, detection instruments, and other electronic and optic systems that have enabled them to change with the times and not fall into disrepair. They continue to contribute to scientific studies. Functional consistency, from a historic preservation standpoint, is particularly important since consistency in design and materials often follows. It is noted that operation testing facilities or launch complexes often receive major modifications as their uses change (ACHP 1991:48).

Commonly, integrity of association may be present while the remaining six attributes are lacking. Evaluation with regard to those other attributes, then, becomes important as a distinguishing tool. If an attribute does not directly affect the characteristics making the property significant, the lack of integrity in that area may not preclude eligibility. It is therefore critical that consensus is reached regarding exactly what elements of a property contribute to its significance, not only to establish eligibility but also to aid in decisions about what alterations would damage its historical integrity and to aid in making firm management decisions.

5.4.2 Application

Determinations of NRHP eligibility for each identified resource are beyond the scope of the current ACC study. Also, because the purpose of the study is to fulfill Section 110 rather than Section 106 compliance, evaluation goals are broader and more geared toward recommendations of eligibility for property types rather than specific resources. Still, the evaluation

procedures have been developed in consideration of the evaluative tools presented above.

Resource evaluation procedures are outlined in the Field Guide (Lewis and Higgins 1994) to assist recorders and to standardize the evaluation process. The focus is on arriving at field decisions that identify properties which appear important to the base and its role in the Cold War as well. Evaluations will include a brief description of why the property is important for the base, including any reasons it may be important in the national context of the Cold War. Relationships to socio-political events, technology, and/or important persons will be considered and specified.

As stated in the discussion of documentation procedures, resources that are determined to be important to the role of the base during the Cold War will be the focus of full recordation activities. This level of documentation includes the completion of a matrix that will prioritize the recorded resources. The matrix is explained in the following section.

5.5 PRIORITIZATION OF ACC CULTURAL RESOURCES

A critical point of comparison for prioritizing resources involves the concepts of representativeness v. uniqueness, although, in essence, virtually all pieces of scientific equipment are both representative and unique in some ways. In accordance with Section 106, the number of examples of a particular historic property type should be given careful consideration when deciding the appropriateness of mitigation measures to be chosen if the property cannot be avoided by an undertaking and thus must be destroyed or substantially altered.

Because the ACC study focus is within the auspices of Section 110, recommendations will be more broad-based and comparative rather than resource specific. Consensus among the preservation community where possible is important when deciding if rare or unique historic properties should be preserved. The NRHP and NHL criteria provide a qualitative framework in which comparative

analysis of historic property types can fruitfully take place (ACHP 1991:29).

The ACC reconnaissance study is a first step toward reaching such consensus for Cold War resources within a national context, while also providing an initial prioritization for all Cold War resources at the bases visited. The level of actual recording involved, however, is not intensive, thus these judgments regarding resource priority should be viewed more as a management tool than as final significance recommendations.

5.5.1 Definitions and Evaluative Tools

5.5.1.1 Priority Ranking Matrix

During base visits, once a resource has been identified as important to the base and recording has progressed, a priority matrix will be completed. The matrix contains data that have been identified as important to prioritizing Cold War resources, utilizing much of the guidance presented to this point in this methodology. Because the focus in the first cut of resource evaluation and prioritization is **within** the individual base context, the initial matrix will reflect the priority of the resource at that level.

The matrix is organized into six main topics that lend themselves to numerical ranking. These topics and specific parameters for ranking are described below.

(1) First is the topic of the relationship of a particular resource to the role the base played in the Cold War. Resources are ranked according to the parameters described below, with rankings descending in order from highest to lowest:

- **Direct Cold War relationship** is assigned to those resources that manifest the ideological differences of the Cold War in a recognizable way, through being part of a technological advance important to the base, or through a significant association with a Cold War event or an important figure in the Cold War. These resources are given the highest ranking.
-

- **Indirect Cold War relationship** includes those resources that are identified with or are of the Cold War period, that may relay information about local history, construction technology, or local persons of importance. This category also will include resources that have attributes reflecting the Cold War but that may not totally embody it to a point recognizable by the general base and/or USAF populace.
- Resources that have **no direct Cold War relationship but are of the period** are ranked next, if they appear significant in their own right. They include those that are identified with or are of the Cold War period but do not convey national meaning or have local importance.
- The lowest ranked group includes resources that may be important in their own right but are **not of the Cold War period** (such as significant World War II resources).

(2) The second topic ranks the relationship of the resource to the context aspects. Scores, from highest to lowest, will be given for the primary relationship of a resource to the following themes identified in the Historic Context:

- **Policy/Strategy**
- **Technology**
- **Architectural/Engineering Design**
- **Social Impacts**

(3) Relationship to the four temporal phases outlined previously is the third topic for ranking resources. The rationale for this ranking, as explained above, is the concept that when dealing with exceptionally significant resources, the older the property, the more the value, given the increase in historical perspective. Rankings proceed in descending order, from highest to lowest, for the following temporal phases:

- **Phase I** (July 1945 to January 1953)
- **Phase II** (January 1953 to November 1963)
- **Phase III** (November 1963 to January 1981)

- **Phase IV** (January 1981 to November 1989)

(4) A fourth topic figures the level of importance of a particular resource into the ranking equation as follows:

- A **"premier"** resource is one that has major importance in identifying the base's role within the national Cold War context, or that has major importance with respect to science, theories, or ideals (e.g., the B-1B hangars at Dyess AFB, Texas).
- A resources with a **"high"** rank is one that has importance to the individual base's role although not necessarily at the national level (e.g., the nuclear resistant building on Cannon AFB, New Mexico, that directly reflects the Cold War ideology even though it does not serve a major base function).
- Resources of **"medium"** rank include those that have limited importance in the individual base Cold War context (e.g., a wood truss hangar that may have been built or used during the Cold War period, but does not add to or define a significant event in that period).
- Resources that have importance to the individual base but do not reflect the Cold War or the period are ranked **"low"** (e.g., a World War II hangar).

(5) Percentage of historic fabric is the fifth topic. This criteria is a qualitative estimation as to how much of the historic architectural or original material or design remains intact. For buildings, this will aid in determining the architectural integrity and whether the building still conveys its meaning using the NRHP integrity categories (design, location, workmanship, setting, association, feeling, and materials). A property must retain a minimum of two of these categories to have integrity, with the actual ranking a subjective decision based on those parameters.

Rankings are prioritized as follows, from highest to lowest:

- **76-100%**
- **51-75%**
- **26-50%**
- **00-25%**

(6) The sixth topic involves the severity of existing threats to the resource. Resources with severe threats will receive the highest score, since they are higher in priority for preservation than are resources with low threats. This topic is intended to reflect the best description of threats, with rankings as follows from highest to lowest:

- **Severe** threats are those that pose an immediate problem for the resource (e.g., an archival resource that is under a leaking roof and is infested with silverfish).
- A **High** degree of threats would pose a problem although not as immediate as a severe one.
- A **Moderate** threat is still a concern, yet they do not represent much more than a standard degree of threats.
- **Low** threats essentially represent a lack of identified problems at this time (e.g., an archival resource located in a climate controlled building and that does not receive much use).

The matrix is followed by a memo field where recorders may qualify rankings or add additional information to more closely reflect the resource. Management recommendations are offered for all fully documented resources. They are not necessarily reflections of the results of the ranking matrix but are developed in consideration of the importance of the resource, along with its current physical condition and severity of threats. Recommendations include:

- (1) **NRHP listing** (if the property is considered by the team as important to the base Cold

War context and appears to meet NRHP criteria at that level);

- (2) **Preservation/conservation/repair** (if a property is considered important and requires attention to maintain or repair to avoid loss or further deterioration);
- (3) **Stewardship** (if a property is important, but differs from number 2 in that the property may not require active preservation);
- (4) **Further research** (if a property appears important but there is not enough information to make a determination); and
- (5) **No further work** (if a property is not considered by the team to be important or eligible for the NRHP, and consequently requires no protection or care).

Ultimately, fully inventoried resources will be compared using a national priority matrix, as described further in the prioritization application section.

5.5.1.2 Base Cold War Material Culture Inventory Reports

Following each base visit, a Cold War material culture inventory report will be generated. Reports will follow a standardized outline developed from the ACC project scope of work. Each report will begin with a management summary followed by a list of acronyms and a glossary defining technical terms used in the report text. An introduction will describe the overall ACC Cold War study.

A base description will then be presented, which briefly outlines the current primary base mission. The qualitative base description will include the following:

- Geographic description;
- Current base layout; and
- Base land use types as compared to typical TAC or SAC land use layouts.

The historical overview will then be presented, beginning with a brief base history which identifies significant developments prior to the Cold War and discusses events important to the Cold War and to the development of the base. The history will include the following:

- Base historic and Cold War context (including a World War II subcontext, if applicable) which identifies installation-specific state and local issues, and events, people, and issues that define the base significance; and
- A description of base development during the Cold War period derived from copies of base layouts for each decade spanned by the Cold War.

A methodology section will specify the steps the team took during the base visit and will list contacts and sources consulted. An initial results section will discuss the resources that were recorded as part of the reconnaissance survey.

This section will be followed by a second results section that describes the resources that were more fully documented and evaluated. This discussion will be organized by USAF property type group and subgroup and will briefly describe the history of each fully inventoried resource, its attributes, and why it is important to the base and the Cold War. The primary USAF groups and subgroups were previously identified in Section 5.3.1.3.

The results section for fully documented properties will include two tables. The first will prioritize each evaluated resource by USAF property type group and subgroup. This table will give the base personnel a comprehensive list of the fully recorded resources. This table also will key into the base map in Appendix B, which locates these resources. The second, evaluated property prioritization table will also include each resource that is fully documented. Resources in this prioritization table will be ordered first by priority matrix score. This table is as much a tool for the final, national comparison as it is for individual bases. Still, this organizational step should be taken for each base to

provide standardized type groupings and allow some comparison of matrix scores at the property type level.

A description of resources off-base that may be important to the base Cold War context will be included in an undocumented resource section, as will those important properties on base which do not relate to the Cold War yet display other merits.

Current improvement programs that may threaten resources identified as important to the base are then discussed, with affected resources listed. Preliminary recommendations specific to the resources on base will be presented, with clear distinctions made between cultural resources and historic properties. A table displaying management recommendations for fully evaluated properties will be included, ordered by Legacy/NRHP resource category and within that by MAI resource number. Recommendations regarding NRHP eligibility will be included. Justifications of the recommendations will include the following:

- Relationship to period of Cold War significance;
- Statement of significance;
- Statement of integrity; and
- Other pertinent information.

Other recommendations that may appear include stewardship, the collection of further data to determine NRHP eligibility, and stabilization procedures.

Following the references cited will be several appendices that will be included in the Cold War material culture inventory report for each base. Appendix A will include a comprehensive list of property types identified at the base as part of the reconnaissance inventory. Resources will be listed in table form and will be ordered first by resource category (Legacy/NRHP), then sorted by MAI Resource Number. This table will give the base personnel a comprehensive list of the range of resources they manage. They may use the photo identification column to refer to the

photographs in Appendix C and thereby locate specific resources. This satisfies the part of the scope asking for a useful manipulation of the real property database (from the Air Force), as well as the specification for a listing of literary material. It also meets additional direction from the Corps of Engineers to photograph at least one of each property type on base. In addition, it complies with the Legacy Program suggestions to provide comprehensive, computerized databases for use by future Cold War related studies.

Base layout maps that quantify the results of the inventory by showing resources inventoried both at the reconnaissance and full levels of evaluation will be included in Appendix B. Inventoried buildings and associated building numbers will be shown.

Photograph logs and prints for all black and white photographs taken at the installation will be submitted as supporting documentation in Appendix C.

Individual inventory printouts will be included in Appendix D, to provide more detailed information for each evaluated resource. They will consist of data from both the Property Management screen as well as the appropriate component screen (building/structure, landscape/site, object, or record/document). The combined table/printout satisfies the part of the scope asking for a building inventory with date built, construction materials, periods of significance, level of integrity, and level of historic significance.

In Appendix E, a listing of base and community contacts will be presented which details other sources or individuals who might provide additional information about base history, resources, and the Cold War. A summary of documents and records that relate to the installation and the Cold War and that facilitate a better general understanding of the phenomenon also will be included.

5.5.2 Application

The priority ranking matrix will have a possible high score of 24 and a possible low score of 6. Once all scores have been tabulated for a particular

base, groups can be assigned qualitative values (for instance, those ranking between 21-24 might be very high priority, followed by high priority from 15-20, then moderate 10-14 and finally low priority between 6-9). Groupings should materialize inductively from the data and, therefore, will not be specifically identified at this early stage. The utility of the priority matrix for truly reflecting the worth that the recorders think a resource should receive will be constantly evaluated. The numerical priority ranges will remain fluid, as three or more teams may be visiting bases and ranking resources through the matrix. Because of the multiple crew nature of the study, complete standardization in this situation is never guaranteed.

The inventory output tables, as described in the previous section, will serve as the most critical tools for the individual bases in making management decisions. Patterns may appear in that some property type groups and subgroups may consistently rank higher as a group than do others. This will facilitate decision-making regarding which group of properties may have more overall significance.

Murphey offers suggestions for prioritizing resource groups and property types (personal communication, Joseph S. Murphey, December 4, 1995). He utilizes a slightly different technique for categorizing property types than does the USAF Interim Guidance (USAF 1993). Murphey identifies the following categories and ranks them in order of importance:

1) Research and Development. These properties reveal the very nature of the Cold War that produced the vast military-industrial complex devoted to technological solutions to an ideological confrontation. These properties directly lead to breakthrough developments resulting in technological hardware that could affect the strategic balance of power.

2) C³I Complexes and Systems. Maintaining command, control, communications, and intelligence (C³I) was the key to survivability before, during, and

after a nuclear first strike. These properties thereby reveal the extent of the mistrust and suspicion of Soviet intentions.

3) Strategic Weapon Systems and Support.

Planned and deployed weapons systems and their direct support structures specifically designed to combat Soviet forces were the bargaining chips of arms control negotiations and formed the basis for the balance of power.

4) Strategic Materiel Production Facilities.

The vast infrastructure of industrial facilities was used to produce the high-technology hardware which gave credence to U.S. Cold War resolve.

5) Operational Support Facilities. Depots, storage warehouses, maintenance docks and hangars, etc., provided operational mission support and movement of men and materiel.

6) Training Facilities. These properties were used to train personnel for Cold War missions.

7) Social Support Facilities. Dorms, theaters, chapels, exchanges, etc., provided necessary support services for personnel.

His rationale is that the first three property types are most likely to exhibit exceptional significance due to their direct influence in Cold War policy making, whereas the remaining four are less likely to be directly involved. However, any property of any type can unexpectedly illustrate the symbolism of the ideological and economic battle of the superpowers in an exceptionally significant manner. The stained glass windows at the SAC Chapel at Offutt AFB, Nebraska, are a prime example of exceptional significance. Images in the stained glass include the famous red phone, jet aircraft, a mushroom cloud, and various other symbols pertaining to the Cold War. The implicit message of the windows is to sanctify the development of high technology and the use of it for national defense. Such artwork, although clearly outside of traditional categories, shows in an exceptional manner the attitude of moral superiority present during the Cold War.

5.6 COMPARATIVE ANALYSIS OF ACC INSTALLATIONS

5.6.1 Definitions and Evaluative Tools

The tools for comparing the ACC installations visited for the current study are essentially the same as those described above for facilitating resource prioritization. Essentially, standardized formats for base Cold War material culture inventory reports, which include base overviews, histories, and data output tables, will facilitate installation comparison at all levels. Data from individual base studies master output tables, creating a comprehensive project database. In addition, a national priority matrix will be developed which is similar in structure to the base priority matrix, but evaluates resource Cold War significance at the national rather than the base level.

5.6.2 Applications

First, the base overviews will allow immediate recognition of which bases served the same types of functions during the Cold War and which were in operation during the same periods. Installation comparison will likely proceed along horizontal lines rather than involving very different base types, although interesting patterns may also be derived from that sort of vertical contrast.

Base histories may be the most useful for interbase comparisons in the area of base development. Proto-typical examples of SAC, MAC, and TAC base layouts will be compared with the individual base layouts collected during base visits. Bases that meet the typical layout will be identified and for those that do not, other factors will be examined to explain the anomaly. Nationwide patterns of development may thus be identified.

Following all base visits, a master table will be created that dumps all data into these groups and allows comparisons at a national level. Individual resources will be selected for evaluation using a national matrix. Depending on the consistency of the base priority scores, we will choose either to

run all fully inventoried properties through the national matrix, or concentrate on those with higher priority scores. This procedure will not be finalized until all base visits are complete.

The priority ranking matrix scores will be manipulated in a number of ways to allow interbase comparisons. The prioritization table, generated for each base, appears to be the most applicable to these broad-based comparisons. The database can be manipulated to search for all the very high priority resources and to establish the number of entries of each property type that fall within this priority category. A second manipulation will involve a search for all resources of the same type, for instance radar facilities, with the priority matrix score used to rank individual resources.

A comparison of the relative importance of property types themselves may be accomplished at the interbase level, just as at the intrabase level. Scores for Group 1 resources (operational and support installations), for instance, might be compared with scores for Group 5 resources (intelligence facilities), perhaps to shed light on why the former have to-date been more frequently determined eligible for and listed on the NRHP than have the latter. This comparison may lead to a better understanding of the qualities necessary for significance and exceptional significance, as the various property types are compared at the national level. In addition, patterns may be identified whereby individual properties of a certain type are found to exemplify the characteristics of exceptional significance.

Overall base statements of significance can be readily compared to assist in evaluating bases as potential NRHP districts or candidates for multiple property nominations. In addition, this comparison will serve a quality control function to ensure that bases are being evaluated in a standardized manner.

Comparisons of management recommendations for individual resources on bases will provide an overall view of which property types are recommended for preservation and which are not. Also, the recommendations section will indicate those

resources that are apparently being lost more frequently than others.

5.7 REGISTRATION REQUIREMENTS OF THE NRHP

5.7.1 Definitions and Evaluative Tools

5.7.1.1 Federal Guidelines

The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (NPS 1983) includes standards for preservation planning; the identification, evaluation, and registration of historic properties; the documentation of historical, architectural, engineering, and archeological resources; and the management of historic preservation projects, along with additional technical information. These guidelines will be consulted for determining the registration requirements for property types, and definitions of the amount of historic fabric necessary to convey significance will be developed for each.

5.7.1.2 Existing National Register Listings

In briefly surveying the list of NRHP properties in the USAF Interim Guidance, some of which are discussed in Section 1.2 of this document, it is noted that virtually all of the existing USAF properties listed include resources within property type Groups 1 and 2. That is, they are missile sites, launch complexes, control centers, and bases. The same is true for those resources that have to-date officially been determined eligible for NRHP listing due to their exceptional significance. However, for the third level of significance, those assets that appear to be potentially eligible resources are included from Group 1, as well as from Groups 3, 4, and 5, such as training and educational facilities, testing sites, and various intelligence and alert facilities. Whether the emphasis on Group 1 and 2 resources reflects a recording bias or a true variation in resource significance by type will be explored.

The matrix itself may be useful in identifying inherent biases in the evaluation process. For

instance, resources are ranked according to the context theme with which they are most closely associated (i.e., resources reflecting policy/strategy are scored higher than are those associated with social impacts). This qualitative decision is based on established ideals regarding the importance of these very different, but related issues. The goal of the ACC study, however, is not only to reflect existing ideals of importance but also to identify new ones as they arise. To evaluate the impact of this matrix component on overall scoring, the matrix may be run twice, first with the context theme association ranking and then without. Some resource scores might change, allowing a second assessment of those resources, so that they are not unduly excluded from significance considerations simply because of their theme association.

The Legacy Program notes that many structures and sites already listed in the NRHP may also be important Cold War resources (DoD 1993). Examination of NRHP listings is therefore in order, with historic properties being reevaluated under categories that pertain to the Cold War rather than those under which they currently are listed. Each base should have a list of existing NRHP listings for resources they manage.

A supporting set of data is available in the Cold War-related sites that are in current NPS NHL listings under the NHL theme of "Political and Military Affairs After 1945." Other more specific themes include "Man in Space" and "Man in Space Alternatives" that deal with some aspects of Cold War sites and material culture. These documents have been requested from the appropriate sources.

5.7.2 Application

The ACC Cold War study will inventory and evaluate the material culture important to each of the bases visited. A final study will in turn evaluate each base's inventory to determine which of the important properties, or property types, have national or exceptional significance and may be eligible for the NRHP.

The overall goal of the study is to comply with Section 110 of the NHPA, the provisions of which

have been previously outlined. Specifically, this study contributes to the Air Force's responsibility under Section 110 to inventory and evaluate its historic properties. This study will provide a tool for the ACC to determine which properties to nominate for the NRHP in a prioritized fashion. Although a building may be determined important in an individual base study, it may not have the same importance at the national level. Once the national evaluation is complete, the ACC will have the data with which to further reduce or expand the list of buildings that will be nominated to the NRHP.

6.0 REFERENCES CITED

Advisory Council on Historic Preservation

1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology by the ACHP, Washington, D.C.

1986 *Section 106, Step-by-Step*. Report prepared by the ACHP, Washington, D.C.

Air Force Communications Command, Office of History

1991 *Air Force Communications Command: 1938-1991 An Illustrated History*. Scott Air Force Base, Illinois.

Armstrong, E. L.

1976 *History of Public Works in the United States 1776-1976*. American Public Works Association, Washington, D.C.

Boyer, P.

1985 *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*. Pantheon Books, New York, New York.

Burdick, E., and H. Wheeler

1962 *Fail-Safe*. McGraw-Hill, New York, New York.

Chant, C.

1981 *Military Aircraft of the World*. Presidio Press, Novato, California.

Clancy, T.

1991 *The Sum of All Fears*. Putnam, New York, New York.

Department of Defense

1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Dinerstein, H. S.

1976 *The Making of a Missile Crisis: October 1962*. Johns Hopkins University Press, Baltimore and London.

Divine, R. A.

1985 *Since 1945: Politics and Diplomacy in Recent American History*. Alfred A. Knopf, New York, New York.

Ferrell, J.

1992 *Heartland Engineers, A History*. U.S. Army Corps of Engineers, Kansas City District, Kansas.

Futrell, R. F.

- 1971 *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force 1907-1964*. Air University Press, Alabama.

Gaddis, J. L.

- 1978 *Russia, the Soviet Union, and the United States: An Interpretive History*. Alfred A. Knopf, New York, New York.

- 1982 *Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy*. Oxford University Press, New York, New York.

- 1992 *The United States and the End of the Cold War: Implications, Reconsiderations, Provocations*. Oxford University Press, New York, New York.

Glines, C. V.

- 1963 *The Compact History of the United States Air Force*. Hawthorn Books, New York, New York.

Glynn, P.

- 1984 The Moral Case for the Arms Buildup. In *Nuclear Arms: Ethics, Strategy, Politics*. Edited by R. James Woolsey, pp. 23-52. ICS Press, San Francisco, California.

Goldberg, A., Ed. E. R. May, J. D. Steinbruner, and T. W. Wolfe

- 1981 *History of the Strategic Arms Competition, 1945-1972*. Office of the Secretary of Defense, Historical Office, Washington, D.C.

- 1957 *A History of the United States Air Force, 1907-1957*. D. Van Nostrand Company, Inc., Princeton, New Jersey.

Gorn, M. H.

- 1988 *Harnessing the Genie: Science and Technology Forecasting for the Air Force, 1944-1986*. Government Printing Office, Washington, D.C.

Hammond, P. Y.

- 1969 *The Cold War Years: American Foreign Policy Since 1945*. Harcourt, Brace & World, Inc., New York, New York.

Hayes, T. J., III, Brigadier General

- 1962 ICBM Site Construction. *The Military Engineer* (362):399-403.

Jones, L. S.

- 1975 *U.S. Fighters*. Aero Publishers, Inc., Fallbrook, California.

Kahn, H.

- 1962 *Thinking About the Unthinkable*. Horizon Press, New York, New York.

Kaufman, W. W.

- 1964 *The McNamara Strategy*. Harper & Row, New York, New York.
-

Knaack, M. S.

1988 *Encyclopedia of U.S. Air Force Aircraft and Missile Systems, Vol. II: Post World War II Bombers 1945-1973*. Office of Air Force History, Washington, D.C.

Lewis, K. and H. Higgins

1994 *Cold War Properties Inventory Field Guide*. Prepared by Mariah Associates, Inc., Albuquerque, New Mexico.

Lindsey, H.

1970 *The Late Great Planet Earth*. Zondervan Publishing, New York, New York.

Malamud, B.

1982 *God's Grace*. Farrar Straus Giroux, New York, New York.

Mayers, T.

1983 *Understanding Nuclear Weapons and Arms Control*. National Council for the Social Studies, Washington, D.C.

McDougall, W. A.

1985 *The Heavens and the Earth: A Political History of the Space Age*. Basic Books, Inc., New York, New York.

McNamara, R.

1986 *Blundering into Disaster: Surviving the First Century of the Nuclear Age*. Pantheon Books, New York, New York.

Medvedev, R. A., and Z. A. Medvedev

1976 *Khrushchev: The Years in Power*. Translated by Andrew R. Durkin. Columbia University Press, New York.

Miller, W. M.

1959 *A Canticle for Leibowitz*. Gregg Press, Boston, Massachusetts.

Murphey, J. S.

1993 *The Determination of Exceptional Significance in Cold War Properties (ROUGH DRAFT)*. Prepared by the U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, Texas.

National Park Service

1983 *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*. Notice published in Federal Register, Vol. 48, No. 190, Washington, D.C.

1990 *National Register Bulletin 22: Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. Report prepared by Marcella Sherfy and W. Ray Luce, NPS, Washington D.C.

1991 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (revised)*. Report prepared by the National Register Branch, NPS, Washington, D.C.

National Security Council

- 1950 *A Report to the National Security Council: United States Objectives for National Security, Document No. 68.* Collection No. 273. On file at the National Archives, Washington, D.C.
- 1953 *A Report to the National Security Council: Basic National Security Policy, Document No. 162/2.* Collection No. 273. On file at the National Archives, Washington, D.C.
- 1955 *A Report to the National Security Council: The U.S. Scientific Satellite Program, Document No. 5520.* Collection No. 273. On file at the National Archives, Washington, D.C.

Neufeld, J.

- 1990 *The Development of Ballistic Missiles in the United States Air Force 1945-1960.* Office of Air Force History, Washington, D.C.
- 1993 *Research and Development in the United States Air Force.* Office of Air Force History, Washington, D.C.

Newhouse, J.

- 1989 *War and Peace in the Nuclear Age.* Alfred A. Knopf, New York, New York.

O'Brien, T.

- 1985 *Nuclear Age.* Knopf Publishing, New York, New York.

Office of the Historian, Headquarters, Strategic Air Command

- 1988 *SAC Fighter Planes and Their Operations.* Offutt AFB, Nebraska.
- 1991a *Alert Operations and the Strategic Air Command, 1957-1991.* Offutt AFB, Nebraska.
- 1991b *From Snark to Peacekeeper: A Pictorial History of Strategic Air Command Missiles.* Offutt AFB, Nebraska.

Peale, N. V.

- 1948 *A Guide to Confident Living.* New York, New York.

Peale, N. V. and S. Blanton

- 1950 *Faith is the Answer.* New York, New York.

Polmar, N.

- 1976 *World Combat Aircraft Directory.* Doubleday & Company, Garden City, New York, New York.

Polmar, N. and T. M. Laur, Eds.

- 1990 *Strategic Air Command: People, Aircraft, and Missiles.* Second edition. The Nautical and Aviation Publishing Company of America, Baltimore, Maryland.

Power, General T. S.

- 1958 SAC and the Ballistic Missile. In *The United States Air Force Report on the Ballistic Missile.* Edited by Lt. Col. Kenneth F. Gantz, pp. 170-197. Doubleday and Company, New York, New York.
-

Pringle, P. and W. Arkin

1983 *SIOP The Secret U.S. Plan for Nuclear War*. W. W. Norton and Company, New York, New York.

Reynolds, G. L.

1988 *White Alice Communications System: Historical Overview and Inventory*. United States Army Corps of Engineers, Alaska District, Anchorage, Alaska.

Riesman, D.

1950 *The Lonely Crowd: A Study of the Changing American Character*. Yale University Press, New Haven, Connecticut.

Robinson, A.

1980 *Air Power: The World's Air Forces*. Ziff-Davis Publishing Company, New York, New York.

Rostow, W. W.

1972 *The Diffusion of Power: An Essay in Recent American History*. The Macmillan Company, New York, New York.

Schaffel, K.

1991 *The Emerging Shield: The Air Force and the Evolution of Continental Air Defense 1945-1960*. Office of Air Force History, Washington, D.C.

Schell, J.

1982 *The Fate of the Earth*. Knopf Publishing, New York, New York.

Schlesinger, A. J.

1949 *The Vital Center: The Politics of Freedom*. Houghton Mifflin Co., Boston, Massachusetts.

Semler, E., J. Benjamin, and A. Gross

1987 *The Language of Nuclear War: An Intelligent Citizen's Dictionary*. Harper and Row, New York, New York.

Steinberg, G. M.

1983 *Satellite Reconnaissance: The Role of Informal Bargaining*. Praeger Publishers, New York, New York.

Sunshine, C. and P. Wheaton

1984 *Death of a Revolution: An Analysis of the Grenada Tragedy and the U.S. Invasion*. EPICA, Washington, D.C.

Taylor, J. W. R., and D. Mondey

1972 *Spies in the Skies*. Charles Scribner's Sons, New York, New York.

United States Air Force

1988 *Military Airlift Command...Backbone of Deterrence*. Office of Public Affairs, Headquarters, Military Airlift Command, Scott Air Force Base, Illinois.

1990 *SAC Missile Chronology, 1939-1988*. Office of the Historian, Headquarters, Strategic Air Command, Offutt Air Force Base, Nebraska.

1991a *Alert Operations and the Strategic Air Command, 1957-1991*. Office of the Historian, Headquarters, Strategic Air Command, Offutt Air Force Base, Nebraska.

1991b *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command, 1941-1991*. Office of History, Headquarters, Military Airlift Command, Scott Air Force Base, Illinois.

1993 *Interim Guidance: Treatment of Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

Walker, M.

1994 *The Cold War: A History*. H. Holt, New York, New York.

Watson, B.

1994 We Couldn't Run, So We Hoped We Could Hide. *Smithsonian* 25 (1):47-58.

Weisberger, B.

1984 *Cold War, Cold Peace: The United States and Russia Since 1945*. American Heritage, New York, New York.

Weitze, Karen

1995 *Scott Air Force Base, Belleville, Illinois - Inventory of Cold War Properties (Draft)*. Report submitted by Geomarine, Inc. to U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, Texas.

Wilson, S.

1955 *The Man in the Grey Flannel Suit*. Simon and Schuster, New York, New York.

Wolk, H. S.

1984 *Planning and Organizing the Postwar Air Force, 1943-1947*. Office of Air Force History, Washington, D.C.

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-1: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT BARKSDALE AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
John A. Evaskovich
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. conducted a cultural resource inventory at Barksdale Air Force Base, Louisiana, between November 8 and 11, 1994, to identify extant Cold War resources important to the base, its history, and Cold War mission as part of the Air Combat Command Cold War study for the ongoing Department of Defense Legacy Program. Environmental scientists James Lowe and John Evaskovich comprised the field team and were welcomed to the base by Robert Haddix, Cultural Resource Manager, from the Environmental Office. Following a discussion concerning the objectives and needs for completing the base inventory, Mr. Haddix arranged for an escort to accompany the field team on an orientation tour of the base.

A variety of information repositories were inventoried on base: the Wing History Office, Public Affairs Office, Civil Engineering Office and Drafting Department, Real Estate Office, Environmental Office, and the Eighth Air Force Museum. Informal interviews were conducted with personnel long affiliated with the base to better understand the relationship of specific base properties to the Cold War era. A photographic reconnaissance of the base was conducted to document Cold War resources as well as representative architecture on the base.

Five resources were selected for documentation and evaluation due to their importance within the base Cold War context. Two Bomber Alert Facilities and a Segregated Storage Igloo represent the U.S. Air Force alert posture and deterrence capabilities indicative of the Cold War era. Recommendations for all three of these resources include National Register of Historic Places eligibility, stewardship, and further documentation. Two Documentary Collections illustrate the development of the base during the Cold War, describe historical base events, and provide information on specific base properties. Recommendations for these resources include further documentation, stewardship, and conservation.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AEC	- Atomic Energy Commission
AFB	- Air Force Base
AGE	- Air Ground Equipment
ALCM	- Air Launched Cruise Missile
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
AREFS	- Air Refueling Squadron
BMG	- Bombardment Group
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
BW	- Bomb Wing
DoD	- Department of Defense
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
GHQ	- General Headquarters
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PACCS	- Post Attack Command and Control System
PME	- Precision Measurement Equipment
SAC	- Strategic Air Command
SACTC	- Southeast Air Corps Training Center
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SRAM	- Short Range Attack Missile
START	- Strategic Arms Reduction Talks
SW	- Strategic Wing
TAC	- Tactical Air Command
USAF	- United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, as well as dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

GLOSSARY (Continued)

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapon systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	20
4.0 METHODOLOGY	27
4.1 INVENTORY	27
4.2 EVALUATION OF IMPORTANT RESOURCES	28
4.2.1 Documentation	28
4.2.2 Evaluation of Importance	28
4.2.2.1 Cold War Context	28
4.2.2.2 NRHP Criteria	29
4.2.2.3 Exceptional Importance	30
4.2.3 Evaluation of Integrity	30
4.2.4 Priority Matrix	31
4.2.5 Resource Organization	32
4.3 BASE SPECIFIC METHODS	32
5.0 RECONNAISSANCE INVENTORY RESULTS	34
6.0 EVALUATION RESULTS	35
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	35
6.1.1 Documentation	35
6.1.1.1 Documentary Collection	35
6.1.1.2 Documentary Collection	37
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	38
6.2.1 Alert Facilities	38

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1.1 Bomber Alert Facility	38
6.2.1.2 Bomber Alert Facility	39
6.2.2 Weapons Storage	40
6.2.2.1 Segregated Storage Igloo	40
6.3 MATERIEL DEVELOPMENT FACILITIES	41
6.4 TRAINING FACILITIES	41
6.5 INTELLIGENCE FACILITIES	41
7.0 UNDOCUMENTED RESOURCES	42
8.0 FUTURE THREATS TO RESOURCES	43
9.0 PRELIMINARY RECOMMENDATIONS	44
9.1 NRHP ELIGIBILITY	44
9.1.1 Evaluation and Determination of NRHP Eligibility	44
9.1.2 Implications of NRHP Eligibility	46
9.2 EVALUATED RESOURCE RECOMMENDATIONS	47
9.2.1 Documentary Collection	49
9.2.2 Documentary Collection	49
9.2.3 Bomber Alert Facility	50
9.2.4 Bomber Alert Facility	50
9.2.5 Segregated Storage Igloo	50
10.0 REFERENCES CITED	52
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Barksdale Air Force Base	5
Figure 2.2 Barksdale Air Force Base Layout	7
Figure 2.3 Standard Strategic Air Command Base Layout	9
Figure 2.4 Barksdale Air Force Base Land Use Diagram	11
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	12
Figure 3.1 Barksdale Air Force Base, 1940 - 1950	21
Figure 3.2 Barksdale Air Force Base, 1950 - 1960	22
Figure 3.3 Barksdale Air Force Base, 1960 - 1980	24
Figure 3.4 Barksdale Air Force Base, 1980 - Present	25

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	35
Table 6.2 Evaluated Resource Prioritization by Priority Rank	35
Table 9.1 Recommendations for Evaluated Resources	47

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

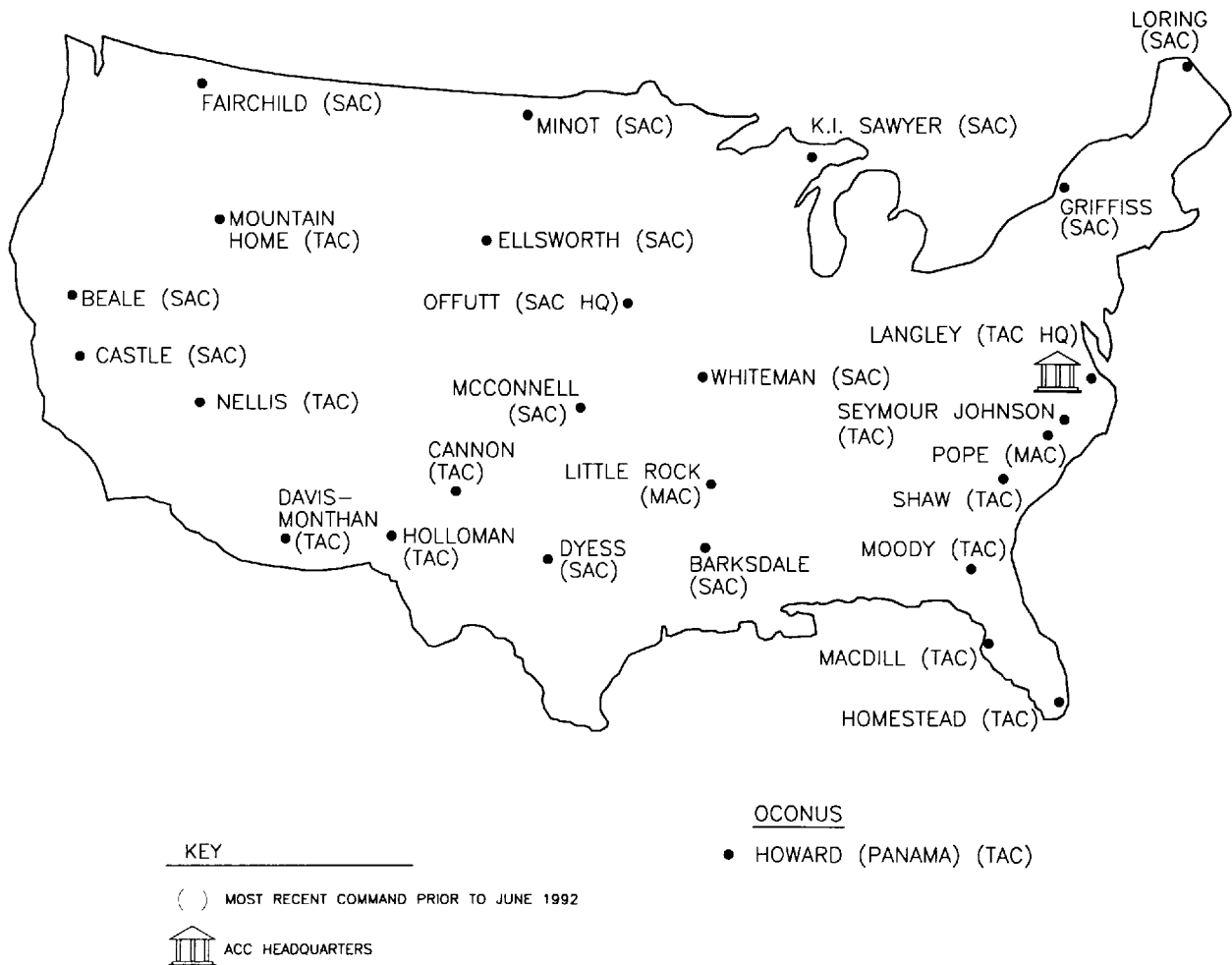
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: COLDWAR\BARKSDALE\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Barksdale Air Force Base (AFB). Barksdale AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The 2nd Bomb Wing (BW) is the host unit at Barksdale AFB. Its mission is to "maintain combat readiness to conduct long-range, heavy bombardment on a global scale" (Environmental Office 1994:8). To maintain this capability, the 2nd BW controls two flying squadrons of B-52H *Stratofortress* aircraft, the 20th and 596th Bomb Squadrons. The 2nd BW also maintained air refueling capability with the KC-135 *Stratotanker* and the KC-10 *Extender* until March 1994, when some of the tankers were transferred to other ACC bases as part of an Air Force realignment, and the remaining tankers were reassigned to the 458th Operations Group at Barksdale AFB under Air Mobility Command. Following the loss of the air refueling mission, the 2nd BW assumed responsibility for training all B-52 aircrews in the Air Force (Environmental Office 1994:8; Public Affairs Office 1994a:2; 1994b:2). Headquarters Eighth Air Force is also located at Barksdale AFB, consisting of active air force, air national guard, and air force reserve units. One of three numbered air forces in ACC, its mission is to function "as a total force war fighting headquarters employing decisive global air power for U.S. Atlantic Command and U.S. Strategic Command" (Public Affairs Office 1994c:1).

2.2 GEOGRAPHIC DESCRIPTION

Barksdale AFB is located in northwest Louisiana adjacent to Bossier City, northeast of the Red River, and 2 mi (3.2 km) northeast of the city of Shreveport (Figure 2.1). The base is centered in an economic area known as the "Ark-La-Tex," named for its proximity to southwest Arkansas and northeast Texas (Department of Defense [DoD] 1971:5; Environmental Office 1994:7; United States Air Force [USAF] 1984:5). The base consists of approximately 22,000 acres (8,903 ha) or 34 mi² (88 km²) of government owned land and easements.

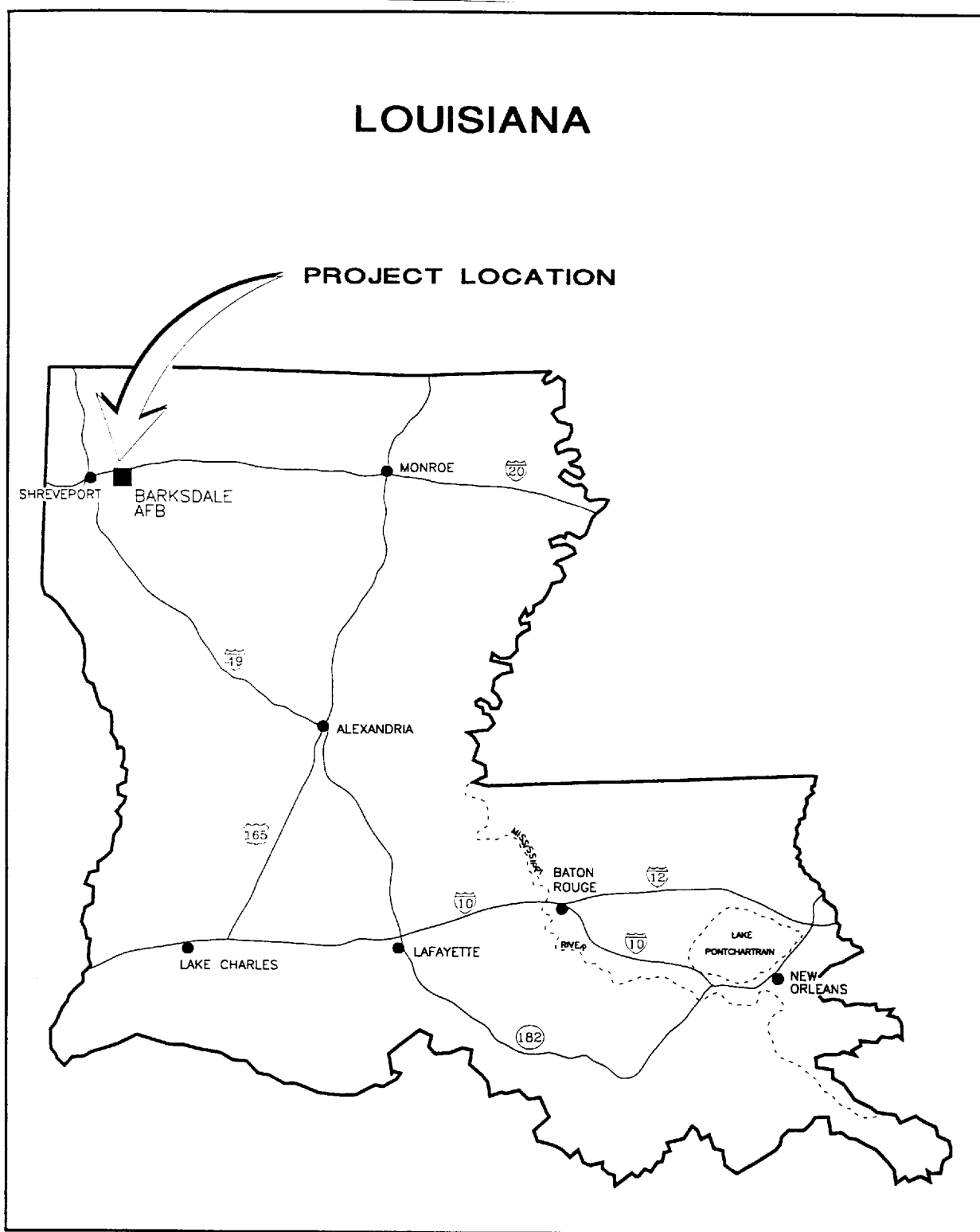


Figure 2.1 Location of Barksdale Air Force Base.

The base is located within the floodplain of the Red River Alluvial Valley which is part of the central Gulf Coastal Plain Physiographic Province. The region is characterized by a gently sloping and lightly dissected plain situated between the Appalachian and Ouachita mountains and the Gulf of Mexico. The topography is virtually level, with elevations on base ranging from 155 to 165 ft (47 to 50 m) above mean sea level (Fenneman 1938:115-117; USAF 1989:1). Prime farmland exists in the region surrounding the base. Traditionally a cotton producing region, primary products also include beef cattle, corn, grain, feed crops, soybeans, and timber harvesting in the woodland areas (Civil Engineering Office 1989:3-15; DoD 1971:5; USAF 1984:5).

2.3 CURRENT BASE LAYOUT

Barksdale AFB is composed of three sections: the main base area, Barksdale East, and the East Reservation (Figure 2.2). The East Reservation, which itself comprises approximately 17,900 acres, is mostly woodland with little development. It contains approximately 1,000 acres of wetlands (Civil Engineering Office 1989:1-11,2-5,3-15; DoD 1971:20-21). A family housing area, originally built for personnel assigned to the classified weapons storage area, is located in the middle of the East Reservation beside a lake developed for recreational use.

The main base and Barksdale East, which total 8 mi² (20 km²), contain the bulk of base development. The runway and associated parking apron are oriented northwest to southeast and act as a barrier between these two sections. Development in the main base is situated along the entire parking apron and extends southwest, forming the shape of a crude triangle with the main gate at its apex. The main road on base, Barksdale Boulevard, runs from this gate to the parking apron, bisecting the main base development into northern and southern portions.

Barksdale East, located on the opposite side of the runway between the runway and the East Reservation, contains development in its northern half. A large weapons storage area and a group of administration and support facilities comprise this development.

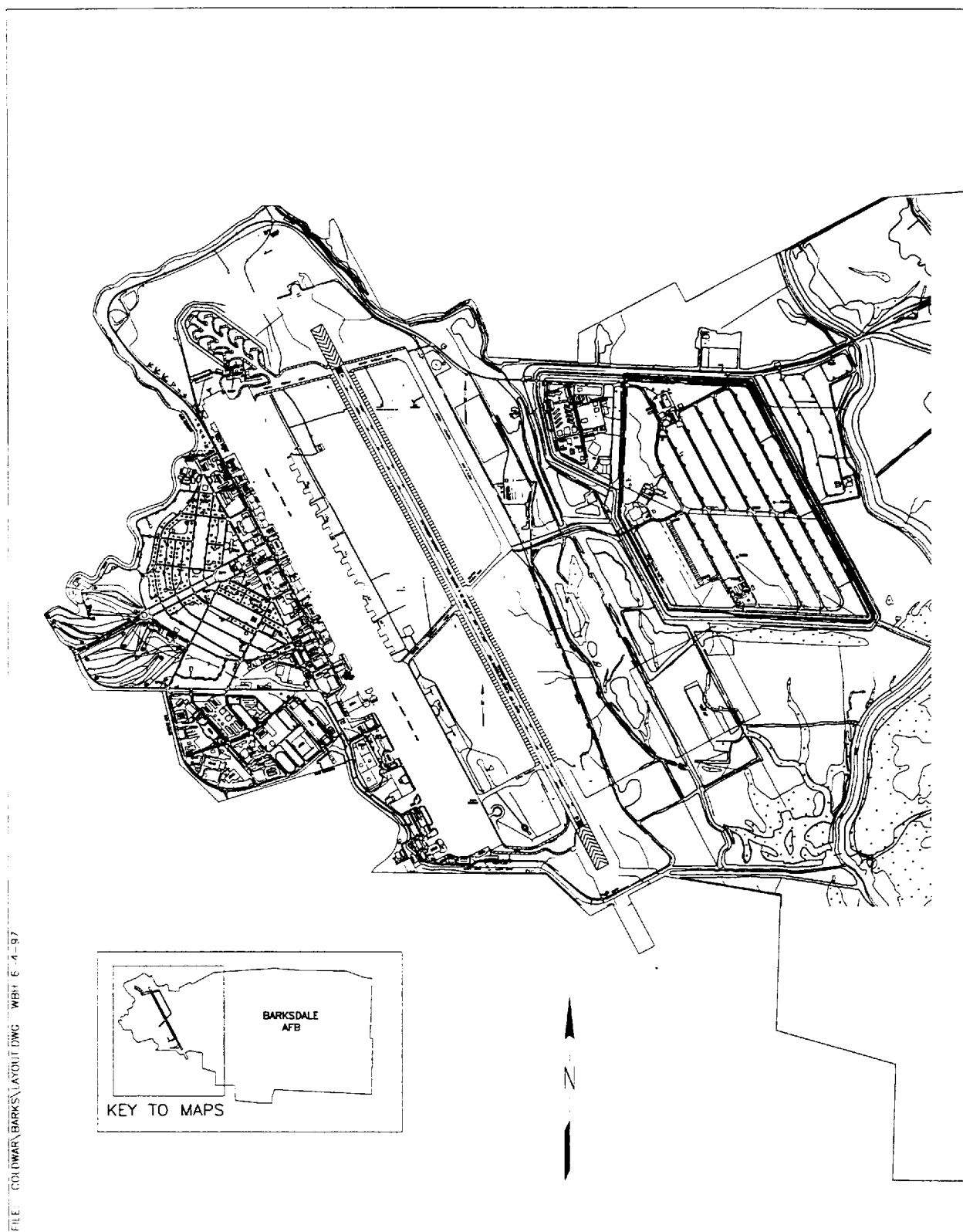


Figure 2.2 Barksdale Air Force Base Layout.

The main base and flight line layout follows that depicted for a standard SAC base (Figure 2.3). Development is located along the flight line on one side, with a bomber alert apron extending off one end of the runway. However, the presence of the rest of the base does not follow the standard layout. The location of developments, namely the housing, recreation, and weapons storage areas, in these areas also does not follow the standard layout.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facility - provides for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but

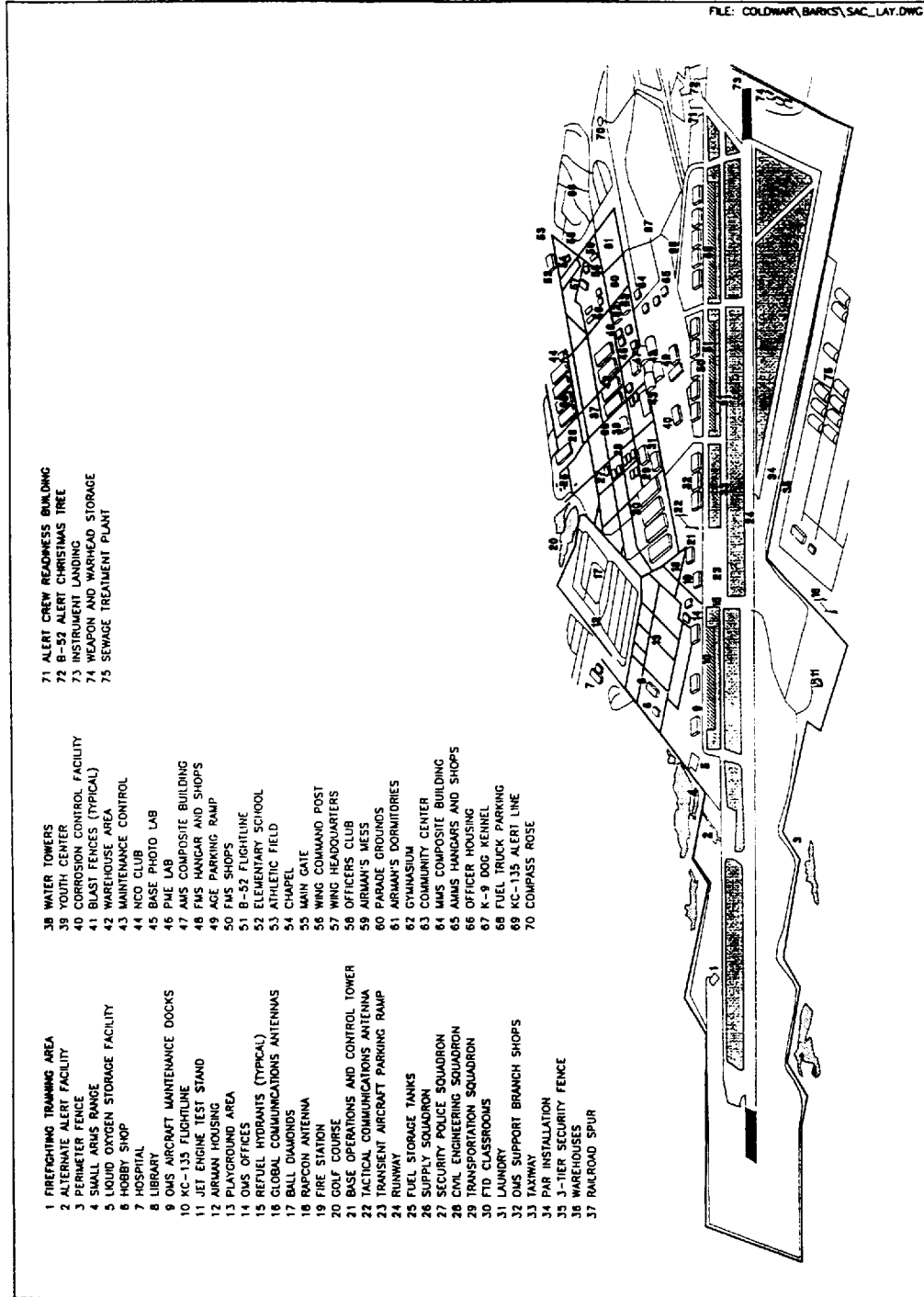


Figure 2.3 Standard Strategic Air Command Base Layout.

provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas. At Barksdale AFB, most of the East Reservation and approximately half of Barksdale East consist of open space. The main base has open space only at each end of the runway.

On the main base, mission areas line the flight line (Figure 2.4). Headquarters are located within the mission area and directly next to it. Next to the mission area are community, unaccompanied housing, and industrial areas. Next is a mix of former housing areas, family housing areas, and unaccompanied housing, with community areas interspersed throughout. Farthest from the flight line and at the apex of the triangle is a large recreational area and the main gate. The alert facility and apron are located at the northern end of the flight line.

On Barksdale East, most of the development is for weapon and warhead storage. A small area of buildings originally built for administration of the weapons storage area is now used for ACC's Non-commissioned Officer (NCO) Academy. This area is now divided into base support facilities, unaccompanied housing, and community areas for the academy.

In comparing Barksdale AFB land use with the standard SAC pattern of land use (Figure 2.5), one can see both similarities and differences. Like the standard, Barksdale AFB's mission area is along the flight line, community and unaccompanied housing are next to the mission area, some of the headquarters buildings are within a community area, family housing and community areas are together farthest from the flight line, and the alert area is found at one end of the runway. Differences in Barksdale AFB's land use include the presence of headquarters buildings in the mission area, the close proximity of the family housing areas to the mission area, and the location of the weapons storage area on the opposite side of the runway along with base support, unaccompanied housing, and community areas.

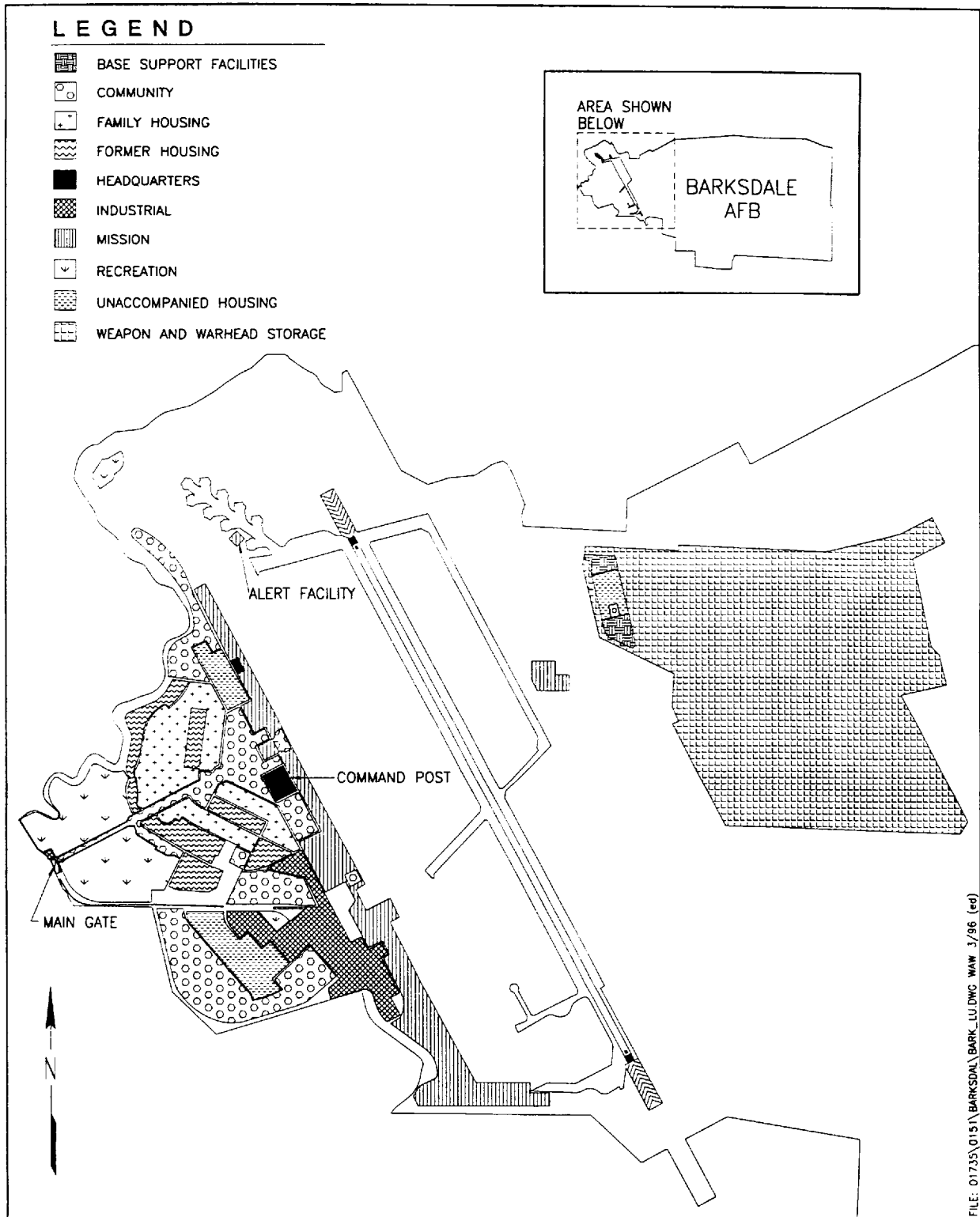


Figure 2.4 Barksdale Air Force Base Land Use Diagram.

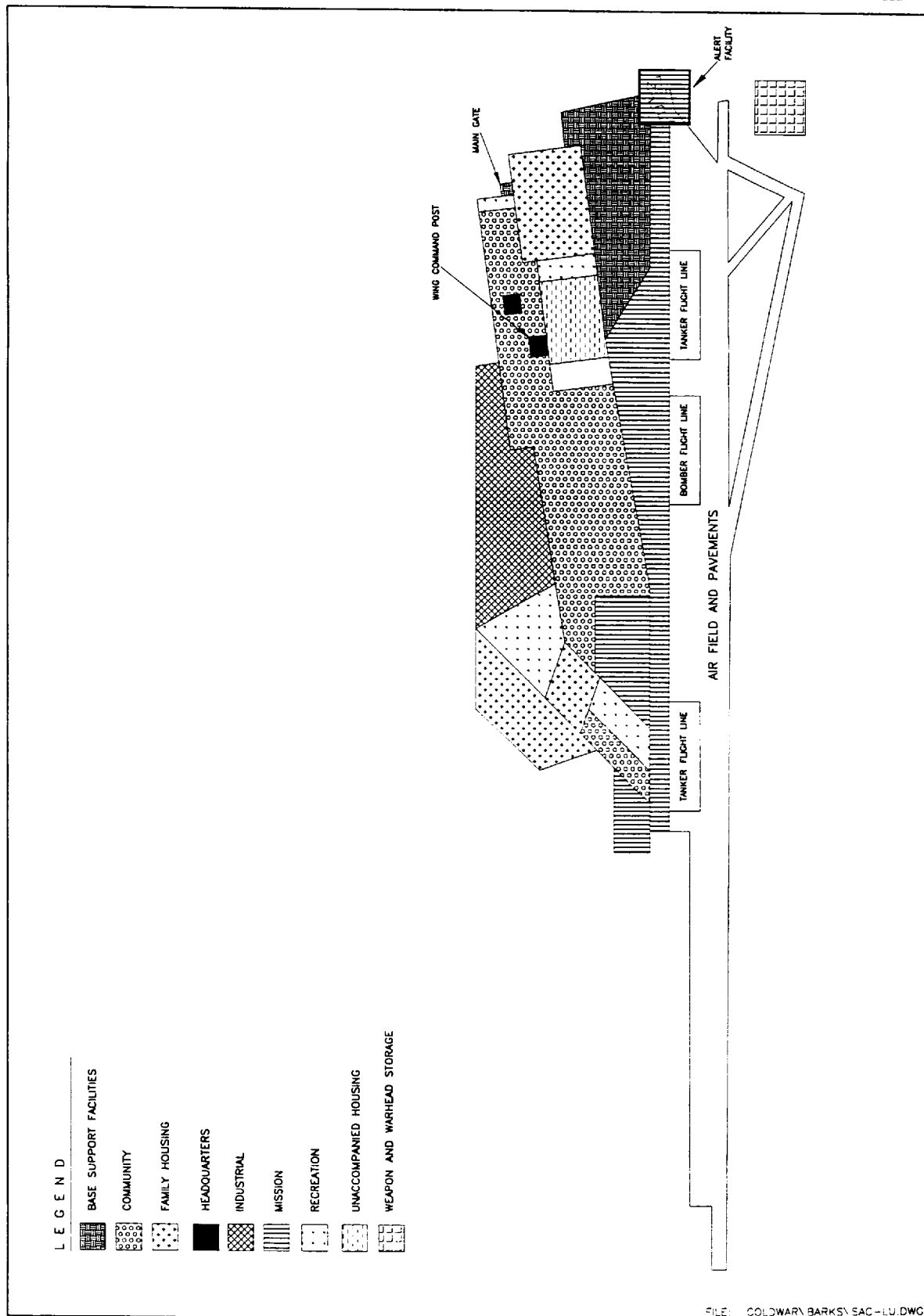


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

The Air Corps Act of 1926 authorized the expansion of U.S. military air power capabilities while at the same time creating the Air Corps from the former Air Service. New airfields were needed to meet the proposed expansion of the 3rd Attack Wing along the southern border of the United States. In addition, 20,000 acres (8,094 ha) of land were required to support a bombing and gunnery range. Following several years of competition between communities to acquire a military base, Shreveport, Louisiana, was chosen as one of the locations for a new airfield (Army Corps of Engineers 1994:8-9; Dewitt 1932:17; Wing History Office 1967:11; 1978:10-12).

A large cotton plantation was chosen as the site for the new airfield, and, on December 4, 1928, Shreveport was chosen as the site for the new home of the 3rd Attack Wing. The city of Shreveport donated the land to the federal government following a successful bond issue to purchase the property. The Secretary of War formally accepted the property in May 1929, and the airfield was officially established on November 18, 1930. Construction of the airfield began in January 1931 when 1,400 acres (567 ha) of cottonland were plowed under and graded. Construction of the airfield continued through 1932 to ready the airfield for flying activities. The 20th Pursuit Group, a unit of the 3rd Attack Wing, arrived in October 1932 as the base's first operational unit under the Fourth Corps (Mueller 1989:15,18; Public Affairs Office 1993:3; Wing History Office 1978:12-14).

Barksdale Field was dedicated on February 2, 1933, as the largest airfield in the world. The airfield was named in honor of Lt. Eugene H. Barksdale, a native of Mississippi. Barksdale enlisted in the Signal Corps in 1917, and, after completion of flight training, he was commissioned and assigned as a pilot to the Royal Air Force in England during World War I. Lt. Barksdale was killed on August 11, 1926, when his attempt to parachute to safety from an

observation plane failed (Mueller 1989:15; Public Affairs Office 1994a:1; Wing History Office 1978:14-19; n.d.:1,4).

Barksdale Field expanded rapidly with the arrival of the 3rd Attack Wing and its 3rd Attack Group in February 1935. In March, General Headquarters (GHQ) Air Force was created and assigned to Barksdale Field, and the 3rd Attack Wing was redesignated the 3rd Wing. The airfield served as a training base for combat groups and air service units between 1935 and the beginning of World War II in 1939 (Army Corps of Engineers 1994:15; Mueller 1989:15; Wing History Office 1978:19; n.d.:5).

While the war in Europe escalated, the 3rd Wing was reassigned to Savannah, Georgia, in October 1940. At the same time, Barksdale Field was assigned a new mission. The Southeast Air Corps Training Center (SACTC), with four specialized flying schools, was established at Barksdale Field to train pilots and bombardment crews for the war effort. The vast East Reservation was utilized for bombing and gunnery practice and chemical warfare training.

The command changed at Barksdale Field from SACTC to Air Force Combat Command in December 1941, and again in February 1942 with the arrival of Third Air Force which remained in control of the base until June 1945. During these command changes, the mission at Barksdale Field remained one of training aircrews for the war effort. However, the role as a flight training base was changed to that of an Operational Training Unit base following the entry of the United States into World War II, with the airfield used in training bombardment units for combat. The mission was altered again in August 1942, when Barksdale Field became a Replacement Training Unit base for B-26 bomber crews, including French B-26 crews. To accommodate increased training activities, expansion at Barksdale Field continued throughout the remainder of World War II (Civil Engineering Office 1989:2-4; Mueller 1989:18; Wing History Office 1978:27-30; n.d.:8-17,25).

Following the end of the war, Barksdale Field, briefly under the command of the Continental Air Forces from June to October 1945, came under the jurisdiction of Army Air Force Training Command in November 1945. This new command brought the Army Air Force Pilot Instructor School to the field, with other specialized school programs to follow. Following the 1947 National Security Act, which created the Air Force as a separate branch of the U.S. military, the base was renamed Barksdale AFB on January 13, 1948 (Lewis et al. 1995). The 47th Bombardment Group (BMG) transferred to Barksdale AFB in November 1948. In 1949, the group converted to the B-45 *Tornado*, making the 47th BMG the first jet bomber unit in the Air Force (Army Corps of Engineers 1994:22; Mueller 1989:18; Wing History Office 1978:33; n.d.:26-29).

The year 1949 was important for Barksdale AFB as reorganization within the Air Force ensured that Barksdale AFB would play a prominent role in the defense posture of the Air Force in the decades to come. The 47th BMG was deactivated at the end of October 1949. On November 1, SAC assumed command of the base and Headquarters Second Air Force was assigned to SAC and to Barksdale AFB that same day. Since its inception in 1946, SAC's mission centered around the development of the airborne capability to sustain massive long-range striking power. The primary mission of Second Air Force was reconnaissance, "the Eyes of the Air Force." Together, SAC and Second Air Force, utilizing aerial refueling and vital intelligence information respectively, fashioned a global deterrent force. The 301st Bombardment Wing (BMW) was transferred to Barksdale AFB on November 8, and its arrival signified that the base would play a significant role in the nation's deterrent capability (Army Corps of Engineers 1994:22; Public Affairs Office 1994a:2; Wing History Office 1978:34-35,40).

Expansion of SAC proceeded apace, with the Korean conflict acting as the catalyst. On April 1, 1950, the existing three numbered air forces were reorganized, and all SAC bases in the central United States came under the operational control of Second Air Force at Barksdale AFB; Second Air Force now controlled bombardment, refueling, fighter, and strategic reconnaissance units. At the same time, the arrival at Barksdale AFB of the 376th BMW in February 1951

contributed significantly to the base's warfare capabilities (Army Corps of Engineers 1994:26-27; Wing History Office 1978:40; n.d.:29).

The early years of the Cold War were marked by nuclear weapons research and development and the early arms race (Lewis et al. 1995). Barksdale AFB joined the nuclear age with the development of Bossier Base in 1951. Created as a separate entity within the Barksdale AFB reservation, and located east of the runway area, Bossier Base was a weapons storage area designed and built to stockpile nuclear weapon components for the Defense Atomic Support Agency under the auspices of the Atomic Energy Commission (AEC). It was one of 13 original areas built to store and maintain the nation's nuclear weapons stockpile in operational readiness. The Air Force re-acquired responsibility for Bossier Base in 1962 and incorporated it into Barksdale AFB in 1970. It is currently known as Barksdale East (Civil Engineering Office 1989:2-4; Sandia National Laboratories 1994:2; Wing History Office 1978:45). Bossier Base was also one of three locations that tested the weapons' reliability in extreme environments under the Natural Environmental Test Program between 1952 and 1960. Considered a tropical environment, weapons systems at Bossier Base were intentionally left outside to determine the effects of exposure to the environment (Sandia National Laboratories 1994:6).

Technology and organization progressed during the 1950s to promote a more effective SAC deterrent at Barksdale AFB. Both the 301st and the 376th BMWs at Barksdale were fully operational with the B-47 *Stratojet* by 1954. They were assisted in their mission of deterrence by the 301st and 376th Air Refueling Squadrons (AREFS). Barksdale AFB received its first B-52 in 1958, replacing the B-47, and the KC-135 replaced the propeller driven KC-97. The introduction of the B-52 and KC-135 was the catalyst for the reorganization of the Second Air Force on March 1, 1958. The 4238th Strategic Wing (SW) became the host unit when it was designated and organized at Barksdale AFB in April 1958, and, in August, the 436th Bombardment Squadron (BMS) was assigned to the base. The 376th and 301st AREFS provided the 4238th SW with two combat-ready tanker squadrons (Wing History Office 1967:13; 1978:40-42; n.d.:30-31,34). The primary mission of the 4238th was to conduct strategic bombardment

operations on a global scale. This included, but was not necessarily limited to, "the maintenance of proficiency of strategic crews and units to successfully deliver atomic and other weapons as directed by prescribed tactics and procedures in the event that Emergency War Orders were placed into effect" (Wing History Office 1959:1-2).

The decade of the 1960s ushered in a more volatile geopolitical climate while research and development technology in the United States continued to make advancements in weapons capability. The alert program at Barksdale AFB was improved with the 1960 completion of a hardened alert facility and alert apron for the bomber crews. In 1961, Second Air Force became an increasingly diversified command when the first squadron of Atlas intercontinental ballistic missiles (ICBM) became operational (Army Corps of Engineers 1994:28-29; Wing History Office 1978:44; n.d.:35). Barksdale AFB also completed facilities in 1961 to accommodate the Hound Dog missile for use by the B-52, and, on November 1, the 4238th Airborne Missile Maintenance Squadron (AMMS) was activated at the base (Wing History Office n.d.:36,38).

Shortly thereafter, in 1961, President Kennedy developed the Post Attack Command Control System (PACCS), nicknamed "Looking Glass," to augment the airborne command system. This expanded system added three auxiliary airborne command posts to the existing system, one of which was made operational at Barksdale AFB in April 1961 utilizing a modified KC-135 (Lewis et al. 1995; SAC 1991:11,15; Wing History Office 1978:44; n.d.:37; Young 1963:6).

This timely addition to the Air Force command and control system occurred just prior to the Cuban Crisis, one of the most potentially volatile Cold War events (Lewis et al. 1995). During the crisis, units at Barksdale AFB were on stand-by alert status, and "from October 24, through November, Barksdale's B-52s and KC-135s were on continual alert" (Army Corps of Engineers 1994:28; Wing History Office 1978:44; n.d.:38). In addition, U-2 reconnaissance flights during the crisis helped to keep the Kennedy administration abreast of the day to day situation. Although operational reconnaissance units were never assigned to Barksdale AFB, U-2 aircraft were housed and maintained at hangars on the flight line at Barksdale AFB when mission

operations were imperative. Such was the case during the Cuban Crisis (Wing History Office 1978:44; personal communication, Hubert Watley, November 10, 1994).

Barksdale AFB experienced a major realignment in the spring of 1963. In keeping with the Air Force tradition to perpetuate those units that had illustrious histories, the 4238th Strategic Wing was inactivated on April 1, 1963, and, in its place, the 2nd BMW was activated as the host unit. It absorbed the equipment and personnel of the 4238th on the same day (Army Corps of Engineers 1994:30; Wing History Office 1978:44; n.d.:38).

The primary mission of the 2nd BMW was to train for and maintain long-range bombardment and air refueling capabilities on a global scale. During 1963, the 2nd BMW participated in SAC's daily airborne alert sorties, nicknamed Chrome Dome. This airborne alert could last up to 45 days before being relieved by other SAC units. Each sortie lasted approximately 24 hours. "Throughout approximately 20 hours of the sortie, the B-52 was expected to be in an effective position to carry out, if directed, a retaliatory strike mission against its assigned Soviet targets" (Young 1963:1-3). The 2nd BMW simultaneously maintained ground alert forces. Between six and eight B-52s and KC-135s were on alert with aircraft in readiness. During this time frame, the B-52s utilized the AGM-28 Hound Dog and Quail missiles among its available weapons systems (Young 1963:6-8; personal communication, Ted Bair, November 10, 1994). Barksdale AFB and the 2nd BMW maintained this mission during the late 1960s and into the early 1970s (Mueller 1989:18).

Although U.S. involvement in the Vietnam War started in 1961, aircraft from Barksdale AFB were not involved in the aerial bombardment campaigns until 1972, when B-52 aircraft and crews from the 2nd BMW joined other Second Air Force wings in the bombing of North Vietnam. SAC involvement in the air war in Southeast Asia ended in 1973, and all of the B-52s from the 2nd BMW at Barksdale AFB were returned by October 1973 (Wing History Office 1978:44-46).

The end of the Vietnam conflict had a direct impact on the base. Barksdale AFB underwent another realignment at the end of 1974. Although still assigned as a SAC base, Second Air Force was inactivated on January 1, 1975, and Headquarters Eighth Air Force moved from Anderson AFB, Guam, to Barksdale AFB. With this change, the 301st and 376th BMWs and the 301st and 376th AREFS were deactivated. The 2nd BMW, however, remained as the base host unit and acquired the personnel and equipment of the deactivated units (Mueller 1989:22-23; Public Affairs Office 1994c:2; Wing History Office 1978:46;).

The weapon systems for the B-52 at Barksdale AFB were updated in the 1970s and again in the 1980s. In 1974, following the construction of storage igloos and missile assembly buildings at the weapons storage area for the storage of the new Short Range Attack Missile (SRAM), Hound Dog missiles were phased out and replaced by this new missile system. Further expansion of the weapon storage area was underway in the spring of 1984 for facilities to accommodate the Air Launched Cruise Missile (ALCM), which is currently maintained in the B-52 arsenal at Barksdale AFB (Abbott and Wallace 1984:101; Mueller 1989:18).

Barksdale AFB continued to maintain its alert bomber and tanker status throughout the Cold War decade of the 1980s. In 1981, the base received its first KC-10 tankers. One year before the fall of the Berlin Wall and the beginning of the end of the Cold War, the mission of the 2nd BMW, the largest bombardment wing in SAC, was to maintain "a state of readiness to carry out strategic bombardment operations on a global scale" (Public Affairs Office 1988:11). The wing now had 65 aircraft, almost twice the number of planes as the average bombardment wing (Public Affairs Office 1994a). In 1991, the wing was redesignated the 2nd Wing to reflect the dual mission of bombardment and refueling.

With the relaxation of U.S. and Soviet relations following the end of the Cold War, two U.S. B-52s and a KC-10 flew a goodwill mission to the Soviet Union to help commemorate the Soviet's 50th anniversary of long-range aviation in March 1992 (Public Affairs Office 1994a:2).

The mission was part of a reciprocal visit. The first Soviet bombers to ever land in the United States then came to Barksdale AFB in May 1992.

In June 1992, SAC was inactivated, and ACC took command of Barksdale AFB and the 2nd Wing. In 1993, the wing was redesignated the 2nd BW, and the KC-135s, KC-10s, and the refueling mission were transferred to Air Mobility Command's 458th Operations Group at Barksdale AFB. This ended 46 years of air refueling operations for the wing, but not for the base. To replace this lost mission, all Air Force training for the B-52 was transferred to the 2nd BW from a closing base in 1994.

3.2 BASE DEVELOPMENT

Buildings and structures extant on Barksdale AFB represent three periods of major expansion: the first occurred during the Great Depression in the early 1930s, the second during World War II, and the third during the mid-1950s.

Building construction of original facilities at Barksdale Field fell into two general classifications: the Air Corp Program and the Army Housing Program, and nearly all of the original construction was permanent. Construction of Barksdale Field began in 1931, and the initial base construction was completed by 1933. The field consisted of the airfield, hangars, paved aprons, headquarters, wing operations, warehouses, officer's and NCO housing, a guard house, fire station, quartermaster utilities warehouse, post exchange, hospital, church, and gymnasium. Associated walks, roads, and utilities were constructed in conjunction with the overall construction. By the end of 1938, additional hangars, officer and NCO housing quarters, and recreational facilities were completed (Army Corps of Engineers 1994:11-12; Dewitt 1932:17,48; Mueller 1989:18).

Increased activities associated with the SACTC during the early years of World War II precipitated the construction of additional temporary billeting facilities, a runway apron, improvements to the air field, additional housing, and buildings for dining, weapons storage,

administration, and training and recreation facilities (Figure 3.1) (Wing History Office 1978:30; Army Corps of Engineers 1994:16-17).

The early years of the Cold War witnessed the 1951 construction of Bossier Base to store part of the nation's stockpile of nuclear weapons components (Figure 3.2). Due to the increased activities on the main base with the arrival of SAC in 1949 and the personnel assigned to Bossier Base, a major dormitory project was completed on the main base in 1951 and 1953. In addition, Wherry Housing units were built in 1952 in the vacant areas of both the officer's and NCO housing areas in the main cantonment area. It was not until 1959-1960 that Capehart housing was built 8 mi (13 km) east of the main base in the East Reservation to house the personnel assigned to Bossier Base (Civil Engineering Office 1989:2-4,2-5; Mueller 1989:18).

The SAC alert program acquired the B-52 in 1955-1956. In preparation for the arrival of the B-52 at Barksdale AFB, a new hangar was constructed in 1955. The B-52 arrived in August 1958, and a new runway was completed the following year. To augment the alert program at Barksdale, a hardened alert facility and alert apron were constructed in 1960. A second base chapel was also completed in 1960 (Mueller 1989:18; Wing History Office 1978:42-44).

Barksdale AFB changed little during the 1960s and 1970s, although there were some ongoing modifications (Figure 3.3). A new base hospital was completed in 1971, a new control tower was commissioned in 1972, and storage igloos and missile assembly buildings were completed during 1973-1974 to accommodate the arrival of the SRAM. A corrosion control facility was built in 1979.

The largest addition to the base during the last decade of the Cold War was the 105 acre (42.5 ha) addition to the weapons storage area to facilitate the acquisition of the ALCM in 1984 (Figure 3.4). One of the facilities was an Integrated Maintenance Facility for joint-use with the existing SRAM system (Mueller 1989:18). The most notable construction project on base in recent years occurred following the end of the Cold War. The removal of the Wherry housing

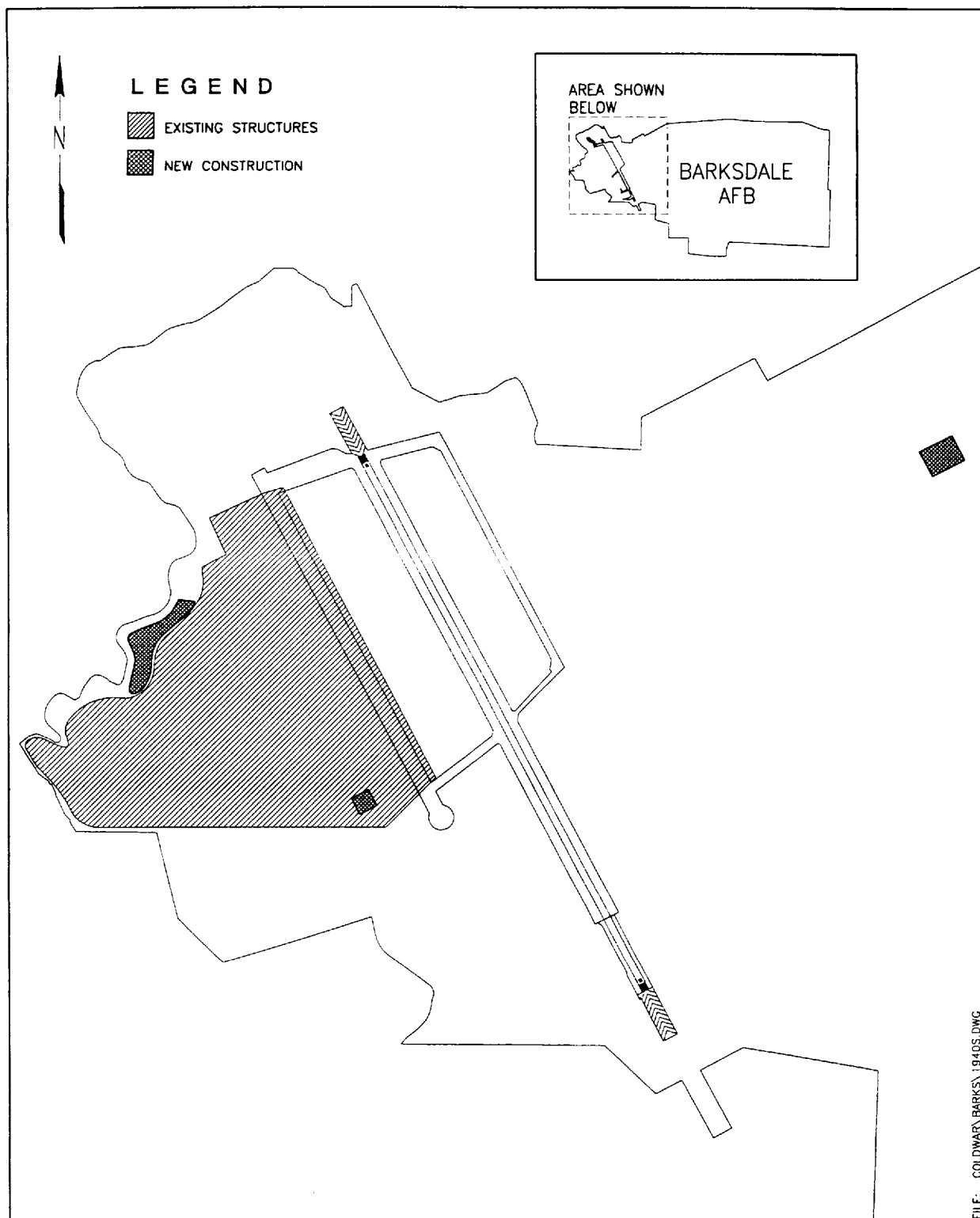


Figure 3.1 Barksdale Air Force Base, 1940 - 1950.

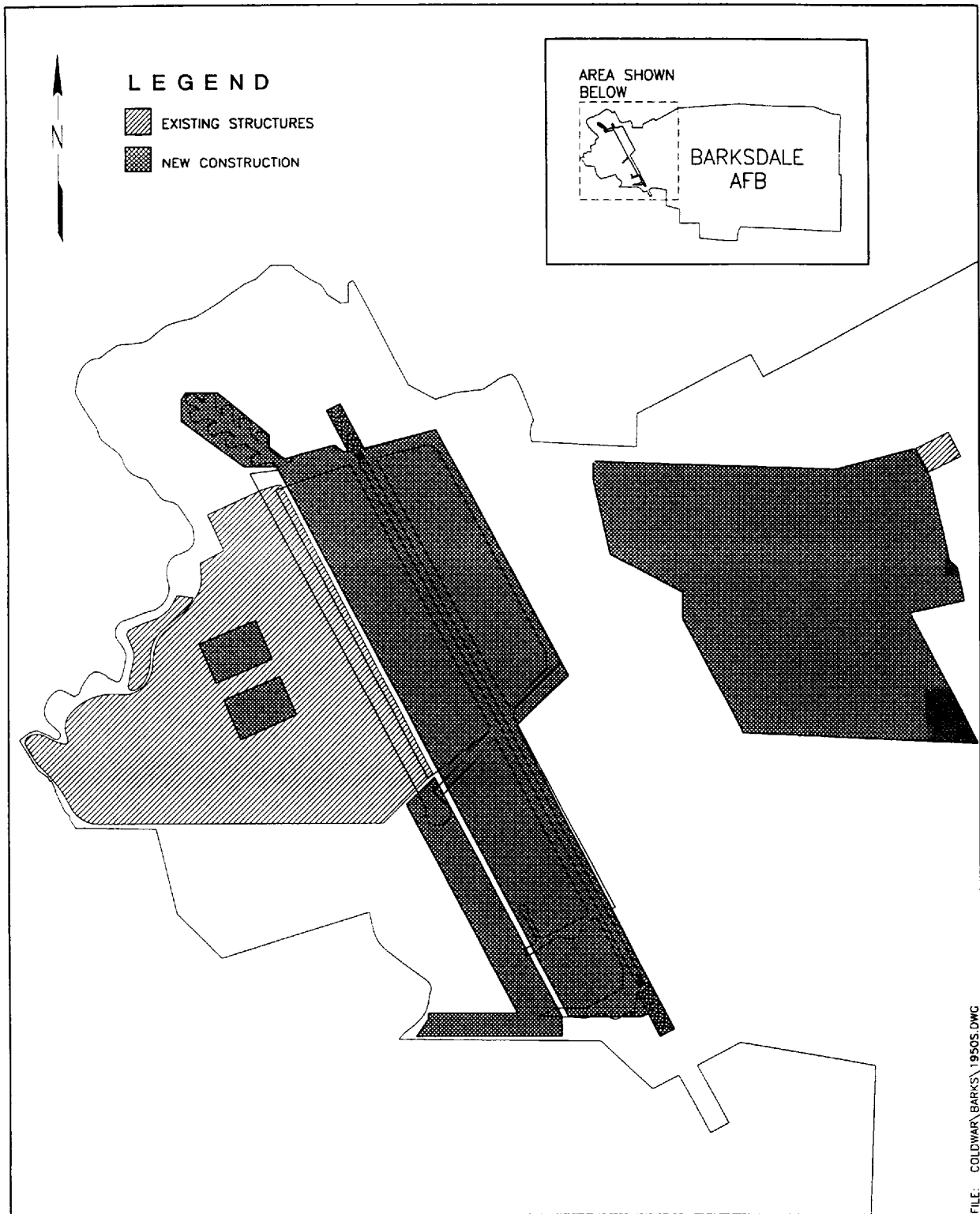


Figure 3.2 Barksdale Air Force Base, 1950 - 1960.

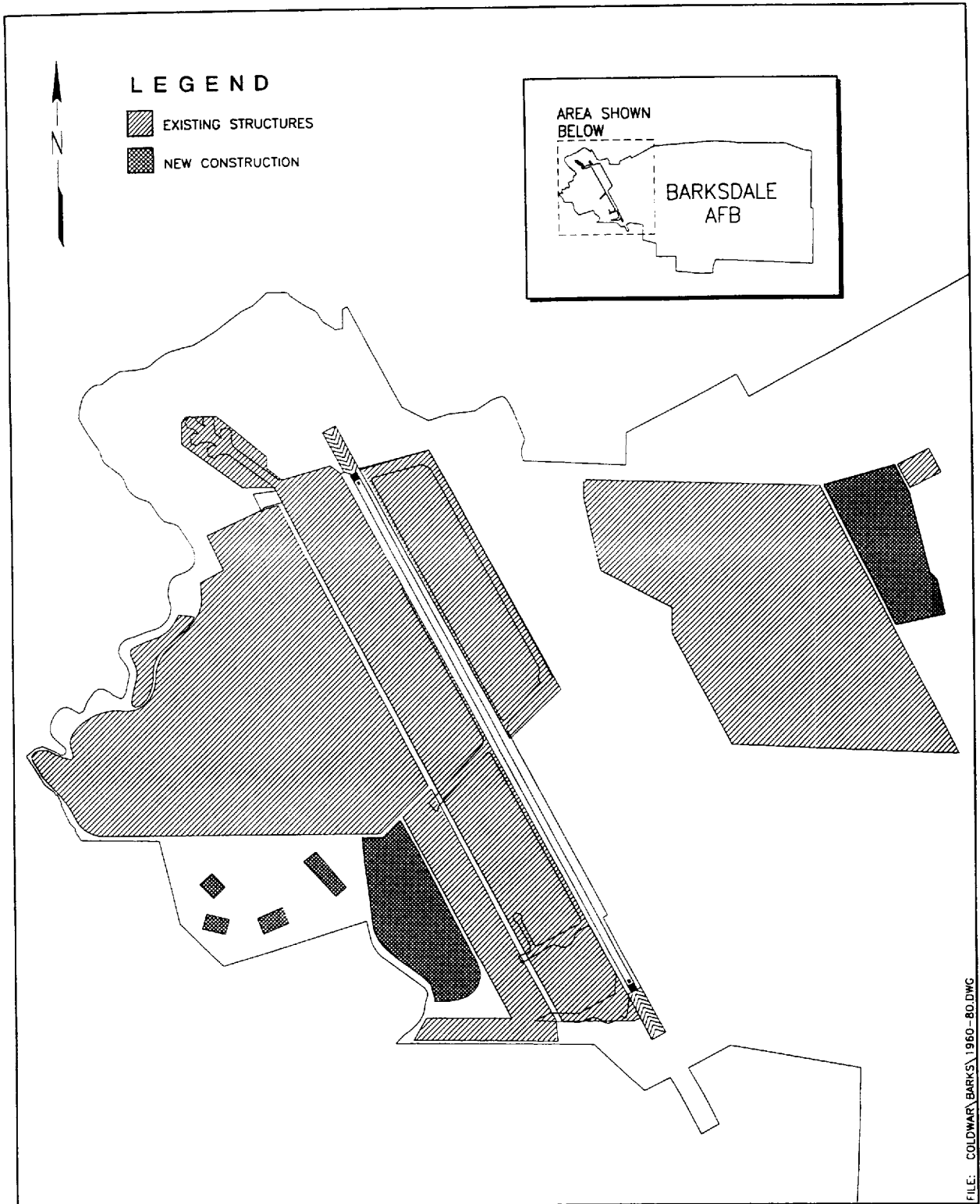


Figure 3.3 Barksdale Air Force Base, 1960 - 1980.

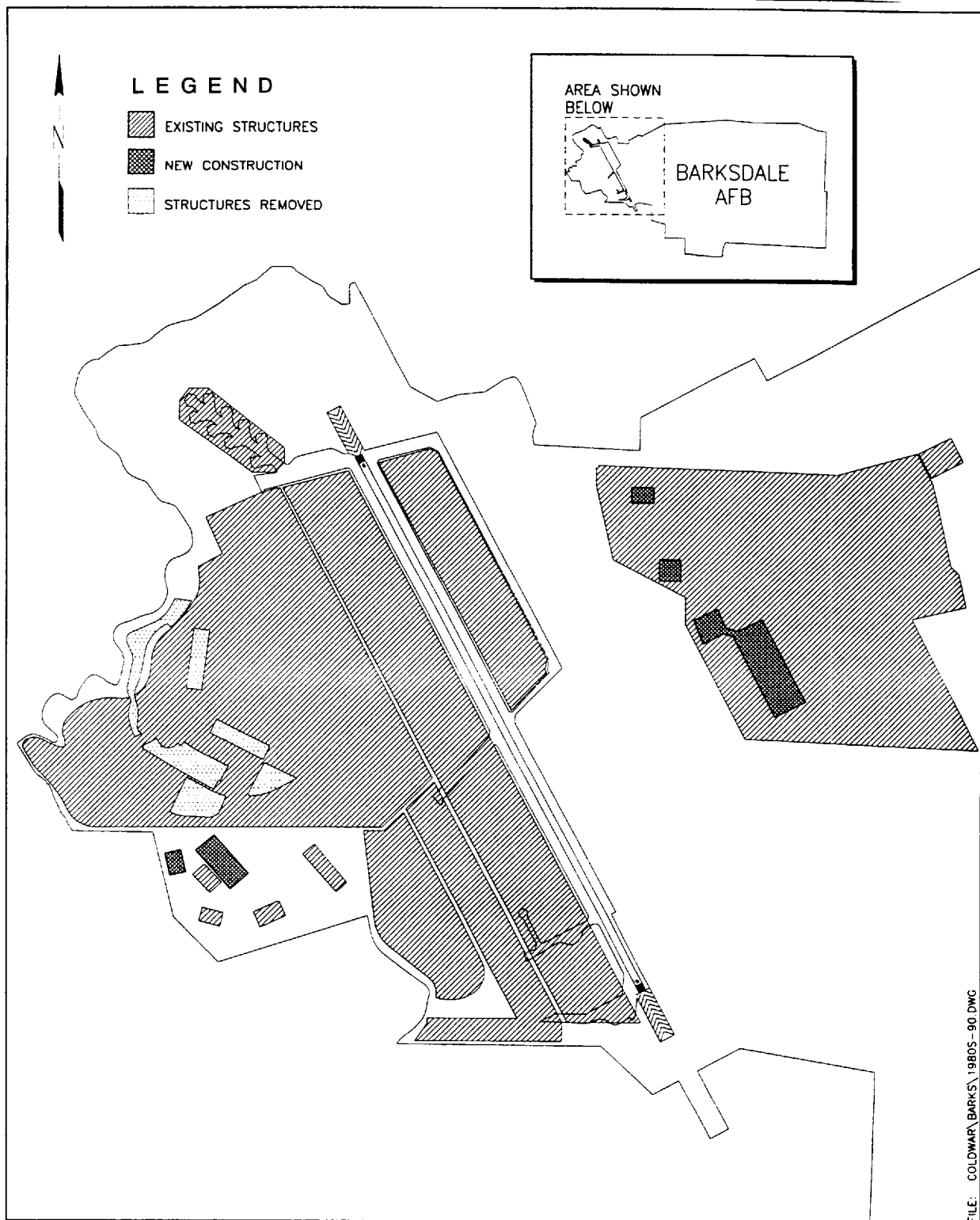


Figure 3.4 Barksdale Air Force Base, 1980 - Present.

units constructed in 1952 began in 1990 and was completed in three phases by 1992. The areas cleared of the Wherry Housing are proposed to be utilized for new parks, street realignments, and new building sites (Civil Engineering Office 1989:3-41).

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Barksdale AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Barksdale AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Barksdale AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Barksdale AFB, the Mariah field team met with Robert Haddix, Cultural Resource Manager, of the Environmental Office. He arranged an orientation tour of the base for the Mariah team. During the tour, the field team became familiar with the base layout and identified certain buildings for evaluation and documentation. This objective completed, the team began their information search on base.

The Wing History Office supplied wing histories that augmented base historical information provided by the Public Affairs Office. These histories were examined to determine the various missions at Barksdale AFB and to link the base to significant events that occurred during the Cold War era. The Wing History Office also had in its possession a bound base newspaper collection dating from 1945 to the present and a photograph collection. Architectural drawing files were inventoried in the Drafting Department of the Civil Engineering Office. Drafting also provided base layout maps on computer discs, current hard copies of base layout maps, and decade maps useful for depicting base development over the Cold War years. Property Cards

from the Real Estate Office established information pertinent to the resources chosen to be documented and evaluated for their Cold War significance.

The Civil Engineering and Environmental Offices provided the field team with various installation reports, comprehensive base plans, and historic preservation forms, etc., which were valuable from a historical perspective. The team also visited the Eighth Air Force Museum at Barksdale AFB to determine if there were any significant Cold War artifacts and collections and to better understand the history of the base.

A photographic reconnaissance was conducted to document important Cold War resources and representative architecture on base. Several informal interviews were conducted with personnel long affiliated with the base to better understand the relationship of specific base resources to the Cold War era. Finally, resources were selected for documentation and evaluation based on their Cold War importance. These resources were more fully documented using a lap-top computer database to store information about the resources.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Barksdale AFB, 117 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Five resources were evaluated at Barksdale AFB, three of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 26117, Located in Real Property No. 3433)

This collection, located in the Drafting Department of Civil Engineering, consists of architectural drawings and aerial photographs housed in 17 flat file cabinets. There is no index to the files; however, a cursory inventory by the field team revealed their contents. The drawings represent most buildings extant on base as well as utilities, landscapes, runways, topography, and base master plans. The drawings include mylar, linen, sepia, vellum, bond, onionskin, and blue line reproductions. Drawings relating to some of the weapons storage facilities are extant, as well as historic World War II drawings dating to the early 1940s. There are no original drawings for the buildings that are part of the NRHP district, only mylar copies. Drawings relating to Bossier Base are limited; these drawings were classified at one time and many drawings relating to Bossier Base were selectively destroyed. Also in the files are approximately 100 base aerial

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	26117	None	RecDoc/Obj	16
Documentation	Documentary Collection	26118	None	RecDoc/Obj	17
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	26001	6067	Real/Bldg	20
Alert Facilities	Bomber Alert Facility	26002	6225	Real/Bldg	18
Storage	Segregated Storage Igloo	26005	7378	Real/Bldg	20

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	26001	6067	Bomber Alert Facility
20	26005	7378	Segregated Storage Igloo
18	26002	6225	Bomber Alert Facility
17	26118	None	Documentary Collection
16	26117	None	Documentary Collection

photographs dating from the 1930s to the present. Many of the photographs in this collection are undated.

The collection as a whole is in good condition. However, it is stored in a relatively unsecured area and is utilized on a continuous basis by base engineers. In addition, many drawings that date to the early 1940s and World War II are in fragile condition.

6.1.1.2 Documentary Collection (Resource No. 26118, Located in Real Property No. 5541)

This collection of wing histories, photographs, and base newspapers is located in the Wing History Office at Wing Headquarters. The wing histories document the 2nd BMW from 1948 to 1993. Because these histories deal with the 2nd BMW at Barksdale AFB since 1963, these volumes could provide valuable insight into the activities conducted at the base in general and specific facilities in particular during the last two temporal phases of the Cold War era. In addition to the wing histories, there is a folder of approximately 150 historic photographs and negatives. Topics in the photographs consist mostly of base construction activities and the disposal of temporary buildings, thus some of the buildings in the photographs are no longer extant. These photographs document the construction techniques used throughout the years of base development and illustrate changes in the base during the Cold War era. The base newspaper collection is complete from 1948 to the present, spanning all four temporal periods of the Cold War era, and could provide additional insight into personnel and activities at Barksdale AFB. The newspapers are bound into individual volumes. Those newspapers spanning 1978 to the present are stored in the Public Affairs Office.

The collection is stored in a secure area within the Wing History Office and is generally in good condition. Copies of the wing histories are also on file at the Air Force Historical Research Center at Maxwell AFB, Alabama.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 26001, Real Property No. 6067)

The Bomber Alert Facility is a permanent, 18,083 ft² facility constructed in 1960 primarily of reinforced concrete. Located at the northern end of the flight line and immediately southeast of the alert apron, it is a two story building and is characterized most by the ramped entrances found on all four sides of its exterior and a sloped earthen berm which extends up the four sides of the building and covers the first story. It was designed to house crews standing alert duty and to facilitate rapid egress from the building to B-52 aircraft parked on the adjacent alert apron during a national emergency situation or operational readiness inspection. This facility was the original crew readiness building constructed for SAC bomber alert crews stationed at Barksdale AFB. In 1968, a concern was raised that the alert apron's launch ramp, which joins the apron to the main runway, could be easily destroyed, thus disabling the aircraft still on the apron. A new facility was built along the main flight line in response to this concern, and was used for alert crews from 1968 to the mid-1980s. At this time, the reduced security of the new facility and its aircraft was determined to be a greater threat, and alert crews moved back to this original Bomber Alert Facility. In 1991, when all air crews were taken off of alert status, the facility was no longer in use. However, the National Airborne Operations Command, formerly the National Emergency Airborne Command Post, utilizes the facility on a periodic basis, and it is also used as visiting officer's quarters.

This facility maintains its exterior architectural integrity. Minimal interior modifications have been made due to moisture damage. The associated facilities (security tower, fence, check house, and alert apron) are also intact. Thus the integrity of this facility is determined to be intact.

The Bomber Alert Facility is exceptionally important to Barksdale AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of the defense triad and was relied upon as the United States' primary manned nuclear bomber force for over 30 years. This facility was used for this purpose during Phases II through IV, and meets NRHP criteria (a) and (c).

6.2.1.2 Bomber Alert Facility (Resource No. 26002, Real Property No. 6225)

This Bomber Alert Facility is a permanent, 22,913 ft² facility built in 1968. Its primary construction materials are not known because the property card does not furnish the information.

Due to the fact that it was constructed to replace the other alert facility, the foundation and walls are likely constructed of reinforced concrete. Located at the northern end of the main flight line, this alert facility is not typical. It is a one story building, has no earthen berm, and has no rapid egress tunnels or ramps. This became the Bomber Alert Facility when the original alert facility was determined to be vulnerable to attack. However, in the mid-1980s, this facility was determined to be a bigger risk as the crews and B-52 aircraft were located in an unsecured area, and the alert functions reverted back to the original facility. This facility is currently used for Squadron Operations.

The exterior of this facility maintains intact integrity. Access to the interior of the building was not secured by the field team; however, due to the use of this building for offices, it is likely that only minor renovations have occurred. Thus interior integrity is also determined to be intact.

The Bomber Alert Facility is exceptionally important to Barksdale AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated to

meet the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of the defense triad and was relied upon as the United States' primary manned nuclear bomber force for over 30 years. This facility was used for this purpose during Phases III and IV, and meets NRHP criterion (a).

6.2.2 Weapons Storage

6.2.2.1 Segregated Storage Igloo (Resource No. 26005, Real Property No. 7378)

This storage igloo is a permanent, 2,352 ft² building constructed in 1951 entirely of reinforced concrete, and is approximately three stories in height. Located east of the main base within the confines of the Barksdale East (old Bossier Base) weapons storage area, it is one of three extant "A" structures built as weapons storage facilities in the Barksdale East compound. This structure is architecturally significant because of its massive, ten foot thick reinforced concrete walls, the false fenestration on its exterior facade, and the steel, bank vault type doors that seal the four storage rooms within the structure. This structure was utilized between 1951 and 1962 by the Defense Atomic Support Agency under the auspices of the AEC to store nuclear weapons components. The structure has not been used since 1962 and is currently empty.

The integrity of this structure is intact, both on the exterior and interior. There are currently no plans in effect that would endanger this important Cold War resource, and, due to the nature of its construction, the threat to this resource is low. The security facilities associated with this structure, such as the observation tower and the concrete "pillboxes" with gunsights, are also intact.

This structure is exceptionally important for the role it played during the early years of the Cold War and the arms race with the Soviet Union. It was one of only 13 operational storage sites in the nation maintained by the AEC. During its operation, it played a significant part in the waging of the Cold War and represents the significant warfighting capability of the USAF. Its

construction illustrates the importance of security and survivability during the Cold War. The date of construction early in the Cold War, the security facilities associated with the structure, and the architectural style designed to store nuclear weapons components make this structure unique among USAF properties. This structure was used in this capacity during Phases I and II of the Cold War, and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Barksdale AFB.

6.4 TRAINING FACILITIES

None were evaluated at Barksdale AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Barksdale AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Barksdale AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Barksdale AFB. These resources should be investigated further for a more comprehensive analysis of base Cold War context.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Barksdale AFB revealed approximately 75 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the B-52 and the Atlas ICBM. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Barksdale AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

Sandia National Laboratories recently completed field research for an environmental restoration study of the weapons storage area at Barksdale East as part of an Environmental Assessment. The results of the field research are currently pending; however, the recommendations will not effect the Segregated Storage Igloo evaluated by the Mariah field team (personal communication, Hubert Watley, December 8, 1994).

A Barksdale AFB historic district containing 264 buildings was nominated to and accepted by the NRHP in 1992. The majority of these properties are associated with the original base construction period, 1931 to 1935; the other buildings date from 1941. None of the buildings evaluated by the current study are included within this historic district.

A cultural resource survey was conducted by South Carolina Institute of Archaeology at Barksdale AFB a few weeks before the Mariah field team visited the base. Approximately 12 historic sites and four archaeological sites were identified, but none initially appeared to be significant. The draft report for this survey was due January 1, 1995 (personal communication, Robert Haddix, November 8, 1994).

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Barksdale AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Barksdale AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Barksdale AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Barksdale AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
26001	6067	Bomber Alert Facility		*	*	*		NRHP eligible now.
26002	6225	Bomber Alert Facility		*	*	*		NRHP eligible now.
26005	7378	Segregated Storage Igloo		*	*	*		NRHP eligible now.
Record or Document - Object								
26117	None	Documentary Collection		*		*	*	
26118	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 26117, Located in Real Property No. 3433)

This collection of architectural drawings and aerial photographs is in good condition. However, the collection is subject to continual use by the base engineers, and some of the earlier drawings are in fragile condition. It is recommended that this collection be inventoried and copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.2 Documentary Collection (Resource No. 26118, Located in Real Property No. 5541)

This collection of wing histories, photographs, and base newspapers is generally in good condition. Copies of the wing histories are presently on file at the Air Force Historical Research Center in Maxwell AFB, Alabama. It is recommended that the photographs and base newspapers

be inventoried and copied. It is further recommended that the copies go to the base for its use, with the originals going to a permanent curatorial facility for stewardship and conservation. Stewardship is recommended for the wing histories.

9.2.3 Bomber Alert Facility (Resource No. 26001, Real Property No. 6067)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based upon its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its features is intact based upon observation. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain integrity of the building and features and further documentation for nomination of this resource to the NRHP.

9.2.4 Bomber Alert Facility (Resource No. 26002, Real Property No. 6225)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based upon its role in sustaining a survivable force to meet the needs of deterrence. The integrity of the building is determined to be intact based upon partial observation and a lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain integrity of the building, and further documentation for nomination of this resource to the NRHP.

9.2.5 Segregated Storage Igloo (Resource No. 26005, Real Property No. 7378)

This structure is evaluated as exceptionally important within the base and national Cold War contexts during Phases I and II. It meets NRHP criteria (a) and (c) based upon its role in storage

and survivability of the nation's nuclear weapon supply, and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its features is intact based upon observation. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain integrity of the building and its features and further documentation for nomination of this resource to the NRHP.

10.0 REFERENCES CITED

Abbott, D.G. TSgt, and SSgt M.J. Wallace

1984 *History of the 2nd Bombardment Wing, April-June 1984*. On file, Wing History Office, Barksdale Air Force Base, Louisiana.

Advisory Council on Historic Preservation

1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Army Corps of Engineers

1994 *Historic District Overview and Maintenance Plan, Barksdale Air Force Base, Louisiana (Draft)*. On file, Environmental Office, Barksdale Air Force Base, Louisiana. U.S. Army Corps of Engineers, Construction Engineering Research Laboratories.

Civil Engineering Office

1989 *Barksdale Air Force Base Comprehensive Plan: Shreveport-Bossier City, Louisiana*. On file, Civil Engineering Office, Barksdale Air Force Base, Louisiana.

Department of Defense

1971 *Executive Order 11508 Installation Survey Report, Barksdale Air Force Base, Bossier Parish, Louisiana*. Office, Assistant Secretary of Defense for Installations and Logistics. On file, Air Force Historical Research Center, Maxwell Air Force Base, Alabama.

1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Dewitt, J. L. Maj. Gen.

1932 Air Corps Construction. *Air Service News*, vol. 1, no. 1. On file, Wing History Office, Barksdale Air Force Base, Louisiana.

Environmental Office

1994 *Environmental Compliance Assessment and Management Program (ECAMP) Environmental Findings Final Report, Barksdale AFB, Louisiana*. On file, Environmental Office, Barksdale Air Force Base, Louisiana.

Fenneman, N. M.

1938 *Physiography of Eastern United States*. McGraw-Hill Book Company, Inc., New York and London.

Lewis, Karen and Howard C. Higgins

1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. S. Boyer, and J. S. Murphey

1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*. Vol. 1. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.

1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service. Washington, D.C.

Public Affairs Office

1988 *Barksdale Air Force Base*. Base guide and telephone directory. On file, Public Affairs Office, Barksdale Air Force Base, Louisiana.

1993 *Barksdale Air Force Base*. Base guide and telephone directory. On file, Public Affairs Office, Barksdale Air Force Base, Louisiana.

1994a *Barksdale Air Force Base History*. Fact Sheet on file, Public Affairs Office, Barksdale Air Force Base, Louisiana.

1994b *2nd Bomb Wing*. Fact Sheet on file, Public Affairs Office, Barksdale Air Force Base, Louisiana.

1994c *Eighth Air Force*. Fact Sheet on file, Public Affairs Office, Barksdale Air Force Base, Louisiana.

Sandia National Laboratories

1994 *Bossier Base (Barksdale Air Force Base), Louisiana: Former Special Weapon Storage Area, Trip Report, September 22, 1994*. On file, Environmental Office, Barksdale Air Force Base, Louisiana.

Strategic Air Command

- 1991 *Peace . . . is our Profession: Alert Operations and the Strategic Air Command, 1957-1991*. Office of the Historian, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska.

United States Air Force

- 1984 *Installation Survey Report, Barksdale Air Force Base, Bossier City, Louisiana*. On file, Air Force Historical Research Center, Maxwell Air Force Base, Alabama.
- 1989 *A Cultural Resources Survey and Assessment of Proposed Peacekeeper Rail Garrison Facilities, Barksdale Air Force Base, Bossier Parish, Louisiana*. Heartfield, Price, and Greene, Inc.: Monroe, Louisiana. On file, Environmental Office, Barksdale Air Force Base, Louisiana.
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

Wing History Office

- 1959 *History of the 4238th Strategic Wing (Heavy), 1-31 August, 1959*. On file, Wing History Office, Barksdale Air Force Base, Louisiana.
- 1967 *Barksdale Air Force Base*. On file, Wing History Office, Barksdale Air Force Base, Louisiana.
- 1978 *Barksdale AFB, LA.: Forty-fifth Anniversary Review, 1933-1978*. On file, Wing History Office, Barksdale Air Force Base, Louisiana.
- n.d. *Early History of Barksdale Field*. On file, Wing History Office, Barksdale Air Force Base, Louisiana.

Young, J.A. SSgt

- 1963 *History of the 2nd Bombardment Wing (Heavy) and Barksdale Air Force Base, Louisiana, 1-30 November 1963*. On file, Wing History Office, Barksdale Air Force Base, Louisiana.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property -Building				
	26001	6067	Bomber Alert Facility	1960
	26002	6225	Bomber Alert Facility	1968
	26003	7314	Storage, MU-CUB Magazine	1951
	26004	7424	Storage, MU-CUB Magazine	1951
	26005	7378	Segregated Storage Igloo	1951
	26006	6402	Gymnasium/Base Operations	1932
	26007	6850	Small Aircraft Maintenance Dock	1987
	26008	6836	Rocket Checkout and Assembly Storage	1979
	26009	6830	Armament Systems	1983
	26010	6825	Maintenance Dock	1958
	26011	6824	Aircraft Corrosion Control	1959
	26012	6649	Petrol Operations	1955
	26013	6626	Aircraft Corrosion Control	1981
	26014	6604	Large Aircraft Maintenance Dock (Hangar 1)	1955
	26015	6613	Medium Aircraft Maintenance Dock	1958
	26016	6448	Recreation Center (Hoban Hall)	1945
	26017	6458	Control Tower	1971
	26018	6426	Fire Station (Hangar 3)	1932
	26019	6412	Squadron Operations (Group Operations)	1934
	26020	6249	Group Headquarters (2nd Logistics Group)	1934
	26021	6238	Recreation Center	1934
	26022	6226	Intelligence Training	1956
	26023	6214	Large Aircraft Maintenance Dock	1959
	26024	6215	Flight Systems Maintenance	1980
	26025	6056	Master Surveillance and Control	1978
	26026	7740	Storage Igloo	1986
	26027	7766	Storage Igloo	1987
	26028	7427	Weapons and Release Systems Shop	1951
	26029	7437	Systems Management Warehouse Facility	1951
	26030	7435	Base Supplies and Equipment Warehouse	1957
	26031	7369	Bunker	1952
	26032	7332	Storage Igloo (B Plant)	1953
	26033	7312	Surveillance Inspection Shop (A plant)	1951
	26036	6057	Traffic Check House (Alert Facility Gate)	1960
	26037	5048	Traffic Check House (North Gate)	1935
	26038	2945	Officers' Open Mess (Officers' Club)	1934
	26039	5155	Visiting Airman's Quarters (Barksdale Inn)	1934
	26040	5123	Visiting Airman's Quarters (Transient Quarters)	1969
	26041	5541	Wing Headquarters	1933
	26042	6227	Aircraft Support Equipment Storage Facility (2nd MUNS)	1968
	26043	5251	Exchange Service Station	1965

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	26044	5175	Auto Garage	1934
	26045	2830	Family Housing (Officer Housing)	1932
	26046	2844	Family Housing (Officer Housing)	1932
	26047	5345	Base Personnel Office (2nd Support)	1933
	26048	3433	Base Engineering Administration	1933
	26049	5435	Bank	1945
	26050	5454	Squadron Operations	1932
	26052	3435	Group Headquarters	1932
	26053	3416	Base Flag Pole	1932
	26054	5546	8th Air Force Headquarters	1933
	26055	3746	Family Housing (NCO Housing)	1932
	26056	3467	Numbered Air Force Headquarters	1952
	26057	5733	Survey Equipment Shop (Parachute Drying Tower)	1932
	26058	5676	Special Operations	1932
	26059	4161	Base Supply and Equipment Warehouse	1931
	26060	5740	AFOSI Office (Det 2190)	1932
	26061	4186	Vehicle Maintenance Shop (2nd Transportation Squadron)	1941
	26063	5766	Aircraft General Purpose Shop	1934
	26064	5821	PME Lab	1942
	26065	4845	Base Supply and Equipment Warehouse	1953
	26066	4765	Commissary/Store	1978
	26067	4666	Dental Clinic	1976
	26068	4660,4643, 4664	Airman Dorms	1993
	26069	4565	Recreation Center (49th Test Squadron, Community Center)	1954
	26070	4543	Composite Medical/Hospital	1971
	26071	4546, 4548	Clinics	1991,1992
	26072	4265	Sales Store (Exchange)	1972
	26073	4238	Youth Center	1966
	26074	4235	Base Theater	1957
	26075	4244	Library	1964
	26076	4223	Bowling Center	1984
	26077	4221	Chapel Center (Chapel 2)	1960
	26078	1778	Exchange Service Station	1954
	26079	1955	Officer's Open Mess (NCO Club)	1954
	26081	4314	Education Center	1953
	26082	4332	Airman Dorm	1983
	26083	4386	Airman Dorm	1985
	26084	4713	Family Support Center	1968
	26085	4631	Airman Dinning Hall (Red River Dining Facility)	1959
	26086	Unknown	B-52 Simulator Building	1993
	26087	5650	Flight Simulator Training	1983

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	26088	5576	Numbered Air Force Headquarters	1932
	26090	3578	Chapel Center (Chapel 1)	1939
	26093	9327	Miscellaneous Recreation Facility	1959
	26094	8930	Branch Exchange (Shoppette)	1962
	26095	8600	Capehart Family Housing	1960
	26096	8601	Capehart Housing	1960
	26097	8123, 8124, 8125	Stables	Unknown
	26098	8112, 8122	Riding Stables (Former Bossier Base Power)	1961, 1952
	26101	7561	Storage, Spare Inert	1944
	26102	7292	Base Engineering Administration (Red Horse)	1981
	26103	7231	Fire Station (Former Bossier Base)	1955
	26104	7212	NCO Professional Center (Former Bossier Base)	1951
	26105	7242	Major Command Headquarters (Air Command Center Former Bossier Base)	1951
	26106	7232, 7233, 7244, 7245	Visiting Airman's Quarters, NCO Professional Center (Former Bossier Base)	1951
	26107	7236	NCO Professional Center (Former Bossier Base)	1955
	26108	7256	NCO Professional Education Center (Former Bossier Base)	1957
	26109	7227	NCO Professional Center (Former Bossier Base)	1957
	26113	5088	8th Air Force Museum	1955
	26116	6237	Missile Assembly Shop	1934
Real Property - Landscape				
	26099	None	Cullum Park	Unknown
	26100	7674	Family Camp	1971
	26115	None	BAFB Airpark Static Displays	n/a
Real Property - Object				
	26034	None	Alert Apron Sign	n/a
	26035	None	Alert Apron	n/a
	26091	None	Alert Post	Unknown
	26110	None	Static Display (KC-135)	n/a
	26111	None	Static Display (B-52 and Hound Dog Missile)	n/a
	26112	None	Static Display	n/a
	26114	None	Static Display (Mig 21)	n/a
Real Property - Structure				
	26051	3454	Fire Protection Water Storage	1933
	26062	5921	Jet Fuel Storage	1952
	26080	1912	NCO Swimming Pool	1938
	26092	None	Naval Mobil Construction Battalion Installation	Unknown

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Record or Document - Object				
	26117	None	Documentary Collection	Various
	26118	None	Documentary Collection	Various

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

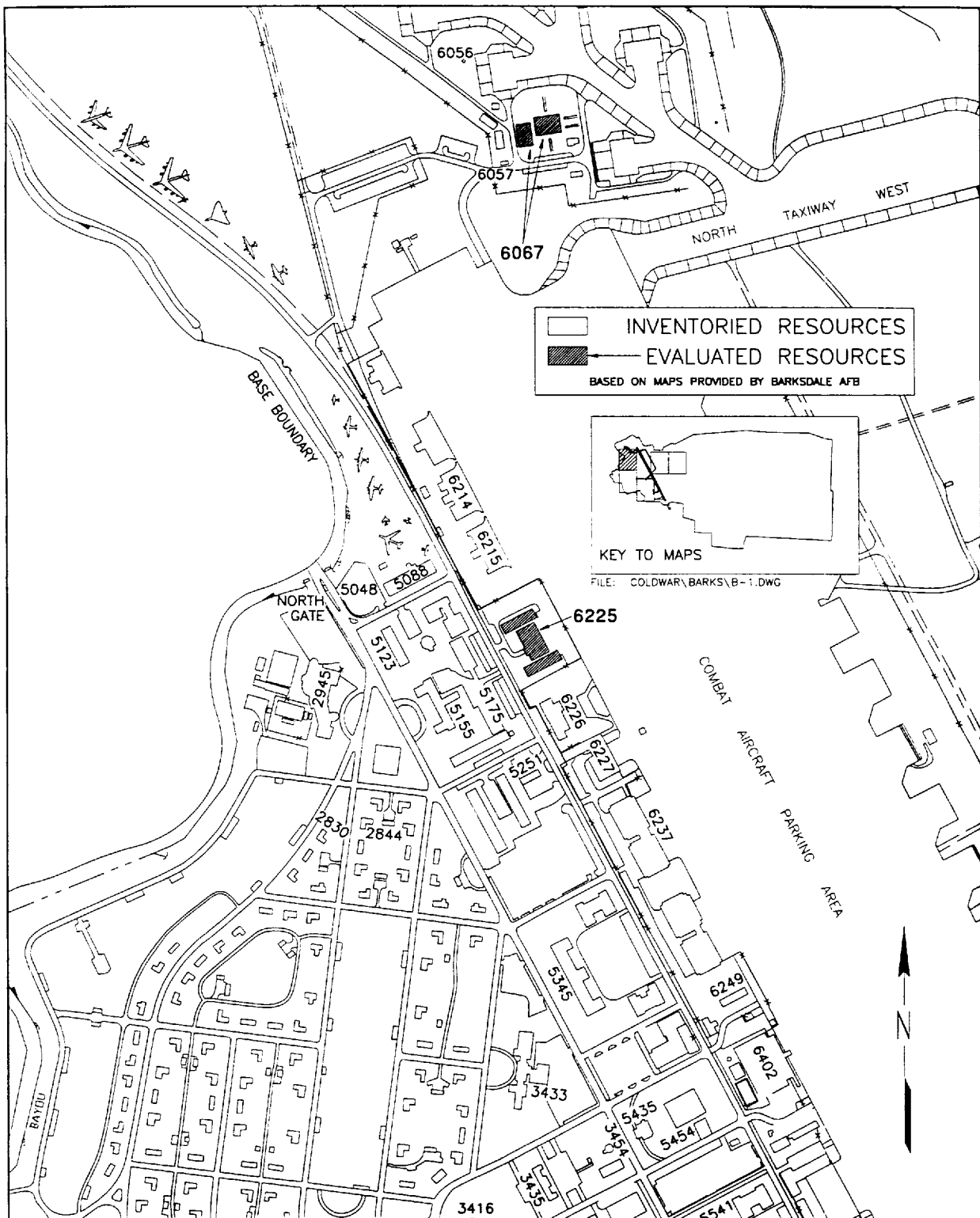


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 5).

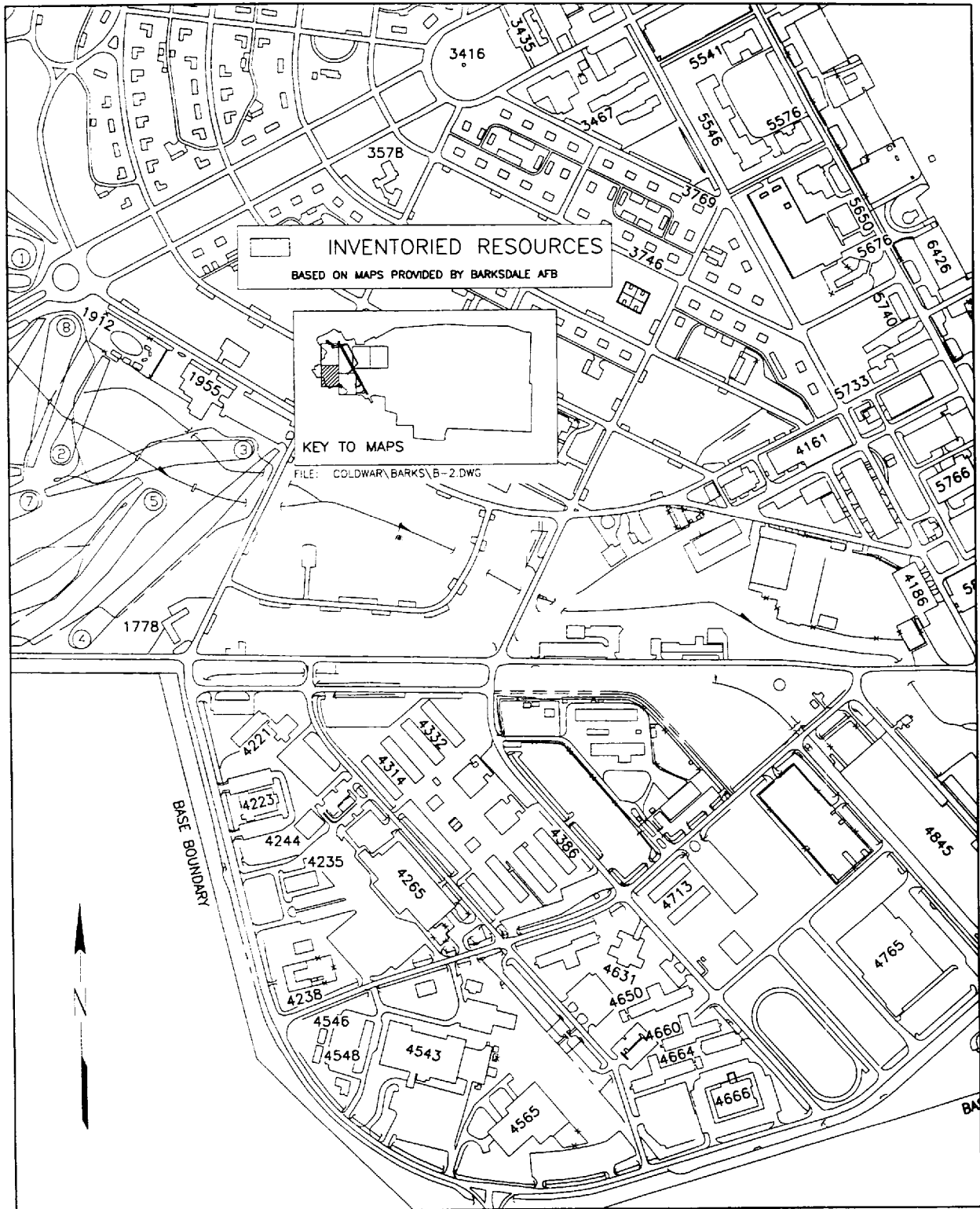


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 5).

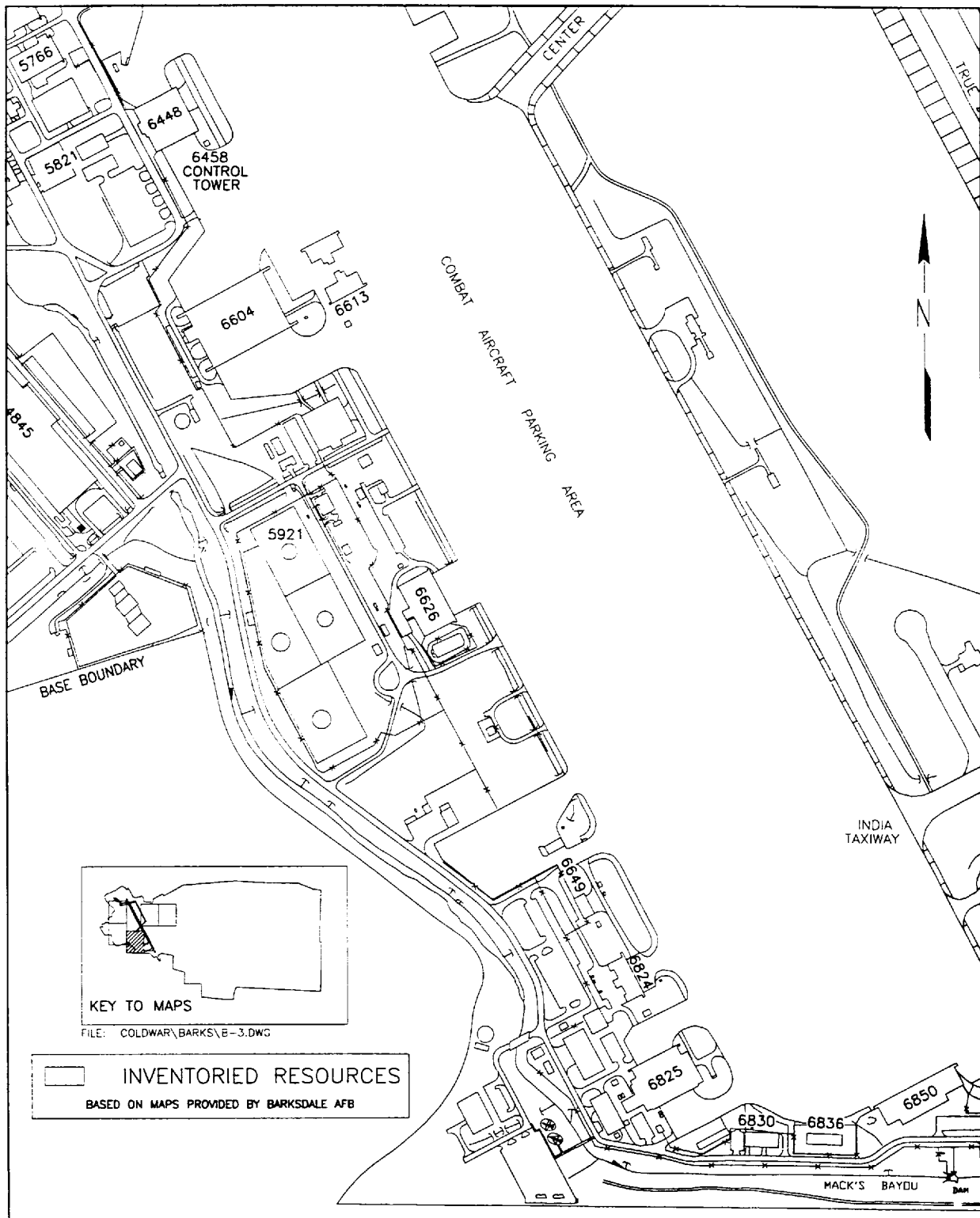


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 5).

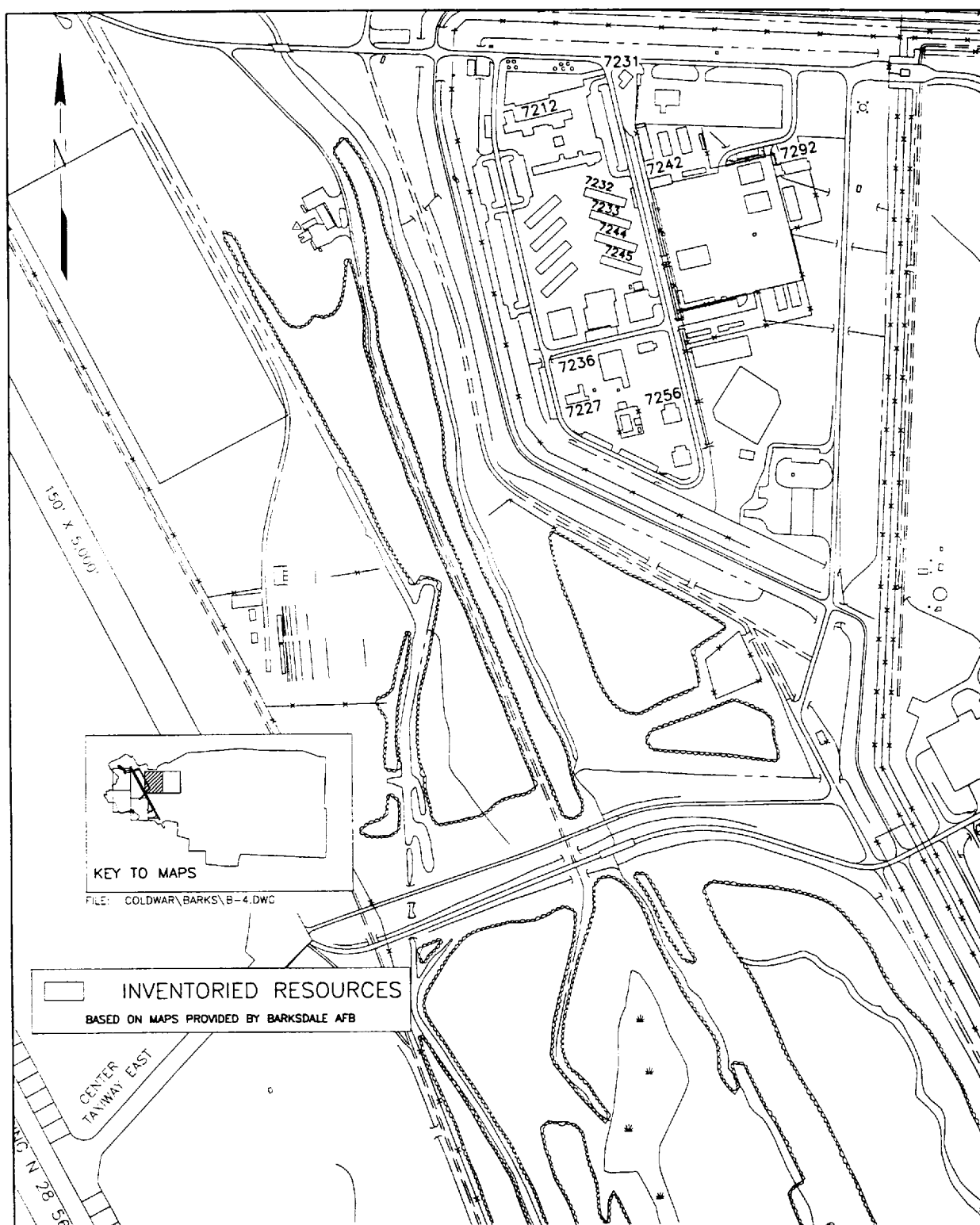


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 5).

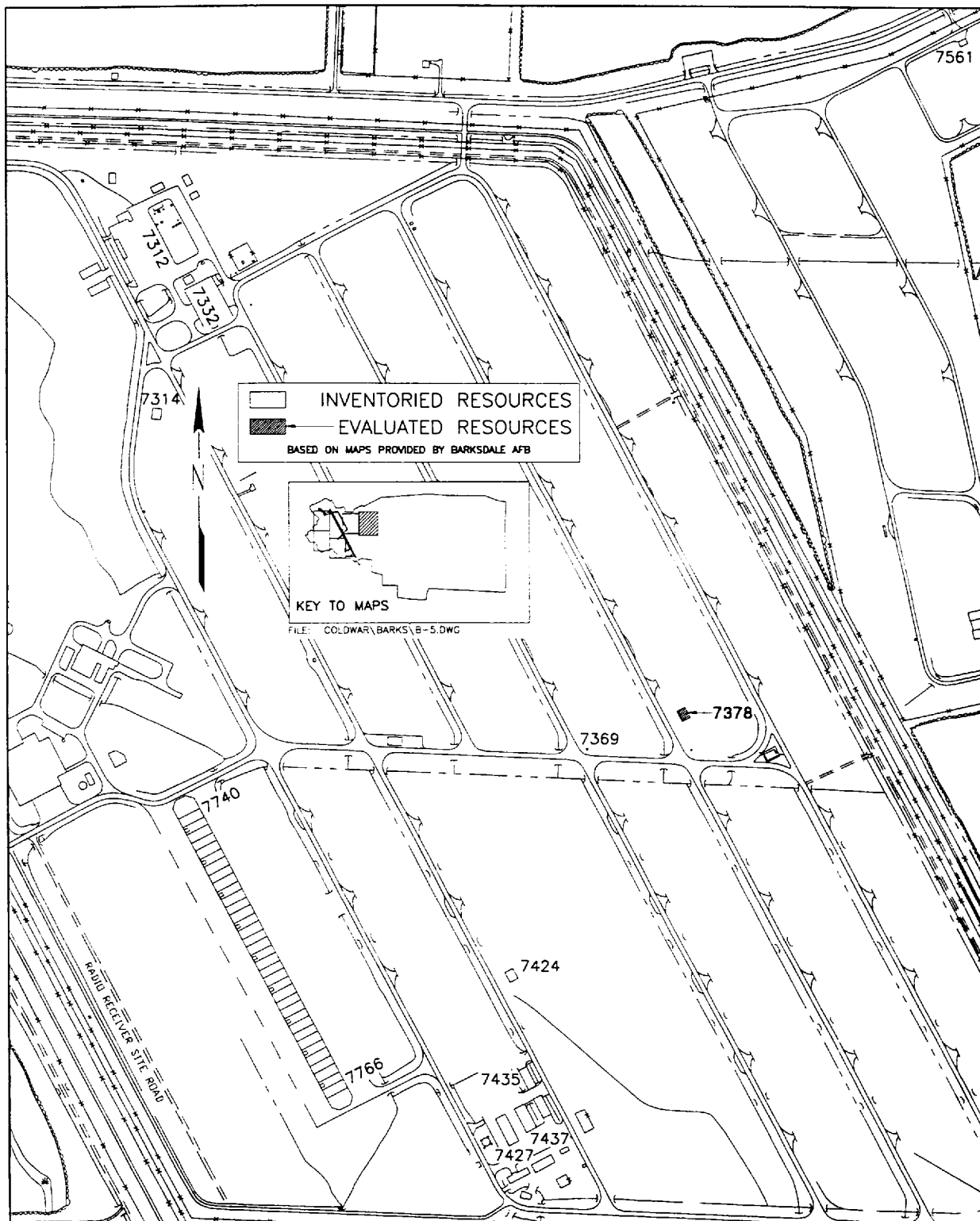
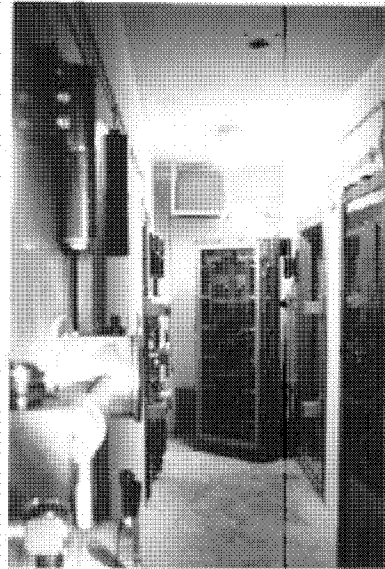


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 5).

APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



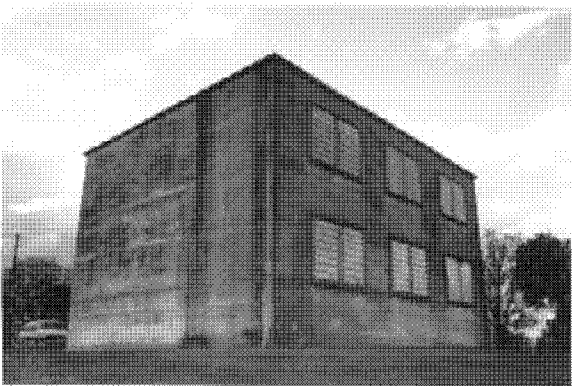
Resource No. 26001, Real Property No. 6067
Crew Readiness



Resource No. 26005, Real Property No. 7378
Segregated Storage Igloo



Resource No. 26002, Real Property No. 6225
Squadron Operations (Old Alert Facility)



Resource No. 26004, Real Property No. 7424
Storage, MU-CUB Magazine



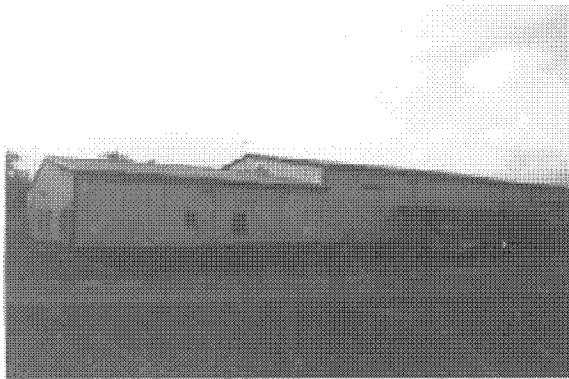
Resource No. 26006, Real Property No. 6402
Gymnasium/Base Operations



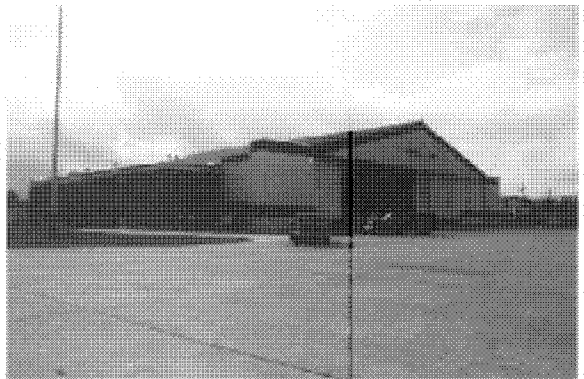
Resource No. 26007, Real Property No. 6850
Small Aircraft Maintenance Dock



Resource No. 26008, Real Property No. 6836
Rocket Checkout and Assembly Storage



Resource No. 26009, Real Property No. 6830
Armament Systems



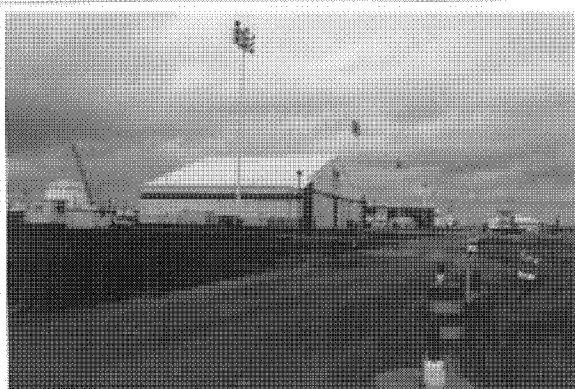
Resource No. 26010, Real Property 6825
Maintenance Dock



Resource No. 26011, Real Property No. 6824
Aircraft Corrosion Control



Resource No. 26012, Real Property No. 6649
Petrol Operations



Resource No. 26013, Real Property No. 6626
Aircraft Corrosion Control



Resource No. 26014, Real Property No. 6604
Large Aircraft Maintenance Dock (Hangar 1)



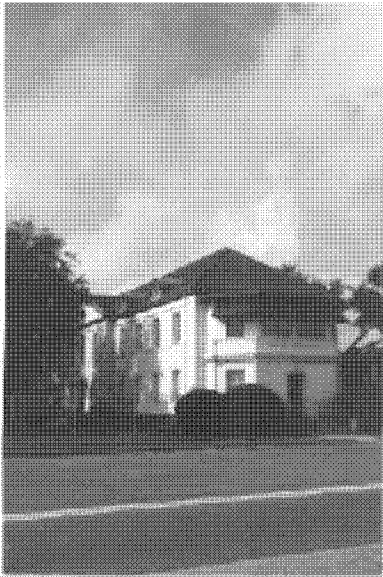
Resource No. 26015, Real Property No. 6613
Medium Aircraft Maintenance Dock



Resource Nos. 26016-26017, Real Property Nos.
6448 and 6458, Recreation Center (Hoban Hall)
and Control Tower



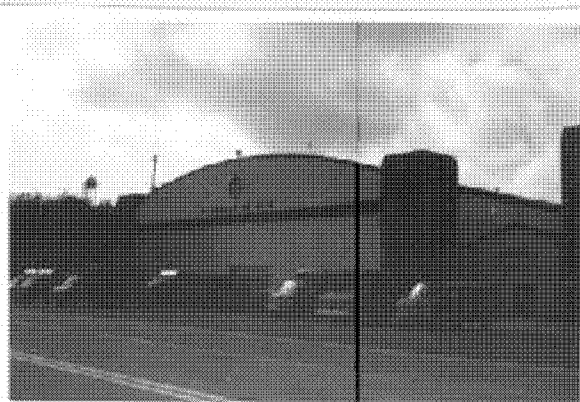
Resource No. 26018, Real Property No. 6426
Fire Station (Hangar 3)



Resource No. 26019, Real Property No. 6412
Squadron Operations (Group Operations)



Resource No. 26020, Real Property No. 6249
Group Headquarters (2nd Logistics Group)



Resource No. 26021, Real Property No. 6238
Recreation Center



Resource Nos. 26023-26024, Property Nos. 6214
and 6215, Large Aircraft Maintenance Dock and
Flight Systems Maintenance



Resource No. 26025, Real Property No. 6056
Master Surveillance and Control



Resource Nos. 26026-26027, Real Property Nos. 7740 and 7766, Storage Igloos



Resource Nos. 26028-26030, Real Property Nos. 7427, 7437, and 7435, Weapons and Release Systems Shop, Systems Management Warehouse Facility, and Base Supplies and Equipment Warehouse



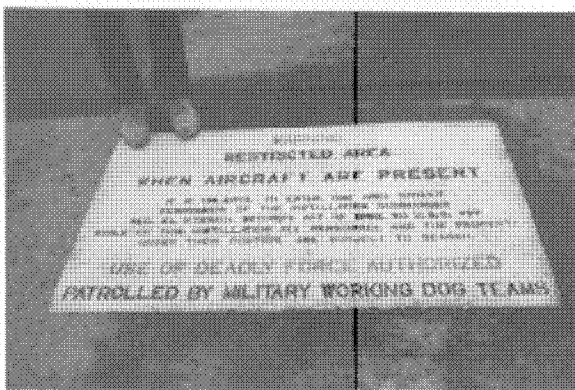
Resource No. 26031, Real Property No. 7369 Bunker



Resource No. 26032, Real Property No. 7332 Storage Igloo (B-Plant)



Resource No. 26033, Real Property No. 7312 Surveillance Inspection Shop (A-Plant)



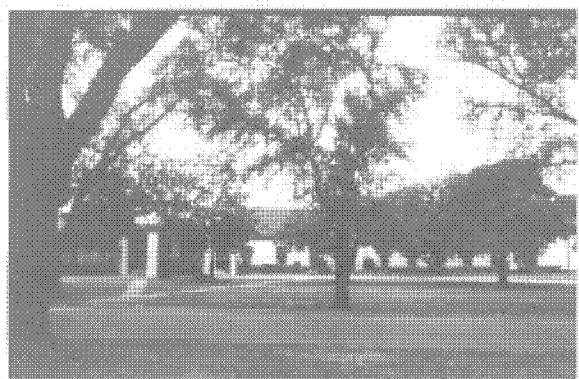
Resource No. 26034, Real Property No. (none) Alert Apron Sign



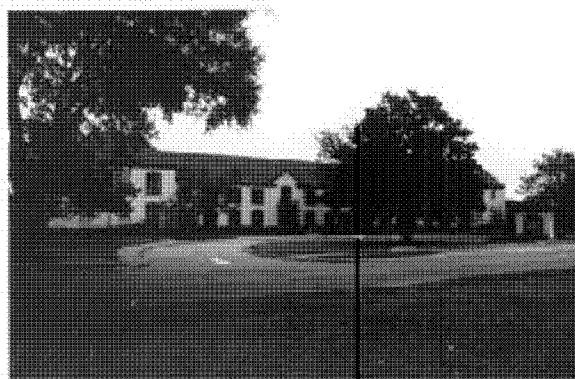
Resource No. 26036, Real Property No. 6057
Traffic Check House (Alert Facility Gate)



Resource No. 26037, Real Property No. 5048
Traffic Check House (North Gate)



Resource No. 26038, Real Property 2945
Officer's Open Mess (Officer's Club)



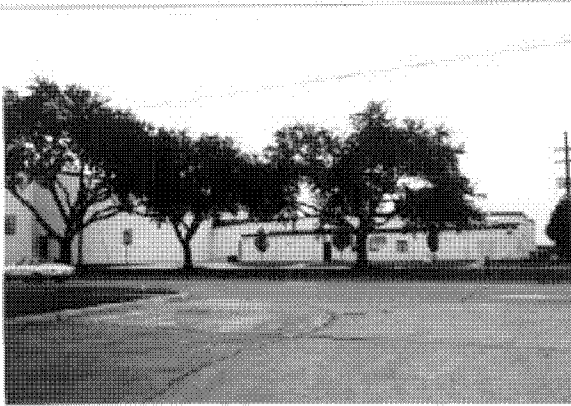
Resource No. 26039, Real Property No. 5155
Visiting Airman's Quarters (Barksdale Inn)



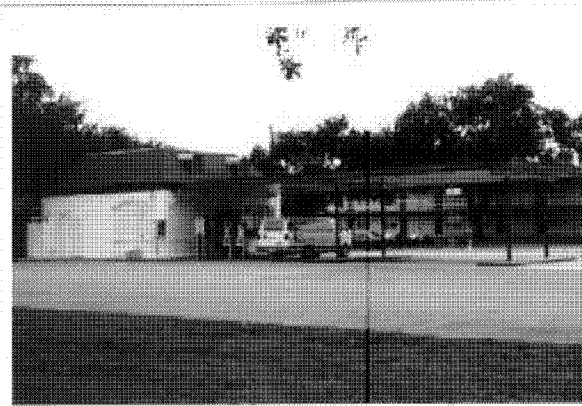
Resource No. 26040, Real Property No. 5123
Visiting Airman's Quarters (Transient Quarters)



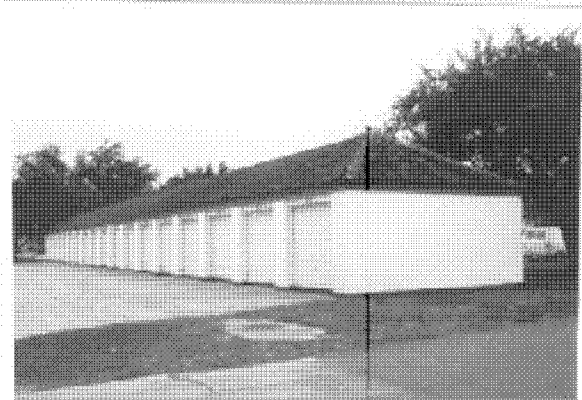
Resource No. 26041, Real Property No. 5541
Wing Headquarters



Resource No. 26042, Real Property No. 6227
Aircraft Support Equipment Storage Facility
(2nd MUNS)



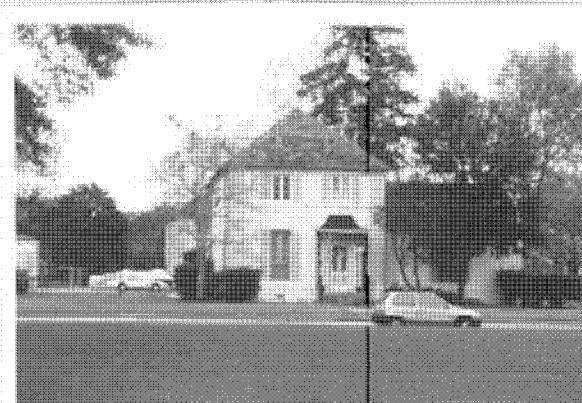
Resource No. 26043, Real Property No. 5251
Exchange Service Station



Resource No. 26044, Real Property No. 5175
Auto Garage



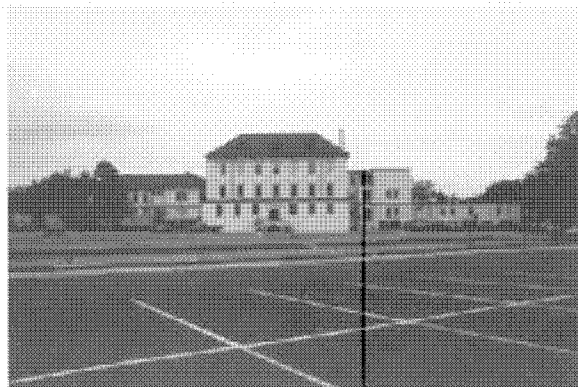
Resource No. 26045, Real Property No. 2830
Family Housing (Officer Housing)



Resource No. 26046, Real Property No. 2844
Family Housing (Officer Housing)



Resource No. 26047, Real Property No. 5345
Base Personnel Office (2nd Support)



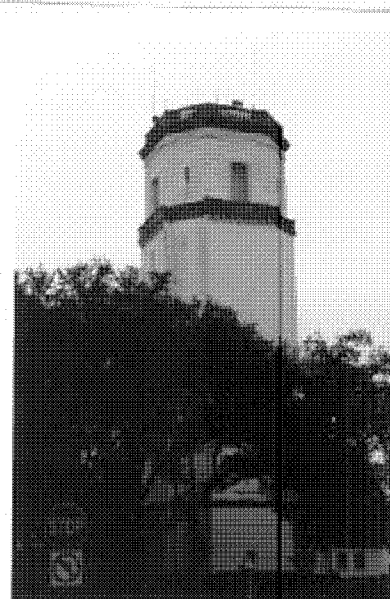
Resource No. 26048, Real Property No. 3433
Base Engineering Administration



Resource No. 26049, Real Property No. 5435
Bank



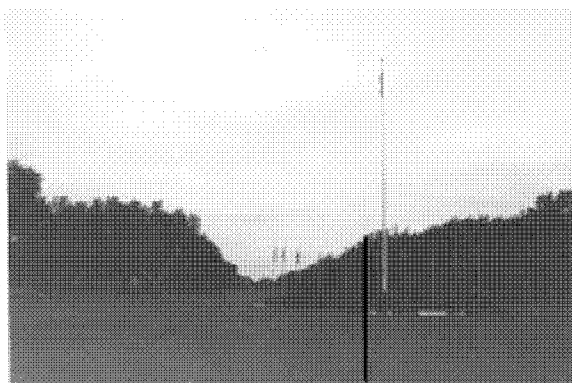
Resource No. 26050, Real Property No. 5454
Squadron Operations



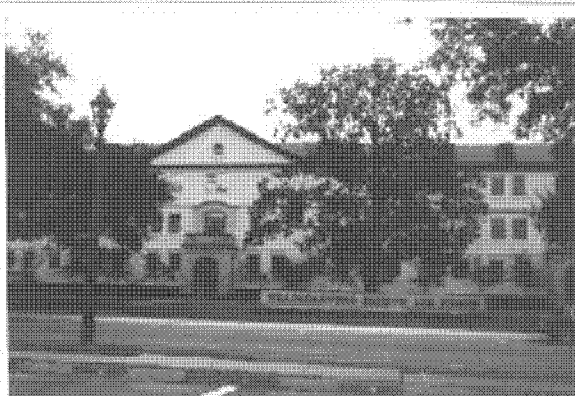
Resource No. 26051, Real Property No. 3454
Fire Protection Water Storage



Resource No. 26052, Real Property No. 3435
Group Headquarters



Resource No. 26053, Real Property No. 3416
Base Flag Pole



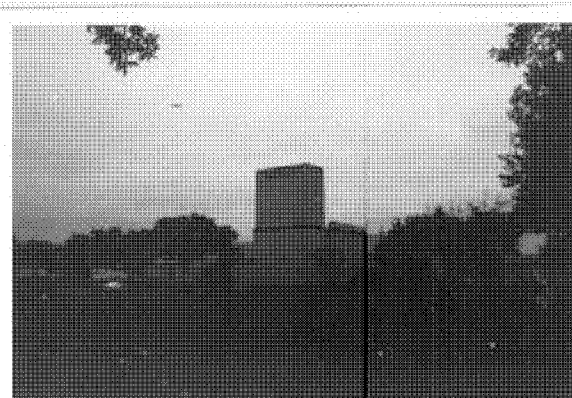
Resource No. 26054, Real Property No. 5546
8th Air Force Headquarters



Resource No. 26055, Real Property No. 3746
Family Housing (NCO Housing)



Resource No. 26056, Real Property No. 3467
Numbered Air Force Headquarters



Resource No. 26057, Real Property No. 5733
Survey Equipment Shop (Parachute Drying
Tower)



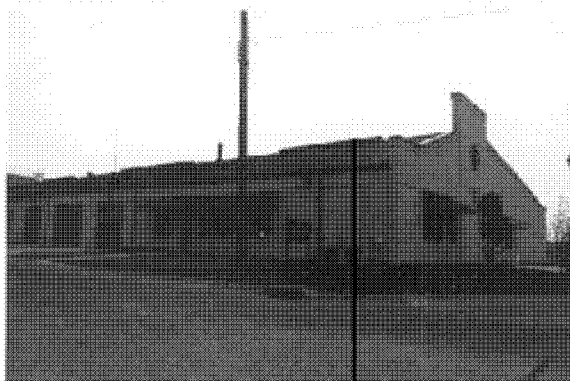
Resource No. 26058, Real Property No. 5676
Special Operations



Resource No. 26059, Real Property No. 4161
Base Supply and Equipment Warehouse



Resource No. 26060, Real Property No. 5740
AFOSI Office (Det 2190)



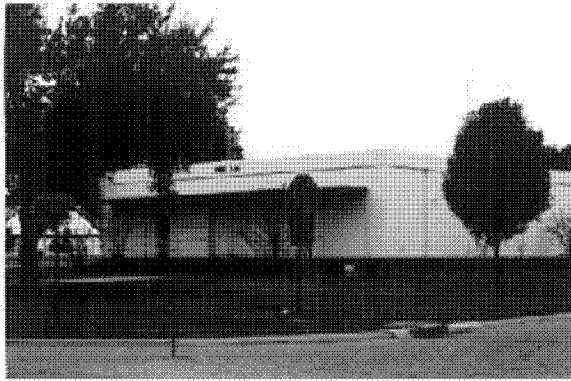
Resource No. 26061, Real Property No. 4186
Vehicle Maintenance Shop (2nd Transportation
Squadron)



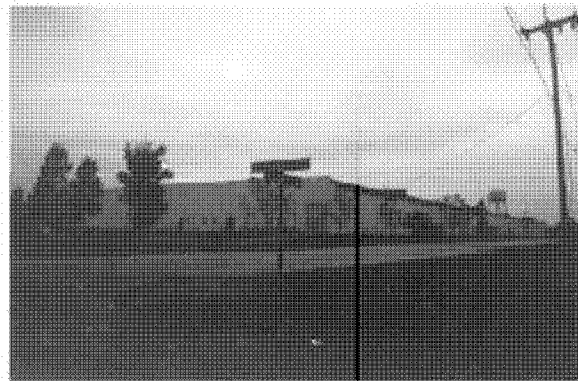
Resource No. 26062, Real Property No. 5921
Jet Fuel Storage



Resource No. 26063, Real Property No. 5766
Aircraft General Purpose Shop



Resource No. 26064, Real Property No. 5821
PME Lab



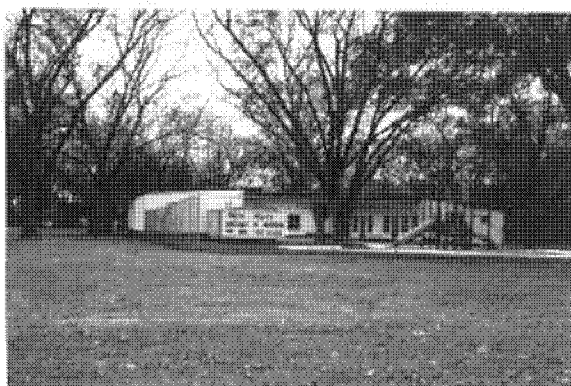
Resource No. 26065, Real Property No. 4845
Base Supply and Equipment Warehouse



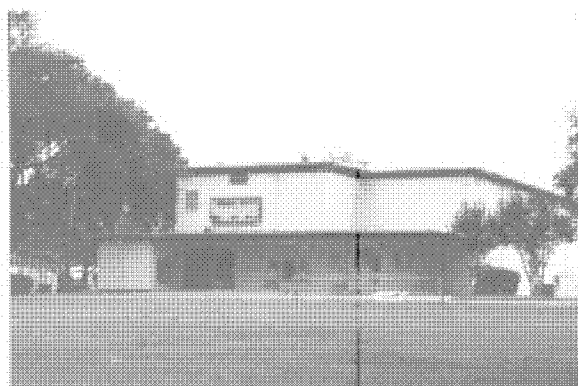
Resource No. 26070, Real Property No. 4543
Composite Medical/Hospital



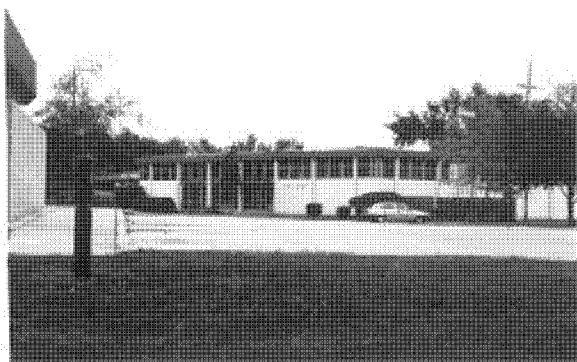
Resource No. 26071, Real Property Nos. 4546
and 4548, Clinics



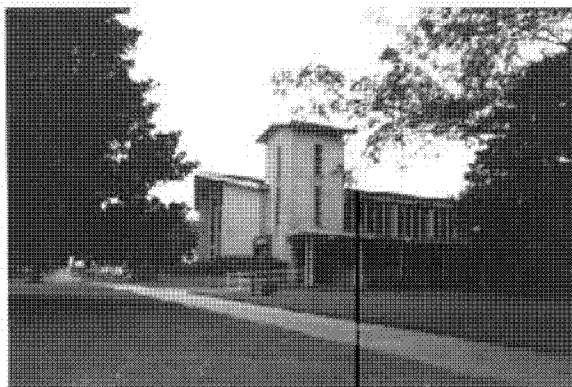
Resource No. 26073, Real Property No. 4238
Youth Center



Resource No. 26074, Real Property No. 4235
Base Theater



Resource No. 26075, Real Property No. 4244
Library



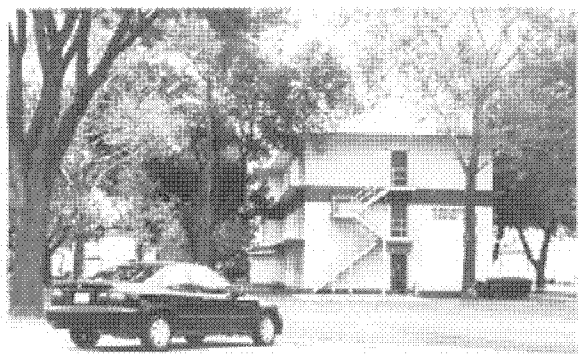
Resource No. 26077, Real Property No. 4221
Chapel Center (Chapel 2)



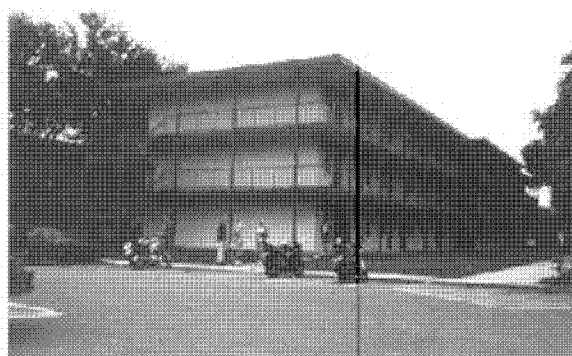
Resource No. 26078, Real Property No. 1778
Exchange Service Station



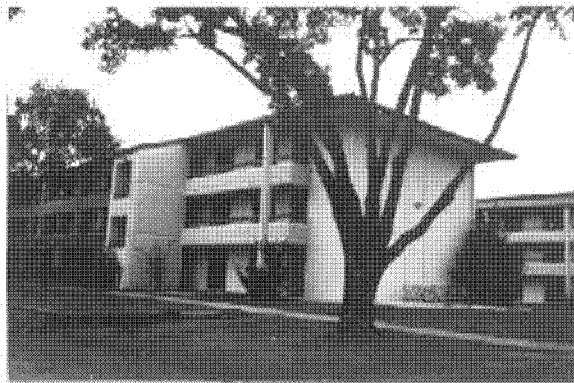
Resource No. 26080, Real Property No. 1912
NCO Swimming Pool



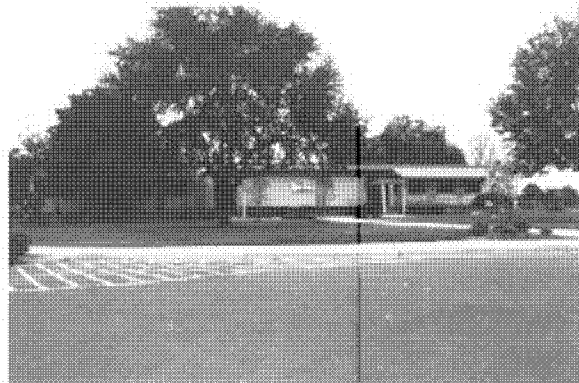
Resource No. 26081, Real Property No. 4314
Education Center



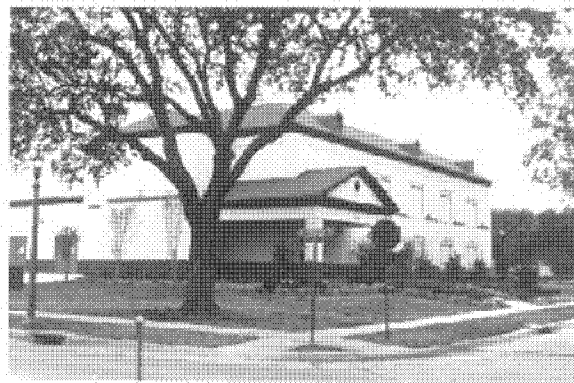
Resource No. 26082, Real Property No. 4332
Airman Dormitory



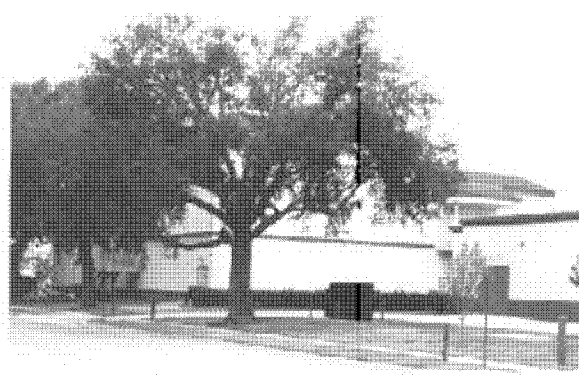
Resource No. 26083, Real Property No. 4386
Airman Dormitory



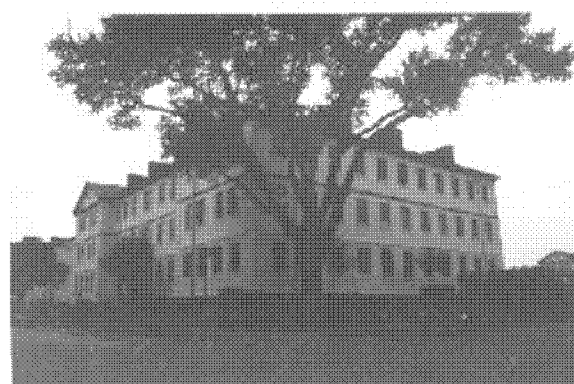
Resource No. 26085, Real Property No. 4631
Airman Dining Hall (Red River Dining Facility)



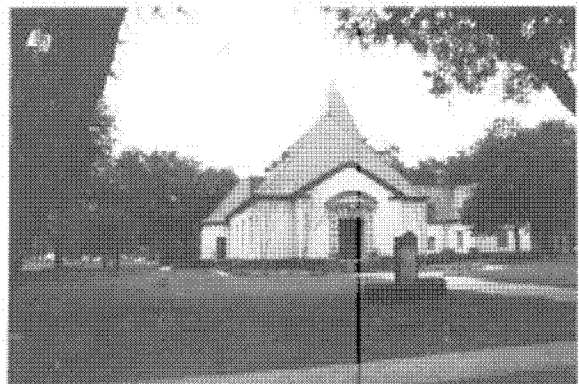
Resource No. 26086, Real Property No.
(unknown), B-52 Simulator Building



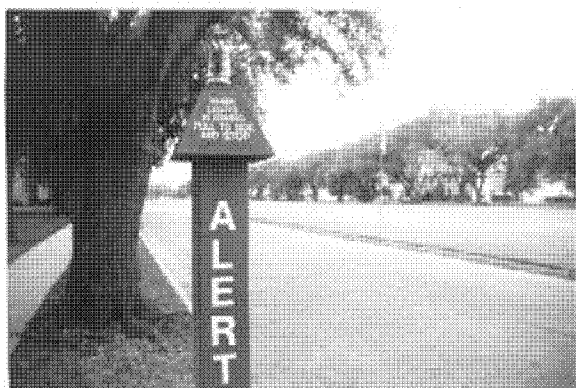
Resource No. 26087, Real Property No. 5650
Flight Simulator Training



Resource No. 26088, Real Property No. 5576
Numbered Air Force Headquarters



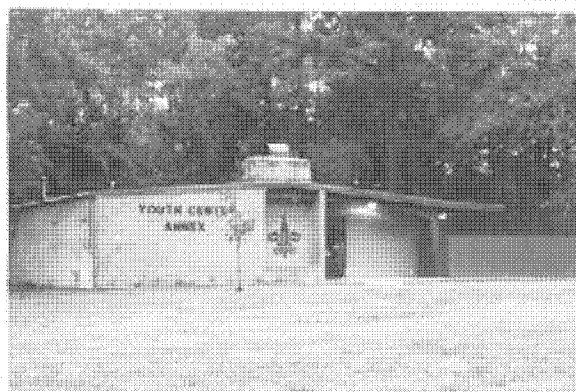
Resource No. 26090, Real Property No. 3578
Chapel Center (Chapel 1)



Resource No. 26091, Real Property No. (none)
Alert Post



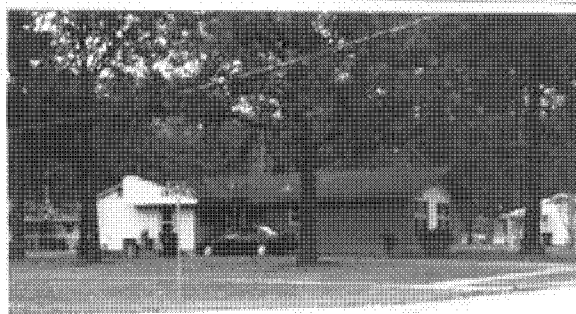
Resource No. 26092, Real Property No. (none)
Naval Mobil Construction Battalion Installation
(SeaBees)



Resource No. 26093, Real Property No. 9327
Miscellaneous Recreation Facility



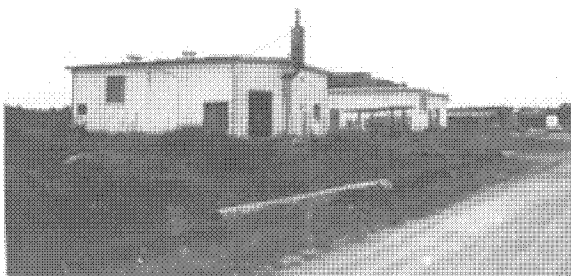
Resource No. 26094, Real Property No. 8930
Branch Exchange (Shoppette)



Resource No. 26095, Real Property No. 8600
Capehart Family Housing



Resource No. 26096, Real Property No. 8601
Capehart Family Housing



Resource No. 26098, Real Property No. 8112 and 8122, Riding Stables (Bossier Base Power Facility)



Resource No. 26099, Real Property No. (none)
Cullum Park



Resource No. 26100, Real Property No. 7674
Family Camp



Resource No. 26101, Real Property No. 7561
Storage, Spare Inert



Resource No. 26102, Real Property No. 7292
Base Engineering Administration (Red Horse)



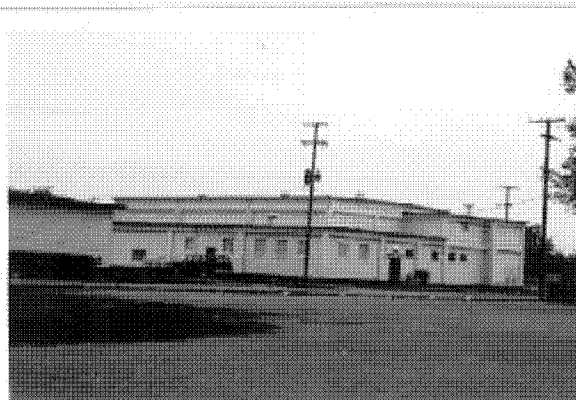
Resource No. 26103, Real Property No. 7231
Fire Station (Bossier Base)



Resource No. 26104, Real Property No. 7212
NCO Professional Center (Bossier Base)



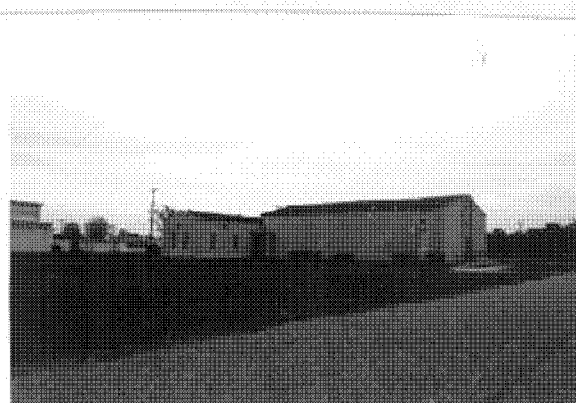
Resource No. 26105, Real Property No. 7242
Major Command Headquarters (Bossier Base)



Resource No. 26107, Real Property No. 7236
NCO Professional Center (Bossier Base)



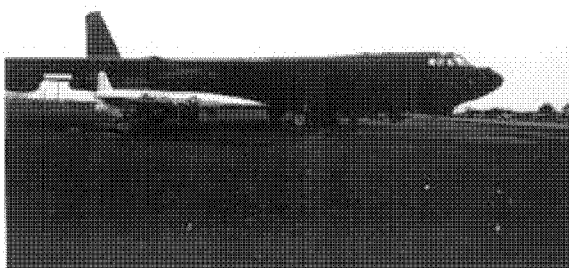
Resource No. 26108, Real Property No. 7256
NCO Professional Education Center (Bossier Base)



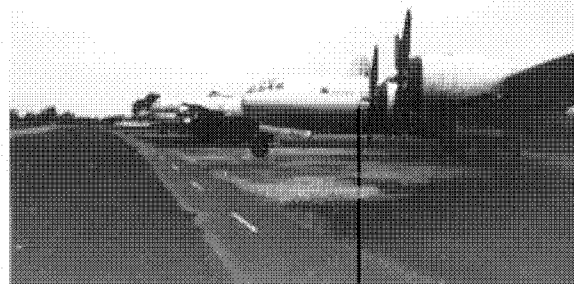
Resource No. 26109, Real Property No. 7227
NCO Professional Center (Bossier Base)



Resource No. 26110, Real Property No. (none)
Static Display (KC-135)



Resource No. 26111, Real Property No. (none)
Static Display (B-52 and Hound Dog Missile)



Resource No. 26112, Real Property No. (none)
Static Display



Resource No. 26113, Real Property No. 5088
8th Air Force Museum

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT BARKSDALE AFB

Resource Number: 26001

Property Description: Alert Facility used during the following two periods: 1960-1968, mid 1980s-1991
Associated Property: 26022, 26025, 26036, 26042, 26116
Non-Inventoried Association:
Sub-installation:
Address: 7667 Lindbergh Road, West
Base Map Date: 11/1/92
Base Map Building Number: 6067

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Bomber Alert Facility

Statement of Significance: This property was directly related to the Cold War effort. It served as a component of first line, rapid response nuclear delivery system (one arm of the nuclear triad deterrent). This resource is also significant for its architectural design elements that allowed for the rapid egress of aircrew personnel.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	This facility has been recently remodeled and is used for NAOC crews as well as VIP quarters. Nevertheless, the resource maintains most of its original fabric. The related facilities (tower, apron, security elements) are also intact.
No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	NRHP eligible now. This resource, including the associated facilities, should be maintained in their present condition.

Importance: Exceptional
Eligibility Eligible

Height: 20 '
Square Footage: 18083
Original Planned Duration: Permanent
Existing Use: NAOC and VIP quarters
Other Use/Dates: Alert facility. Abandoned from 1968-1980s.
Comments on Use: Resource 26001 was the original alert facility built at BAFB. In 1968 a new facility was built on the flightline when a concern was voiced about the potential disabling of the launch ramp between the alert apron and the runway. These activities were probably the result of SAC directives.
Primary Building Materials: Concrete Masonry Unit
Character Defining Features: Earth bermed lower story with rapid egress ramps.

Resource Number: 26002

Property Description: Squadron Operations (Alert Facility 1968-mid1980s)
Associated Property: 26022, 26042, 26116
Non-Inventoried Association:
Sub-installation: none
Address: 525 Lindbergh Road, West
Base Map Date: 11/1/92
Base Map Building Number: 6225

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Bomber Alert Facility

Statement of Significance: This property was directly related to the Cold War effort. It served as a component of first line, rapid response nuclear delivery system (one arm of the nuclear triad deterrent).

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	4
Percent Historic Fabric:	2
Severity of Threats:	2
Total Score for Priority Matrix:	18
Comments on Threats:	This facility is currently used as a squadron ops building and has probably had interior remodeling (i.e., removal of crew quarter partitions). The resource was NOT inspected on the inside.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	NRHP eligible now.

Importance: Exceptional
Eligibility Eligible

Height: 10
Square Footage: 22913
Original Planned Duration: Permanent
Existing Use: Squadron Operations
Other Use/Dates: Used as alert crew quarters 1968-1980s.
Comments on Use: Used as a replacement for the original alert facility (resource 26001) during the period 1968-1980s when the original alert apron was considered vulnerable. When the reduced security of resource 26002 (aircraft parked on the flightline) was considered a greater threat to the alert mission, the aircraft and crews were moved back to the original facility.

These activities may have been a result of SAC directives.

Primary Building Materials: Concrete Masonry Unit

Character Defining Features: none

Resource Number: 26005

Property Description: A structure (nuclear component storage)
Associated Property: 26003, 26004, 26032, and 26033
Non-Inventoried Association: Weapon storage igloos, security facilities, weapon assembly facilities, and Bossier Base administration facilities.
Sub-installation: Former Bossier Base
Address:
Base Map Date: 11/1/92
Base Map Building Number: 7378

Operational Support & Installations:
Combat Weapons and Support Systems: Storage
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Segregated Storage Igloo

Statement of Significance: This resource embodies Cold War significance as an integral part of the storage and maintenance of AEC nuclear weapons components. The resource is also architecturally significant for the following: high degree of threat survivability with 10 foot concrete walls; high level of security with steel vault doors; and deception with false fenestration (windows). In addition, there are two other "A" structures identical in appearance and function to 26005. The integrity of 26003 has been minimally compromised and 26004 is currently used for storage of sensitive material. These resources are considered less significant due to their reduced integrity. Finally, resources 7312 and 7332 ("A-plant" and "B-plant") are related facilities where weapons were tested and assembled before they were returned to the storage facility.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	20

Comments on Threats: This resource is highly representative of the early Cold War period. No immediate threats to the building were identified; however, they are subject to benign neglect.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	NRHP eligible now.

Importance: Exceptional

Eligibility Eligible

Height: 30'

Square Footage: 2352

Original Planned Duration: Permanent

Existing Use: none

Other Use/Dates: AEC nuclear weapons storage.

Comments on Use: The building is currently abandoned.

Primary Building Materials: Poured Concrete

Character Defining Features: 10' thick concrete walls, false windows, and four vaults with steel vault doors.

Resource Number: 26117

Property Description: Architectural drawing files contained within 17 flat storage cabinets located in a storeroom in the drafting department. One of these is located in the drafting room. A small roll file contains about 10 drawing sets. Included are drawings dating from the 1940's to present. Media represented are vellum, mylar, onionskin, linen, bond, and fabric. Types of drawings include master base plans (C-Tabs, land use and planning), landscapes, buildings (initial construction, modification, renovation, and repair), runways and taxiways, topography, utilities, and other miscellaneous constructed facilities. One drawer contained as many as 100 base aerial photos dating from 1930s to present. Many of these photos were undated. No original plans from the historic district, only mylar copies. Also included were limited plans for Bossier Base, although some of the Bossier Base plans were selectively destroyed.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 334 Davis Ave. Barksdale AFB

Base Map Date: 9/1/93

Base Map Building Number: inside 3433

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: These drawings are a record of construction and renovations completed for all buildings on base, past and present. They also can provide further information for future evaluations of extant buildings and structures on Barksdale AFB and Bossier Base.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats: Apparently a number of drawings concerning Bossier Base were destroyed. However, drawings concerning a number of Bossier Base buildings and facilities are filed. These include the security perimeter, the storage igloos, and the A and B plants. Only a few drawings of the A Structures were located. Numerous plans from the WWII period are contained in the drawing files. Although not of the Cold War period,

these are historical resources. No original plans for any of the historic district buildings are located in the drawing files. These may be curated in an offsite location.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	This resource is in generally good condition. Some of the WWII period drawings are in fair condition and should be curated. No index exists for these drawing files.

Object Condition:	In Storage/Benign Neglect
Record/Document Category:	Architectural Drawing
Year of Document:	various
Period of Association:	Spans all four temporal periods of the Cold War.
Comments on Condition:	This resource is in generally good condition. Drawings from the WWII period are in fair condition and should be curated.

Resource Number: 26118

Property Description: 2nd Bombardment Wing histories; 150 photographs and negatives, and a base newspaper collection that is continuous from 1948 to the present. Newspapers from 1978 to the present are stored at the Public Affairs Office.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 245 Davis Ave. East Barksdale AFB, LA

Base Map Date:

Base Map Building Number: inside 5541

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: The history collection details the activities of the 2nd Bombardment Wing at Barksdale AFB. Further research into the various volumes that span 1948-1993 could provide additional insight into the activities conducted at the base in general and specific facilities in particular during the Cold War era since 1963, when the 2nd came to Barksdale. Newspapers record events happening at the base during the Cold War. The photographs record specific buildings, some of which are no longer extant.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	1
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Object Condition: In Storage/Benign Neglect

Record/Document Category: Photograph, reports, newspapers

Year of Document: various

Period of Association: All four temporal phases.

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Barksdale AFB, and to provide research materials for this study:

Theodore D. Bair
Deputy Base Civil Engineer
2 CES/DCE
334 Davis Avenue West, Suite 200
Barksdale AFB, Louisiana 71110-2078
(318) 456-4857

MSgt William I. Chivette
Wing Historian
8 AF/HO
245 Davis Avenue East, Room 29
Barksdale AFB, Louisiana 71110-2278
(318) 456-4219

Murry Ford
Engineering Assistant
2 CES/CEEE
334 Davis Avenue West
Barksdale AFB, Louisiana 71110-2078
(318) 456-4342

Robert Haddix
Historic Preservation Architect
2 CES/CEV
334 Davis Avenue West
Barksdale AFB, Louisiana 71110-2078
(318) 456-5262

SSgt Brian A. Mauhar
CAD Specialist
2 CES/CEEE
334 Davis Avenue West
Barksdale AFB, Louisiana 71110-2078
(318) 456-6811

Wade Meyers
Historian
2 WG/HOM
841 Fairchild Avenue, Suite 103
Barksdale AFB, Louisiana 71110-2278
(318) 456-5504

Forrest Miller
Civil Engineering Planner
2 CES
334 Davis Avenue West
Barksdale AFB, Louisiana 71110-2078
(318) 456-3169

Russell Ray
Real Property Officer
2 CES/CERR
334 Davis Avenue West
Barksdale AFB, Louisiana 71110-2078
(318) 456-5297

H. D. "Buck" Rigg
Eighth Air Force Museum Curator
2 WG/HOM
841 Fairchild Avenue, Suite 103
Barksdale AFB, Louisiana 71110-2278
(318) 456-5504

Rebecca Sterba
Real Property Office
2 CES/CERR
334 Davis Avenue West
Barksdale AFB, Louisiana 71110-2078
(318) 456-5297

Hubert Watley
Installation Restoration Manager
2 CES/CEV
334 Davis Avenue West
Barksdale AFB, Louisiana 71110-2078
(318) 456-5262

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Barksdale AFB history and Cold War context.

Theodore D. Bair, Deputy Base Civil Engineer, November 10, 1994

Robert Haddix, Cultural Resource Manager, November 8 and December 8, 1994

Forrest Miller, Civil Engineering Planner, November 10, 1994

H. D. "Buck" Rigg, Eighth Air Force Museum Curator, November 9, 1994

Hubert Watley, Installation Restoration Manager, November 8 and 10, and December 8, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-2: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT BEALE AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Karen Lewis
R. Blake Roxlau
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

October 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Beale Air Force Base was inventoried for Cold War resources by Karen Lewis and R. Blake Roxlau of Mariah Associates, Inc., between August 29 and September 3, 1994, as part of the Air Combat Command Cold War Study under the Department of Defense Legacy Program. Information was gathered at the base from the Wing Historian and the Drawing Room staff, and at the Civil Engineering, Real Property, and Public Affairs Offices. On-site inspections were also conducted. During this research and inventory, resources were identified and then photographed.

Four resources were further documented and evaluated as important to the Cold War during the course of the survey, including a collection of Architectural Drawing Files, a Bomber Alert Facility, a Semi-Automatic Ground Environment Facility, and the PAVE PAWS Facility. The resources documented correspond to Phases II through IV (1953-1989) of the Cold War as described in the historic context and methodology document written for this project (Lewis et al. 1995). To differing degrees, they reflect the role that Beale Air Force Base played in the Cold War.

Recommendations for the Architectural Drawing Files include inventory, stewardship, and conservation in a permanent curatorial facility. The Semi-Automatic Ground Environment Facility and the Bomber Alert Facility are both recommended as ineligible to the National Register of Historic Places due to the buildings' lack of integrity. The PAVE PAWS Facility is recommended as eligible to the National Register, with stewardship and further documentation also recommended.

LIST OF ACRONYMS

ACC	-	Air Combat Command
ACHP	-	Advisory Council on Historic Preservation
ADC	-	Air Defense Command
AFB	-	Air Force Base
AFR	-	Air Force Range
AFS	-	Air Force Station
AGE	-	Air Ground Equipment
AMMS	-	Airborne Missile Maintenance Squadron
AMS	-	Avionics Maintenance Squadron
AREFS	-	Air Refueling Squadron
AREFW	-	Air Refueling Wing
BMS	-	Bombardment Squadron
BMW	-	Bombardment Wing
BW	-	Bomb Wing
CAC	-	Continental Air Command
CES	-	Civil Engineering Squadron
DoD	-	Department of Defense
FMS	-	Field Maintenance Squadron
FTD	-	Field Training Detachment
HABS	-	Historic American Buildings Survey
ICBM	-	Intercontinental Ballistic Missile
MAC	-	Military Airlift Command
Mariah	-	Mariah Associates, Inc.
MMS	-	Munitions Maintenance Squadron
NCA	-	National Command Authority
NCO	-	Non-Commissioned Officer
NHPA	-	National Historic Preservation Act
NORAD	-	North American Aerospace Defense
NPS	-	National Park Service
NRHP	-	National Register of Historic Places
NSC	-	National Security Council
OCONUS	-	Off the Continental United States
OMS	-	Organizational Maintenance Squadron
PAVE PAWS	-	Position Acquisition Vehicle Entry Phased Array Warning System
PME	-	Precision Measurement Equipment
POW	-	Prisoner of War
RAPCON	-	Radar Approach Control Center
RW	-	Reconnaissance Wing
SAC	-	Strategic Air Command
SAGE	-	Semi Automatic Ground Environment
SALT	-	Strategic Arms Limitation Treaty

LIST OF ACRONYMS (Continued)

SATCAT	-	Satellite Catalog
SAW	-	Strategic Aerospace Wing
SCARWAF	-	Special Category Army with Air Force
SDI	-	Strategic Defense Initiative
SHPO	-	State Historic Preservation Office
SLBM	-	Submarine Launched Ballistic Missile
SMS	-	Strategic Missile Squadron
SRS	-	Strategic Reconnaissance Squadron
SRTS	-	Strategic Reconnaissance Training Squadron
SRW	-	Strategic Reconnaissance Wing
START	-	Strategic Arms Reduction Talks
SW	-	Strategic Wing
TAC	-	Tactical Air Command
USAF	-	United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Gaither Report - a report concerning the development of the Cold War produced by the Gaither Committee in 1957. It predicted an increase in the arms race and continued escalation of the Cold War. It recommended a drastic increase in military spending and initiation of a multibillion-dollar civil defense system. It also echoed the Killian Report in recommending the dispersal of the bomber force to increase survivability.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

GLOSSARY (Continued)

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	4
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	19
4.0 METHODOLOGY	24
4.1 INVENTORY	24
4.2 EVALUATION OF IMPORTANT RESOURCES	25
4.2.1 Documentation	25
4.2.2 Evaluation of Importance	25
4.2.2.1 Cold War Context	25
4.2.2.2 NRHP Criteria	26
4.2.2.3 Exceptional Importance	27
4.2.3 Evaluation of Integrity	27
4.2.4 Priority Matrix	28
4.2.5 Resource Organization	29
4.3 BASE SPECIFIC METHODS	29
5.0 RECONNAISSANCE INVENTORY RESULTS	31
6.0 EVALUATION RESULTS	32
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	32
6.1.1 Documentation	32
6.1.1.1 Architectural Drawing Files	32
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	34
6.2.1 Alert Facilities	34
6.2.1.1 Bomber Alert Facility	34

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.2 Communications	35
6.2.2.1 SAGE Facility	35
6.3 MATERIEL DEVELOPMENT FACILITIES	36
6.4 TRAINING FACILITIES	36
6.5 INTELLIGENCE FACILITIES	36
6.5.1 Radar Sites	36
6.5.1.1 PAVE PAWS Facility	36
7.0 UNDOCUMENTED RESOURCES	39
8.0 FUTURE THREATS TO RESOURCES	40
9.0 PRELIMINARY RECOMMENDATIONS	41
9.1 NRHP ELIGIBILITY	41
9.1.1 Evaluation and Determination of NRHP Eligibility	41
9.1.2 Implications of NRHP Eligibility	43
9.2 EVALUATED RESOURCE RECOMMENDATIONS	44
9.2.1 Architectural Drawing Files	46
9.2.2 Bomber Alert Facility	46
9.2.3 SAGE Facility	47
9.2.4 PAVE PAWS Facility	47
10.0 REFERENCES CITED	48
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Beale Air Force Base	5
Figure 2.2 Beale Air Force Base Layout	6
Figure 2.3 Standard Strategic Air Command Base Layout	7
Figure 2.4 Beale Air Force Base Land Use Diagram	10
Figure 2.5 Strategic Air Command Base Land Use Diagram	11
Figure 3.1 Beale Air Force Base, 1940	20
Figure 3.2 Beale Air Force Base, 1950-1970	21
Figure 3.3 Beale Air Force Base, 1970-1990	23

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	33
Table 6.2 Evaluated Resource Prioritization by Priority Rank	33
Table 9.1 Recommendations for Evaluated Resources	45

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

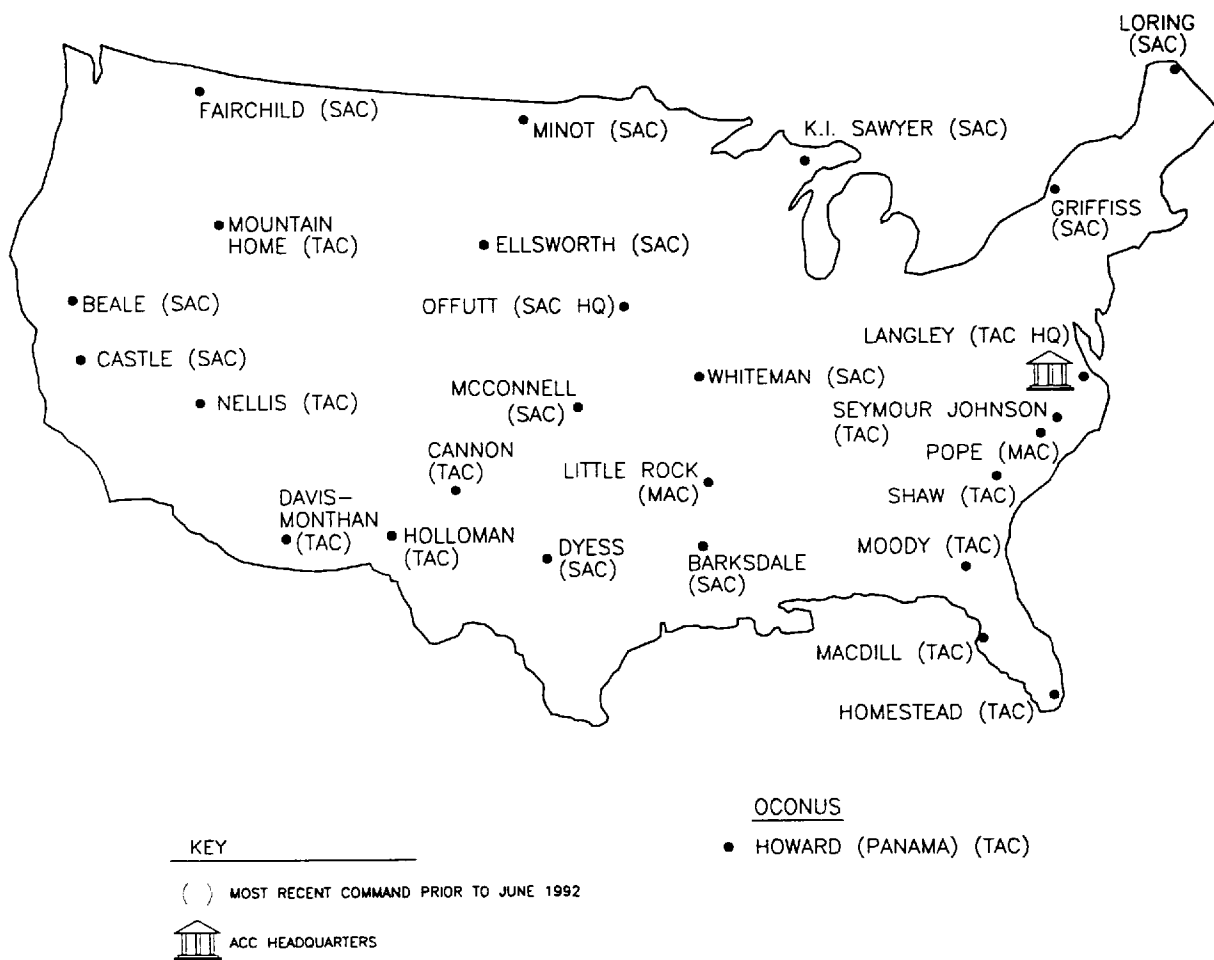
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: BEALE\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Beale Air Force Base (AFB). Beale AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Beale AFB currently consists of the 9th Reconnaissance Wing (RW) which is the base host. The 9th RW commands four groups on base. One is the 9th Operations Group, which includes the 1st and 99th Reconnaissance Squadrons, the 9th Intelligence Support Squadron, and the 9th Operational Support Squadron. The second one is 9th Logistics Group, which commands the 9th Logistical Support Squadron, 9th Maintenance Squadron, 9th Transportation Squadron, and the 9th Supply Squadron. The third is the 9th Support Squadron, which consists of the 9th Civil Engineering Squadron (CES), 9th Security Police Squadron, and other support units. The fourth is the 9th Medical Group (Beale AFB 1993). The mission of the 9th RW is to operate the U-2R reconnaissance aircraft to gather worldwide intelligence information. The wing's motto is "Semper Paratus, Always Ready" (Beale AFB 1993).

2.2 GEOGRAPHIC DESCRIPTION

Beale AFB is located approximately 13 mi (21 km) east of Marysville and Yuba City, California (Figure 2.1). These cities have a population of 50,000 and are economically reliant on agriculture, retail, and recreation industries. The base is 22,944 acres (9,285 ha) in area and is located on the eastern edge of the mostly flat, arid Sacramento Valley, near the foothills of the Sierra Nevada mountains. Elevations in the valley range from 80 to 580 ft (24 to 177 m) above mean sea level.

2.3 CURRENT BASE LAYOUT

The layout of the buildings and facilities at Beale AFB (Figure 2.2) is different from that of the standard SAC plan (Figure 2.3) in that there are three separate areas of development that are



Figure 2.1 Location of Beale Air Force Base.

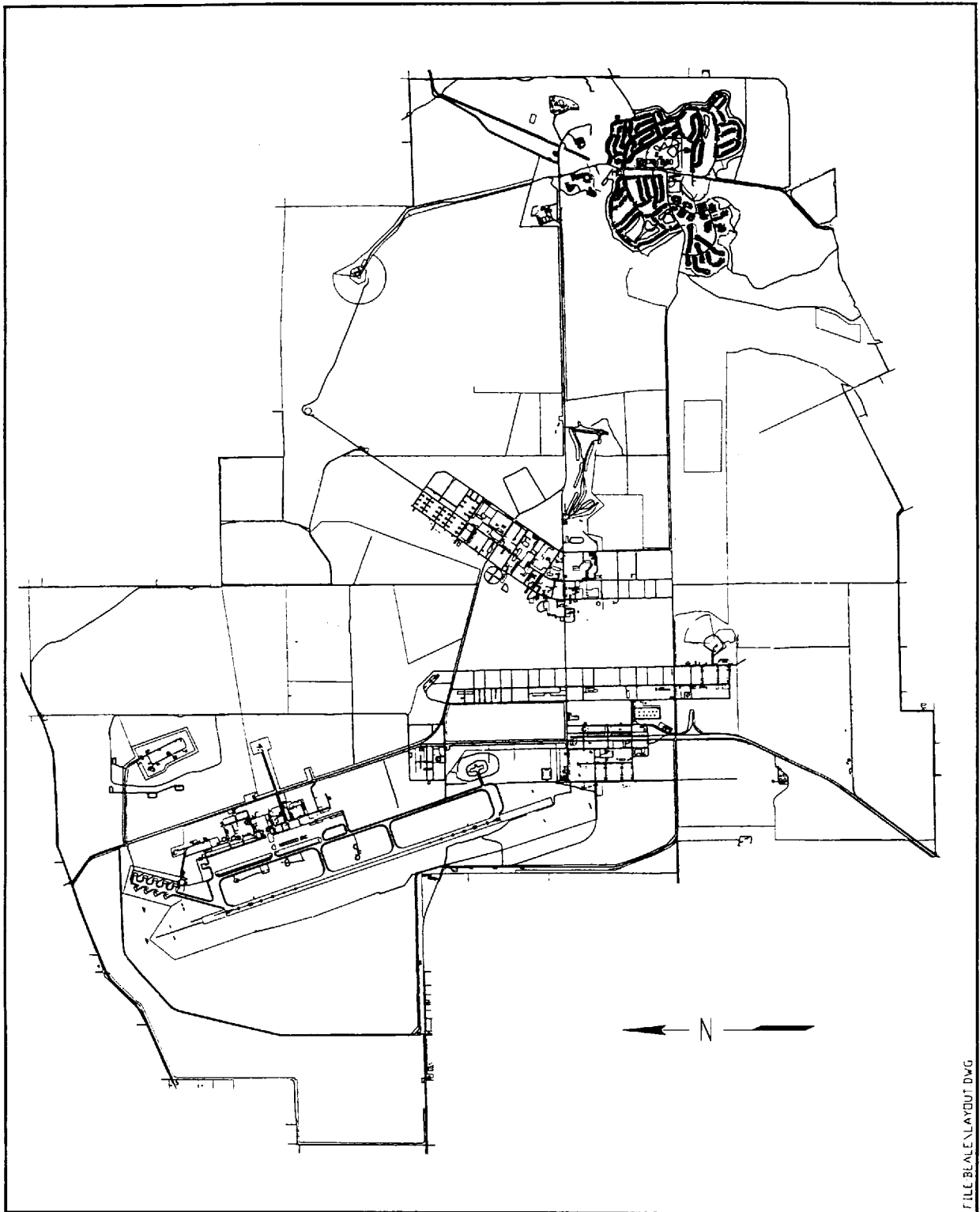


Figure 2.2 Beale Air Force Base Layout.

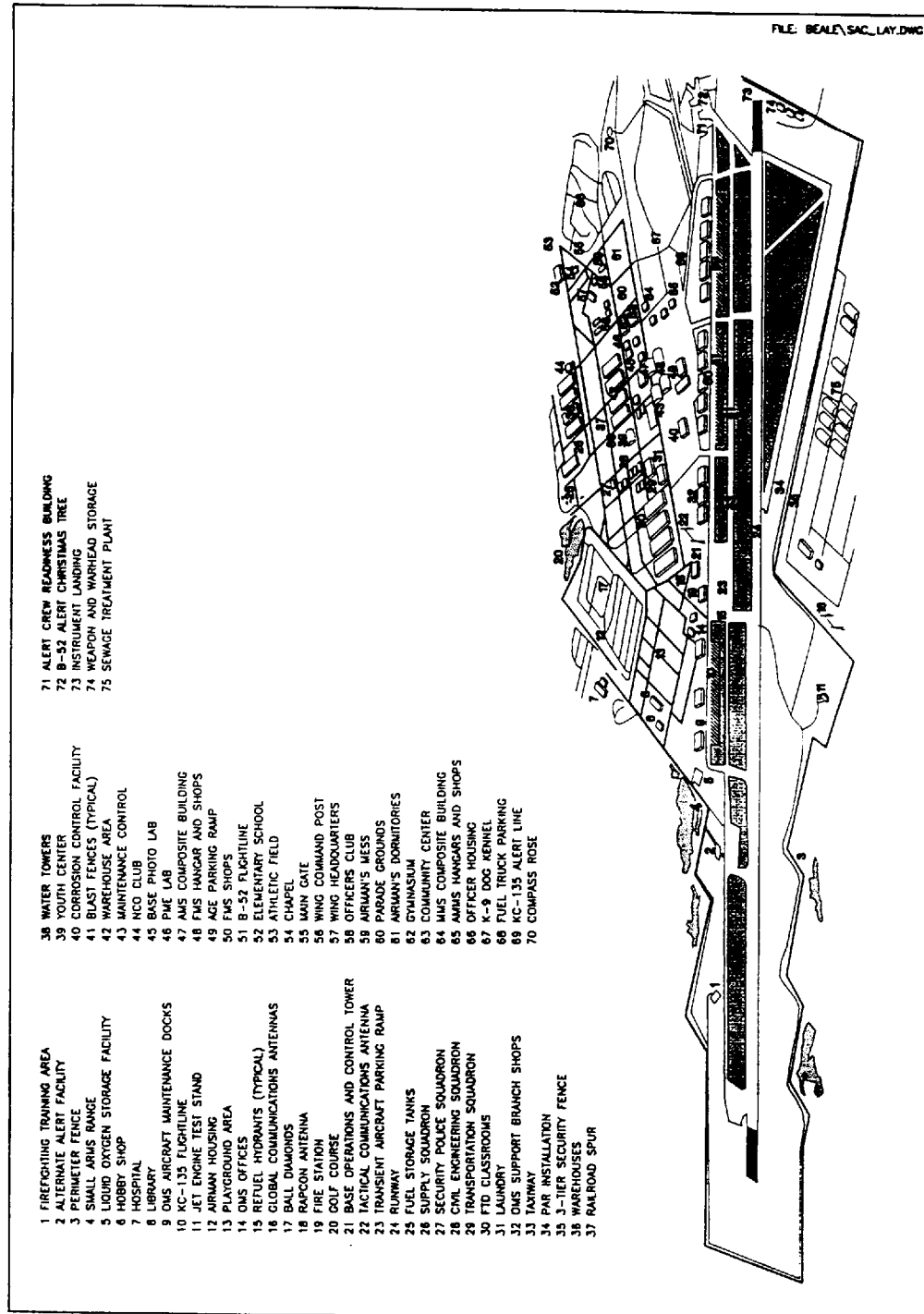


Figure 2.3 Standard Strategic Air Command Base Layout.

divided by expanses of open space. The three areas of the base are the flight line, cantonment, and family housing areas.

The flight line is at the western edge of the developed base, with most buildings and facilities located to the east of the runway. The base runway and aprons are oriented north/south. The buildings in the flight line area are generally mission and support facilities.

Community and administrative buildings are located in the cantonment area, which was originally part of the developed area of Camp Beale and lies further east of the flight line. The facilities in this area include the former Semi-Automatic Ground Environment (SAGE) building, the Wing and Group Headquarters, support squadrons such as Civil Engineering, and community buildings such as the commissary and exchange. Other types of development include a mobile home park, unaccompanied housing, and the golf course.

Family housing is in a hilly area east of the cantonment area and is the farthest developed area from the flight line. The hospital, officer's temporary quarters, youth center (the former Officer's Club), and the combined Non-Commissioned Officer (NCO) and Officer's Club are community facilities located to the north of this housing area. Also included in this area are two schools and a church. The housing area winds among the hills and includes Capehart Housing for all ranks. The commander's housing area is separate, is located between the family housing and the community facilities, and forms a circle around a park.

Separate from these three developed areas is the radar facility, located north of family housing and northeast of the cantonment area in an otherwise empty area. The facility is protected by an alarmed fence and guarded entrance check house. The facility's location aids in protection of the secret missions associated with the structure and provides safety zones for microwave radiation produced by its sensors.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan of Beale AFB and Figure 2.5 is a diagrammatic land use plan of a standard SAC base. Beale AFB's land use pattern is very similar to that of a standard SAC base. In both plans, most of the buildings are located on one side of the flight line.

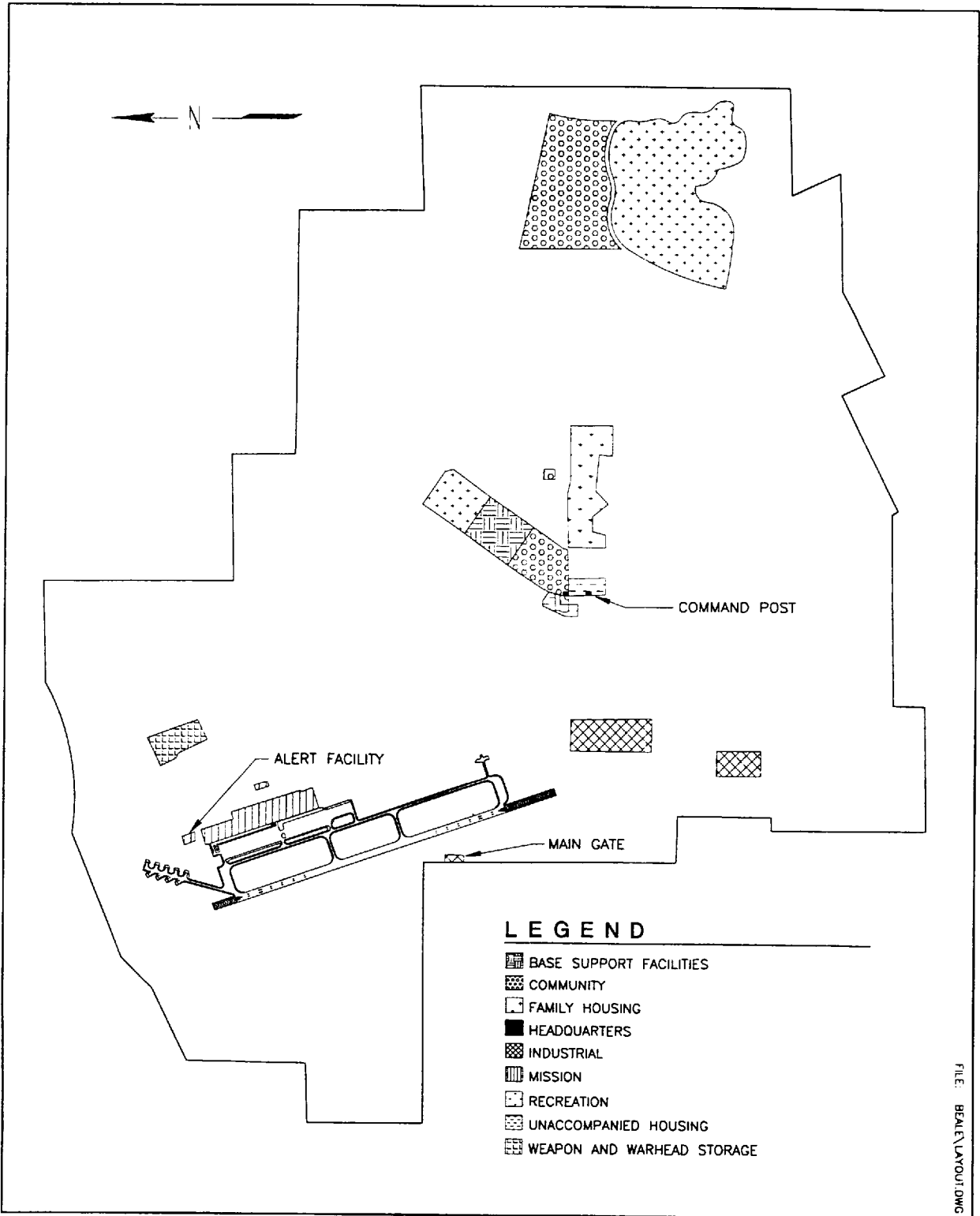


Figure 2.4 Beale Air Force Base Land Use Diagram.

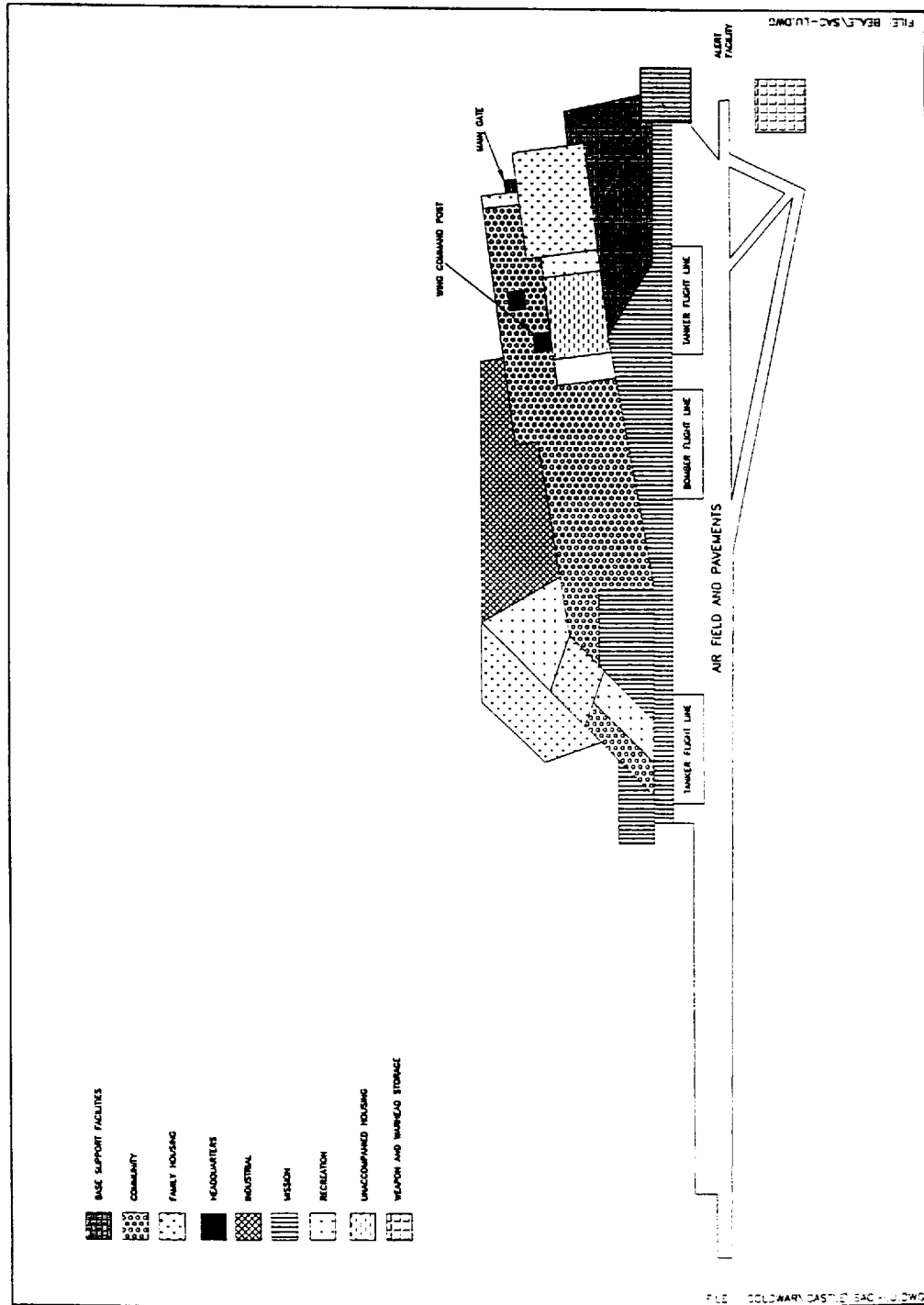


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

Headquarters are located near the middle of the base, away from the flight line. Community, base support, unaccompanied housing, and some recreation areas are centrally located on both plans and provide a buffer between mission areas and housing areas, which are located at a distance from the flight line area. Recreational areas are also situated in and around the housing areas.

The main difference between the Beale AFB and the standard SAC base diagram is the large open space between each of the three main areas of the base. The space in between these areas is rolling grass hills, which are quite dry in the summer months and pose a potential fire hazard. Many firebreaks throughout the base protect the different areas and keep the spread of fire to a minimum.

Another difference between the two diagrams is the placement of Beale AFB's weapon and warhead storage area on the same side of the flight line as the mission area. In the standard diagram, the storage area placement is on the undeveloped side of the flight line, probably as a safety measure. However, due to the large amount of space available on Beale AFB, the storage area is still a long distance from the developed areas of the base and thus retains this measure of safety.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Beale AFB is named for Edward Fitzgerald Beale (1822-1893), who was a western explorer, Commissioner of Indian Affairs, Brigadier General, Surveyor General of California and Nevada, and a prominent California landowner (Mueller 1989). The site of the present base was first established in 1849 as Camp Far West to keep the peace for settlers during the California Gold Rush. The original camp has been nearly obliterated (Krahulec and Goddard 1980).

The site began its modern military existence as the U.S. Army's Camp Beale in 1942. With the United States' entry into World War II in 1941, many new locations were needed for military operations. Leading citizens in the nearby city of Marysville had been trying for some time to attract a military installation to the area. Approximately 86,000 acres were acquired from over 150 owners through the right of eminent domain for the purpose of establishing Camp Beale (Bal 1979).

Construction on the camp began in 1942, and troops and equipment arrived soon after. The 13th Armored Division trained at the camp and was followed by the 81st and 96th Infantry Divisions. The camp also served as a personnel replacement depot, induction center, a west coast separation center, and hospital (Krahulec and Goddard 1980). Camp Beale was also utilized as a German prisoner-of-war (POW) camp during and shortly following World War II. The self-contained, fenced camp held approximately 1,000 prisoners, while five smaller camps administered from Beale and located in surrounding communities held an additional 1,000 prisoners each (Krahulec and Goddard 1980). The POWs were tasked to do a variety of jobs at the camp as well as agricultural labor in the community. The Germans were reportedly treated very well to ensure that the Nazi government would have no reason to retaliate against American prisoners (Bal 1979; Krahulec and Goddard 1980). Although many of the buildings associated with Camp Beale have

since been removed or demolished, numerous building foundations can still be observed at the site. Two concrete solitary confinement cellblocks are all that remain of the POW camp.

In 1947, Camp Beale was declared a surplus property. However, in 1948, it was renamed Beale Air Force Range (AFR), to be used by the newly established Air Force as a bombing range for planes based at Mather AFB near Sacramento (Bal 1979). In 1951, command of Beale AFR was transferred to Continental Air Command (CAC), and the range functioned as a training base for Special Category Army with Air Force (SCARWAF) personnel. This group was comprised of Army personnel assigned to the new Air Force as a transitional work force (Bal 1979; Krahulec and Goddard 1980). The camp continued to function as a bombing range and was renamed Beale AFB in 1951.

Beale was considered as a possible location for the Air Force Academy in 1949. Although it was not chosen, the prospect resulted in a renewed interest among community members to maintain the base. The SCARWAF personnel were seen as only temporary residents, thus a more permanent tenant was actively sought. The local promotion of the base went so far as to produce a large document detailing the advantages of Beale AFB (Bal 1979).

At the same time that Beale AFB area residents were requesting a permanent installation at the base, the Soviet Union's development of the Bear and Bison bombers was igniting fears of a "bomber gap" between the United States and the Soviet Union (Goldberg 1957). This resulted in a call for the production of more U.S. long-range bombers. In 1957, the Gaither Report claimed the Soviet Union could possess a first-strike capability against the United States as early as 1959 and recommended that bombers be dispersed to numerous bases to help ensure that a substantial portion of the strategic bomber and tanker force would survive a Soviet first strike (Lewis et al. 1995).

Beale AFB had been assigned to SAC in August of 1956 and now was to serve as a dispersal base for bombers and tankers. The 4126th Strategic Wing (SW) was activated, and construction

of a new runway and all necessary support facilities was undertaken between 1956 and 1959 (Krahulec and Goddard 1980). The 4126th SW would consist of the 903rd Air Refueling Squadron (AREFS) and the 31st Bombardment Squadron (BMS) (Bal 1979). KC-135 *Stratotanker* refueling planes began arriving at Beale AFB in July of 1959, and the wing was declared combat ready in November 1959. In 1960, 12 B-52 *Stratofortress* bombers were delivered for operation by the 31st BMS. As part of the SAC B-52 dispersal plan, the 14th Air Division was assigned to Beale AFB in January of 1960 (Krahulec and Goddard 1980). The 4126th SW was then redesignated the 456th SW.

Beale AFB assumed an early warning role in 1959 as part of a major effort to protect against possible enemy bomber attack. The original realization of a bomber threat was based on the 1953 detonation of a Soviet hydrogen device and the subsequent Killian Report, which was presented to the National Security Council (NSC) in March of 1954 (Lewis et al. 1995). The report noted that in spite of the U.S. advantage in nuclear strike capability, the nation was vulnerable to surprise attack as a result of poor air defense, lack of early warning systems, and an increasingly large Soviet long-range bomber force.

To remedy the situation, a defense network including a variety of early warning devices, fighter interceptors, and the SAGE system was to be established along the northern and coastal borders of the United States. The SAGE buildings, one of which was to be located at Beale AFB, were controlled by Air Defense Command (ADC). Construction of a SAGE building at Beale AFB was begun in 1959. The building contained two large computers; radar, communication, and electronic equipment; and command and control rooms. The computers calculated the elevation, speed, and distance of incoming targets using data from various radar systems, and then figured the most efficient intercept route and relayed that information to the fighter interceptors based in its sector. The Beale AFB SAGE building was responsible for the San Francisco Air Defense Sector and was active between 1959 and 1962 (Bal 1979; Lewis et al. 1995).

In 1954, the Killian Report recommended that highest priority be given to the development of the United States Air Force's (USAF's) missile program (Lewis et al. 1995). In response, President Eisenhower called for the deployment of Atlas and Titan I missiles at 16 SAC bases. Beale AFB was chosen for installation of three Titan missile sites, each with three missile silos.

Construction of the sites began in 1959 at three separate locations near Beale AFB. The missiles were placed under the command of the 851st Strategic Missile Squadron (SMS) of the 456th SW at Beale AFB. With the addition of missiles, the 14th Air Division became the 14th Aerospace Division and the 456th SW became the 456th Strategic Aerospace Wing (SAW). Construction involved the installation of an underground, concrete, dome-shaped power plant and support facilities, as well as a network of connecting tunnels. The Air Force accepted the missile complexes in 1962. The Titan missiles were stationed at Beale AFB for only a short time, and were deactivated in April of 1965 to make way for the more advanced Titan II and Minuteman missiles being stationed at other bases (Krahulec and Goddard 1980). The 851st SMS was also deactivated at this time.

The SR-71 *Blackbird* reconnaissance plane, perhaps the most widely recognized plane in Air Force history, was assigned to Beale AFB in 1964. The futuristic looking aircraft was designed to be a highly survivable surveillance aircraft that could photograph a wide territory in a short span of time. Its Mach 3 speed and extremely high flying elevation virtually ensured that it could not be hit by enemy missiles.

The 4200th Strategic Reconnaissance Wing (SRW) was activated at Beale AFB in January 1965 and became the base host, and the SR-71s were delivered a year later. The 4200th SRW was redesignated the 9th SRW in June of 1966 in order to honor a distinguished unit (Krahulec and Goddard 1980). The 1st Strategic Reconnaissance Squadron (SRS) was designated as the wing's flying squadron. Over the years, the SR-71 set several speed and distance records.

The base now had two wings, the 9th SRW and the 456th SAW. In 1970, the 456th SAW acquired the 9th AREFS, giving it two tanker squadrons. In 1972, with the removal of the missile mission from the base, the 14th Aerospace Division returned to the name 14th Air Division and the 456th SAW became the 456th Bombardment Wing (BMW). Also, the 31st BMS was renumbered the 744th. In 1975, the 456th BMW took on the role as base host. Later that year, the wing was deactivated and renamed the 17th BMW (Beale AFB 1993). At this time, the 744th BMS was renumbered the 34th.

In 1976, the U-2 reconnaissance plane was transferred from Davis-Monthan AFB in Arizona to Beale AFB and its 9th SRW in order to streamline USAF reconnaissance efforts by having both aircraft, SR-71 and U-2, stationed at the same base. The 99th SRS was assigned to the U-2. That same year, Beale AFB's B-52 fleet and the 34th BMS were relocated to other SAC installations, removing the bomber mission from the base. In accordance with this change, the 17th BMW was deactivated, and its tanker squadrons, the recently acquired 9th AREFS and the 903rd, which were renumbered the 350th and 349th respectively, were transferred to the newly established 100th AREFW on the base. The 100th AREFW assumed base host responsibilities. With the bomber mission gone, the tanker fleet was maintained in support of reconnaissance aircraft only.

Beale AFB was again chosen for an early warning role when, in 1975, it was announced that a Precision Acquisition Vehicle Entry Phased Array Warning System (PAVE PAWS) would be installed. This powerful radar system was intended to track incoming submarine-launched ballistic missiles (SLBM) and give immediate warning to the National Command Authority (NCA). It was also planned to be used for the tracking of satellites and space debris. The Beale AFB PAVE PAWS is responsible for tracking all incoming objects over the Pacific Ocean. Three other PAVE PAWS facilities, located in Texas, Georgia, and Massachusetts, are responsible for monitoring the Gulf of Mexico and the Atlantic Ocean (USAF n.d.).

The PAVE PAWS facility became operational in 1979 in spite of community fears and protests about possible negative health effects of microwave radiation that reportedly would be produced by the facility (Krahulec and Goddard 1980). The facility was originally operated by Aerospace Defense Command, was turned over to SAC soon after completion, and finally was transferred to Space Command in 1982 (USAF n.d.). PAVE PAWS at Beale AFB is operated by the 7th Space Warning Squadron of the 21st Space Wing. The structure is triangular in shape and consists of two large arrays of radar transmitters and receivers that act as one unit to produce a powerful electronic beam (USAF 1992, n.d.).

The decade of the 1980s was a busy time for the base. In August 1981, Beale AFB received the TR-1 reconnaissance aircraft. At this same time, the 4029th Strategic Reconnaissance Training Squadron (SRTS) was activated at the base under the 9th SRW, with responsibility to train all U-2 and TR-1 pilots. Two years later, the 4029th SRTS also took over training for the SR-71. Also in 1983, the tanker squadrons maintained for refueling of the SR-71s, the 349th and the 350th, were placed under the command of the 9th SRW. The 100th AREFW was subsequently deactivated. In 1986, the 4029th SRTS was deactivated and replaced by the 5th SRTS.

In 1990, the SR-71 aircraft was retired due to Congressional budget cuts and the high cost of the plane, and the 9th SRW transferred base host responsibilities to the 14th Air Division. In 1991, the 14th Air Division was deactivated, and the Second Air Force was reactivated at Beale AFB for the USAF's reconnaissance headquarters. With this change, the 9th SRW once again assumed base host responsibilities.

In June 1992, Beale AFB became a member of ACC. With this change, the 9th SRW was renamed the 9th Wing (Beale AFB 1993). The 349th AREFS was deactivated, and in 1993, the 350th AREFS was transferred to Air Mobility Command but remained at the base. In July 1993, the Second Air Force was deactivated, and Beale AFB was moved under the 12th Air Force. Later that same year, the 9th Wing was once again renamed, this time to 9th RW.

3.2 BASE DEVELOPMENT

Beale AFB has had a lengthy history in comparison to many AFBs, as well as numerous missions. This has resulted in several construction episodes that have influenced the development of the base.

The Army Corps of Engineers and contractors immediately began construction of base facilities when the installation was acquired in 1942. Over 7,000 workmen worked to build all the necessary structures for Camp Beale. Barracks, administrative buildings, warehouses, mess halls, chapels, streets, and training areas were all constructed (Figure 3.1). Barracks were completed by September 1942, when the first troops of the 13th Armored Division arrived.

During World War II, the camp housed over 60,000 personnel and had 10 chapels, five theaters, and 175 mess halls (Krahulec and Goddard 1980). When the camp was deactivated in 1947, over 70 percent of the structures were sold and removed or demolished (Bal 1979). Foundations near the present cantonment and other remnants around the base are all that remain of Beale's World War II mission (Krahulec and Goddard 1980) (Figure 3.2).

When SCARWAF personnel were assigned to Beale AFB in 1951, new buildings had to be constructed to house men and operational activities. Most of the building construction and rehabilitation was of a general nature in that the buildings could serve any number of functions once completed. Many of the facilities of the period were planned as semi-permanent structures, with a few temporary and permanent buildings (Figure 3.2) (Krahulec and Goddard 1980).

SCARWAF personnel were withdrawn in 1956 and later that year it was announced that SAC would take over the base for use by bombers and tankers. The buildings used by SCARWAF were boarded up, and SAC began construction of many new structures to meet the needs of its mission (Figure 3.2). Between 1956 and 1959, construction was undertaken on new housing areas, officer and NCO clubs, a hospital, and a new runway. Ground was broken for the new runway in 1957,

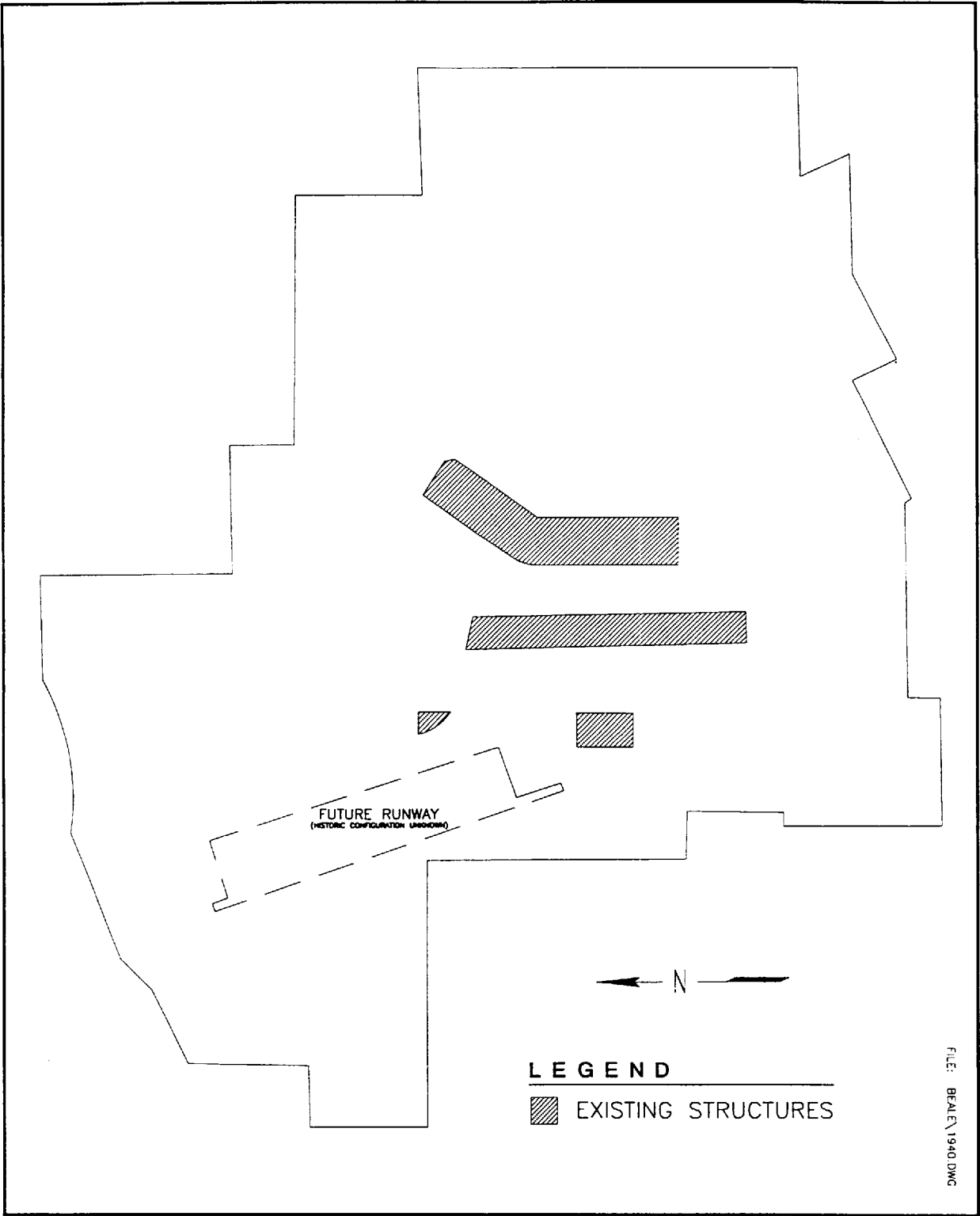


Figure 3.1 Beale Air Force Base, 1940.

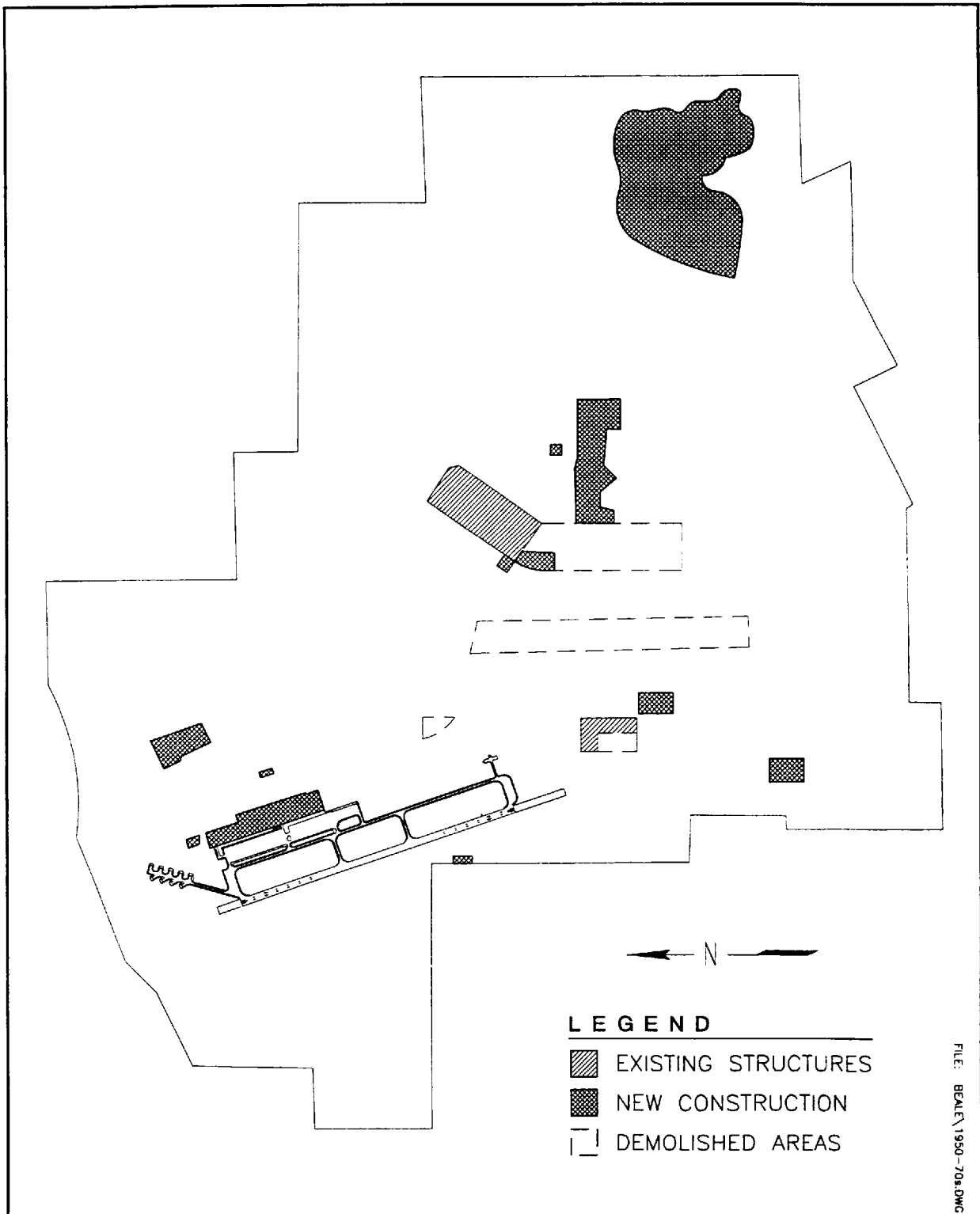


Figure 3.2 Beale Air Force Base, 1950-1970.

and it was completed in August of 1958. Hangars and maintenance shops were constructed for the KC-135 tankers and B-52 bombers (Krahulec and Goddard 1980).

In January of 1962, construction began on nine missile silos at three Titan I missile sites near Beale AFB. The entire complex was underground and required a huge amount of earth moving. The silos were 155 ft deep covered by two 125 ton concrete leaf doors. Two large concrete domes housed the power plant and control facilities, and the entire complex was connected by a series of tunnels (United States Army Corps of Engineers 1962).

Further development at the base included the construction of hangars for the SR-71 and support buildings, including a physiological support building necessary for pilot preparation for the physically demanding SR-71 mission. Hangars were constructed for the U-2 aircraft, which transferred to Beale AFB in 1976. PAVE PAWS was a major construction effort in the late 1970s (Krahulec and Goddard 1980) (Figure 3.3).

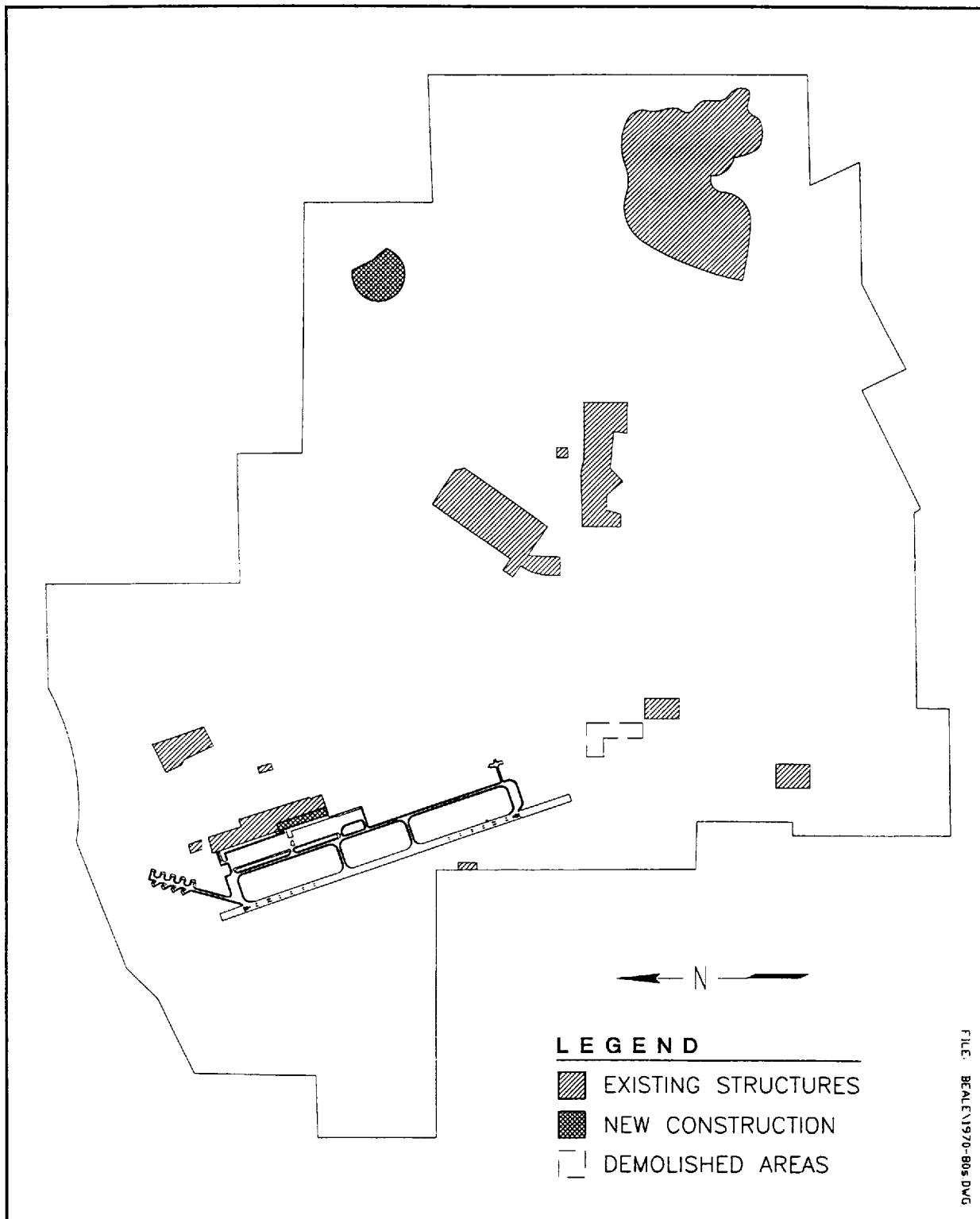


Figure 3.3 Beale Air Force Base, 1970-1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Beale AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Beale AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Beale AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Mr. John Thompson, a natural resource specialist with the Civil Engineering Environmental Office, met with the Mariah field team upon its arrival at Beale AFB and introduced the team to the individuals who would provide the information required to complete the field work. These people included Drawing Room staff, CAD operators, and Real Property Office staff. The Mariah team met briefly with the Wing Historian, Dr. Coy Cross. The historian provided a history of the base and arranged a meeting with Mr. Fred Carmody, a long-time Lockheed employee assigned to both the SR-71 and U-2 programs at Beale AFB. The team was in contact with Mr. Thompson on a daily basis.

The fieldwork began with an orientation tour of the base provided by Mr. Thompson. Access to the flight line proved problematic since an escort was required. While waiting for flight line access, the survey and inventory of buildings off the flight line was completed. A flight line escort was arranged by the 9th Reconnaissance Wing Executive Officer Captain Risse, and the team was escorted by Security Police Technical Sergeant Thibadeaux during inventory of flight line buildings. Certain buildings were selected for evaluation based on their importance to Beale AFB's

Cold War history. These buildings were documented, photographed, and researched in the Real Property Office.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Beale AFB, 115 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Four resources were evaluated at Beale AFB, three of them falling under the DoD category of real property and one under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Architectural Drawing Files (Resource No. 17116, Located in Real Property No. 2535)

Beale AFB drawing files include two rows of 10 ft tall flat files of architectural drawings. The files contain numerous historical maps, original base master layouts, and construction and utility project drawings of Beale AFB and related facilities. The maps are of paper, linen, mylar, vellum, and blue line reproductions. The flat files contain valuable information about historic structures on base and the development of the installation throughout the Cold War. The majority of drawings are in good condition, but are threatened by frequent handling and removal from drawers.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Architectural Drawing Files	17116	None	Rec/Doc	15
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	17103	1200	Real/Bldg	20
Communications	SAGE Facility	17002	2145	Real/Bldg	20
Intelligence Facilities					
Radar Sites	PAVE PAWS Facility	17059	5760	Real/Bldg	20

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	17002	2145	SAGE Facility
20	17059	5760	PAVE PAWS Facility
20	17103	1200	Bomber Alert Facility
15	17116	None	Architectural Drawing Files

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 17103, Real Property No. 1200)

The Bomber Alert Facility, constructed of reinforced concrete, functioned as a self-contained community for B-52 bomber crews who were required to live at the facility for seven day periods and respond to any drill or war situation at a moment's notice. This facility, built in 1959, was used for alert duty until 1976, when it was decommissioned. Bedrooms, dining rooms, a recreation room, and a briefing room were all located in the building. A distinctive feature remaining at the facility is an earthen berm surrounding the building. The alert building was a secure facility and is surrounded by a chain link and barbed wire fence complete with a security control entry building. A security police tower is located on the adjacent bomber alert apron. An associated building still located outside the alert security perimeter was used for marital and family activities.

The building was initially remodeled for office space after being decommissioned from alert functions. In November 1995, despite a recommendation that this building was eligible for listing on the NRHP, a complete renovation project was initiated which removed any remnants of kitchens, dining rooms, and dormitories. The large ramp tunnels which allowed for rapid egress from the building to the planes were filled in with concrete block. Because of the amount of renovation conducted on this building, the building no longer retains its integrity.

The Bomber Alert Facility is highly significant to Beale AFB and the Cold War nationally. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to NSC-68, the concept of deterrence by intimidation, and the dispersion of bombers across the country as recommended in the Killian Report (Lewis et al. 1995) The B-52 force was an integral part of the DoD defense triad

and was relied on as the United States' primary manned nuclear bomber for over 30 years. This facility was used for this purpose during Phases II and III and meets NRHP criterion (a).

6.2.2 Communications

6.2.2.1 SAGE Facility (Resource No. 17002, Real Property No. 2145)

This building was originally designed to house the SAGE system, an early warning system that detected incoming enemy bombers and controlled interceptor fighters. Built in 1959, this building served its SAGE mission until early 1962, when it began use as a photo lab. The building currently houses a photo reconnaissance laboratory and offices for various base units, including the 9th RW support squadrons.

The building's integrity was evaluated based on the presence of features which convey the facility's importance to the Cold War. Specific SAGE features that are still intact include its windowless, reinforced concrete construction. However, the exterior has been modified to reduce its stark appearance, such as the addition of a sloping roof, a canopy, and a new facade on the front of the building. The basement of the building originally housed two large computers, mechanical equipment, and a large, well-stocked, fallout shelter. The computers have since been removed, but 4 to 6 inch diameter holes through the concrete ceiling show where the computer cables and conduits penetrated into the rest of the building. Currently, this basement contains full-room air handling units. The upper floors originally contained offices, weapons control system rooms, and support facilities for SAGE. These areas are now used for a photo reconnaissance laboratory and offices for various base units. Thus, the appearance of the exterior and the entire interior of the building have been renovated, resulting in a lack of integrity for the building.

This building was constructed as part of the early warning radar system that was called for in the Killian Report (Lewis et al. 1995). It was another link in the NORAD system, which disseminated information between Beale AFB and SAC. The building's design and features exhibit the importance of nuclear survivable systems to the overall deterrence role of SAC. The exceptionally important function of the building conveys the United States' fear of surprise nuclear bomber attack by the Soviet Union and reflects the desire to gain early warning and successful interception of such an attack. This building served this function during Phase II of the Cold War and meets NRHP criterion (a).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Beale AFB.

6.4 TRAINING FACILITIES

None were evaluated at Beale AFB.

6.5 INTELLIGENCE FACILITIES

6.5.1 Radar Sites

6.5.1.1 PAVE PAWS Facility (Resource No. 17059, Real Property No. 5760)

This facility, known as PAVE PAWS, is one of four units located in the United States. PAVE PAWS units are also located at El Dorado Air Force Station (AFS) in Texas, Robbins AFB in Georgia, and Cape Cod AFS in Massachusetts. Each unit is part of a national system under Aerospace Defense Command designed to provide early warning detection and tracking of both SLBMs and intercontinental ballistic missiles (ICBM), as well as tracking of satellites.

PAVE PAWS is a phased array technology that can track multiple targets moving at high speeds, and has a longer range than conventional radar systems and uses less power. A conventional radar system can take several seconds to mechanically move and track an object, while the PAVE PAWS system can do the same immediately through transmission sequence and phasing of the antenna elements. These antenna elements allow the system to perform simultaneous surveillance missions including detection, characterization, and warning of missile attack, as well as tracking 7,000 items in orbit around the earth. Satellites and space trash are some of the items that are tracked through the radar area for the Beale AFB PAVE PAWS unit and then passed for tracking to the next unit. The information gained from this tracking goes into the satellite catalog (SATCAT), which allows the Space Surveillance Center to track orbiting material and aids in developing the United Nations Registry Report.

The unit at Beale AFB was accepted by Aerospace Defense Command in 1979 and shortly after was transferred to the 14th Air Division of SAC. In 1983, the site was transferred to Space Command. Currently the site is being run by the 7th Space Warning Squadron and Raytheon, which works under contract to the Air Force. When Raytheon becomes the prime operator of the site, approximately 30 Air Force staff will be involved.

This PAVE PAWS facility is a steel frame structure that is almost triangular in plan. The antennae are located on two of the elevations in a 102 ft (31 m) diameter octagon. The antenna walls are tilted back at a 20° angle. Each array contains approximately 1,800 active antenna elements and has room for more. If additional antennae were installed, the array would cover a greater distance. Each of the 1,792 antennae transmits the same amount of power as three 100 watt light bulbs. As the signal from each travels outward, it is reinforced by other signals and develops into a high power beam.

Both the exterior and interior of the building was examined by the field team, and the integrity of each was determined to be intact. This was not surprising as the building has had and continues to have only one function, PAVE PAWS.

The primary mission of the PAVE PAWS unit is the detection, warning, and characterization of a missile attack. The system tracks high speed objects and determines whether they are incoming ballistic missiles. High priority data, such as incoming information, is transferred to the Worldwide Military Command and Control System, which then transfers the information to the National Military Command Center in Washington, D.C., North American Aerospace Defense (NORAD) Command in Colorado Springs, and SAC Command Post at Offutt AFB, Nebraska. This ballistic missile tracking mission gives PAVE PAWS its exceptional Cold War significance. The site manager for PAVE PAWS during the 1970s, Jerry Coffey, said the following about the PAVE PAWS system:

It's a deterrent. For Russia to be able to overpower the United States, they have to catch us by surprise and would have to hit our Triad. They would have to launch a sufficient number of warheads to slam the doors shut on the silos, catch the birds on the ground and the subs in the pen. If PAVE PAWS is sitting here watching, and they know we are here watching, it's just like having a real bad dog in your front yard. When a guy comes up to your gate, he'll probably turn around and go home before he goes through the gate [Bal 1979].

SACs primary mission was deterrence (Lewis et al. 1995) and during the Cold War the goal of PAVE PAWS was to deter nuclear attack through the demonstrated capability of knowing exactly how and when a strike was occurring. An informed command structure would be prepared to react. PAVE PAWS epitomizes the concepts of survivability and deterrence. The facility was built and made operational during Phase III of the Cold War, and continued in operation during Phase IV. It meets NRHP criteria (a) and (c).

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Beale AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Beale AFB. These resources should be investigated further for a more comprehensive analyses.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Beale AFB revealed approximately 80 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the B-52, the Titan I missile, SAGE, PAVE PAWS, and reconnaissance aircraft. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Beale AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

There are no known projects planned at Beale AFB that may impact the resources noted as important in this report.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Beale AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Beale AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Beale AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Beale AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
17002	2145	SAGE Facility	*					NRHP eligible now.
17059	5760	PAVE PAWS Facility		*	*	*		
17103	1200	Bomber Alert Facility	*					
Record or Document - Object								
17116	None	Architectural Drawing Files		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Architectural Drawing Files (Resource No. 17116, Located in Real Property No. 2535)

The majority of the drawing files are in good condition; however, they are threatened by frequent or occasional handling and removal from the drawers. It is recommended that the files be inventoried, with the originals going to a permanent curatorial facility for stewardship and conservation.

9.2.2 Bomber Alert Facility (Resource No. 17103, Real Property No. 1200)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III. It meets NRHP criterion (a) based on its role in sustaining a survivable force to meet the needs of deterrence. However, the integrity of the building has been impacted due to extensive renovations, which were conducted after the building was recommended as eligible to the NRHP. Due to these renovations and the resulting lack of

recommended as eligible to the NRHP. Due to these renovations and the resulting lack of integrity for the building, this building is now recommended as not eligible for listing on the NRHP.

9.2.3 SAGE Facility (Resource No. 17002, Real Property No. 2145)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II. It meets NRHP criterion (a) based on its role in early warning and response. However, the building no longer retains integrity due to extensive renovations and additions. Therefore, the building is recommended as not eligible for listing on the NRHP.

9.2.4 PAVE PAWS Facility (Resource No. 17059, Real Property No. 5760)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III through IV. It meets NRHP criteria (a) and (c) based on its role in early detection and warning, and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact since only minimal modifications have been made to the interior. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Bal, P.

- 1979 *Pebbles in the Stream*. Marysville, California.

Beale Air Force Base

- 1993 *Beale Air Force Base*. Marcoa Publishing, Inc. San Diego, California.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Goldberg, A. (ed.)

- 1957 *A History of the United States Air Force, 1907-1957*. D. Van Nostrand, Princeton, New Jersey.

Krahulec, SSgt J. L., and SSgt S. D. Goddard

- 1980 *History of Beale Air Force Base*. United States Air Force, Beale Air Force Base, California.

Lewis, K., and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*, Vol. 1. Office of History, United States Air Force, Washington, D.C.
-

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service. Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

United States Air Force

- 1992 Fact Sheet, PAVE PAWS. 7th Space Warning Squadron, Beale Air Force Base, California.
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
- n.d. *History of the 7th Space Warning Squadron*. 7th Space Warning Squadron, Beale Air Force Base, California.

United States Army Corp of Engineers

- 1962 History of Corps of Engineers Activities at Beale AFB. Report prepared by Lt. Col. Joseph H. Sheppard, United States Army Corps of Engineers Ballistic Missile Construction Office, Beale Area, California.
-

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	17001	2140	Reconnaissance Photo Laboratory	1953
	17002	2145	Reconnaissance Photo Laboratory (SAGE Facility)	1959
	17003	2171	Communication Facility	1952
	17004	2161	Numbered Air Force Headquarters	1953
	17005	2160	Medical Command and Administration	1954
	17006	2159	Communication Facility	1958
	17007	2156	Visiting Airmen's Quarters	1952
	17008	2155	Airmen's Open Mess	1953
	17009	2401	Airmen's Dormitory PP/PPS-STD	1985
	17010	2415	Audio Visual Facility	1983
	17011	25309	Airmen's Dormitory	1992
	17012	2400	Group Headquarters	1953
	17013	2490	Airmen's Dining Hall	1981
	17014	2432	Group Headquarters	1953
	17015	2435	Base Chapel	1953
	17016	2440	Security Police Operations	1953
	17017	2439	Library Recreation	1953
	17018	2467	Miscellaneous Recreation Facility	1986
	17019	2475	Education Center	1953
	17020	2477	Education Center	1953
	17021	26216	Housing Supply and Storage Facility	1991
	17022	None	Mobile Home	Unknown
	17023	2529	Wing Headquarters	1953
	17024	2493	Fire Station	1942
	17025	2535	Base Engineering Administration	1953
	17026	2491	Vehicle Operations Administration	1953
	17027	2483	Group Headquarters	1953
	17028	2470	Museum Building	1953
	17029	25608	Commissary Store	1992
	17030	2471	Base Supply Administration	1954
	17031	2453	Clothing Store	1952
	17032	2445	DPI	1984
	17033	2452	Munitions Loading Crew Training	1952
	17034	2431	Bowling Center	1961
	17035	2418	Gymnasium	1965
	17036	2417	Wing Headquarters	1953
	17037	2419	Law Center	1953
	17038	2177	Correction Facility	1952
	17040	2420	Wing Headquarters	1942
	17041	2179	Family Support Center	1952
	17042	2132	Security Police Kennel Support Building	1965

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	17043	Unknown	Airmen's Dormitory	1992
	17044	2496	Vehicle Maintenance Shop	1954
	17045	2499	Vehicle Fuel Station	1953
	17046	2447	Exchange Cafe Snack Bar	1988
	17047	2474	Base Theater	1975
	17048	2433	Bus Shelter	1986
	17049	2434	Exchange Sales Store	1971
	17050	2427	Arts and Crafts Center	1971
	17051	2459	Commissary Store	1952
	17052	2422	Swimmer's Bath House	1962
	17054	2425	Recreation Center	1953
	17055	250	Rod and Gun Club	1961
	17056	409	Jet Fuel Storage	1959
	17058	None	World War II POW Cell Block	Unknown
	17059	5760	PAVE PAWS Facility	1978
	17060	26232	new building	1994
	17061	24114	Airmen's Dormitory	1992
	17062	24112	Lodging	1992
	17063	24206	Zone Maintenance	1994
	17064	770	Traffic Checkhouse	1988
	17065	25504	Veterinarian	1994
	17066	2241	Golf Clubhouse	1968
	17067	5709	Flight Surgeon's Clinic	1984
	17068	5704	Material Services	1974
	17069	5700	Composite Medical Facility	1961
	17070	2340	Youth Center	1961
	17071	2322	Swimmer's Bath House	1962
	17072	2362	Visiting Officer's Quarters	1965
	17073	2314	Capehart Family Housing	1962
	17074	3833	Capehart Family Housing	1960
	17075	3839	Capehart Family Housing	1960
	17076	4264	Capehart Family Housing	1962
	17077	3268	Chapel Center	1968
	17078	None	Lonetree School	Unknown
	17079	4352	Capehart Family Housing	1962
	17080	3304	Branch Exchange	1972
	17081	3306	Child Care Center	1967
	17082	5110	Temporary Lodging Facility	1967
	17083	5235	Family Housing (Appr. 1970A)	1975
	17089	1317	Conventional Munitions Shop	1961
	17090	1319	Explosive Ordnance Disposal	1975
	17091	1320	Spare Inert Storage	1961

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	17092	1322	Conventional Munitions Shop	1959
	17093	1325	Traffic Checkhouse	1959
	17094	None	Titan Missile Components	Unknown
	17098	1068	Aircraft Shelter	1982
	17099	1049	Aircraft Shelter	1967
	17100	1060	Base Operations	1959
	17101	1077	Fuel System Maintenance Dock	1963
	17102	1243	Large Aircraft Maintenance Dock	1971
	17103	1200	Security Police Operations (Bomber Alert Facility)	1959
	17104	1210	Aero Club	1971
	17106	1225	Shop A/SE Storage Facility	1961
	17107	1086	General Purpose Aircraft Shop	1959
	17109	1062	General Purpose Aircraft Shop	1953
	17110	1073	Refueling Vehicle Shop	1988
	17111	1032	PME Laboratory	1968
	17112	1025	General Purpose Aircraft Shop	1966
	17113	1034	Physiological Support Division	Unknown
	17114	1023	Warehouse Supply and Equipment Base	1973
Real Property - Landscape				
	17057	None	Major Mack Memorial	Unknown
	17084	None	Playground	Unknown
Real Property - Object				
	17039	None	U-2 Static Display	Unknown
	17095	None	T-38 Static Display	Unknown
	17096	None	EB-57 Static Display	Unknown
Real Property - Structure				
	17085	1318	Segregated Magazine Storage	1959
	17086	1314	Storage Igloo	1959
	17087	1309	Storage Igloo	1975
	17088	1315	Multi-Cubicle Magazine Storage	1959
	17097	1044	Aircraft Shelter	1988
	17105	Unknown	Engine Test Cell	Unknown
	17108	1072	Aircraft Wash Rack Pad	1962
	17115	1150	Water Tank Storage	1969
Record or Document - Object				
	17116	None	Architectural Drawing Files	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

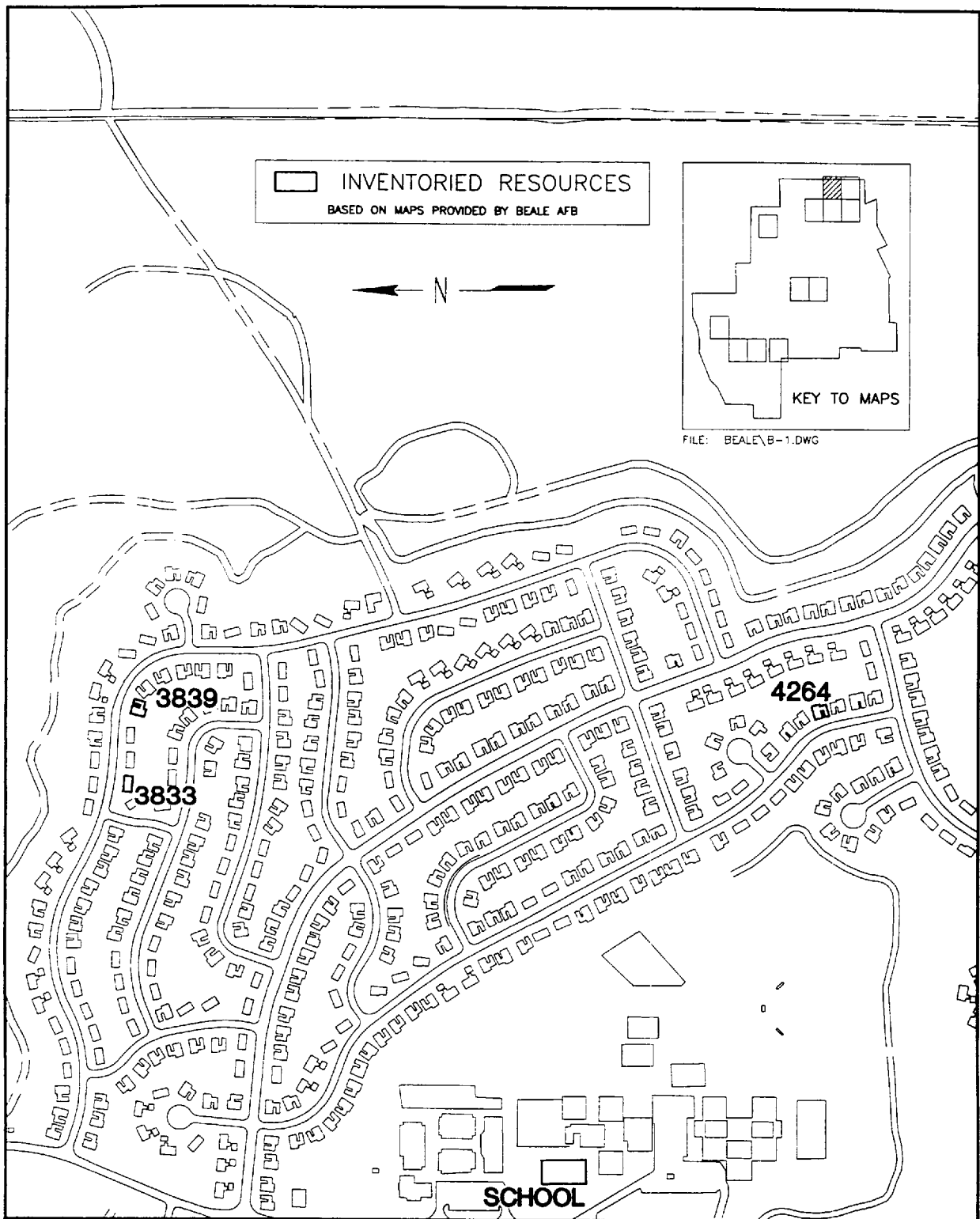


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 12).

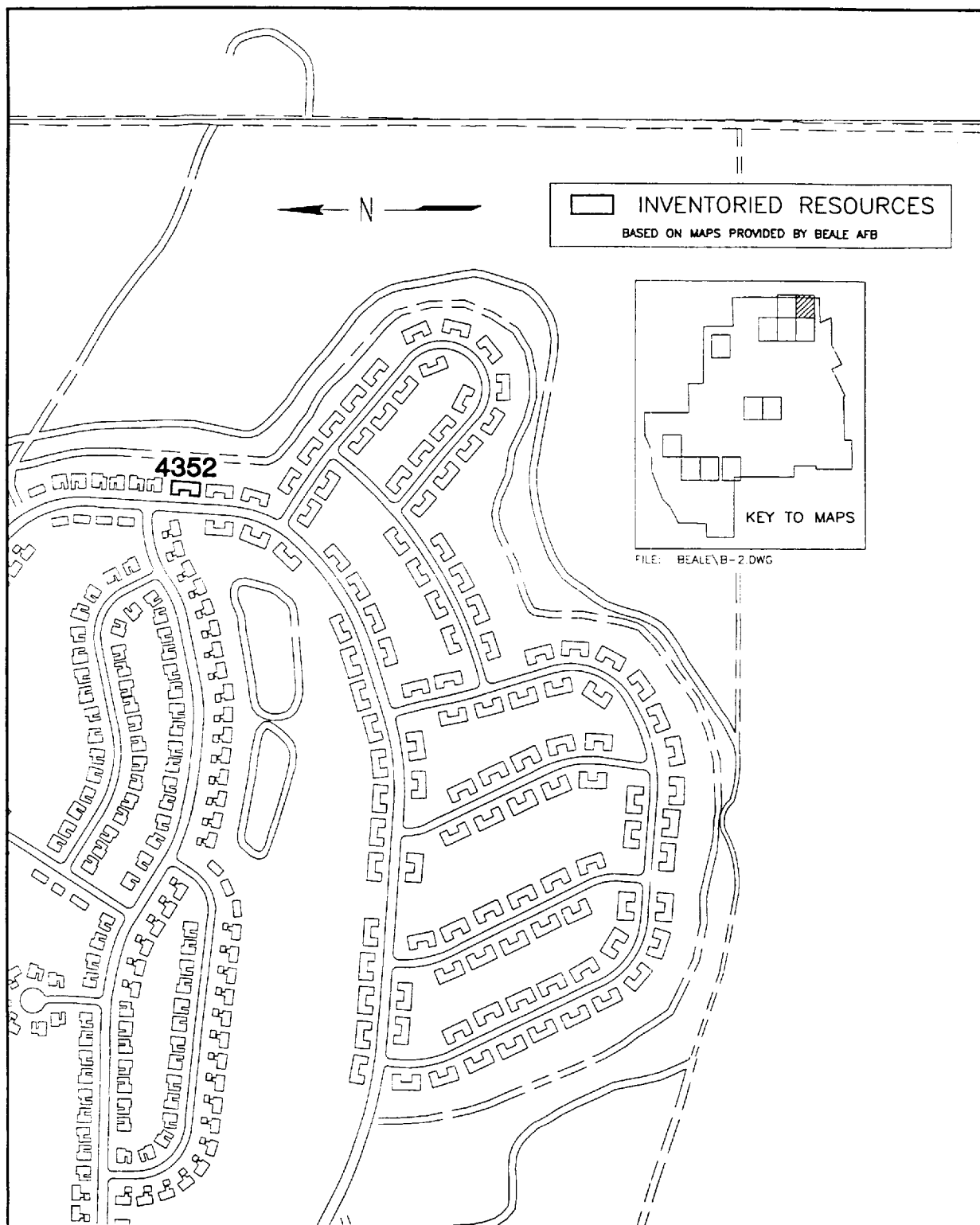


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 12).

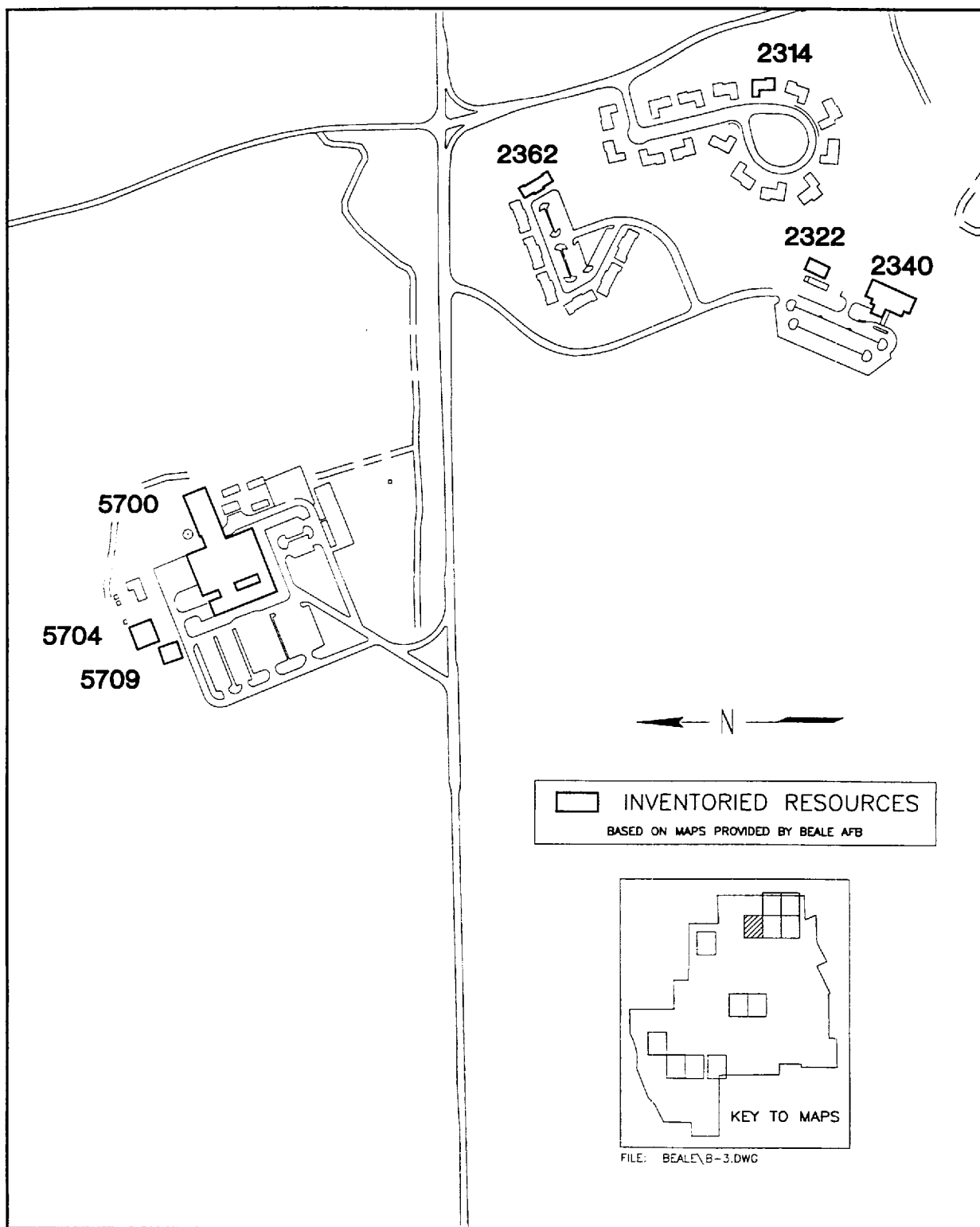


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 12).

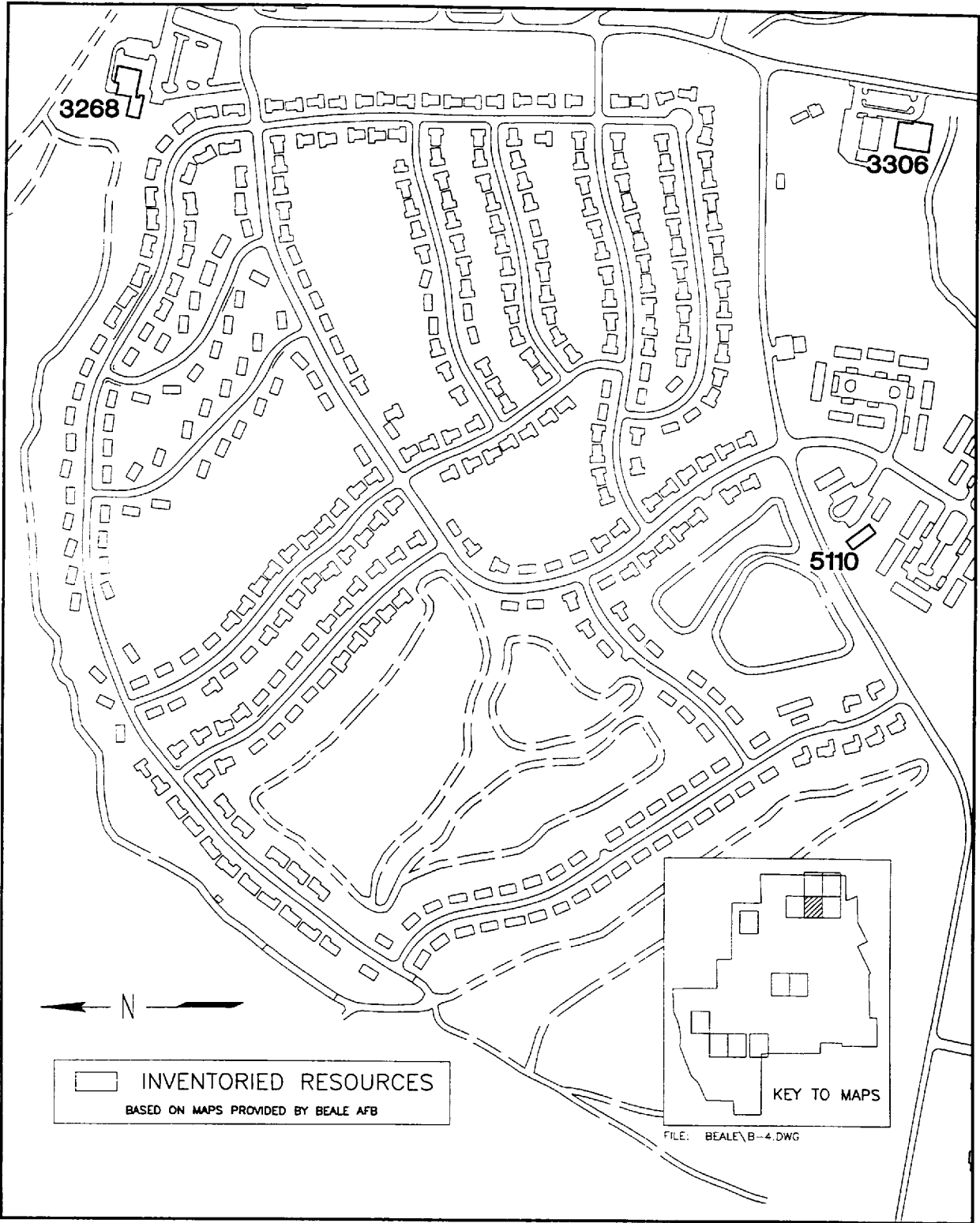


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 12).

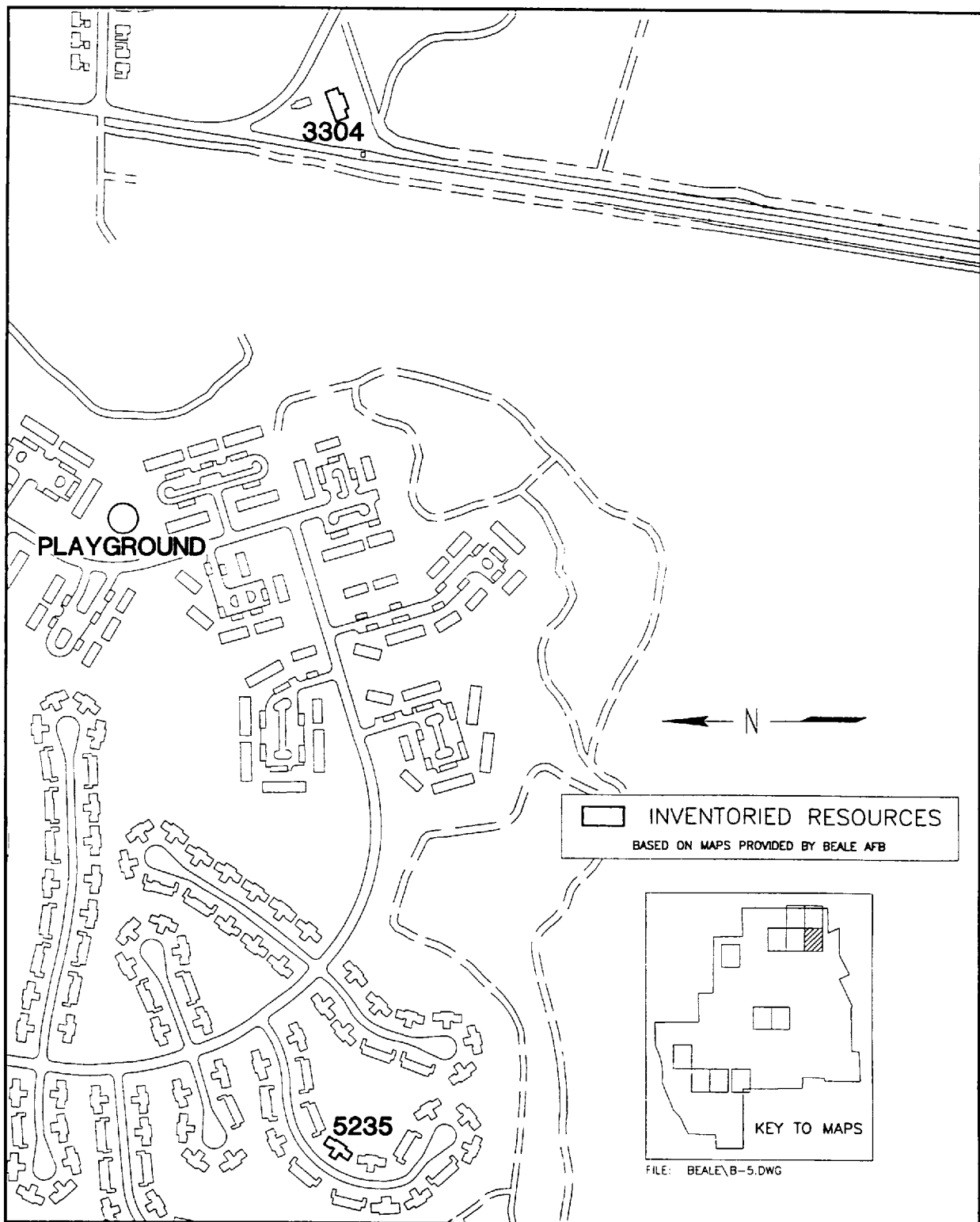


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 12).

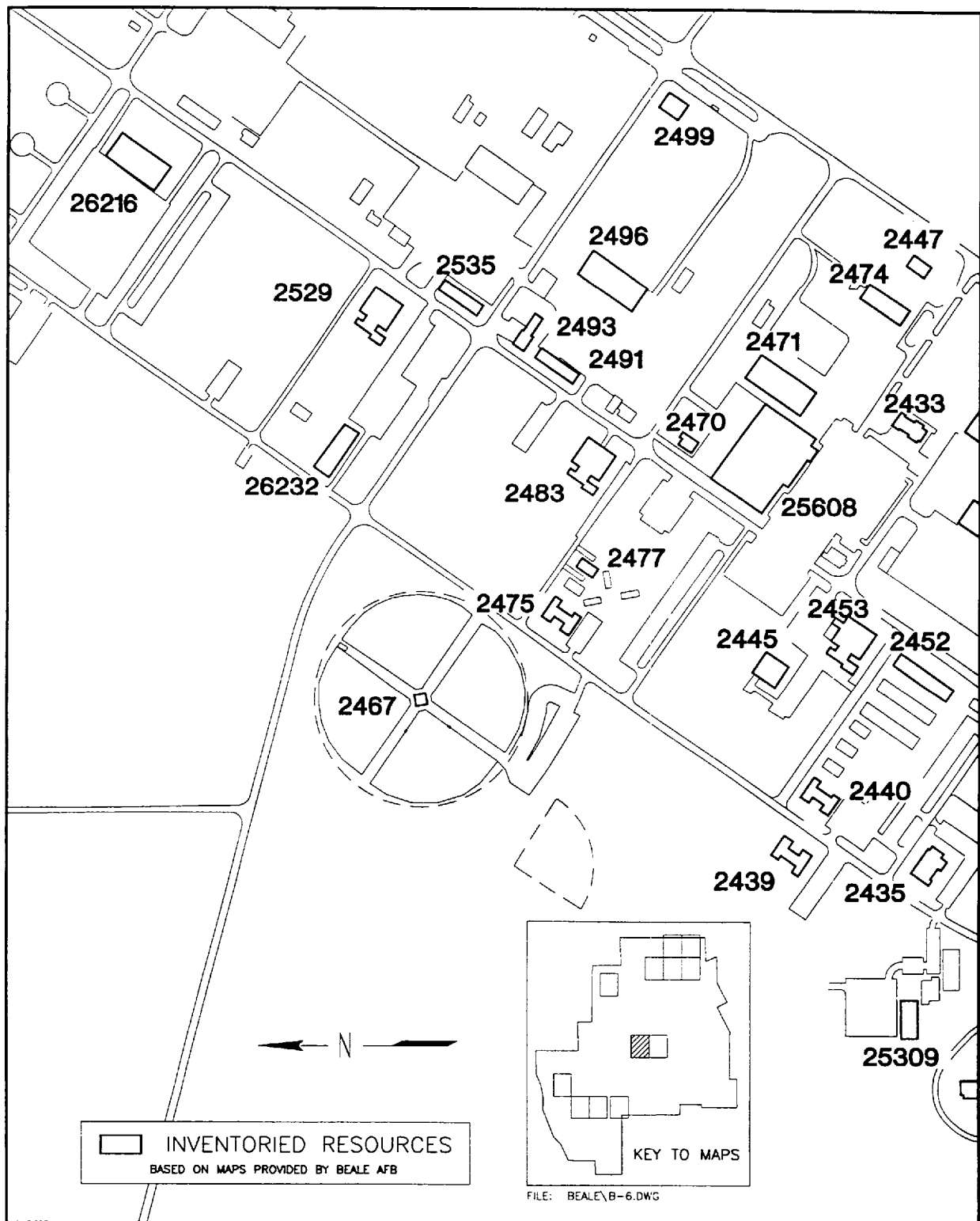


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 12).

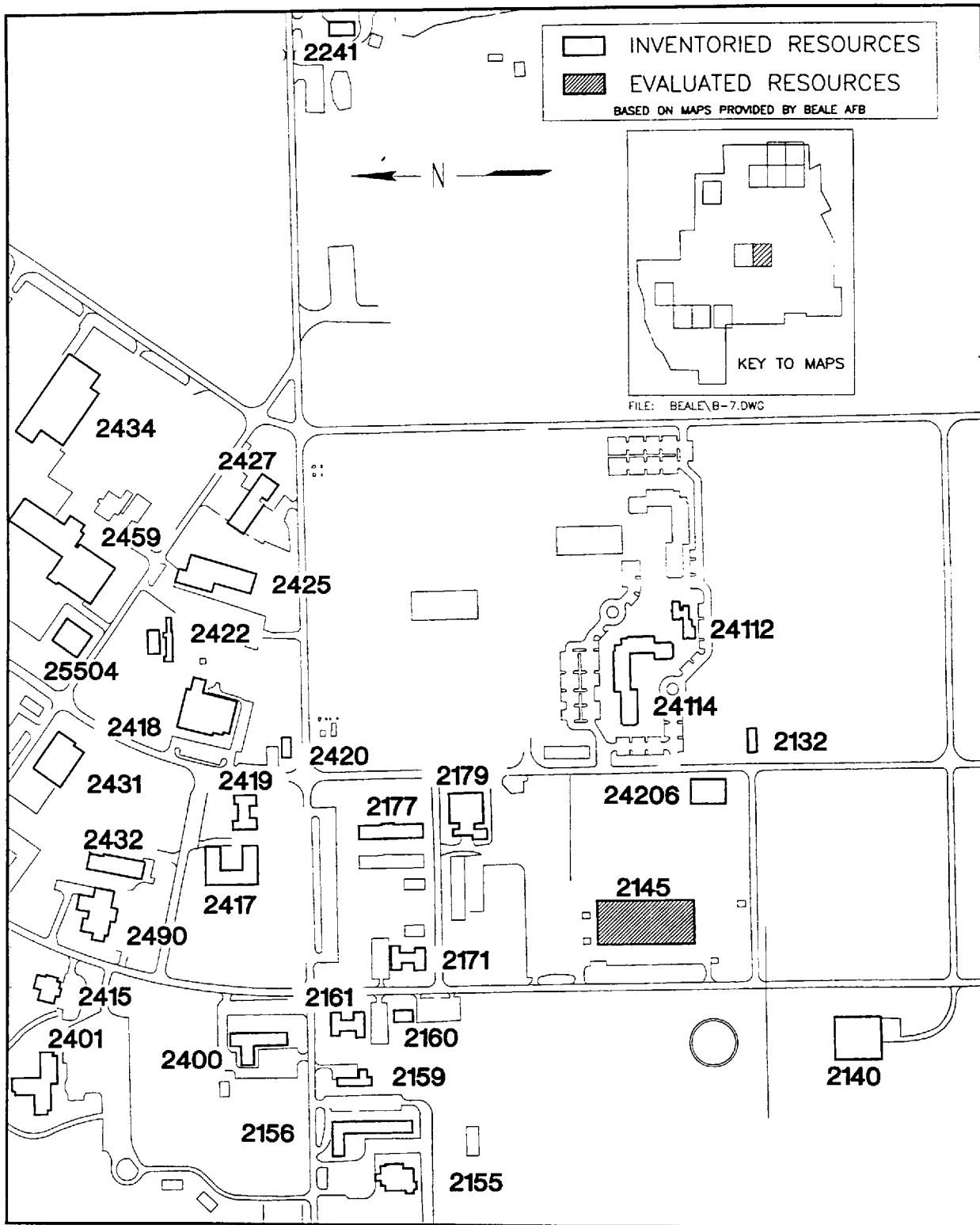


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 12).

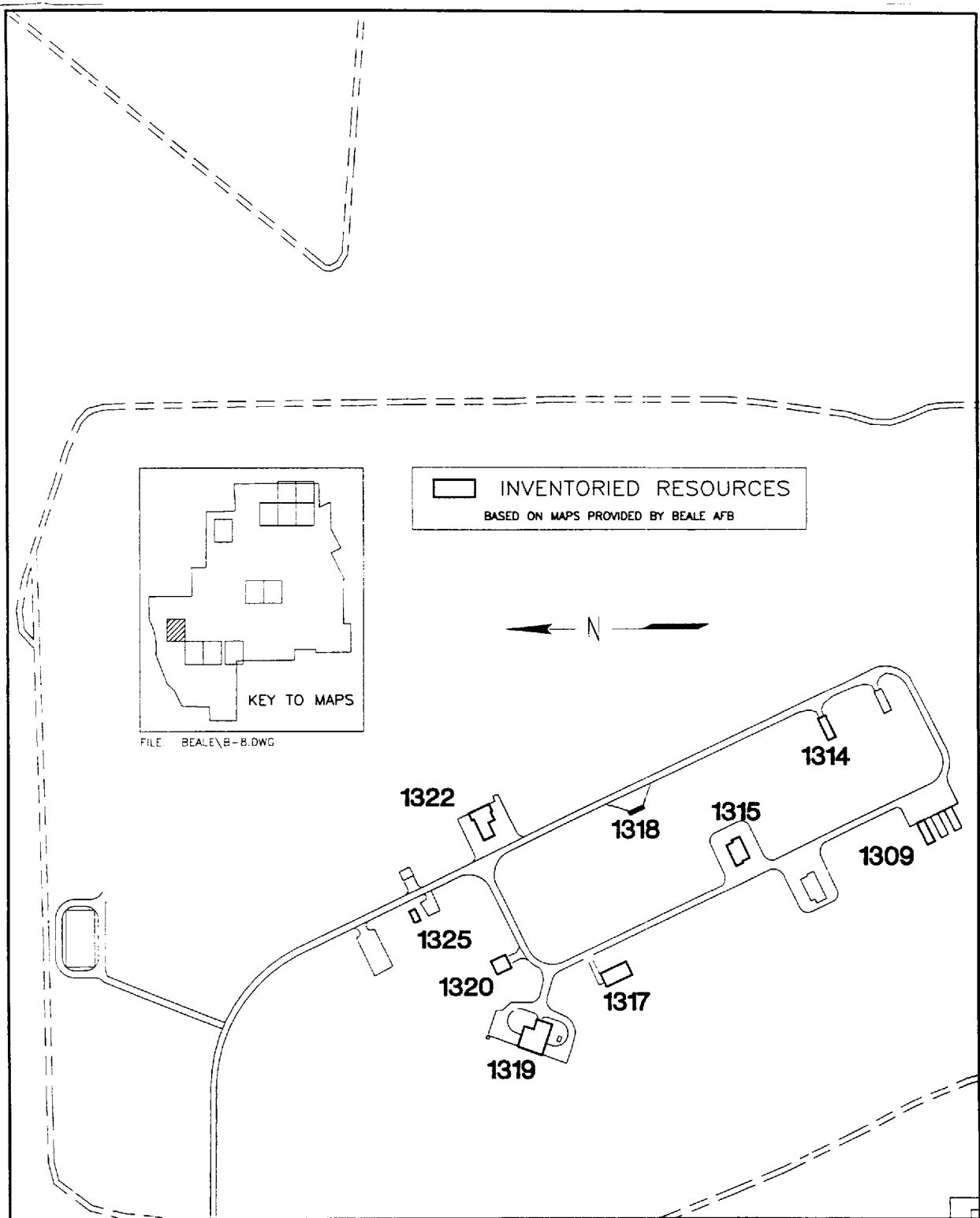


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 12).

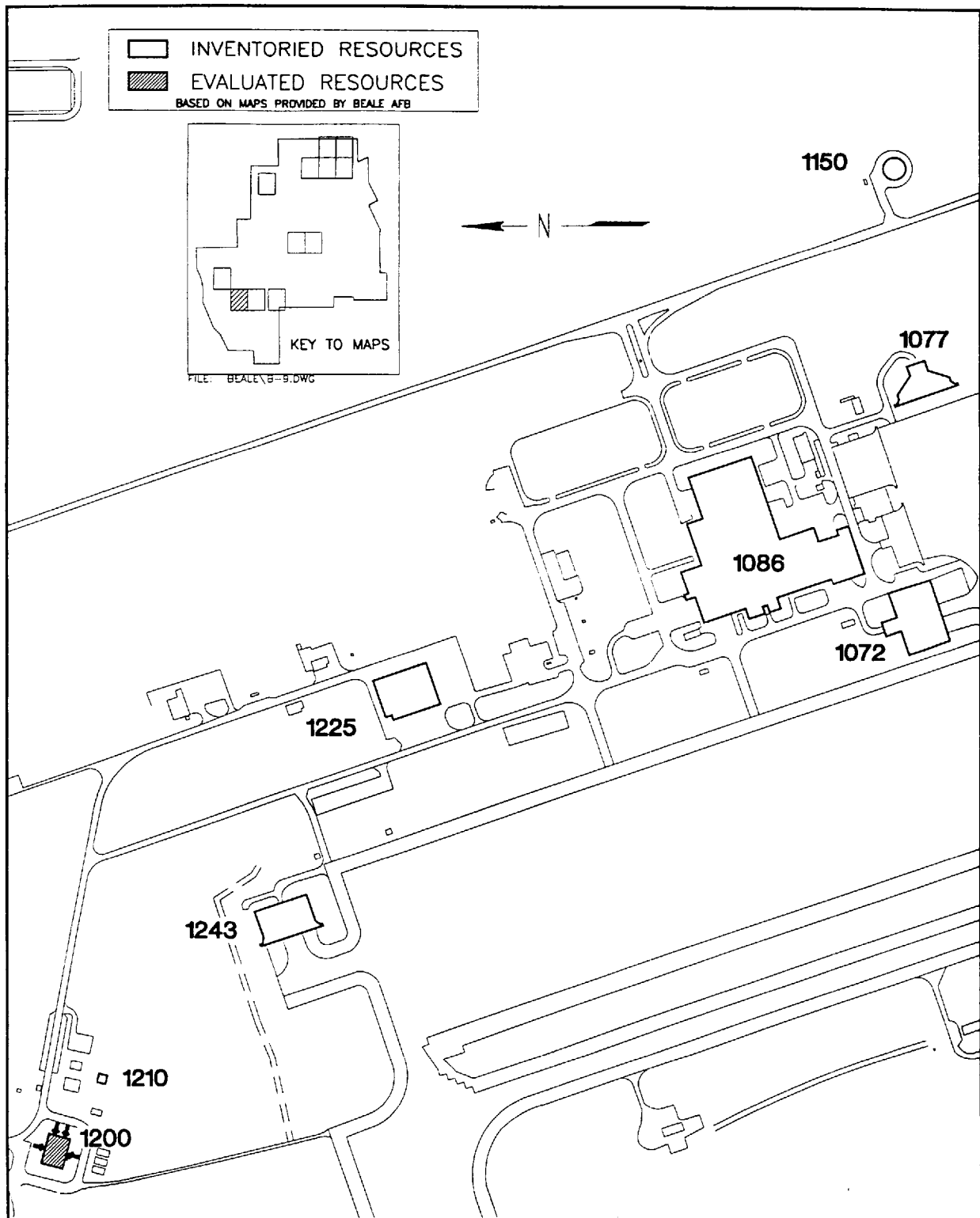


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 12).

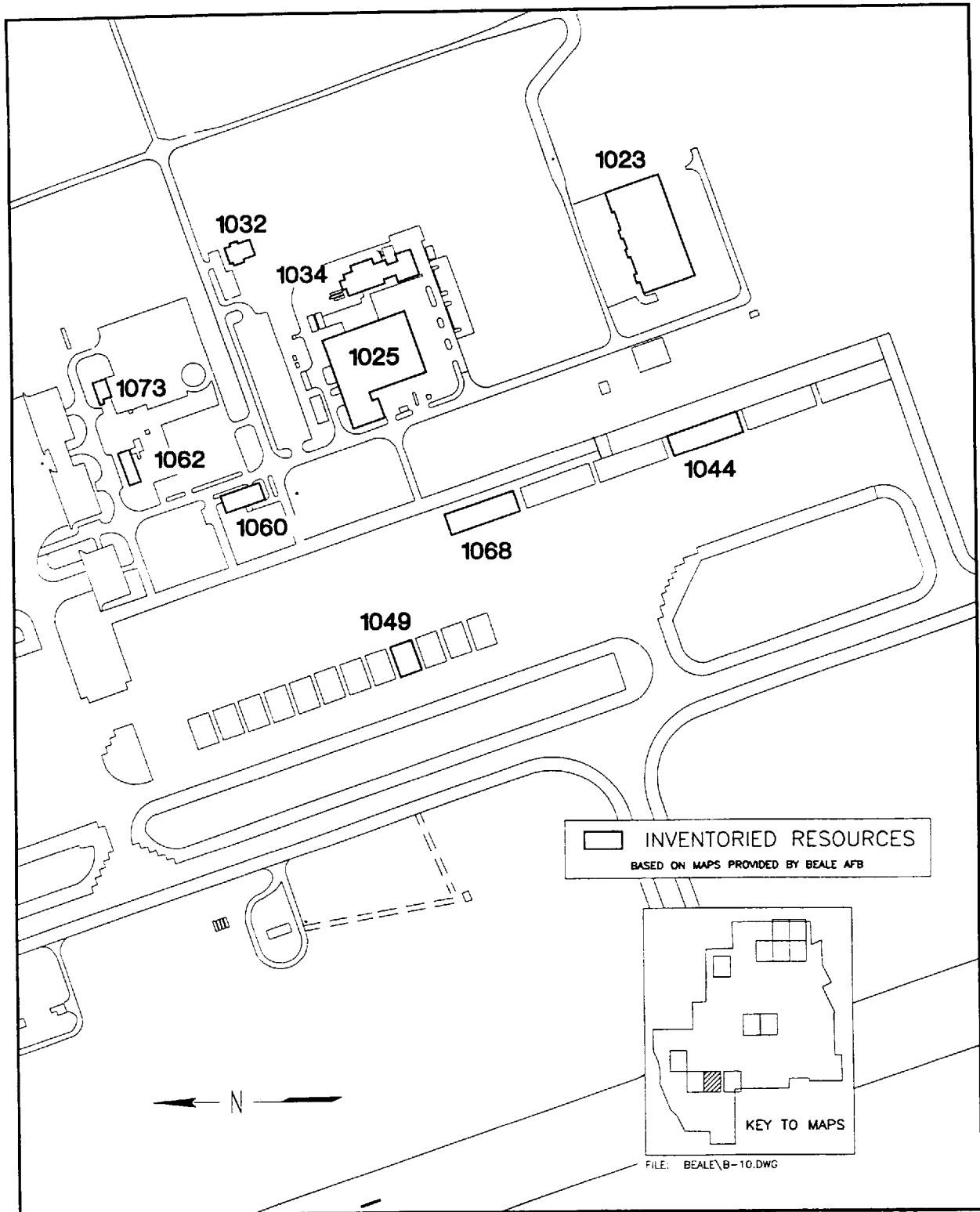


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 10 of 12).

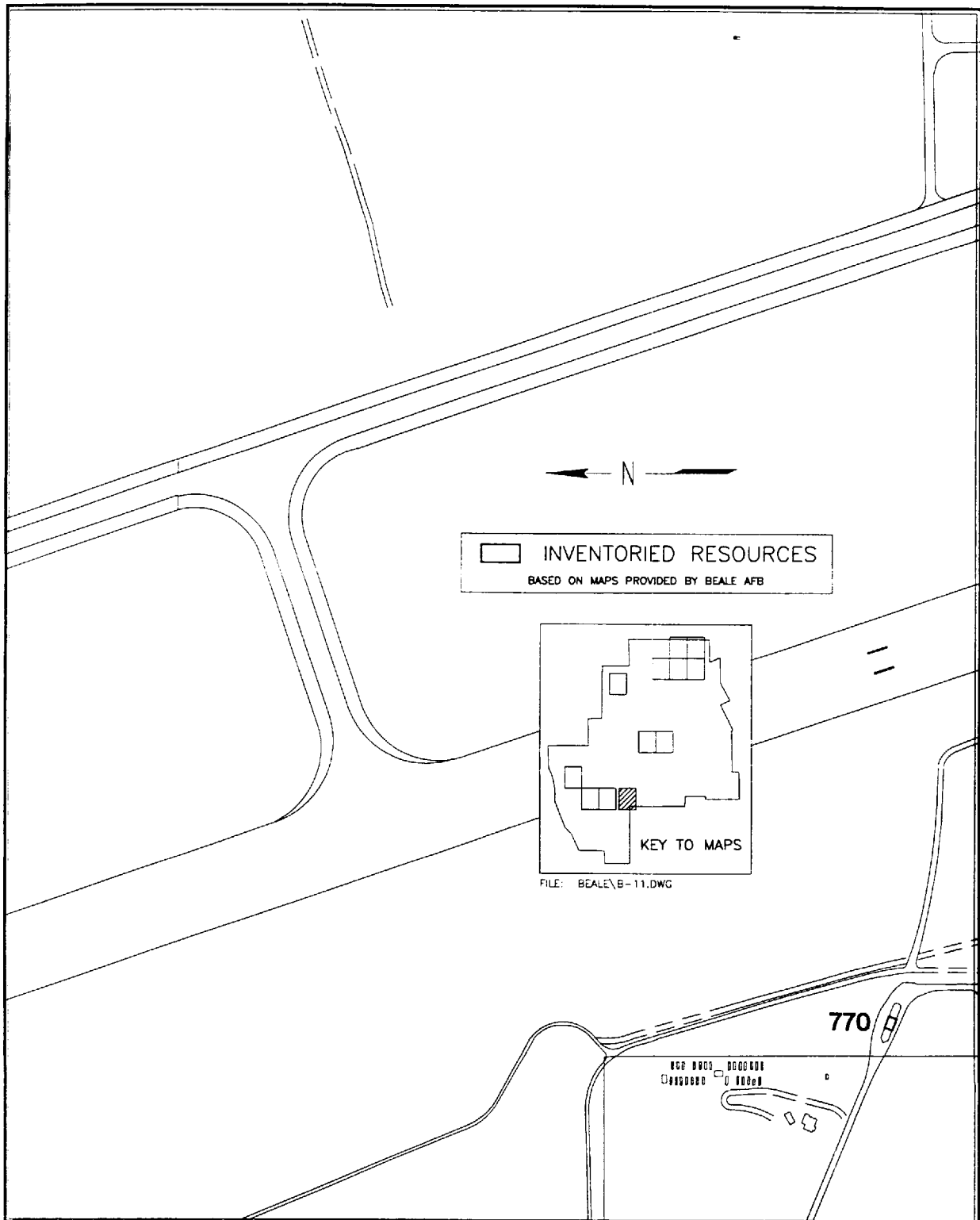


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 11 of 12).

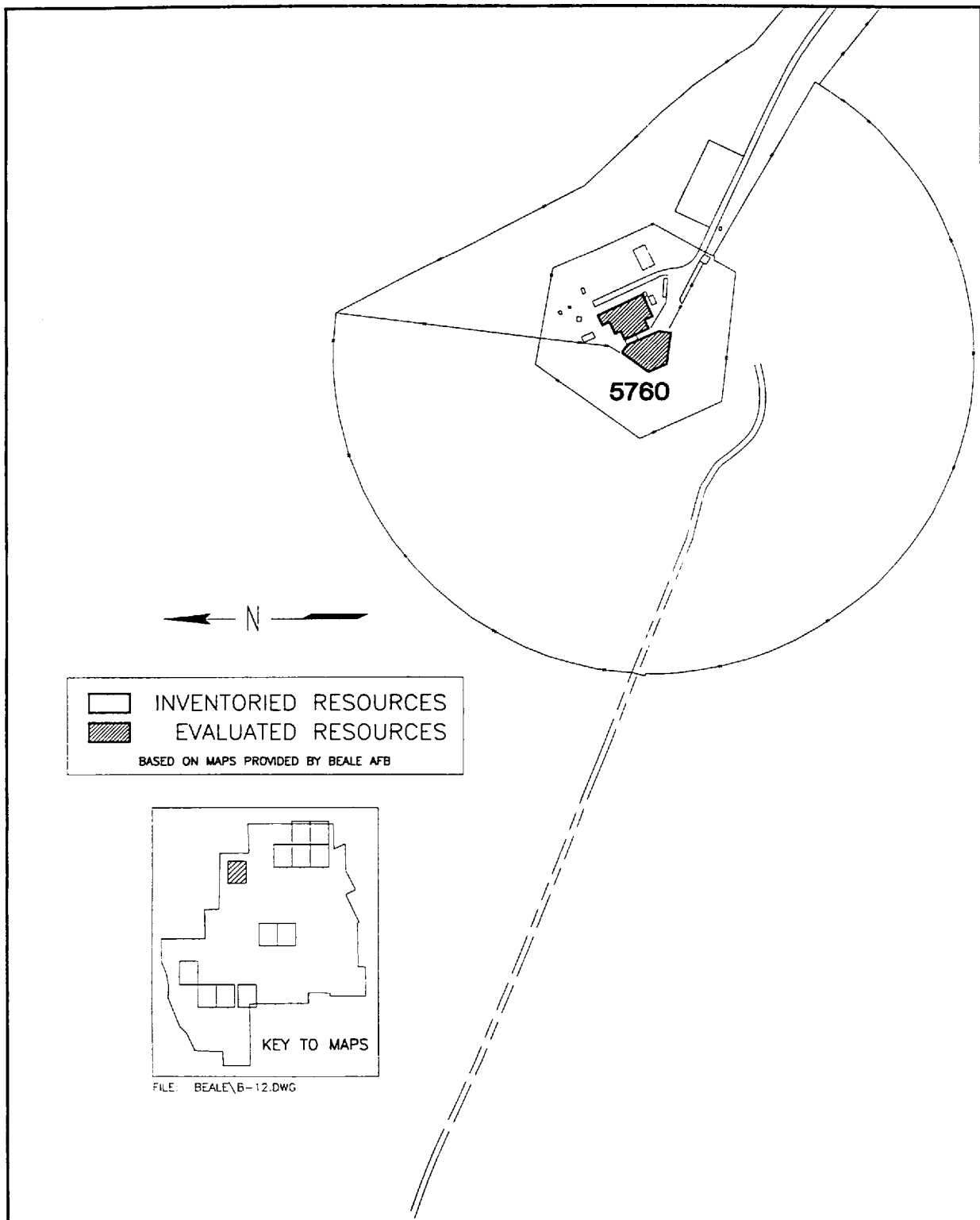


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 12 of 12).

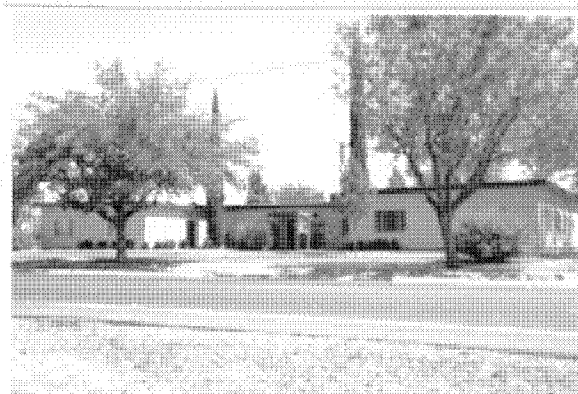
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 17001, Real Property No. 2140
Reconnaissance Photo Laboratory



Resource No. 17002, Real Property No. 2145
Reconnaissance Photo Laboratory (SAGE
Facility)



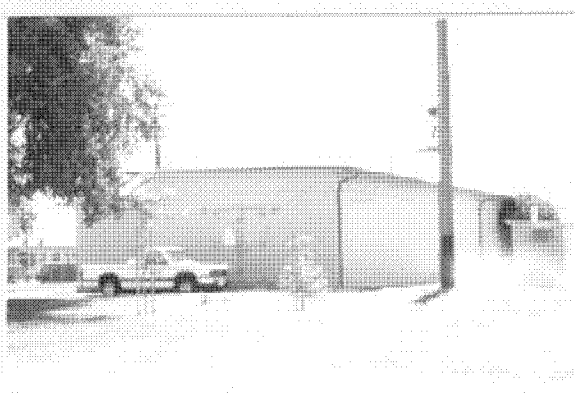
Resource No. 17003, Real Property No. 2171
Communication Facility



Resource No. 17004, Real Property No. 2161
Numbered Air Force Headquarters



Resource No. 17005, Real Property No. 2160
Medical Command and Administration



Resource No. 17006, Real Property No. 2159
Communication Facility



Resource No. 17007, Real Property No. 2156
Visiting Airman's Quarters



Resource No. 17008, Real Property No. 2155
Airman's Open Mess



Resource No. 17009, Real Property No. 2401
Airman's Dormitory



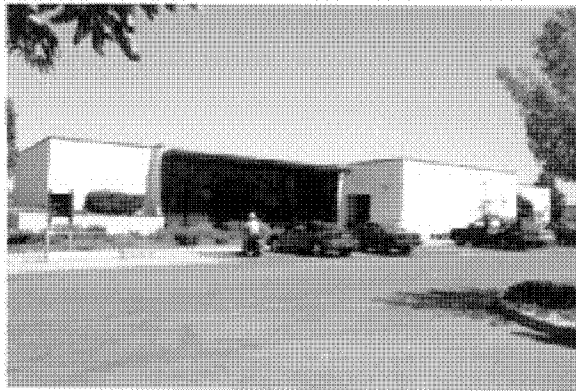
Resource No. 17010, Real Property No. 2415
Audio Visual Facility



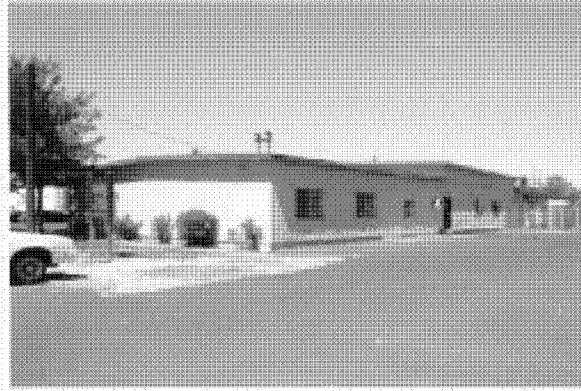
Resource No. 17011, Real Property No. 25309
Airman's Dormitory



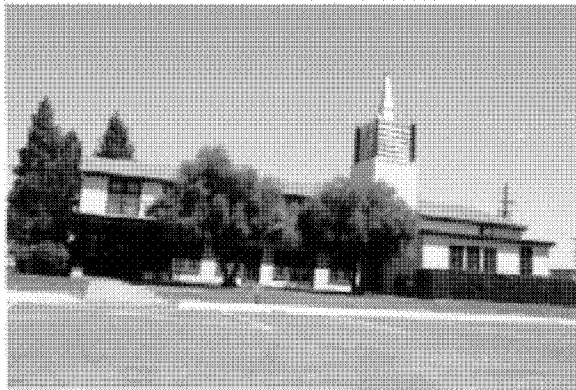
Resource No. 17012, Real Property No. 2400
Group Headquarters



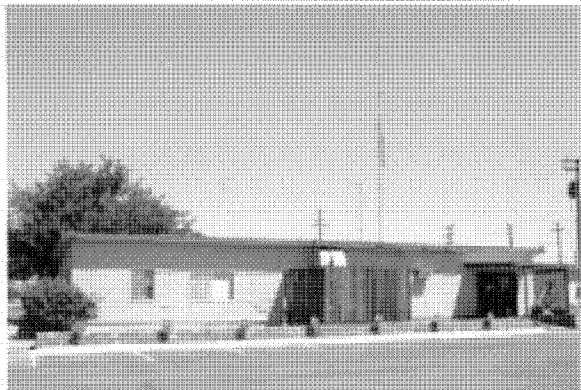
Resource No. 17013, Real Property No. 2490
Airman's Dining Hall



Resource No. 17014, Real Property No. 2432
Group Headquarters



Resource No. 17015, Real Property No. 2435
Base Chapel



Resource No. 17016, Real Property No. 2440
Security Police Operations



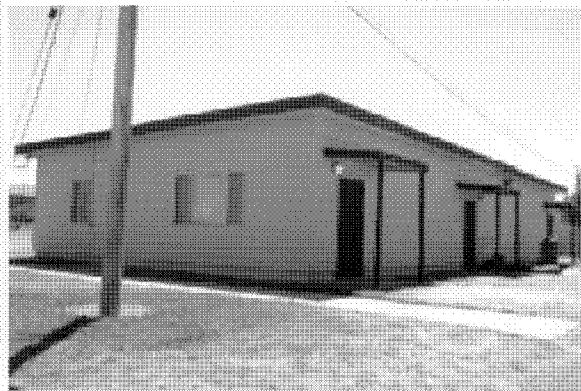
Resource No. 17017, Real Property No. 2439
Library Recreation



Resource No. 17018, Real Property No. 2467
Miscellaneous Recreation Facility



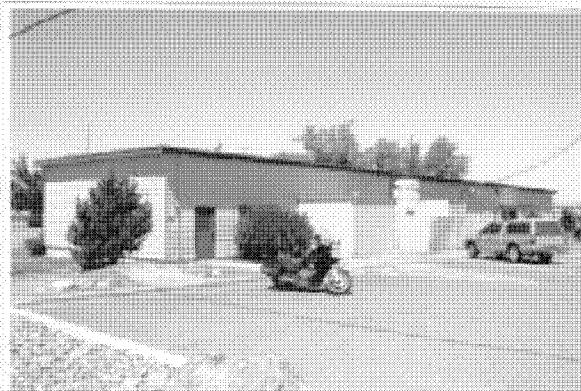
Resource No. 17019, Real Property No. 2475
Education Center



Resource No. 17020, Real Property No. 2477
Education Center



Resource No. 17021, Real Property No. 26216
Housing Supply and Storage Facility



Resource No. 17025, Real Property No. 2535
Base Engineering Administration



Resource No. 17026, Real Property No. 2491
Vehicle Operations Administration



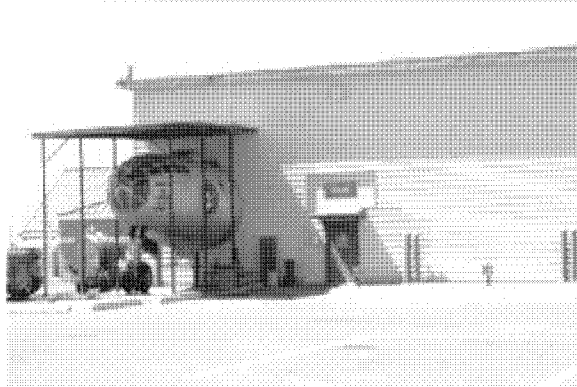
Resource No. 17027, Real Property No. 2483
Group Headquarters



Resource No. 17028, Real Property No. 2470
Museum Building



Resource No. 17029, Real Property No. 25608
Commissary Store



Resource No. 17030, Real Property No. 2471
Base Supply Administration



Resource No. 17031, Real Property No. 2453
Clothing Store



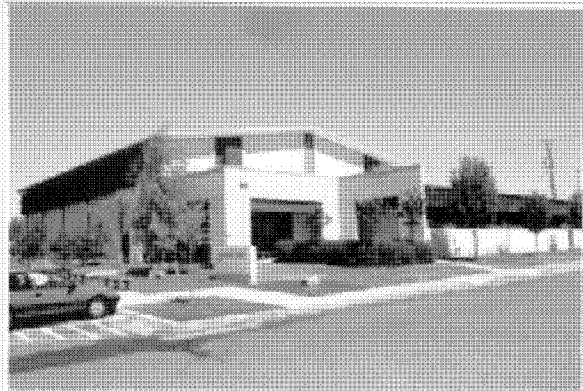
Resource No. 17032, Real Property No. 2445
DPI



Resource No. 17033, Real Property No. 2452
Munitions Loading Crew Training



Resource No. 17034, Real Property No. 2431
Bowling Center



Resource No. 17035, Real Property No. 2418
Gymnasium



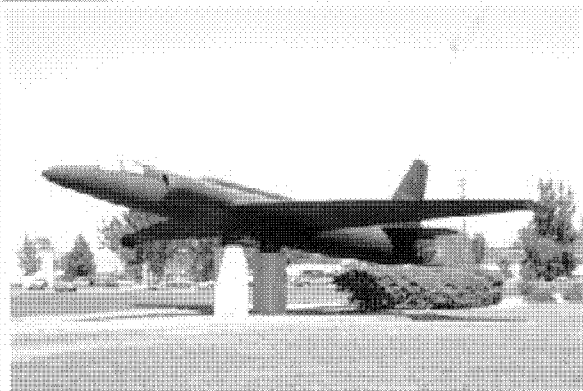
Resource No. 17036, Real Property No. 2417
Wing Headquarters



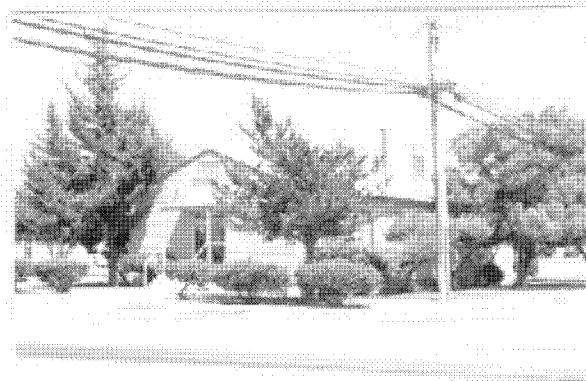
Resource No. 17037, Real Property No. 2419
Law Center



Resource No. 17038, Real Property No. 2177
Correction Facility



Resource No. 17039, Real Property No. (none)
U-2 Static Display



Resource No. 17040, Real Property No. 2420
Wing Headquarters



Resource No. 17041, Real Property No. 2179
Family Support Center



Resource No. 17042, Real Property No. 2132
Security Police Kennel Support Building



Resource No. 17045, Real Property No. 2499
Vehicle Fuel Station



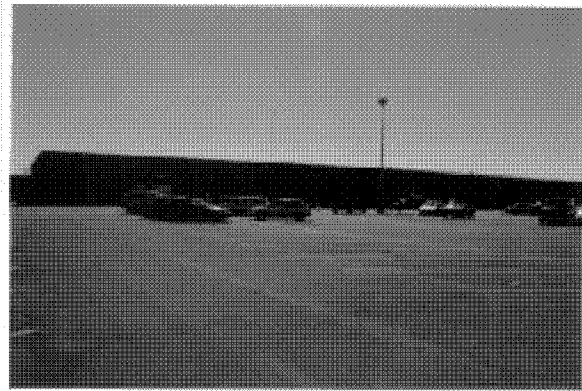
Resource No. 17046, Real Property No. 2447
Exchange Cafe Snack Bar



Resource No. 17047, Real Property No. 2474
Base Theater



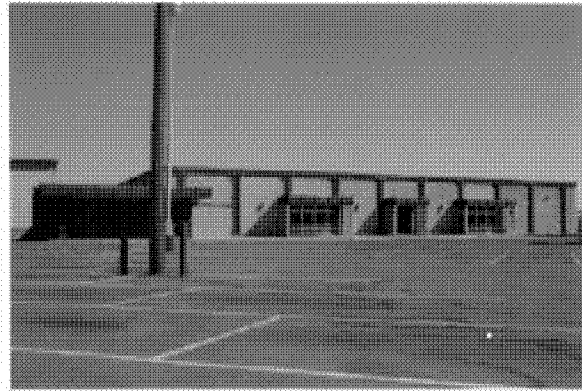
Resource No. 17048, Real Property No. 2433
Bus Shelter



Resource No. 17049, Real Property No. 2434
Exchange Sales Store



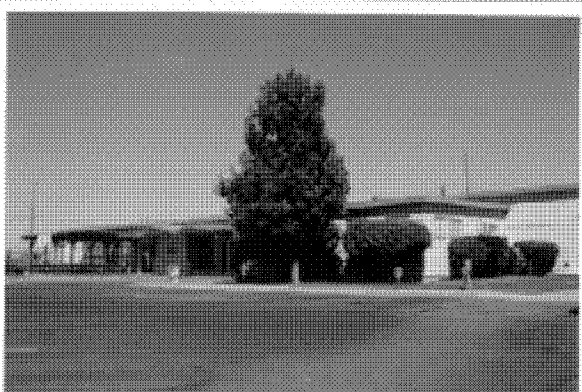
Resource No. 17050, Real Property No. 2427
Arts and Crafts Center



Resource No. 17051, Real Property No. 2459
Commissary Store



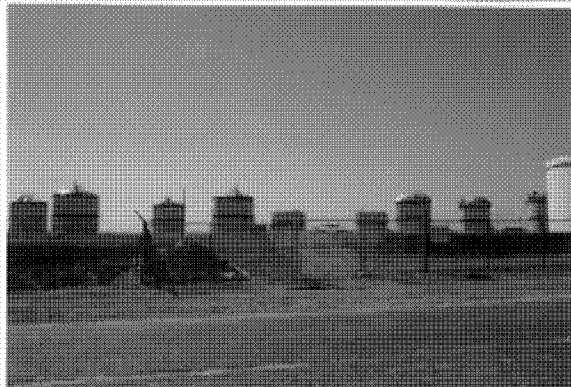
Resource No. 17052, Real Property No. 2422
Swimmer's Bath House



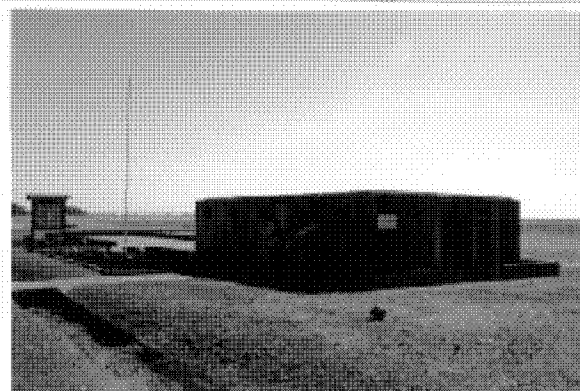
Resource No. 17054, Real Property No. 2425
Recreation Center



Resource No. 17055, Real Property No. 250
Rod and Gun Club



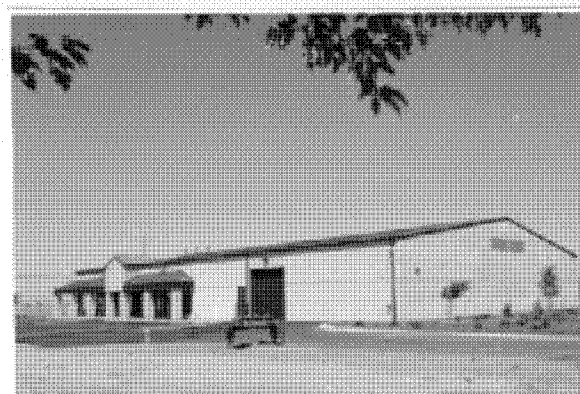
Resource No. 17056, Real Property No. 409
Jet Fuel Storage



Resource No. 17058, Real Property No. (none)
World War II POW Cell Block



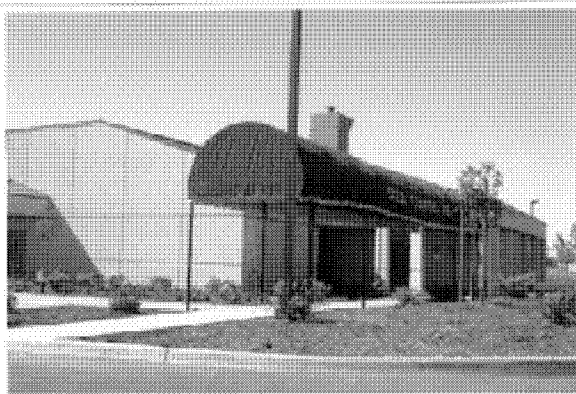
Resource No. 17059, Real Property No. 5760
Radar Transmitter Computer Building



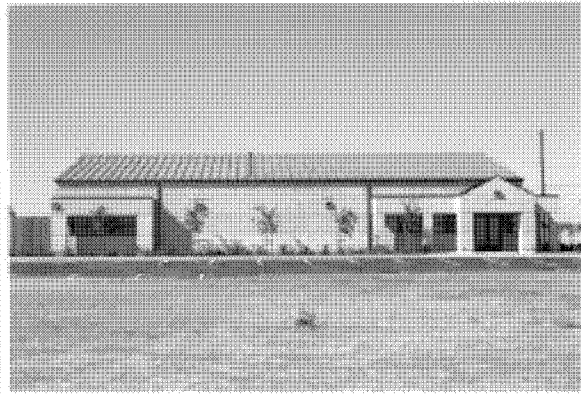
Resource No. 17060, Real Property No. 26232
New Building



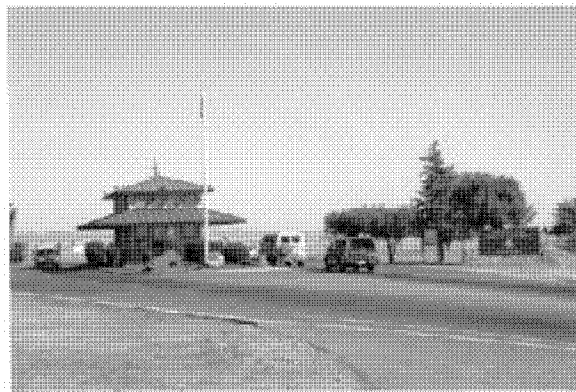
Resource No. 17061, Real Property No. 24214
Airman's Dormitory



Resource No. 17062, Real Property No. 24212
Lodging



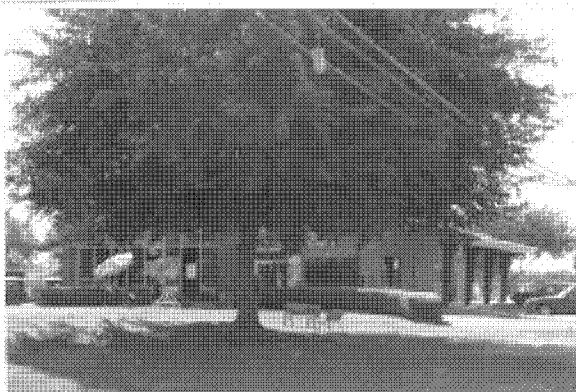
Resource No. 17063, Real Property No. 24206
New Building



Resource No. 17064, Real Property No. 770
Traffic Checkhouse



Resource No. 17065, Real Property No. 25504
New Building



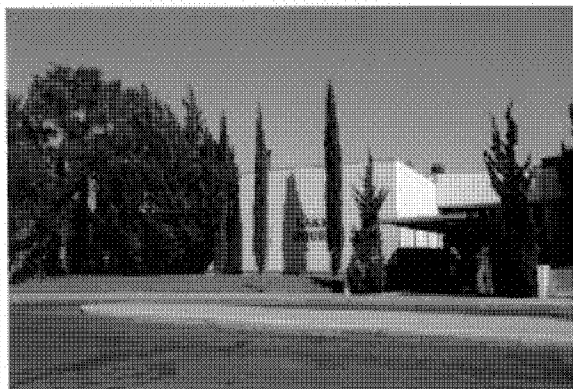
Resource No. 17066, Real Property No. 2241
Golf Clubhouse



Resource No. 17067, Real Property No. 5709
Flight Surgeon's Clinic



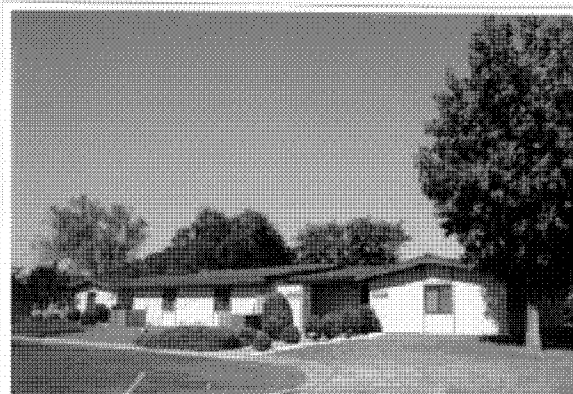
Resource No. 17068, Real Property No. 5704
Material Services



Resource No. 17070, Real Property No. 2340
Youth Center



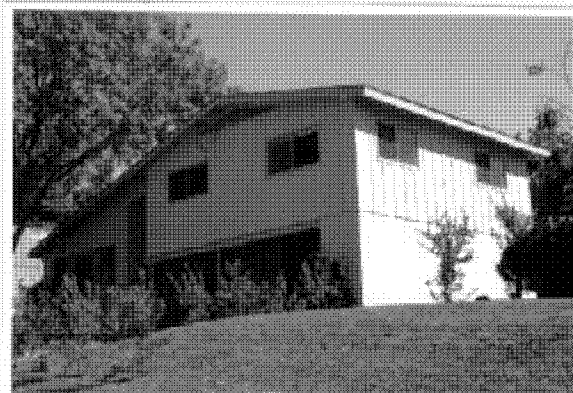
Resource No. 17071, Real Property No. 2322
Swimmer's Bath House



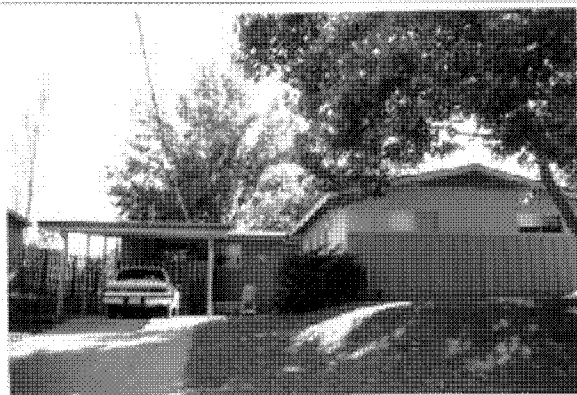
Resource No. 17072, Real Property No. 2362
Visiting Officer's Quarter



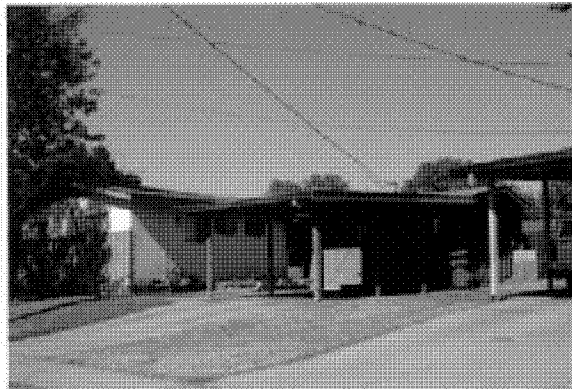
Resource No. 17073, Real Property No. 2314
Capehart Family Housing



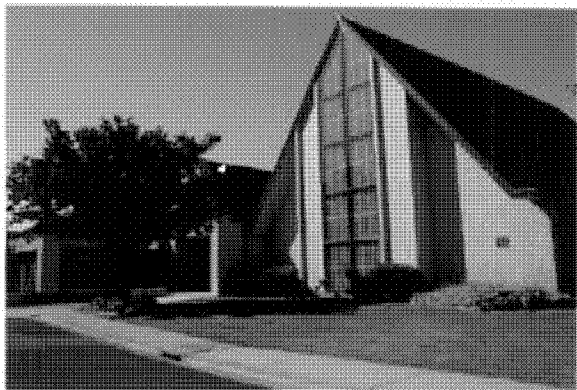
Resource No. 17074, Real Property No. 3833
Capehart Family Housing



Resource No. 17075, Real Property No. 3839
Capehart Family Housing



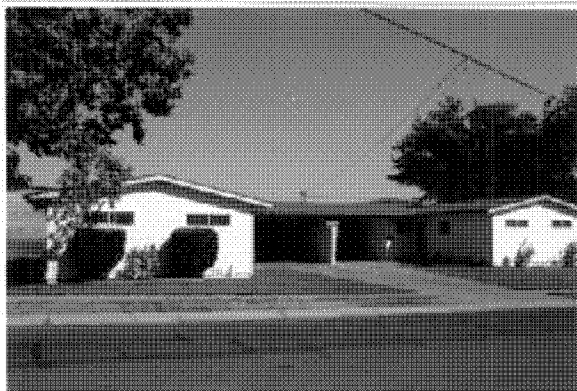
Resource No. 17076, Real Property No. 4264
Capehart Family Housing



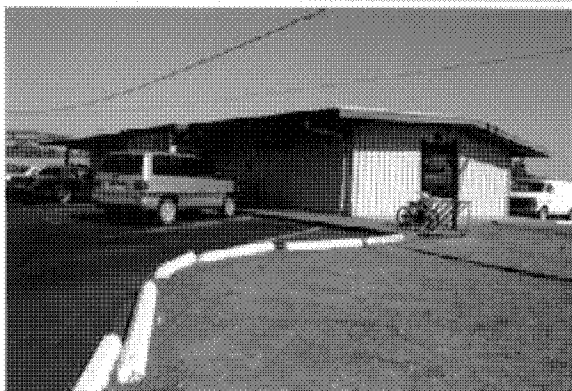
Resource No. 17077, Real Property No. 3268
Chapel Center



Resource No. 17078, Real Property No. (none)
Lonetree School



Resource No. 17079, Real Property No. 4352
Capehart Family Housing



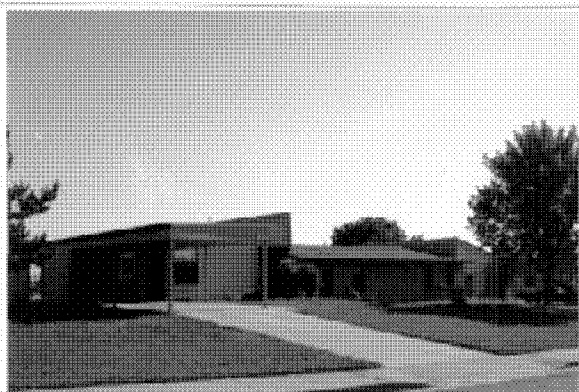
Resource No. 17080, Real Property No. 3304
Branch Exchange



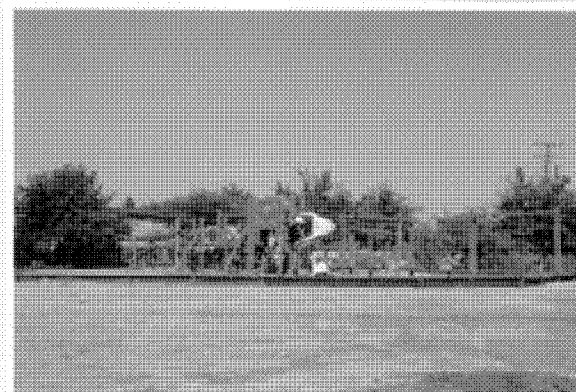
Resource No. 17081, Real Property No. 3306
Child Care Center



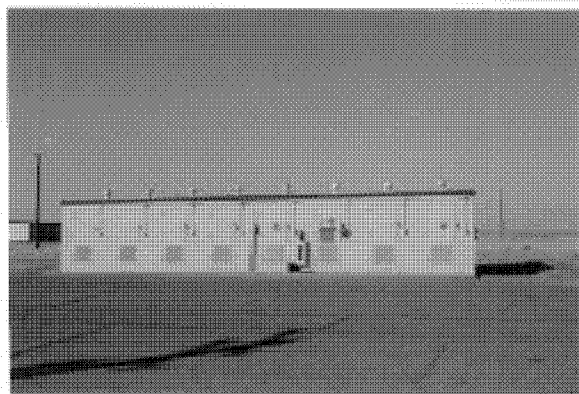
Resource No. 17082, Real Property No. 5110
Temporary Lodging Facility



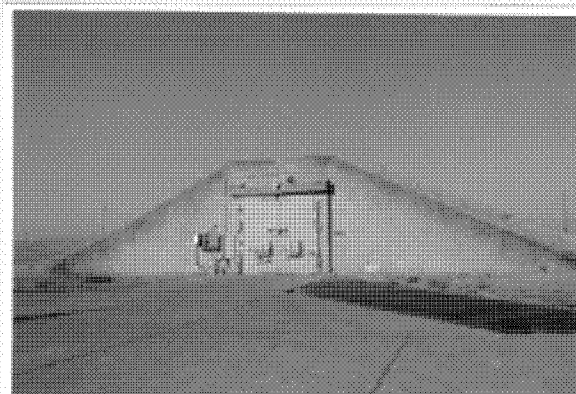
Resource No. 17083, Real Property No. 5235
Family Housing (Appr. 1970A)



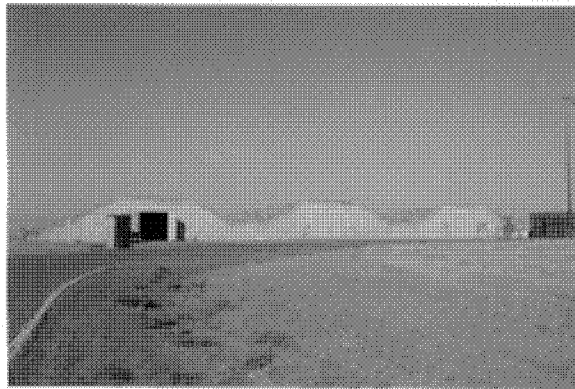
Resource No. 17084, Real Property No. (none)
Playground



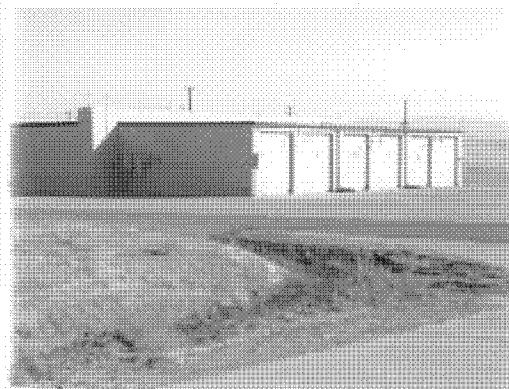
Resource No. 17085, Real Property No. 1318
Segregated Magazine Storage



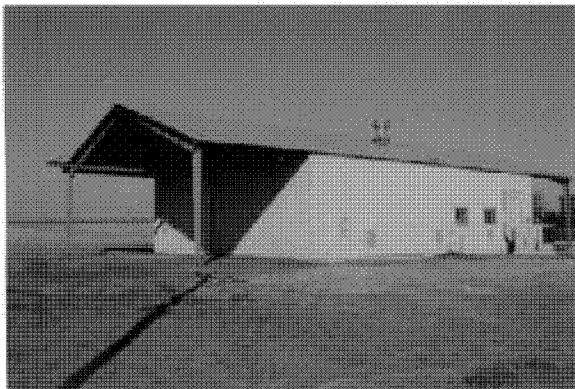
Resource No. 17086, Real Property No. 1314
Storage Igloo



Resource No. 17087, Real Property No. 1309
Storage Igloo



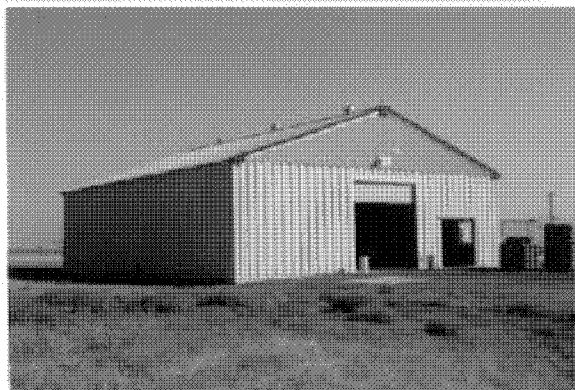
Resource No. 17088, Real Property No. 1315
Multi-Cubicle Magazine Storage



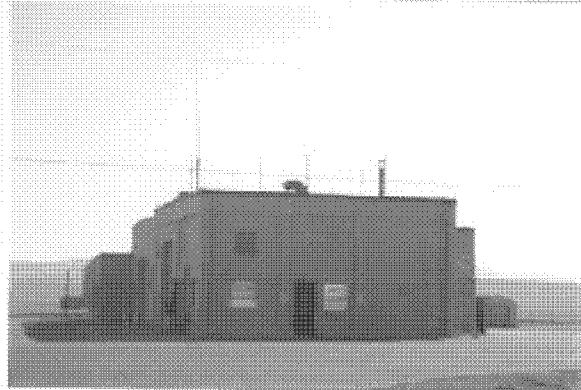
Resource No. 17089, Real Property No. 1317
Conventional Munitions Shop



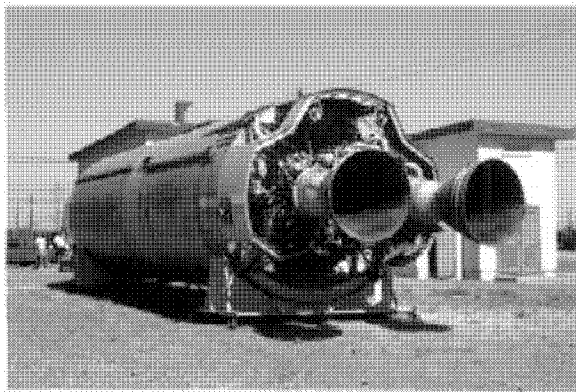
Resource No. 17090, Real Property No. 1319
Explosive Ordnance Disposal



Resource No. 17091, Real Property No. 1320
Spare Inert Storage



Resource No. 17092, Real Property No. 1322
Conventional Munitions Shop



Resource No. 17094, Real Property No. (none)
Titan Missile Components



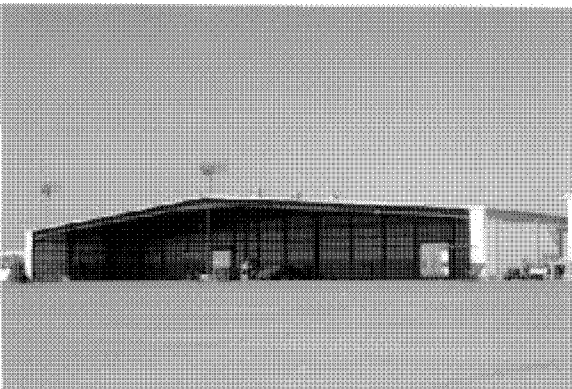
Resource No. 17095, Real Property No. (none)
T-38 Static Display



Resource No. 17096, Real Property No. (none)
EB-57 Static Display



Resource No. 17097, Real Property No. 1044
Aircraft Shelter



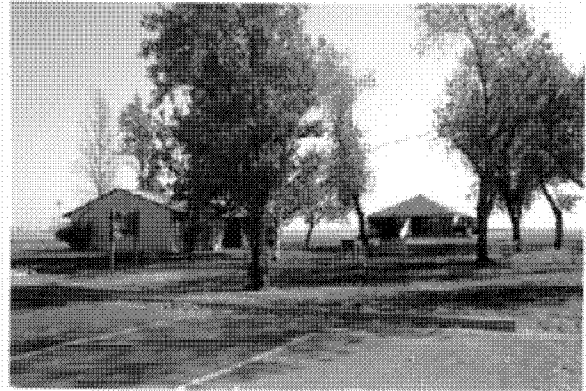
Resource No. 17098, Real Property No. 1068
Aircraft Shelter



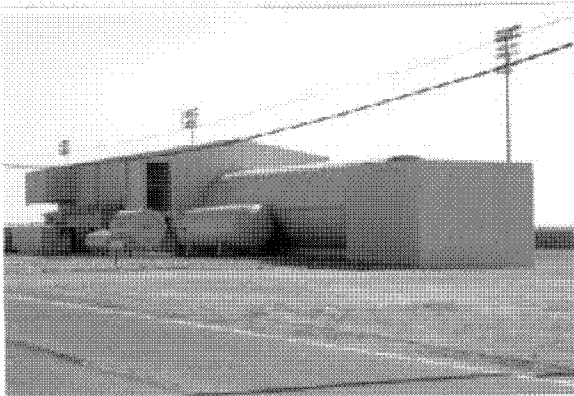
Resource No. 17099, Real Property No. 1049
Aircraft Shelter



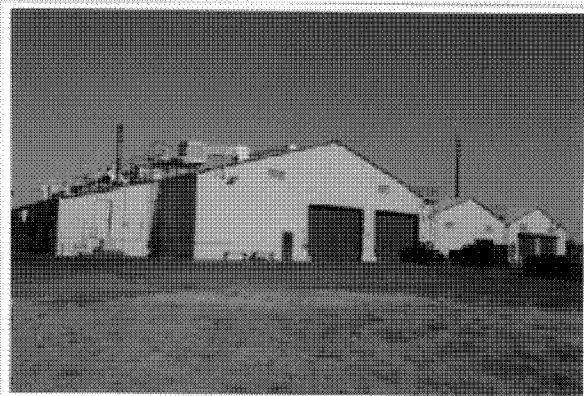
Resource No. 17103, Real Property No. 1200
Security Police Operations



Resource No. 17104, Real Property No. 1210
Aero Club



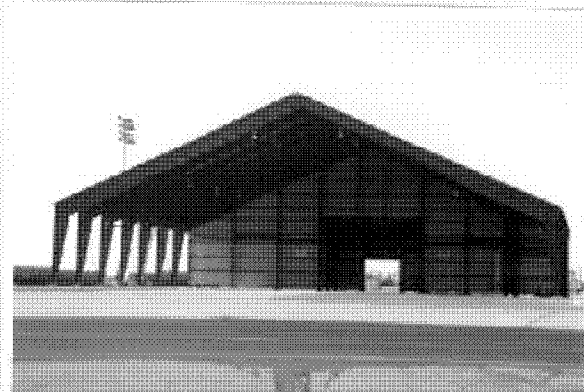
Resource No. 17105, Real Property No.
(unknown), Engine Test Cell



Resource No. 17106, Real Property No. 1225
Shop A/SE Storage Facility



Resource No. 17107, Real Property No. 1086
General Purpose Aircraft Shop



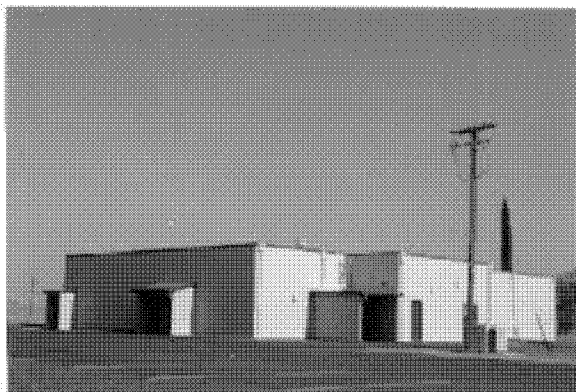
Resource No. 17108, Real Property No. 1072
Aircraft Wash Rack Pad



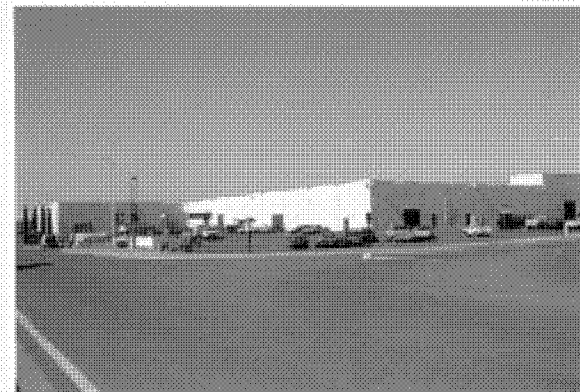
Resource No. 17109, Real Property No. 1062
General Purpose Aircraft Shop



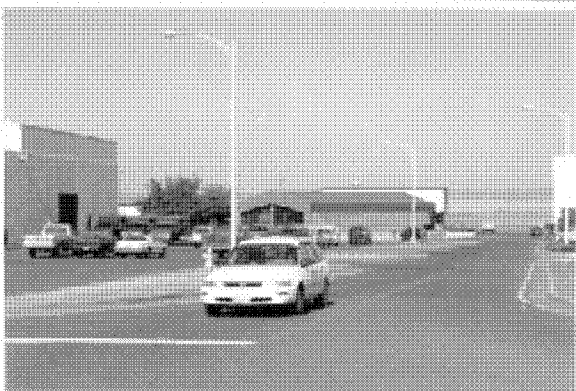
Resource No. 17110, Real Property No. 1073
Refueling Vehicle Shop



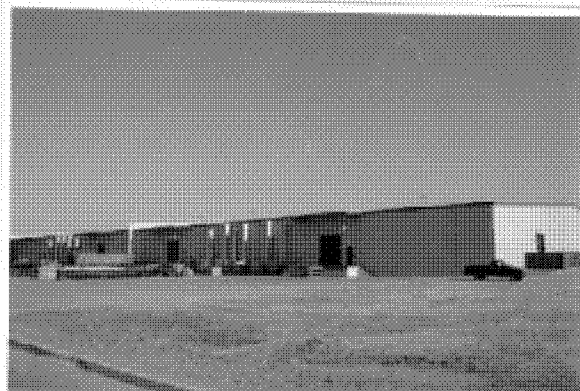
Resource No. 17111, Real Property No. 1032
PME Laboratory



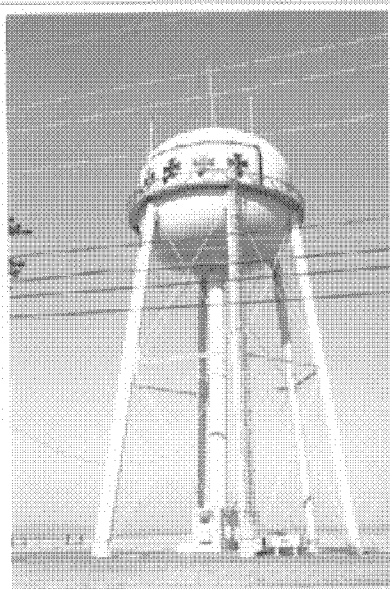
Resource No. 17112, Real Property No. 1025
General Purpose Aircraft Shop



Resource No. 17113, Real Property No. 1034
Physiological Support Division



Resource No. 17114, Real Property No. 1023
Warehouse Supply and Equipment Base



Resource No. 17115, Real Property No. 1150
Water Tank Storage

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT BEALE AFB

Resource Number: 17002

Property Description: Photo Reconnaissance Laboratory, formerly SAGE building, large , four story, windowless cubicle building, additionally houses a variety of offices.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 5801 "C" Street

Base Map Date: 1/1/93

Base Map Building Number: 2145

Operational Support & Installations:

Combat Weapons and Support Systems: Communications

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: SAGE Facility

Statement of Significance: The building was originally designed as a SAGE (semi-automated ground environment) building that housed a variety of computer and electronic equipment which coordinated information on incoming threats and figured vectors for successful interception of enemy targets. The Beale AFB SAGE sector was the San Francisco area, The early fear of Soviet bomber attack and the attempts to prevent such an attack are a major Cold War theme.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 4

Percent Historic Fabric: 3

Severity of Threats: 2

Total Score for Priority Matrix: 20

Comments on Threats: The building's exterior and interior have been severely impacted through renovation. Little integrity remains.

No Further Work: Yes

Stewardship: No

National Register Listing: No

Further Documentation: No

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Ineligible

Height: 45
Square Footage: 188570
Original Planned Duration: Permanent
Existing Use: Photo Reconnaissance Lab
Other Use/Dates: SAGE
Primary Building Materials: Poured Concrete
Character Defining Features: large size, windowless construction

Resource Number: 17059

Property Description: Large Radar Transmitter/Receiver Building
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 7400 Spencer Paul Road
Base Map Date:
Base Map Building Number: 5760

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence: Radar Sites
Property Type: PAVE PAWS Facility

Statement of Significance: The building is one of four PAVE PAWS facilities in the U.S. with transmitter/receiver radar for the purpose of detecting incoming Soviet SLBMS, (and ICBMs). The capability of the USSR to launch a SLBM attack and the U.S. desire to rapidly detect such an attack is a significant Cold War theme.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Exceptionally significant and NRHP eligible.

Importance: Exceptional
Eligibility: Eligible

Height: 100
Square Footage:
Original Planned Duration: Permanent
Existing Use: Radar SLBM detection
Other Use/Dates: Radar SLBM detection
Primary Building Materials: Steel Frame
Character Defining Features: Large radar arrays, guard tower, power station's industrial appearance

Resource Number: 17103

Property Description: Former Bomber Alert Facility, now serves a security police function

Associated Property: 1210

Non-Inventoried Association:

Sub-installation:

Address: 19800 Henderson Drive

Base Map Date:

Base Map Building Number: 1200

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Bomber Alert Facility

Statement of Significance: This building was designed and used as a bomber alert facility. It was designed to house B-52 crews and provided quarters and other day-to day functions as well as briefing rooms and operational facilities. Features such as ramps to the apron allowed quick access to aircraft. The fear of a surprise Soviet attack and the perceived need for rapid response is exemplified in the Alert Facility.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 3

Severity of Threats: 3

Total Score for Priority Matrix: 20

Comments on Threats:

No Further Work: Yes

Stewardship: No

National Register Listing: No

Further Documentation: No

Preservation/Conservation/Repair: No

Comments on Resource Management: Was potentially eligible to NRHP in 1994. Integrity was impacted by the base in 1995. This resulted in removal of the building's integrity, thus it is no longer eligible.

Importance: Exceptional

Eligibility: Ineligible

Height: 25

Original Planned Duration: Permanent

Existing Use: Offices

Other Use/Dates: Alert Facility

Primary Building Materials: Poured Concrete

Character Defining Features: Massing, access ramps, domestic and operations facilities

Resource Number: 17116

Property Description: Historical maps, base layouts, and construction and utility project drawings

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date:

Base Map Building Number: inside 2539

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Architectural Drawing Files

Statement of Significance: Information on historic structures and development of the installation.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 1

Temporal Phase Relationship: 3

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 3

Total Score for Priority Matrix: 15

Comments on Threats: Frequent handling and removal from drawers.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Inventory, copy, and storage at curatorial facility.

Record/Document Category: Drawing Files

Year of Document: various

Period of Association: all

Comments on Condition: Good condition but threatened by handling.

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Beale AFB, and to provide research materials for this study:

John Thompson
Natural Resource Specialist
9th CES/CERR
6451 B Street
Beale AFB, California 95903-1708
(916) 634-2665

Coy F. Cross II, Ph.D.
Wing Historian
9th RW/ History Office
19501 Edison Street, Suite 300
Beale AFB, California 95903-1221
(916) 634-9177

Dennis Bruner
Community Planner
9th CES/ Drawing Room
6451 B Street
Beale AFB, California 95903-1708
(916) 634-2699

Fred M. Carmody
Field Operations Manager
Lockheed Corporation
(916) 788-0281

Jane Cook
Real Property Officer
9th CES/CERR
6451 B Street
Beale AFB, California 95903-1708
(916) 634-2670

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Beale AFB history and Cold War context:

Coy F. Cross II, Ph.D., Wing Historian, 9th RW, August 29 - September 2, 1994

Fred M. Carmody, Field Operations Manager, Lockheed Corporation, September 1, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-3: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT CANNON AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Lori E. Rhodes
Karen Lewis
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

June 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Cannon Air Force Base was inventoried by Karen Lewis and Lori E. Rhodes of Mariah Associates, Inc., between April 12 and 15, 1994 as part of the Air Combat Command Cold War study for the ongoing Department of Defense Legacy Program. Information was gathered at the base from the Wing Historian, the Drawing Room staff, and at the Civil Engineering, Real Property, and Public Affairs offices. On-site inspections were also conducted. During this research and inventory, resources were inventoried and photographed. A relatively small amount of material culture was identified as relating to the Cold War era and consequently to the scope of this study.

From the research and on-site inspection, three resources were evaluated as important to the base and national Cold War history. A photograph collection and two documentary collections contain photographs, plans, maps, drawings, and literary resources that document the development of Cannon Air Force Base throughout the Cold War. Further documentation, stewardship, and conservation are recommended for all three resources.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AGE	- Air Ground Equipment
amsl	- above mean sea level
CRS	- Component Repair Squadron
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
F-BW	- Fighter-Bomber Wing
FTD	- Field Training Detachment
GSA	- General Services Administration
HABS	- Historic American Buildings Survey
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NATO	- North Atlantic Treaty Organization
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCNUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TFW	- Tactical Fighter Wing
USAF	- United States Air Force
WSK	- War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Super-Airdrome - A runway and landing field configuration, designed in 1942, equipped to handle blind landings and the larger aircraft which were coming into use.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	4
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	15
4.0 METHODOLOGY	22
4.1 INVENTORY	22
4.2 EVALUATION OF IMPORTANT RESOURCES	23
4.2.1 Documentation	23
4.2.2 Evaluation of Importance	23
4.2.2.1 Cold War Context	23
4.2.2.2 NRHP Criteria	24
4.2.2.3 Exceptional Importance	25
4.2.3 Evaluation of Integrity	25
4.2.4 Priority Matrix	26
4.2.5 Resource Organization	27
4.3 BASE SPECIFIC METHODS	27
5.0 RECONNAISSANCE INVENTORY RESULTS	29
6.0 EVALUATION RESULTS	30
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	30
6.1.1 Documentation	30
6.1.1.1 Photograph Collection	30
6.1.1.2 Documentary Collection	30
6.1.1.3 Documentary Collection	32
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	33
6.3 MATERIEL DEVELOPMENT FACILITIES	33

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.4 TRAINING FACILITIES	33
6.5 INTELLIGENCE FACILITIES	33
7.0 UNDOCUMENTED RESOURCES	34
8.0 FUTURE THREATS TO RESOURCES	35
9.0 PRELIMINARY RECOMMENDATIONS	36
9.1 NRHP ELIGIBILITY	36
9.1.1 Evaluation and Determination of NRHP Eligibility.....	36
9.1.2 Implications of NRHP Eligibility.....	38
9.2 EVALUATED RESOURCE RECOMMENDATIONS	39
9.2.1 Photographic Collection.....	41
9.2.2 Documentary Collection.....	41
9.2.3 Documentary Collection.....	42
10.0 REFERENCES CITED	43
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Cannon Air Force Base	5
Figure 2.2 Cannon Air Force Base Layout	6
Figure 2.3 Standard Tactical Air Command Base Layout	8
Figure 2.4 Cannon Air Force Base Land Use Diagram	10
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	11
Figure 3.1 Cannon Air Force Base, 1940s	16
Figure 3.2 Cannon Air Force Base, 1940s, Close-up of the Main Base Structures	17
Figure 3.3 Cannon Air Force Base, 1950s	18
Figure 3.4 Cannon Air Force Base, 1960s	19
Figure 3.5 Cannon Air Force Base, 1970s	20

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	31
Table 6.2 Evaluated Resource Prioritization by Priority Rank	31
Table 8.1 Resources Planned for Demolition	35
Table 9.1 Recommendations for Evaluated Resources	40

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

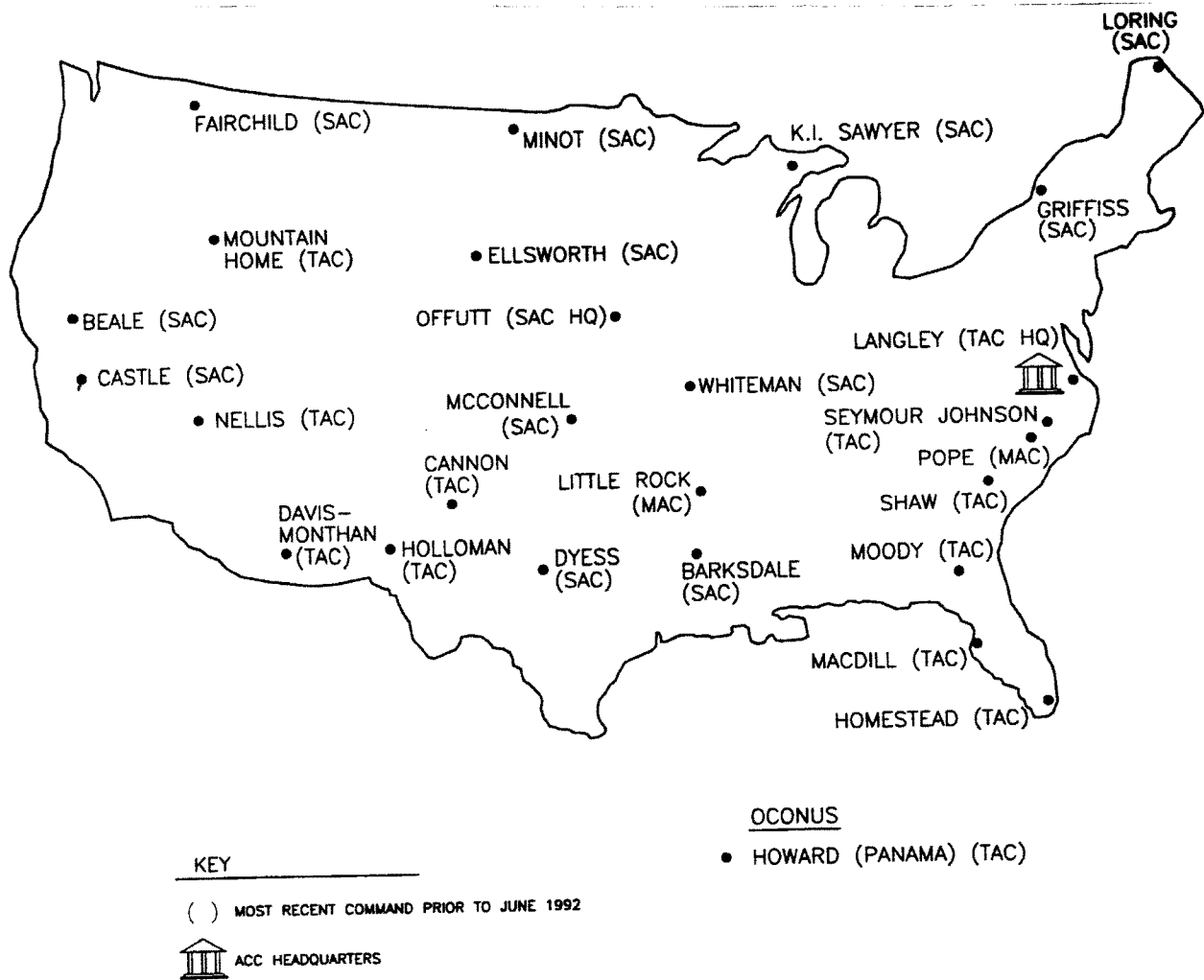
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\CANNON\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Cannon Air Force Base (AFB). Cannon AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Cannon AFB is currently the home of the 27th Tactical Fighter Wing (TFW), the only operational United States Air Force (USAF) unit flying the F-111 strike fighter and the EF-111A *Raven* electronic countermeasures aircraft. The primary mission of the 27th Wing is to develop and maintain an F-111 and EF-111A fighter wing capable of day, night, and all-weather combat operations for war fighting commanders worldwide at any time (USAF 1993a).

2.2 GEOGRAPHIC DESCRIPTION

Cannon AFB is located on the high plains of extreme eastern New Mexico along U.S. Highway 60/84, 0.6 mi (0.96 km) west of Clovis (Figure 2.1). Melrose Bombing Range, which is controlled by Cannon AFB, is located approximately 35 mi (56.3 km) west of the main base and is also accessed by Highway 60/84.

This portion of New Mexico lies in the Llano Estacado, a physiographic zone characterized by desert basin plains with grama grasslands. The terrain of Cannon AFB is relatively flat, with no major streams or landforms in the vicinity. Elevation averages approximately 4,295 ft (1,309 m) above mean sea level (amsl). Melrose Bombing Range exhibits generally the same topography, with the exception of a low mesa on the west side of the range.

2.3 CURRENT BASE LAYOUT

Cannon AFB is generally bounded on the north by U.S. Highway 60/84, although a new housing section now extends north of this highway (Figure 2.2). Other boundaries abut farmland and are defined by the perimeter road. The main base building area occupies the northcentral portion of the overall base area. The primary runway is aligned slightly northeast-southwest. A secondary runway runs perpendicular to the primary one, intersecting it just southwest of the main base.

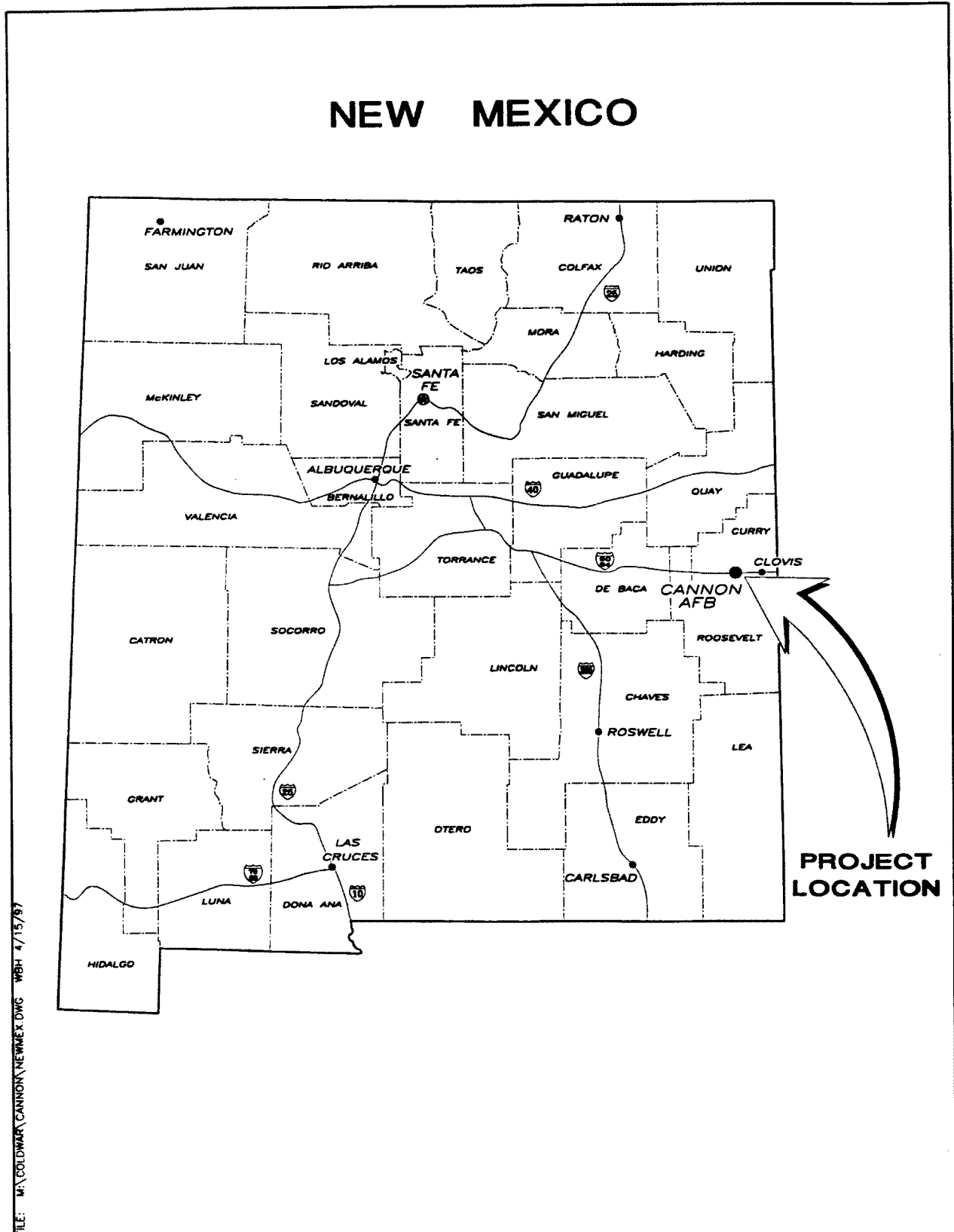


Figure 2.1 Location of Cannon Air Force Base.

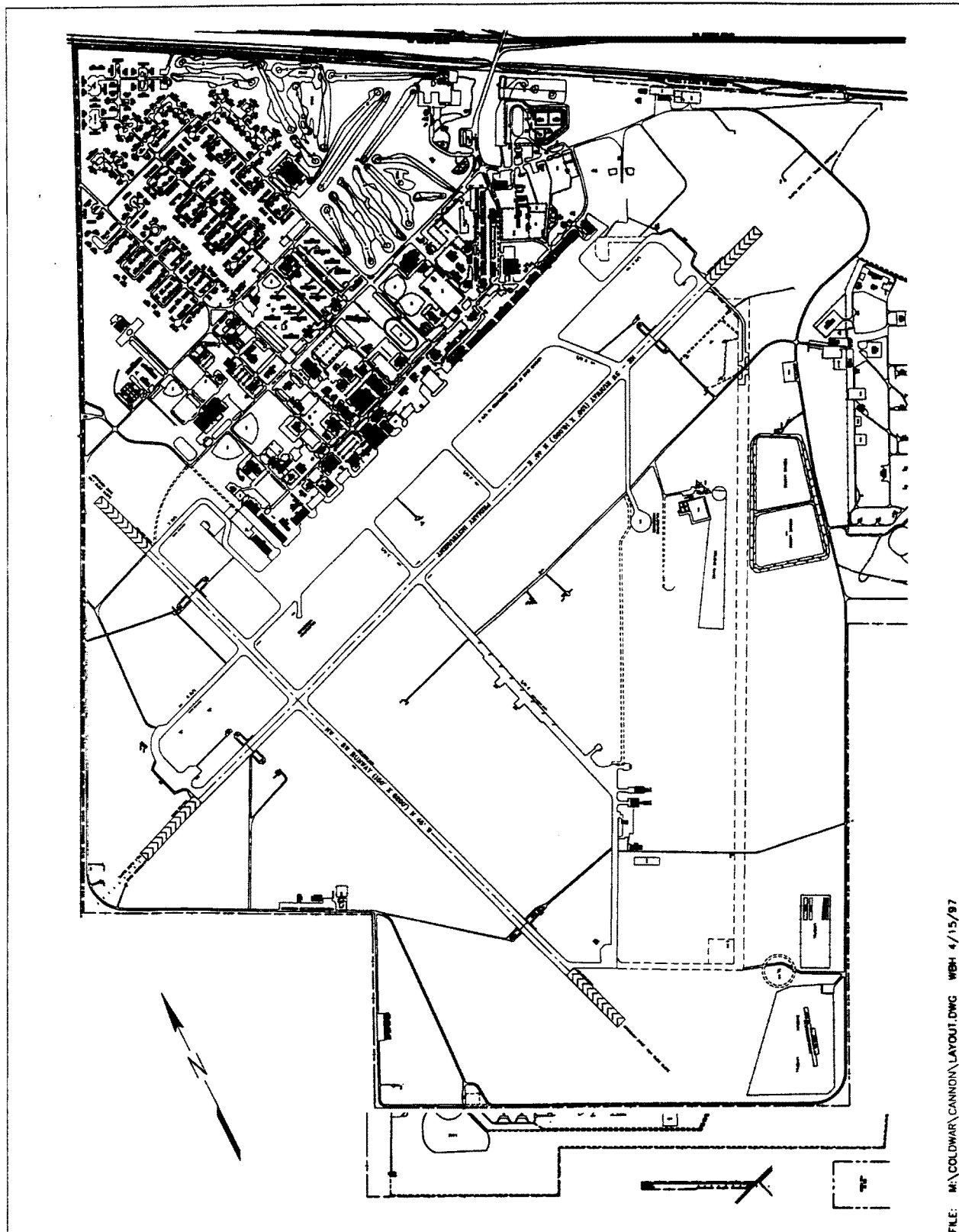


Figure 2.2 Cannon Air Force Base Layout.

This alignment varies from the standard TAC base (Figure 2.3) where the secondary runway abuts the flightline and the primary runway is an offshoot, beginning at one end of the flightline then running at a tangent away from the main base. In the typical layout, an unused runway corresponds to the secondary runway alignment at Cannon AFB.

The remaining lands occupied by Cannon AFB are traversed by taxiways, an old runway, and secondary dirt roads, and include many clear zones where no development may occur. Ancillary facilities (sewage lagoons, landfill, fire training, kennels, small arms range) are located along the perimeter road and adjacent to these dirt roads. A secured munitions area is located just outside the perimeter road along the eastern edge of the base lands. The standard TAC base layout exhibits fewer ancillary buildings in these peripheral zones, perhaps because of the primary runway through these areas.

The current layout of the main base at Cannon AFB includes mission buildings which run parallel to the flightline and the primary runway. Maintenance docks are located directly on the apron. Support buildings, such as propulsion and avionics, are located adjacent to the mission area on the north and west side of Torch Boulevard. Despite the fact that the flightline is along the secondary runway in the standard layout, particular buildings, including the base operations and control tower, squad operations buildings, and fire station, are found in almost identical locations along the flightline in the standard layout and at Cannon AFB.

Community buildings interspersed with ball fields and other recreation areas cluster along the southwestern end of the mission area. The wing headquarters is nestled in this area. To the north is a section of older base storage buildings through which a now dismantled railroad spur once ran. This location of wing headquarters and base supply is almost identical to the standard plan, yet in the latter the railroad spur does not run through the supply area. Instead it is further away from the developed area, more accessible to the fuel storage and loading area.

Insert Figure 2.3.

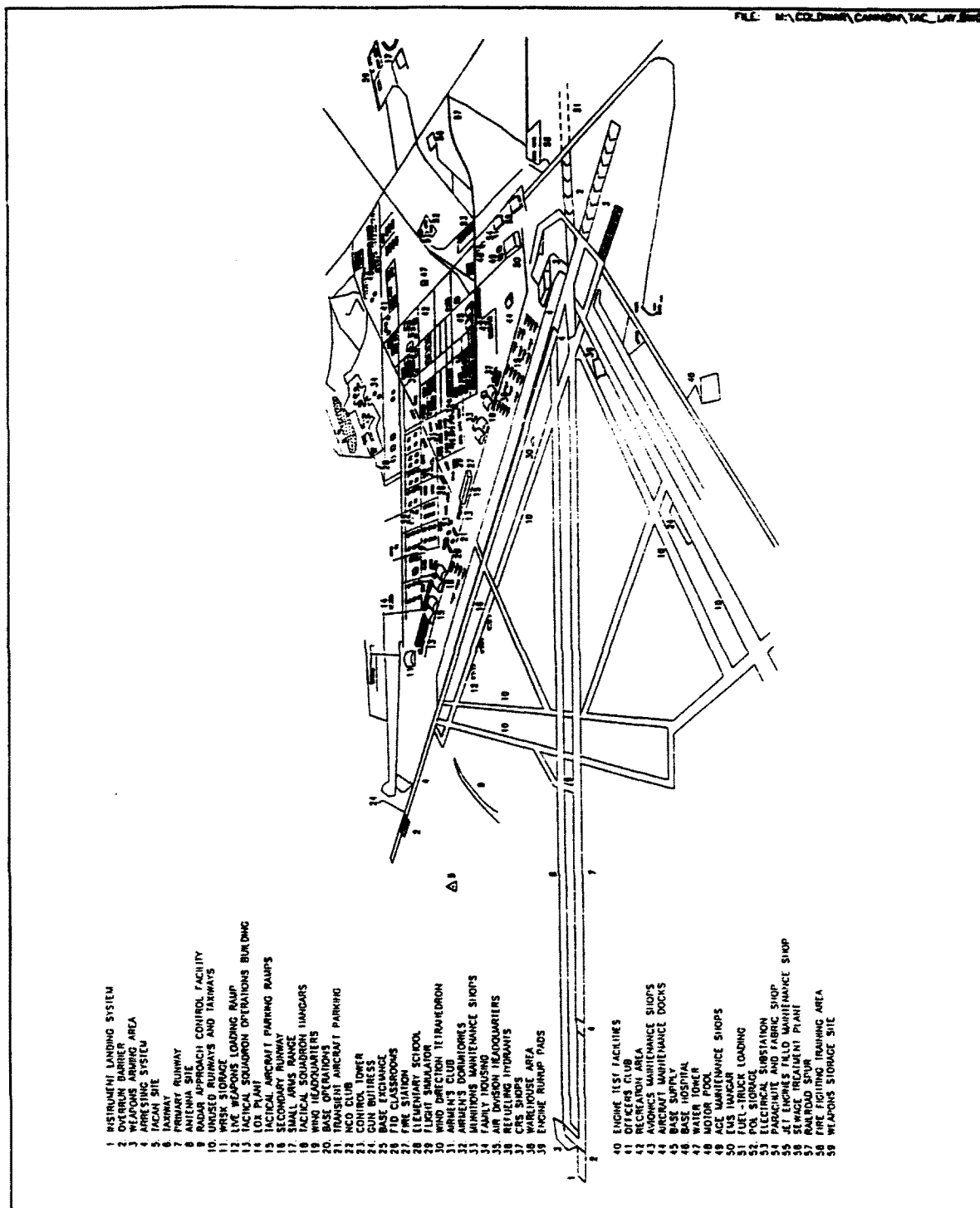


Figure 2.3 Standard Tactical Air Command Base Layout.

The base hotel, officer's club, housing areas, and golf course are located on the periphery of the main base buildings, adjacent to the perimeter road. The main base entrance is flanked by the tank farm on the southeast and by the main base static display park on the northwest.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - facilities that house administrative and maintenance functions

Community - facilities such as shopping areas, medical, and family support

Family Housing - accommodations for married personnel and families, including temporary housing

Headquarters - building that houses administration for base wing

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and industrial contractors

Mission - areas for the preparation and maintenance of aircraft

Recreation - areas used for athletics, camping, and recreational activities

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers between base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan of Cannon AFB, and Figure 2.5 is a diagrammatic land use plan of a standard TAC base. Cannon AFB is basically laid out as a standard plan TAC base with mission and industrial areas close to the airfield and aprons. Recreational areas and family housing are concentrated near the entrance side of the base. The community area separates the housing areas from the mission activities, a characteristic which is partially true for

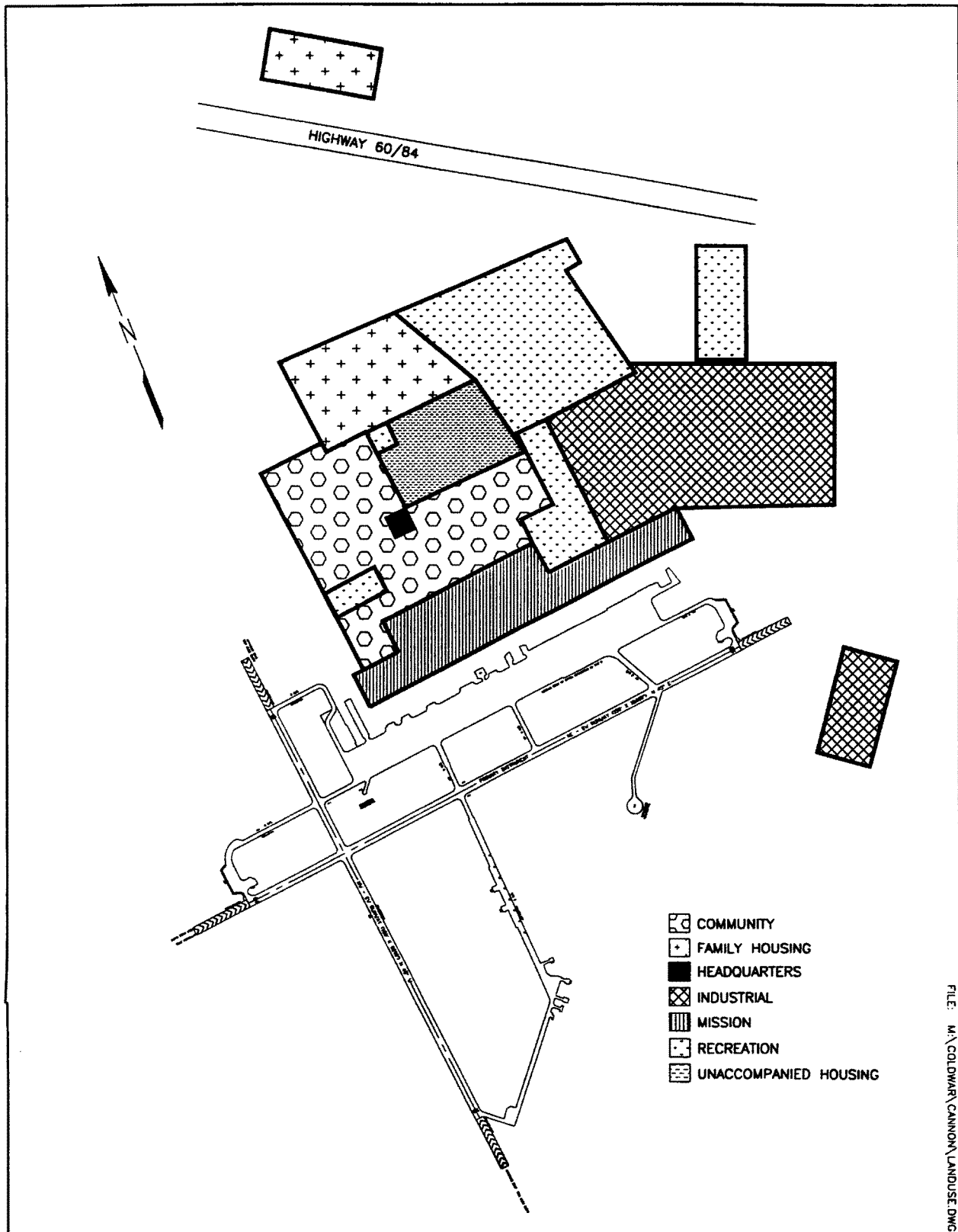


Figure 2.4 Cannon Air Force Base Land Use Diagram.

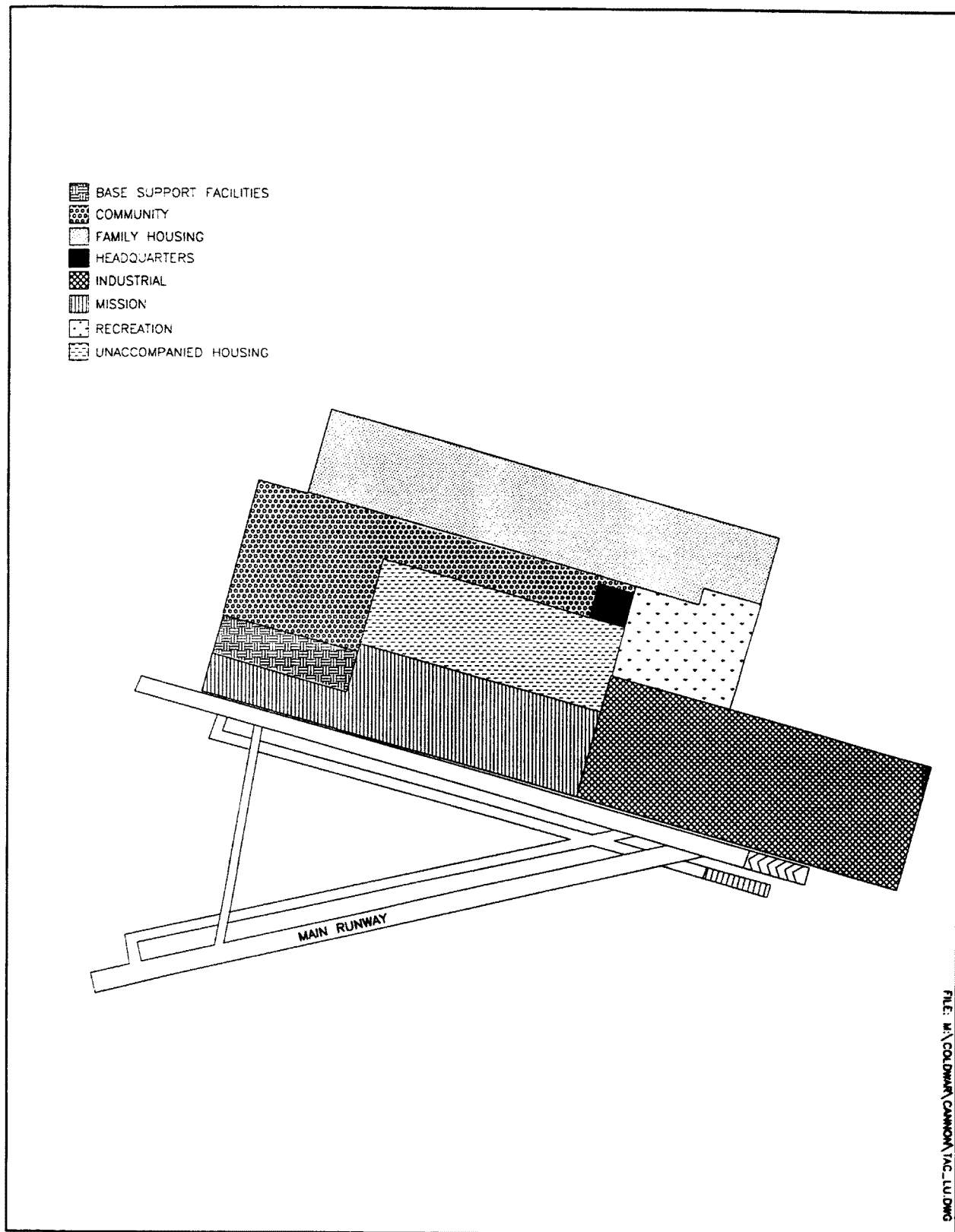


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

the standard TAC base plan. The industrial area runs from the northeast corner of the apron away from the main mission area, but roughly parallel with the main runway. The primary differences between Cannon AFB and the standard plan are Cannon AFB's development of areas on the south side of the airfield and the installation of off-base, government funded lease housing.

Recreation areas at Cannon AFB are prevalent and located in association with various land use areas around the base, including within the community and unaccompanied housing areas, and divide the industrial area from mission, comprising almost the entire northeastern quadrant of the main base. The Headquarters building is located away from the mission area and is surrounded by community buildings. Unaccompanied housing is centrally located, within walking distance to community, recreation and mission buildings. Family housing is located farthest from the flightline and, as previously mentioned, continues on the opposite side of Highway 60/84. The main base entrance is on the south side of Highway 60/84, dividing recreation (golf course) from the industrial area. Some storage and special operations buildings are located on the south side of the airfield. There are new traffic check houses at the south and the west sides of the base. Newer industrial buildings at Cannon AFB are located at the extreme eastern end of the flightline.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Cannon AFB is on the original site of Portair Field, a 1920s civilian passenger facility. In the 1930s, the field was renamed Clovis Municipal Airport, and in 1942 the site was proposed as one of the three Super-Airdrome sites.

The base opened in September 1942 as Clovis Army Air Field. Strategic Air Command (SAC) took control of the field in March 1946. The 16th Bombardment Operational Wing was the first unit to occupy the field and used the facility to train aircrews for B-24, B-17, and B-29 bombers. The air field was then reassigned to the 15th Air Force with responsibilities to man, train, and equip tactical units (General Services Administration [GSA] 1972). In 1947 the field was inactivated, probably due to the general down-sizing trend of the military after World War II. While deactivated, the airfield was renamed Clovis AFB.

Air Training Command took control of the base in April 1950. Also in 1950, the National Security Council documented the need for a massive build-up of conventional military capabilities in National Security Council document No. 68. The invasion of South Korea by North Korea later that year supported the document. However, the administration in Washington, D.C., at that time wanted to keep costs at a minimum, resulting in a preference for converting or modernizing existing bases rather than constructing new ones. In accordance with this preference, Clovis AFB was reassigned to the 140th Fighter-Bomber Wing (F-BW) of TAC in 1951. In 1952, 7,771 acres were leased near Melrose, New Mexico, to serve as a bombing range for the F-86 *Sabre* aircraft stationed at the base. Melrose Bombing Range was used during the Korean War by Air Force, Navy, and Marine Corps units for bombing and gunnery practice.

During the early to mid-1950s, many different wings and squadrons occupied the base before being assigned to Korea or Europe. These included the 388th F-BW, trained for F-86s, which arrived in 1953 and then moved to Europe in 1954; the 37th F-BW, both activated and

inactivated in 1953; and the 50th F-BW, activated and converted from P-51 to F-86/F aircraft in 1953 before being moved to Germany the same year.

Activated at Clovis AFB in 1954, the 312th F-BW was associated with the base for significantly longer. Initially trained to maintain proficiency in fighter-bomber operations with conventional weapons, the 312th F-BW began training in 1955 to maintain combat proficiency with atomic weapons. The wing was rotated to France in 1957-1958 to provide TAC air strike forces for the Far East.

In 1957, the base was finally designated a permanent installation and named in honor of General John Kenneth Cannon. General Cannon was renowned for his tactical achievements during World War II, and was a former commander of the 12th Air Force and of TAC (Mueller 1989:58-59).

In 1957, the first F-100 *Super Sabre* was assigned to Cannon AFB as part of the 474th TFW, which maintained proficiency in tactical fighter operations and deployed components, aircraft, and crews on a global basis in support of the North Atlantic Treaty Organization (NATO).

In 1958, the 27th TFW was transferred to Cannon AFB from Bergstrom AFB in Texas, replacing the 312th F-BW. The 27th TFW deployed F-100s during the Cuban Missile Crisis, and other Cannon AFB units were deployed during the Vietnam War. The 474th TFW deployed three squadrons during the Cuban Missile Crisis, but the wing was transferred to Nellis AFB, Nevada, in 1968.

During the 1960s, Cannon AFB experienced a build-up of personnel and sophisticated weapons systems, which manifested itself in real property improvements. Between 1968 and 1989, 78,000 additional acres of land were purchased to expand Melrose Bombing Range.

In 1969 Cannon AFB became the second base to receive the F-111 strike fighter. The conversion to a full F-111 wing began with the delivery of 10 aircraft from Nellis AFB followed by training for maintenance and support staff.

Cannon AFB was reassigned to ACC in June 1992. The current mission of Cannon AFB is to organize, equip, train, and administer forces. The 27th TFW supplies combat-ready units to support worldwide general war commitments with either nuclear or conventional weapons. During the Cold War, the wing provided active air defense capable of engaging and destroying enemy air forces. Since the end of the Cold War, this capability has become a secondary part of its mission. Throughout its history, Cannon AFB has provided training for tactical aircrews and maintenance personnel (TSgt Timothy Drummond, personal communication, April 12, 1994).

3.2 BASE DEVELOPMENT

The base layout and land use areas at Cannon AFB have not changed significantly since its original construction in the early 1940s (Figures 3.1 and 3.2). While the use has stayed the same, flightline structures have undergone changes to keep up with evolving aircraft and to implement changing missions. As a progression of base layouts illustrates (Figures 3.3 and 3.4), these changes culminated in a much more developed flightline in the 1970s (Figure 3.5). Housing has been expanded over Highway 60/84, which borders the main base on the north, and housing areas now exist in Clovis and Portales. Recently the base has received 161 million dollars for capitol improvements and plans to demolish or renovate most of the older base structures.

Major construction events at Cannon AFB include the addition of four hangars in 1943, the construction of concrete aprons for F-86Fs in 1953, a new runway that was built in 1961, and the completion of 250 family housing units in 1965-66. Additional events include the construction of an air-to-ground gunnery range in 1953, the addition of more housing in 1969 and 1974, and the building of a JP-4 jet fuel pipeline from Amarillo, Texas, in 1968.

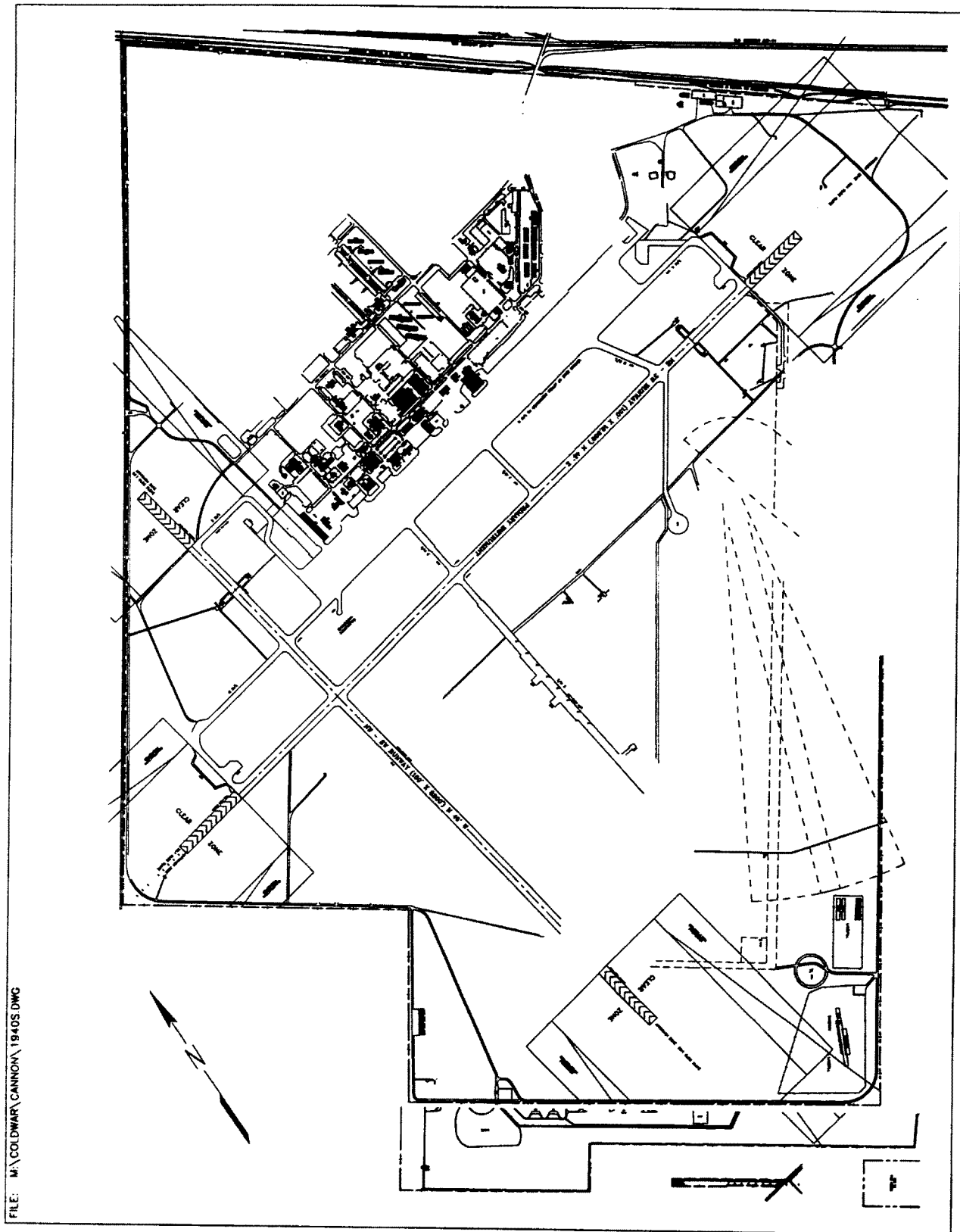


Figure 3.1 Cannon Air Force Base, 1940s.

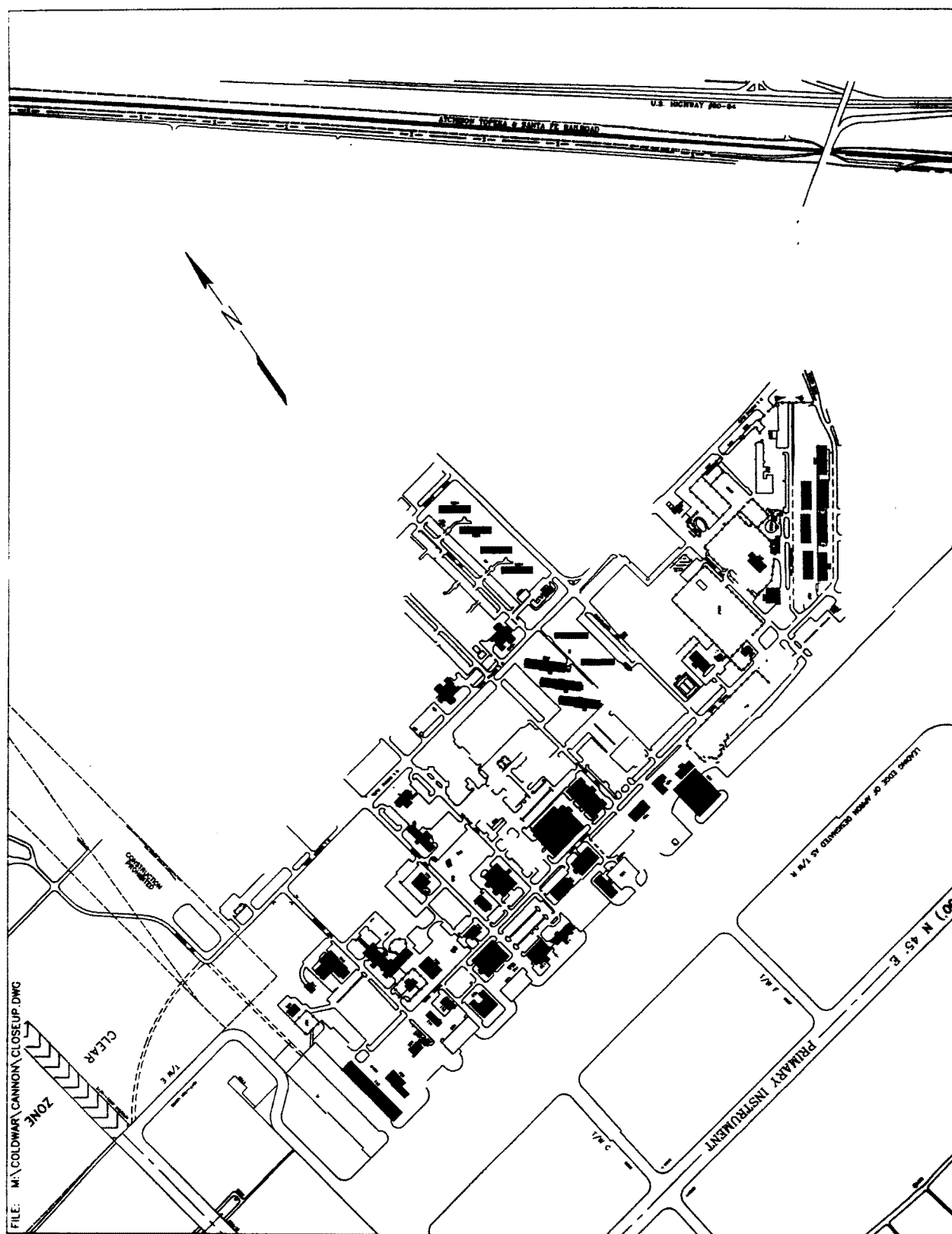


Figure 3.2 Cannon Air Force Base, 1940s, Close-up of the Main Base Structures.

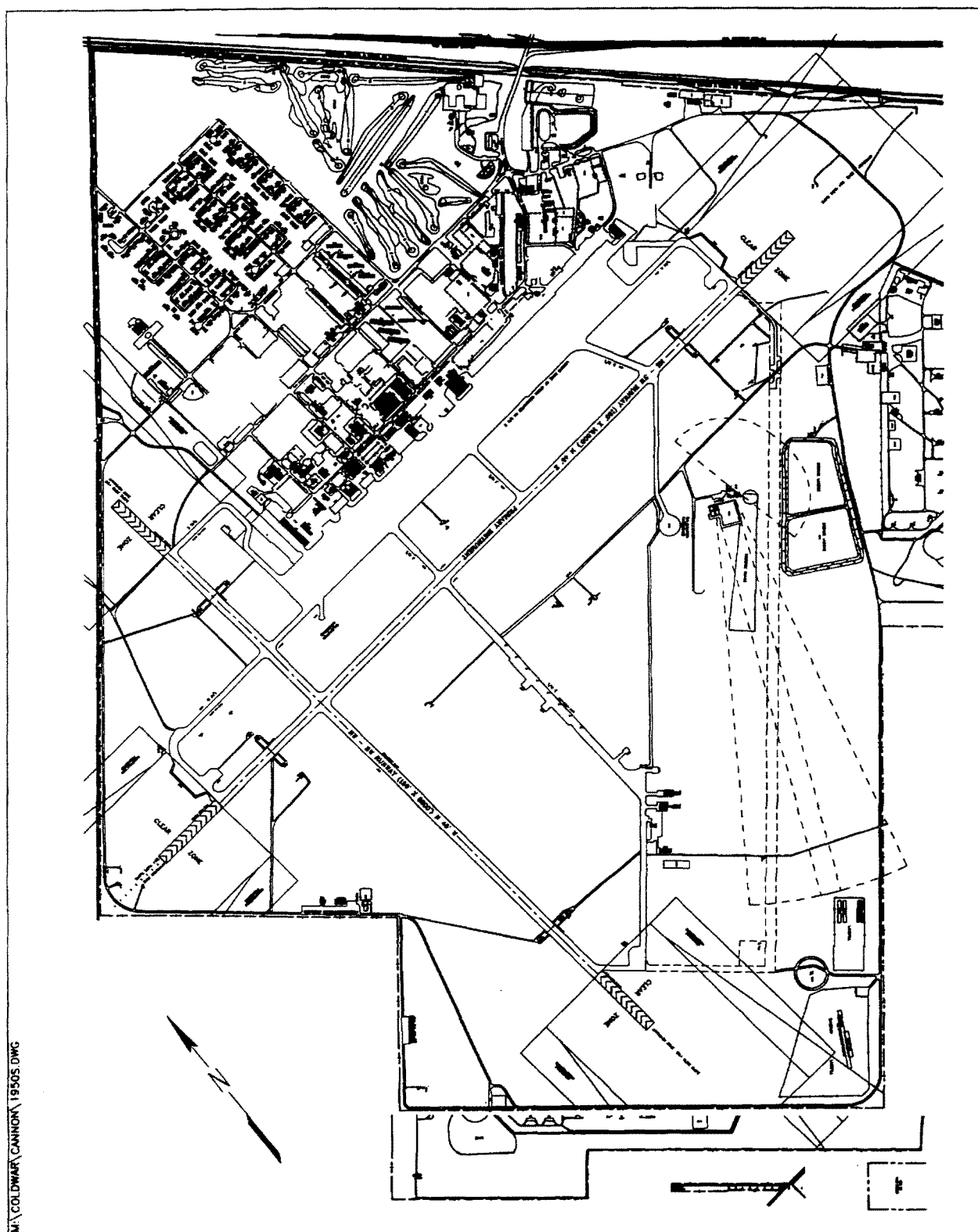


Figure 3.3 Cannon Air Force Base, 1950s.

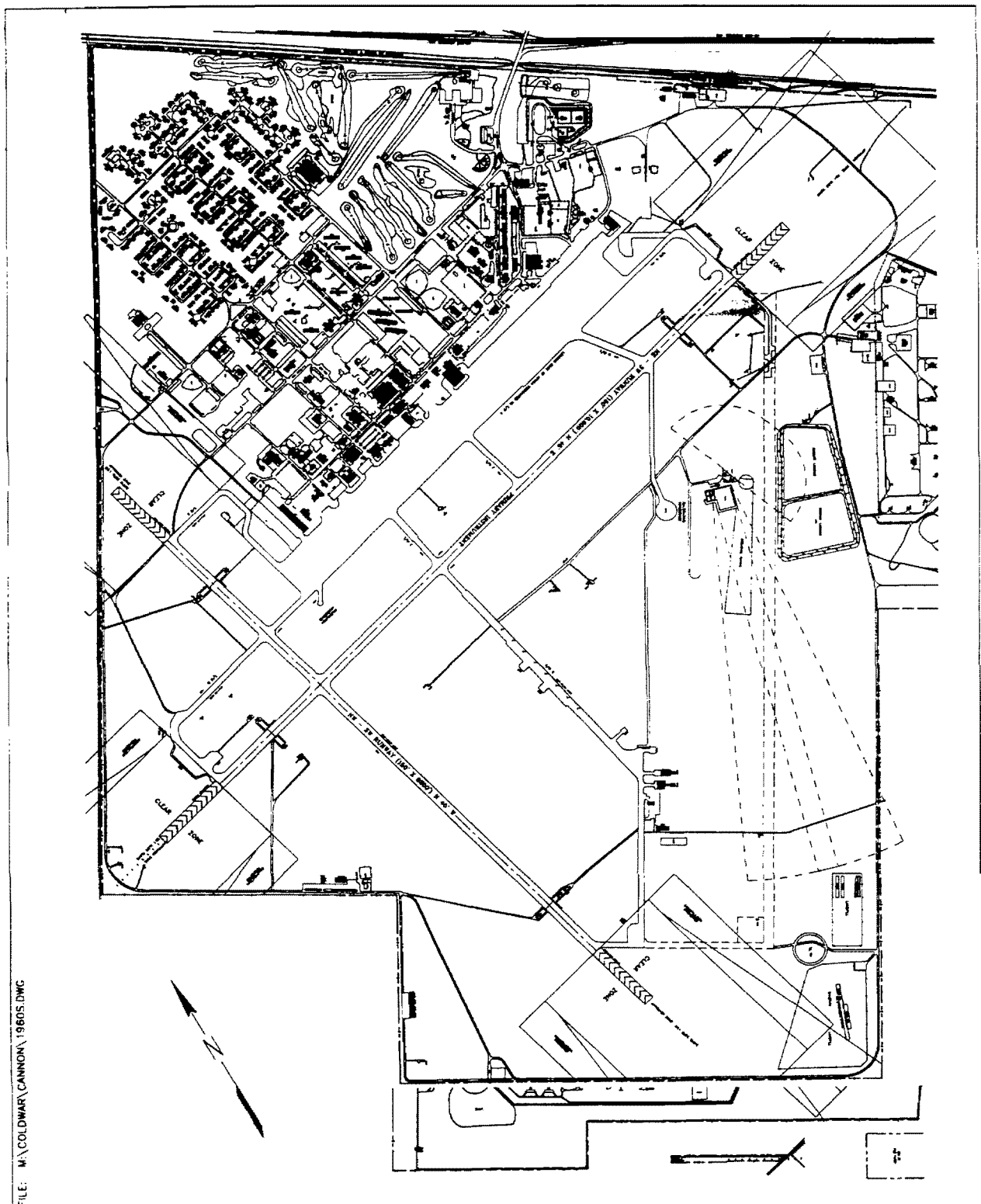
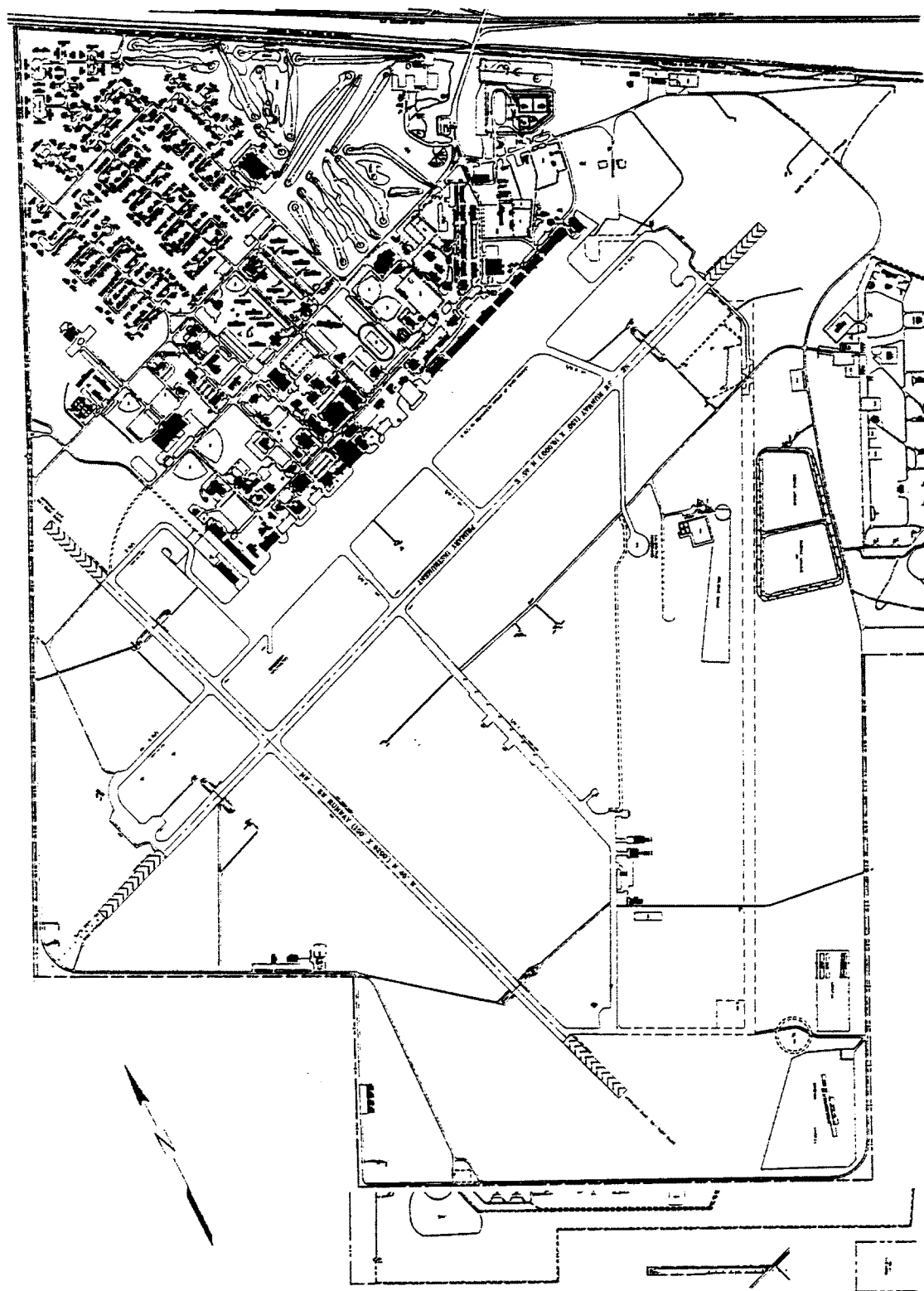


Figure 3.4 Cannon Air Force Base, 1960s.



FILE: M:\COLDWATER\CANNON\LAYOUT.DWG WBH 4/15/97

Figure 3.5 Cannon Air Force Base, 1970s.

In the mid-1950s, many buildings were rehabilitated, World War II structures were sold to the private sector, and new structures were built on base. Around 1954, seven new dormitories, three squadron operations buildings, an administration building, two warehouses, a cold storage plant, and other more minor facilities were constructed. In 1957, 362 new housing units were constructed. During the Cuban Missile Crisis and Vietnam, seven new dormitories, two officer's quarters, two mess halls, three squadron operations buildings and a new division headquarters were constructed on base. These replaced portions of "Splinter Village," of which seventy-five buildings were sold to the public (GSA 1972). Though the records are unclear, the name may refer to wooden World War II structures.

Due to Cannon's build-up of personnel and sophisticated weapons systems during the 1960s, the base received real property improvements including 400 family housing units, 12 maintenance docks, a warehouse, an engine shop, an avionics shop, an automotive shop, an 88 bed hospital, and runway improvements.

Extra land for housing was purchased in 1971 (GSA 1972), and there is housing off-base in both Portales and Clovis. This housing was paid for by the government and is being leased for 20 years at the end of which ownership of the facilities will revert back to the original general contractor.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Cannon AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993b:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Cannon AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Cannon AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due to the recent origin of the resources; and (2) an absence of data for

comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993b) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
 - d) have yielded or be likely to yield information of importance to United States Cold War history.
-

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993b) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

The Mariah field team arrived at Cannon AFB on April 12 and met with point of contact TSgt Timothy Drummond, Wing Historian. The team discussed the Cold War project with TSgt Drummond and set an itinerary for the visit. TSgt Drummond escorted the team to the Public Affairs office where they briefly explained their project to Captain Mike Pearson, Public Affairs officer, and collected brochures describing the base. TSgt Drummond then introduced the team to Mr. Rick Crow, Natural/Cultural Resource Manager. The same day, Mr. Crow escorted the team on a base tour, which began at the Cultural Resource Management office, proceeded along the unsecured areas of the flightline and through the base, and included the perimeter road and adjacent areas. Mr. Crow then took the team to the Civil Engineering office (Richard Creery, Engineering Technician) and Real Property office (Helen Pate, Real Property Officer). These two offices were visited intermittently by the team between April 12th and 15th to investigate records and documents and to gather information from property cards and maps for the evaluated properties.

After obtaining the proper permits, TSgt Drummond escorted the team into the secured areas of the flightline on April 13th. Photographs were taken to document the range of flightline resources. Photographs of examples of property types and important resources outside the flightline were taken without an escort for the remainder of the day. On April 14th, TSgt Drummond escorted the team to Melrose Bombing Range. The team visited the range control

tower and observed bombing practice flights. The control tower operator, Mr. Dave Miller of Westar Corporation, provided information regarding range activities. Some photographs were taken. Following the range visit, the team finished taking base photographs, unescorted. The base visit was completed on April 15th with an inventory of historic materials in TSgt Drummond's office.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Cannon AFB, 116 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at Cannon AFB, all of them falling under the DoD category of records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Photograph Collection (Resource No. 3114, Located in Real Property No. 352)

The Chief of Engineering Design, Mr. Harold Walker, has photographed numerous base buildings dating between the 1940s and 1990s as part of overall base documentation. Many of the older buildings have since been altered or destroyed. The photographs are stored in two boxes, each with approximately 50 photographs, in the Civil Engineering drawing room. The photographs provide valuable documentation of the base and are particularly important because Cannon AFB retains very few of its original buildings. The collection is in good condition, but the Civil Engineering building itself is slated for demolition and the collection could easily be lost or damaged during the transition to a new building.

6.1.1.2 Documentary Collection (Resource No. 3115, Located in Real Property No. 352)

This collection of engineering drawing files are located in the Base Engineer Administration building drawing room, which is secured. Resources in the collection include flat files of original historical maps, rolled original master plans and construction project maps, and flat files of architectural drawings.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Photograph Collection	3114	None	RecDoc/ Obj	19
Documentation	Documentary Collection	3115	None	RecDoc/ Obj	18
Documentation	Documentary Collection	3116	None	RecDoc/ Obj	15

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
19	3114	None	Photograph Collection
18	3115	None	Documentary Collection
15	3116	None	Documentary Collection

One cabinet of flat files, containing 30 drawers, is filled with original maps including base layouts, utility plans, geographic maps, mylars, photos, and housing project plans. Some of the drawers are labeled as follows: Melrose, old photos, base history, geographic maps, Mercury, Gemini, MFH, and Chavez Manor (housing projects). These flat files generally are referred to as the "historic maps." Some of these maps have been torn.

A wooden cabinet containing over 50 rolled maps is on top of the historic flat files. They are primarily construction master plans, most on paper. The maps are stuck directly into wooden slats and are not in tubes.

Architectural drawings include flat files filled with dated plans, mylar and linen originals, blueprints of construction documents, and as-builts. Two cabinets, each with 44 drawers, are arranged by building number, and an additional 50 drawers in another cabinet are simply labeled "infrastructure." The drawings provide architectural data pertinent to individual buildings on the base that date to the Cold War.

These drawings and maps span the 1940s to 1990s, include all four Cold War phases, and provide information on individual buildings as well as base-wide development. This collection provides valuable of the base in its development throughout the Cold War, illustrating the effect of the Cold War on base expansion.

6.1.1.3 Documentary Collection (Resource No. 3116, Located in Real Property No. 1)

The 27th Fighter Wing historian maintains a historical collection in his office, located in the Wing Headquarters. Photographic resources include five volumes of photographs, one drawer of historical photographic archives, and slides in two boxes. Four cabinets contain periodic histories, monographs, studies, and reports from 1951-1989. Three cabinets contain current and future history working files. The historian also has photographs of Melrose Bombing Range that he took, although these were not examined. Classified documents include two cabinets (four drawers each) of historical programs, periodic histories, monographs, reports, and working

materials. The resource is important due to its documentation of the base in its development throughout the Cold War era, showing the effect of the Cold War on the base and its mission as a part of TAC. The collection is being protected and is in good condition.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

None were evaluated at Cannon AFB.

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Cannon AFB.

6.4 TRAINING FACILITIES

None were evaluated at Cannon AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Cannon AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Cannon AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources such as literature and objects were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Cannon AFB. These resources should be investigated further for a more comprehensive analysis.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. Future studies of Cold War history at Cannon AFB should allot time and energy to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

The base is currently updating its facilities, primarily through the demolition of old buildings and the construction of new ones. No resources that were evaluated in this study are slated for demolition. Resources that were inventoried in this study and are currently planned for demolition are listed below (Table 8.1). Though these buildings are 50 years old or older, they were not determined to be important to the base's Cold War history, thus they were not evaluated during this study. However, they may be significant for other reasons outside the scope of this project, and therefore should be evaluated for eligibility to the NRHP prior to demolition.

Two maintenance docks, that were not inventoried, are slated for demolition. These are similar to docks at Holloman AFB, New Mexico, that are currently being considered for the National Register. A third maintenance dock, also not inventoried, has undergone Level I Historic American Buildings Survey documentation and will be demolished soon. Although beyond the scope of this particular study, these buildings should be formally documented and evaluated prior to destruction.

Table 8.1 Resources Planned for Demolition.

Resource No.	Real Property No.	Property Name	Status*	Date
3008	170	Small Aircraft Maintenance Dock	S	1943
3009	184	Small Aircraft Maintenance Dock	S	1943
3010	181	Squadron Operations	T	1943
3011	159	General Purpose Aircraft Shop	T	1943
3059	582	Squadron Operations	S	1943
3098	357	Base Engineer Maintenance Shop	?	?
3103	323	Base Engineer Covered Storage Facility	T	1944
3104	302	Base Supplies and Equipment Warehouse	T	1942

* S = semi-permanent, T = temporary

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Cannon AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Cannon AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Cannon AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic properties, though evaluated and determined eligible, are not nominated to the list. These

properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is designed to take place during the planning stages of a project when changes can be made to

achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Cannon AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Table 9.1 Recommendations for Evaluated Resources.

			Management Recommendations*					
Resource No.	Real Property No.	Property Type	No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	Comments
Record/Documents - Objects								
3114	None	Photograph Collection		*		*	*	
3115	None	Documentary Collection		*		*	*	
3116	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Photographic Collection (Resource No. 3114, Located in Real Property No. 352)

This collection of photographs of base buildings is valuable in that it documents buildings that have since been destroyed. The Civil Engineering Office, where the collection is stored, is slated for demolition and the photographs could easily become lost or damaged during the transition to a new building. It is recommended that the entire collection be inventoried. It is further recommended that the photographs be duplicated, that the duplicates be retained by the base for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.2 Documentary Collection (Resource No. 3115, Located in Real Property No. 352)

This collection contains original historic maps of base layout, original master plans and construction project maps, and architectural drawings, all providing information on the development of Cannon AFB during the Cold War. The storage of this collection has had an

impact on the condition of the maps and drawings, resulting in some of them being torn. It is recommended that copies be made of the collection and retained by the base for its use. It is further recommended that the original collection be sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Documentary Collection (Resource No. 3116, Located in Real Property No. 1)

This collection consists of photographs and documents that are currently under restricted access and are in good condition. It is recommended that the entire collection be inventoried. It is further recommended that the photographs be copied, with the copies remaining at the base for its use and the originals being sent to a permanent curatorial facility for stewardship and conservation.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

General Services Administration

- 1972 *Executive Order 11508 Installation Survey*. Cannon Air Force Base, New Mexico.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on September 1982*. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

United States Air Force

- 1993a *United States Air Force Fact Sheet: Cannon Air Force Base*. Cannon Air Force Base, New Mexico.
- 1993b *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property-Building				
	3001	00335	Vehicle Maintenance Shop	1955
	3002	00375	Vehicle Maintenance Shop	1968
	3003	00379	Vehicle Maintenance Shop	1965
	3005	00199	Aircraft Corrosion Control	1992
	3006	00197	Fuel System Maintenance Dock	1990
	3007	00196	Small Aircraft Maintenance Dock	1969
	3008	00170	Small Aircraft Maintenance Dock	1943
	3009	00184	Small Aircraft Maintenance Dock	1943
	3010	00181	Squadron Operations	1943
	3011	00159	General Purpose Aircraft Shop	1943
	3012	00135	Base Operations	1958
	3013	00160	Base Supply and Equipment Maintenance	1993
	3014	00130	Fire Station	1960
	3015	00124	General Purpose Aircraft Shop	1959
	3016	00111	Flight Simulator Training	1943
	3017	00125	Small Aircraft Maintenance Dock	1989
	3018	00133	Small Aircraft Maintenance Dock	1993
	3019	02326	Veterinary Clinic	1974
	3020	02321	Canine Kennel	1981
	3021	02346	Relocated Maintenance Docks	1958
	3023	05122	Power Check Pad	1982
	3024	02312	Small Arms Systems Range	1961
	3025	02145	Spare Inert Storage (Weapons)	1993
	3026	00252	Base Engineering Ground Pavement Facility	1958
	3027	02023	Petrol Operations Building	1988
	3028	01800	Visiting Officers Quarters	1968
	3029	00077	Commissary	1980
	3030	01820	Officer's Open Mess	1977
	3031	01816	Visiting Airmen's Dormitory	1969
	3032	Unknown	Housing Office	1994
	3033	00076	Child Care Center	1976
	3034	00078	Clothing Store	1992
	3035	00075	Recreation Center	1978
	3036	00054	Youth Center	1979
	3037	None	Housing (1660 Point Blank Loop)	
	3038	None	Duplex (1751 Midway Circle)	
	3039	None	Apartments (1760 Normandy)	
	3040	01111	Branch Exchange	1979
	3041	01156	Airman's Dormitory	1960
	3042	00058	Chapel Center	1971
	3043	00070	Base Theatre	1968
	3044	00074	Bowling Center	1972

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	3045	00060	Law Center	1962
	3046	00600	Base Personnel Office	1986
	3047	00001	Wing Headquarters	1960
	3048	01199	Airman's Dining Hall	1958
	3049	00550	Airman's Dormitory	1991
	3050	01249	Post Office Center	1958
	3051	01400	Composite Medical	1968
	3052	01404	Base Engineer Maintenance Shop	1075
	3057	01208	Library	1976
	3058	01256	Airman's Dormitory	1958
	3059	00582	Squadron Operations	1943
	3066	3110	Observation Tower at Melrose Range	
	3069	3121	Range Control at Melrose Range	
	3071	00112	Disaster Preparedness	1956
	3072	00840	NCO Open Mess	1954
	3073	00785	Field Training Facility	1966
	3074	00799	Explosive Ordinance Disposal	1957
	3075	00790	Flight Simulator Training	1967
	3076	00122	Weapons and Release Systems Shop	1991
	3077	00772	Data Processing Installation	1983
	3078	00682	Security Police Operations	1943
	3079	00012	Target Intelligence Training	1969
	3082	00728	Radar Approach Control Center	1972
	3083	00010	Communication Facility	1962
	3084	00150	Group Headquarters	1967
	3085	00680	Jet Engine Inspection and Maintenance Shop	1965
	3086	00155	Flight Training Classroom	1966
	3088	00620	Avionics Shop	1961
	3090	00593	Non-Destructive Inspection Shop	1986
	3094	01230	Exchange Cafe Snack Bar (Burger King)	1989
	3095	00444	Gymnasium	1977
	3096	00368	Exchange Service Station	1963
	3098	00357	Base Engineer Maintenance Shop	1969
	3100	00380	Base Engineer Covered Storage Facility	1953
	3102	00192	Base Cold Storage	1956
	3103	00323	Base Engineer Covered Storage Facility	1944
	3104	00302	Base Supplies and Equipment Warehouse	1942
	3105	00395	Jet Fuel Storage	1966
	3106	None	Duplex (7142 Oregon Court)	
	3107	None	Officer's Housing (7706 Oklahoma Court)	
	3108	None	Trailer Park ("High Plains Park")	
	3109	02209	Security Police Control Center	1987
	3110	00320	Traffic Check House	1970

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property-Landscape				
	3053	None	Playground	
	3064	None	Entrance to Melrose Range	
	3089	None	Landscaping Across From Avionics Shop (Bldg. 620)	
	3092	00580	Football Field	
	3093	00400	Athletic Softball Field	1964
	3097	None	Golf Course	
	3111	None	Small Static Display Park (F-100, F-111, flag)	
	3112	None	Large Static Display Near Base Entrance	
Real Property-Site				
	3022	02336	Fireman Training Facility	1977
	3067	None	Melrose Range Drop Zone	
Real Property-Structure				
	3055	None	Water Towers	
	3056	00050	Swimmer's Bath House	1961
	3068	unknown	Strafe Targets on Melrose Range	
	3099	None	Solar Panels Near Vehicle Maintenance	
Real Property-Object				
	3004	None	Fireball Squadron Sign on Squadron Ops (Bldg. 198)	
	3054	None	Sign in front of Airman's Dormitory (Bldg. 1254)	
	3060	None	Trophy Case in Wing Headquarters (Bldg. 1)	
	3061	None	Base Commander Photos in Wing HQ (Bldg. 1)	
	3062	None	Stained Glass Window of F-111 in Wing HQ (Bldg. 1)	
	3063	None	Entrance sign to Melrose Range	
	3065	None	Insignia Signs on Range Control at Melrose Range	
	3070	None	Bomb Shaped Bollards at Melrose Range Fueling Area	
	3080	None	"Red Carpet" on Flightline	
	3081	None	Sign Outside Control Tower	
	3087	None	Rock Sign Outside Avionics Shop (Bldg. 620)	
	3091	None	Sign at CRS	
	3101	None	Stallion Sign Near Depot Area	
	3113	None	27th FW Sign in Large Static Display Park (3112)	
Record/Document-Object				
	3114	None	Photograph Collection	
	3115	None	Documentary Collection	
	3116	None	Documentary Collection	

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES



Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 10).

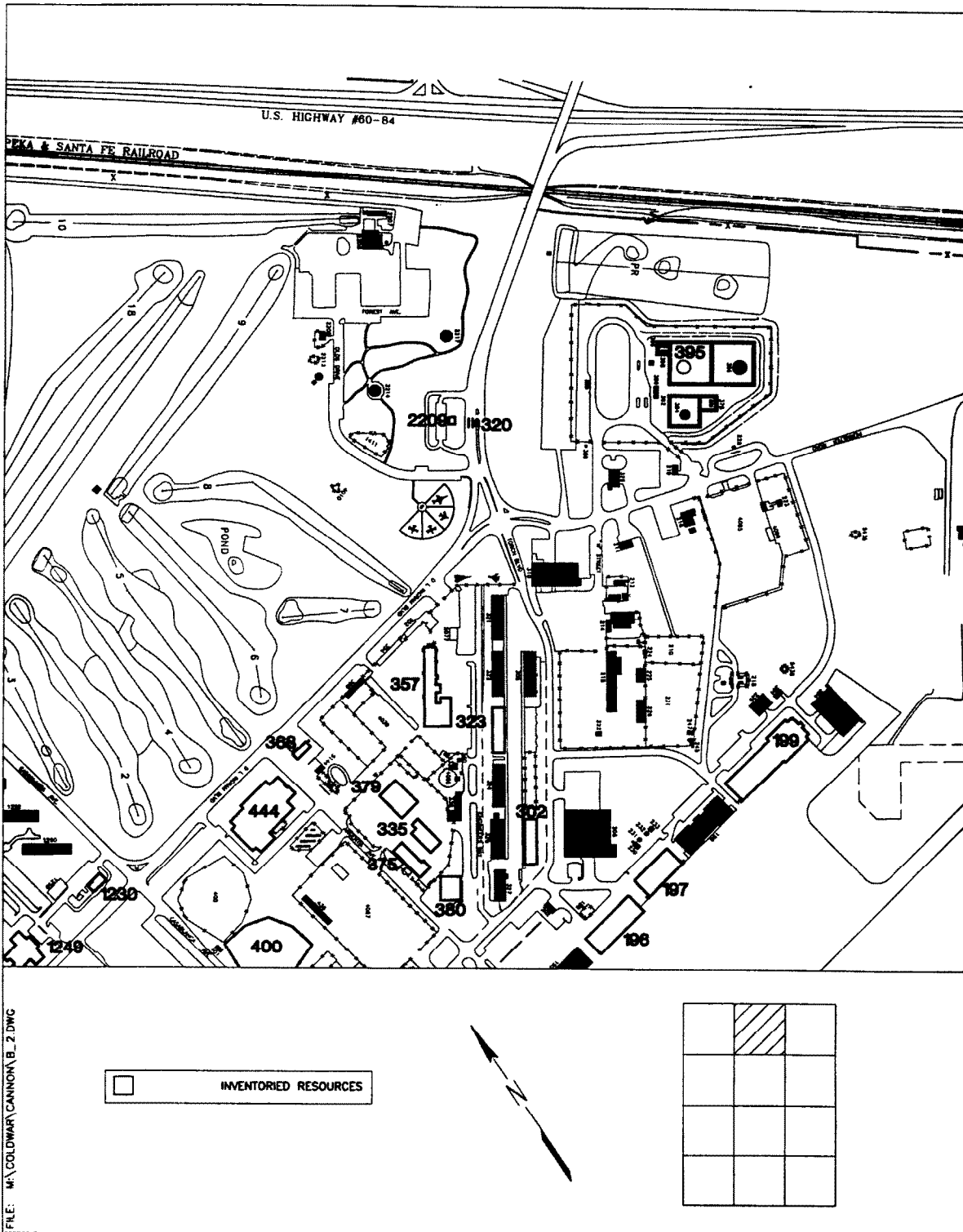


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 10).

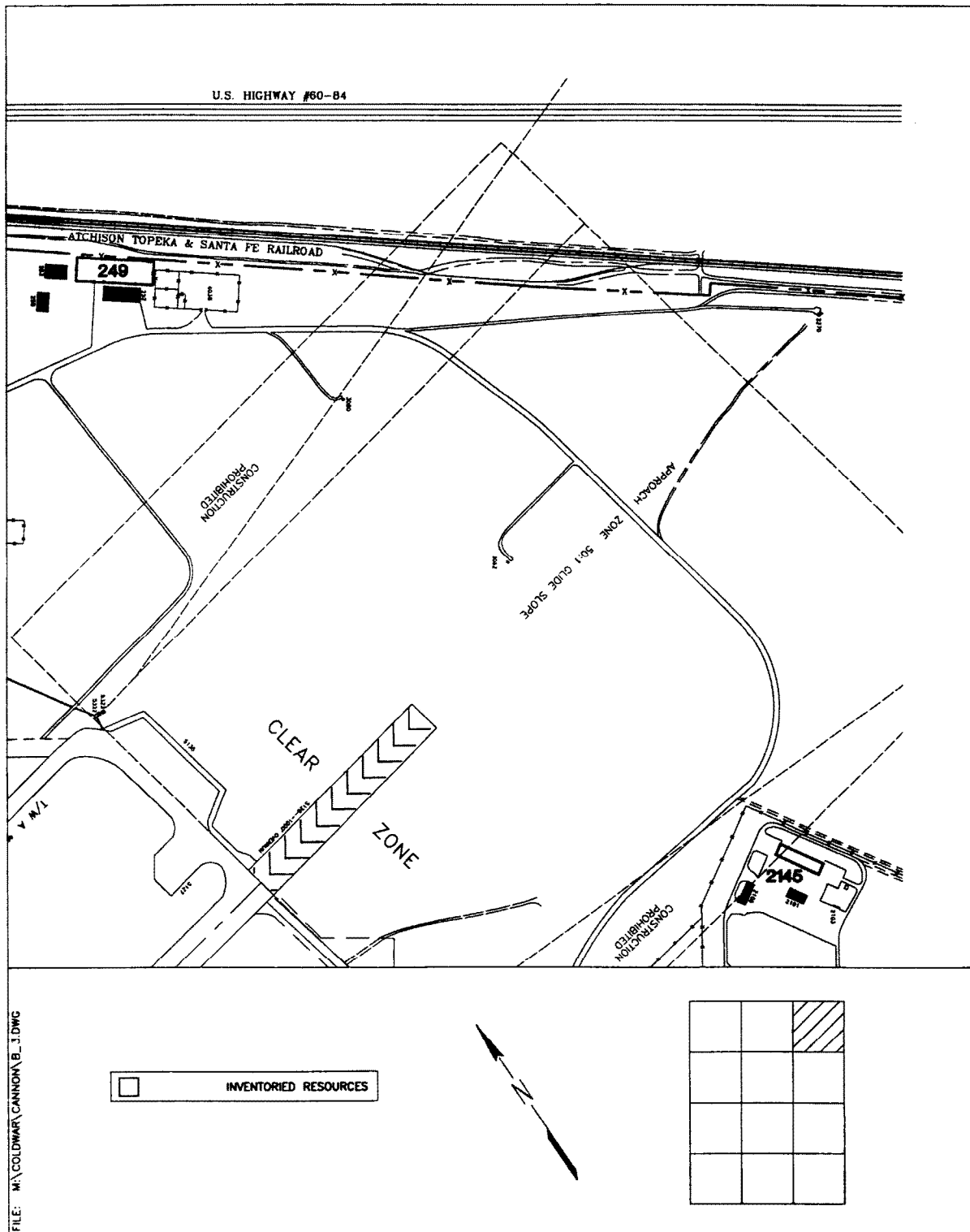


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 10).

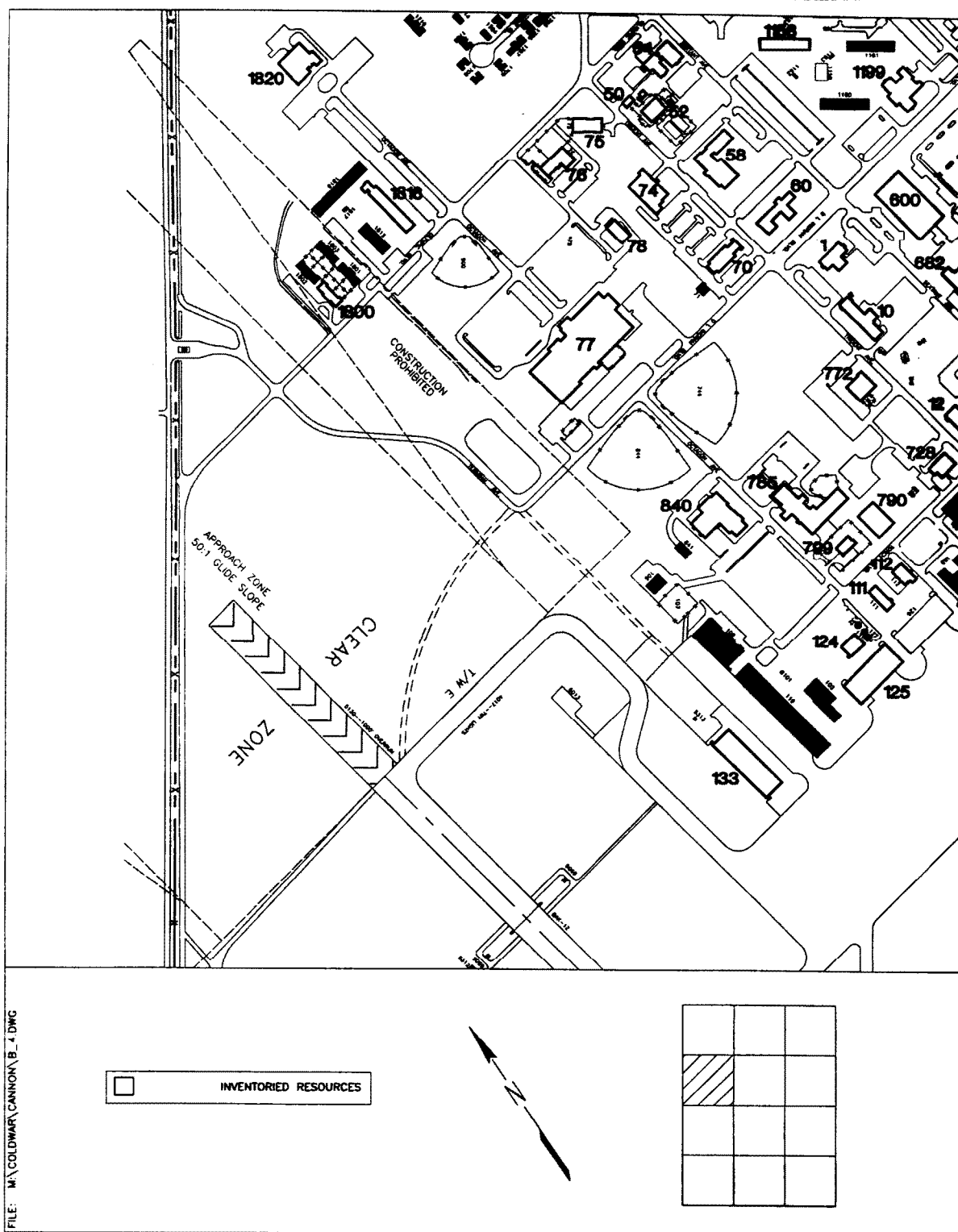


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 10).

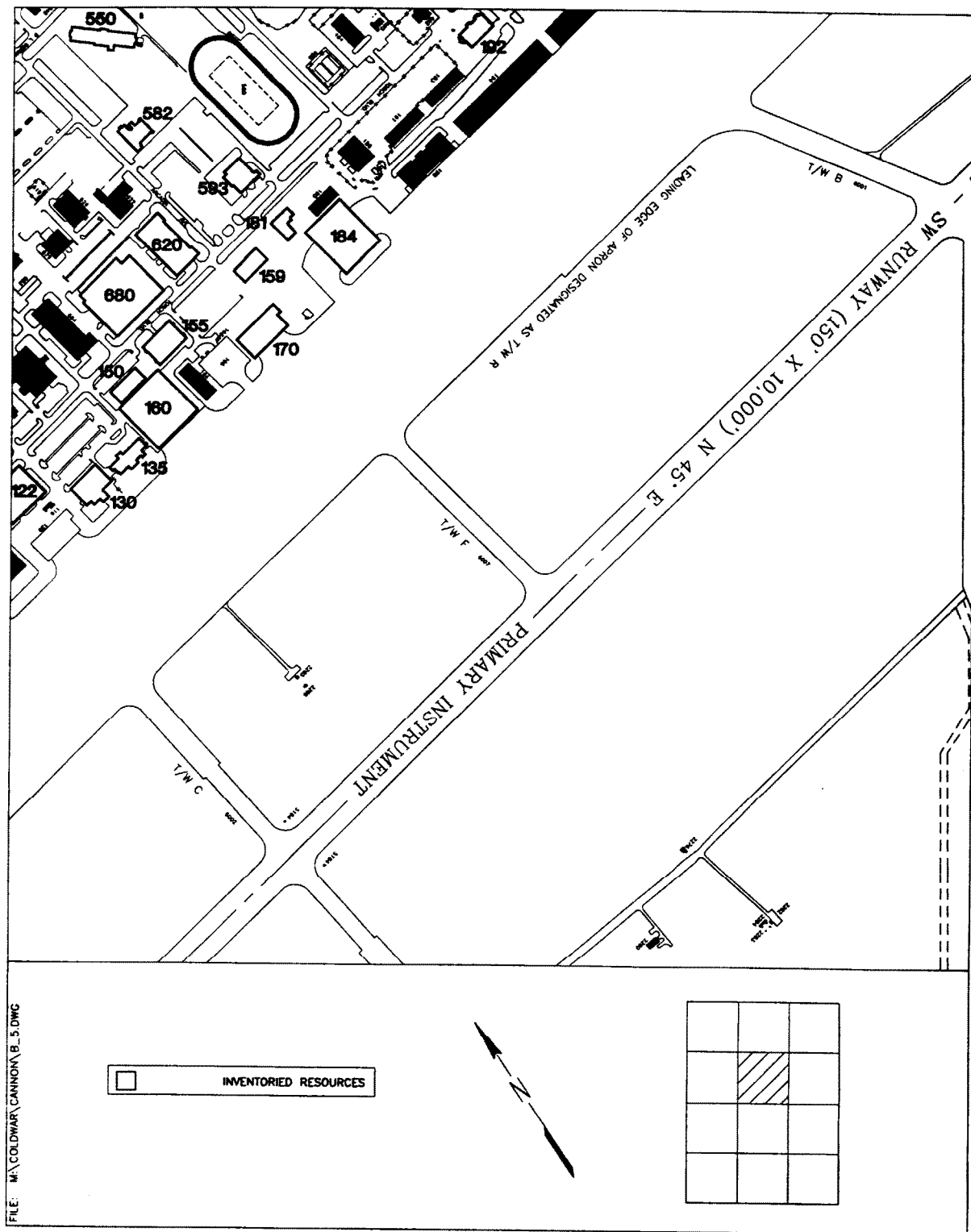
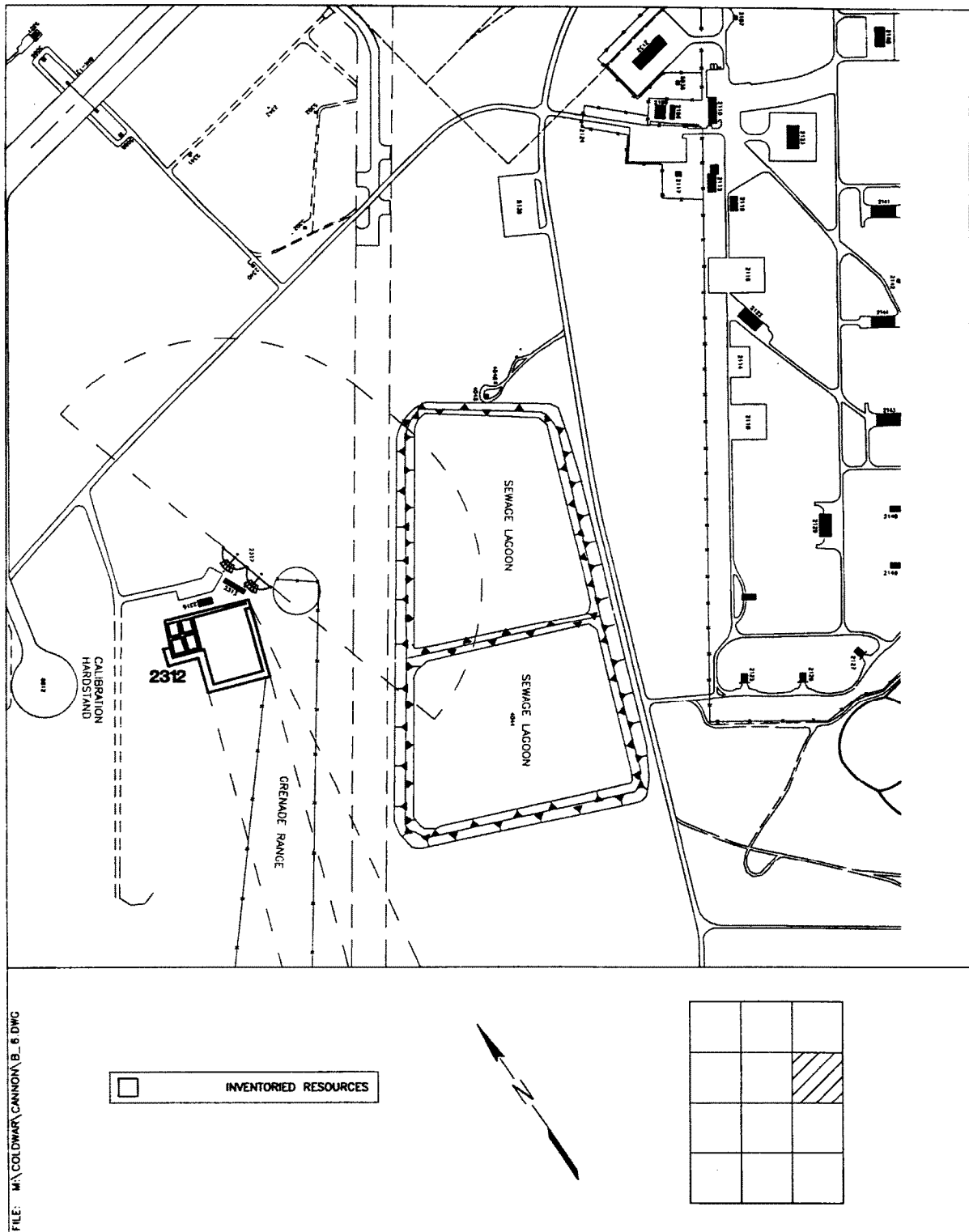


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 10).



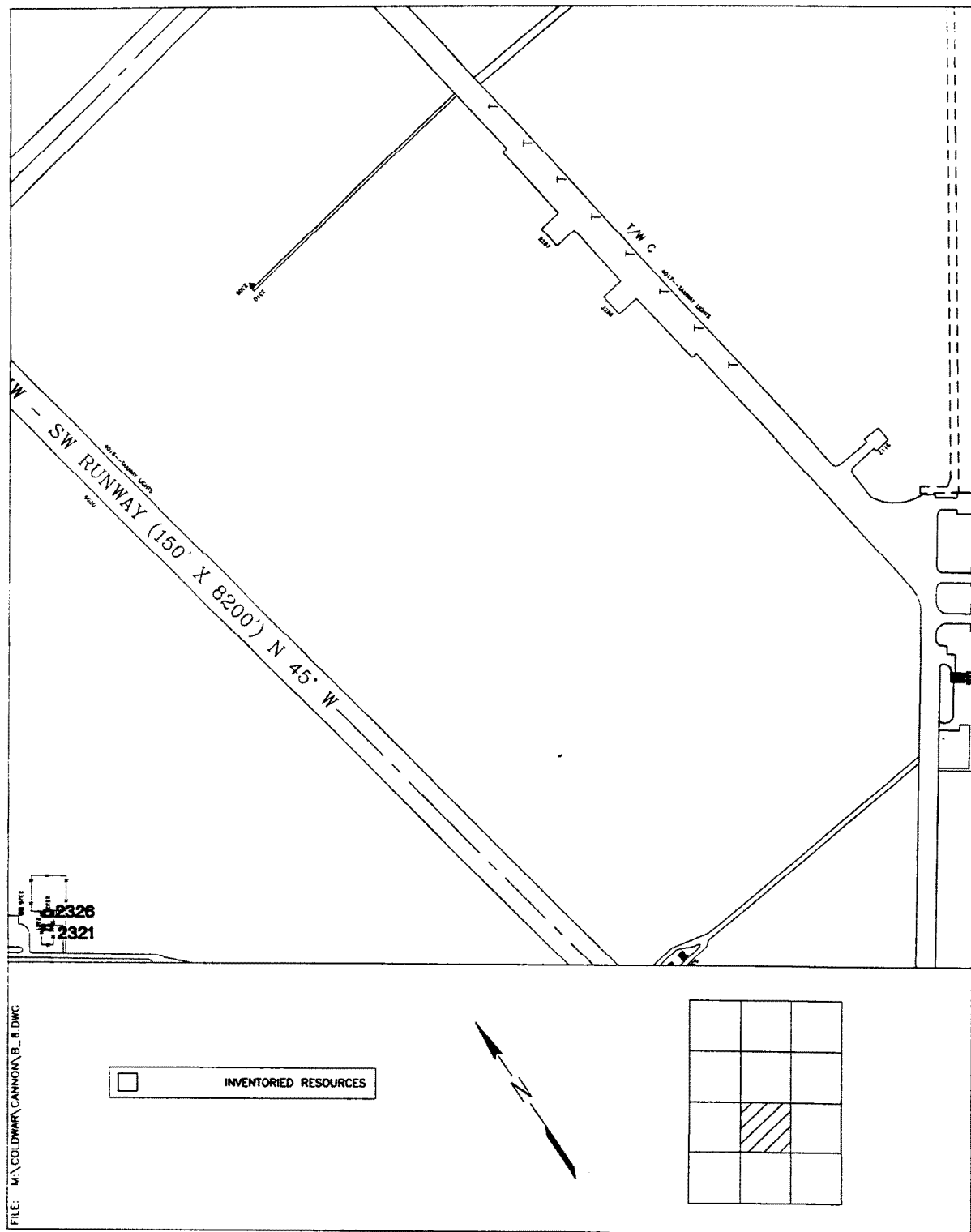


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 10).

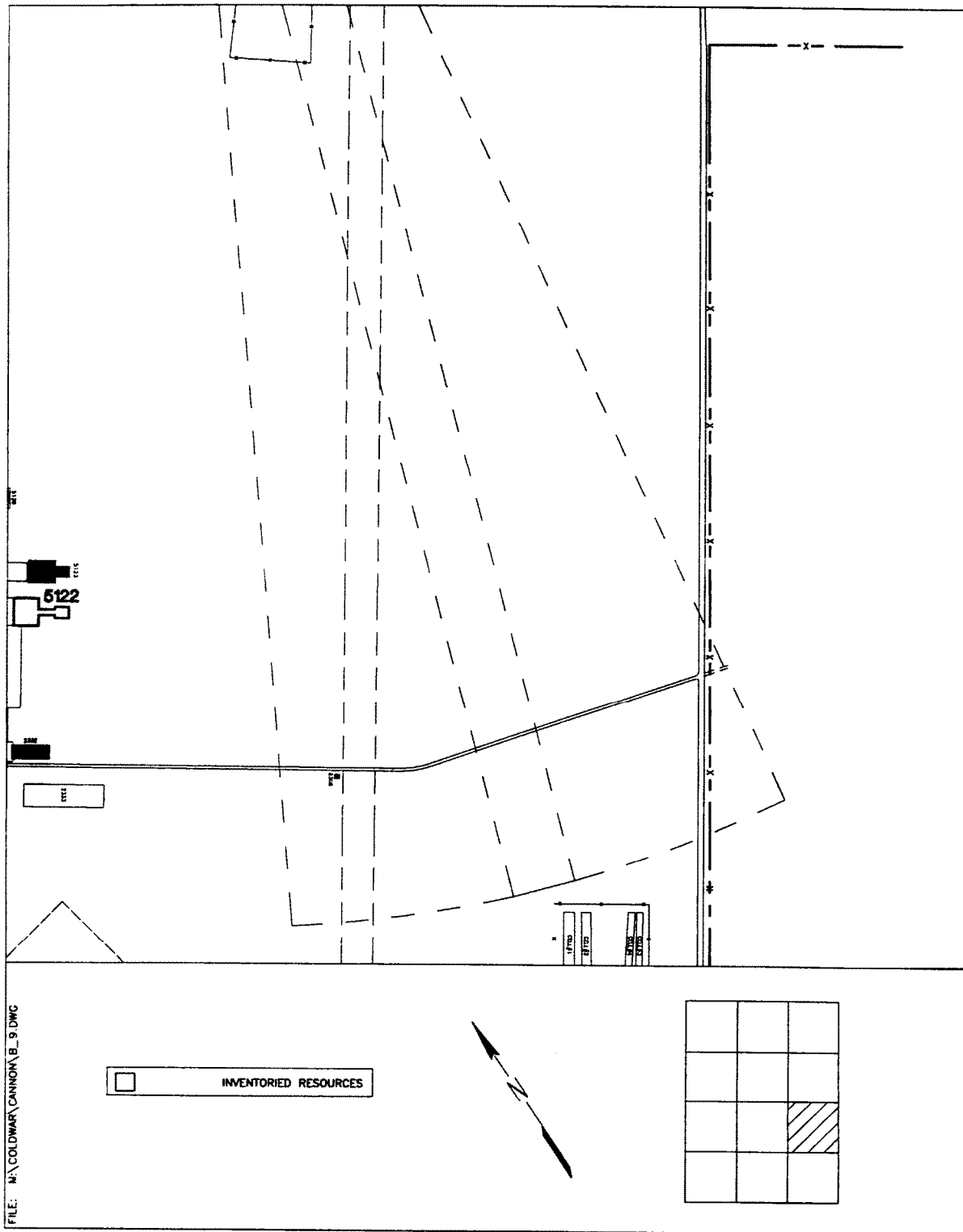


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 10).

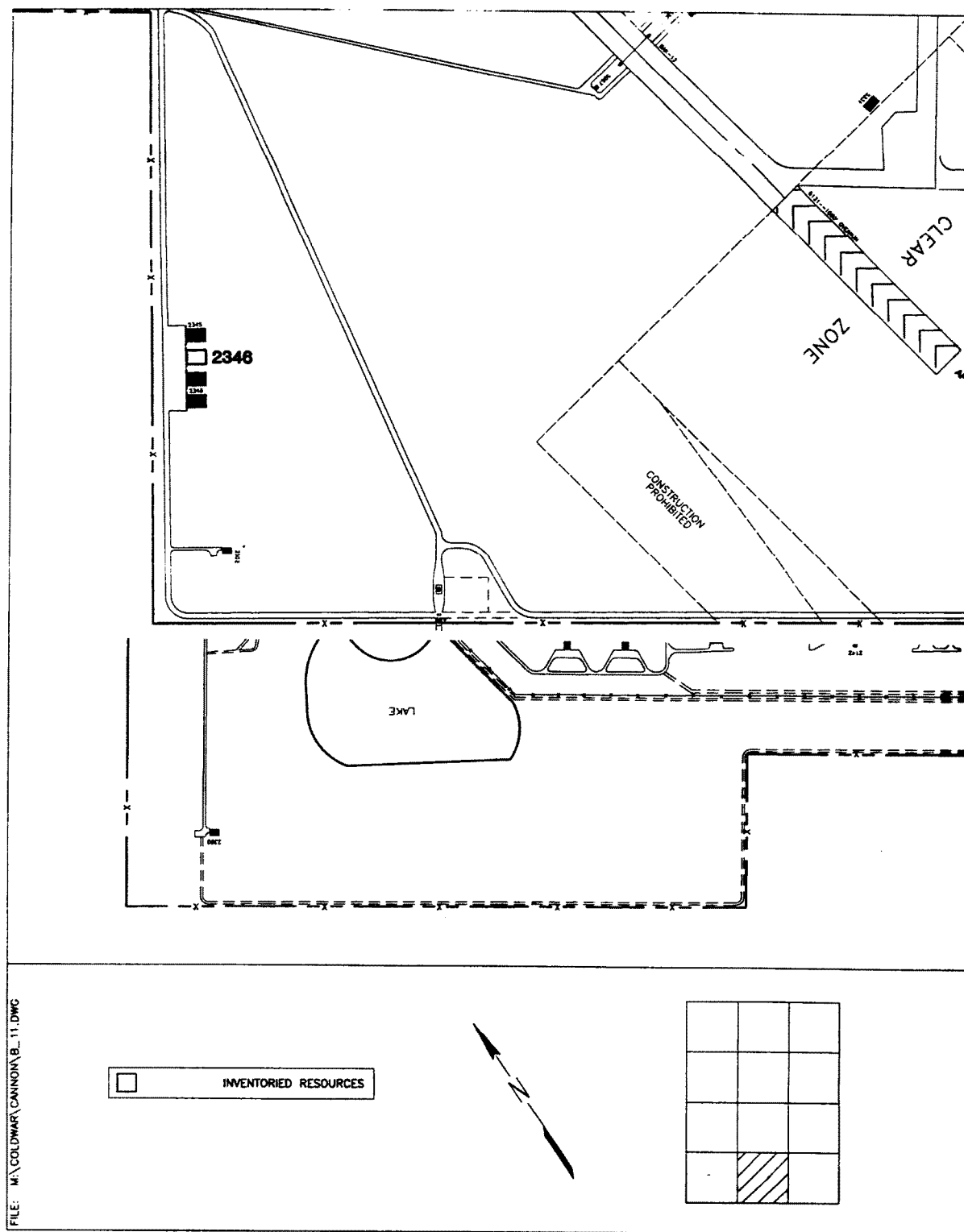


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 10).

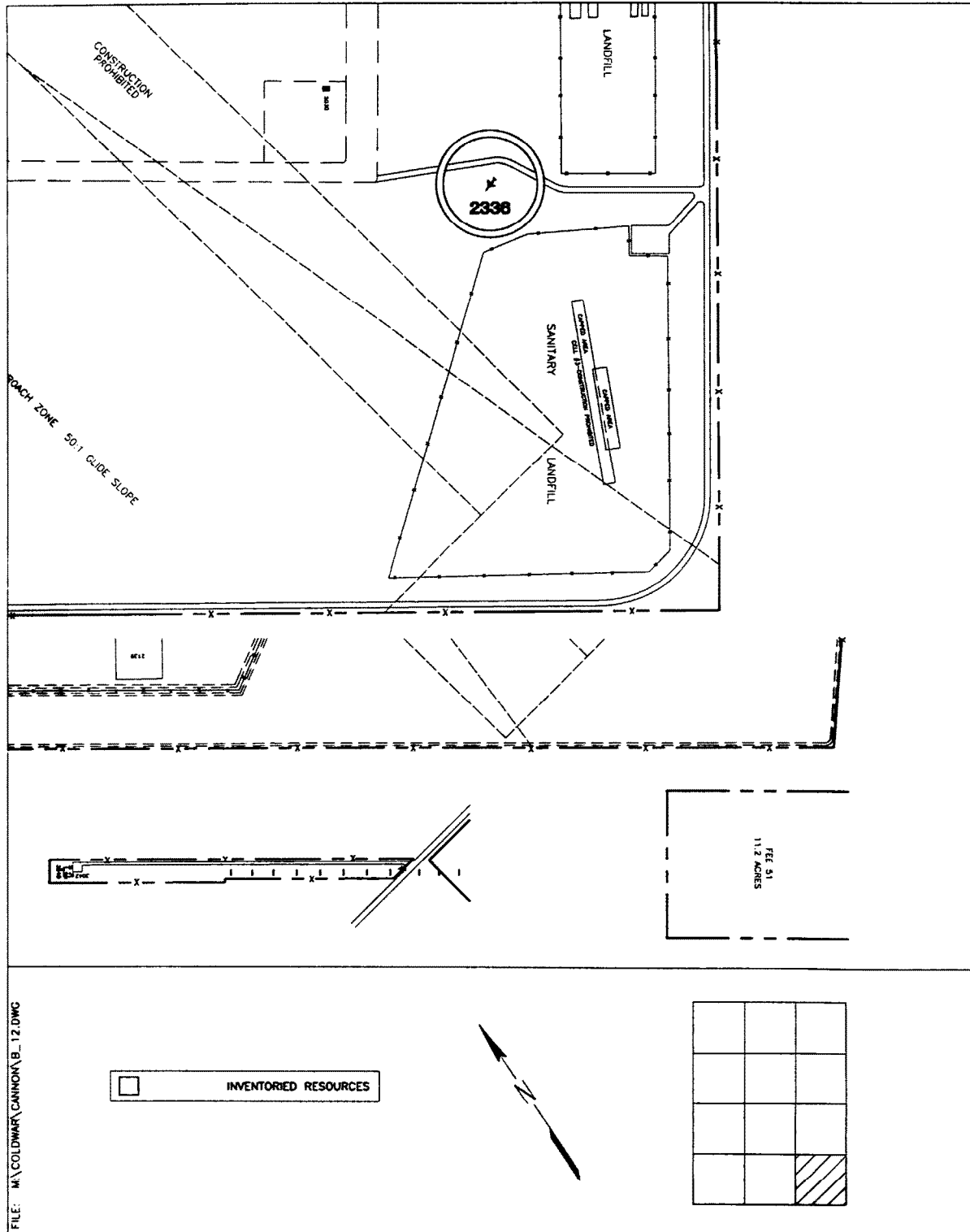


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 10 of 10).

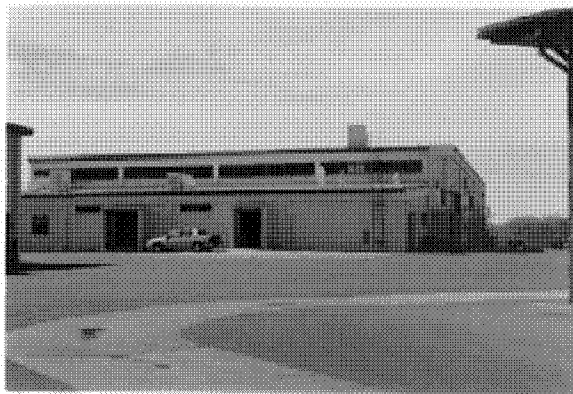
APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 3001, Real Property No. 335
Vehicle Maintenance Shop



Resource No. 3002, Real Property No. 375
Vehicle Maintenance Shop



Resource No. 3003, Real Property No. 379
Vehicle Maintenance Shop



Resource No. 3004, Real Property No. (none)
Fireball Squadron Sign on Squadron Operations



Resource No. 3005, Real Property No. 199
Aircraft Corrosion Control



Resource No. 3006, Real Property No. 197
Fuel System Maintenance Dock



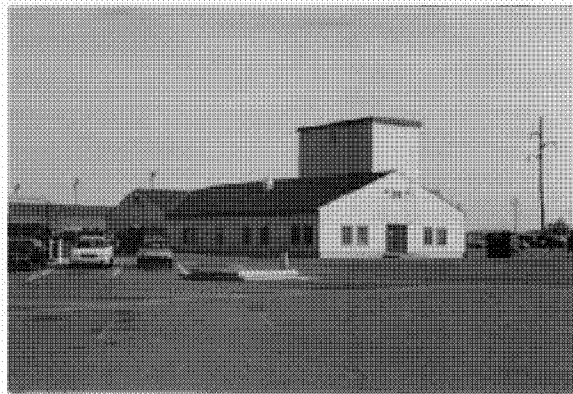
Resource No. 3007, Real Property No. 196
Small Aircraft Maintenance Dock



Resource No. 3008, Real Property No. 170
Small Aircraft Maintenance Dock



Resource No. 3009, Real Property No. 184
Small Aircraft Maintenance Dock



Resource No. 3010, Real Property No. 181
Squadron Operations



Resource No. 3011, Real Property No. 159
General Purpose Aircraft Shop



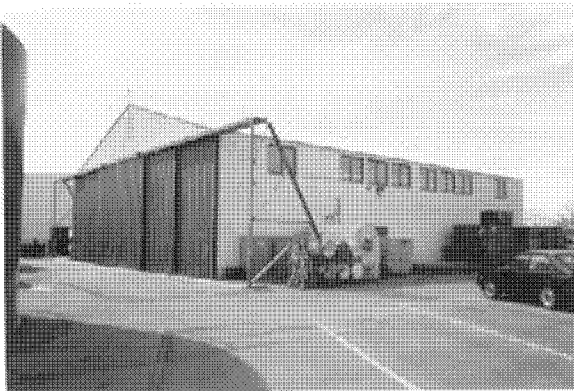
Resource No. 3012, Real Property No. 135
Base Operations



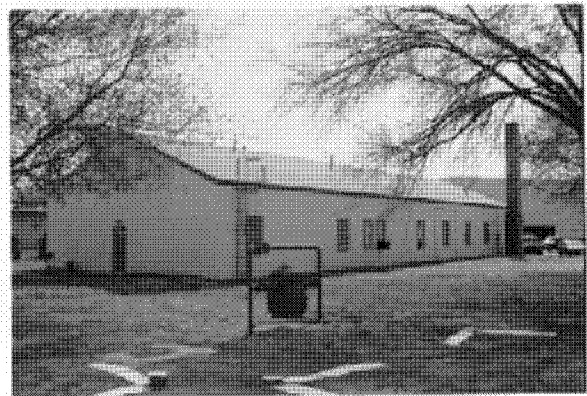
Resource No. 3013, Real Property No. 160
Base Supply and Equipment Maintenance



Resource No. 3014, Real Property No. 130
Fire Station



Resource No. 3015, Real Property No. 124
General Purpose Aircraft Shop



Resource No. 3016, Real Property No. 111
Flight Simulator Training



Resource No. 3017, Real Property No. 125
Small Aircraft Maintenance Dock



Resource No. 3018, Real Property No. 133
Small Aircraft Maintenance Dock



Resource No. 3019, Real Property No. 2326
Veterinary Clinic



Resource No. 3020, Real Property No. 2321
Canine Kennel



Resource No. 3021, Real Property No. 2346
Relocated Maintenance Docks



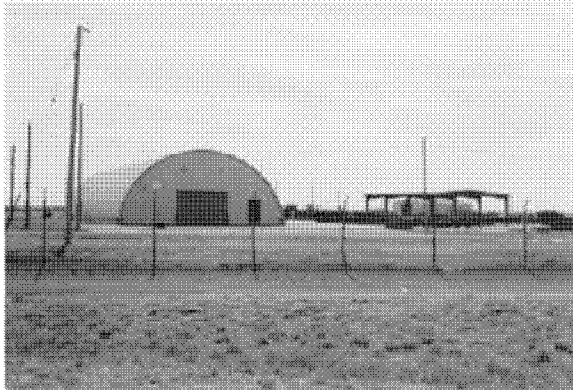
Resource No. 3022, Real Property No. 2336
Fireman Training Facility



Resource No. 3023, Real Property No. 5122
Power Check Pad



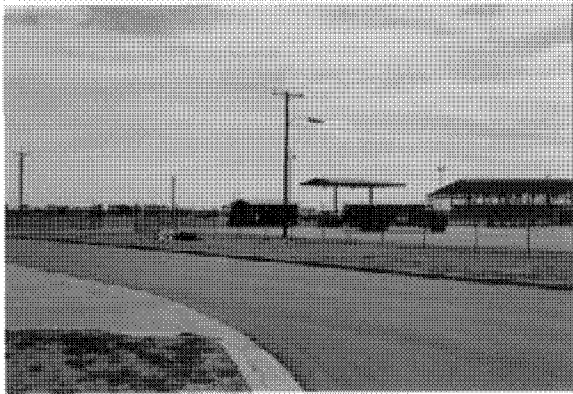
Resource No. 3024, Real Property No. 2312
Small Arms Systems Range



Resource No. 3025, Real Property No. 2145
Spare Inert Storage (Weapons)



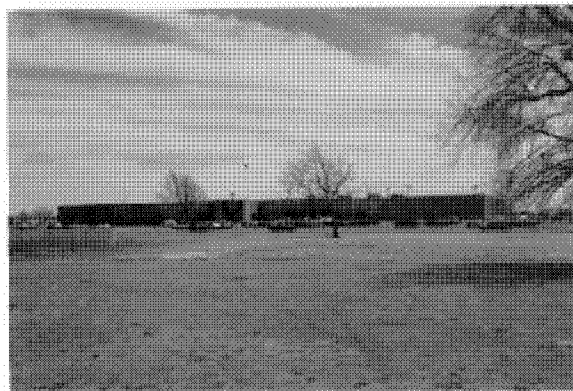
Resource No. 3026, Real Property No. 252
Base Engineering Ground Pavement Facility



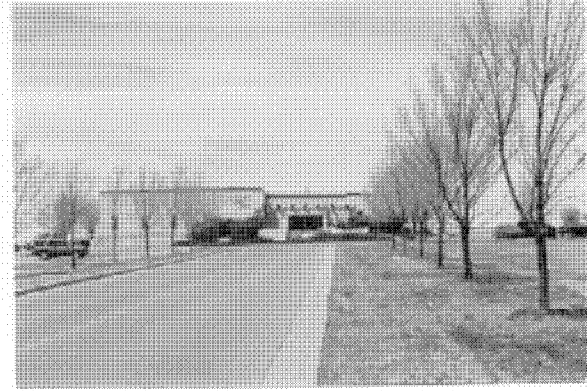
Resource No. 3027, Real Property No. 2023
Petrol Operations Building



Resource No. 3028, Real Property No. 1800
Visiting Officer's Quarters



Resource No. 3029, Real Property No. 77
Commissary



Resource No. 3030, Real Property No. 1820
Officer's Open Mess



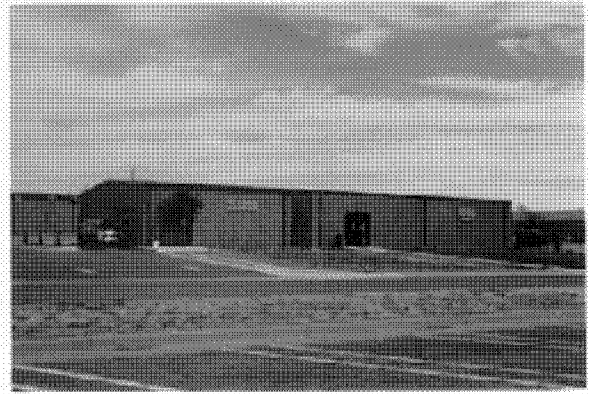
Resource No. 3031, Real Property No. 1816
Visiting Airman's Dormitory



Resource No. 3032, Real Property No.
(unknown), Housing Office



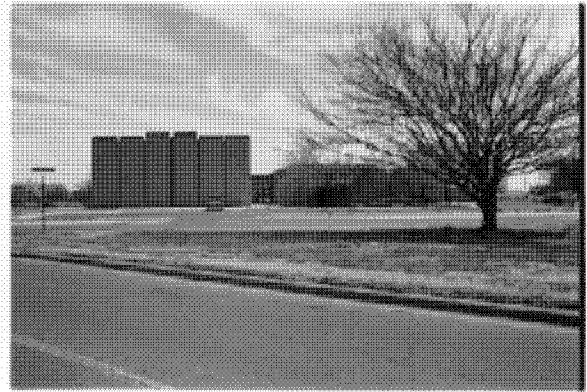
Resource No. 3033, Real Property No. 76
Child Care Center



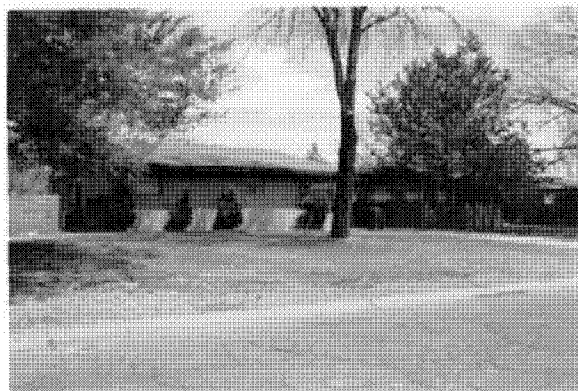
Resource No. 3034, Real Property No. 78
Clothing Store



Resource No. 3035, Real Property No. 75
Recreation Center



Resource No. 3036, Real Property No. 54
Youth Center



Resource No. 3037, Real Property No. (none)
Housing (1660 Point Blank Loop)



Resource No. 3038, Real Property No. (none)
Duplex (1751 Midway Circle)



Resource No. 3039, Real Property No. (none)
Apartments (1760 Normandy)



Resource No. 3040, Real Property No. 1111
Branch Exchange



Resource No. 3041, Real Property No. 1156
Airman's Dormitory



Resource No. 3042, Real Property No. 58
Chapel Center



Resource No. 3043, Real Property No. 70
Base Theater



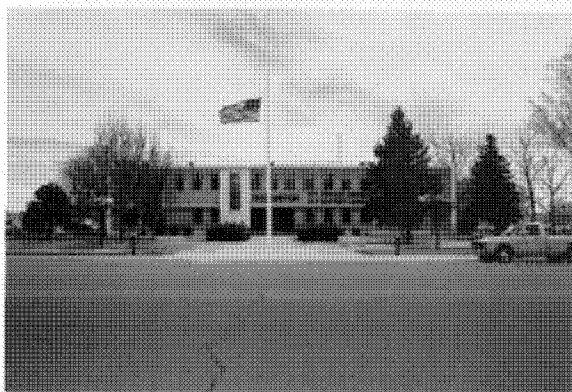
Resource No. 3044, Real Property No. 74
Bowling Center



Resource No. 3045, Real Property No. 60
Law Center



Resource No. 3046, Real Property No. 600
Base Personnel Office



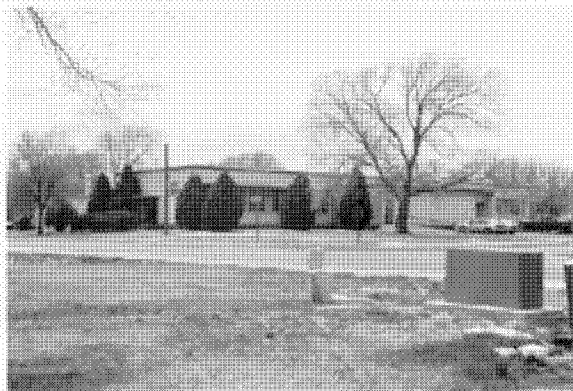
Resource No. 3047, Real Property No. 1
Wing Headquarters



Resource No. 3048, Real Property No. 1199
Airman's Dining Hall



Resource No. 3049, Real Property No. 550
Airman's Dormitory



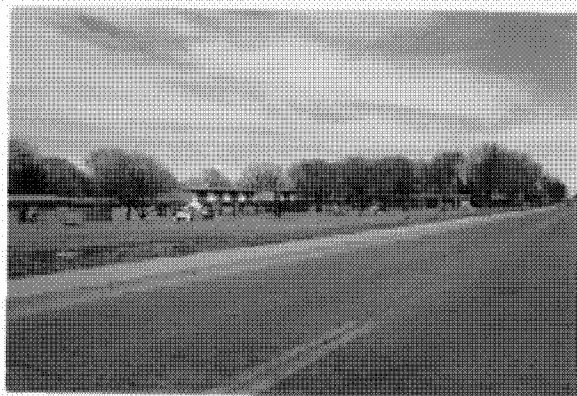
Resource No. 3050, Real Property No. 1249
Post Office Center



Resource No. 3051, Real Property No. 1400
Composite Medical



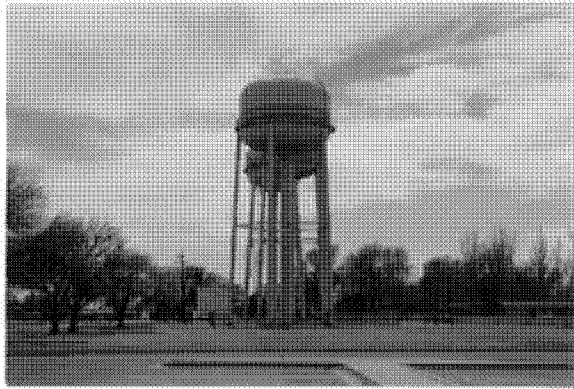
Resource No. 3052, Real Property No. 1404
Base Engineer Maintenance Shop



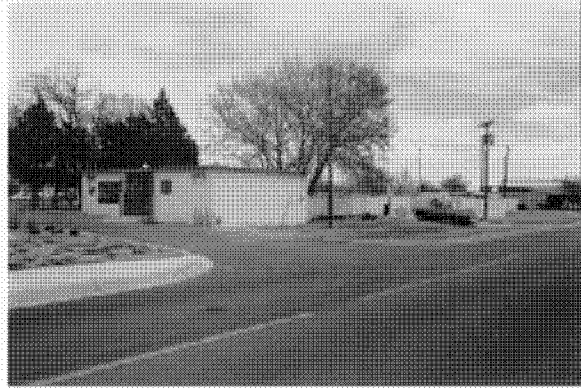
Resource No. 3053, Real Property No. (none)
Playground



Resource No. 3054, Real Property No. (none)
Sign in front of Airman's Dormitory



Resource No. 3055, Real Property No. (none)
Water Towers



Resource No. 3056, Real Property No. 50
Swimmer's Bath House



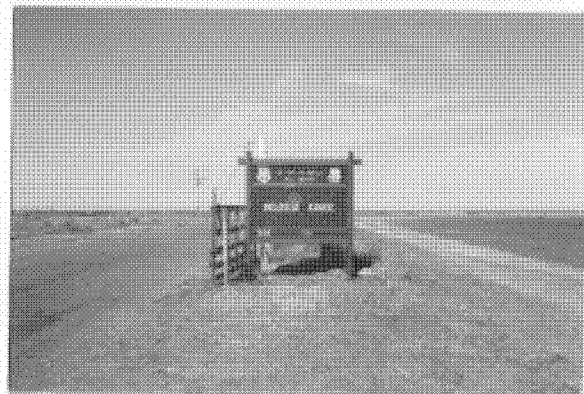
Resource No. 3057, Real Property No. 1208
Library



Resource No. 3058, Real Property No. 1256
Airman's Dormitory



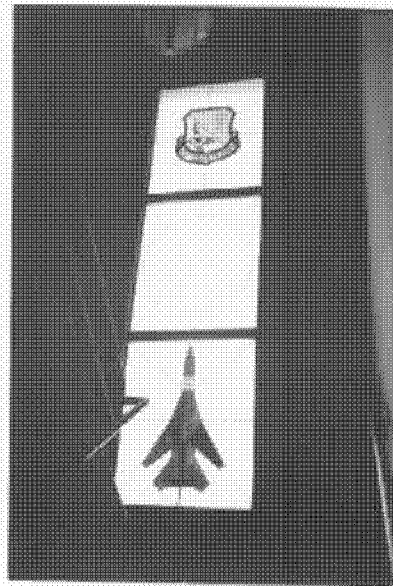
Resource No. 3059, Real Property No. 582
Squadron Operations



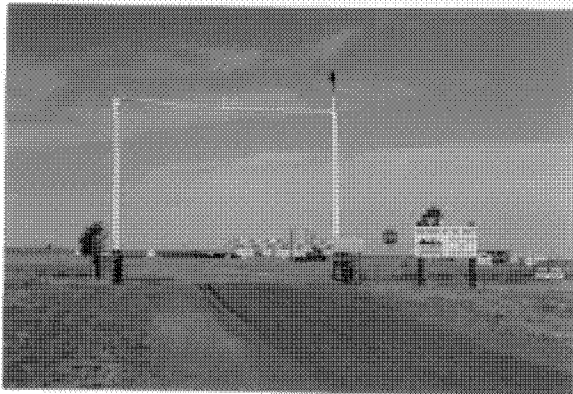
Resource No. 3063, Real Property No. (none)
Entrance sign to Melrose Range



Resource No. 3060, Real Property No. (none)
Trophy Case in Wing Headquarters



Resource No. 3062, Real Property No. (none)
Stained Glass Window of F-111 in Wing
Headquarters



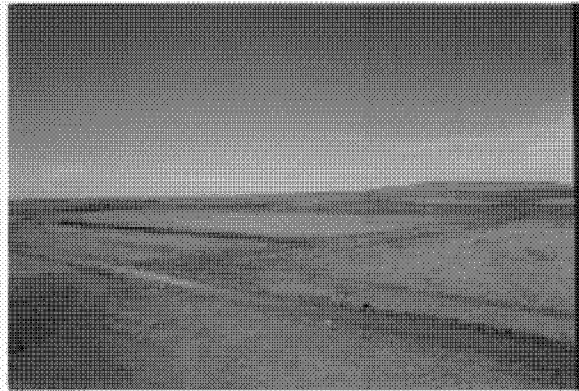
Resource No. 3064, Real Property No. (none)
Entrance to Melrose Range



Resource No. 3065, Real Property No. (none)
Insignia signs on Range Control at Melrose
Range



Resource No. 3066, Real Property No. 3110
Observation Tower at Melrose Range



Resource No. 3067, Real Property No. (none)
Melrose Range Drop Zone



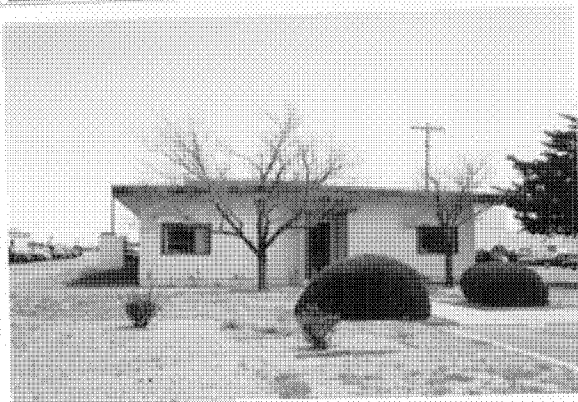
Resource No. 3068, Real Property No.
(unknown), Strafe Targets on Melrose Range



Resource No. 3069, Real Property No. 3121
Range Control at Melrose Range



Resource No. 3070, Real Property No. (none)
Bomb Shaped Bollards at Melrose Range Fueling
Area



Resource No. 3071, Real Property No. 112
Disaster Preparedness



Resource No. 3072, Real Property No. 840
Non-commissioned Officer Open Mess



Resource No. 3073, Real Property No. 785
Field Training Facility



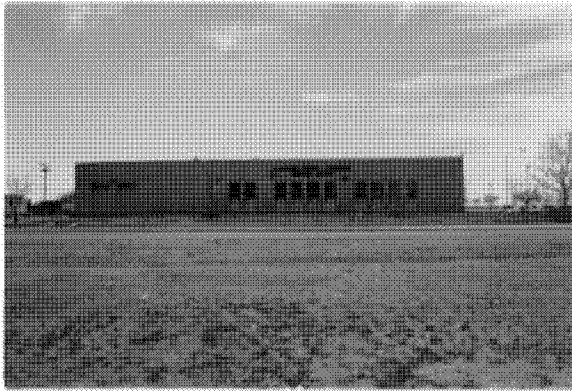
Resource No. 3074, Real Property No. 799
Explosive Ordnance Disposal



Resource No. 3075, Real Property No. 790
Flight Simulator Training



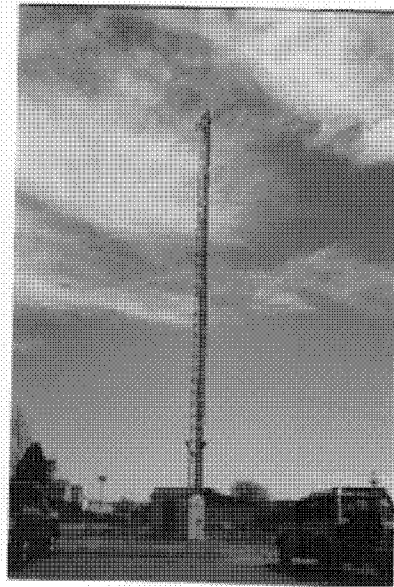
Resource No. 3076, Real Property No. 122
Weapons and Release Systems Shop



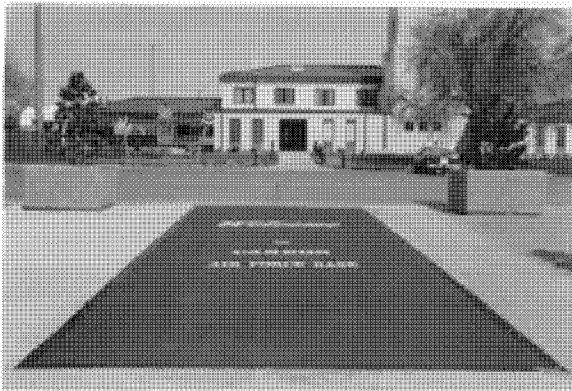
Resource No. 3077, Real Property No. 772
Data Processing Installation



Resource No. 3078, Real Property No. 682
Security Police Operations



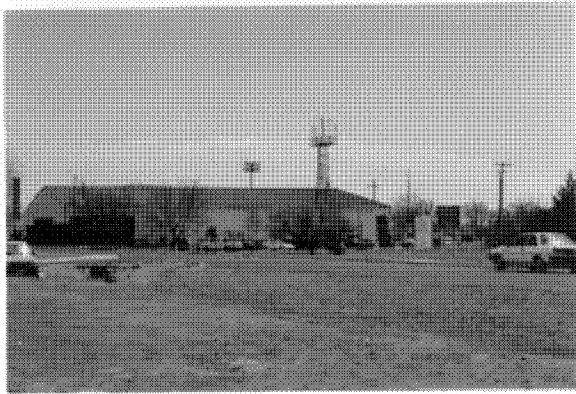
Resource No. 3079, Real Property No. 12
Target Intelligence Training



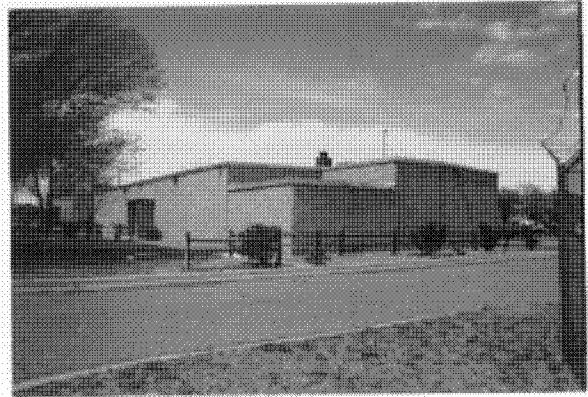
Resource No. 3080, Real Property No. (none)
"Red Carpet" on Flightline



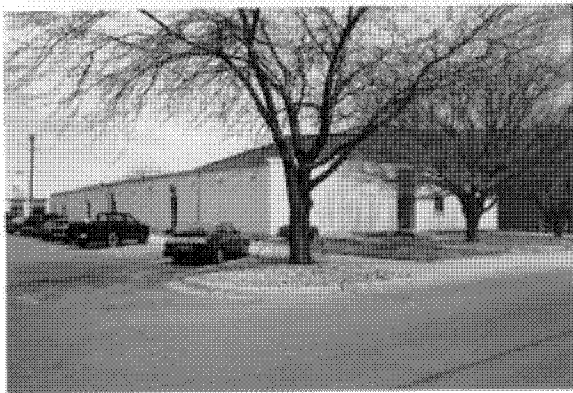
Resource No. 3081, Real Property No. (none)
Sign Outside Control Tower



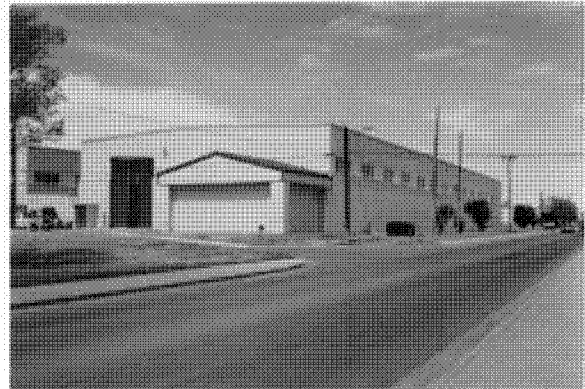
Resource No. 3082, Real Property No. 728
Radar Approach Control Center



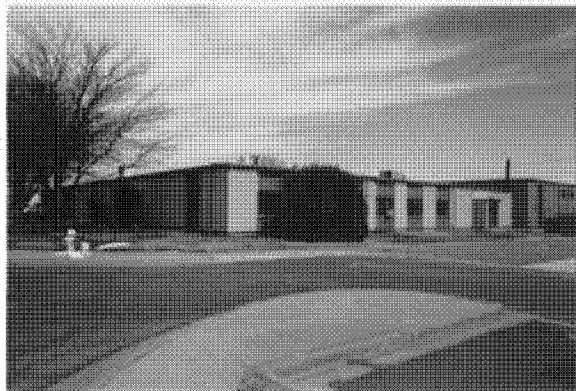
Resource No. 3083, Real Property No. 10
Communication Facility



Resource No. 3084, Real Property No. 150
Group Headquarters



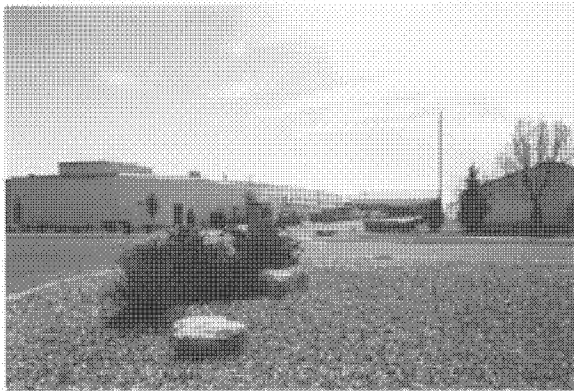
Resource No. 3085, Real Property No. 680
Jet Engine Inspection and Maintenance Shop



Resource No. 3086, Real Property No. 155
Flight Training Classroom



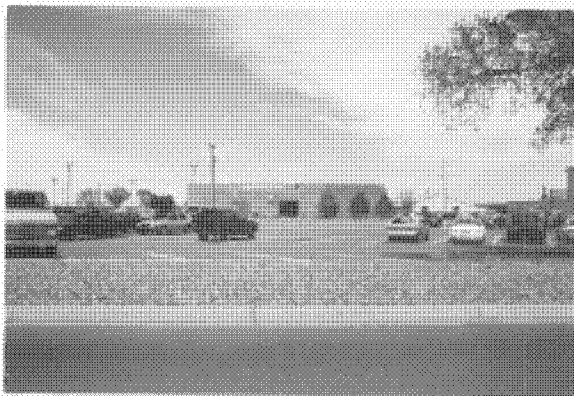
Resource No. 3087, Real Property No. (none)
Rock Sign Outside Avionics Shop



Resource No. 3088, Real Property No. 620
Avionics Shop



Resource No. 3089, Real Property No. (none)
Landscaping Across From Avionics Shop



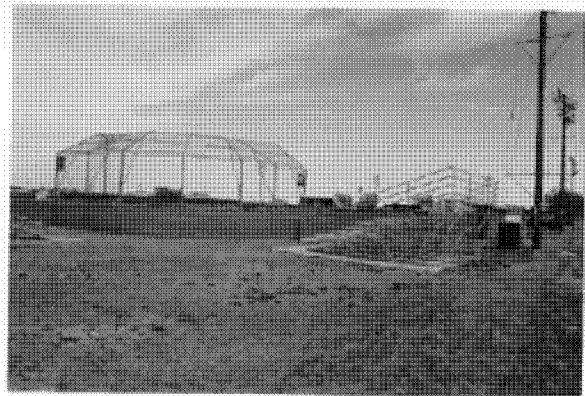
Resource No. 3090, Real Property No. 593
Non-Destructive Inspection Shop



Resource No. 3091, Real Property No. (none)
Sign at CRS



Resource No. 3092, Real Property No. 580
Football Field



Resource No. 3093, Real Property No. 400
Athletic Softball Field



Resource No. 3094, Real Property No. 1230
Exchange Cafe Snack Bar (Burger King)



Resource No. 3095, Real Property No. 444
Gymnasium



Resource No. 3096, Real Property No. 368
Exchange Service Station



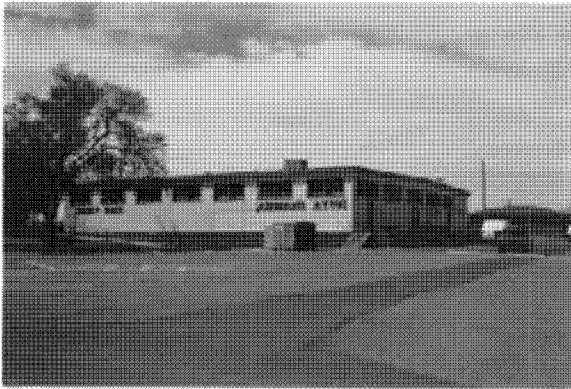
Resource No. 3097, Real Property No. (none)
Golf Course



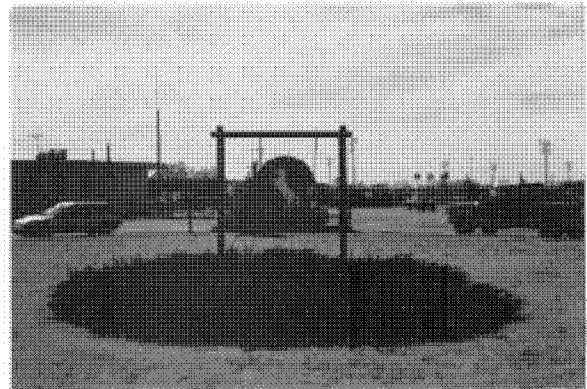
Resource No. 3098, Real Property No. 357
Base Engineer Maintenance Shop



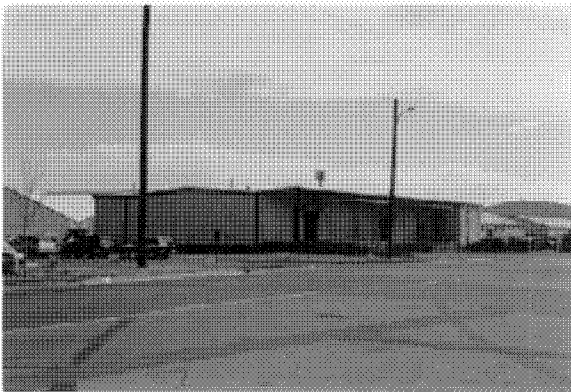
Resource No. 3099, Real Property No. (none)
Solar Panels Near Vehicle Maintenance



Resource No. 3100, Real Property No. 380
Base Engineer Covered Storage Facility



Resource No. 3101, Real Property No. (none)
Stallion Sign Near Depot Area



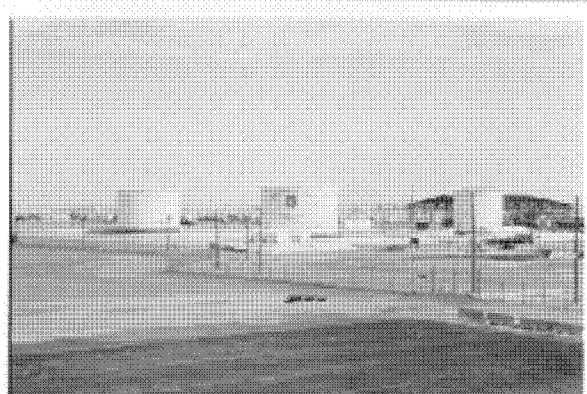
Resource No. 3102, Real Property No. 192
Base Cold Storage



Resource No. 3103, Real Property No. 323
Base Engineer Covered Storage Facility



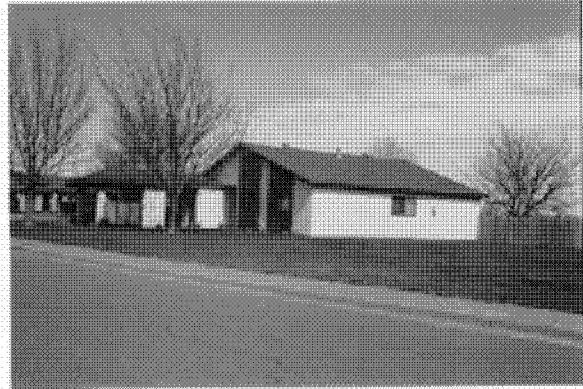
Resource No. 3104, Real Property No. 302
Base Supplies and Equipment Warehouse



Resource No. 3105, Real Property No. 395
Jet Fuel Storage



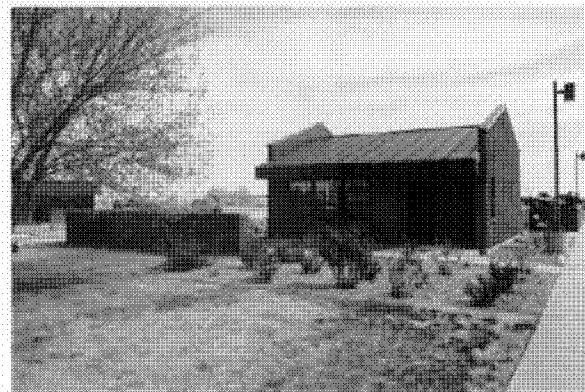
Resource No. 3106, Real Property No. (none)
Duplex (7142 Oregon Court)



Resource No. 3107, Real Property No. (none)
Officer's Housing (7706 Oklahoma Court)



Resource No. 3108, Real Property No. (none)
Trailer Park ("High Plains Park")



Resource No. 3109, Real Property No. 2209
Security Police Control Center



Resource No. 3110, Real Property No. 320
Traffic Check House



Resource No. 3111, Real Property No. (none)
Small Static Display Park



Resource No. 3112, Real Property No. (none)
Large Static Display Near Base Entrance

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT HOLLOMAN AFB

Resource Number: 1001

Property Description: Mark Tower, NAVAID Tower, only building 900 is described

Associated Property: 1133, 1249

Non-Inventoried Association: 9 other theodolite stations on the White Sands Missile Range

Sub-installation:

Address: 50 m south of Kelly Road

Base Map Date: 2/17/93

Base Map Building Number: 900

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test sites

Intelligence:

Property Type: Tracking and Documentation

Statement of Significance: These site were important for the tracking of unknown missiles during early missiles development and testing; German scientists and equipment were used, first cold war missile instrument tracking site

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 3

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 20

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 25
Square Footage: 584
Original Planned Duration: Permanent
Existing Use: none
Other Use/Dates: Army storage, CE exterior electric shop
Comments on Use: Possible tie with German technology
Primary Building Materials: Poured concrete
Character Defining Features: Steel I-beam roof with counter balanced sections
Comments on Architecture: Possible tie with German technology

Resource Number: 1003

Property Description: Earthen ramp with concrete and steel pavement
originally used to test early missile

Associated Property: 1139, 1142

Non-Inventoried Association: Eglin AFB, static displays?, various concrete pads

Sub-installation:

Address:

Base Map Date: 2/17/93

Base Map Building Number: None

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test Sites

Intelligence:

Property Type: Launch Ramp

Statement of Significance: The only earthen inclined missile test ramp

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 4

Percent Historic Fabric: 3

Severity of Threats: 2

Total Score for Priority Matrix: 20

Comments on Threats: Threat is from natural erosion and deterioration

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Original Planned Duration: Temporary

Comments on Use: Probably many changes over time, we do not have data
on these modifications

Primary Building Materials: Earthen ramp, concrete, wood

Character Defining Features: Earthen ramp

Comments on Architecture: See above

Physical Remains/Features:

Resource Number: 1004

Property Description: Concrete observation and test control buildings
Associated Property: Loon launch ramp
Non-Inventoried Association: Various concrete slabs, static displays, Space Museum
Sub-installation:
Address: 1602, 1591, 1616 Tula Peak Road
Base Map Date: 2/17/93
Base Map Building Number: 1139, 1142, 1116

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities: Test Sites
Intelligence:
Property Type: Blockhouse

Statement of Significance: Associated with the testing of important missile technology ultimately incorporated into ICBM and NASA rockets. Architecture designed to defend against accidental explosion; design elements incorporate construction materials and design for nuclear blast protection, windows are similar to defensive bunkers re: field of view enhanced

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	

Importance: Exceptional
Eligibility: Eligible

Height: 10
Square Footage: 660
Original Planned Duration: Temporary
Existing Use: MWR - sports storage
Primary Building Materials: Poured concrete
Character Defining Features: Massing, window set back, shape, and thickness, concrete thickness
Comments on Architecture: Original electronic instrumentation is gone. Associated with concrete pads and probably launch framework now missing.

Resource Number: 1009

Property Description: 9.8 mi long railed test track with numerous associated buildings

Associated Property: 1175

Non-Inventoried Association: Numerous buildings, targets, sled bone yard, support buildings, assembly bunker

Sub-installation:

Address: 1656 Test Track Road

Base Map Date: 2/17/93

Base Map Building Number: 39710

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test Sites

Intelligence:

Property Type: Test Track

Statement of Significance: This structure was the original 3500 ft track, expanded to 35,000 feet and now is nearly 10 mi long, the longest rocket test track in the world?, used to test many generations of rockets, missiles, seat belts, associated with aeromedical research and associated with Colonel Stapp: human guinea pig

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 0

Square Footage: 50855

Original Planned Duration: unknown

Other Use/Dates: none

Primary Building Materials: Concrete and steel

Character Defining Features: Precise construction with tight tolerances for rail grade; length

Resource Number: 1010

Property Description: Control Blockhouse located at the South end of the test track

Associated Property: 39710

Non-Inventoried Association: Various photostands, instrument stands, blockhouses, sled bone yard, control and administration buildings, and rocket assembly bunker

Sub-installation:

Address: 1656 Test Track Road

Base Map Date: 2/17/93

Base Map Building Number: 1175

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test Sites

Intelligence:

Property Type: Blockhouse

Statement of Significance: Site is related to the test track, is probably not eligible individually but as part of a district; windows are periscoped, people protected underground

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 10

Square Footage: 2529

Original Planned Duration: Permanent

Primary Building Materials: Concrete

Character Defining Features: Primarily underground concrete buildings with periscope viewing windows

Resource Number: 1012

Property Description: Complex of buildings equipment lots, taxiways, etc. associated with the 4449th Mobility Support Station

Associated Property:

Non-Inventoried Association: Various lots, sheds, taxiways, and aprons, quanset huts

Sub-installation:

Address: 1273 Bear Path

Base Map Date: 9/1/92

Base Map Building Number: 901

Operational Support & Installations:

Combat Weapons and Support Systems: Ground Vehicles and Equipment

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Bare Base Installation

Statement of Significance: This complex supports the only unit in the AF capable of establishing TAC fighter ops anywhere in the world

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	3
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Important

Eligibility: Future

Site Function: TAC Bare Base Operations

Present Site Function: TAC Bare Base Operations

Year of Association: 1972-1994

Physical Remains/Features: Hangars, warehouses, quansets, storage lots

Changes to the Resource: Unknown

Resource Number: 1014

Property Description: Aeromedical lab and primate center
Associated Property:
Non-Inventoried Association: Modern facilities to the north
Sub-installation:
Address: 821 Douglass Road
Base Map Date: 2/17/93
Base Map Building Number: 1200-1207

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities: Research Laboratories
Intelligence:
Property Type: Medical Science Laboratory

Statement of Significance: Facilities used in support of Aeromedical research on g forces, biophysical research, drugs, toxins, etc.
Support facilities for HAM and ENOS, famous test chimps

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	

Importance: Exceptional
Eligibility: Eligible

Height: 10
Square Footage: 2500
Original Planned Duration: Permanent
Primary Building Materials: Concrete masonry unit
Character Defining Features: Cages and runs around buildings, rounded parapits on concrete walls

Resource Number: 1015

Property Description: Various support buildings within high security fenced area

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 1416 Sabre Road

Base Map Date: 8/1/93

Base Map Building Number: 1062

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence: Spy Satellites

Property Type: Deployable Warning Complex

Statement of Significance: High tech and classified satellite intelligence and commun system home base

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 1

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 17

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 0

Square Footage: 0

Original Planned Duration: Permanent

Primary Building Materials: Concrete support buildings; mobile units in truck

Character Defining Features: High tech instrumentation, survivability, mobility

Resource Number: 1017

Property Description: Four stacks of vertical files filled with construction documents, bluelines, originals, sailcloth, sepia

Associated Property: All buildings on base

Non-Inventoried Association:

Sub-installation:

Address: 550 Tabosa Avenue, Civil Engineering, Engineeri

Base Map Date:

Base Map Building Number: inside 55

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Architectural Drawing Files

Statement of Significance: Supply of potentially significant drawings, many may be unique one of a kind documents

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 3

Severity of Threats: 1

Total Score for Priority Matrix: 15

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Object Condition: Being Preserved

Record/Document Category: Architectural Drawing

Year of Document:

Period of Association: documents date to various dates

Resource Number: 1018

Property Description: Complex of research and lab buildings
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 1644 Vandergrift Road
Base Map Date: 2/17/93
Base Map Building Number: 1265

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities: Test Sites
Intelligence:
Property Type: Weapons Guidance Laboratory

Statement of Significance: The development of interial guidance systems was integral to the development of aircraft and missile systems

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	2
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	

Importance: Exceptional
Eligibility: Eligible

Height: 30
Square Footage: 79066
Primary Building Materials: Concrete and steel frame
Character Defining Features: Multiple windows and height of the building

Resource Number: 1019

Property Description: Three Alert Hangars and alert pilot lodging

Associated Property:

Non-Inventoried Association: 1048, 1049, 1052, 105

Sub-installation:

Address: 1411 Dezonias Road

Base Map Date: 2/17/93

Base Map Building Number: 1090

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Fighter Alert Facility

Statement of Significance: Alert Facilities are pervasive throughout Cold War Bases, this is an example of a TAC Defensive Alert Facility

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 18

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 30

Square Footage: 17080

Original Planned Duration: Permanent

Primary Building Materials: Steel frame

Character Defining Features: Three open Alert Hangars and associated pilot living quarters

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Cannon AFB, and to provide research materials for this study:

TSgt Timothy Drummond, Wing Historian
Wing Historian's Office
27 FW/HO
100 S DL Ingram Blvd., Suite 202
Cannon AFB, New Mexico 88103-5214
(505) 784-2338
(505) 784-2460

Captain Mike Pearson, Public Affairs Officer
Public Affairs Office
27 FW/PA
100 S DL Ingram Blvd., Suite 102
Cannon AFB, New Mexico 88103-5216
(505) 784-4131

Rick Crow, Manager
Natural/Cultural Resources Office
27 CESS/CEV
111 Engineer's Way
Cannon AFB, New Mexico 88103-5136
(505) 784-4348

Richard Creery, Engineering Technician
Engineering Drawing Room
27 CES/CEER
111 Engineer's Way
Cannon AFB, New Mexico 88103-5136
(505) 784-2116

Helen Pate, Officer
Real Property Office
27 CER/CERR
111 Engineer's Way
Cannon AFB, New Mexico 88103-5136
(505) 784-7628

Harold Walker, Chief
Civil Engineering
27 CES/CEER
111 Engineer's Way
Cannon AFB, New Mexico 88103-5136
(505) 784-2116

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Cannon AFB history and Cold War context.

TSgt Timothy Drummond, Wing Historian, April 12 - 15, 1994

Rick Crow, Natural/Cultural Resources Manager, April 12, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-4: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT CASTLE AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Karen Lewis
R. Blake Roxlau
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Castle Air Force Base was inventoried for Cold War resources between August 15 and 24, 1994 as part of the Air Combat Command Cold War study for the on-going Department of Defense Legacy Program. Information was obtained on base from the Real Property Office files, the Drawing Room, the Wing Historian, and Castle Air Museum.

An initial base reconnaissance was conducted with the Wing Historian, which provided a basic understanding of the base, its resources, and some of its history. This initial tour provided an overall perspective for the team's research. A tour of classified areas and resources on base was coordinated by the Wing Historian, and photographs of these resources and property types were taken by the team. On-site inspections and file research were also conducted.

From the research and inventory, three resources were determined to be important in their relationship to the base's Cold War mission and history: a Documentary Collection, the Bomber Alert Facility, and the Fighter Alert Facility. These resources were documented and evaluated for their importance to the training and alert missions of the base.

Recommendations for the Documentary Collection include further documentation, stewardship, and conservation. The two alert facilities are recommended as eligible to the National Register of Historic Places, and further documentation and stewardship are also recommended for these resources.

LIST OF ACRONYMS

AAF	- Army Air Field
ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
AFB	- Air Force Base
AGE	- Air Ground Equipment
AMC	- Air Materiel Command
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
AREFS	- Air Refueling Squadron
BMG	- Bombardment Group
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
DoD	- Department of Defense
FIS	- Fighter Interceptor Squadron
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
MAC	- Military Aircraft Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
NSC	- National Security Council
OCNUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center
SAC	- Strategic Air Command
SAGE	- Semi-Automated Ground Environment
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
USAF	- United States Air Force
WRS	- Weather Reconnaissance Squadron

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

GLOSSARY (Continued)

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	4
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	12
3.1 BASE HISTORY AND COLD WAR CONTEXT	12
3.2 BASE DEVELOPMENT	15
4.0 METHODOLOGY	20
4.1 INVENTORY	20
4.2 EVALUATION OF IMPORTANT RESOURCES	21
4.2.1 Documentation	21
4.2.2 Evaluation of Importance	21
4.2.2.1 Cold War Context	21
4.2.2.2 NRHP Criteria	22
4.2.2.3 Exceptional Importance	23
4.2.3 Evaluation of Integrity	23
4.2.4 Priority Matrix	24
4.2.5 Resource Organization	25
4.3 BASE SPECIFIC METHODS	25
5.0 RECONNAISSANCE INVENTORY RESULTS	26
6.0 EVALUATION RESULTS	27
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	27
6.1.1 Documentation	27
6.1.1.1 Documentary Collection	27
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	29
6.2.1 Alert Facilities	29
6.2.1.1 Bomber Alert Facility	29

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1.2 Fighter Alert Facility.....	30
6.3 MATERIEL DEVELOPMENT FACILITIES	30
6.4 TRAINING FACILITIES.....	30
6.5 INTELLIGENCE FACILITIES	31
7.0 UNDOCUMENTED RESOURCES	32
8.0 FUTURE THREATS TO RESOURCES	33
9.0 PRELIMINARY RECOMMENDATIONS	34
9.1 NRHP ELIGIBILITY	34
9.1.1 Evaluation and Determination of NRHP Eligibility.....	34
9.1.2 Implications of NRHP Eligibility	36
9.2 EVALUATED RESOURCE RECOMMENDATIONS.....	37
9.2.1 Documentary Collection	39
9.2.2 Bomber Alert Facility.....	39
9.2.3 Fighter Alert Facility	40
10.0 REFERENCES CITED	41
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Castle Air Force Base	5
Figure 2.2 Castle Air Force Base Layout	6
Figure 2.3 Standard Strategic Air Command Base Layout	7
Figure 2.4 Castle Air Force Base Land Use Diagram	10
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	11
Figure 3.1 Castle Air Force Base, 1940s	16
Figure 3.2 Castle Air Force Base, 1950 to 1960	17
Figure 3.3 Castle Air Force Base, 1990	19

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	28
Table 6.2 Evaluated Resource Prioritization by Priority Rank	28
Table 9.1 Recommendations for Evaluated Resources	38

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

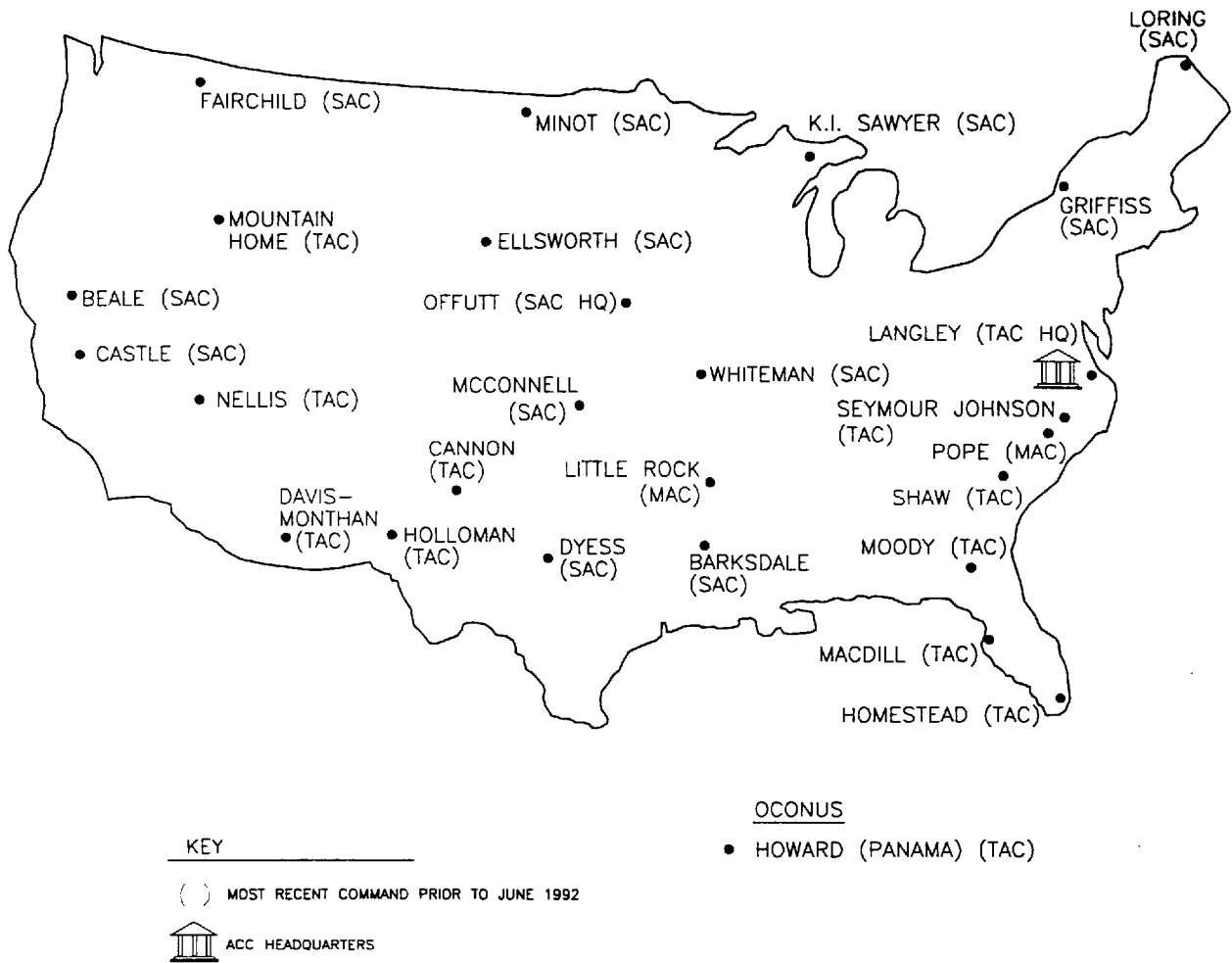
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\CASTLE\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Castle Air Force Base (AFB). Castle AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Castle AFB is currently undergoing procedures to close the base in 1995. Prior to the initiation of closure, the 93rd Wing's primary mission was the development and maintenance of a combat ready force capable of long distance bombardment operations. The wing was also responsible for the training and re-qualification of all ACC B-52 *Stratofortress* aircrew members.

2.2 GEOGRAPHIC DESCRIPTION

Castle AFB is located approximately 8 mi (13 km) north of Merced, California and about 110 mi (177 km) southeast of San Francisco (Figure 2.1). The land area of the base is 2,570 acres (1,040 ha), with 478 acres (193 ha) in easements. The land surrounding the base is used mainly for farming, grazing, and orchards.

2.3 CURRENT BASE LAYOUT

Castle AFB is oriented along the northwest/southeast axis of the runway (Figure 2.2) and is similar to the standard SAC layout (Figure 2.3). The main gate is located farthest from the flight line at the center of the developed area of the base. The road from the gate runs northeasterly/southwesterly through the community area and leads to a ceremonial parade ground. Unaccompanied housing at the base consists of temporary lodging, visiting officer's quarters, and airmen's quarters and is found in three separate areas located from northwest to southeast respectively. The alert facility is located at the southeastern end of the runway and has a "christmas tree" alert apron next to it.

Differences between the Castle AFB layout and that of the standard SAC layout include the use of the same building for Wing Headquarters and the Command Post. Also, this building is located

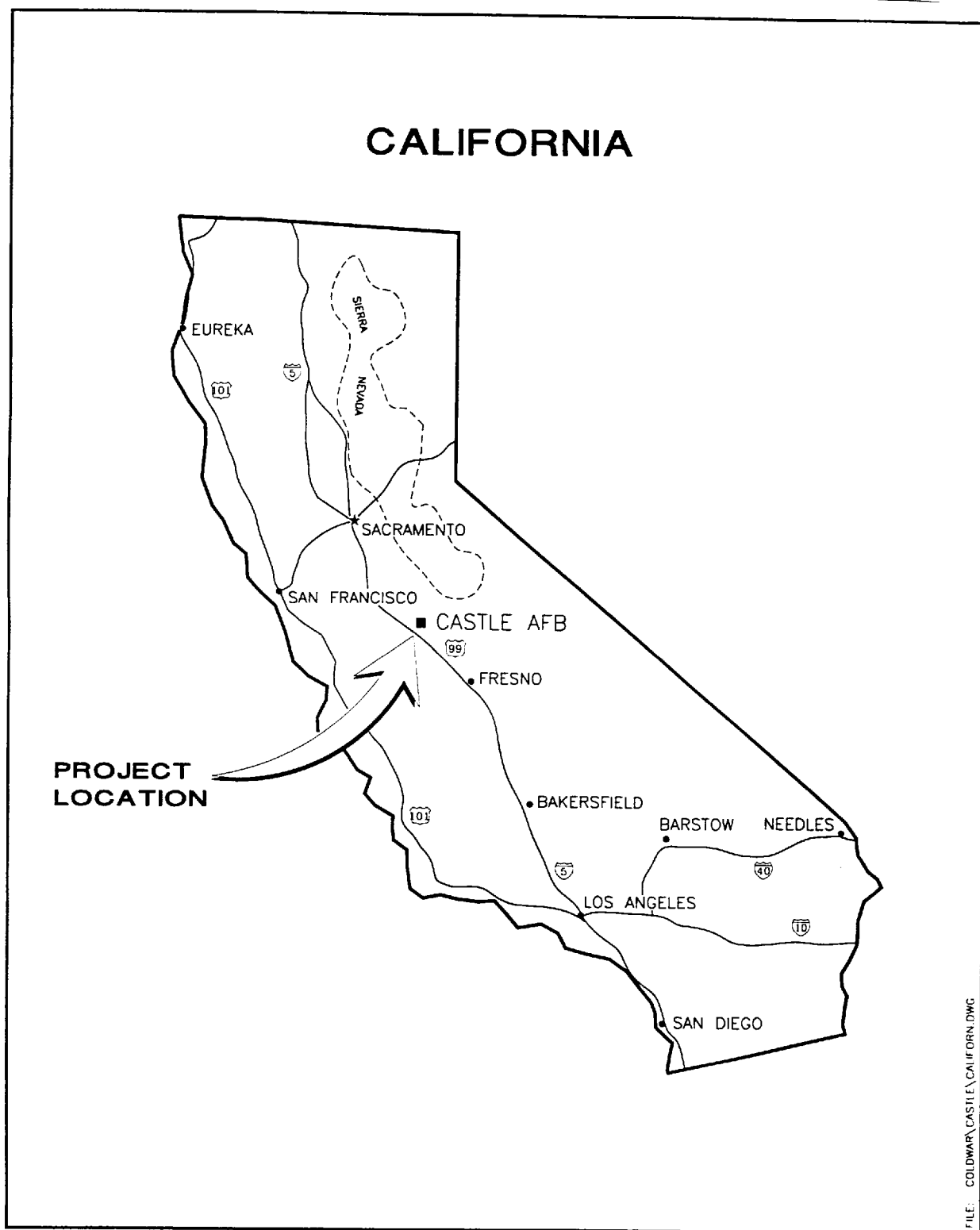


Figure 2.1 Location of Castle Air Force Base.

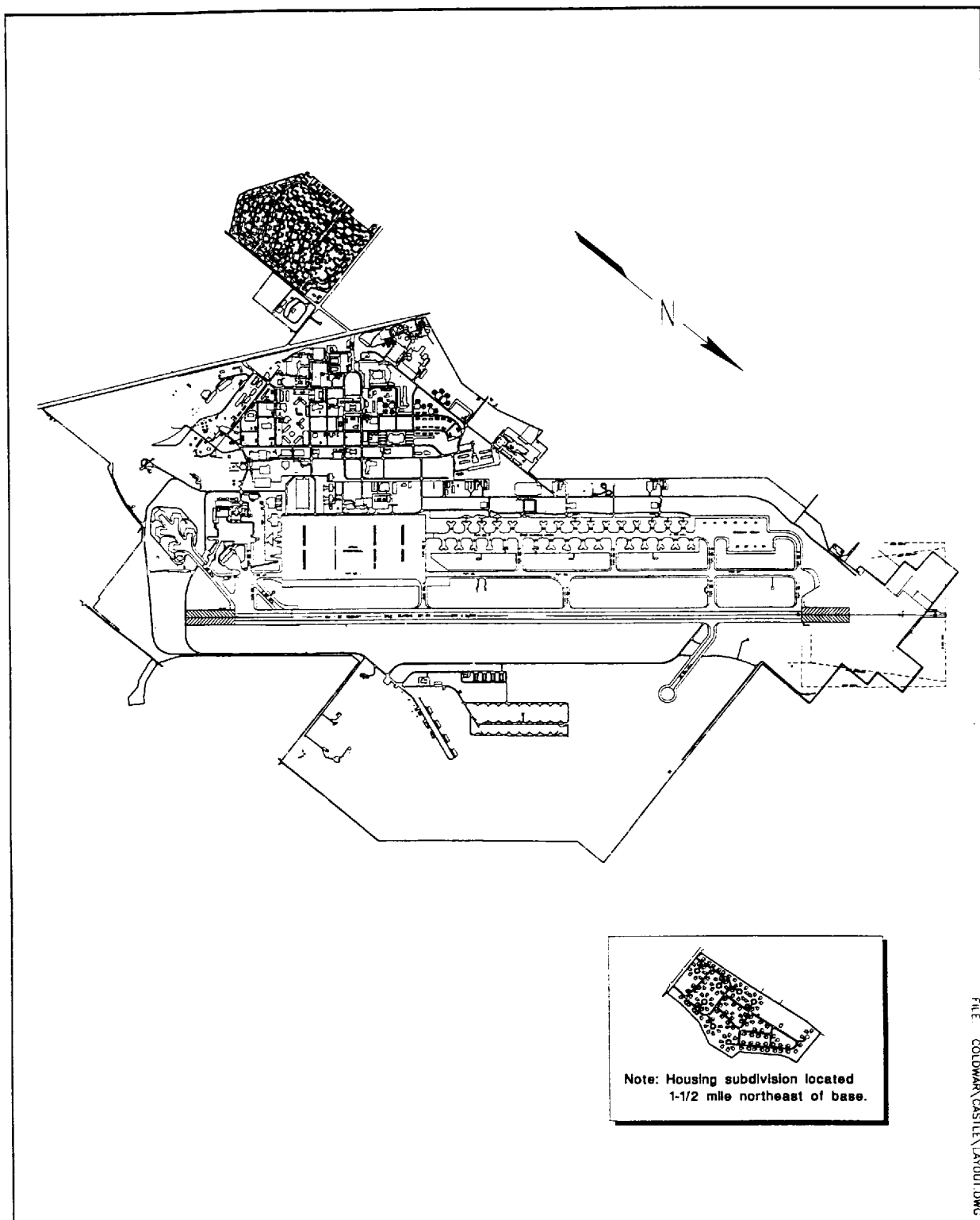


Figure 2.2 Castle Air Force Base Layout.

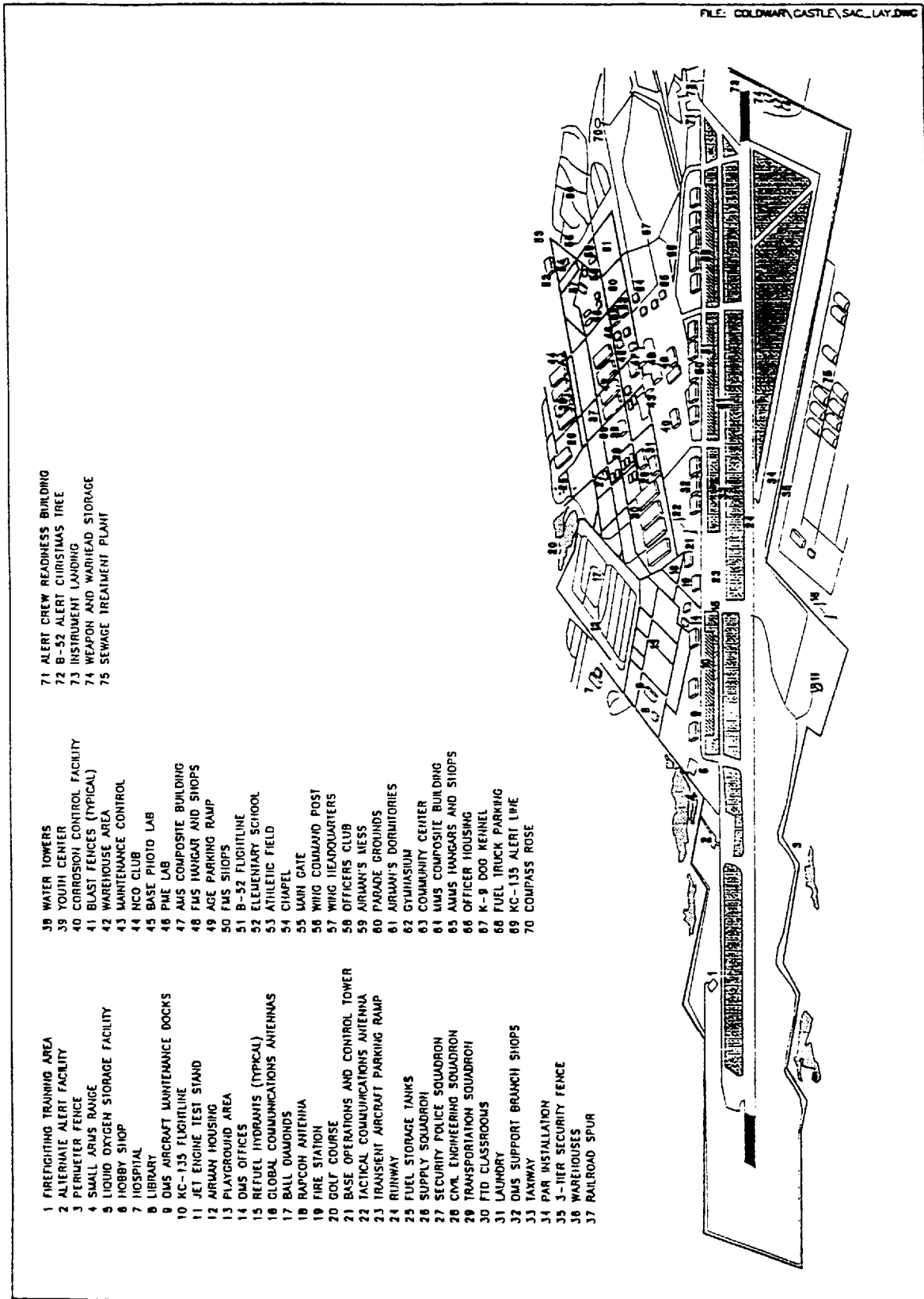


Figure 2.3 Standard Strategic Air Command Base Layout.

closer to the flight line than the standard plan locates either of the facilities. Another difference is the location of housing and recreational areas off the base. The recreational area consists of a youth center and a park with facilities for barbecuing and picnics.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan for Castle AFB, and Figure 2.5 is a diagrammatic land use plan of a standard SAC base. Castle AFB follows the standard plan in most ways. In both plans, the main base is on one side of the runway, with the mission area along the flight line and the weapon and warhead storage area on the other side of the runway. The base support, community, and unaccompanied housing areas are all located together next to the mission area. The industrial areas are located along the edges of the base, and family housing is located away from the mission and weapon storage areas. The alert facility is located at one end of the flight line, and the bulk of the base development has occurred at this same end.

Castle AFB land use differs from the standard SAC land use in that family housing is located off-base, and the Command Post is in the same building with the Wing Headquarters.

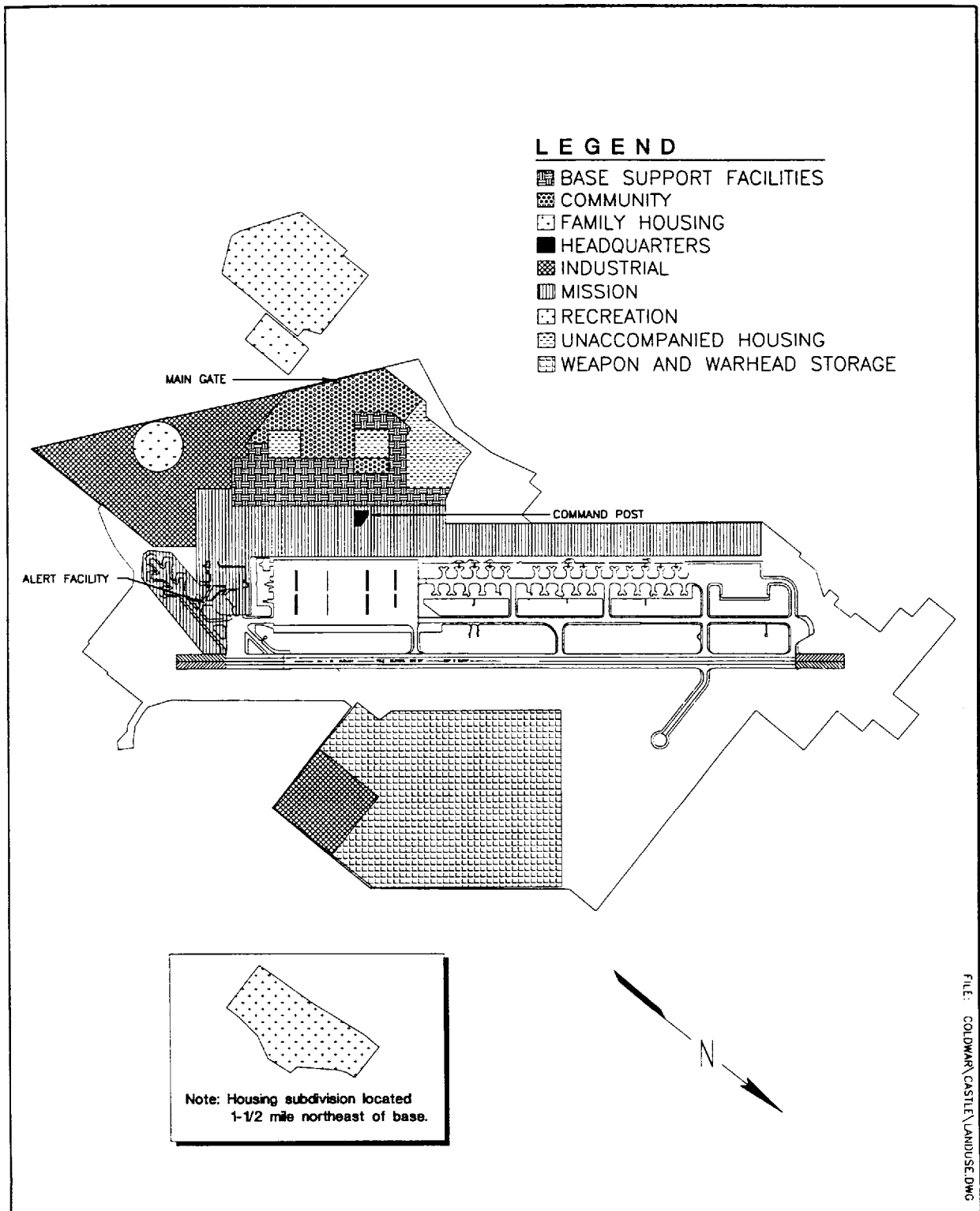


Figure 2.4 Castle Air Force Base Land Use Diagram.

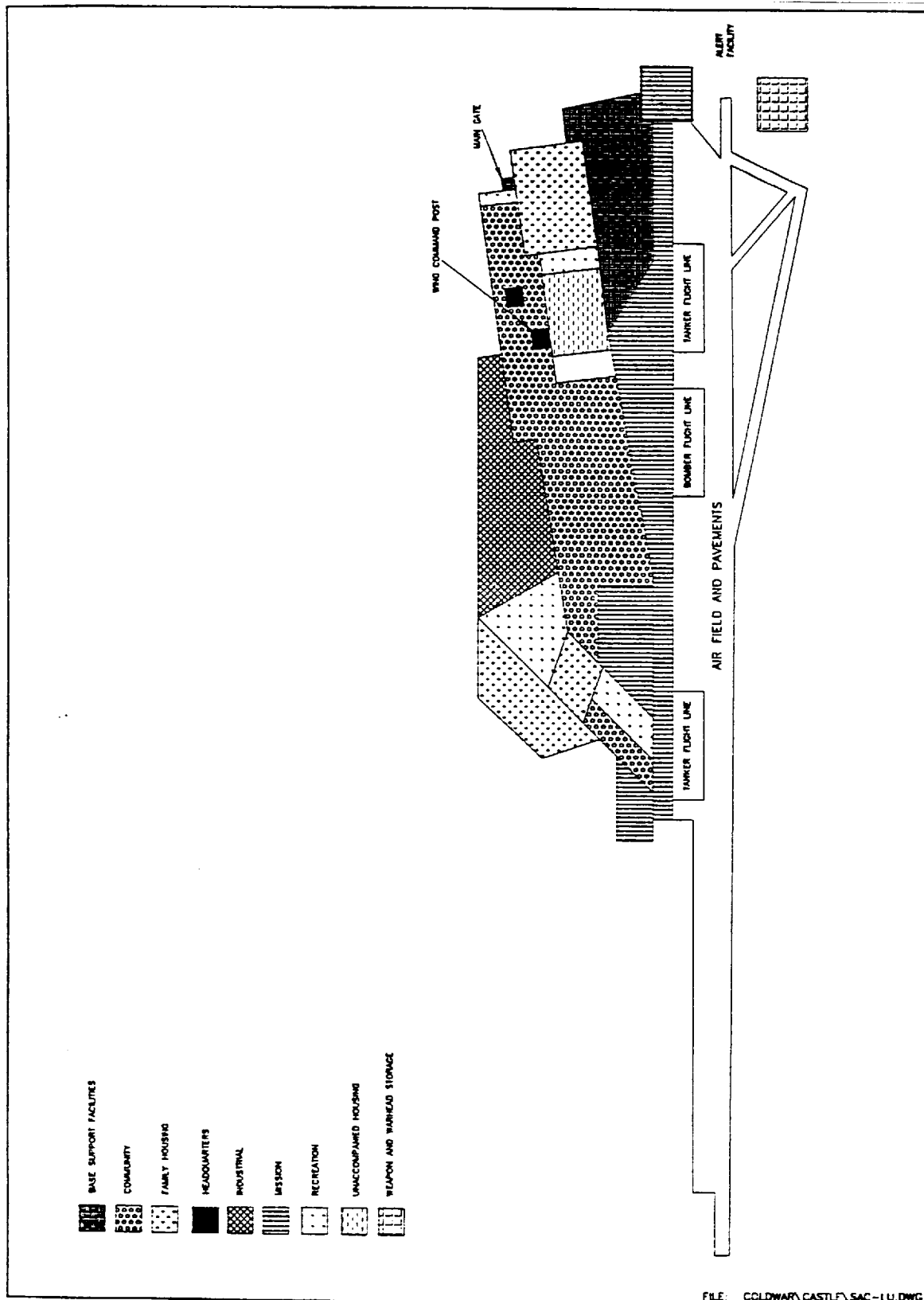


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

In 1940, the city council planners of Merced, California negotiated with the United States Army to establish a flying school near Merced. The city council purchased 900 (364 ha) acres of farmland and leased it to the Army for one dollar per year. In July of 1941, construction of the school began with a contract for housing and utility facilities (United States Air Force [(USAF)] 1965). In September of 1941, the adjunct general from Moffet Field in California officially established the school; however, troops and officers had to live in Merced until December, when construction was completed and housing was available (USAF 1965).

The 89th Bombardment Group (BMG) took control of Merced Army Flying School in December 1941. The first aircraft for the flying school were stored at the Merced Municipal Airport, as the runway was not yet complete. The day after the attack on Pearl Harbor, 34 BT-113A light trainers were transferred to the school (Castle AFB 1993), and the first training began at the school that month.

The training course was 10 weeks long, had 94 students, and consisted of basic single-engine flight training (Castle Air Museum Foundation n.d.). During 1942, Air Corps hangars, additional gasoline storage, a 30% increase in housing, and lengthening of the field were completed. One year later, the name of the school was changed to the Merced Army Air Field (AAF), and it became part of the Western Flying Training Command. Training at the air field peaked in 1944, when each class trained 454 cadets and the base was operating five auxiliary fields at Potter, Howard, Ballico, Anthione, and Mariposa (Castle AFB 1993). In 1945, the personnel and aircraft from Merced AAF were transferred to Minter Field, and the air field became a processing center for troops on their way to combat zones (USAF 1965).

In 1946, the name of the air field was changed to Castle AAF to honor Brig. Gen. Frederick W. Castle, a fallen war hero. General Castle was killed in action during a bombing mission in Eaeenhousen, Germany. He was flying the B-17 while the crew fought 13 Messerschmitt fighters. When the plane ignited, the crew bailed out, but Castle was still in the aircraft when it exploded. Castle was known for his acceptance of difficult missions, his assistance in setting up the Eighth Air Force supply system in Europe, and his exceptional logistical skills (Castle AFB 1993).

In February of 1946, the 59th Weather Reconnaissance Squadron (WRS) was stationed at Castle AAF and conducted operations with B-29 bomber, B-17 bomber, and C-54 cargo aircraft. In April of the same year, SAC took control of the air field, assigned the 93rd BMG, and reassigned the 59th WRS to Travis AFB. During May of 1947, the 93rd BMG was expanded when new people and the B-29 *Superfortress* aircraft were assigned to Castle AAF. In July, SAC activated the 93rd Bombardment Wing (BMW) and began the reduction of the BMG. The 93rd BMG was finally deactivated in 1952, and the honors and entitlements were transferred to the 93rd BMW. In 1948, SAC redesignated the installation as Castle AFB (Castle AFB 1993).

In 1949, SAC assigned B-50 *Stratofortress* bombers to Castle AFB, and, from 1950 to 1952, the 93rd BMW flew training missions in England. In 1952, the 93rd BMW won the SAC Bomb-Navigation Fairchild Trophy. This wing was selected for conversion to the B-52 bomber, and Castle AFB began the conversion to B-52 crew training for SAC. Runway extensions and facility expansions were planned in preparation for the new mission (USAF 1965). In 1954, also to prepare for the mission, the wing was provided with B-47 *Stratojet* bombers to give the unit initial experience with jet powered aircraft.

The first B-52 bomber delivered to any SAC unit arrived at Castle AFB on June 29, 1955. The conversion to the B-52 mission was completed at Castle AFB by March 1956, and the Castle AFB trainers began training outside units as well as crews based at Castle AFB (USAF 1965). Castle AFB received 45 B-52s, each costing ten million dollars. Although air crew training was

usually provided by Air Training Command, the cost of the aircraft led to the decision that these aircraft, owned by SAC, would have two functions, crew training and combat readiness.

In 1955, the 456th Fighter Interceptor Squadron (FIS) was assigned to the base and the fighter-interceptor alert facility was completed. This squadron was a part of Air Defense Command (ADC) and as such was a tenant unit on the base. In 1956, the 456th FIS F-86 *Sabre* crews began alert duty. These fighter interceptors were established in response to the Soviet Union's development of long-range bombing capabilities through the Tu-95 (*Bear*) and, to a lesser extent, the Myasishchev M-4 (*Bison*) aircraft. The Bear had a 10,000 mi (16,093 km) range and the Bison had a 5,000 mi (8046.5 km) range, each capable of reaching the continental United States (Yenne 1985). In 1958, the 456th FIS was converted to the F-102 *Delta Dagger* and, in 1959, they were converted to the F-106 *Delta Dart*.

In 1956, Castle AFB expanded its training facilities in preparation for receipt of the KC-135 *Stratotanker*, which was replacing the propeller-driven KC-97. The first KC-135 arrived at Castle AFB in 1957 and was assigned to the 93rd Air Refueling Squadron (AREFS). In 1956, with the help of the new refueling aircraft, two of the 93rd BMW's B-52s made non-stop flights around the perimeter of North America. This display of deterrence capability was referred to as Operation Quick Kick. In 1957, this was topped by Operation Power Flight in which three of Castle AFB's B-52s circled the world in 45 hours and 19 minutes (USAF 1965). This was hailed as one of the greatest feats in modern aviation, because the flight time for circling the globe had been cut in half. The 93rd BMW had proven SAC's message of deterrence through their ability to fly long distances in a relatively short period of time. Each crew member was awarded the Distinguished Flying Cross by General Curtis E. LeMay, who said the flight was a "demonstration of SAC's capabilities to strike any target on the face of the earth" (Yenne 1985).

The Bomber Alert Facility at Castle AFB was completed in 1960 at a cost of one million dollars (USAF n.d.), and SAC reached its goal of having one third of its assigned aircraft on continuous alert (USAF 1991). By 1961, the 330th Bombardment Squadron (BMS) was on continuous alert.

At this point, the base still had a dual role of combat readiness and crew training. The 330th BMS went off alert in 1963, and, in 1964, the 924th BMS went on alert.

The ADC's 456th FIS left Castle AFB in 1968, and, in 1973, Tactical Air Command's (TAC) 84th FIS moved to Castle AFB as a tenant unit. In 1981, the 318th FIS replaced the 84th (USAF 1986).

In 1991, the 93rd BMW was changed to the 93rd Wing to reflect the combined mission of the bomber and tanker. Sweeping reorganization occurred in 1992, with ACC replacing SAC, TAC, and Military Aircraft Command (MAC). ACC became responsible for Castle AFB and the 93rd Wing with its B-52 bomber mission, and Air Materiel Command (AMC) became responsible for both the tanker and training operations. In 1994, the B-52G was retired by congressional mandate, and the last one left Castle AFB for Davis-Monthan AFB in Arizona (Castle AFB 1994). Although the KC-135s and flight training currently remain at Castle AFB, the base is scheduled to close in 1995.

3.2 BASE DEVELOPMENT

In 1941, Merced leased 900 acres (364 ha) to the Army for the development of Merced Army Flying School (Figure 3.1). Development of the base began with unaccompanied housing and utilities. In 1942, construction began on two Air Corps hangars, the addition of gasoline storage facilities, lengthening of the runways, and a 30% increase in housing. By 1943, the acreage had increased to 957 (387 ha) and the runway was 3,500 by 1,500 ft (1,066 by 457 m) with 2 inch plant mix on top of a 4 inch gravel base.

In 1952, SAC planned to make Castle AFB the primary training facility for B-52 bombers. Once the decision was made, the runway was updated to allow for the requirements of the B-52 (Figure 3.2). New facilities were constructed and the base spread along the new runway to provide support for the training and combat ready missions. In 1955, a Fighter Alert Facility was

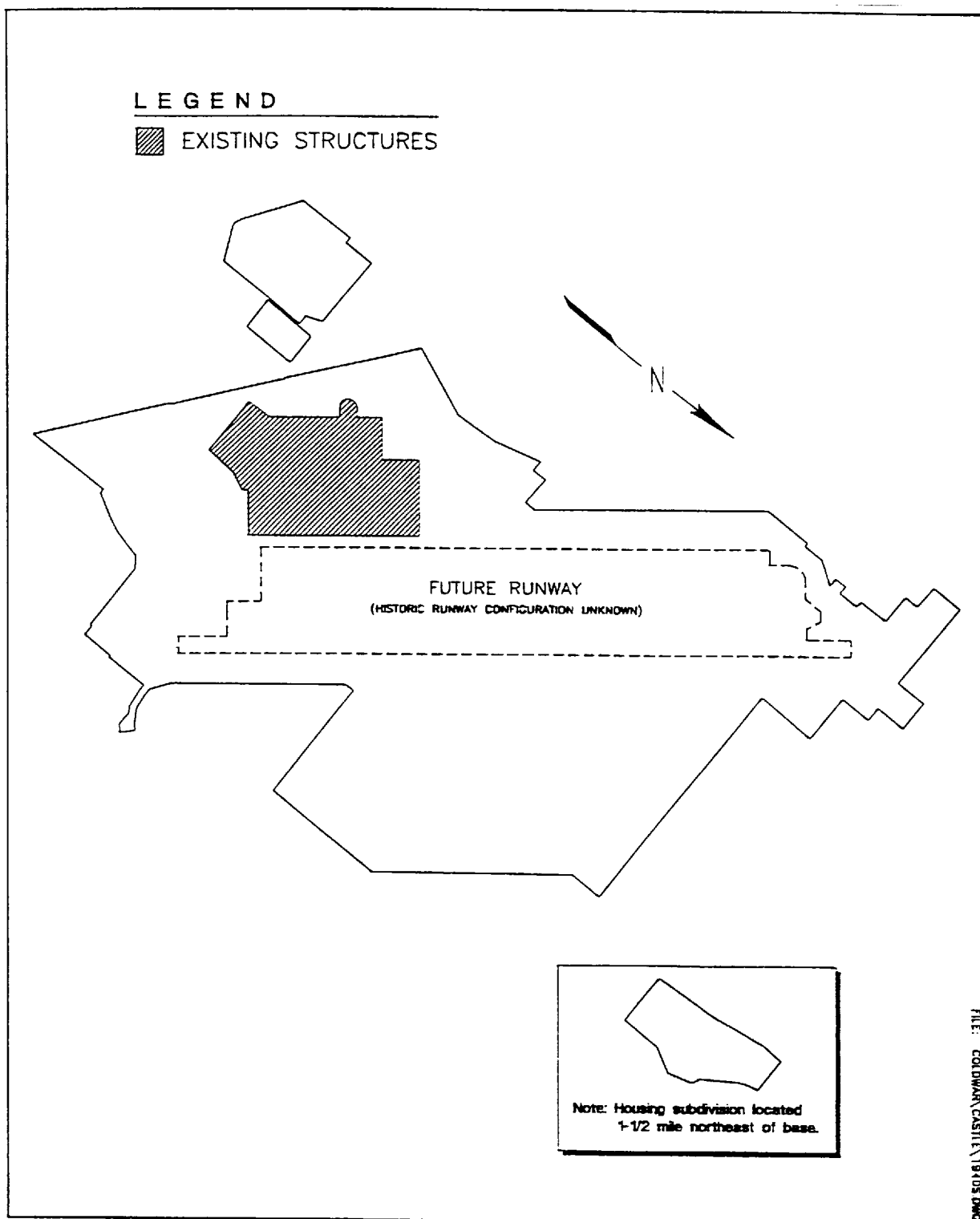


Figure 3.1 Castle Air Force Base, 1940s.

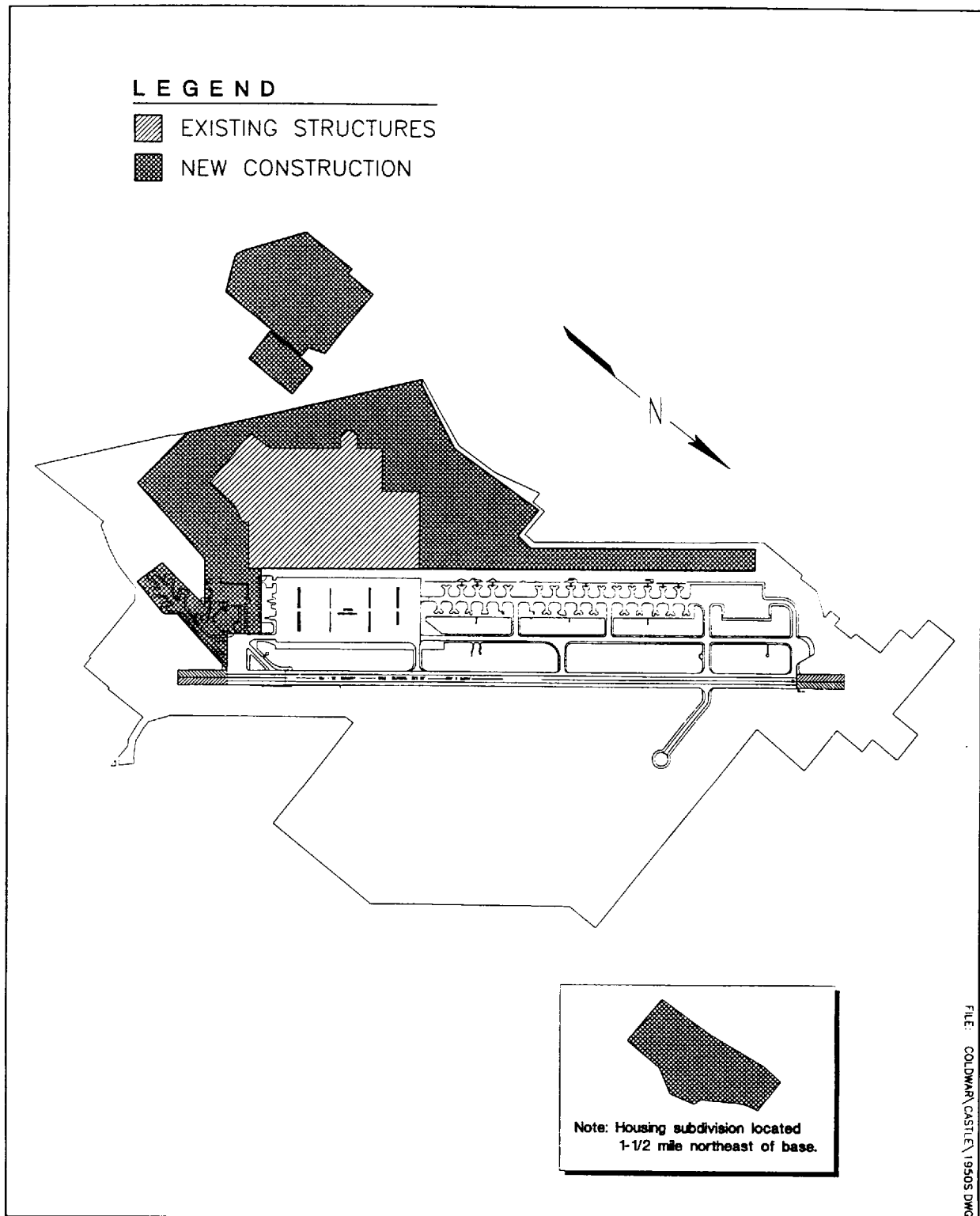


Figure 3.2 Castle Air Force Base, 1950 to 1960.

constructed at the southeastern end of the runway and aprons. In 1960, a Bomber Alert Facility and "christmas tree" alert apron were constructed southeast of the Fighter Alert Facility.

Over the next 30 years, changes were made to the buildings on base to update them to meet the requirements of the mission, and more base support and community services buildings were added (Figure 3.3).

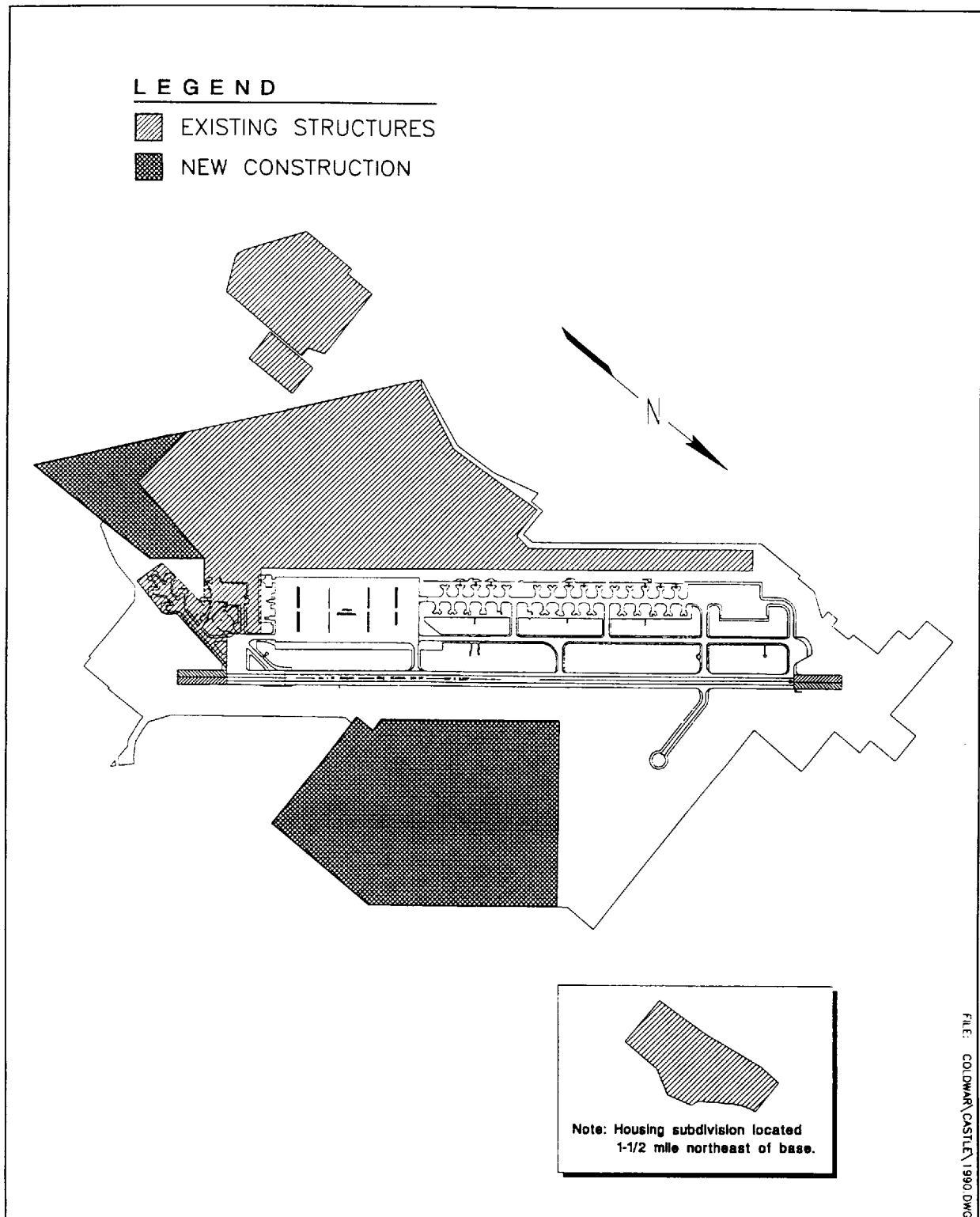


Figure 3.3 Castle Air Force Base, 1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Castle AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Castle AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Castle AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

The Mariah field team, Karen Lewis and R. Blake Roxlau, conducted the inventory at Castle AFB from August 15 to 24, 1994. Upon arrival, the team met with the Wing Historian, SSgt William Redilla, to discuss research objectives and the requirements to complete the base inventory. After the meeting, SSgt Redilla gave the team a tour of the base, during which several resources important to the Cold War context were identified. After the tour, the field team was introduced to other base staff who would aid in the inventory, including the staff of the Civil Engineering Office, the Real Property Office, and the Drafting Office.

The team began the inventory with photographs of property types and an analysis of the Real Property Office cards and files. As the inventory progressed, SSgt Redilla was able to arrange access to the flight line, weapon and warhead storage area, and the flight simulator, all secured areas. Documentation of these areas was completed after the tour, and photographs were taken. The team conducted interviews with the Wing Historian, flight simulator contractor, and Castle Air Museum staff. Most of the written history information was gathered at the museum.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Castle AFB, 87 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at Castle AFB, two of them falling under the DoD category of real property and one under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to one of the evaluated buildings could not be secured. In this instance, documentation describing any changes to the building was consulted to provide insight into the integrity of the building's interior.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 16088, Located in Real Property No. 1200)

This documentary collection is located in the Base Engineering building in six cabinets of flat files. The collection contains numerous historical maps, original base master layouts, large aerial photographs, and construction and utility project drawings, all of Castle AFB. The collection's maps and drawings include paper, linen, mylar, vellum, and blue line reproductions. The collection contains important information about historic structures on base and illustrates the development of the installation throughout the Cold War era. Portions of the collection pertain specifically to resources evaluated in this study. Most of the collection is in good condition, but is threatened by frequent handling and removal from the drawers. What will happen to the collection when the base is closed is unknown.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	16088	None	RecDoc/Obj	13
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	16058	1582	Real/Bldg	22
Alert Facilities	Fighter Alert Facility	16059	1560	Real/Bldg	22

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
22	16058	1582	Bomber Alert Facility
22	16059	1560	Fighter Alert Facility
13	16088	None	Documentary Collection

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 16058, Real Property No. 1582)

This alert facility was constructed in 1960 and was used for B-52 bomber alert. The facility was constructed of reinforced concrete and was a self-contained community for B-52 bomber crews. These crews were required to live at the facility for seven-day periods and respond to any drill or war situation at a moment's notice. Bedrooms, dining halls, a recreation room, and a briefing room were all located in the building. Distinctive external features of the facility include several ramp tunnels that lead out to the alert apron. The alert building is a secure facility surrounded by a chainlink and barbed wire fence with a security control entry building. A security police tower is located on the adjacent bomber alert apron. An associated building located outside the alert security perimeter was used for marital and family activities. The overall integrity of the facility and its features is intact. However, ephemeral items such as furniture, recreation items, and communications equipment have been removed.

The Bomber Alert Facility on Castle AFB is extremely important to the history of the base as well as Cold War history at the national level. Although it was not used continuously, this facility exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of the SAC defense triad and was relied upon as the United States' primary manned nuclear bomb force for over 30 years. This facility was used for this purpose during Phase II of the Cold War, and meets NRHP criteria (a) and (c).

6.2.1.2 Fighter Alert Facility (Resource No. 16059, Real Property No. 1560)

This Fighter Alert Facility was constructed in 1955 for use by fighter interceptor crews. The facility includes such character defining features as aircraft docks and crew living facilities. During the building's operation as a Fighter Alert Facility, the pilots were on a five minute alert. The pilots and the support staff were required to be in the building and ready to go with a moment's notice. The notification to fly, as well as where to go and how quickly to be there, came from the Semi-Automated Ground Environment (SAGE) building at Beale AFB, California.

The exterior integrity of the building is intact. Access to the interior of the facility was not secured by the field team; however, the real property card for the building indicates no major renovations or changes in use. Therefore, interior integrity is also intact.

This facility is extremely important not only to Castle AFB's history, but to Cold War history at the national level. The importance of this facility lies in its sole mission to thwart any surprise attack by the Soviet Union on the United States. This building conveys the United States' fear of a Soviet bomber attack from the north and the measures taken to insure that any such attack would be successfully intercepted. It is a direct result of Congressional approval in the 1950s for the construction of interceptor bases and the NSC-68 recommendations for a massive military build-up to counteract the increasing threat posed by the Soviet Union (Lewis et al. 1995).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Castle AFB.

6.4 TRAINING FACILITIES

None were evaluated at Castle AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Castle AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Castle AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Castle AFB. An example is the holdings of the Castle Air Museum. These resources should be investigated further for more comprehensive analyses.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Castle AFB revealed approximately 200 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the B-52 and the fighter interceptor aircraft. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Castle AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base and potential future contacts, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

Castle AFB is closing, so all the buildings and structures within the facility will undergo adaptive reuse or be demolished. The evaluated resources on Castle AFB are at present minimally at risk; however, they should be documented as soon as possible. The fate of the documentary collection is unknown at this time.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Castle AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Castle AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Castle AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Castle AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
16058	1582	Bomber Alert Facility		*	*	*		NRHP eligible now.
16059	1560	Fighter Alert Facility		*	*	*		NRHP eligible now.
Record or Document - Object								
16088	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 16088, Located in Real Property No. 1200)

This collection of maps, drawings, and photographs is currently in good condition, but is threatened by frequent handling and removal from flat file drawers. It is also unknown what will happen to the collection when the base closes. It is recommended that the collection be inventoried and sent to a permanent curatorial facility for stewardship and conservation.

9.2.2 Bomber Alert Facility (Resource No. 16058, Real Property No. 1582)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The

unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact based upon visual inspection. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.3 Fighter Alert Facility (Resource No. 16059, Real Property No. 1560)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through III. It meets NRHP criteria (a) and (c) based on its mission to thwart any surprise attack by the Soviet Union and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact based upon visual inspection and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Castle Air Force Base

- 1993 Team Castle. Prepared by the United States Air Force. Castle Air Force Base, California.
- 1994 93rd Bomb Wing and Castle Air Force Base Fact Sheet. Prepared by Public Affairs Office, Castle Air Force Base, California.

Castle Air Museum Foundation

- n.d. Economic Impact and Feasibility Study: Castle Air Museum. Prepared by Zephyr Associates.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.
-

United States Air Force

- 1965 *A Brief History of the 93rd Bombardment Wing and Castle Air Force Base*. Prepared by Maurice A. Miller, Jr., United States Air Force, Washington D.C.
- 1986 *Installation Survey Report: Castle Air Force Base, Merced, California*. Prepared by the Office of the Assistant Secretary of the Air Force, Washington D. C.
- 1991 *Alert Operations and the Strategic Air Command, 1957-1991*. Prepared by the Office of the Historian, Headquarters, Strategic Air Command, Offutt Air Force Base, Nebraska.
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

n.d. Informational brochure about Castle Air Force Base and its mission.

Yenne, B.

- 1985 *SAC: A Primer of Modern Strategic Airpower*. Presidio Press, Novato, California.
-

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	16001	404	Officer's Open Mess	1948
	16002	300	Airmen's Dormitory	1986
	16003	373	Airmen's Dormitory	1971
	16004	395	Recreation Center	1956
	16005	465	Child Care Center	1982
	16006	118	Environmental Health	1941
	16007	127	Correctional Facility	1942
	16008	115	Data Processing Installation	1983
	16009	45	Base Supply Administration	1942
	16010	42	Security Police Central Control	1942
	16011	51	Flyaway Kit Warehouse	1941
	16012	1248	Survival Equipment Shop	1988
	16013	54	Logistics Facility Departmental Operations	1944
	16014	1260	Jet Engine Maintenance Shop	1955
	16015	1350	Maintenance Hangar	1954
	16016	531	Morale Welfare and Recreation Supply	1941
	16017	1230	Wing Headquarters	1953
	16018	1340	Base Operations	1953
	16019	1344	Fire Station	1955
	16020	1335	Avionics Shop	1955
	16021	1333	Flight Simulator Training	1956
	16022	1332	Flight Simulator Training	1978
	16023	1330	Communications Facility	1955
	16024	1323	Aircraft Support Equipment Storage Facility	1989
	16025	1325	Aircraft Support Equipment Storage Facility	1955
	16026	1322	Squadron Operations	1957
	16027	1214	Base Personnel Office	1953
	16028	1210	Heating Facility Building	1953
	16029	1131	Visiting Officer's Quarters	1948
	16030	175	Flight Simulator	1981
	16031	1200	Base Engineering Administration	1991
	16032	1186	Base Engineer Hospital Maintenance Shop	1966
	16033	1182	Composite Medical Facility	1964
	16034	1015	Flight Training Classroom	1974
	16035	1038	Chapel Center	1982
	16036	789	Bowling Center	1970
	16037	748	Thrift Shop	1984
	16038	759	Exchange Sales Store	1978
	16039	752	Postal Office Center	1959
	16040	765	Commissary Store	1990
	16041	545	Security Police Operations	1942

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	16042	551	Miscellaneous Recreation Building	1941
	16043	871	Gymnasium	1981
	16044	65	Vehicle Filling Station	1949
	16045	1360	Warehouse Supply and Equipment Base	1953
	16046	1213	Squadron Operations	1953
	16047	1315	Squadron Operations	1957
	16048	782	Security Police Identification Control	1987
	16049	781	Traffic Checkhouse	1987
	16050	786	Base Theater	1956
	16051	708	Group Headquarters	1942
	16052	706	Water Tank Storage	1953
	16053	None	Alert Vehicle Parking	Unknown
	16055	411	Law Center	1941
	16056	422	Library Recreation	1967
	16057	425	Branch Exchange	1984
	16058	1582	Bomber Alert Facility	1960
	16059	1560	Fighter Alert Facility	1955
	16060	1541	Museum Building	1974
	16061	1550	Weapons and Release System Shop	1956
	16062	1555	Aircraft Weapons Overhaul Depot Shop	1961
	16063	1509	Fuel Systems Maintenance Dock	1984
	16064	1529	Aircraft Corrosion Control	1987
	16065	1353	Medium Aircraft Maintenance Dock	1957
	16066	1346	Fire Protection Water Storage	1946
	16067	1319	Aircraft Maintenance Organizational Shop	1969
	16068	1709	Surveillance and Inspection Shop	1956
	16073	1711	Security Police Canine Kennel	1990
	16076	1532	Precision Measurement Equipment Lab	1961
	16077	1540	Weapons System Maintenance Management Facility	1956
	16078	1545	Munitions Maintenance Administration	1955
	16079	1562	Weapons Systems Maintenance Management Facility	1958
	16081	227	Castle Gardens Single Family House	Unknown
	16082	7	Castle Gardens Commander House	Unknown
	16083	45	Castle Gardens Duplex	Unknown
	16085	2191	Castle Vista Duplex	Unknown
	16086	680	Youth Center	Unknown
Real Property - Landscape				
	16054	455	Monuments Memorial	1941
Real Property - Object				
	16080	None	Castle Gardens Sign	Unknown
	16084	None	Castle Vista Sign	Unknown

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Structure				
	16069	1809	Storage Igloo	1953
	16070	1812	Storage Igloo	1953
	16071	1813	Storage Igloo	1953
	16074	950	Test Cell	1956
	16075	956	Test Cell	1987
	16087	None	Shelter House - Off Base Park	Unknown
Record or Document - Object				
	16088	None	Documentary Collection	Varies

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

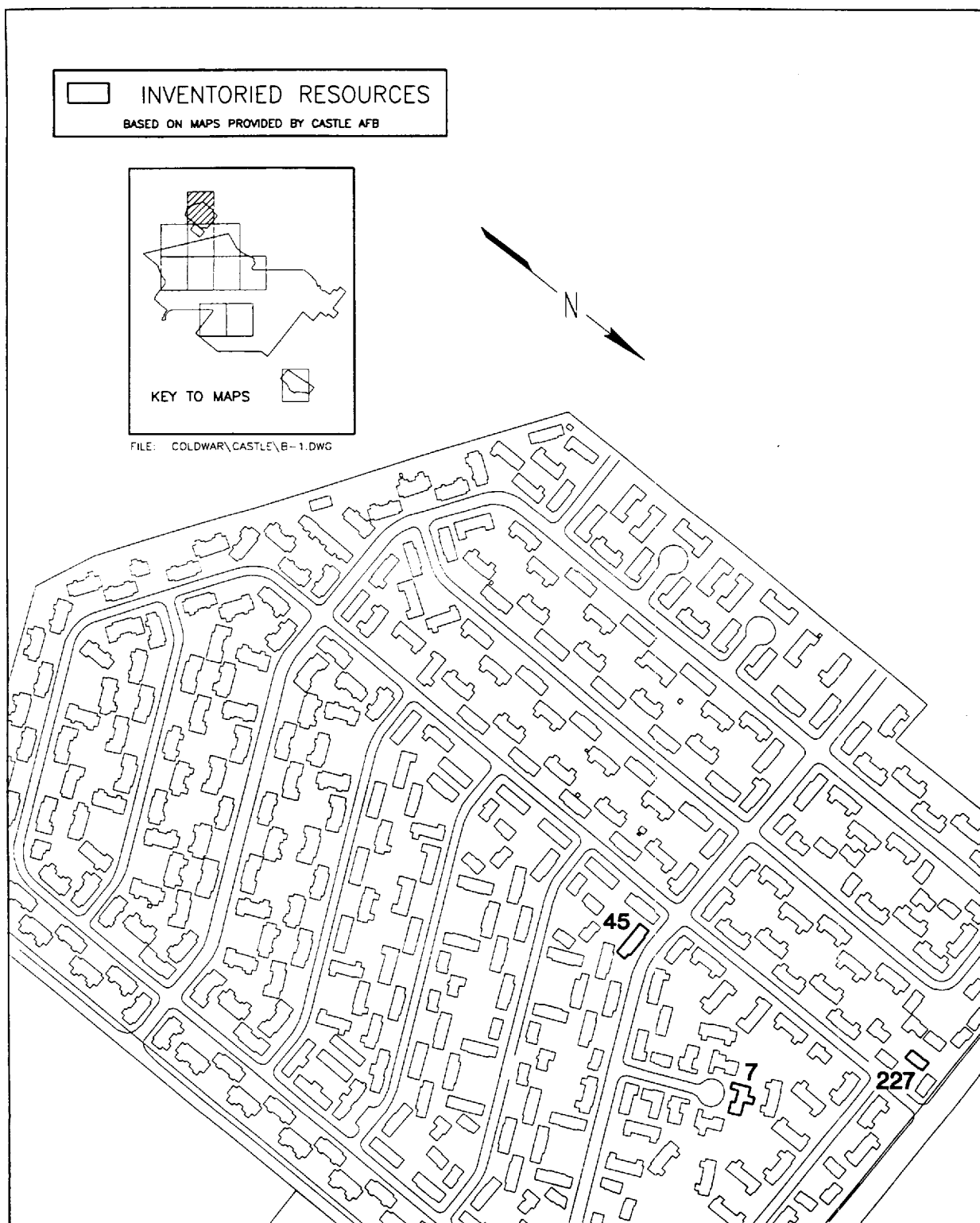


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 11).

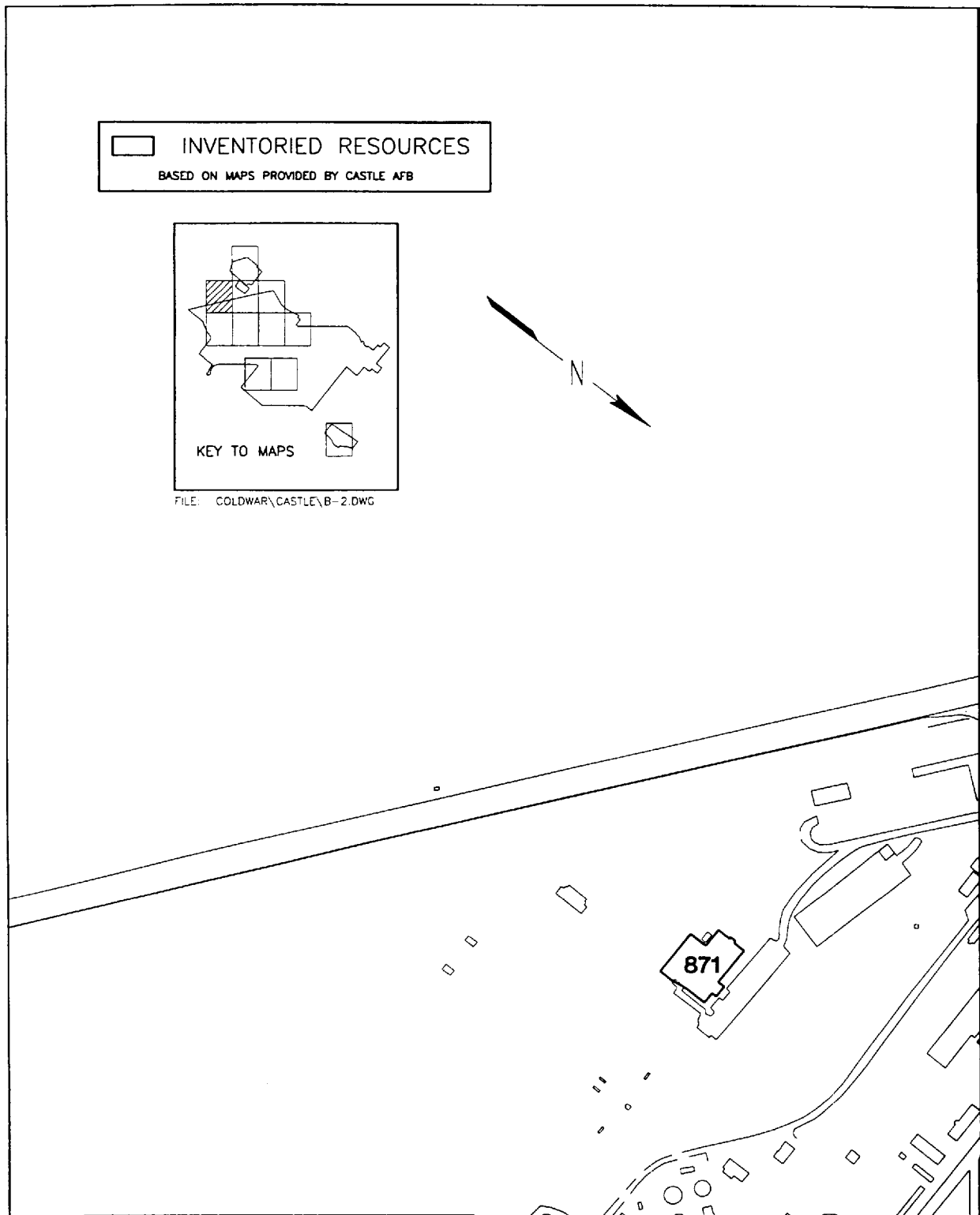


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 11).

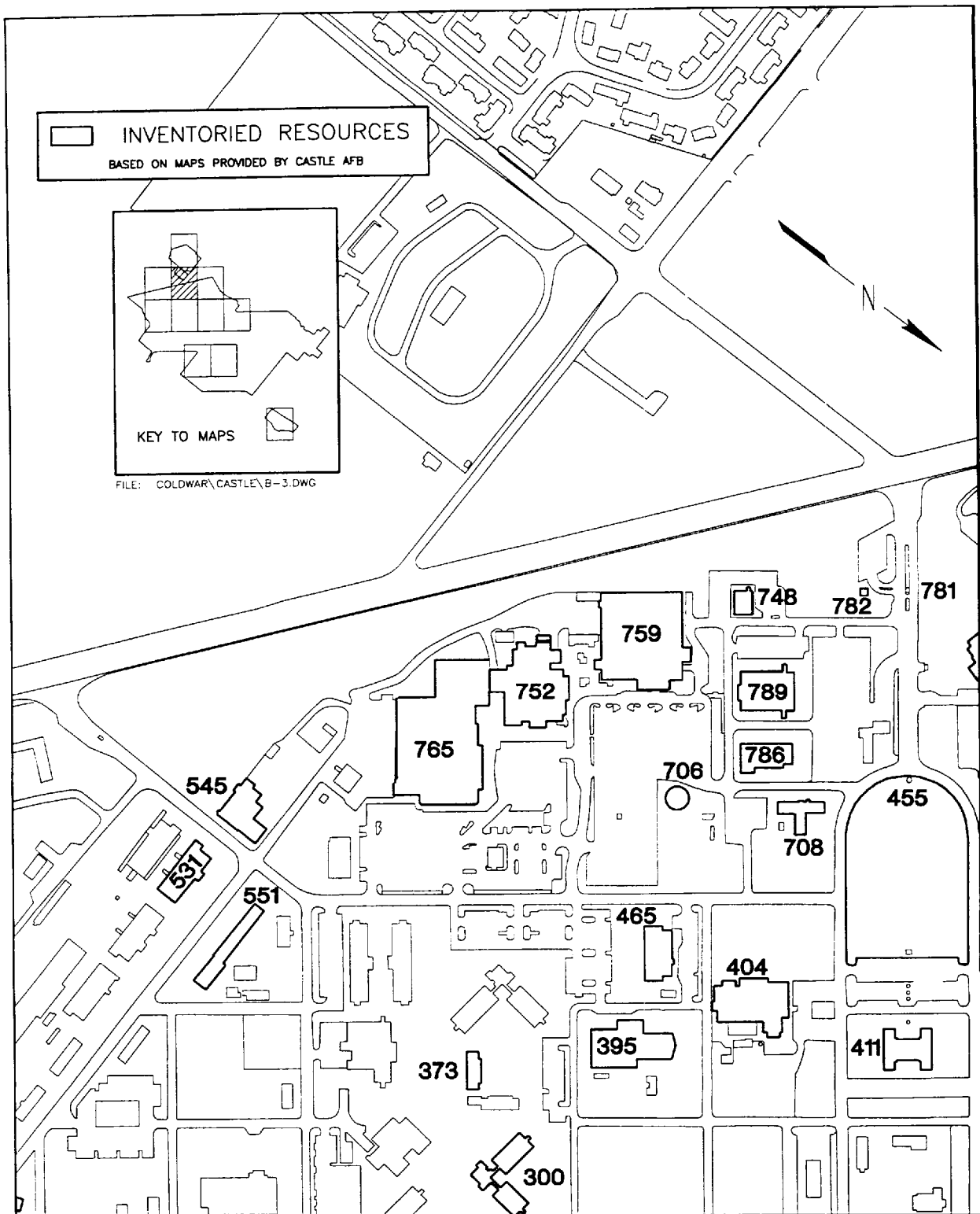


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 11).

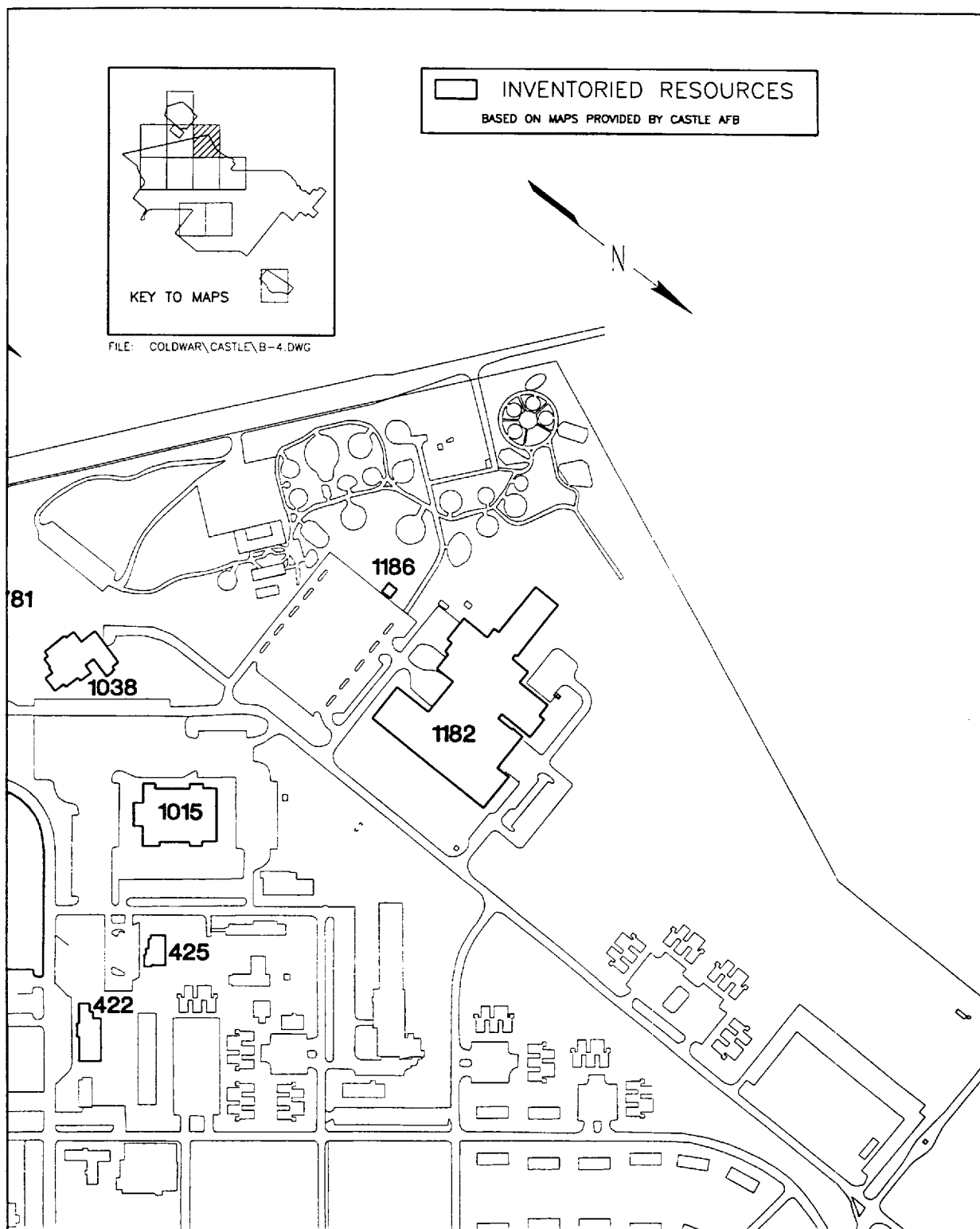


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 11).

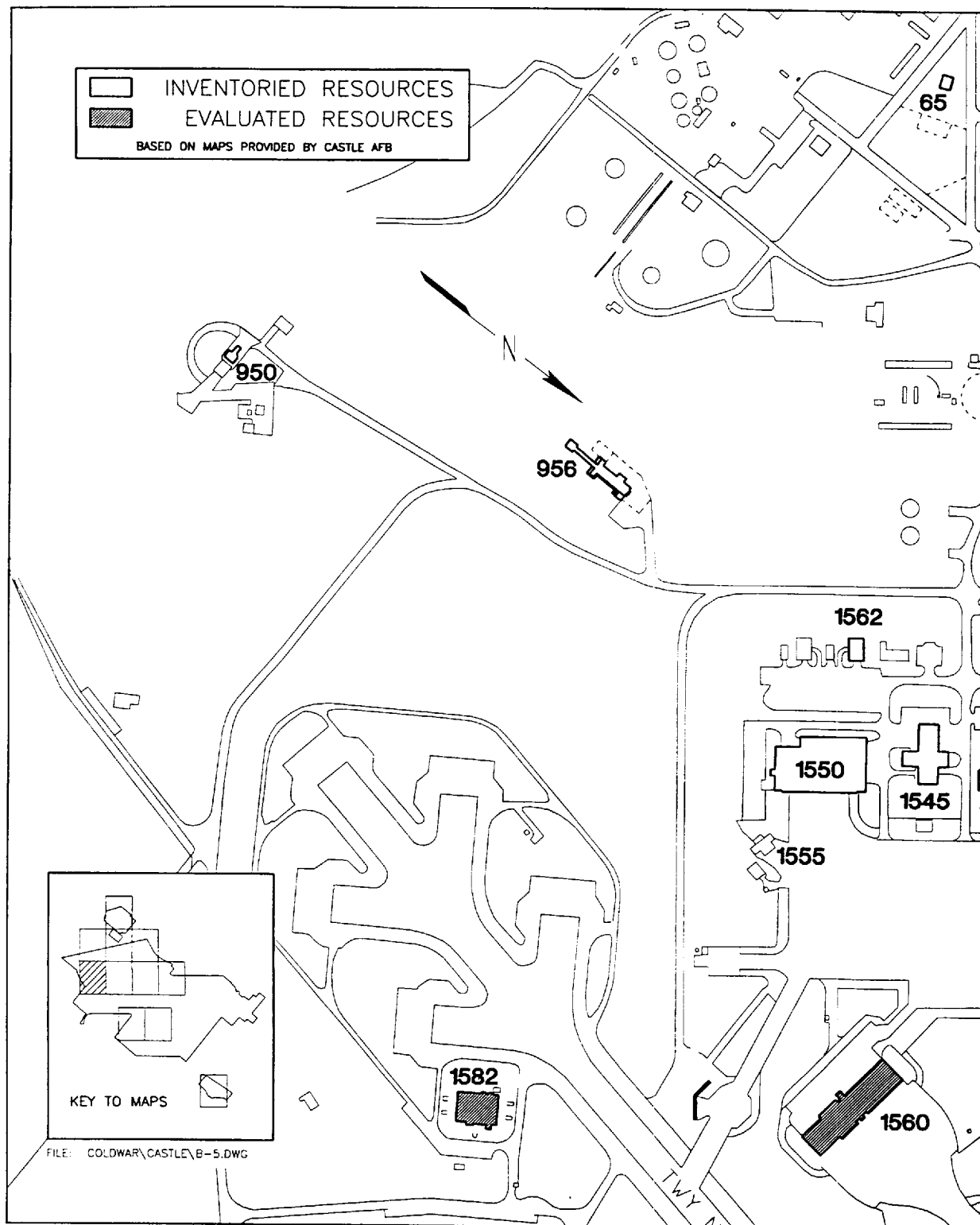


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 11).

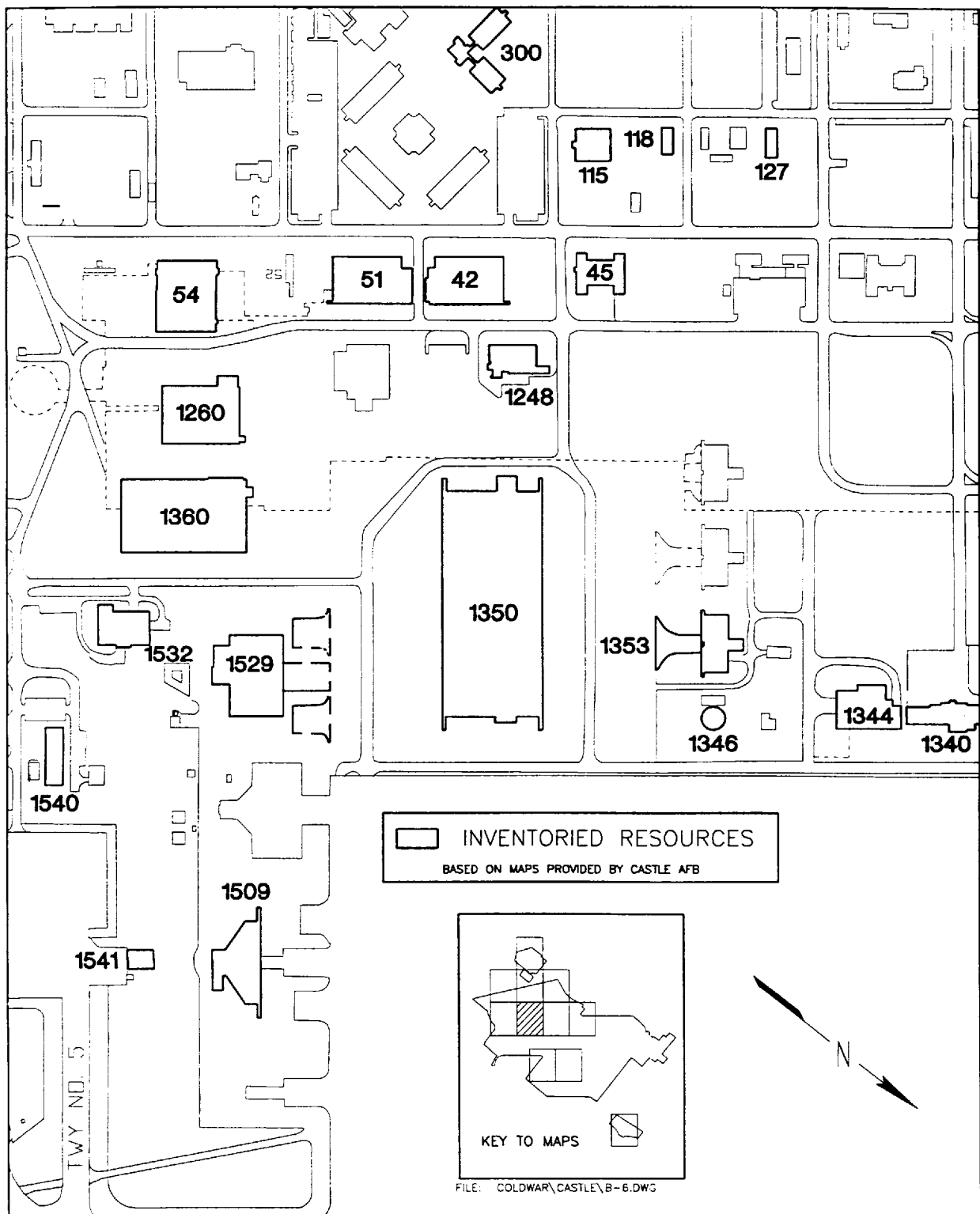


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 11).

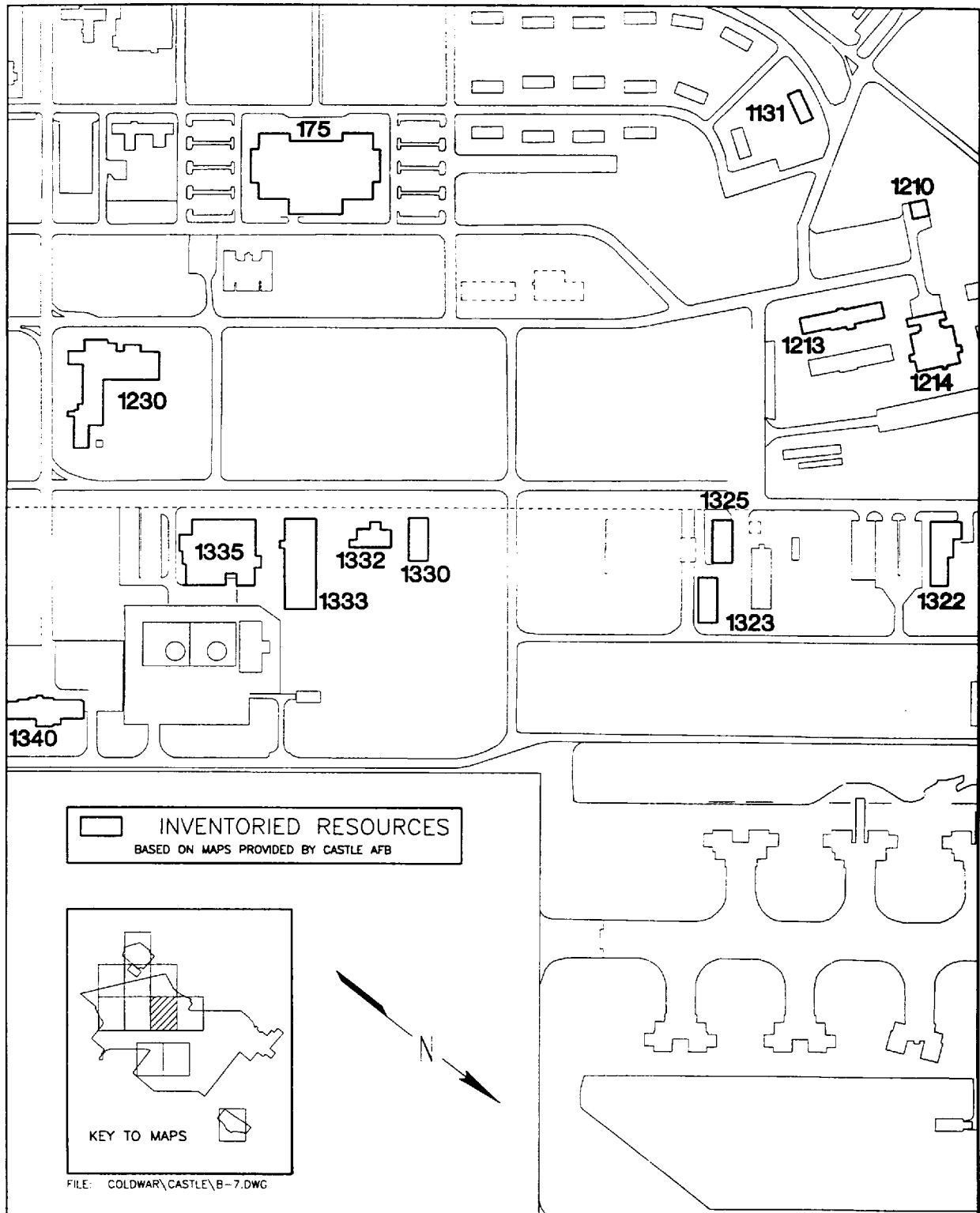


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 11).

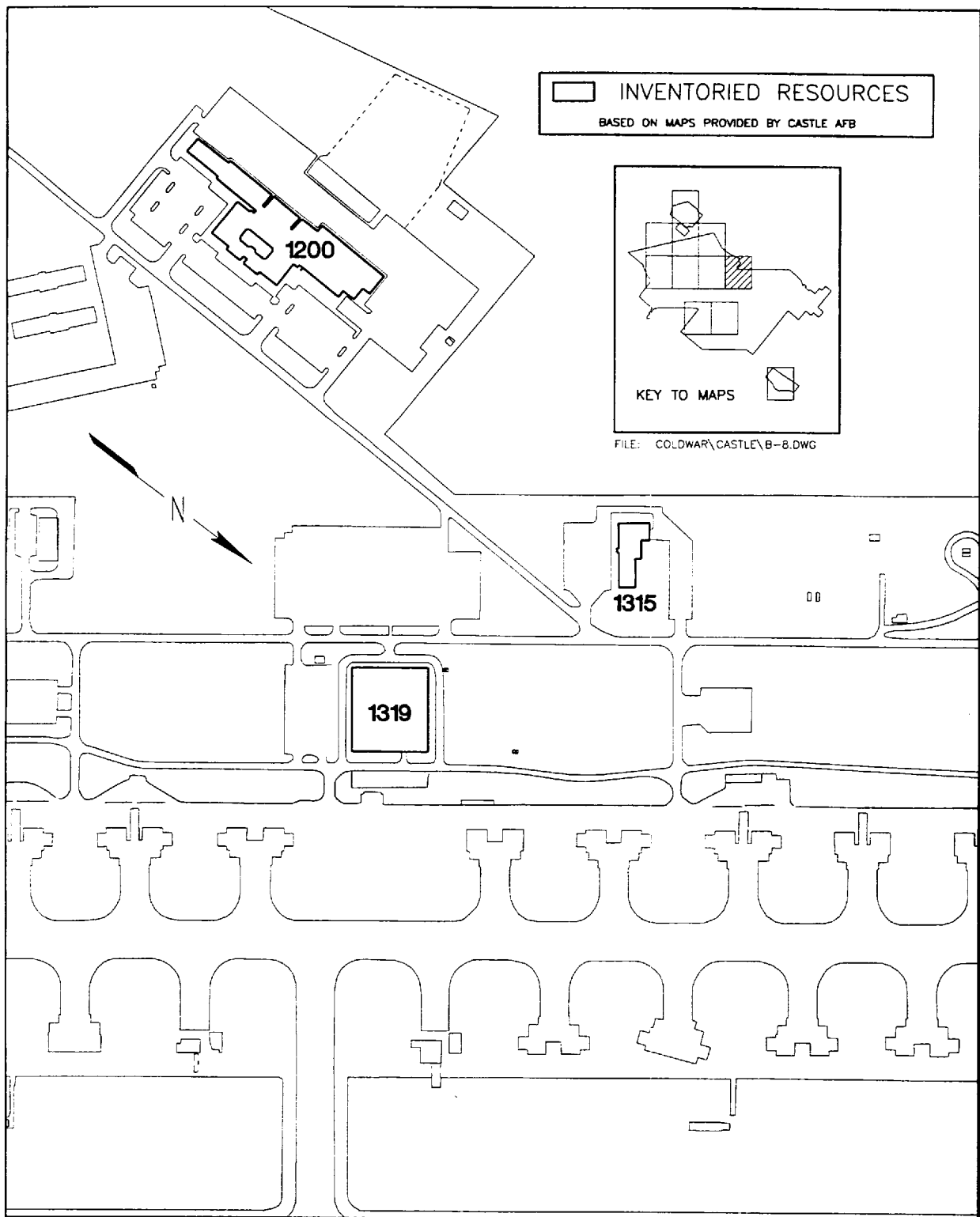


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 11).

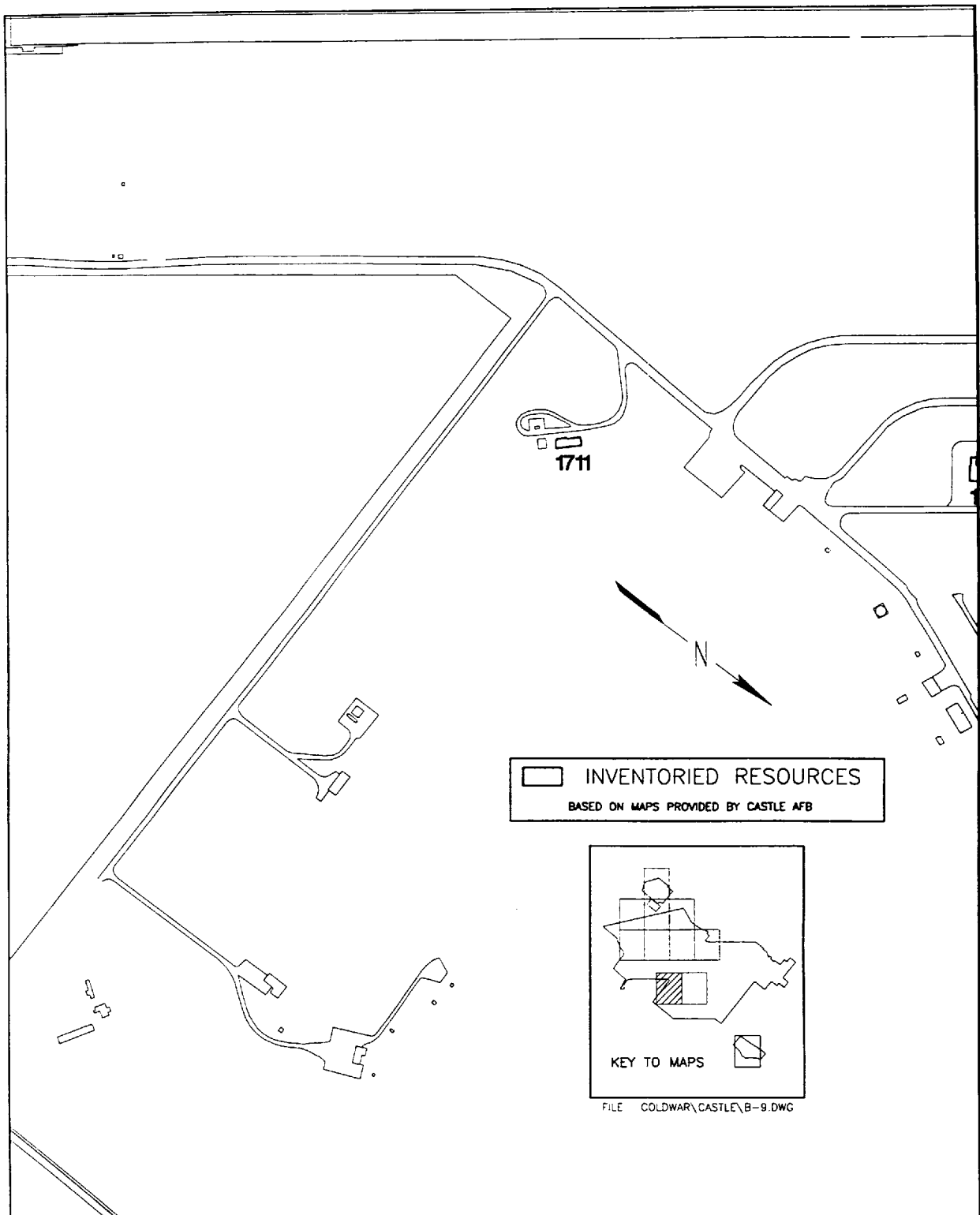


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 11).

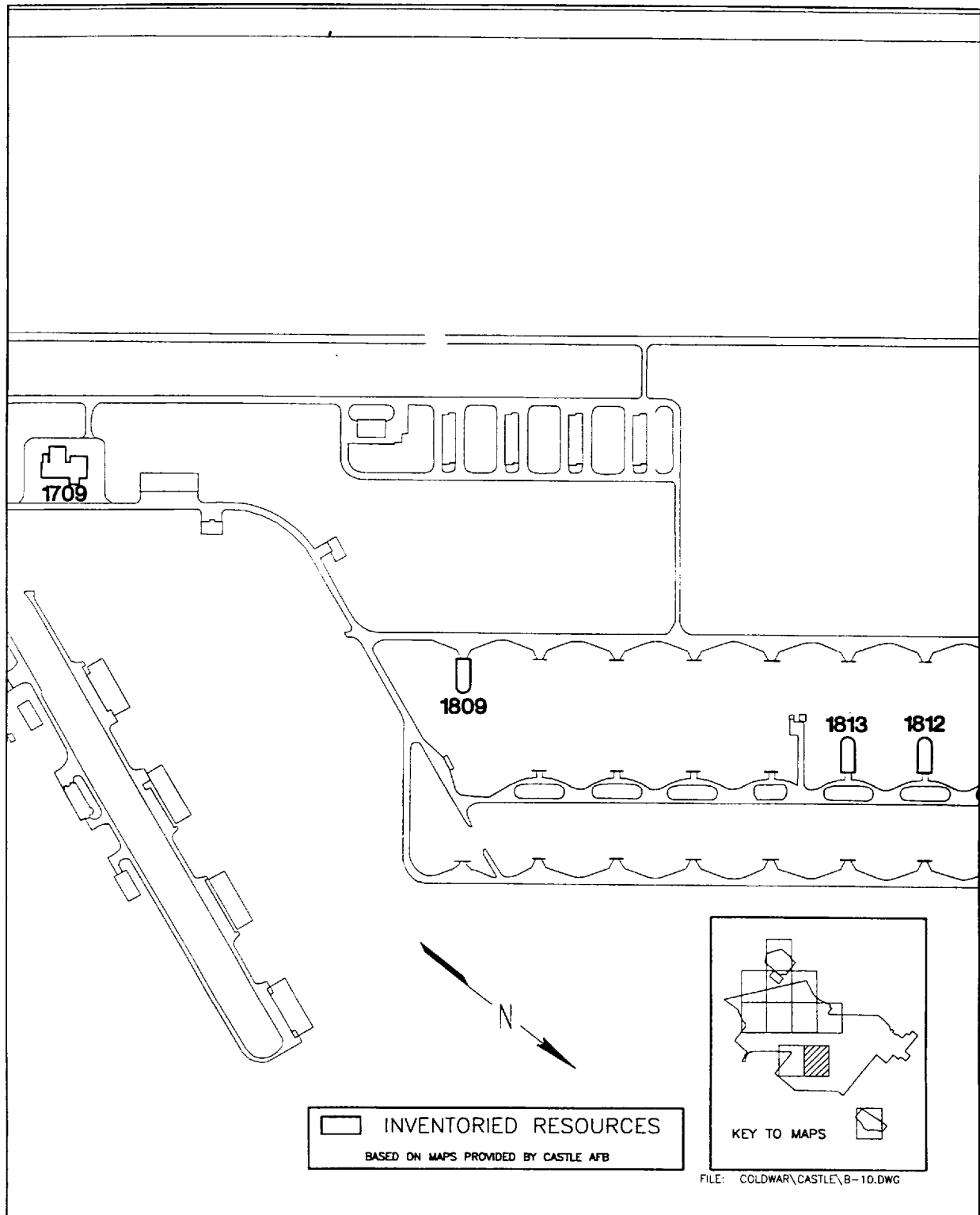
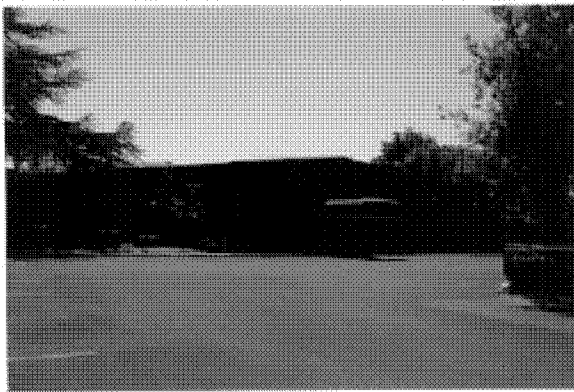


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 10 of 11).



Figure B.1 Base Layout Map Showing Inventoried Resources (Map 11 of 11).

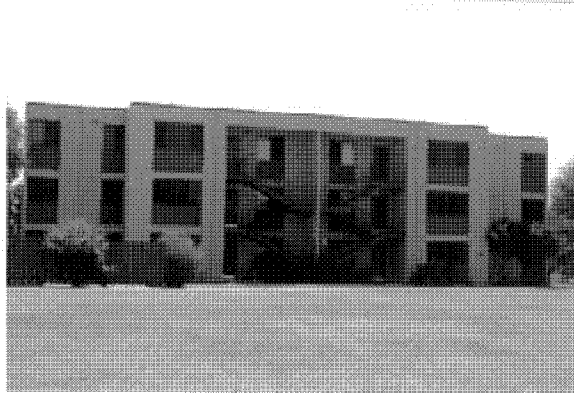
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 16001, Real Property No. 404
Officer's Open Mess



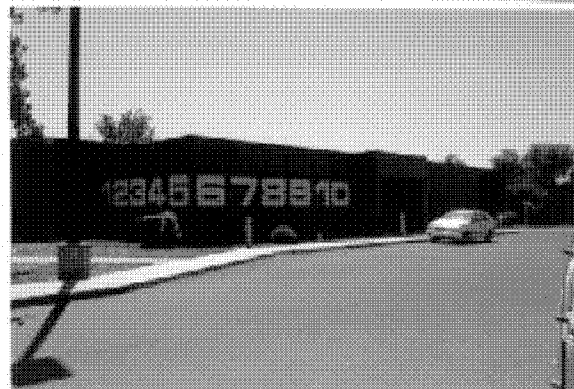
Resource No. 16002, Real Property No. 300
Airman's Dormitory



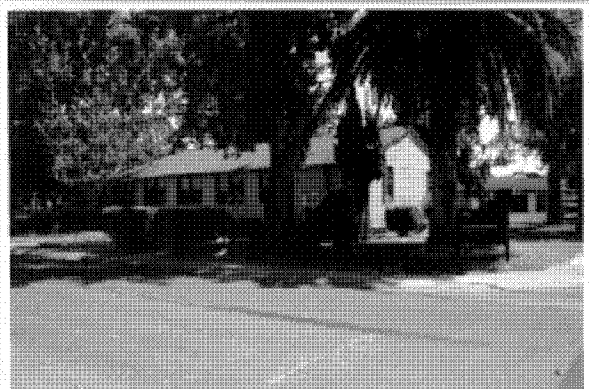
Resource No. 16003, Real Property No. 373
Airman's Dormitory



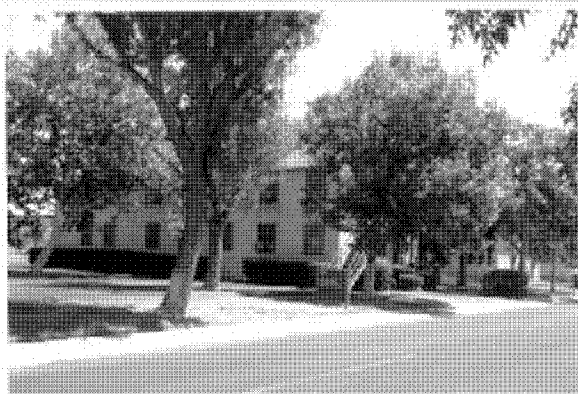
Resource No. 16004, Real Property No. 395
Recreation Center



Resource No. 16005, Real Property No. 465
Child Care Center



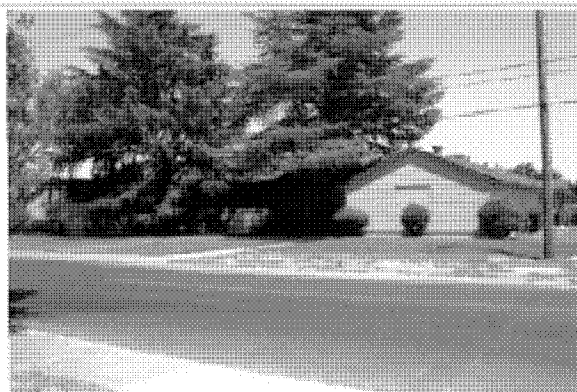
Resource No. 16006, Real Property No. 118
Environmental Health



Resource No. 16007, Real Property No. 127
Correctional Facility



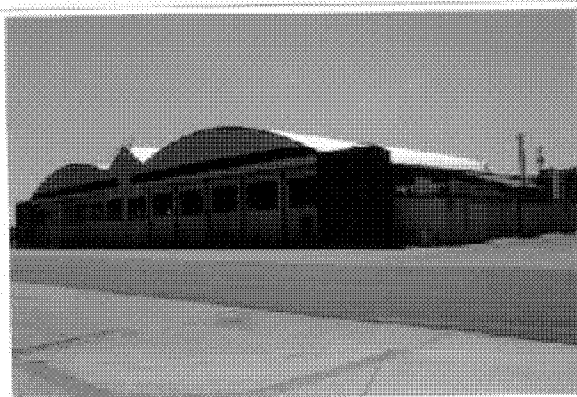
Resource No. 16008, Real Property No. 115
DPI



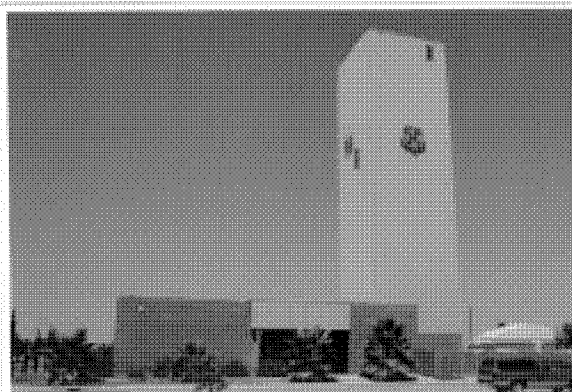
Resource No. 16009, Real Property No. 45
Base Supply Administration



Resource No. 16010, Real Property No. 42
Security Police Central Control



Resource No. 16011, Real Property No. 51
Flyaway Kit Warehouse



Resource No. 16012, Real Property No. 1248
Survival Equipment Shop



Resource No. 16013, Real Property No. 54
Logistics Facility Departmental Operations



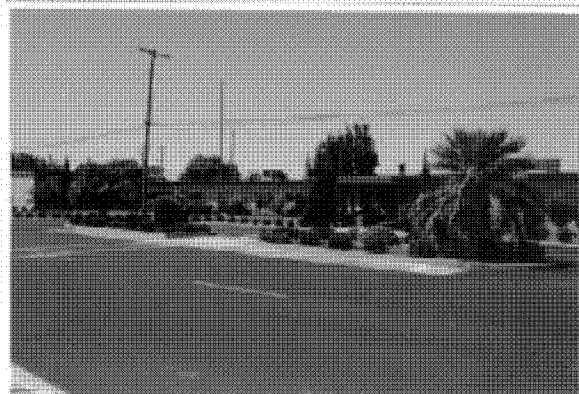
Resource No. 16014, Real Property No. 1260
Jet Engine Maintenance Shop



Resource No. 16015, Real Property No. 1350
Maintenance Hangar



Resource No. 16016, Real Property No. 531
Morale Welfare and Recreation Supply



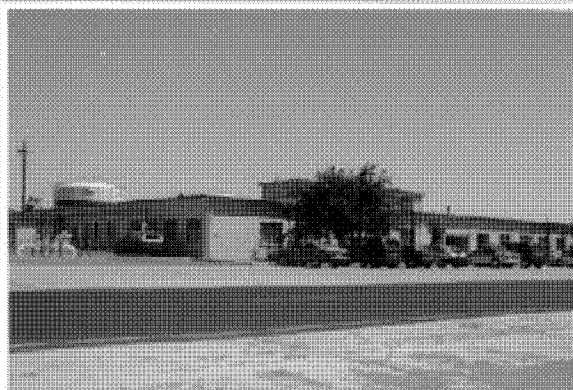
Resource No. 16017, Real Property No. 1230
Wing Headquarters



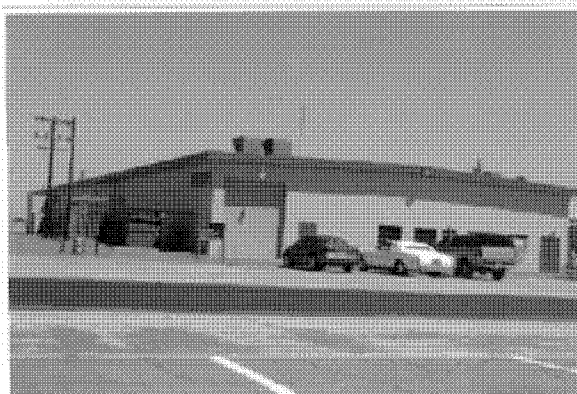
Resource No. 16018, Real Property No. 1340
Base Operations



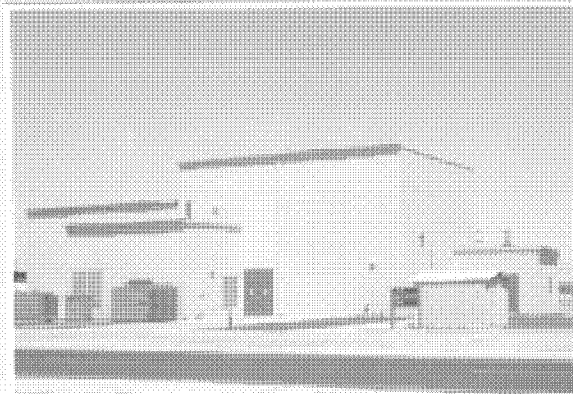
Resource No. 16019, Real Property No. 1344
Fire Station



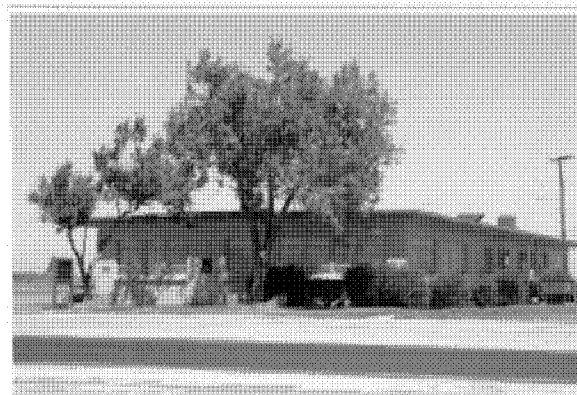
Resource No. 16020, Real Property No. 1335
Avionics Shop



Resource No. 16021, Real Property No. 1333
Flight Simulator Training



Resource No. 16022, Real Property No. 1332
Flight Simulator Training



Resource No. 16023, Real Property No. 1330
Communications Facility



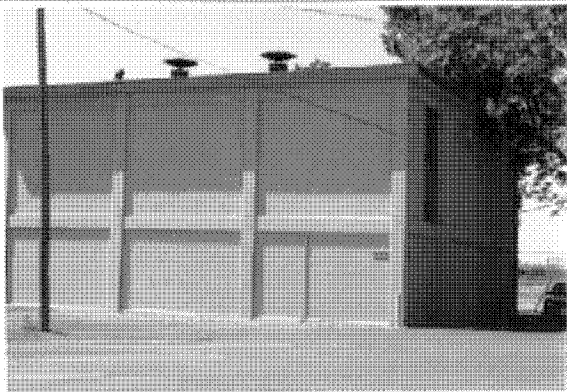
Resource No. 16024, Real Property No. 1323
Aircraft Support Equipment Storage Facility



Resource No. 16025, Real Property No. 1325
Aircraft Support Equipment Storage Facility



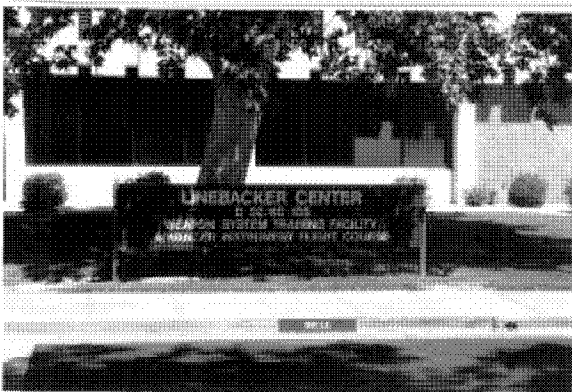
Resource No. 16027, Real Property No. 1214
Base Personnel Office



Resource No. 16028, Real Property No. 1210
Heating Facility Building



Resource No. 16029, Real Property No. 1131
Visiting Officer's Quarters



Resource No. 16030, Real Property No. 175
Flight Simulator Training



Resource No. 16031, Real Property No. 1200
Base Engineering Administration



Resource No. 16032, Real Property No. 1186
Base Engineer Hospital Maintenance Shop



Resource No. 16033, Real Property No. 1182
Composite Medical Facility



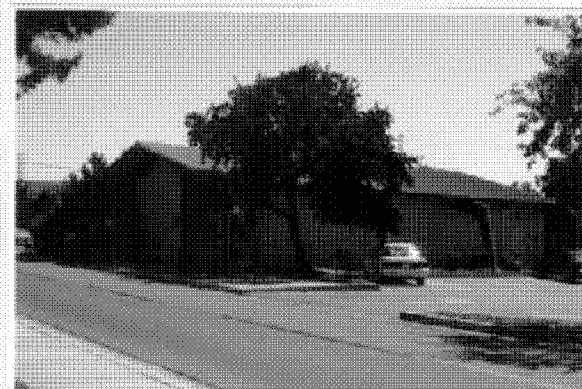
Resource No. 16034, Real Property No. 1015
Flight Training Classroom



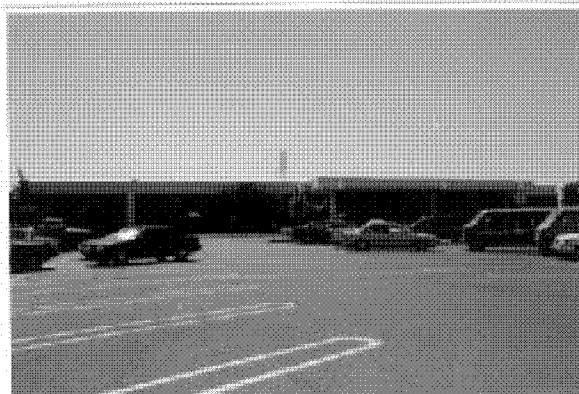
Resource No. 16035, Real Property No. 1038
Chapel Center



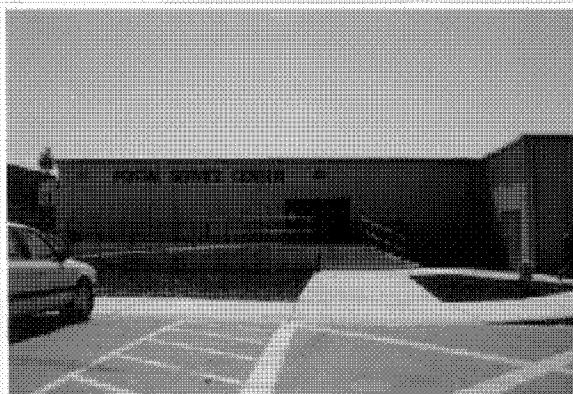
Resource No. 16036, Real Property No. 789
Bowling Center



Resource No. 16037, Real Property No. 748
Thrift Shop



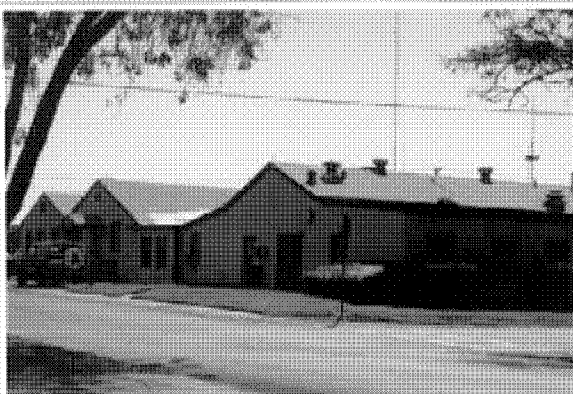
Resource No. 16038, Real Property No. 759
Exchange Sales Store



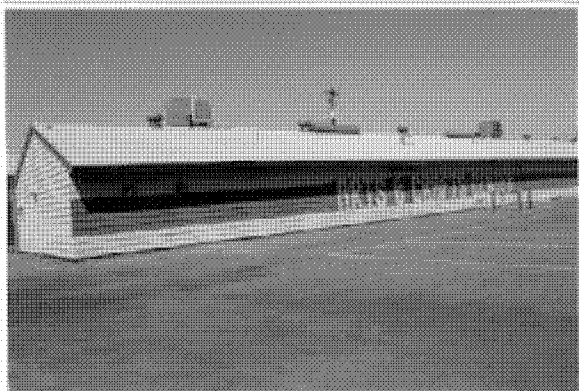
Resource No. 16039, Real Property No. 752
Postal Office Center



Resource No. 16040, Real Property No. 765
Commissary Store



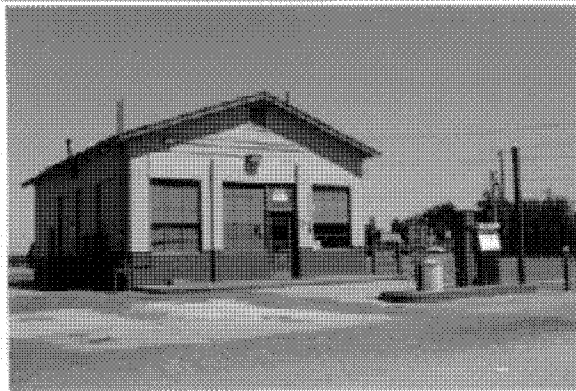
Resource No. 16041, Real Property No. 545
Security Police Operations



Resource No. 16042, Real Property No. 551
Miscellaneous Recreation Building



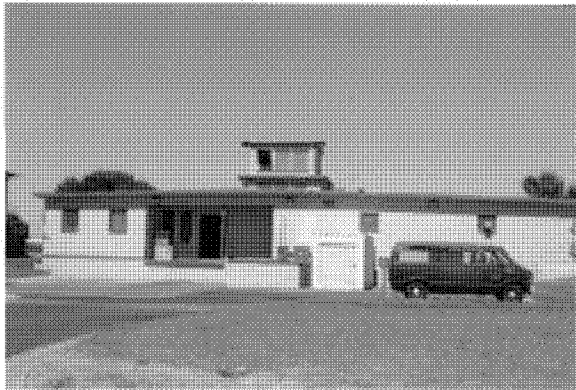
Resource No. 16043, Real Property No. 871
Gymnasium



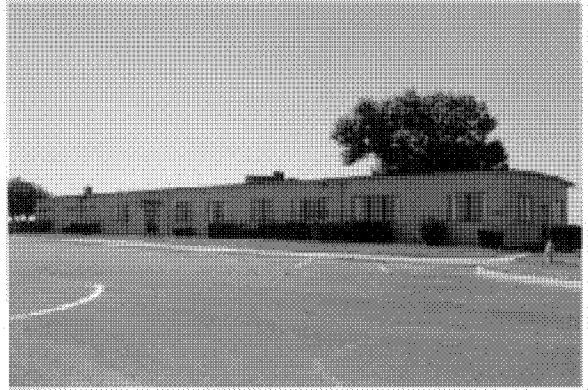
Resource No. 16044, Real Property No. 65
Vehicle Filling Station



Resource No. 16045, Real Property No. 1360
Warehouse Supply and Equipment Base



Resource No. 16046, Real Property No. 1213
Squadron Operations



Resource No. 16047, Real Property No. 1315
Squadron Operations



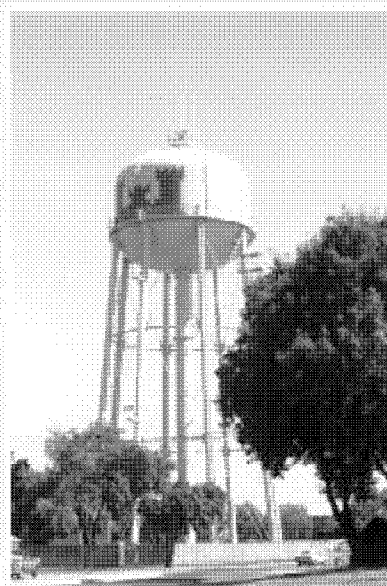
Resource No. 16048, Real Property No. 782
Security Police Identification Control



Resource No. 16049, Real Property No. 781
Traffic Checkhouse



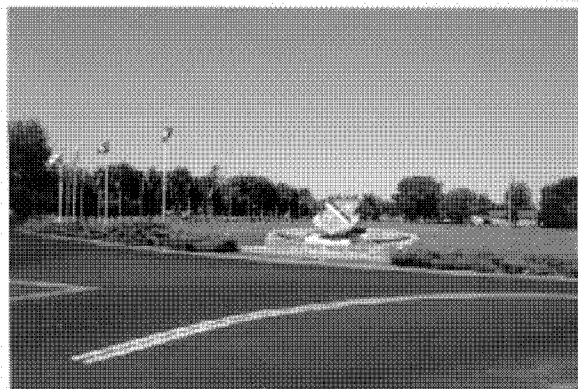
Resource No. 16050, Real Property No. 786
Base Theater



Resource No. 16052, Real Property No. 706
Water Tank Storage



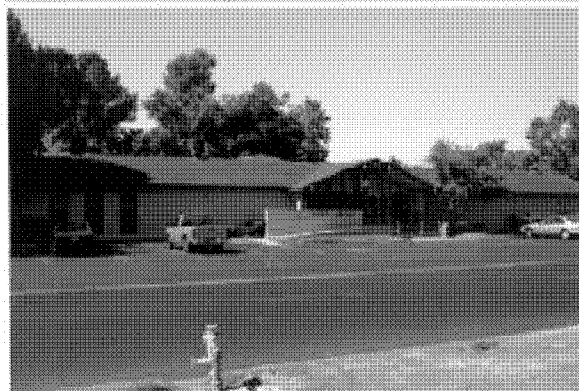
Resource No. 16053, Real Property No. (none)
Alert Vehicle Parking



Resource No. 16054, Real Property No. 455
Monuments/Memorial



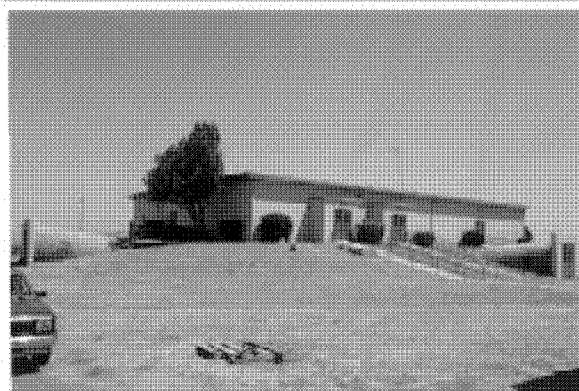
Resource No. 16055, Real Property No. 411
Law Center



Resource No. 16056, Real Property No. 422
Library Recreation



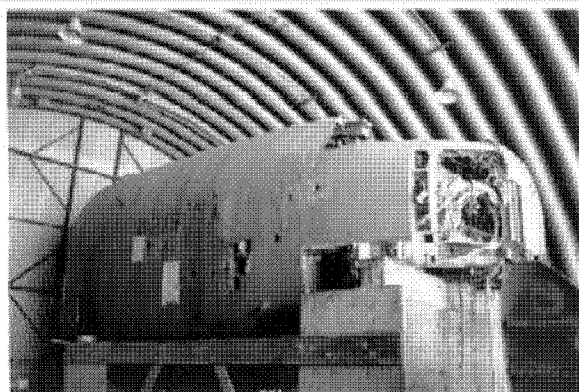
Resource No. 16057, Real Property No. 425
Branch Exchange



Resource No. 16058, Real Property No. 1582
Crew Readiness



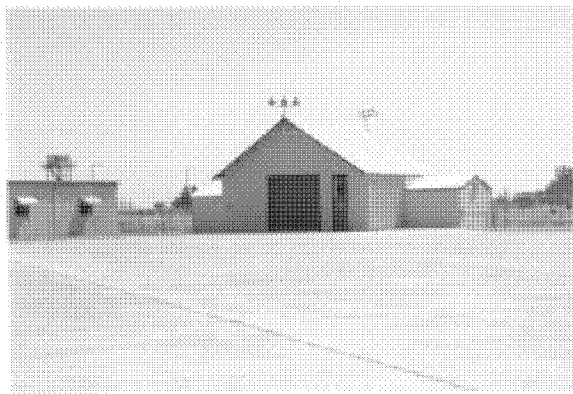
Resource No. 16059, Real Property No. 1560
Crew Readiness



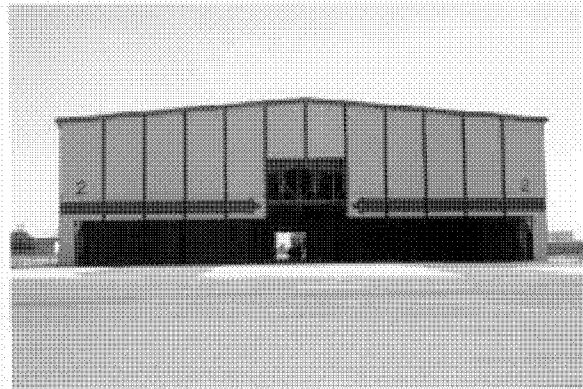
Resource No. 16060, Real Property No. 1541
Museum Building



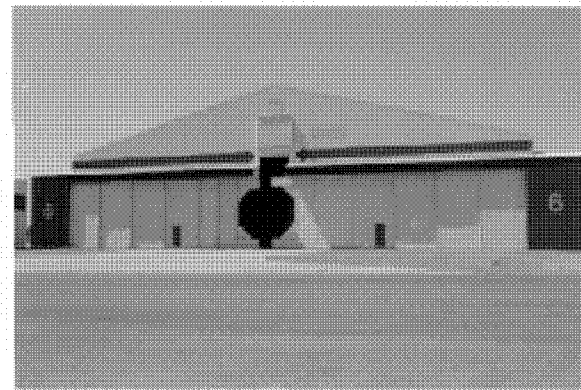
Resource No. 16061, Real Property No. 1550
Weapons and Release System Shop



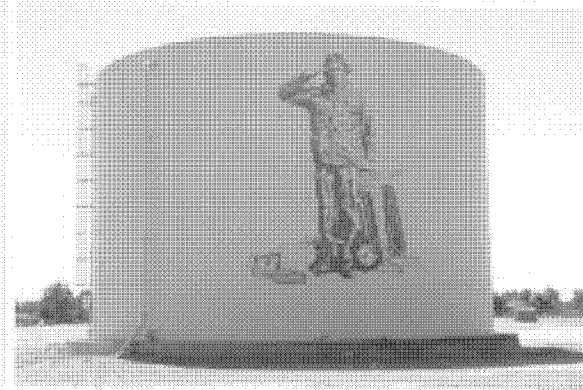
Resource No. 16062, Real Property No. 1555
Aircraft Weapons Overhaul Depot Shop



Resource No. 16064, Real Property No. 1529
Aircraft Corrosion Control



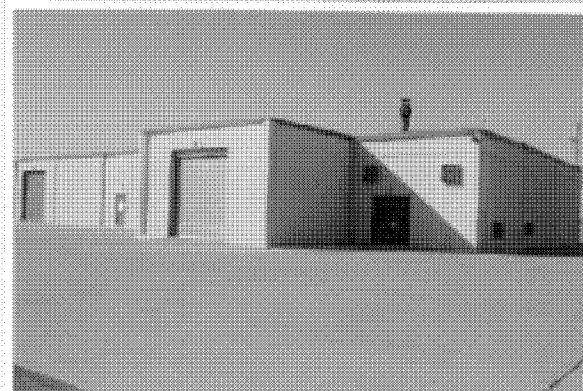
Resource No. 16065, Real Property No. 1353
Medium Aircraft Maintenance Dock



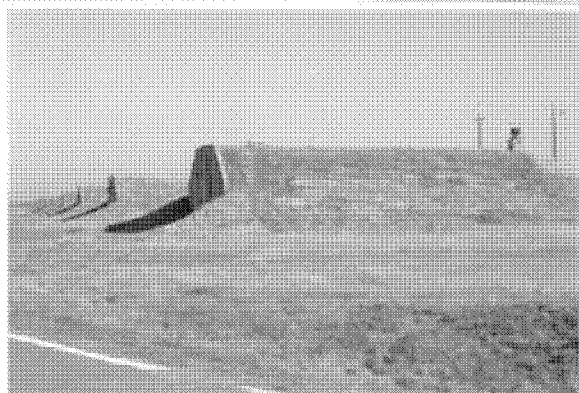
Resource No. 16066, Real Property No. 1346
Fire Protection Water Storage



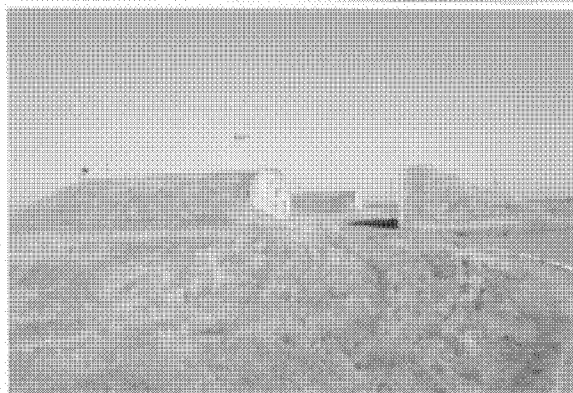
Resource No. 16067, Real Property No. 1319
Aircraft Maintenance Organizational Shop



Resource No. 16068, Real Property No. 1709
Surveillance and Inspection Shop



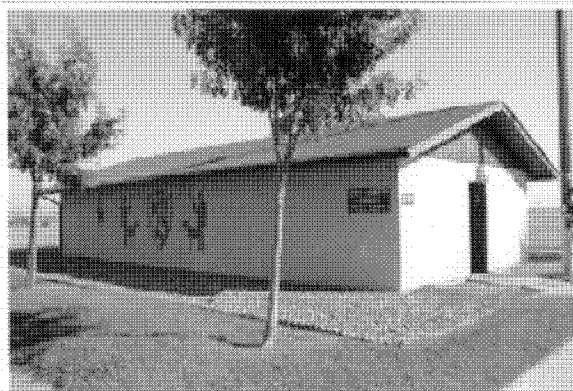
Resource No. 16069, Real Property No. 1809
Storage Igloo



Resource No. 16070, Real Property No. 1812
Storage Igloo



Resource No. 16071, Real Property No. 1813
Storage Igloo



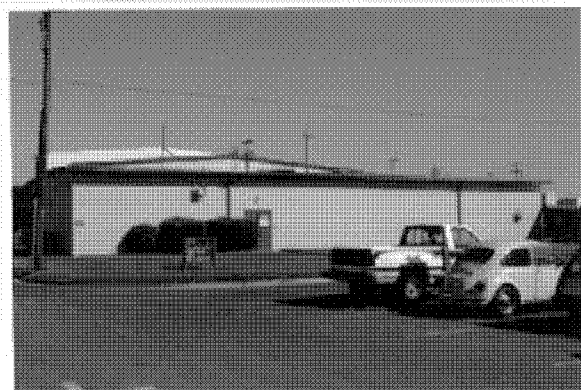
Resource No. 16073, Real Property No. 1711
Security Police Canine Kennel



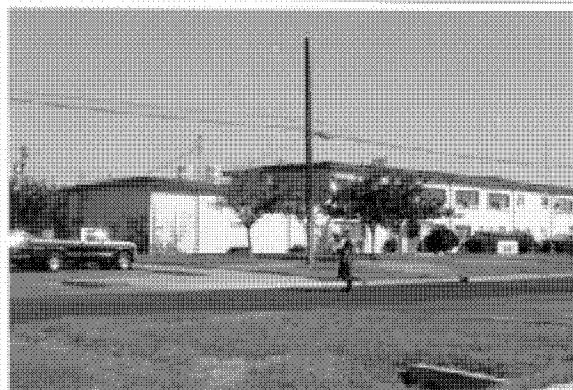
Resource No. 16074, Real Property No. 950
Test Cell



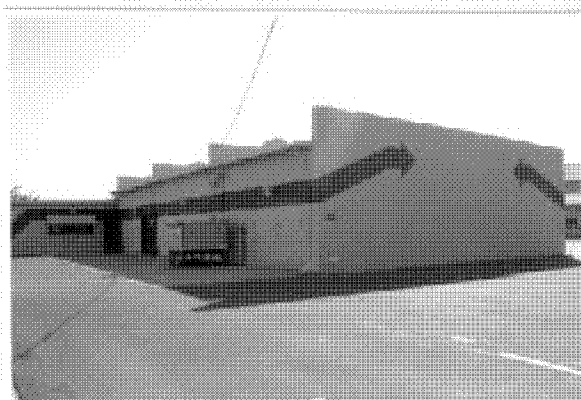
Resource No. 16075, Real Property No. 956
Test Cell



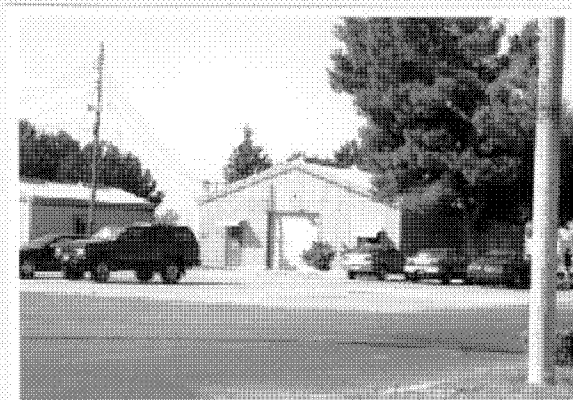
Resource No. 16076, Real Property No. 1532
PME Lab



Resource No. 16077, Real Property No. 1540
Weapons System Maintenance Management
Facility



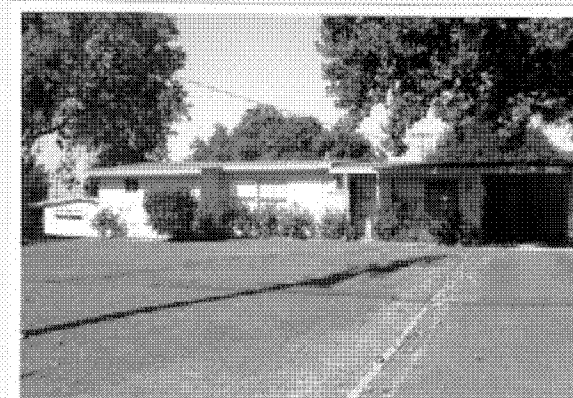
Resource No. 16078, Real Property No. 1545
Munitions Maintenance Administration



Resource No. 16079, Real Property No. 1562
Weapons Systems Maintenance Management
Facility



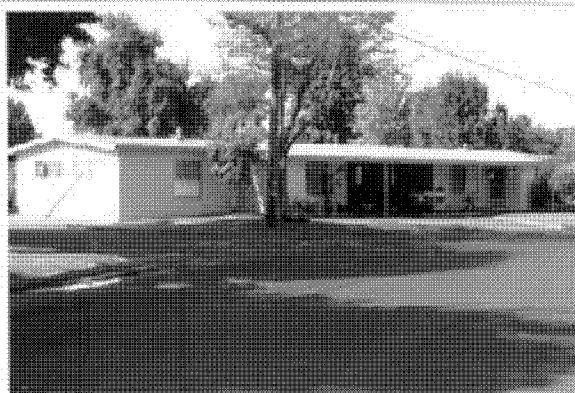
Resource No. 16080, Real Property No. (none)
"Castle Gardens" Sign



Resource No. 16081, Real Property No. 227
Castle Gardens Single Family House



Resource No. 16082, Real Property No. 7
Castle Gardens Commander House



Resource No. 16083, Real Property No. 45
Castle Gardens Duplex



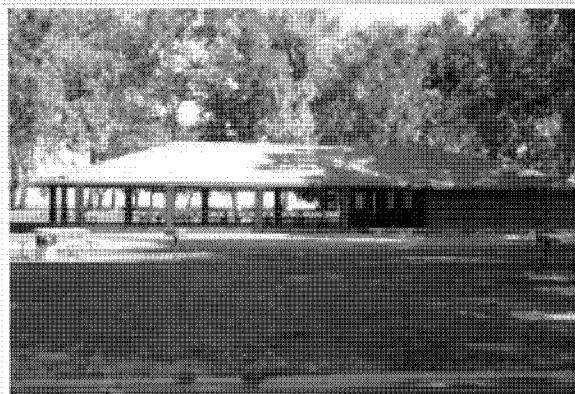
Resource No. 16084, Real Property No. (none)
"Castle Vista" Sign



Resource No. 16085, Real Property No. 2191
Castle Vista Duplex



Resource No. 16086, Real Property No. 680
Youth Center



Resource No. 16087, Real Property No. (none)
Shelter House - Off Base Park

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT CASTLE AFB

Resource Number: 16058

Property Description: Crew Readiness Facility housed B-52 bomber pilots and facilitated rapid deployment of bomber crews to their planes

Associated Property: 1576, 1586, 1596

Non-Inventoried Association:

Sub-installation:

Address: none

Base Map Date:

Base Map Building Number: 1582

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Bomber Alert Facility

Statement of Significance: The facility was designed and used for crew readiness allowing bomber crews quick access to planes. The buildings design conveys this use through the presence of ramps and facilities that supported personnel. The role of alert facilities is directly related to the Cold War as nuclear bombers needed immediate take-off to prevent destruction in the event of attack.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 4

Total Score for Priority Matrix: 22

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Building is being leased to private interest, recommend HABS or other documentation before further change or degradation takes place.

Importance: Exceptional

Eligibility: Eligible

Height: 20
Square Footage: 19050
Original Planned Duration: Permanent
Existing Use: vacant
Other Use/Dates: crew readiness
Comments on Use:
Primary Building Materials: Poured Concrete
Character Defining Features: Massing, ramps to apron, support facilities - tower, security gate and interior features - (bedrooms, briefing room, kitchen, etc.)

Resource Number: 16059

Property Description: Fighter Alert Facility containing aircraft docks and facility for pilots and crew readiness

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: none

Base Map Date:

Base Map Building Number: 1560

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Fighter Alert Facility

Statement of Significance: The Facility housed fighter aircraft and crews to be dispatched in the event of attack by enemy bombers. Rapid interception of enemy nuclear attack is a central Cold War strategy.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	4
Total Score for Priority Matrix:	22
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Building is currently vacant and will soon be turned over to civilian interests. Recommend HABS or other documentation before alteration or degradation occurs

Importance: Exceptional

Eligibility Eligible

Height: 30

Square Footage: 21872

Original Planned Duration: Permanent

Existing Use: vacant

Other Use/Dates:

Comments on Use:

Primary Building Materials: Steel Frame

Character Defining Features: aircraft bays, crew support facilities

Resource Number: 16088

Property Description: Drawing Flat Files, maps, aerial photographs
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date:
Base Map Building Number: inside 1200

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Documentary Collection

Statement of Significance: Files house documentation of most buildings on base, including significant structures.

Cold War Relationship-Nat'l. Recognition: 2
Theme Relationship: 2
Temporal Phase Relationship: 1
Level of Importance: 1
Percent Historic Fabric: 4
Severity of Threats: 3
Total Score for Priority Matrix: 13
Comments on Threats: It is unknown what will happen to the files after base closure.

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: Yes
Preservation/Conservation/Repair: Yes
Comments on Resource Management:

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: varies
Period of Association: drawings are associated with all periods

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Castle AFB, and to provide maps and other research materials for this study.

SSgt William Redilla
Wing Historian
93rd History Office
Castle AFB, California 95342
(209) 726-2991

Rosemary Parker
Real Property Officer
93rd CES/CERR
Castle AFB, California 95342
(209) 726-4750

H. L. Gilbert
Civil Engineering Drawing Room
93rd CES/CCQ
Castle AFB, California 95342
(209) 726-4816

INFORMAL INTERVIEWS

The following person was informally interviewed by the field team during the base visit. He was identified as someone possessing extensive knowledge of Castle AFB history and Cold War context.

SSgt William Redilla, 93rd Wing Historian, August 15-22, 1994

KNOWLEDGEABLE INDIVIDUALS

The following individuals were identified during the investigations as people with some knowledge of Castle AFB history during the Cold War. They were either unavailable during the investigation or possess much more information than could be documented during this preliminary reconnaissance.

Edwin C. Range
Works part-time for Museum
(209) 722-7174

Richard A. Rodrigues
Writing a history of Castle AFB
(217) 328-4129

Pat McNally
Merced Sun Star Daily Newspaper
(209) 384-3881

Helen McCarthy
Community Relations Officer
(209) 726-4816

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-5: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT DAVIS-MONTHAN AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Patience Elizabeth Patterson
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Davis-Monthan Air Force Base was inventoried by Patience E. Patterson and David P. Staley from November 1 to November 8, 1994 as part of the Air Combat Command Cold War study under the ongoing Department of Defense Legacy Program. Information was gathered at the base from the Real Property Office, Drafting Office, Environmental Office, Community Planning Office, Public Affairs Office, and History Office.

An initial reconnaissance of the base was accomplished with Mrs. Gwen Lisa, the Natural and Cultural Resource Officer for the base. This initial orientation enabled the team to become familiar with the base and to determine what property types were extant on base. It also allowed for the determination of specific resources which would likely be relevant to the Cold War study. Photographs were taken of resources that were representative of the different types and styles of facilities on the base.

From the information gathered and the on-site inspection, four buildings and two sources of documents were selected for further documentation and evaluated as important within the base's Cold War context. Two of these resources relate to Operations and Support Installations, three are Combat Weapons and Support Systems, and one is a Training Facility. Contextual Phases II through IV of the Cold War era, as described in the historic context and methodology document written for this study (Lewis et al. 1995), are represented.

One of the evaluated facilities is a missile installation that has been converted into a museum and is currently a National Historic Landmark. Continued stewardship is recommended for this facility. National Register of Historic Places eligibility, further documentation, and stewardship are recommended for the Bomber/Tanker Alert Facility, the Fighter Alert Facility, and the Ground Launched Cruise Missile Training Facility. Further documentation, stewardship, and conservation are recommended for the two Documentary Collections evaluated. There are also

two resources that, although they were not evaluated, are recommended for further work due to their importance to the base's history outside of the Cold War context.

LIST OF ACRONYMS

AAF	- Army Air Force
ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
AFB	- Air Force Base
AGE	- Air Ground Equipment
AMARC	- Aerospace Maintenance and Regeneration Center
ANG	- Air National Guard
AREFS	- Air Refueling Squadron
ARS	- Air Rescue Squadron
BMG	- Bombardment Group
BMW	- Bombardment Wing
CAT	- Combat Arms Training
CCTS	- Combat Crew Training School
CCTW	- Combat Crew Training Wing
CEBMCO	- Corps of Engineers Ballistic Missile Contracting Office
CES	- Civil Engineering Squadron
CIS	- Commonwealth of Independent States
CRS	- Component Repair Squadron
DoD	- Department of Defense
ECS	- Electronic Combat Squadron
EMS	- Electronic Maintenance Squadron
FAA	- Federal Aviation Administration
FIG	- Fighter Interceptor Group
FIS	- Fighter Interceptor Squadron
FS	- Fighter Squadron
FTD	- Field Training Detachment
GLCM	- Ground Launched Cruise Missile
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
INF	- Intermediate-range Nuclear Forces
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NATO	- North Atlantic Treaty Organization
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants

LIST OF ACRONYMS (Continued)

SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Office
SMD	- Strategic Missile Division
SMS	- Strategic Missile Squadron
SMW	- Strategic Missile Wing
SRW	- Strategic Reconnaissance Wing
START	- Strategic Arms Reduction Talks
SW	- Strategic Wing
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TEL	- Transporter-Erector Launchers
TFW	- Tactical Fighter Wing
TMTS	- Tactical Missile Training Squadron
USAF	- United States Air Force
WRSK	- War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Intermediate Range Nuclear Forces Treaty - a treaty between the United States and the Soviet Union to eliminate intermediate-range and short-range nuclear missiles. This treaty permanently bans all United States and Soviet Union ground-launched missiles with a range of between 500 and 5,000 kilometers (300 - 3,400 miles). This treaty was ratified and went into effect on June 1, 1988 at the Moscow Summit.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

GLOSSARY (Continued)

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	iii
GLOSSARY	v
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	5
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	14
3.1 BASE HISTORY AND COLD WAR CONTEXT	14
3.2 BASE DEVELOPMENT	25
4.0 METHODOLOGY	31
4.1 INVENTORY	31
4.2 EVALUATION OF IMPORTANT RESOURCES	32
4.2.1 Documentation	32
4.2.2 Evaluation of Importance	32
4.2.2.1 Cold War Context	32
4.2.2.2 NRHP Criteria	33
4.2.2.3 Exceptional Importance	34
4.2.3 Evaluation of Integrity	34
4.2.4 Priority Matrix	35
4.2.5 Resource Organization	36
4.3 BASE SPECIFIC METHODS	36
5.0 RECONNAISSANCE INVENTORY RESULTS	38
6.0 EVALUATION RESULTS	39
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	39
6.1.1 Documentation	39
6.1.1.1 Documentary Collection	39
6.1.1.2 Documentary Collection	41
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	41
6.2.1 Alert Facilities	41

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1.1 Bomber/Tanker Alert Facility.....	41
6.2.1.2 Fighter Alert Facility.....	42
6.2.2 Missiles.....	43
6.2.2.1 Missile Launch Complex.....	43
6.3 MATERIEL DEVELOPMENT FACILITIES	44
6.4 TRAINING FACILITIES.....	45
6.4.1 Missile Training	45
6.4.1.1 GLCM Training Facility.....	45
6.5 INTELLIGENCE FACILITIES	45
7.0 UNDOCUMENTED RESOURCES	46
8.0 FUTURE THREATS TO RESOURCES	48
9.0 PRELIMINARY RECOMMENDATIONS	49
9.1 NRHP ELIGIBILITY	49
9.1.1 Evaluation and Determination of NRHP Eligibility.....	49
9.1.2 Implications of NRHP Eligibility	51
9.2 EVALUATED RESOURCE RECOMMENDATIONS.....	53
9.2.1 Documentary Collection	53
9.2.2 Documentary Collection	55
9.2.3 Bomber/Tanker Alert Facility.....	55
9.2.4 Fighter Alert Facility.....	55
9.2.5 Missile Launch Complex	56
9.2.6 GLCM Training Facility	56
10.0 REFERENCES CITED	57
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: DETAILED RESOURCE INVENTORY	
APPENDIX F: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Davis-Monthan Air Force Base	6
Figure 2.2 Davis-Monthan Air Force Base Layout	7
Figure 2.3 Standard Tactical Air Command Base Layout	9
Figure 2.4 Davis-Monthan Air Force Base Land Use Diagram	11
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	12
Figure 3.1 Davis-Monthan Air Force Base, 1950-1960	26
Figure 3.2 Davis-Monthan Air Force Base, 1960-1970	27
Figure 3.3 Davis-Monthan Air Force Base, 1970-1980	28
Figure 3.4 Davis-Monthan Air Force Base, 1980-1990	30

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	40
Table 6.2 Evaluated Resource Prioritization by Priority Rank	40
Table 9.1 Recommendations for Evaluated Resources	54

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

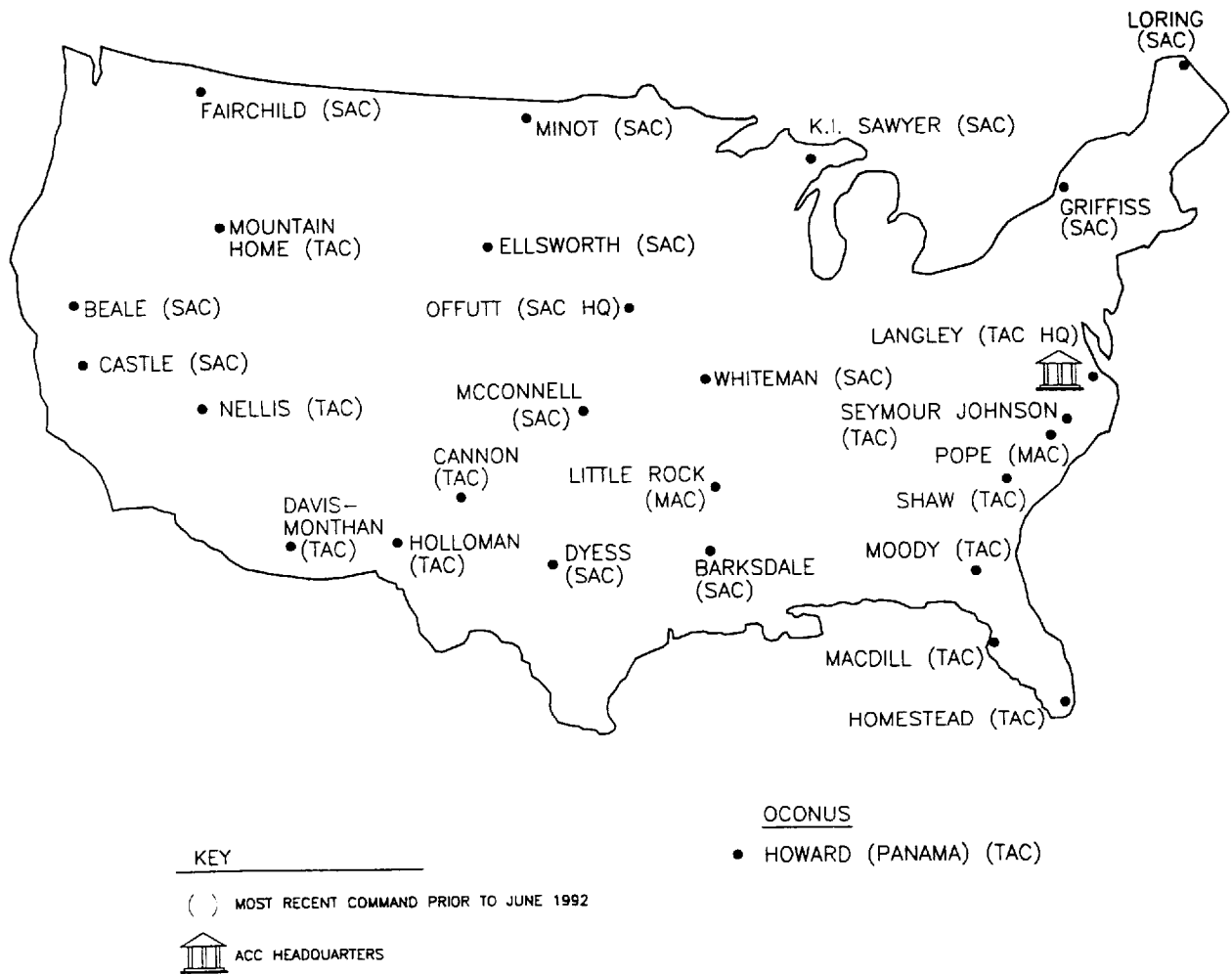
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\DAVIS\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Davis-Monthan Air Force Base (AFB). Davis-Monthan AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The 355th Wing is the host unit at Davis-Monthan AFB. The wing is composed of six groups, four located on the base and two geographically separated units. The two separated units are the 3rd Air Support Group, Fort Hood, Texas and the 1st Air Support Group, Fort Lewis, Washington. The four groups on the base are: the 355th Operations Group with seven squadrons, the 355th Logistics Group with six squadrons, the 355th Support Group with five squadrons, and the 355th Medical Group (Davis-Monthan AFB 1993:17-35). The 355th Operations Group consists of the 41st and the 43rd Electronic Combat Squadrons (ECS), which provide command, control, and communications countermeasure capability using the EC-130H aircraft. The squadrons' combat mission is to support tactical air and ground operations by confusing the enemy's defenses and disrupting its command, control, and communications capabilities (Davis-Monthan AFB 1993:20). The 355th Operations Group also consists of four fighter squadrons (FS) flying the A/OA-10 *Thunderbolt II* attack aircraft.

The 355th Wing Treaty Compliance Office is the headquarters for administration and compliance activities associated with the Intermediate-range Nuclear Forces (INF) Treaty. The office also handles START issues and other potential international treaties. The office handles all Commonwealth of Independent States (CIS) (formerly the Soviet Union) inspections relating to the above mentioned treaties. CIS inspectors have performed more than 20 inspections at Davis-Monthan AFB to ensure the elimination of the Ground Launched Cruise Missile (GLCM) (completed in May 1991) and the destruction of 350 B-52 *Stratofortress* bombers. CIS inspections will continue at Davis-Monthan AFB through the year 2001 (Davis-Monthan AFB 1993:34).

Among the base's tenant units are the 12th Air Force Headquarters (United States Air Force [USAF] 1993a), the Aerospace Maintenance and Regeneration Center (AMARC) (USAF 1993b),

the 305th Air Rescue Squadron (ARS) (USAF 1994a), Detachment 1 of the 120th Fighter Interceptor Group (FIG), and the 162nd Air National Guard (ANG). Other federal agencies are also tenants on Davis-Monthan AFB. These tenants include the Federal Aviation Administration (FAA), the U.S. Customs Service Air Service Branch, the U.S. Army Corps of Engineers, the Federal Law Enforcement Training Center, and a detachment of the Naval Air Systems Command (Davis-Monthan AFB 1993:36-43).

2.2 GEOGRAPHIC DESCRIPTION

Davis-Monthan AFB is located in southern Arizona in Pima County (Figure 2.1). The city of Tucson, of which the base is a part, lies to the north and west of the base, and Interstate 10 is directly to the south of the base. The Davis-Monthan AFB/Tucson area lies in a valley at an elevation of approximately 2,400 ft (731 m) above mean sea level, with the Santa Catalina Mountains to the north, the Rincon Mountains to the east, the Santa Rita Mountains to the south, and the Tucson Mountains to the west. The area is located in the Basin and Range Physiographic Province, which is characterized by isolated ranges of mountains and a desert environment. The average high and low temperatures are 81.7° and 54.2° F respectively. The base is approximately 10,763 acres (4,355 ha) in size (Davis-Monthan AFB 1993; Department of Defense [DoD] 1982).

2.3 CURRENT BASE LAYOUT

Davis-Monthan AFB's layout (Figure 2.2) consists of a long, narrow area oriented northwest to southeast, with three primary areas of development. At the northwestern end is the main base development, in the middle are the AMARC facilities, and at the southeastern end are the weapons storage and the Combat Arms Training (CAT) areas. The runway extends from the extreme northwestern corner to the southeast along the main base development to the AMARC area. The runway forms the southwestern boundary of these two sections of the base. Aside from the control tower, which is found just west of the center of the runway, all base development is located east of the runway.

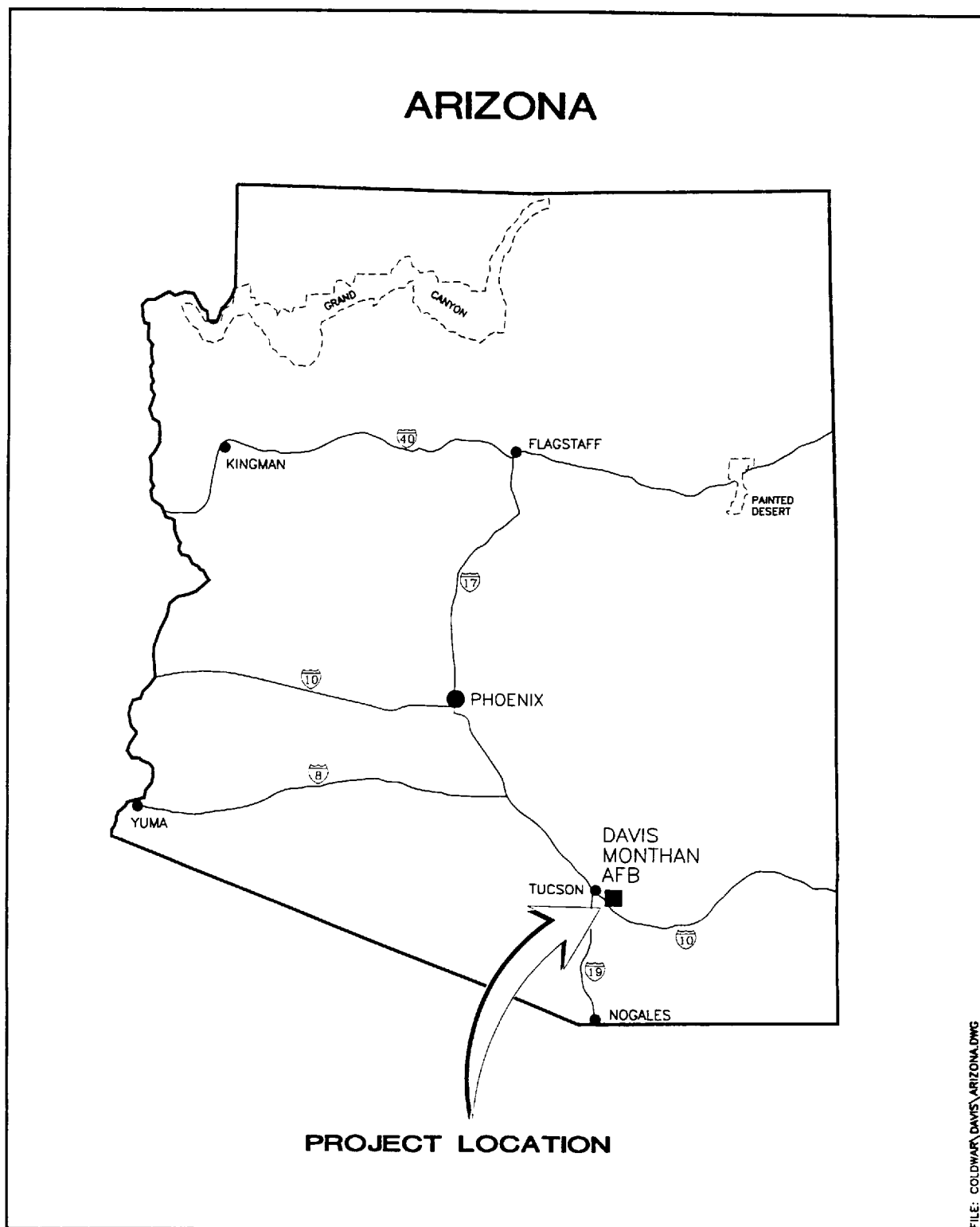


Figure 2.1 Location of Davis-Monthan Air Force Base.

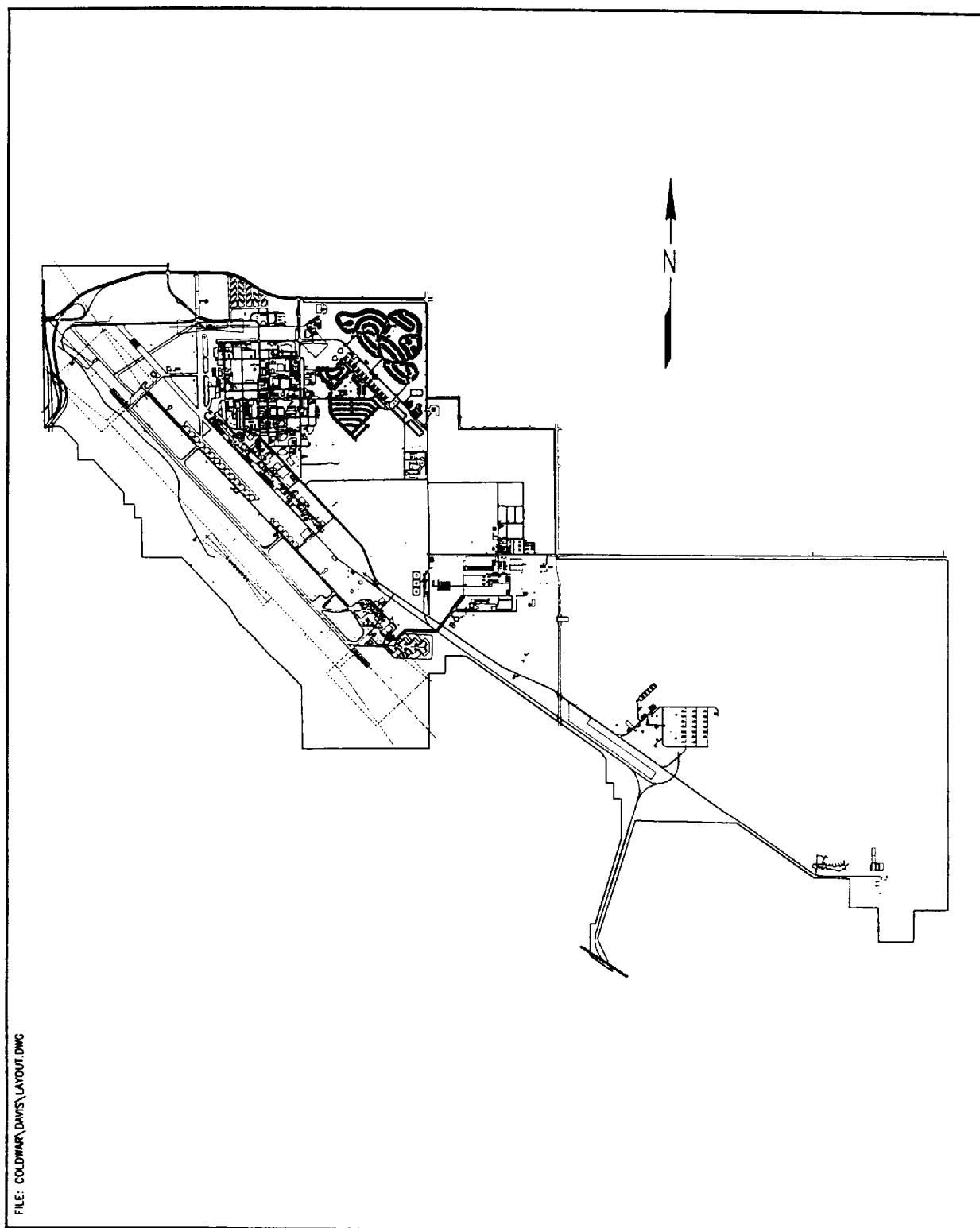


Figure 2.2 Davis-Monthan Air Force Base Layout.

The main base development lies adjacent to the runway and extends northeast to the base boundary. The AMARC area, at the southeastern end of the runway, lies adjacent to the bomber/tanker alert apron. Aircraft access the AMARC parking aprons by going through the alert apron and along a narrow taxiway. The AMARC area includes large areas of natural ground surface for parking aircraft, and thus comprises a major portion of the base. The weapons storage area is located adjacent to the southwestern boundary of the southeastern portion of the base. The CAT area, located at the extreme southeastern end of the base, is also adjacent to the southwestern boundary. These areas are surrounded by open space to allow for explosive and weapon storage buffer zones.

The Davis-Monthan AFB layout corresponds only generally to the standard TAC base layout (Figure 2.3). Similarities include the location of almost all base development on one side of the runway and the position of the weapons storage area away from the runway and main base development. Differences stem from Davis-Monthan AFB's use of three development areas that together extend far beyond the runway. Also, Davis-Monthan AFB has a bomber/tanker alert area, with facilities and a "christmas tree" parking apron, which are left over from the days when this base was under the jurisdiction of Strategic Air Command (SAC).

2.4 BASE LAND USE

The following is a list of standard TAC and SAC land use categories:

Alert Facility - provides for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

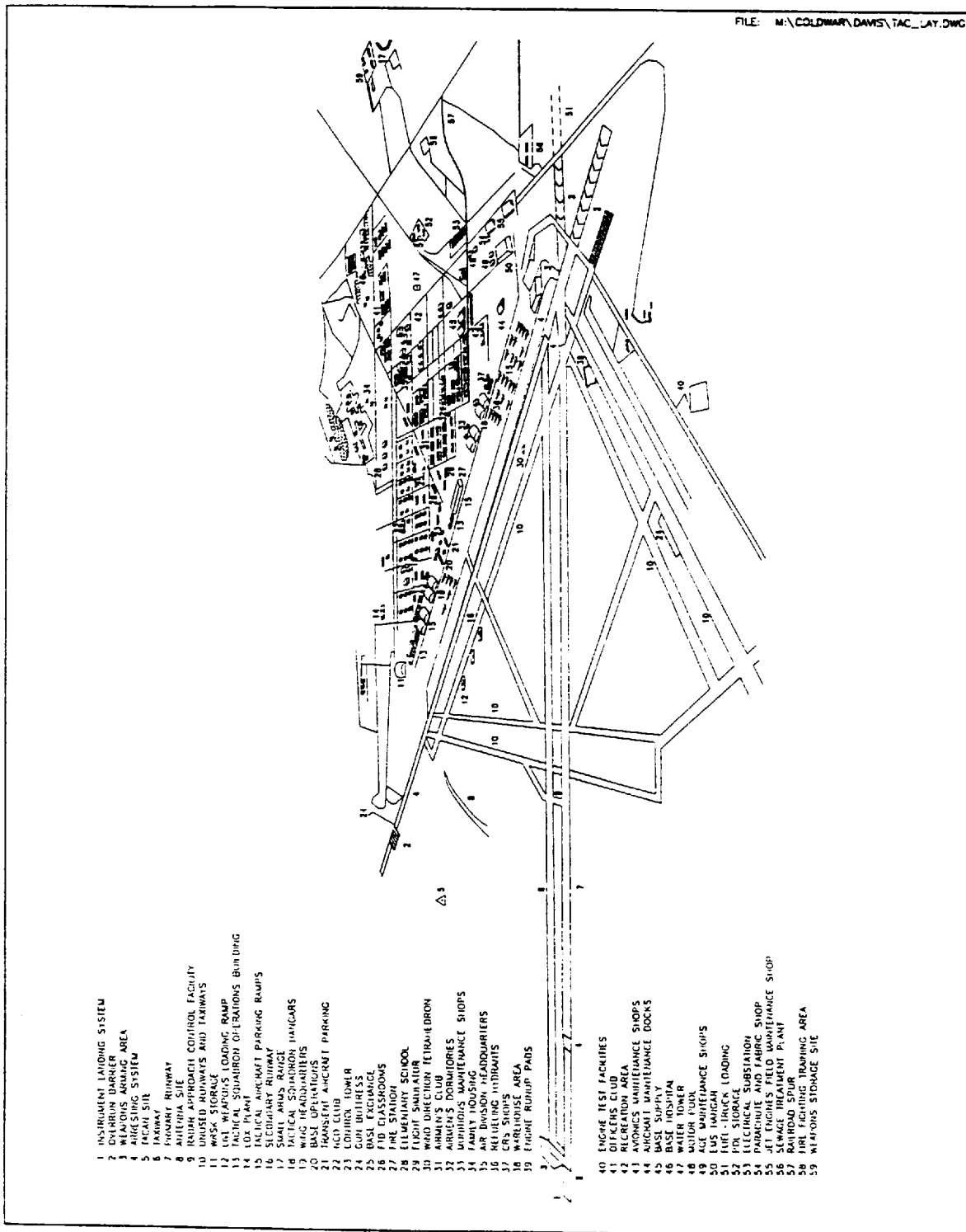


Figure 2.3 Standard Tactical Air Command Base Layout.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Open space areas occur on Davis-Monthan AFB southwest of the runway, near the weapons storage area, and surrounding the CAT area (Figure 2.4). The areas between the main base development and AMARC, and between AMARC and the weapons storage area, were originally open space but are now used by AMARC for aircraft and component storage.

Land use within the main base development at Davis-Monthan AFB is generally similar to that shown on the standard TAC base land use diagram (Figure 2.5). Mission and industrial areas are next to the runway. The central portion is a mix of base support, community, unaccompanied housing, and recreation areas, with headquarters facilities spread throughout this portion. Family housing is located farthest from the runway, against the northeastern base boundary.

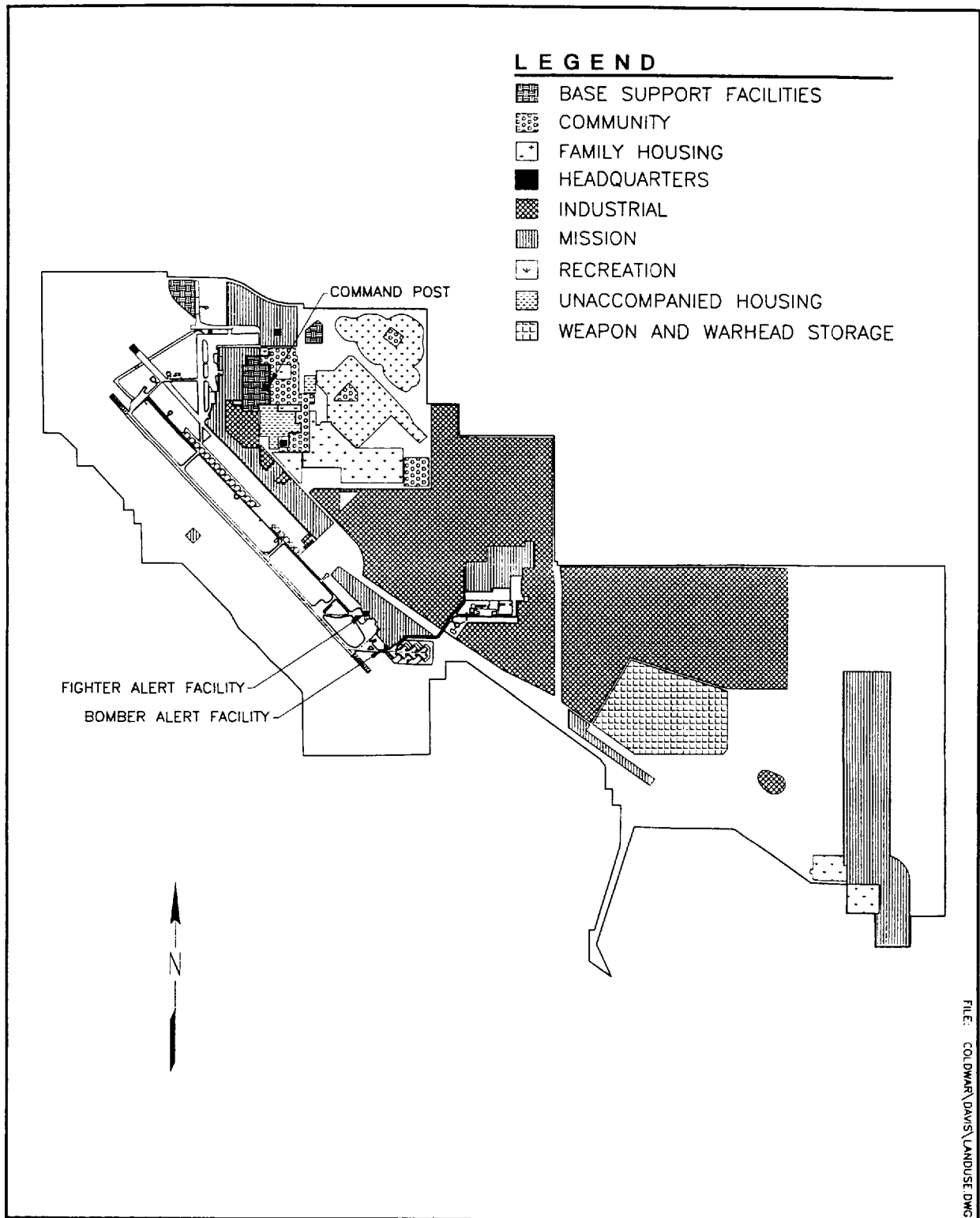


Figure 2.4 Davis-Monthan Air Force Base Land Use Diagram.

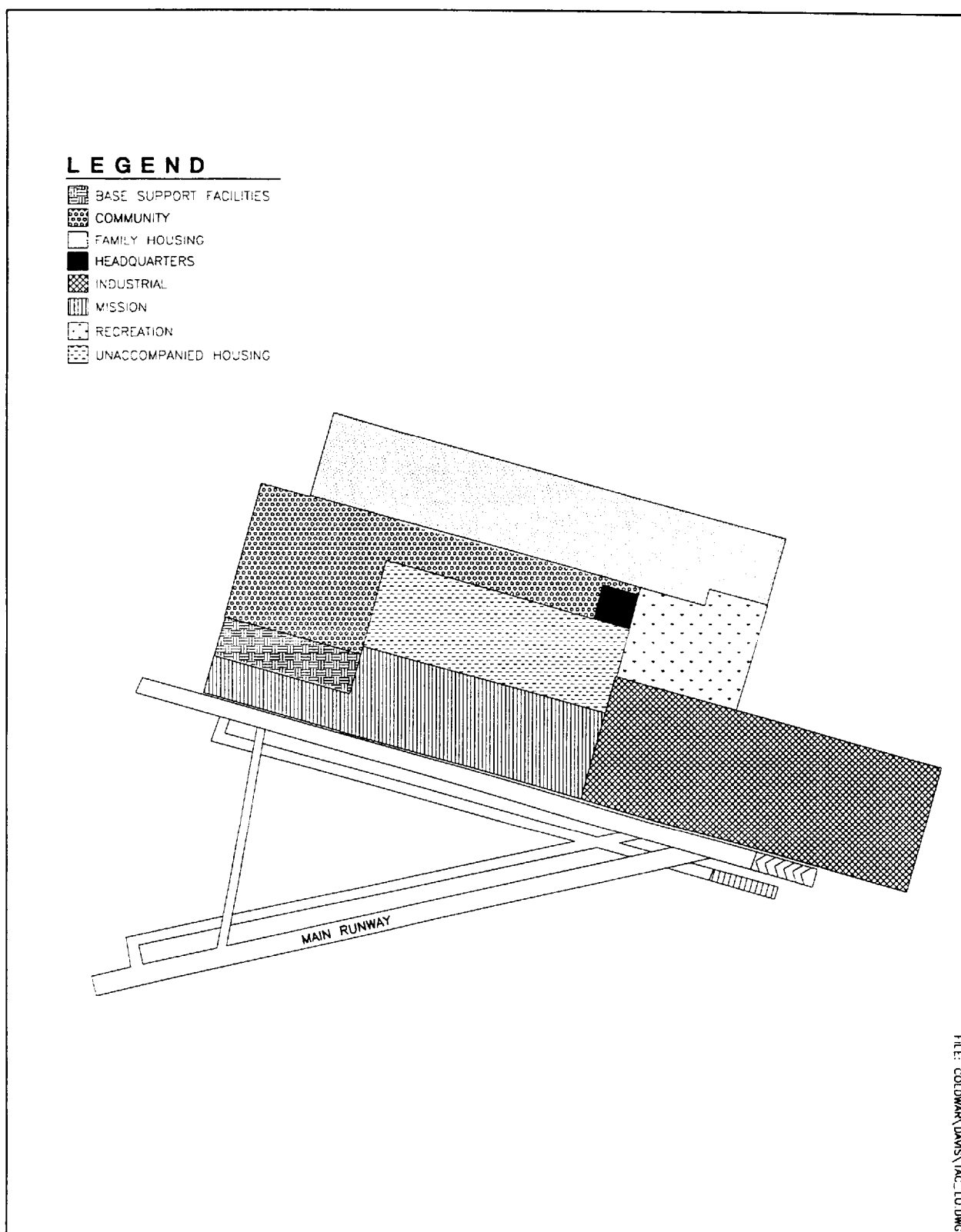


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

Differences in land use between the base and the standard diagram appear to arise from the base's history while under the jurisdiction of SAC and from the elongated layout of the base. One difference again is the presence of a bomber/tanker alert apron, facilities, and command post. Another is the presence of industrial, mission, weapon storage, and recreation facilities and areas past the end of the runway. It appears that the need for storage areas for the AMARC mission (marked as industrial areas on the diagram) and for open space buffer zones around the weapons storage and CAT areas necessitated this elongated and unusual layout.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Davis-Monthan AFB's history begins in 1925, when the United States Air Service sent SSgt Dewey Simpson to Tucson, Arizona, to establish an airport as a refueling and service stop for Army planes that were landing there with increasing frequency. Under his able management, the demands on the airport's services expanded, and a new and larger site for the airfield was sought. The tracts of land that ultimately were purchased were located to the southeast of the city and east of the Southern Pacific railroad tracks. Construction of the new airport was completed in late 1927. On September 23, 1927, Charles A. Lindbergh arrived in Tucson to dedicate what was the first municipal airport in the nation as Davis-Monthan Field (Myers 1982:17). The name honors two Tucson men, Lieutenant Samuel Howard Davis and Lieutenant Oscar Monthan. Davis was a World War I aviator killed in an aircraft accident in Florida on December 28, 1921. Monthan, who served as an aviator and advanced aeronautical engineer after the Armistice, was killed in the crash of a Martin B-2 bomber at Lake Field, Hawaii on March 27, 1924 (Myers 1982:17-22).

Full U.S. Army involvement with Davis-Monthan Field began in 1940, when the Aviation Committee of the Tucson Chamber of Commerce approached the War Department concerning the establishment of an Army air field in Tucson. As World War II continued in Europe, the Army began to seriously consider Tucson as the location of one of six new air bases the War Department had recommended (Myers 1982:23).

In 1941, the field was named Tucson Air Base and served as a training base for the mostly obsolete Douglas B-18 Bolo twin engine medium bomber. On December 1, 1941, the air base was rechristened Davis-Monthan Field (Myers 1982:27-31). In 1942, the 39th Bombardment Group (BMG) arrived and began training B-17 Flying Fortress and B-24 Liberator aircraft and

crews. Rapid growth of the Second Air Force, under which Davis-Monthan Field operated, led to an ambitious program of development on the base.

The 39th BMG was redesignated Combat Crew Training School (CCTS) on December 1, 1943. By year's end, there were 150 combat crews in training at Davis-Monthan Field. The pilots learned high altitude flying and steady bomb approaches, while navigators, radiomen, and gunners all practiced their duties (Myers 1982:41). By the end of 1944, Davis-Monthan Field was converting to a B-29 *Superfortress* training program (Myers 1982:44; USAF 1994b).

Toward the end of the war, Davis-Monthan Field had a German prisoner-of-war camp. The camp, with 135 German prisoners, was used only a short time and was discontinued on March 31, 1946. Davis-Monthan Field was also the site of one of three Separation Processing Centers for the Second Air Force. Separation processing of personnel taxed the base to its limits in September 1945, when there were 11,614 people staying on the base. The Separation Center was located in Hangar 8030, and over 300 people a day went through processing. When the center closed on November 30, 1945, it had processed almost 9,500 people out of the military (Myers 1982:47).

With the end of World War II, Davis-Monthan Field no longer had the responsibilities of B-29 training. On November 15, 1945, the San Antonio Air Technical Service Command took jurisdiction of the field from the Second Air Force. The 4105th Army Air Force (AAF) Base Unit was activated and assigned the mission of extended aircraft storage for AAF planes, mostly B-29 and C-47 aircraft, and the responsibility for maintenance of the deserted buildings and flight lines on Davis-Monthan Field (Myers 1982:49). Environmental conditions at Davis-Monthan Field made it ideally suited for the storage mission. The low residual acidic content and very high caliche content of the field's soil made it possible to park aircraft directly on the ground surface, thus eliminating the need to construct thousands of acres of asphalt or concrete ramps. Low annual rainfall and a dry desert climate further enhanced Davis-Monthan Field's suitability

for aircraft storage. In 1946, approximately 900 aircraft were in storage at Davis-Monthan Field; the majority of these were being processed for overhaul and return to service.

On March 31, 1946, the newly formed SAC and the Fifteenth Air Force assumed control of Davis-Monthan Field, bringing to the field a new strategic flying mission under the 43rd BMG; however, Davis-Monthan Field's role as an aircraft storage center continued under the transfer agreement (Myers 1982:49). In November of 1946, command jurisdiction over the 43rd BMG and all its facilities was transferred from Fifteenth to Eighth Air Force.

Davis-Monthan Field personnel and planes played an important part in the early stages of the Cold War. A significant international mission of the 43rd BMG was the flight of six B-29s to Europe where they spent almost two weeks visiting European capitols, evaluating airfields for possible future use, and, perhaps most important, flying missions along the border of Soviet-occupied territory. This critical mission, which demonstrated the United States's intention not to abandon Western Europe to Communist aggression, marked the first use of SAC bombers as instruments of international diplomacy (Myers 1982:50-52).

In 1947, the 2nd BMG was assigned to Davis-Monthan Field, and both the 43rd and 2nd BMGs were redesignated as bombardment wings (BMW). With the formation of the USAF as a separate military service, Davis-Monthan Field was officially redesignated Davis-Monthan AFB on January 13, 1948 (Myers 1982:52). The arrival of the 43rd and 2nd BMWs and the other personnel precipitated an immediate housing problem as three-fourths of the incoming personnel were married and had families. Some unused hospital barracks were divided into single and double-room units, and 24 additional barracks were donated for the same sort of housing. These barracks had to be dismantled and put back together on the base proper (Myers 1982:50).

The technological development and deployment of new bombers to replace the B-29s of World War II had a direct bearing on Davis-Monthan AFB. On February 20, 1948, the first B-50 *Superfortress* in the SAC inventory landed at Davis-Monthan AFB and was delivered to the 43rd

BMW. The 43rd Air Refueling Squadron (AREFS), one of the first AREFS in the Air Force, was assigned to the base in June of 1948. The tanker aircraft used by the squadron were modified B-29s, designated KB-29Ms; these arrived later that same year (Myers 1982:53-54).

In March 1949, a Davis-Monthan AFB B-50A, called the *Lucky Lady II*, completed a 23,452 mi non-stop flight around the world. The B-50A was refueled four times during the mission by KB-29 tankers of the 43rd AREFS (Myers 1982:56-57). This momentous flight showed the world that the USAF had the capability to fly to any place on the globe and return; more importantly, it showed the Soviet Union that it had the capability to strike inside Soviet borders (Lewis et al. 1995:29-31).

The 2nd BMW was transferred to Chatham AFB, Georgia in April 1949. In 1951, the 43rd BMW was joined by the 303rd BMW, which flew the B-29. In 1953, the 43rd and 303rd BMWs began converting to the B-47 *Stratojet*. The B-47 was the first jet-powered aircraft to be mass produced and deployed by the USAF. Deployment of the B-47 at Davis-Monthan AFB required construction of a 200-ft wide, 11,500-ft long runway of asphalted concrete engineered to take the stress of the largest aircraft in SAC's inventory at the time (Myers 1982:59). Davis-Monthan AFB also received four T-33 jet trainers which were assigned to the 303rd BMW. By early 1954, both BMWs had disposed of their B-50s and KB-29s and taken possession of the last of their new B-47 bombers and the accompanying KC-97 tankers (Myers 1982:60).

As Cold War hostility intensified during the years following World War II, it became increasingly clear that military aircraft had to be preserved for future use in emergencies. In June of 1953, there were 210 aircraft in storage at Davis-Monthan AFB. By the end of the year, as the base received its first influx of all types of planes, there were 981 (Myers 1982:94).

In April 1953, the Air Defense Command (ADC) became a tenant at Davis-Monthan AFB when the 15th Fighter Interceptor Squadron (FIS) was activated and assigned to the base. The FIS was initially outfitted with F-86A *Sabre* aircraft. These were replaced the following year with the "D"

models which were capable of supersonic speed (Lewis et al. 1995; Myers 1982:63). In 1956, an alert hangar for the FIS was constructed (355th Civil Engineering Squadron [CES] 1994). Also in 1956, the runway was extended to 13,645 ft to accommodate larger bombers and tankers. In 1960, a bomber alert facility was completed next to the fighter alert facility at the southeastern end of the runway. By this time, the 15th FIS F-86s had been replaced by the F-101 *Voodoo* aircraft. Also in 1960, the 43rd BMW was reassigned, leaving the 303rd BMW as base host.

In 1960, Davis-Monthan AFB was selected as the location for a Titan II intercontinental ballistic missile (ICBM) wing. The base was to be the site of the nation's first operational Titan II weapon system (Myers 1982:63). A task force unit of the Air Force Systems Command was established at the base to supervise the siting, construction, engineering, and management of the new weapons system.

The Davis-Monthan Area Office, U.S. Army Corps of Engineers Ballistic Missile Construction Office (CEBMCO) was established at the base on October 3, 1960. The mission of the Davis-Monthan Area Office was the administration of Corps of Engineer contracts for construction of Titan II ICBM launch and support facilities (CEBMCO 1964:I.1). The establishment of the Titan II program was based on the concept of *concurrency*. Concurrency meant that basic missile research and development were underway while missile launch facilities were being built and personnel were being acquired and trained to carry out the strategic mission of the ICBMs (CEBMCO 1964:VIII.1; Myers 1982:65).

Eighteen Titan II launch complexes were scattered over a wide area around the base, with the closest being 24 mi and the farthest more than 60 mi away. The 390th Strategic Missile Wing (SMW) was officially activated at the base on January 1, 1962 to man the system (Office of the Historian 1990a:23). By November 29, 1963, the 390th SMW was fully equipped with 18 operational missiles. From ground breaking to operational status, the process took almost three years. The 390th SMW was comprised of the 570th Strategic Missile Squadron (SMS) and the 571st SMS. On November 30, 1963, the 390th SMW became the first operational Titan II wing

in the USAF (390th SMW 1981; Office of the Historian 1990b:42). Each Titan II was housed in its own hardened underground silo, with launch control provided from a subterranean launch control center located on the site. Unlike the Titan I, the Titan II was able to be maintained in a fully fueled state that permitted immediate launch directly from its silo (Lewis et al. 1995; Myers 1982:80-82; 390th SMW 1981).

During this time, Davis-Monthan AFB was the site of repeated marches and demonstrations by anti-war protestors and pacifist groups. For the most part, these activities were peacefully conducted near base entrances and missile construction sites; however, several demonstrators were turned over to federal marshals for trespassing on base property (Myers 1982:67,139-142).

In 1960, President John F. Kennedy announced the Soviet buildup in Cuba, and the 390th SMW was placed on alert despite possessing no operational missiles at this time (Myers 1982:141). The Cuban Missile Crisis also impacted the aircraft storage area; by July of 1960, the storage inventory had increased to more than 4,000 assorted aircraft, and plans were in progress for the disposal of a large number of old fuselages and parts. Those plans ended with the Soviet missile buildup in July and August of 1961, as a result of which the phaseout of the B-47 and other disposal projects were put on hold. Some planes removed for disposal were placed back into storage although many had already been stripped of useable parts. Over the next 12 months, reclamation projects produced over 110,000 items with a total monetary value of \$60,400,000; these were placed back into the system as spare parts (Myers 1982:95-98).

On July 1, 1963, the 4080th Strategic Wing (SW), a reconnaissance unit with 23 U-2 high-altitude aircraft, transferred from Laughlin AFB, Texas to Davis-Monthan AFB and added a new dimension to the base's strategic importance. The last reconnaissance unit on Davis-Monthan AFB had been the 41st BMG with their B-18 Bolos during World War II. With the addition of the 4080th SW, the base was now a three wing base. The primary mission of the 4080th SW was to conduct strategic reconnaissance operations on a global scale. The wing worked in cooperation with other U.S. forces to complete reconnaissance reports, target material,

and compile weather data for operational forecasting, and with the Defense Atomic Support Agency, to conduct continuous upper air sampling (Davis-Monthan AFB 1964). The 4080th SW was the only SAC unit with the high-altitude U-2 aircraft (Myers 1982:69).

The ADC's 15th FIS was deactivated in 1964, and its assets were dispersed to other ADC units. Phaseout of the 303rd BMW's operations and preparation for turnover of the wing's facilities also began early in 1964. On June 11, 1964, the wing's last B-47 departed for Pease AFB, New Hampshire. One week later, the 303rd BMW was officially deactivated, and Davis-Monthan AFB lost its last bombardment unit. Components of the newly assigned 4453rd Combat Crew Training Wing (CCTW) were to assume possession of the 303rd BMW's facilities (Myers 1982:69-74). This was the first time that Davis-Monthan AFB had a combat crew training mission since immediately before the end of World War II.

On July 1, 1964, Davis-Monthan AFB became the new home of the 4453rd CCTW. This wing was a TAC unit reassigned from MacDill AFB, Florida. The mission of the 4453rd CCTW was to prepare the aircrews of 12 tactical fighter wings (TFW) for the complete conversion to the F-4C *Phantom II* aircraft. The F-4 had the capability to be either a supersonic air superiority fighter or a long-range nuclear or conventional bomber. The intensive flight training program included flying and radar training courses designed to prepare the two-man crews to fully utilize the new fighter-bomber's capabilities (Myers 1982:74). The F-4 was one of the primary jet fighter-bombers utilized in the Vietnam War by the United States, and in July 1966, the 4453rd CCTW began to train replacement crews in the F-4 for direct assignment to Southeast Asia (Myers 1982:74).

The 4080th SW began to deploy U-2 aircraft and personnel to Southeast Asia in the spring of 1964. In June of 1966, the 4080th SW was deactivated, and its personnel and equipment were assigned to the newly activated 100th Strategic Reconnaissance Wing (SRW).

In 1971, the 390th SMW became the host unit at Davis-Monthan AFB. After a brief period, the 12th Strategic Missile Division (SMD) assumed the host unit role (Myers 1982:82). In July 1971, the 355th TFW was assigned to Davis-Monthan AFB. With its A-7D *Corsair II* aircraft, the 355th TFW became the major TAC tenant unit. It had two missions: maintenance of combat ready pilots and aircraft and training of new A-7D pilots and maintenance personnel. On September 30, 1971, the 4453rd CCTW was deactivated, and its F-4 fighter-bombers were transferred to Luke AFB, Arizona (Myers 1982:82). In 1973, the 12th SMD was redesignated the 12th Air Division.

As the war in Southeast Asia continued, the 100th SRW continued its operational mission from its forward operating bases. With the signing of the ceasefire in January 1973, the workload of the 100th SRW was considerably diminished. On September 30, 1976, the 100th SRW was inactivated, and its personnel and U-2 aircraft were reassigned to the 9th SRW at Beale AFB for the purpose of consolidating in a single organization the management of all high-altitude manned reconnaissance operations. Beale AFB was the home of the SR-71 *Blackbird*, the other high-altitude reconnaissance aircraft (Myers 1982:84-85).

As technologies changed and weapon systems were developed and deployed, missions and systems changed on Davis-Monthan AFB. The 355th TFW continued its tactical fighting and training missions with the A-7D aircraft. In 1976, the 355th TFW began its transition to a new type of close air support aircraft, the A-10A *Thunderbolt II* attack aircraft. Davis-Monthan AFB became the home of the only A-10A pilot training program in the USAF (Myers 1982:89).

With the inactivation of the 100th SRW, the SAC flying mission at Davis-Monthan AFB was substantially reduced. This brought about the reassignment of the 12th Air Division to Dyess AFB, Texas. That move was completed on October 1, 1976, TAC assumed control of the base, the 355th TFW became host unit, and the 390th SMW assumed status as a tenant unit (Myers 1982:89).

As the Cold War continued, technological development of strategic as well as tactical weapons progressed. In 1979, the North Atlantic Treaty Organization (NATO) decided to modernize its nuclear deterrent forces and use U.S. missiles to counter-balance the ever-increasing number of Soviet missiles aimed at Europe (Office of Public Affairs 1989:2-5). Davis-Monthan AFB was chosen as the training center for the GLCM system. The GLCM was a medium-range (up to 1,500 mi), tactical, highly survivable nuclear weapon based on mobile missile launchers called Transporter-Erector Launchers (TEL). This weapon system was developed to counter the Soviet SS-20 missile, which was able to reach all of Europe from its mobile bases (Hess 1983; Office of Public Affairs 1989:19-24). The GLCM was one of the most controversial nuclear weapon systems in the United States arsenal because it was deployed throughout Europe (Hess 1984).

The 836th Air Division was activated at the base on January 1, 1981, and assumed base host responsibilities. The only GLCM training squadron, the 868th Tactical Missile Training Squadron (TMTS), was activated at the base at the same time. This unit trained crews to operate, maintain, and defend the GLCM system (355th TFW 1981; USAF 1994b). The 41st and 43rd ECSs also arrived at the base equipped with C-130 transport aircraft specially configured to the EC-130H *Compass Call* aircraft. These units' combat mission is to support tactical air and ground operations by confusing the enemy's defenses and disrupting its command, control, and communications capabilities through the use of electronic countermeasures systems, aerial refueling capabilities, and upgraded engines and avionics (Davis-Monthan AFB 1993:20). The 602nd Tactical Air Control Wing, a unit responsible for the Air Force's tactical control system west of the Mississippi River, was activated under the air division at Davis-Monthan AFB on September 1, 1982 (355th TFW 1982; Davis-Monthan AFB 1993:17). Members of the 602nd were responsible for directing forward air forces and coordinating them with ground forces for a combined team effort. To accomplish their mission, wing air controllers and liaison officers were stationed on both Air Force and Army bases (Smith 1994).

On October 2, 1981, Deputy Secretary of Defense Carlucci ordered the deactivation of the Titan II system (Office of the Historian 1990b:70). During 1982 through 1984, the 390th SMW deactivated

all of its missiles, destroyed all but one of its Titan II launch complexes, and was deactivated (Office of the Historian 1990b:77). On July 10, 1984, the USAF and DoD approved a plan to donate one deactivated launch complex at each of the three Titan II bases to a public agency for use as a museum (Office of the Historian 1990b:77). Missile Site No. 8, also designated 571-7, a deactivated complex formally of the 390th SMW located near Green Valley, Arizona, became a first-of-its-kind historical museum (Lawler 1984). A missile without its warhead and guidance system stands in the silo, and the 740-ton blast door is permanently placed halfway open. Russian treaty observers continue to fly over the silo to verify its inactive status (Titan Missile Museum 1994).

On November 18, 1981, President Ronald Reagan made the so-called "zero-zero" arms control offer to the Soviets. According to the terms of this offer the United States would not produce or deploy in Europe the 108 Pershing IIs and 464 GLCMs requested by NATO in 1979 if the Soviet Union would agree to dismantle its force of 250 new SS-20 missiles and more than 350 older SS-4 and SS-5 missiles. On November 30, 1981, representatives of the United States and Soviet Union governments held the first round of what would come to be called the INF talks (Office of Public Affairs 1989:6). These negotiations continued for six years.

As the INF talks proceeded, Davis-Monthan AFB again became a site for protests against nuclear weapons. One group of demonstrators set up a "peace camp" near the main gate of the base for over six months (Hess 1984; Kemper 1983). Other demonstrations and protests promoted an "anti-cruise" policy (355th Wing History Office 1994), and hundreds of protestors and marchers used acts of civil disobedience to protest nuclear proliferation (Heltsley 1984; Hess 1984; Lawler 1983; Matier 1983; Spivak 1983). On May 3, 1985, security police apprehended four female protestors who had gained access to the base, climbed on top of the 868th TMTS Headquarters, and declared the area a nuclear free zone.

In July 1987, General Secretary Mikhail Gorbachev accepted a "global double zero" INF missile balance. This proposal included provisions for the global elimination of all U.S. and Soviet

intermediate-range missiles and short-range ground-launched missiles, the destruction of missile launchers, and the most stringent verification regime in arms control history (Office of Public Affairs 1989:12). Finally, on December 8, 1987, the treaty documents were signed in Washington, D.C. by Reagan and Gorbachev. On June 1, 1988, the President and General Secretary exchanged instruments of ratification in Moscow and the INF Treaty came into force (Office of Public Affairs 1989:14-15).

Davis-Monthan AFB and the Treaty Compliance Office of the 355th Wing have the responsibility for carrying out the stipulations of the INF Treaty and the START provisions. Under the terms of the INF Treaty, Davis-Monthan AFB's AMARC serves as the elimination site for GLCMs. During the three-year period ending May 1991, AMARC eliminated 445 missiles and canisters, 29 driver training vehicles, 124 TEL, and 68 training launch canisters. Soviet Union inspectors were on site 11 times to witness the elimination process (USAF 1993b). The areas associated with the GLCM program are specifically targeted for inspection by the Soviet Union through the year 2001 (personal communication, Dr. L. Lashbrook, 1994). AMARC has also been designated to accomplish the task of eliminating approximately 350 B-52 aircraft during a three and a half year period to comply with the conditions of START. Elimination of these aircraft is accomplished with a 13,000 lb free-falling guillotine blade attached to a Linkbelt crane. The blade severs the wings and the fuselage at predetermined points. The Soviet Union inspectors will visit Davis-Monthan AFB in the future to verify this elimination process.

The last class of the 868th TMTS graduated in May of 1990, and the unit was inactivated. In October 1991, as part of USAF-wide reorganization, the 355th TFW was redesignated the 355th Fighter Wing, and the 602nd Tactical Air Control Wing was redesignated as an air control wing. In May 1992, the 836th Air Division and the 602nd Air Control Wing were deactivated, and the 355th Fighter Wing was redesignated as the 355th Wing and assumed base host responsibilities. At this time, the 12th Air Force headquarters moved to Davis-Monthan AFB. In June 1992, command of the base and the wing switched from TAC to ACC.

3.2 BASE DEVELOPMENT

Use of Davis-Monthan AFB during World War II had already established extensive areas of development at the base. The 1950s brought a new runway (Figure 3.1) suitable for the B-47 medium bomber and the KC-97 tanker. Barracks were added, some of which replaced older units. In 1952, several hundred Wherry housing units were constructed on the base. Additional acreage was procured for the aircraft storage area in 1953. In 1955, base operations and the fire station on the flight line were constructed. In 1956, an alert facility was constructed for ADC's 15th FIS unit at the southeastern end of the runway. In 1957, five housing units were constructed as commander's family quarters. That same year a new base theater and Officer's Open Mess were constructed. The next year, 1958, a new Noncommissioned Officer (NCO) Open Mess was completed.

The 1960s brought more changes to Davis-Monthan AFB. An alert facility and its attendant "christmas tree" alert apron were completed for SAC in 1960 (Figure 3.2). The main runway was extended to 13,645 ft. Also in 1960, Davis-Monthan AFB was selected as the site for a future Titan II missile wing. Although this caused some refitting of extant buildings and some new facilities, most of the construction for the missile complexes took place away from the installation. In 1961, a 180,072 ft² reclamation shelter was completed in the AMARC area. A new hospital was also completed, along with an 18-hole golf course. A new gymnasium was constructed in 1968. In 1969, a golf clubhouse was constructed.

The 1970s saw expansions in base housing and other base facilities (Figure 3.3). An additional family housing area was constructed in 1972 through 1975. A new base exchange was opened in 1974, and the commissary was constructed in 1978. Some maintenance hangars and other shops were also constructed in the 1970s.

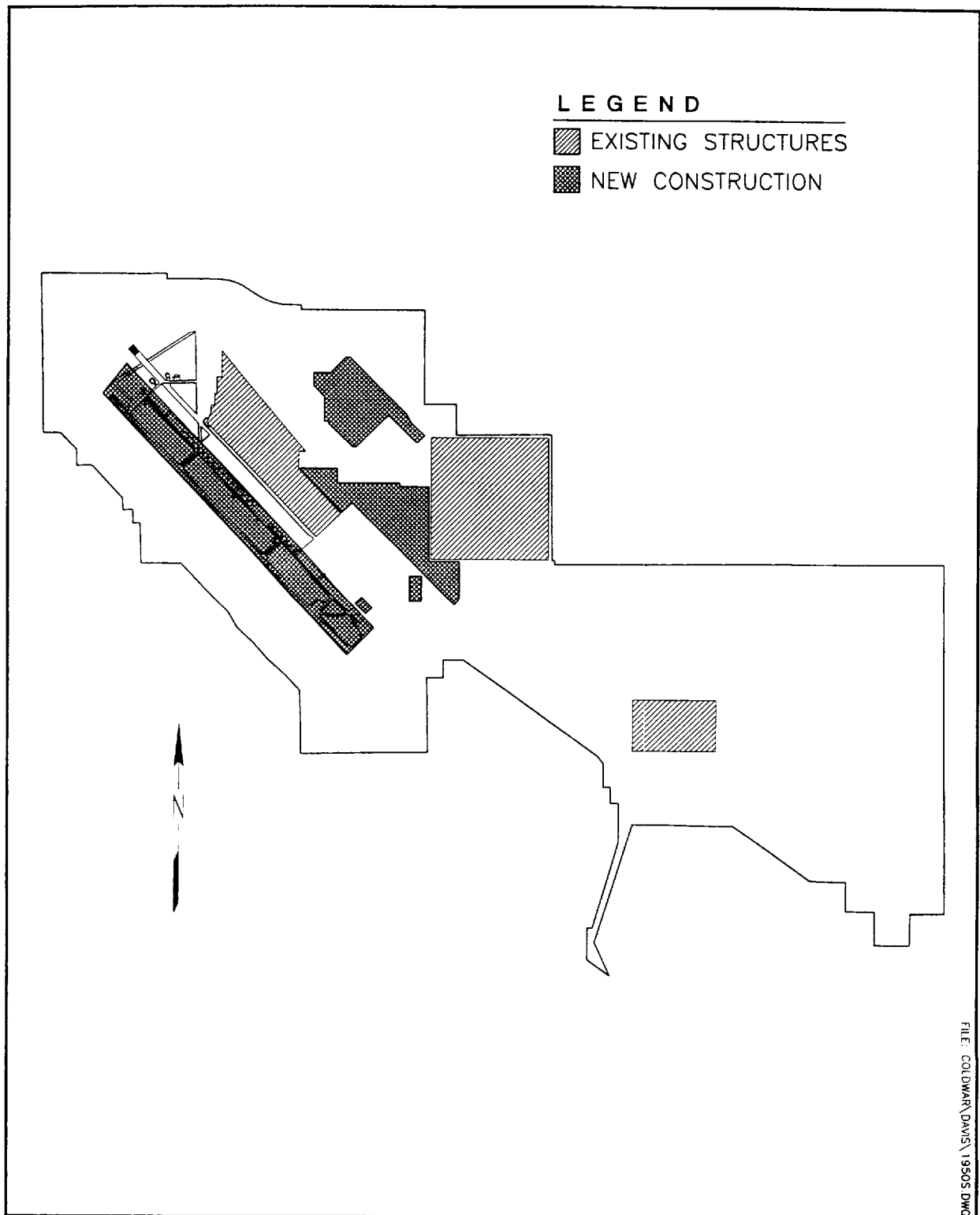


Figure 3.1 Davis-Monthan Air Force Base, 1950-1960.

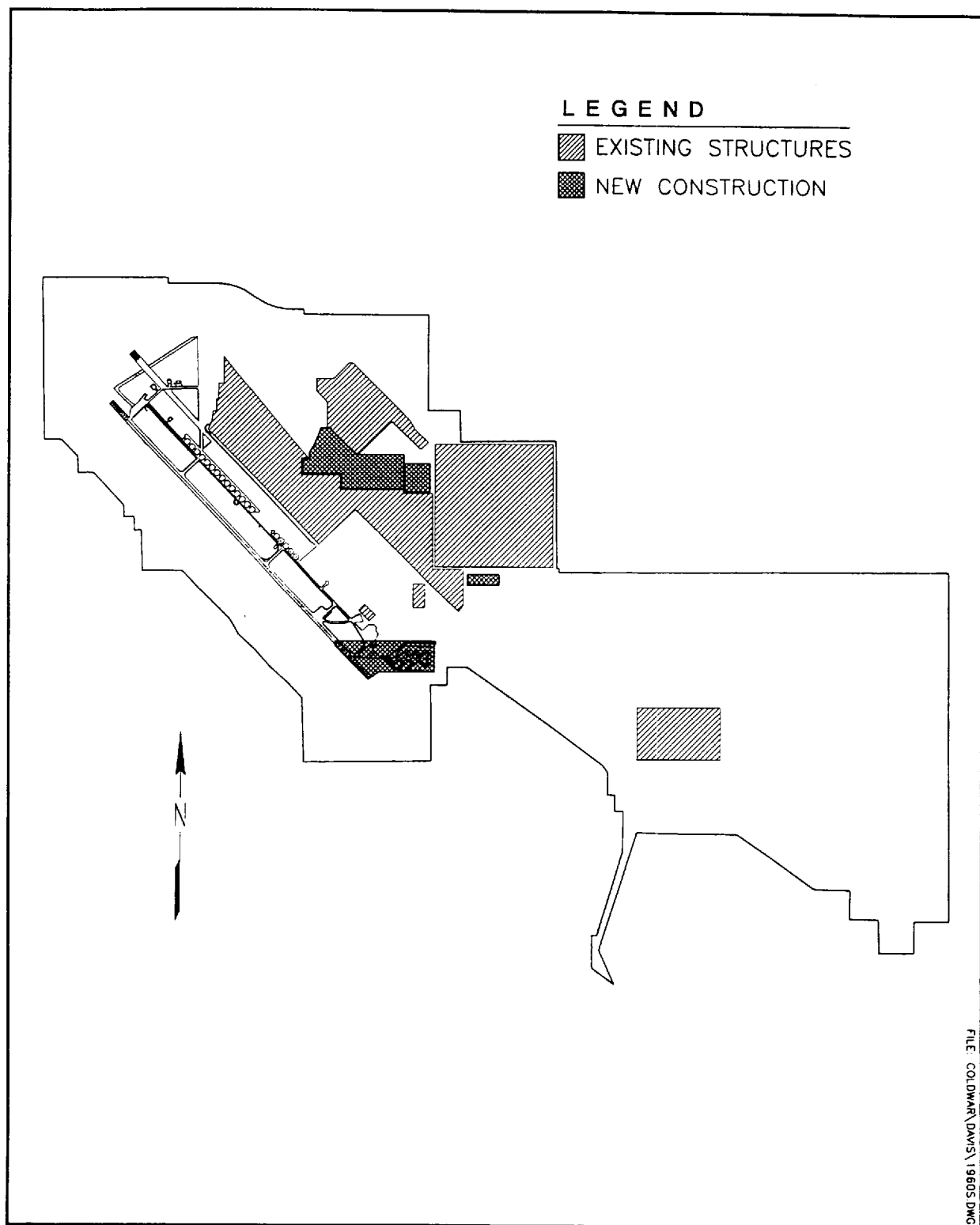


Figure 3.2 Davis-Monthan Air Force Base, 1960-1970.

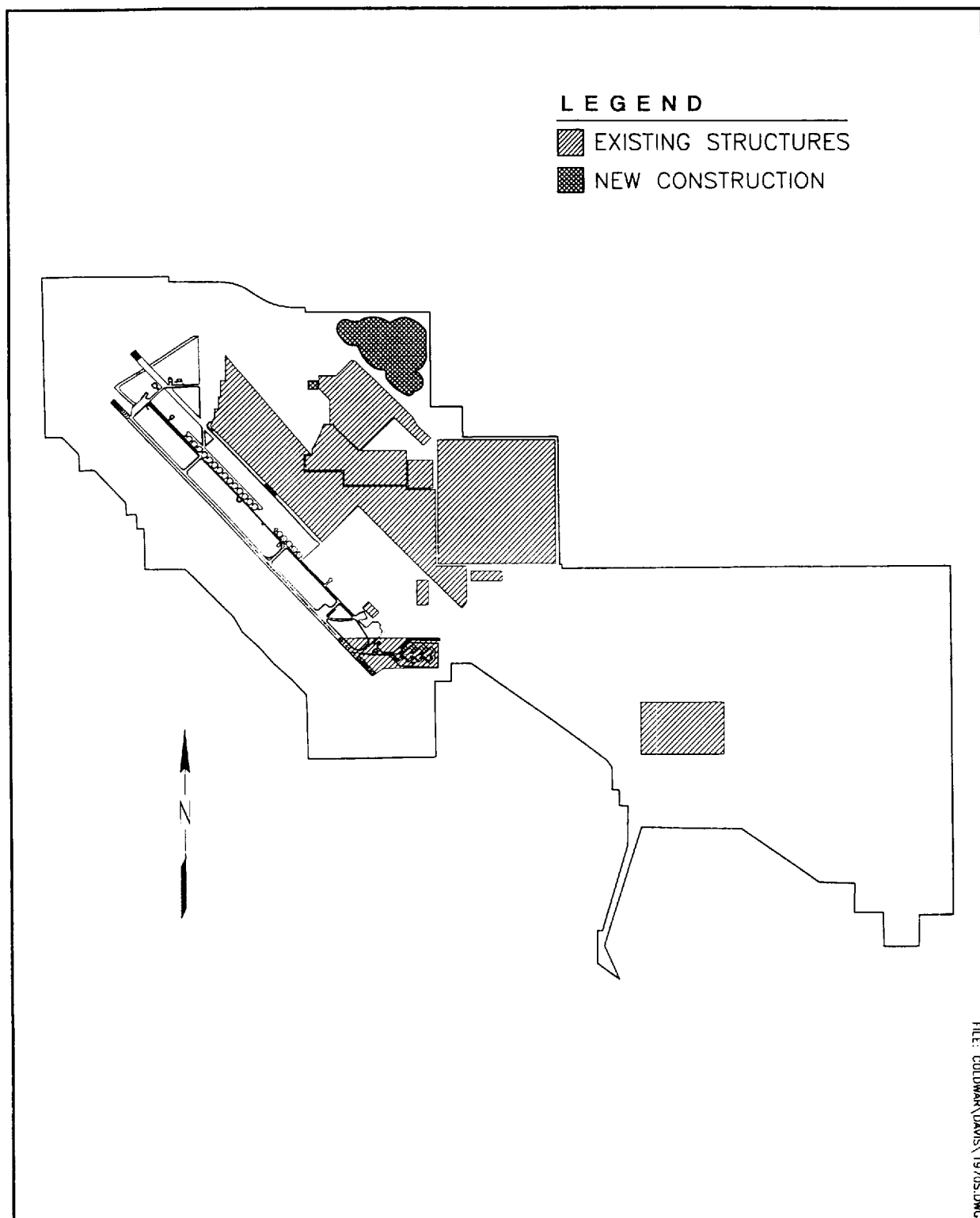


Figure 3.3 Davis-Monthan Air Force Base, 1970-1980.

The 1980s brought a new mission to the base when the 868th TMTS was officially activated. In 1983, three facilities were constructed for the GLCM training complex and the 868th TMTS (Figure 3.4). New hangars, supply buildings, and community facilities were also constructed during the 1980s.

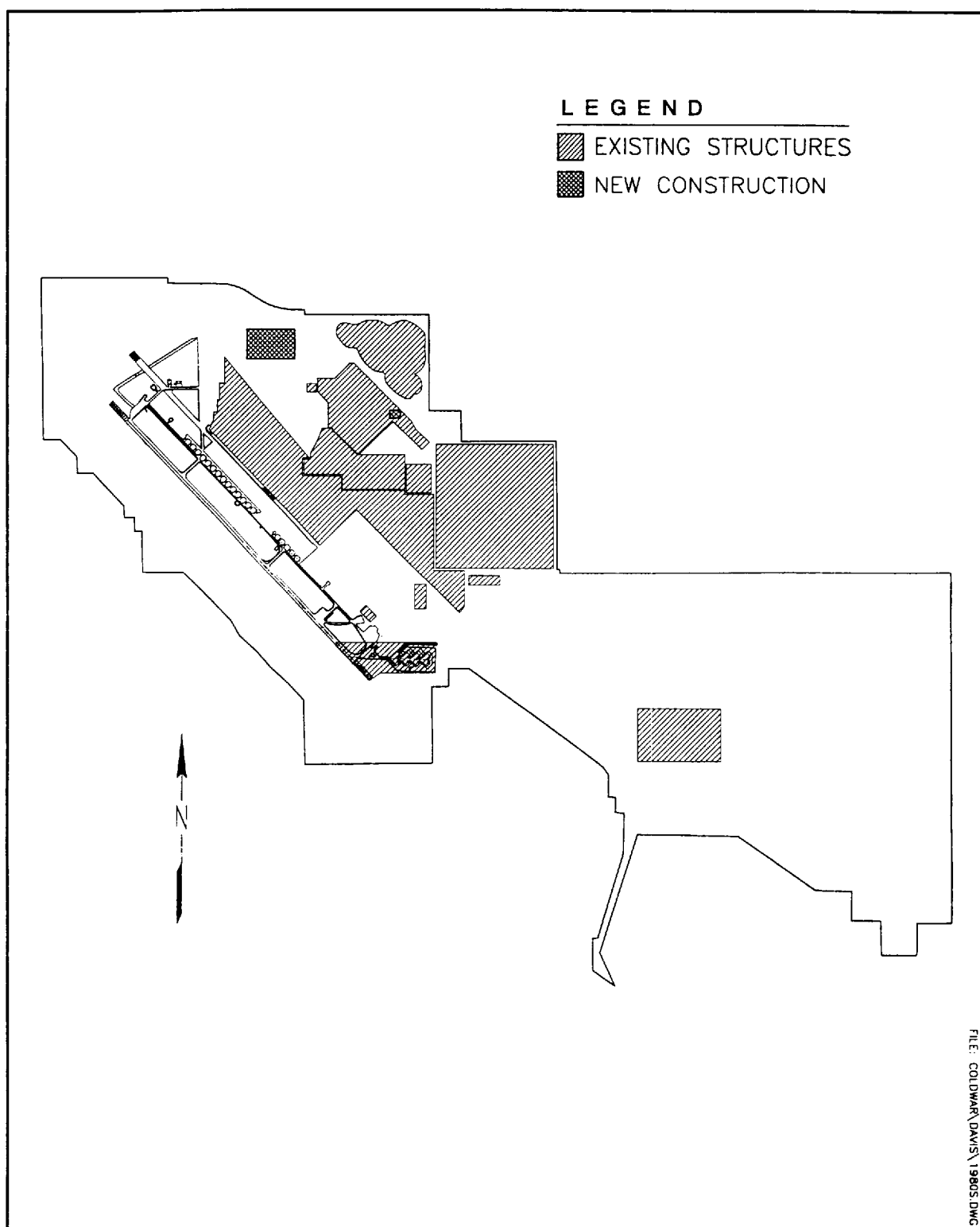


Figure 3.4 Davis-Monthan Air Force Base, 1980-1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Davis-Monthan AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993c:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Davis-Monthan AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Davis-Monthan AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the

importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993c) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993c) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Davis-Monthan AFB, the Mariah field team met with Mrs. Gwen Lisa, the Natural and Cultural Resources Officer, Mr. John Thompson, Chief of the Environmental Flight, and Mr. Gino Patriarka, Community Planner, all with the 355th CES. These contacts were advised of the team's schedule and the objectives and needs for accomplishing the base reconnaissance inventory.

Mrs. Lisa provided the field team with a tour of the base to familiarize them with the base layout, types of facilities present, and resources potentially significant within the context of the inventory. At the Real Property Office, Ms. Jan DeMaria gave the team a copy of the Real Property Change List and access to the older files containing Property Change Cards. The team was also supplied with copies of earlier planning documents, old property inventories, and other pertinent research materials. Mr. Ben Kaiser of the Drafting Office provided copies of computer generated C-Tabs or maps of the base. The field team was also given access to old project files containing architectural drawings, maps, aerial photographs, and other documents. These project files were an excellent source of data regarding base development and land use. TSgt Kim R.

Smith, Wing Historian in the 355th Wing History Office, was also contacted by the team, and the team inventoried the collections in his office. The 355th Wing Public Affairs Office furnished historical research material and copies of the current missions for the host unit and any tenant units on the base.

The field team visited the Titan Missile Museum at Green Valley, Arizona. This property is owned by the USAF and is listed on the Davis-Monthan AFB Real Property Office records. Therefore, the museum was subject to inventory and investigation.

Photographic inventory of property types on the base was conducted throughout the base visit. Mr. Daryl Johnson, the Airfield Manager, gave permission for photographing relevant facilities along the secured flight apron. Lt. Col. G. Peluso, Commander of Detachment 1, Fighter Interceptor Group, was in attendance during photographing of the ADC alert facility.

On the last day of the base visit, the field team visited the 355th Wing Treaty Compliance Office and spoke with Dr. Larry Lashbrook, the Director of Treaty Compliance. On the same day, the team provided an outbriefing to the Commander of the 355th CES regarding the study's preliminary findings.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Davis-Monthan AFB, 184 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Six resources were evaluated at Davis-Monthan AFB, four of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 24182, Located in Real Property No. 2300)

This collection, located in the Wing History Office, contains reports, histories, newsclippings, and photograph prints and slides pertaining to the base and the 355th Wing during the Cold War. A more detailed listing of the collection contents is provided in Appendix E. This documentary collection is an important source of data regarding the history and development of the base during the Cold War era. The collection is generally in good condition. The photograph collection is currently being organized and catalogued.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	24182	None	RecDoc/Obj	18
Documentation	Documentary Collection	24183	None	RecDoc/Obj	17
Combat Weapons and Support Systems					
Alert Facilities	Bomber/Tanker Alert Facility	24017	140	Real/Bldg	19
Alert Facilities	Fighter Alert Facility	24038	128	Real/Bldg	19
Missiles	Missile Launch Complex	24019	8004	Real/Bldg	19
Training Facilities					
Missile Training	GLCM Training Facility	24040	70	Real/Bldg	17

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
19	24017	140	Bomber/Tanker Alert Facility
19	24019	8004	Missile Launch Complex
19	24038	128	Fighter Alert Facility
18	24182	None	Documentary Collection
17	24040	70	GLCM Training Facility
17	24183	None	Documentary Collection

6.1.1.2 Documentary Collection (Resource No. 24183, Located in Real Property No. 5315)

This documentary collection, located in the Civil Engineering Office, contains architectural drawings and aerial photographs. The architectural drawings include blueprints and plans of all existing buildings on the base, in addition to buildings and facilities that have been demolished, such as the Titan II launch complexes. Many of these drawings are originals. The aerial photographs record facility construction and alteration projects that have taken place on the base. A more detailed listing of the collection's contents is provided in Appendix E. This collection is an important source of information regarding the construction of base facilities and illustrates the development of the base throughout the Cold War. It also records the construction of facilities that are evaluated by this study as important to the base's Cold War context.

This collection generally is well organized and in good condition. The archival drawers, which contain the older drawings, are not organized. The entire collection is subject to continuous use, which has resulted in wear on the collection, especially to the older maps which have been torn.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS**6.2.1 Alert Facilities****6.2.1.1 Bomber/Tanker Alert Facility** (Resource No. 24017, Real Property No. 140)

This building, built in 1960 for SAC combat forces, was utilized as an alert facility for B-47 and KC-97 aircraft until 1965. Since then the building has been used for academic classrooms, as a multipurpose facility by wing headquarters, and as temporary headquarters for the GLCM training units of the 868th TMTS. It currently is used as the 41st ECS operations building.

This two-story, concrete block, semi-subterranean building exhibits architectural features common to alert facilities, including ramps and covered tunnels for quick egress from both floors of the

building; an alert aircraft parking apron, called a "christmas tree" apron due to its shape; and attendant security facilities. This building has the unique feature of a sun deck on one end of the roof. The building's traffic check house has been converted into a storage shed, and the security fencing is no longer in place. The exterior integrity of the building is intact. Although this facility has been used for offices by various units on the base, the real property card for the facility indicates no major renovations to the building. Thus interior integrity is also determined to be intact.

The exceptional importance of this facility to the base and national Cold War contexts lies in its use for maximum readiness and rapid deployment of air crews in response to enemy aggression. Its design, association, and setting convey the military strategy of survivability, a major component of the U. S. deterrent capability during the Cold War. The facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers and tankers across the country (Lewis et al. 1995). This building was used as an alert facility during the transition from Phases II to III; however, it characterizes the policy and strategy enacted during Phase II of the Cold War. This facility meets NRHP criteria (a) and (c).

6.2.1.2 Fighter Alert Facility (Resource No. 24038, Real Property No. 128)

This building, built in 1956, was the first alert facility constructed on the base and served as facilities for the 15th FIS under ADC. The facility includes such character defining features as two-story metal-framed construction, four bay aircraft shelter with bay doors on front and back, administrative and living quarters for crews on alert status in the center of the building, security fencing, and a security station building. While on alert, fighter pilots and support staff were required to be in the building and ready to deploy within five minutes. The building served as the alert facility until 1967. It was subsequently used for base warehouse supply and equipment until 1973. It then reverted back to an alert facility, this time for TAC forces flying the F-16 *Falcon*, and has continued this function to the present. Although no longer on alert status, this facility still supports the mission to intercept, identify, and, if necessary, destroy an airborne threat to the United States.

The exterior of the building maintains intact integrity. The interior of the facility was partially investigated. Based on these investigations, and the almost continual use of the facility as an alert facility to the present day, interior integrity is also determined to be intact.

This facility is exceptionally important to the base's Cold War history and to Cold War history at the national level. The importance of this facility lies in its sole mission to defend the United States against attacks from the Soviet Union. The construction of this facility and others around the country was stimulated by fear that the Soviet Union possessed the capability to strike targets in the United States. It is the direct result of Congressional approval in the 1950s for the construction of interceptor bases and the NSC-68 recommendations for a massive military build-up to counteract the increasing threat posed by the Soviet Union (Lewis et al. 1995). Its function of rapid deployment illustrates the strategy of survivability, a major component of the U. S. deterrent capability. This facility was used for this purpose during Phases II through IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.2 Missiles

6.2.2.1 Missile Launch Complex (Resource No. 24019, Real Property No. 8004)

This Titan II missile launch complex is now the Titan Missile Museum located at former missile site 571-7 in Green Valley, Arizona. It was an active missile facility from July 1963 through 1983 under the 390th SMW at Davis-Monthan AFB. Upon deactivation, it was donated to the museum for an interpretive display.

The missile complex is primarily underground. Visible at the surface are the various antenna arrays, security fences, retractable closure door and base with portable crane hardstand, the inside of

the silo complete with an inert missile, and intake and exhaust air shafts. The complex is constructed of reinforced poured concrete with steel plates, forming a hardened silo and command center. The complex came under the stewardship of the museum upon deactivation, thus it retains a high level of integrity.

This missile launch complex is evaluated as exceptionally important to the base and national Cold War contexts. The United States ICBM force has held a major role in the country's deterrent capability since its inception with the Atlas missile in 1958, and the Titan II missile was a part of this force for over 20 years. The Titan II was a second generation missile considered to be a major advancement over the first generation missiles due to its ability to be fired from within the silo. This increased the survivability of the missile. This survivability factor has been the backbone of the U. S. deterrent capability since the 1950s. The Titan II wing at Davis-Monthan AFB was one of three in the country and was the first to be activated. This complex held its importance during Phases III and IV of the Cold War, and it meets NRHP criteria (a) and (c).

This facility has already been awarded National Landmark status by the NRHP, and is fully interpreted by the Titan Missile Museum. The complex and museum are an excellent example of the interpretation of USAF Cold War properties for the public.

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Davis-Monthan AFB.

6.4 TRAINING FACILITIES

6.4.1 Missile Training

6.4.1.1 GLCM Training Facility (Resource No. 24040, Real Property No. 70)

This two-story, concrete and brick building was constructed in 1983 as the headquarters of the 868th TMTS. The 868th TMTS later became a group and then moved up to wing status. This facility served as the training facility for the GLCM weapon system under the 836th Air Division from 1983 to 1990. All graduating classes from this training facility were sent to NATO countries where the GLCM system was stationed.

The function of this building is not revealed by any notable architectural features. However, the building remains in association with the "GLCM ramp" (as it is termed on the base map) and with other related buildings on the ramp. These buildings and the surrounding ramp are under INF Treaty physical observation and verification provisions until the year AD 2001. The building retains both its interior and exterior integrity.

This training facility is exceptionally important within the base and national Cold War contexts. It represents one of the last remnants of a weapon system integral to the United States deterrent capability and was the only training facility for the GLCM in the USAF. The GLCM system functioned as a negotiating lever in the INF Treaty with the Soviet Union. All GLCMs have since been destroyed under the provisions of the INF Treaty, thus this is one of the few remaining resources tied to this weapons system. The importance of the building lies in Phase IV of the Cold War era. The building meets NRHP criterion (a).

6.5 INTELLIGENCE FACILITIES

None were evaluated at Davis-Monthan AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Davis-Monthan AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Davis-Monthan AFB. These resources should be investigated further for a more comprehensive analysis of the base's Cold War context.

There are two buildings on the base that, although not evaluated in this study, deserve further attention. Chapel No. 2 (Real Property No. 3208) was built in 1942 and has been in continuous use since that time. The building retains its architectural integrity, and exhibits feeling and association regarding base structures of the period with a religious function. It is recommended that this building be formally evaluated for eligibility to the NRHP within a World War II context. Until this evaluation is completed, stewardship to maintain the building's integrity is recommended.

Hangar 8030 was built in 1932 and is the oldest structure on the base today. The building retains its integrity; however the severity of threat to this facility is moderate as it is positioned within the clear zone of the runway. A nomination of this building to the NRHP has been begun. It is recommended that the nomination process for this building be completed.

The USAF Historical Research Agency at Maxwell AFB, Alabama is the repository for all Air Force historical documents. A computerized search for materials related to Davis-Monthan AFB revealed approximately 175 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the Titan II missile system and the GLCM weapon system. The vast majority of these documents are

available on microfilm. Future studies of Cold War history at Davis-Monthan AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts and a list of informal interviews conducted by the field team at the base are presented in Appendix F.

8.0 FUTURE THREATS TO RESOURCES

The planned disposal of buildings on Davis-Monthan AFB for the next four to five fiscal years does not include any buildings that have been evaluated by this study as important to the base's Cold War context. The Military Construction Program through FY99 also does not contain any indicated action for these evaluated resources.

Facilities on Davis-Monthan AFB have been identified by this study as historically and/or architecturally significant outside of the base's Cold War context. Hangar 8030 (Real Property No. 8030) and Chapel No. 2 (Real Property No. 3208) have been previously identified as properties possibly eligible for inclusion on the NRHP. At present, there are no known threats to these resources. However, nomination to the NRHP and possible future listing could help ensure the stewardship of these buildings.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Davis-Monthan AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Davis-Monthan AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Davis-Monthan AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Davis-Monthan AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource 24182, Located in Real Property No. 2300)

This documentary collection is an important source of information regarding the base's Cold War history and development, and is generally in good condition. This collection of reports, histories, newsclippings, and photograph prints and slides should be inventoried and copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
24017	140	Bomber/Tanker Alert Facility		*	*	*		NRHP eligible now.
24019	8004	Missile Launch Complex		*				Already a National Landmark.
24038	128	Fighter Alert Facility		*	*	*		NRHP eligible now.
24040	70	GLCM Training Facility		*	*	*		NRHP eligible now.
Record or Document - Object								
24182	None	Documentary Collection		*		*	*	
24183	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Documentary Collection (Resource No. 24183, Located in Real Property No. 5315)

This collection of architectural drawings and aerial photographs is an important source of information regarding the development of the base during the Cold War, and is generally in good condition. However, use of the collection has resulted in wear on the drawings. This collection should be inventoried and copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Bomber/Tanker Alert Facility (Resource No. 24017, Real Property No. 140)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence, and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its features is determined to be intact based upon partial observation and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation for nomination of this resource to the NRHP.

9.2.4 Fighter Alert Facility (Resource No. 24038, Real Property No. 128)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based upon its role of rapid deployment and interception of enemy attack, a strategy that was part of the United States deterrent capability, and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its features is intact based upon visual inspection and the almost continual use of the facility as an

alert facility for fighter aircraft and aircrews. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to retain the integrity of the building, and further documentation for nomination of this resource to the NRHP.

9.2.5 Missile Launch Complex (Resource No. 24019, Real Property No. 8004)

This complex is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV, and meets NRHP criteria (a) and (c) based upon its role within the deterrent strategy of the United States. The integrity of the facility is intact. This facility is already listed on the NRHP as a National Landmark, therefore, stewardship of the complex within its role as a museum is recommended.

9.2.6 GLCM Training Facility (Resource No. 24040, Real Property No. 70)

This building is evaluated as exceptionally important within the base and national Cold War contexts during the last phase of the Cold War, and meets NRHP criterion (a) based upon its association with the GLCM weapon system. The integrity of the building is intact. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building, and further documentation for nomination of this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Corps of Engineers Ballistic Missile Construction Office

- 1964 *U.S. Army Corps of Engineers Ballistic Missile Construction Office (CEBMCO) History of Davis-Monthan Air Force Base, Arizona October 1960 - January 1964*. U.S. Army Corps of Engineers Ballistic Missile Construction Office, Titan II Directorate.

Davis-Monthan Air Force Base

- 1964 *Davis-Monthan Air Force Base Directory-Guide Tucson, Arizona*. Community Newspapers, Massachusetts.

- 1993 *Davis-Monthan Air Force Base 1993-94*. Installation Guide. Benchmark Publication, Inc.

Department of Defense

- 1982 *Installations Survey Report Davis-Monthan Air Force Base Tucson, Arizona*. Office, Assistant Secretary of Defense (Installations), Washington, D.C.
- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Heltsley, E.

- 1984 "Monk Starts Peace Vigil Outside Davis-Monthan." *The Arizona Daily Star*, January 10, 1984. Tucson, Arizona.

Hess, B.

- 1983 "Why the Big Fuss About Cruise Missiles?" *Courier*, October 23, 1983. Prescott, Arizona.
- 1984 "Missile-Related Training to Increase." *Sierra Vista Herald-Dispatch*, September 24, 1984. Sierra Vista, Arizona.

Kemper, V.

- 1983 "Davis-Monthan Crew Arrests 60 Protesters." *The Arizona Daily Star*, October 22, 1983. Tucson, Arizona.
-

Lawler, E.

1983 "19 Arrests in Protest at Air Base." *The Arizona Daily Star*, December 13, 1983. Tucson, Arizona.

1984 "Missile Site Museum is Racing Clock, AF Begins Work Early on Deactivated Titan." *The Arizona Daily Star*, January 20, 1984. Tucson, Arizona.

Lewis, K. and H. C. Higgins

1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Matier, P.

1983 "'Peace Camp' Activists Plan to Step Up Protest." *Tucson Citizen*, October 20, 1983. Tucson, Arizona.

Myers, G. P., MSgt

1982 *The Story of Davis-Monthan AFB. Strategic Air Command History*. On file, 355th Wing History Office, Davis-Monthan Air Force Base, Arizona.

National Park Service

1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.

1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Office of Public Affairs

1989 *Understanding the INF Treaty*. Office of Public Affairs, U.S. Arms Control & Disarmament Agency, Washington, D.C.

Office of the Historian

1990a *From Snark to Peacekeeper: A Pictorial History of Strategic Air Command Missiles*. Office of the Historian, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska.

1990b *SAC Missile Chronology 1939 - 1988*. Office of the Historian, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska.

Smith, K. R., TSgt

1994 History of Davis-Monthan Air Force Base. 355th Wing History Office, Davis-Monthan Air Force Base, Arizona.

Spivak, J.

1983 "New Barrier Separates Davis-Monthan and 'Peace Camp.'" *Arizona Daily Star*, October 23, 1983. Tucson, Arizona.

355th Civil Engineering Squadron

1994 Real Property Records for Facility # 128. Real Property Records Office, 355th Civil Engineering Squadron, Davis-Monthan Air Force Base, Arizona.

355th Tactical Fighter Wing

1981 355th TFW Chronology 1 July - 30 September 1981. On file, 355th Wing History Office, Davis-Monthan Air Force Base, Arizona.

1982 355th TFW Chronology 1 January - 30 December 1982. On file, 355th Wing History Office, Davis-Monthan Air Force Base, Arizona.

355th Wing History Office

1994 355th Wing Chronologies. 1983 through 1987 on file, Wing History Office, Davis-Monthan Air Force Base, Arizona.

390th Strategic Missile Wing

1981 "A Portrait of the 390th." 390th Strategic Missile Wing History Office. On file, 355th Wing History Office, Davis-Monthan Air Force Base, Arizona.

Titan Missile Museum

1994 *Pima Air Museum Titan Missile Museum*. Tucson Air Museum Foundation Brochure. Tucson, Arizona.

United States Air Force

1993a *Fact Sheet: Twelfth Air Force*. Headquarters Twelfth Air Force, Office of Public Affairs, Davis-Monthan Air Force Base, Arizona.

1993b *Fact Sheet: Aerospace Maintenance and Regeneration Center*. 355th Wing, Public Affairs Office, Davis-Monthan Air Force Base, Arizona.

1993c *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

1994a *Fact Sheet: 305th Rescue Squadron (AFRES)*. 939th Rescue Wing, Portland International Airport, Oregon.

1994b *Fact Sheet: Davis-Monthan Air Force Base, Arizona.* 355th Wing, Public Affairs Office, Davis-Monthan Air Force Base, Arizona.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	24001	57	Security Police Identification Control	1984
	24002	56	Traffic Check House	1984
	24008	266	Rocket Check Assembly Storage, Conventional Munitions Shop (WSA)	1967
	24009	265	Rocket Check Assembly Storage, Conventional Munitions Shop (WSA)	1959
	24010	270	Munitions Cubicle, Magazine Storage (WSA)	1959
	24011	275	Munitions Cubicle Magazine Storage (WSA)	1959
	24012	280	Munitions Cubicle Magazine Storage (WSA)	1959
	24014	7300	General Purpose Aircraft Shop (AMARC)	1963
	24015	7401	Base Supply Equipment Warehouse (AMARC)	1963
	24016	7220	General Purpose Aircraft Shop (AMARC)	1943
	24017	140	Bomber/Tanker Alert Facility	1960
	24018	141	Base Supply and Equipment Shed (Traffic Check House)	1960
	24019	8004	Missile Launch Complex (Titan Missile Museum)	1963
	24020	8005	Guided Missile Launch Control (Titan Missile Museum)	1963
	24021	8006	Missile Operations Buildings (Titan Missile Museum)	1963
	24022	2300	Wing Headquarters	1990
	24023	3200	Base Personnel Office	1976
	24024	3203	Bowling Center	1961
	24025	3220	Thrift Shop	1970
	24026	3205	Chapel Center (Chapel 1)	1969
	24027	3208	Chapel Center (Chapel 2)	1943
	24028	3508	Permanent Party Airman's Dormitory	1989
	24029	3511	Visiting Airman's Quarters Dormitory	1970
	24030	3210	Family Support Center	1943
	24031	2240	Post Office Center	1954
	24032	2317	Branch Bank	1965
	24033	2520	Davis-Monthan Federal Credit Union	Unknown
	24034	2521	Fast Food Service (Burger King)	1988
	24035	2525	Group Headquarters (Operational Contracting)	1990
	24037	4310	Group Headquarters (Command Post)	1953
	24038	128	Fighter Alert Facility	1956
	24039	211	Traffic Checkhouse	1988
	24040	70	GLCM Training Facility	1983
	24041	74	Air Force Communications System Maintenance Facility (GLCM Maintenance)	1988
	24042	72	Vehicle Maintenance Shop (GLCM Maintenance)	1984
	24043	8030	Reserve Forces Ground Training Storage	1932
	24044	2524	Branch Exchange	1978
	24045	2441	Sales Store Exchange	1974

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	24047	2505	Gynasium	1968
	24048	2402	Field Training Facility	1974
	24049	2409	Base Package Store	1981
	24050	2513	Service Station Exchange	1961
	24051	2614	Child Care Center	1982
	24052	2615	Commissary Store	1978
	24053	2712	Medical Food Inspection, Veterinary Clinic	1986
	24054	2711	Troop Subsistence Warehouse	1990
	24055	1711	Base Supply and Equipment Warehouse	1984
	24056	1712	Squadron Operations	1979
	24057	1713	Fire Station	1990
	24058	1632	Rescue Squadron Headquarters	1994
	24059	1605	Non-Air Force Administration Offices	1988
	24060	1630	Squadron Operations	1990
	24061	1613	Maintenance Shop Exchange	1982
	24062	1226	Base Engineering Administration	1983
	24063	1358	Squadron Operations	1980
	24064	1440	Medical Storage	1941
	24065	1540	Technical Training Laboratory and Shop	1945
	24066	1749	AERO Club	1956
	24067	1027	Precision Measurement Equipment Laboratory	1973
	24068	5030	Traffic Management Facility	1993
	24069	1144	Medium Aircraft Maintenance Dock	1959
	24070	5045	General Purpose Aircraft Shop	1960
	24071	5032	Housing Support and Storage Facility	1987
	24072	5126	Base Supply and Equipment Warehouse	1943
	24073	5111	Base Supply and Equipment Warehouse	1954
	24074	1237	U.S. Customs Office	Unknown
	24075	5010	Data Processing Installation	1983
	24076	5029	Traffic Management Facility	1993
	24077	5247	Squadron Operations	1953
	24078	5245	Jet Engine Inspection and Maintenance Shop	1970
	24080	5420	Group Headquarters	1953
	24081	5428	Reserve Forces Ground Training School	1992
	24082	5426	In-Flight Kitchen	1985
	24083	5600	Squadron Operations	1953
	24084	5500	Group Headquarters	1954
	24085	5406	Non-Destructive Inspection Shop	1971
	24086	5405	Air Force Office of Special Investigations	1968
	24087	5315	Base Engineering Administration	1941
	24088	5313	Base Engineering Administration	1941
	24089	5303	Base Engineering Storage Covered Facility	1983
	24090	4300	Base Engineering Administration	1953

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	24091	4201	Recreation Center	1953
	24092	4100	Airman's Detached Dining Hall	1953
	24093	5000	Service Outlet Exchange	1958
	24094	3426	Security Police Operations	1952
	24095	4153	Base Theater	1957
	24097	4351	Swimmers Bath House	1949
	24098	4455	Non-Commissioned Officers Open Mess	1958
	24099	4430	Morale, Welfare, Recreation Supply/ Non-Appropriated Fund Central Storage	4430
	24100	4531	Automotive Hobby Shop	1980
	24101	4532	Outdoor Recreation Pavillion	1985
	24102	4413	Squadron Operations	1983
	24103	4339	Recreational Library	1986
	24104	4432	Service Outlet Exchange	1972
	24105	4414	Base Supply and Equipment Warehouse	1972
	24106	2350	Visiting Officers Quarters	1968
	24107	2555	Family Housing Management Office	1988
	24108	500	Wherry Family Housing	1952
	24109	526	Wherry Family Housing	1952
	24110	632	Elementary School	Unknown
	24111	803	Wherry Family Housing	1952
	24112	805	Wherry Family Housing	1952
	24113	2050	Officers Open Mess	1957
	24114	4065	Visiting Officers Quarters	1959
	24115	4172	Family Housing APPR 50-69 (Officers Housing)	1957
	24116	4174	Family Housing APPR 50-69 (Officers Housing)	1957
	24117	4750	Recreation (Racketball Facility)	1981
	24118	4459	Golf Clubhouse/ Equipment	1969
	24119	4705	Vehicle Maintenance Shop	1953
	24120	4710	Weapon and Release System Shop	1967
	24121	4800	Squadron Operations	1953
	24122	4712	Aircraft Support Equipment Shop and Storage Facility	1970
	24123	4821	Fire Station	1955
	24124	4820	Base Operations	1955
	24125	4819	Air Passenger Terminal	1957
	24126	4826	Fleet Service Terminal	1988
	24127	4809	Small Aircraft Maintenance Dock	1971
	24128	4810	Weapons and Release Systems Shop	1970
	24129	5607	Small Aircraft Maintenance Dock	1971
	24130	5605	Squadron Operations	1966
	24131	5430	Small Aircraft Maintenance Dock	1984
	24132	4859	Base Supply and Equipment Warehouse	1986
	24133	4816	Federal Aviation Administration	Unknown

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	24134	4824	Survival Equipment Shop	1955
	24135	4853	Squadron Operations	1956
	24136	4851	Squadron Operations	1953
	24137	4857	Petroleum Operations Building	1972
	24138	4850	Squadron Operations	1953
	24139	100	Locomotive Shop Shelter	1993
	24140	127	Group Headquarters	1955
	24141	130	Weapons System Maintenance Management Facility	1956
	24145	129	Medium Aircraft Maintenance Dock	1955
	24146	136	Fuel Systems Maintenance Dock	1986
	24147	131	Flight Simulator Training	1968
	24148	165	Range Control House	1952
	24151	184	Munitions Maintenance Administration	1956
	24152	144	Security Police Kennel Support Building	1956
	24153	1244	Medium Aircraft Maintenance Dock	1959
	24154	1246	Base Supply and Equipment Warehouse	1967
	24155	1446	Air Force Communications System Maintenance Facility	1970
	24156	1750	Small Aircraft Maintenance Dock	1990
	24157	75	Security Police Operations	1988
	24158	6040	Branch Exchange	1993
	24159	6000	Youth Center	1988
	24160	6350	Frank Borman Elementary School	Unknown
	24161	6755	Family Housing APPR FY 70A	1975
	24162	6757	Family Housing APPR FY 70A	1975
	24163	6728	Family Housing APPR FY 70A	1975
	24164	6200	Family Housing APPR FY 70A	1972
	24166	404	Material Services	1941
	24167	417	Reserve Forces Operational Training	1982
	24168	400	Composite Medical	1961
	24169	413	Air Force Clinic	1990
	24170	306	Control Tower	1989
	24171	343	Observation Tower	1981
	24177	None	12th Air Force Command Headquarters	1994
	24184	146	Security Police Entry Control Building	1983
Real Property - Landscape				
	24036	75006	Athletic Field Track	1988
	24046	10022	Athletic Field Baseball	1972
Real Property - Object				
	24003	None	Missile Stages (AMARC)	Unknown
	24005	None	B-52 (whole) (AMARC)	Unknown
	24006	None	B-52 (chopped) (AMARC)	Unknown
	24007	None	Guillotine used for B-52s and other aircraft (AMARC)	Unknown

Table A.1 (Continued).

Resource Category	Resource No.	Real Property		Year Completed
		No.	Property Type	
	24013	None	B-52s (AMARC)	Unknown
	24079	76006	Static Display (F-86 Sabre Jet)	Unknown
	24172	76003	Static Display (F-100 Super Sabre - Warrior Park)	Unknown
	24173	76003	Static Display (A-7D Corsair II - Warrior Park)	Unknown
	24174	76003	Static Display (F-4 Phantom - Warrior Park)	Unknown
	24175	76003	Static Display (F-105 Thunderbird - Warrior Park)	Unknown
	24176	76003	Static Display (A-10 Warthog - Warrior Park)	Unknown
	24178	76003	Static Display (B-52-Warrior Park)	Unknown
	24179	76003	Static Display (GLCM Memorial and Helicopter - Warrior)	Unknown
	24180	76003	Static Display (C-130 Hercules and OV-10 - Warrior Park)	Unknown
	24181	76003	Static Display (U-2-Warrior Park)	Unknown
Real Property - Site				
	24004	None	GLCM Dismantling Area (AMARC)	Unknown
	24165	6999	Trailer Court Parking	1975
Real Property - Structure				
	24096	4340	Water Tank Storage	1941
	24142	10166	Jet Fuel Storage	1955
	24143	10167	Jet Fuel Storage	1955
	24144	10168	Jet Fuel Storage	1955
	24149	75046	Riding Stables	Unknown
	24150	157	Storage Igloo	1952
Record or Document - Object				
	24182	None	Wing Historians Office Collection	Various
	24183	None	Architectural Drawings	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

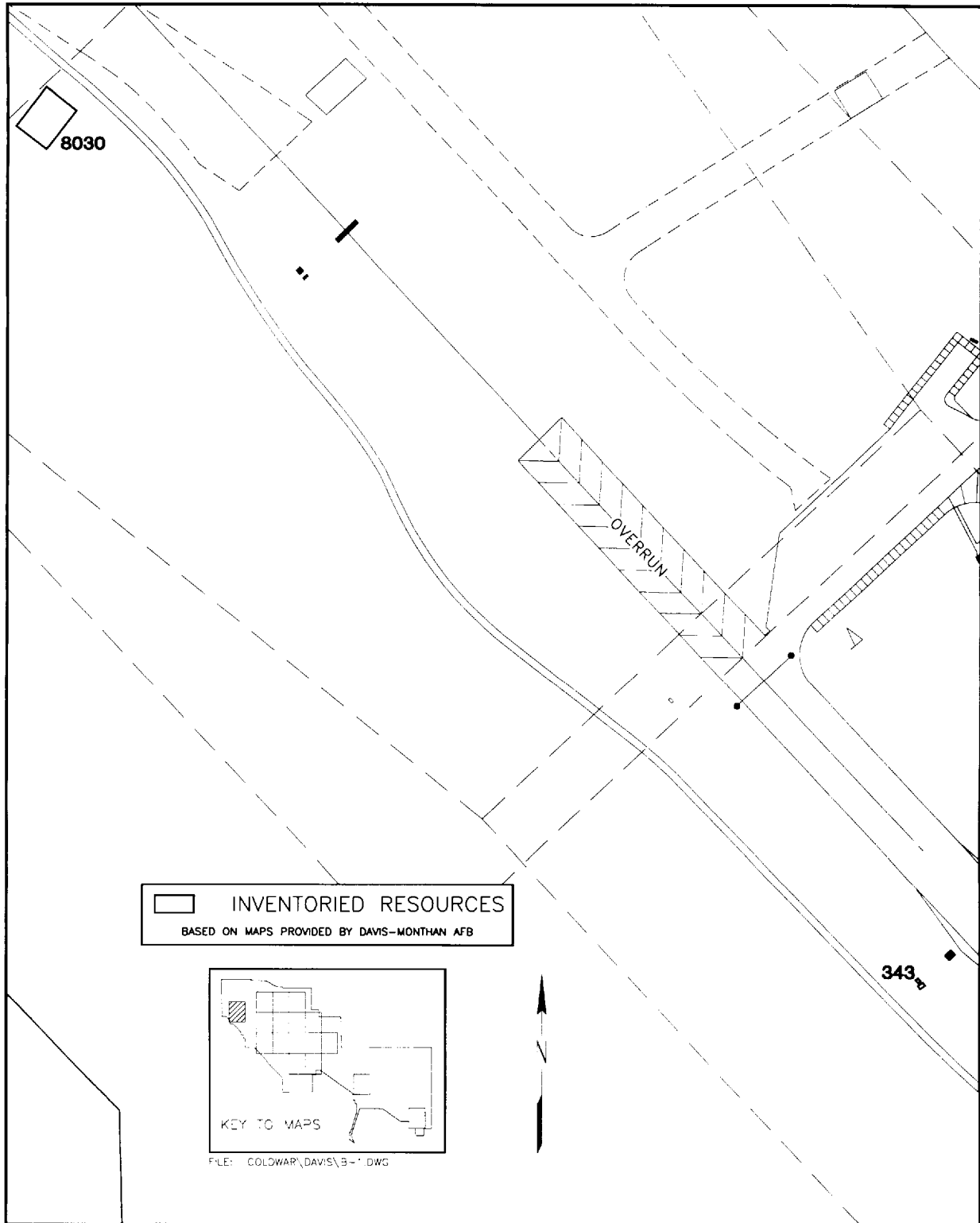


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 14).

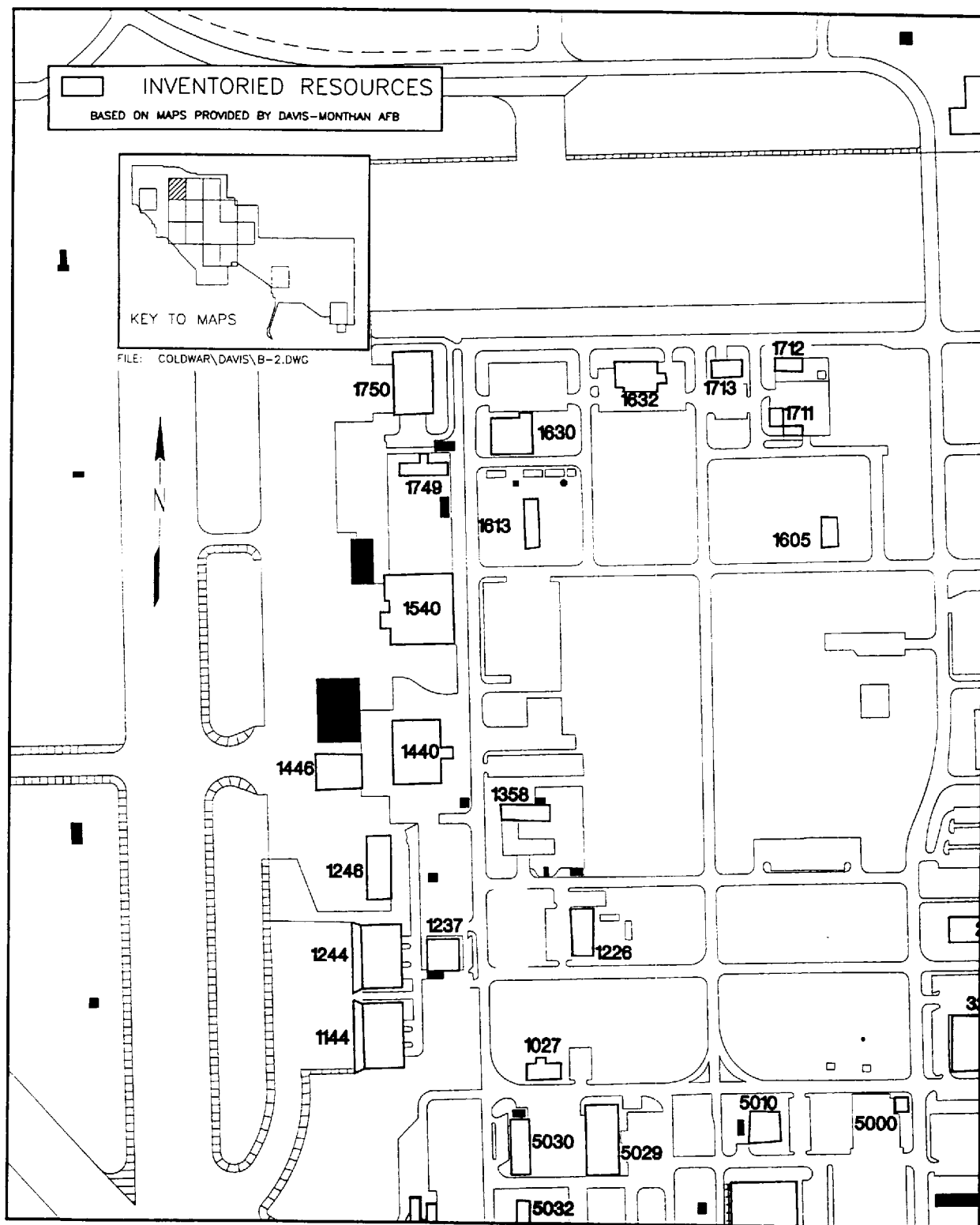


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 14).

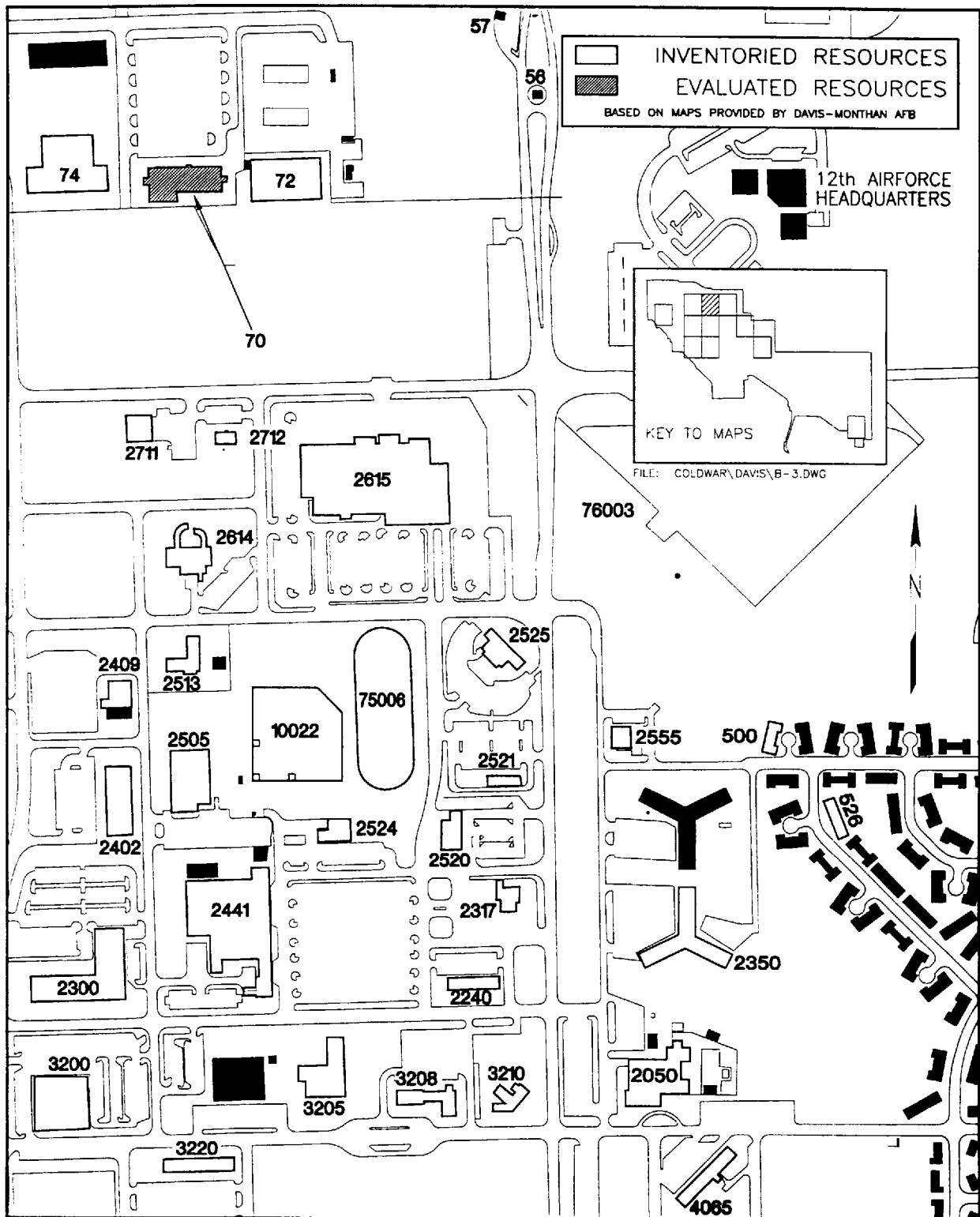


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 14).

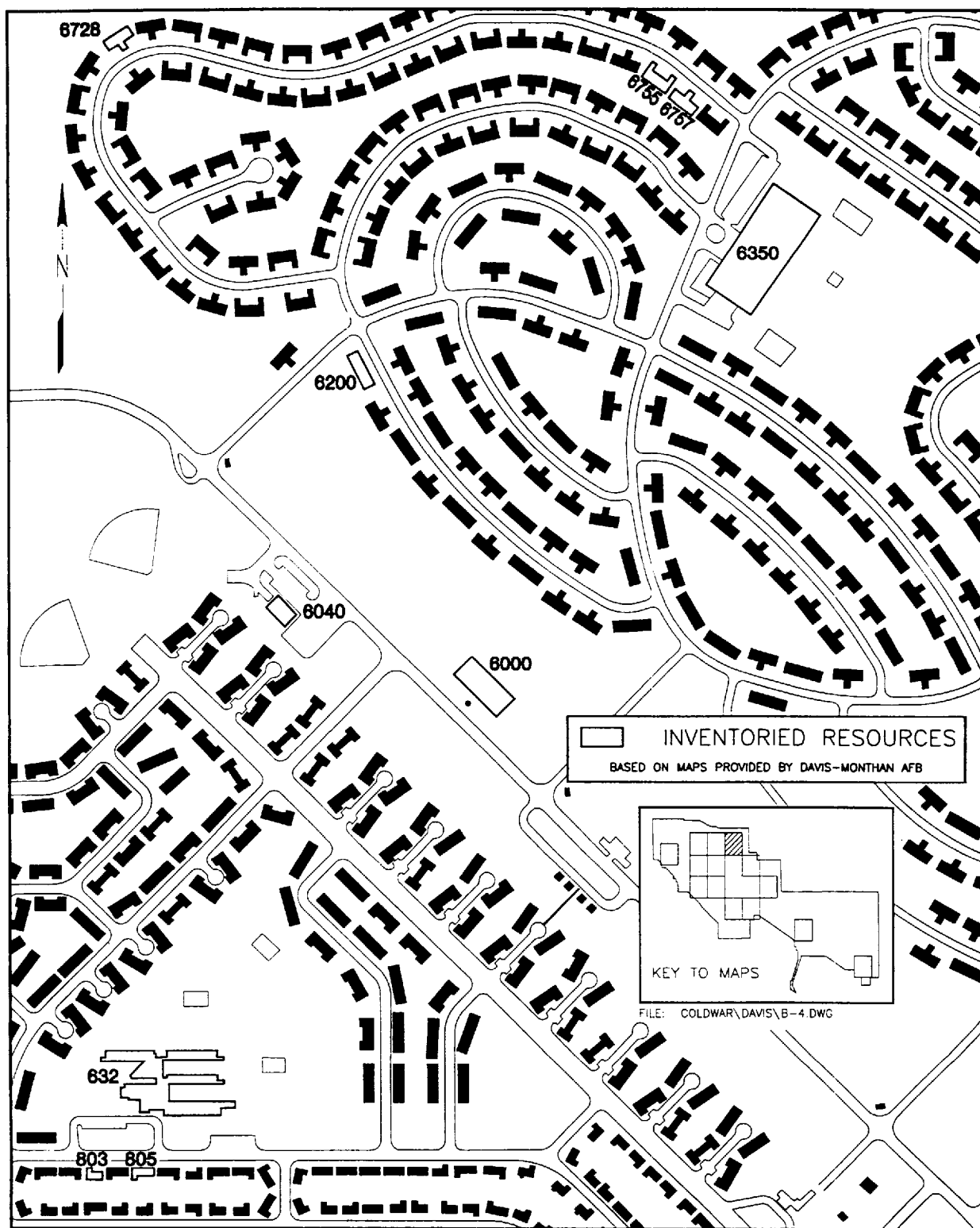


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 14).

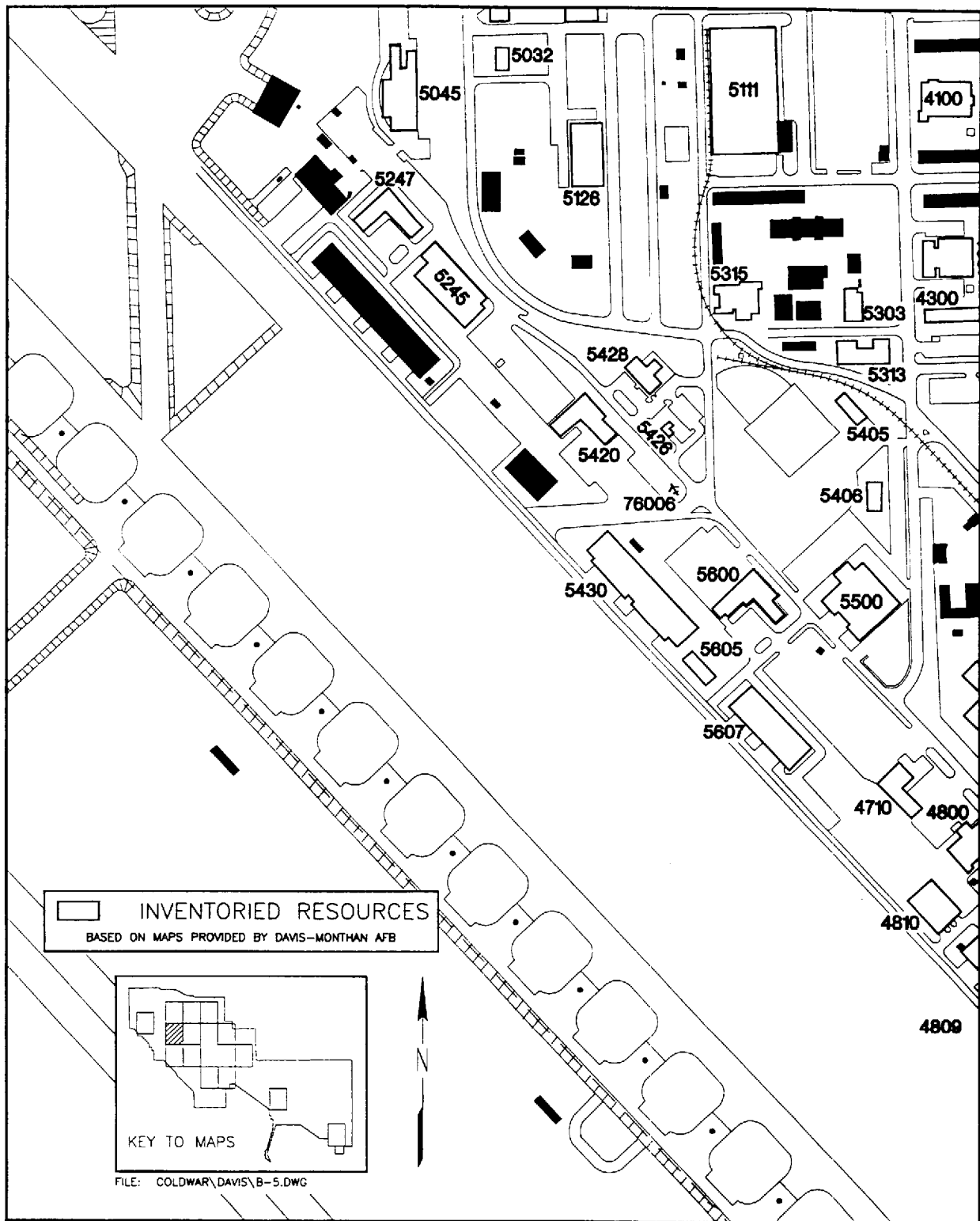


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 14).

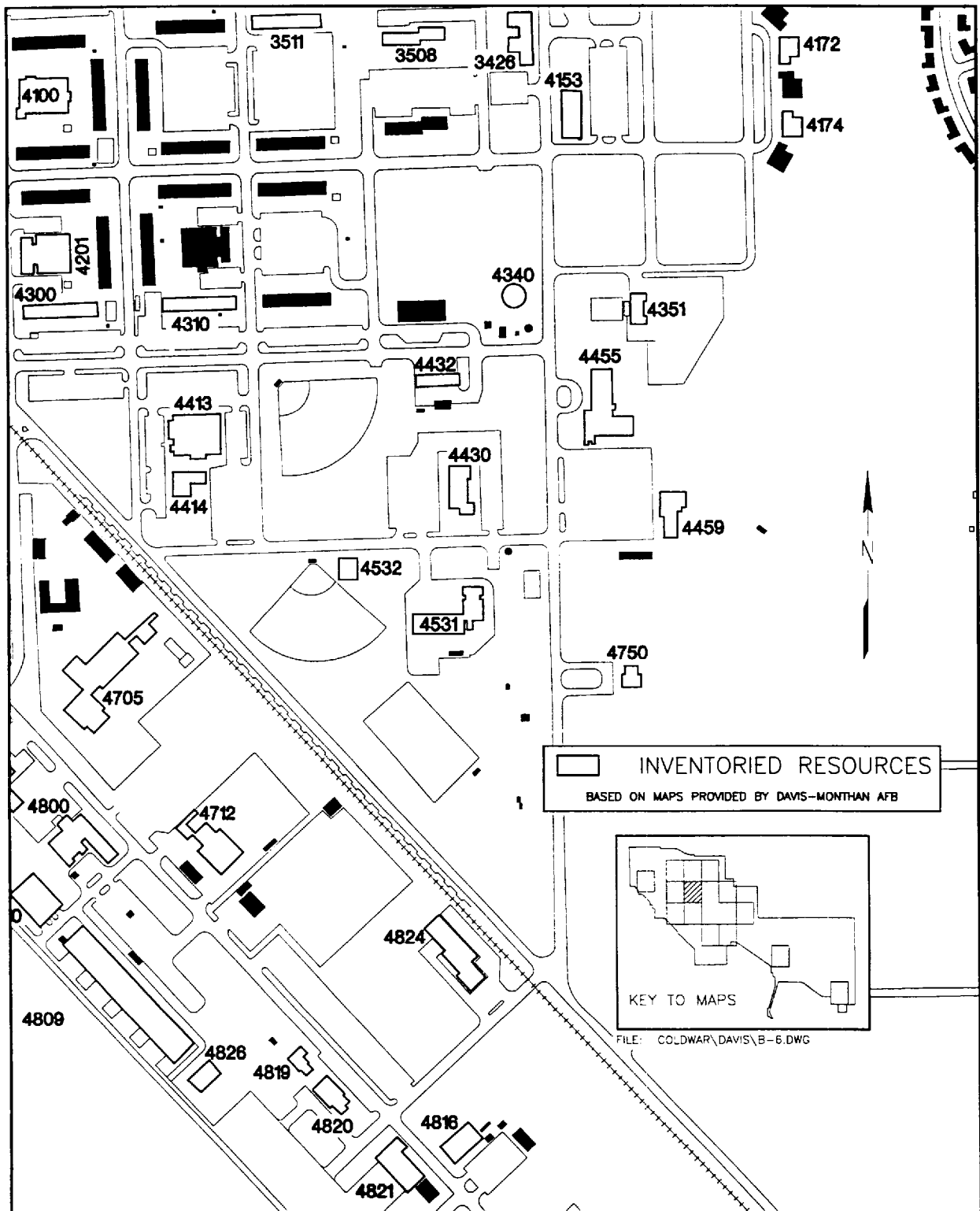


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 14).

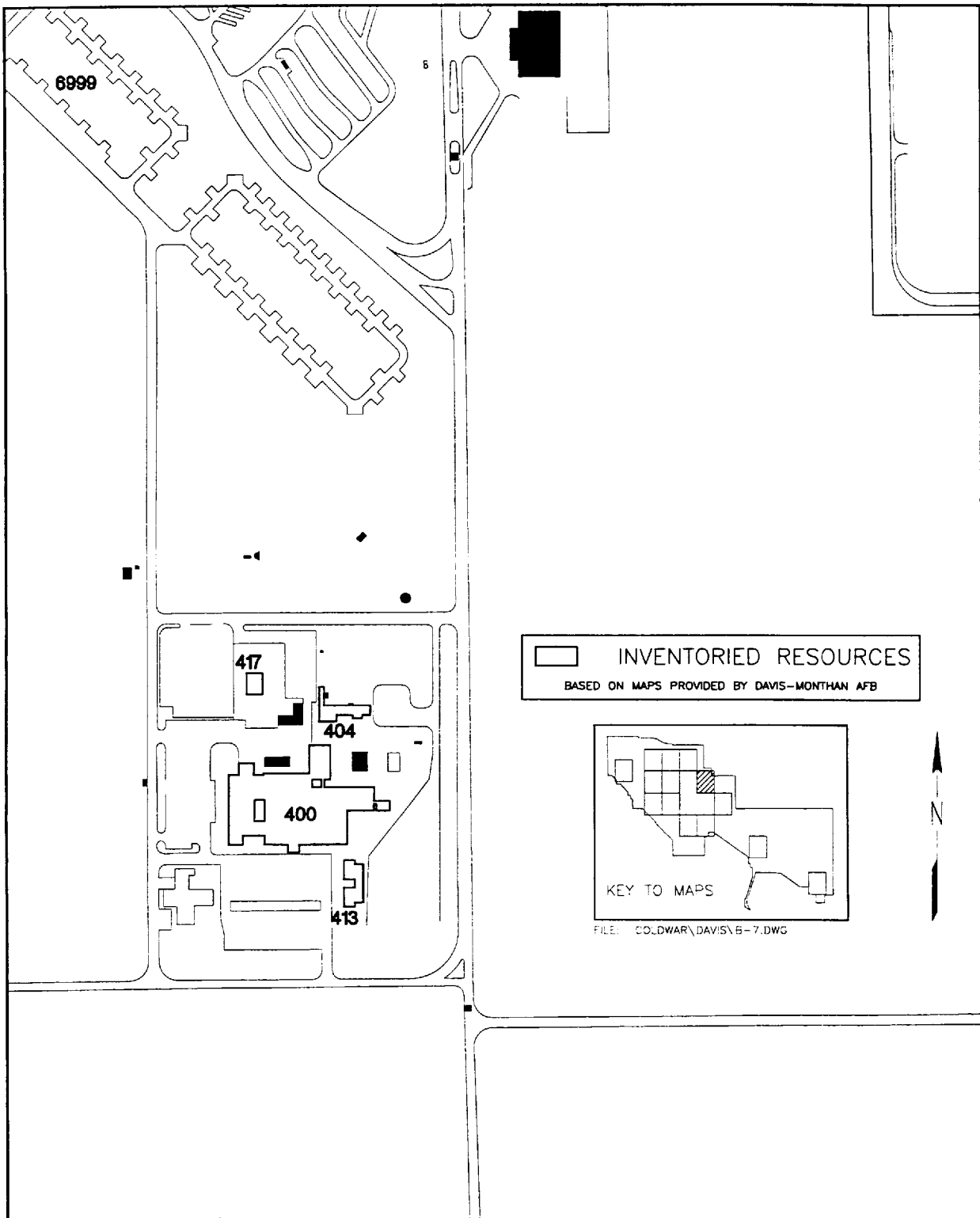


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 14).

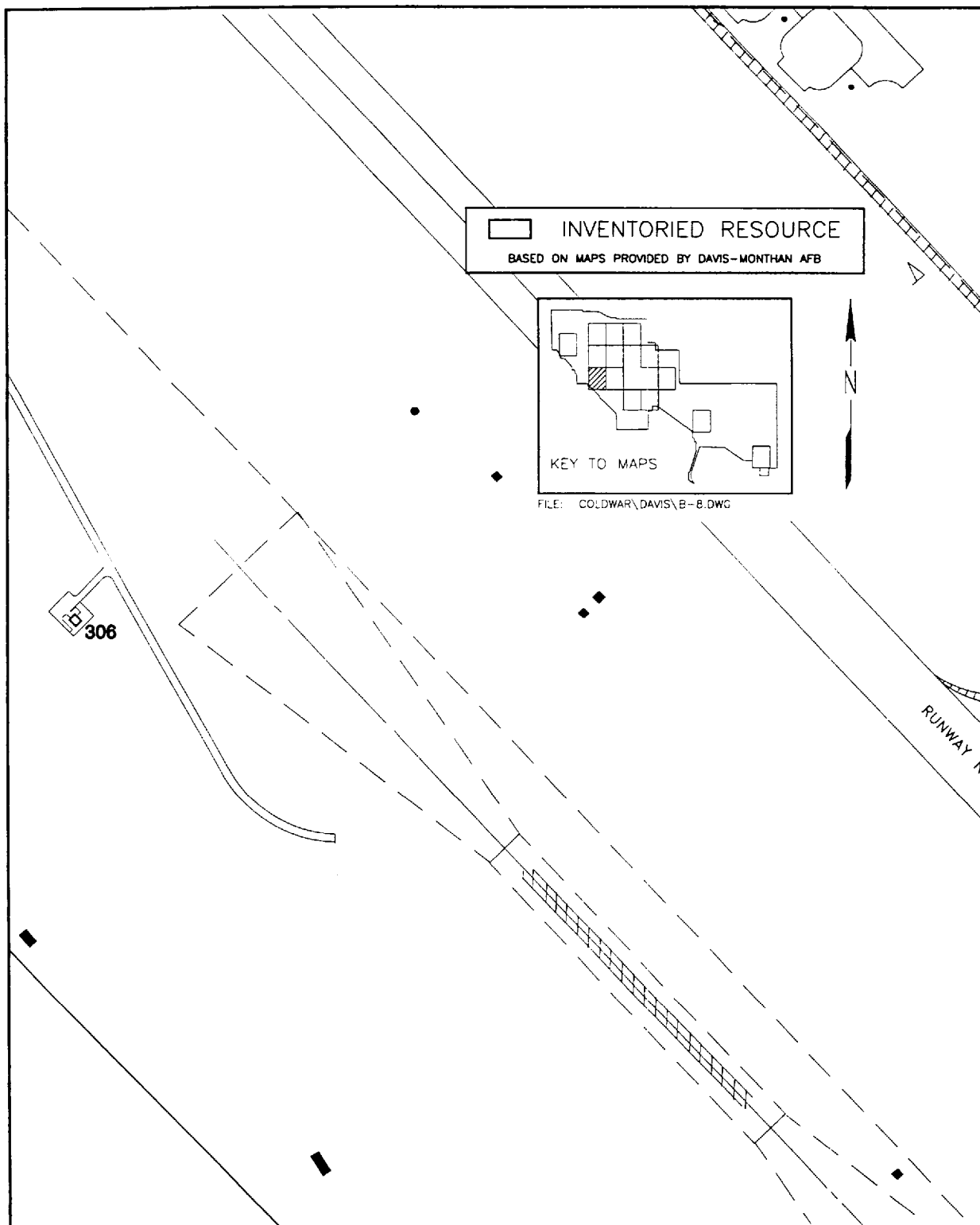


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 14).

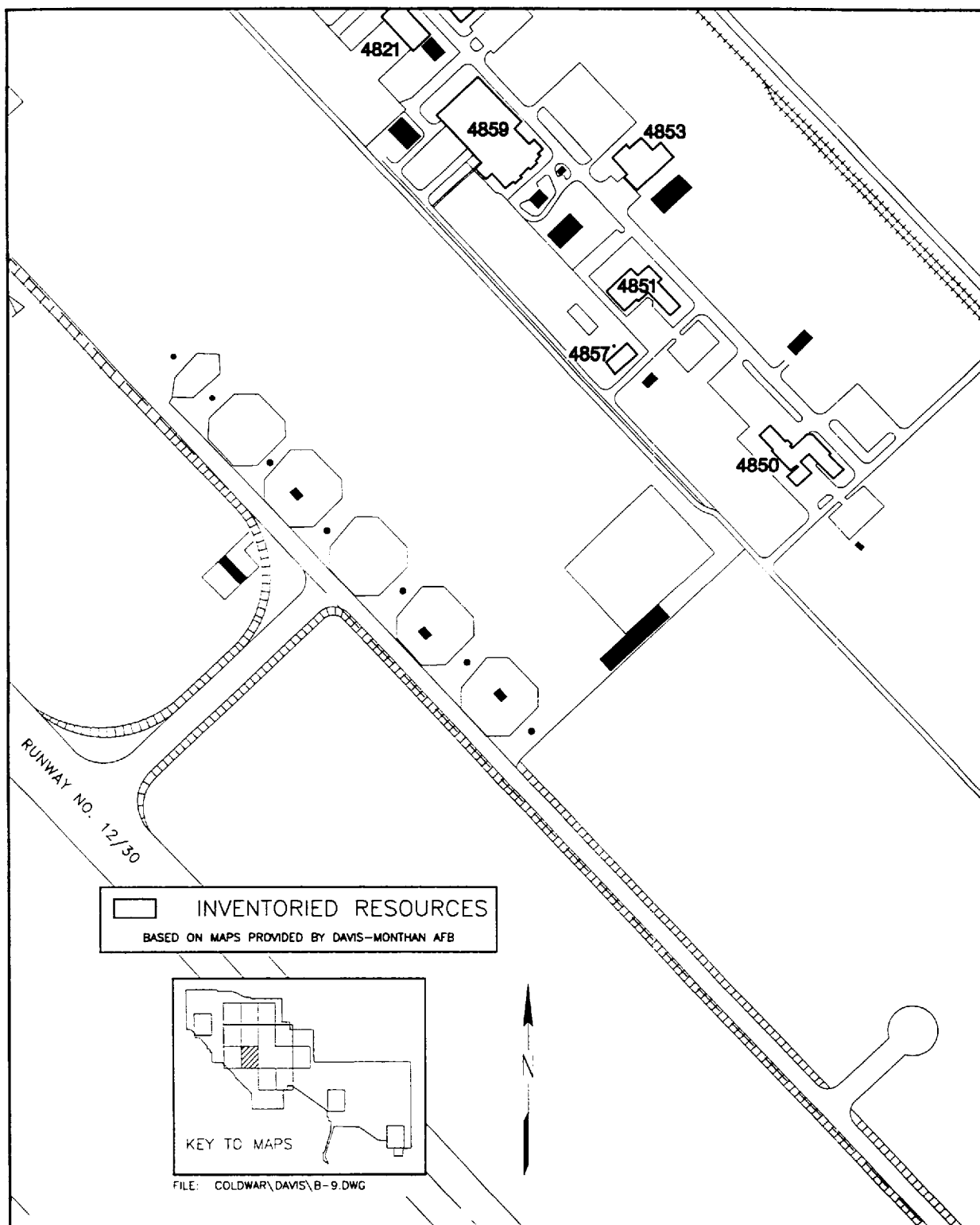


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 14).

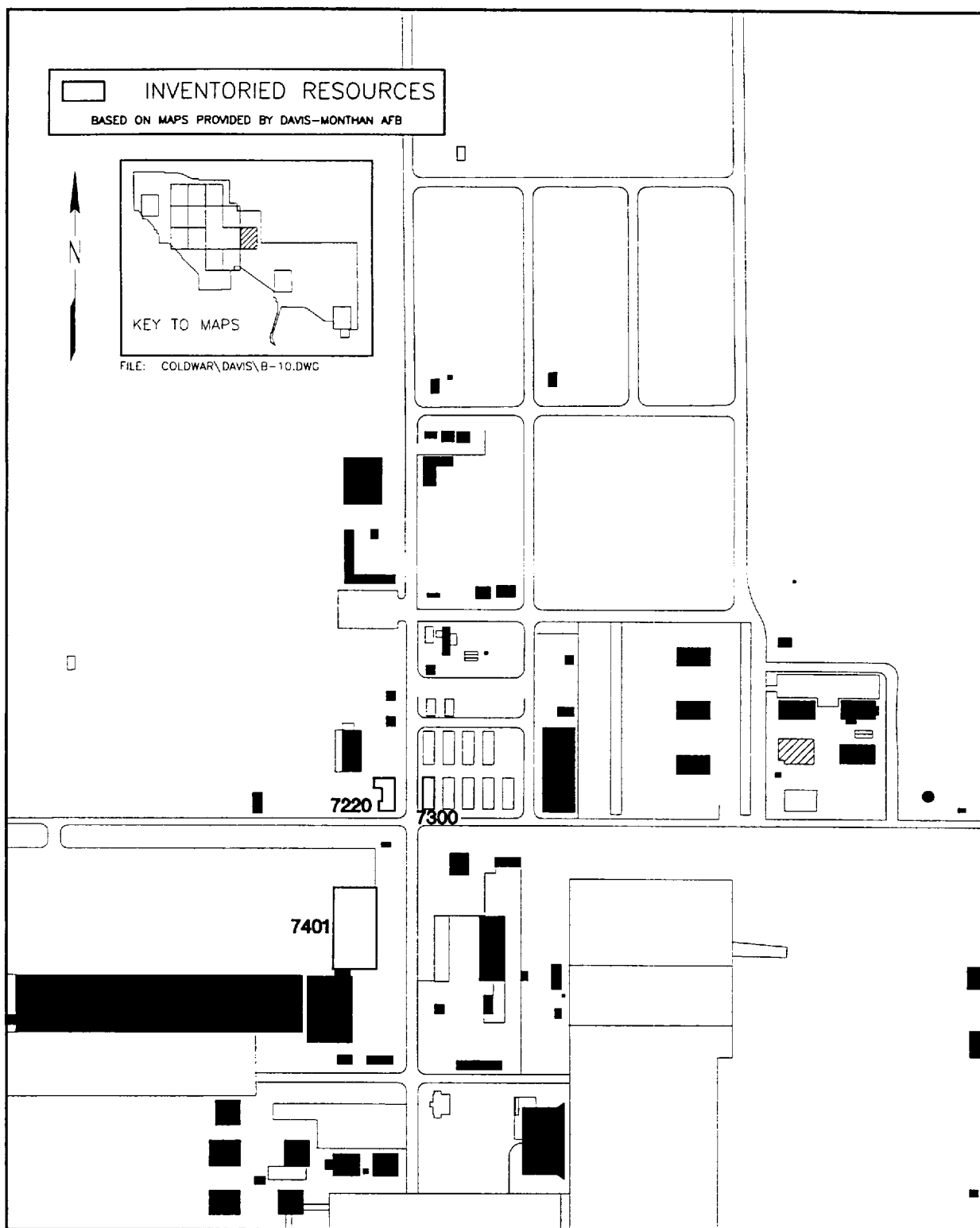


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 10 of 14).

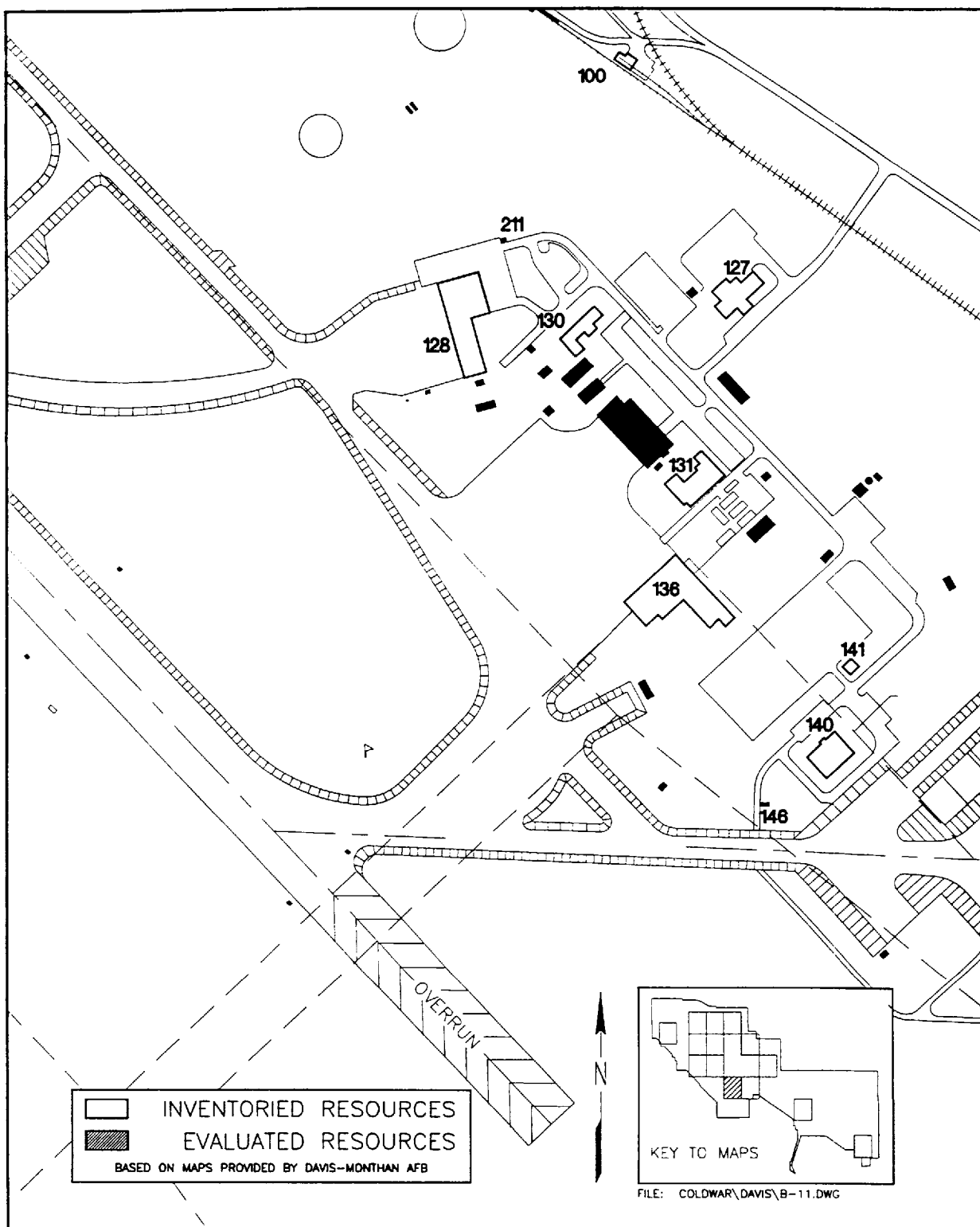


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 11 of 14).

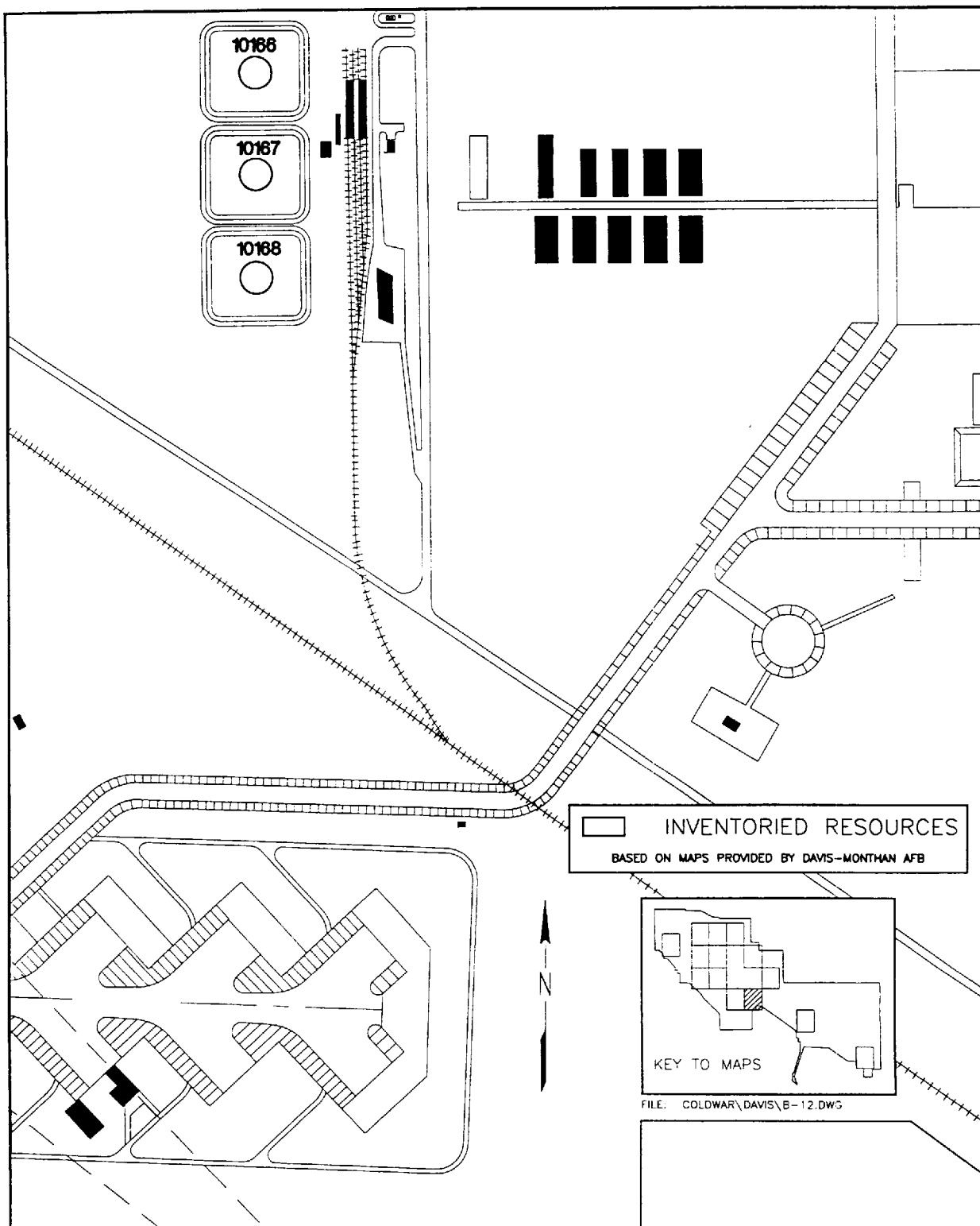


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 12 of 14).

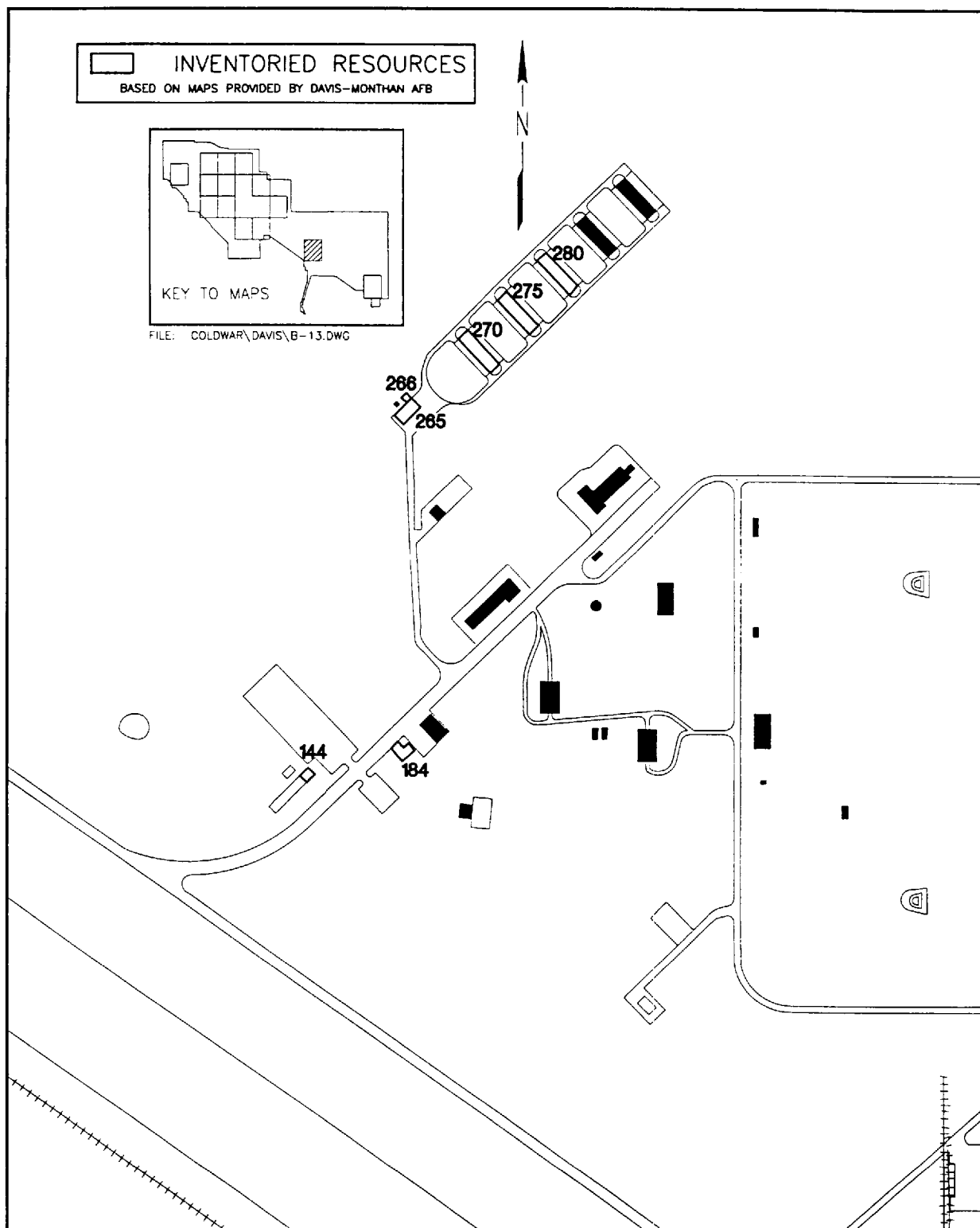


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 13 of 14).

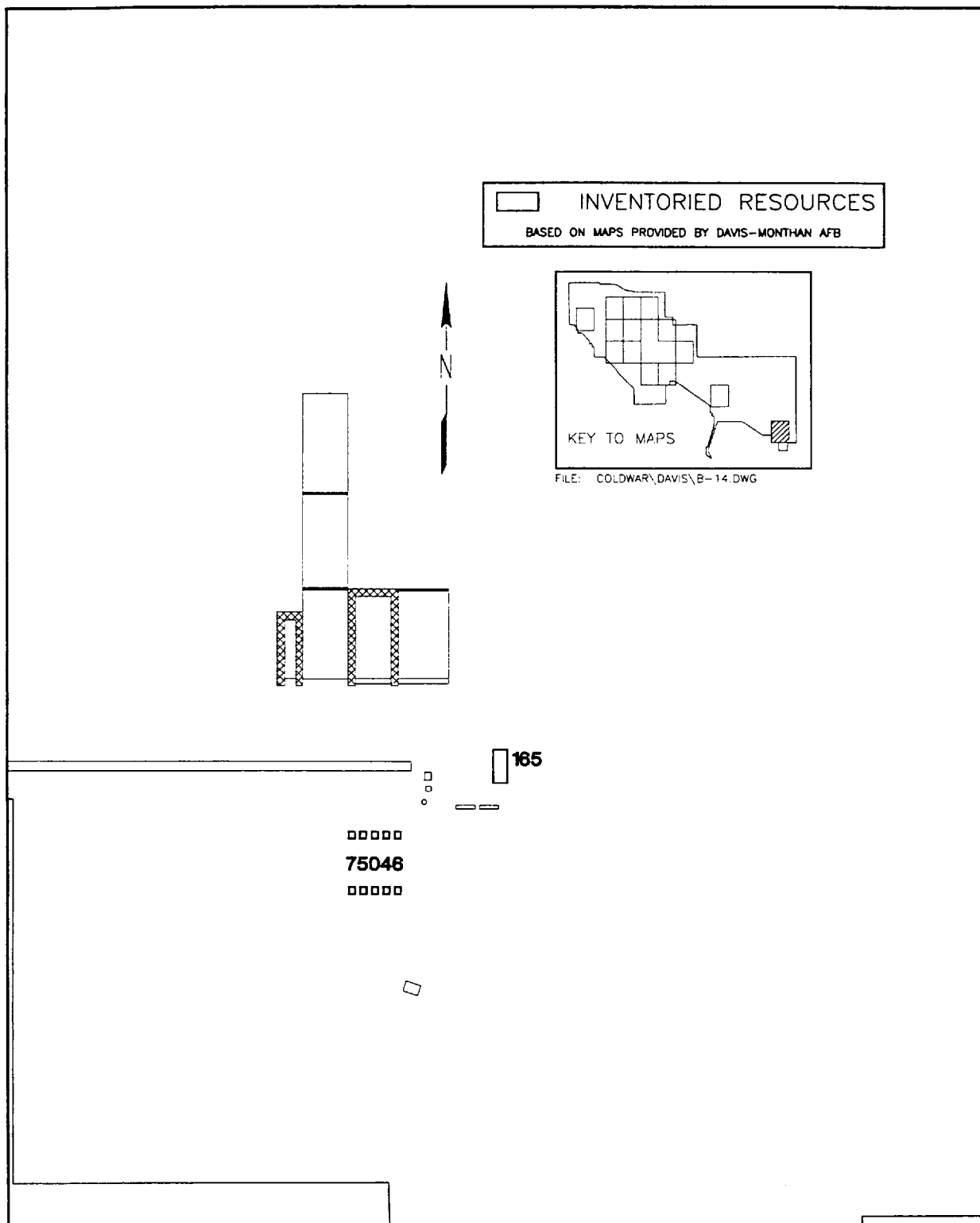
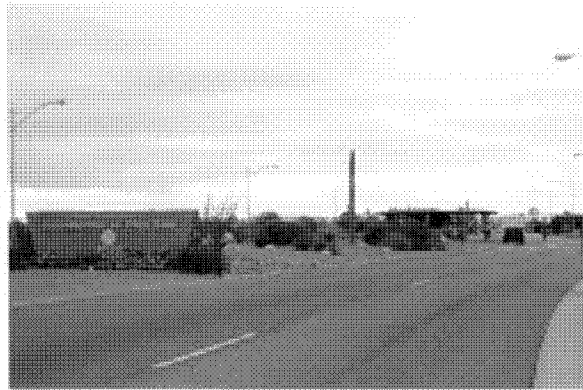


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 14 of 14).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



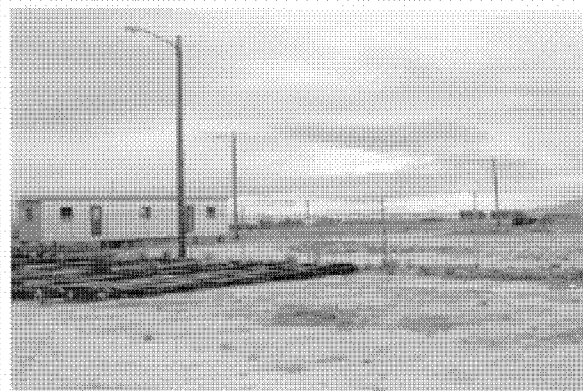
Resource No. 24001, Real Property No. 57
Security Police Identification Control



Resource No. 24002, Real Property No. 56
Traffic Check House



Resource No. 24003, Real Property No. (none)
Missile Stages (AMARC Area)



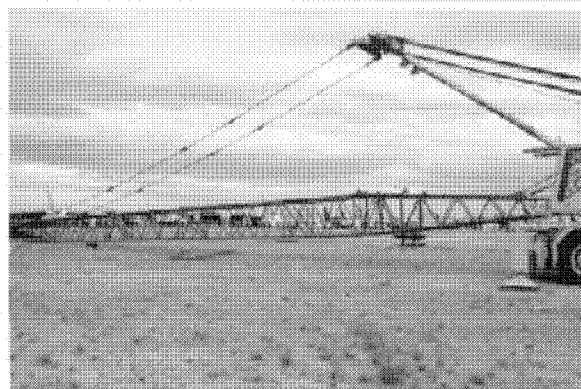
Resource No. 24004, Real Property No. (none)
GLCM Dismantling Area (AMARC Area)



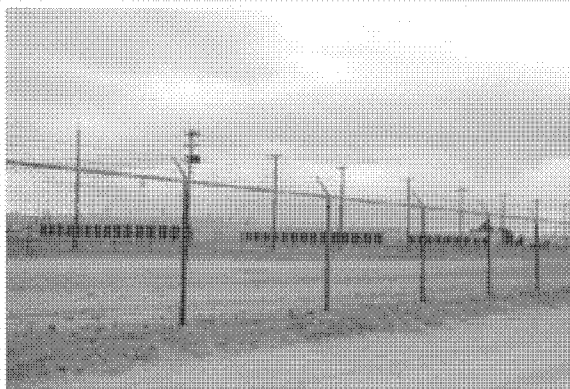
Resource No. 24005, Real Property No. (none)
B-52 (AMARC Area)



Resource No. 24006, Real Property No. (none)
Chopped B-52 (AMARC Area)



Resource No. 24007, Real Property No. (none)
Guillotine Used for B-52s and Other Aircraft
(AMARC Area)



Resource Nos. 24008-24012, Real Property Nos.
266, 265, 270, 275, and 280, Rocket Check
Assembly Storages - Conventional Munitions
Shops and Munitions Cubicles - Magazine
Storages



Resource No. 24013, Real Property No. (none)
B-52s (AMARC Area)



Resource No. 24014, Real Property No. 7300
General Purpose Aircraft Shop (AMARC Area)



Resource No. 24015, Real Property No. 7401
Base Supply Equipment Warehouse (AMARC
Area)



Resource No. 24016, Real Property No. 7220
General Purpose Aircraft Shop (AMARC Area)



Resource No. 24017, Real Property No. 140
Squadron Operations (Crew Readiness)



Resource No. 24018, Real Property No. 141
Base Supply and Equipment Shed (Traffic Check
House)



Resource No. 24019, Real Property No. 8004
Missile Launch Facility (Titan Missile Museum)



Resource No. 24022, Real Property No. 2300
Wing Headquarters



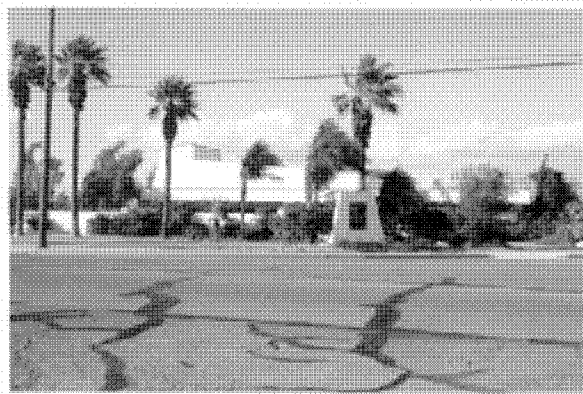
Resource No. 24023, Real Property No. 3200
Base Personnel Office



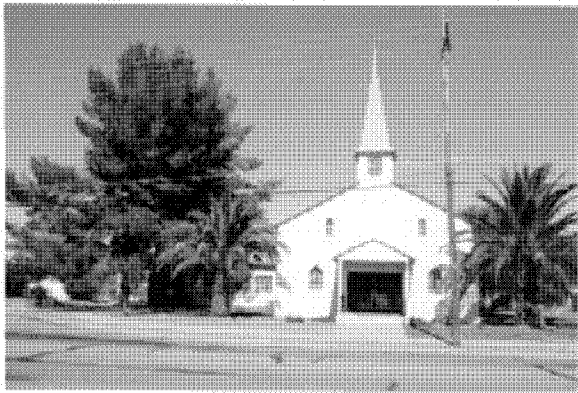
Resource No. 24024, Real Property No. 3203
Bowling Center



Resource No. 24025, Real Property No. 3220
Thrift Shop



Resource No. 24026, Real Property No. 3205
Chapel Center (Chapel 1)



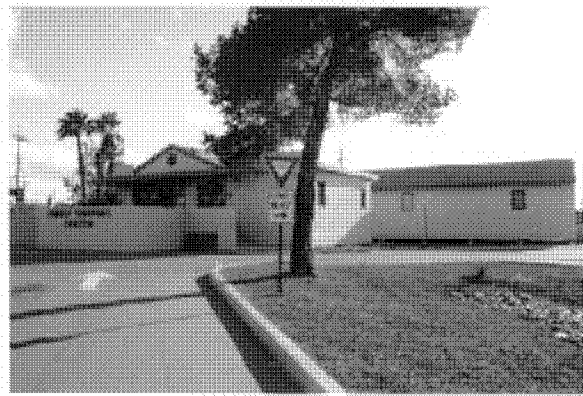
Resource No. 24027, Real Property No. 3208
Chapel Center (Chapel 2)



Resource No. 24028, Real Property No. 3508
Permanent Party Airman's Dormitory



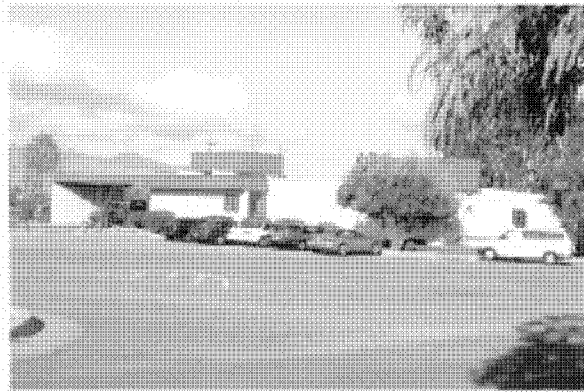
Resource No. 24029, Real Property No. 3511
Visiting Airman's Quarters Dormitory



Resource No. 24030, Real Property No. 3210
Family Support Center



Resource No. 24031, Real Property No. 2240
Post Office Center



Resource No. 24032, Real Property No. 2317
Branch Bank



Resource No. 24033, Real Property No. 2520
Davis-Monthan Federal Credit Union



Resource No. 24034, Real Property No. 2521
Fast Food Service (Burger King)



Resource No. 24035, Real Property No. 2525
Group Headquarters (Operational Contracting)



Resource No. 24036, Real Property No. 75006
Athletic Field Track



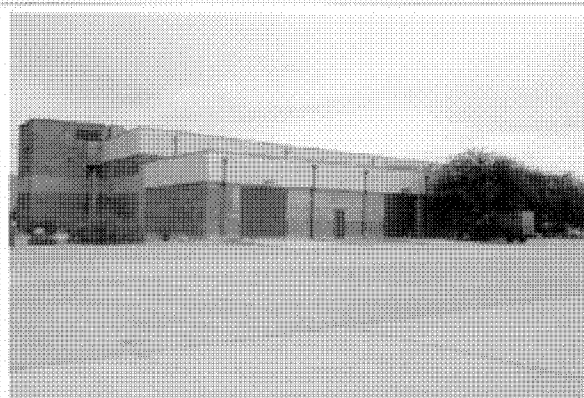
Resource No. 24037, Real Property No. 4310
Group Headquarters (Command Post)



Resource No. 24038, Real Property No. 128
Aircraft Shelter (Crew Readiness)



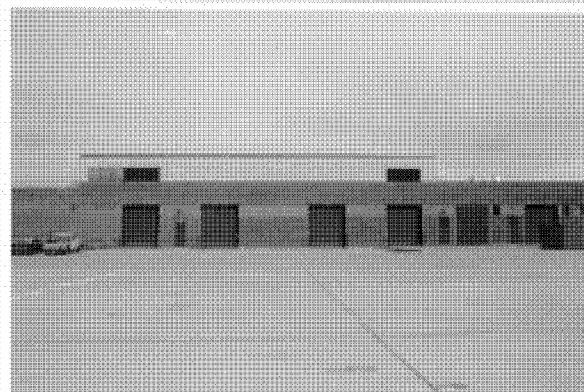
Resource No. 24039, Real Property No. 211
Traffic Checkhouse



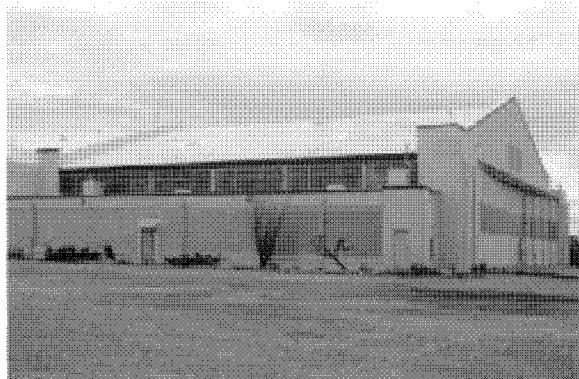
Resource No. 24040, Real Property No. 70
Numbered Air Force Headquarters (GLCM
Headquarters)



Resource No. 24041, Real Property No. 74
Air Force Communications System Maintenance
Facility



Resource No. 24042, Real Property No. 72
Vehicle Maintenance Shop (GLCM Maintenance)



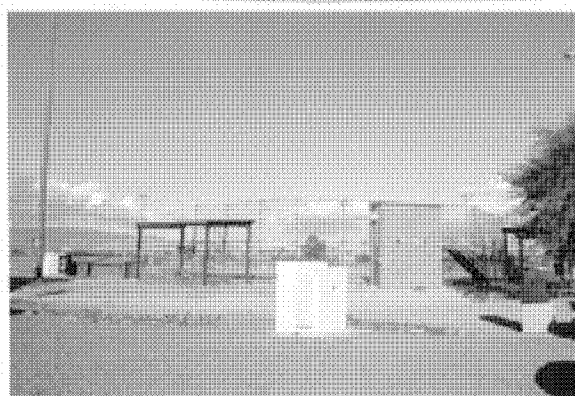
Resource No. 24043, Real Property No. 8030
Reserve Forces Ground Training Storage



Resource No. 24044, Real Property No. 2524
Branch Exchange



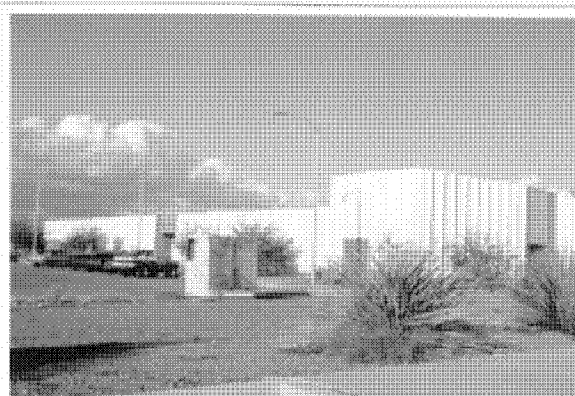
Resource No. 24045, Real Property No. 2441
Sales Store Exchange



Resource No. 24046, Real Property No. 10022
Athletic Field Baseball



Resource No. 24047, Real Property No. 2505
Gymnasium



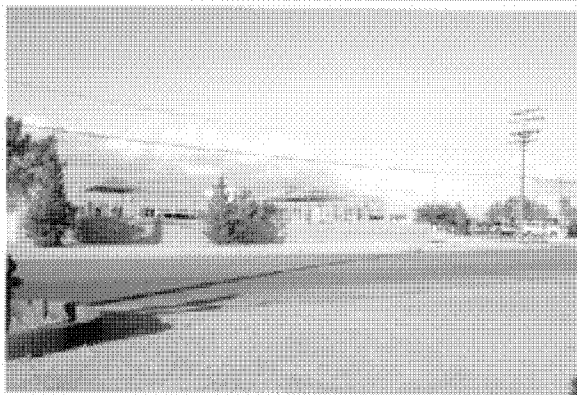
Resource No. 24048, Real Property No. 2402
Field Training Facility



Resource No. 24049, Real Property No. 2409
Base Package Store



Resource No. 24050, Real Property No. 2513
Service Station Exchange



Resource No. 24051, Real Property No. 2614
Child Care Center



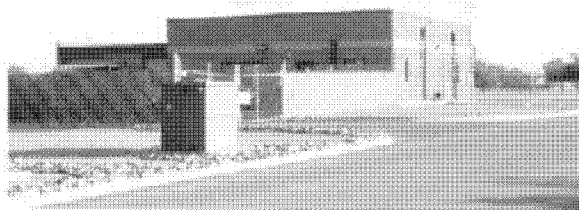
Resource No. 24052, Real Property No. 2615
Commissary Store



Resource No. 24053, Real Property No. 2712
Medical Food Inspection, Veterinary Clinic



Resource No. 24054, Real Property No. 2711
Troop Subsistence Warehouse



Resource No. 24055, Real Property No. 1711
Base Supply and Equipment Warehouse



Resource No. 24056, Real Property No. 1712
Squadron Operations



Resource No. 24057, Real Property No. 1713
Fire Station



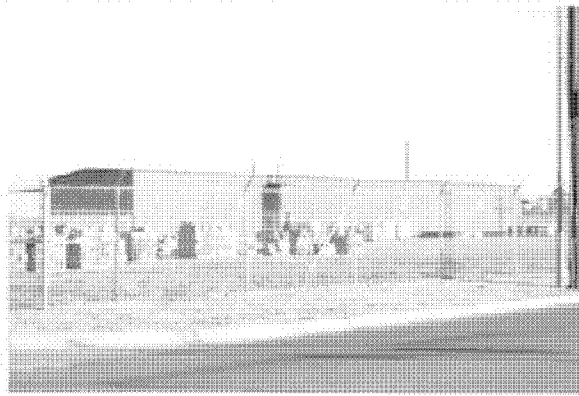
Resource No. 24058, Real Property No. 1632
Rescue Squadron Headquarters



Resource No. 24059, Real Property No. 1605
NAF Administration Offices



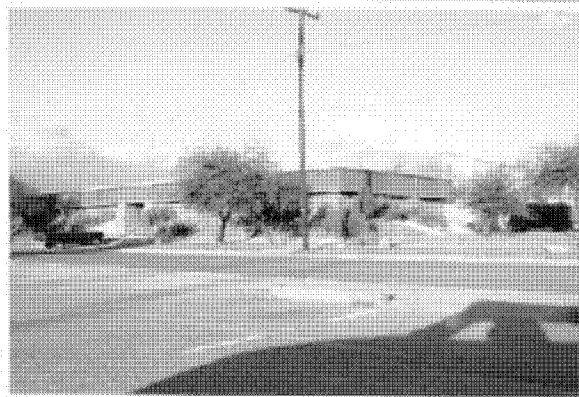
Resource No. 24060, Real Property No. 1630
Squadron Operations



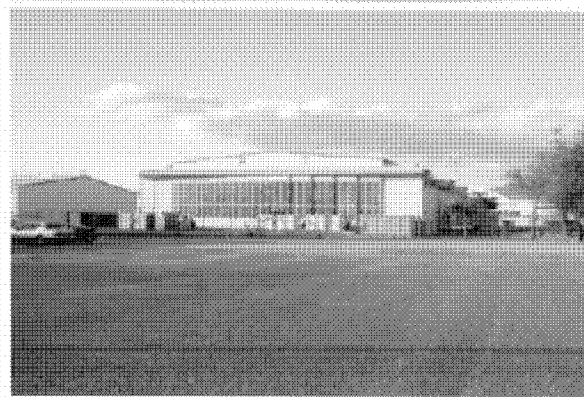
Resource No. 24061, Real Property No. 1613
Maintenance Shop Exchange



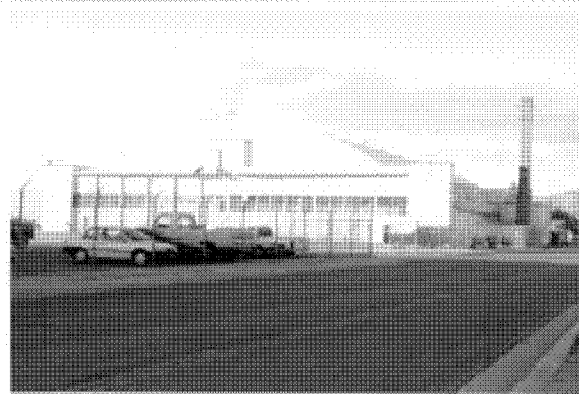
Resource No. 24062, Real Property No. 1226
Base Engineering Administration



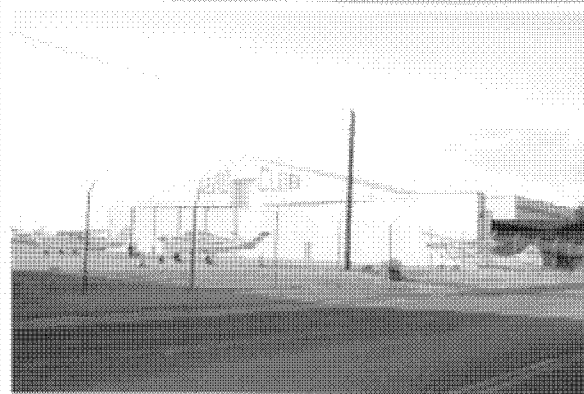
Resource No. 24063, Real Property No. 1358
Squadron Operations



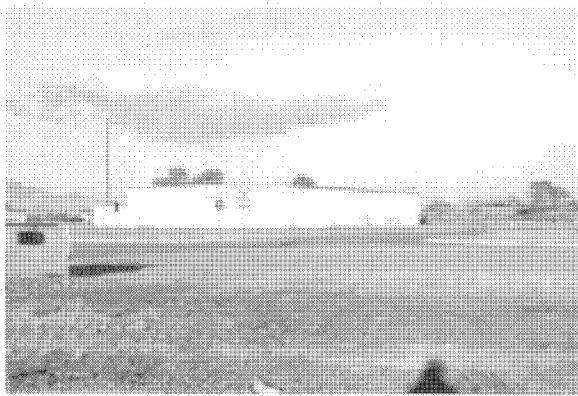
Resource No. 24064, Real Property No. 1440
Medical Storage



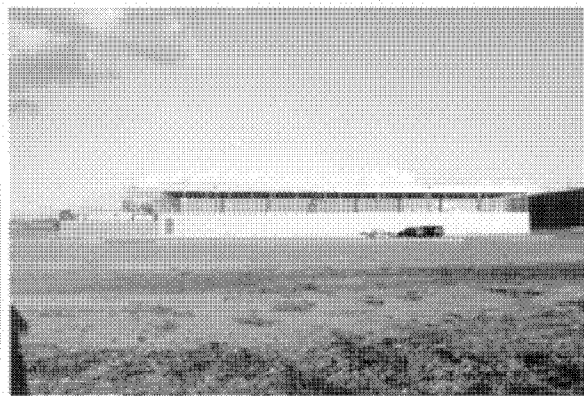
Resource No. 24065, Real Property No. 1540
Technical Training Laboratory and Shop



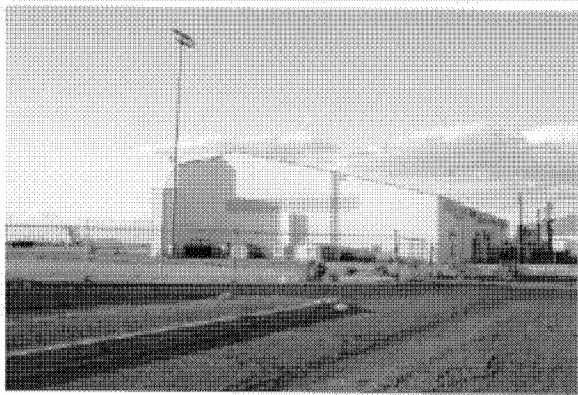
Resource No. 24066, Real Property No. 1749
AERO Club



Resource No. 24067, Real Property No. 1027
Precision Measurement Equipment Laboratory



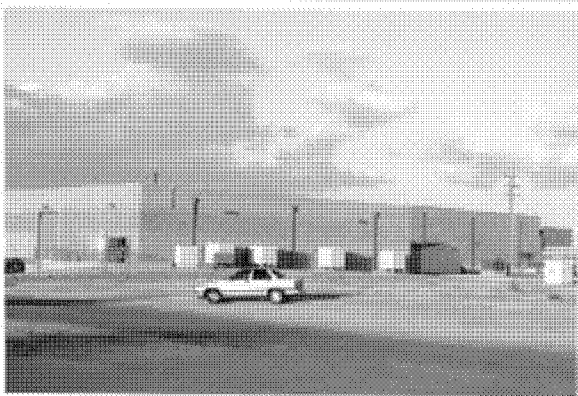
Resource No. 24068, Real Property No. 5030
Traffic Management Facility



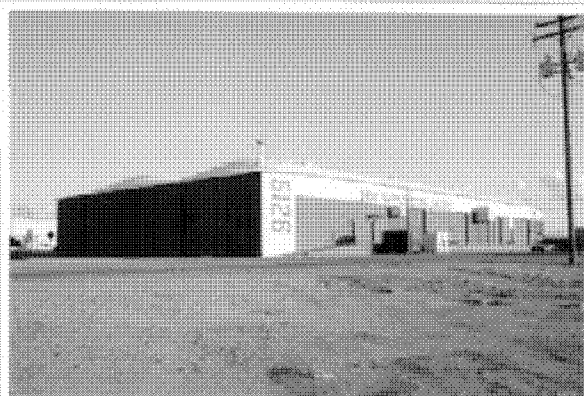
Resource No. 24069, Real Property No. 1144
Medium Aircraft Maintenance Dock



Resource No. 24070, Real Property No. 5045
General Purpose Aircraft Shop



Resource No. 24071, Real Property No. 5032
Housing Support and Storage Facility



Resource No. 24072, Real Property No. 5126
Base Supply and Equipment Warehouse



Resource No. 24073, Real Property No. 5111
Base Supply and Equipment Warehouse



Resource No. 24074, Real Property No. 1237
U.S. Customs Office



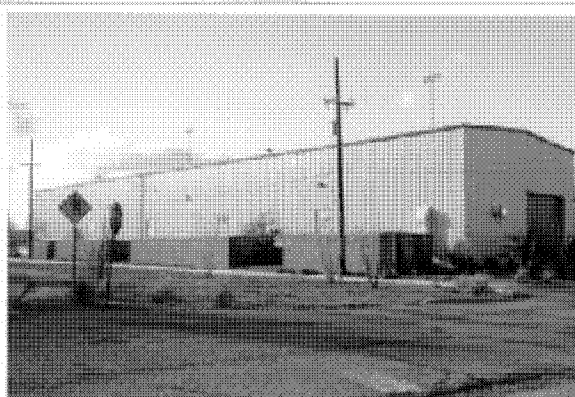
Resource No. 24075, Real Property No. 5010
Data Processing Installation



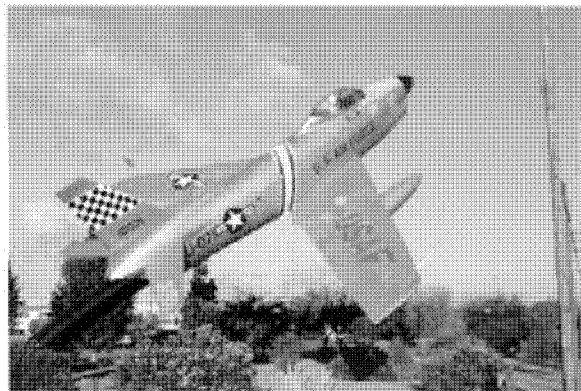
Resource No. 24076, Real Property No. 5029
Traffic Management Facility



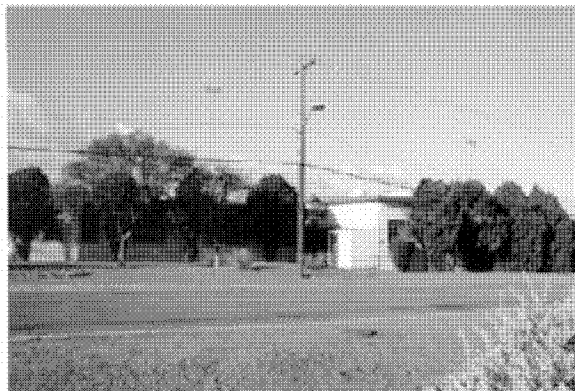
Resource No. 24077, Real Property No. 5247
Squadron Operations



Resource No. 24078, Real Property No. 5245
Jet Engine Inspection and Maintenance Shop



Resource No. 24079, Real Property No. 76006
Static Display (F-86 Sabre Jet)



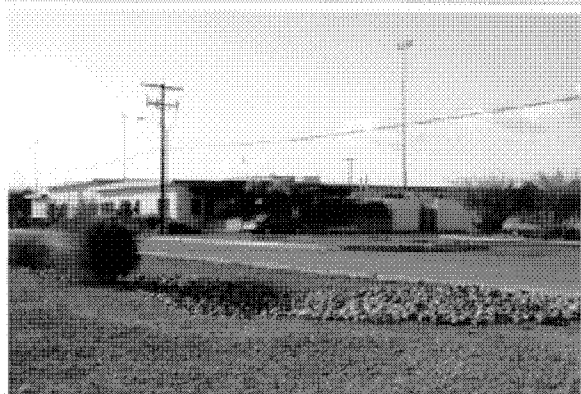
Resource No. 24080, Real Property No. 5420
Group Headquarters



Resource No. 24081, Real Property No. 5428
Reserve Forces Ground Training School



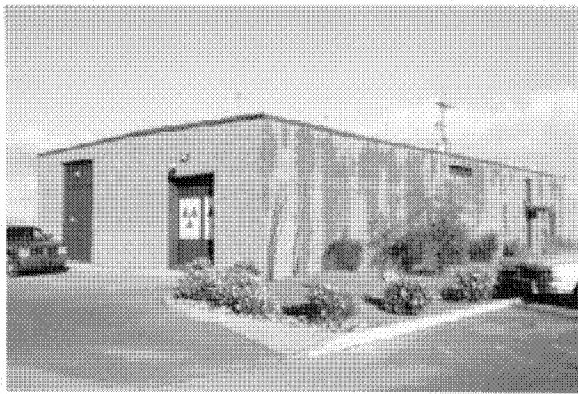
Resource No. 24082, Real Property No. 5426
In-Flight Kitchen



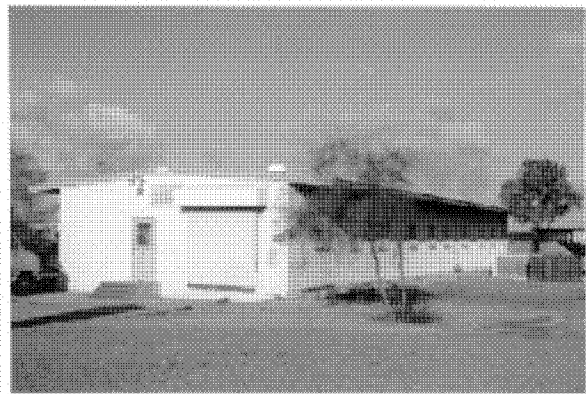
Resource No. 24083, Real Property No. 5600
Squadron Operations



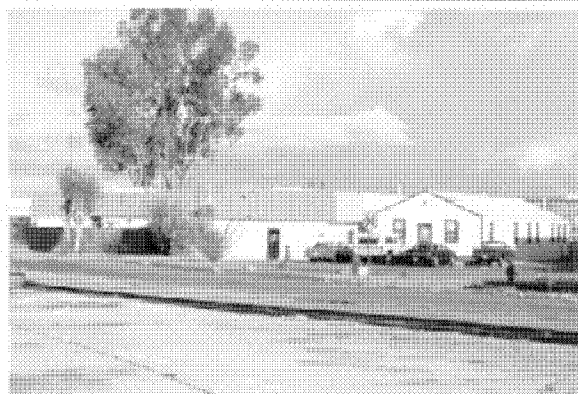
Resource No. 24084, Real Property No. 5500
Group Headquarters



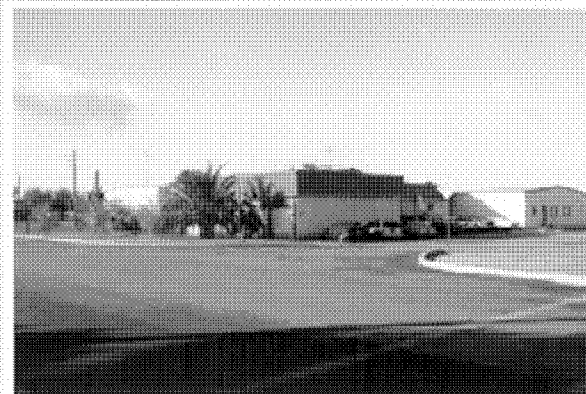
Resource No. 24085, Real Property No. 5406
Non-Destructive Inspection Shop



Resource No. 24086, Real Property No. 5405
Air Force Office of Special Investigations



Resource No. 24087, Real Property No. 5315
Base Engineering Administration



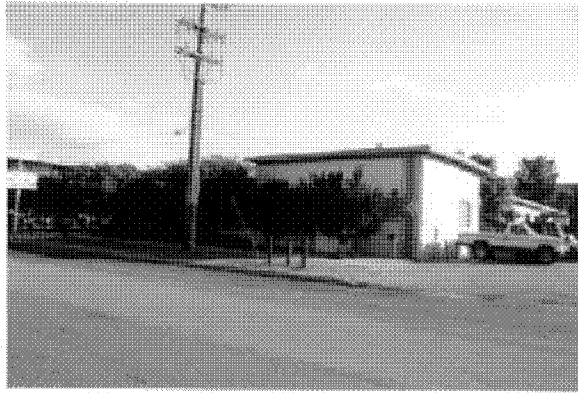
Resource No. 24088, Real Property No. 5313
Base Engineering Administration



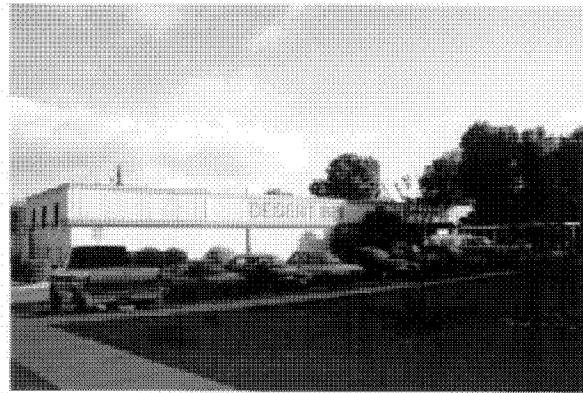
Resource No. 24089, Real Property No. 5303
Base Engineering Storage Covered Facility



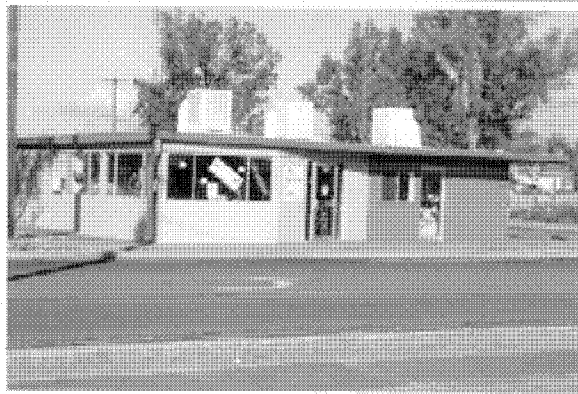
Resource No. 24090, Real Property No. 4300
Base Engineering Administration



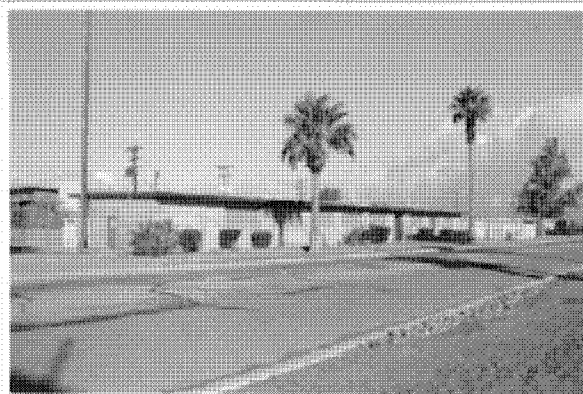
Resource No. 24091, Real Property No. 4201
Recreation Center



Resource No. 24092, Real Property No. 4100
Airman's Detached Dining Hall



Resource No. 24093, Real Property No. 5000
Service Outlet Exchange



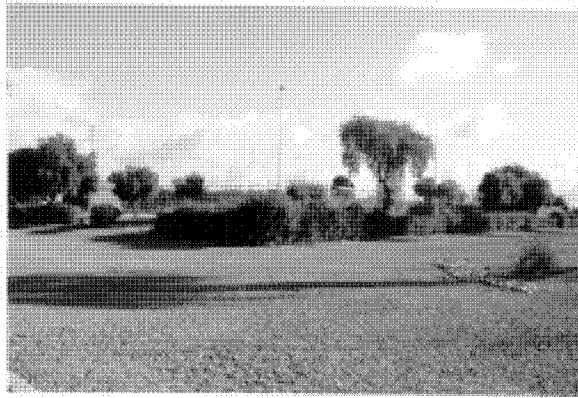
Resource No. 24094, Real Property No. 3426
Security Police Operations



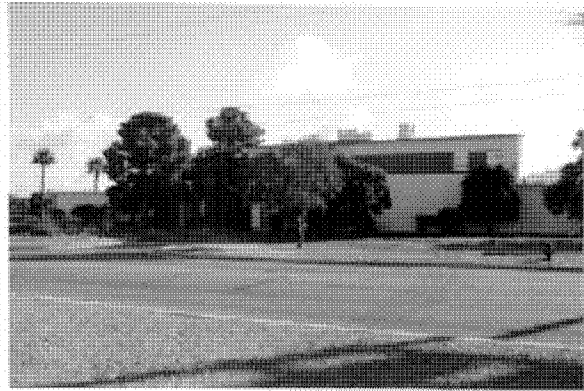
Resource No. 24095, Real Property No. 4153
Base Theater



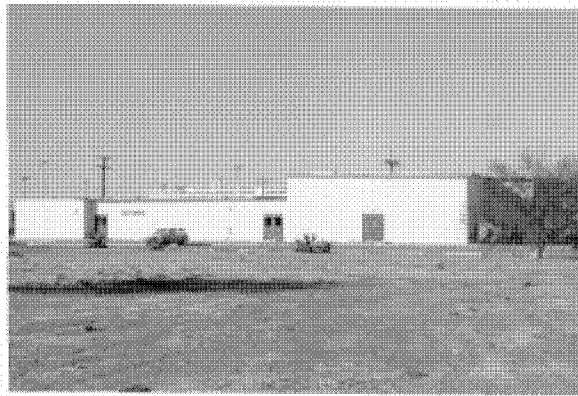
Resource No. 24096, Real Property No. 4340
Water Tank Storage



Resource No. 24097, Real Property No. 4351
Swimmer's Bath House



Resource No. 24098, Real Property No. 4455
Non-Commissioned Officer's Open Mess



Resource No. 24099, Real Property No. 4430
MWR Supply/Non-Appropriated Fund Central
Storage



Resource No. 24100, Real Property No. 4531
Automotive Hobby Shop



Resource No. 24101, Real Property No. 4532
Outdoor Recreation Pavilion



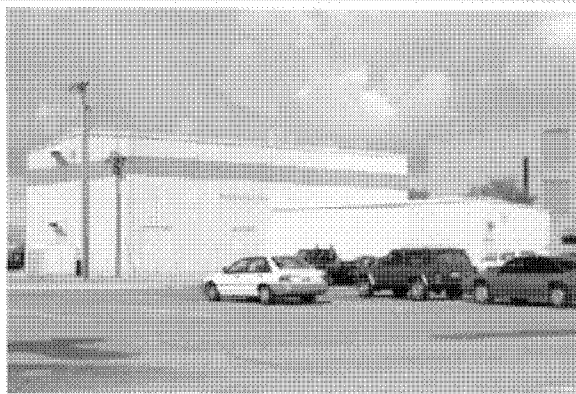
Resource No. 24102, Real Property No. 4413
Squadron Operations



Resource No. 24103, Real Property No. 4339
Recreation Library



Resource No. 24104, Real Property No. 4432
Service Outlet Exchange



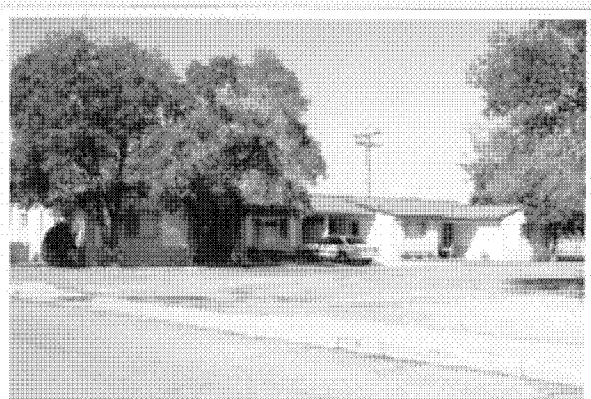
Resource No. 24105, Real Property No. 4414
Base Supply and Equipment Warehouse



Resource No. 24106, Real Property No. 2350
Visiting Officer's Quarters



Resource No. 24107, Real Property No. 2555
Family Housing Management Office



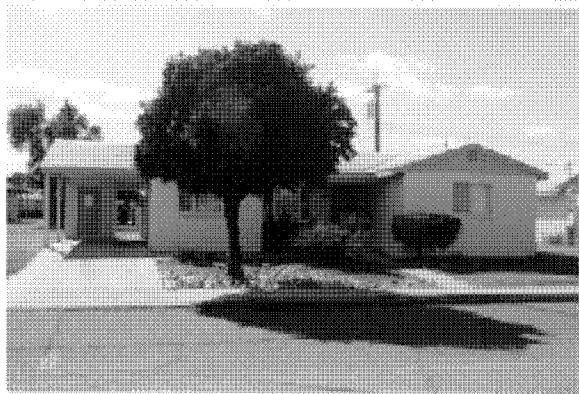
Resource No. 24108, Real Property No. 500
Wherry Family Housing



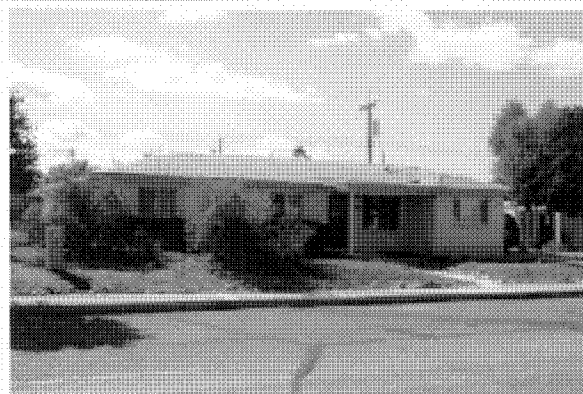
Resource No. 24109, Real Property No. 526
Wherry Family Housing



Resource No. 24110, Real Property No. 632
Elementary School



Resource No. 24111, Real Property No. 803
Wherry Family Housing



Resource No. 24112, Real Property No. 805
Wherry Family Housing



Resource No. 24113, Real Property No. 2050
Officer's Open Mess



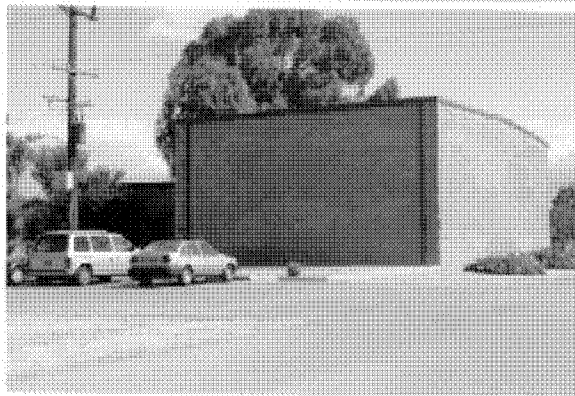
Resource No. 24114, Real Property No. 4065
Visiting Officer's Quarters



Resource No. 24115, Real Property No. 4172
Officer's Housing (Appr. 1959-1960)



Resource No. 24116, Real Property No. 4174
Officer's Housing (Appr. 1959-1960)



Resource No. 24117, Real Property No. 4750
Recreation (Racquetball Facility)



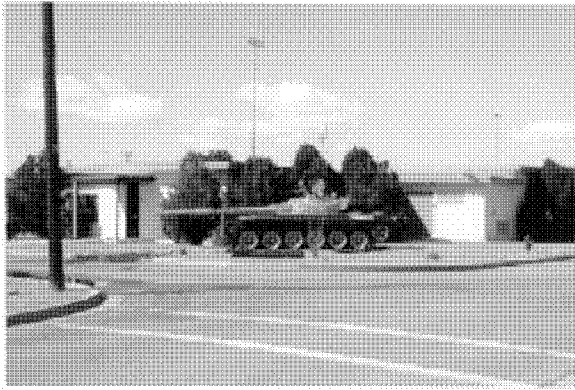
Resource No. 24118, Real Property No. 4459
Golf Clubhouse/Equipment



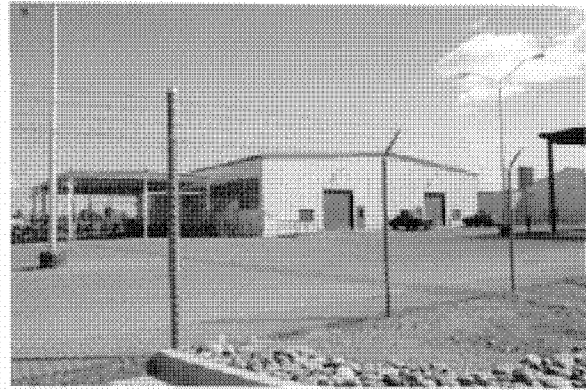
Resource No. 24119, Real Property No. 4705
Vehicle Maintenance Shop



Resource No. 24120, Real Property No. 4710
Weapons and Release Systems Shop



Resource No. 24121, Real Property No. 4800
Squadron Operations



Resource No. 24122, Real Property No. 4712
Aircraft Support Equipment Shop and Storage
Facility



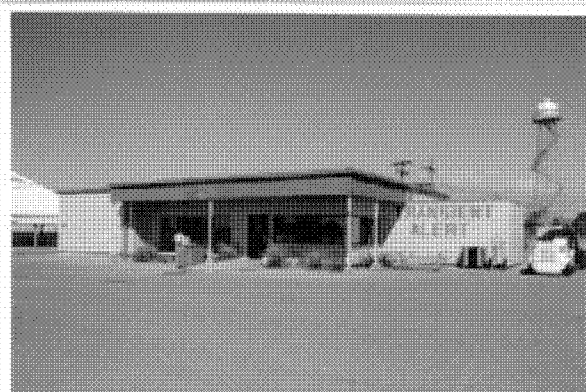
Resource No. 24123, Real Property No. 4821
Fire Station



Resource No. 24124, Real Property No. 4820
Base Operations



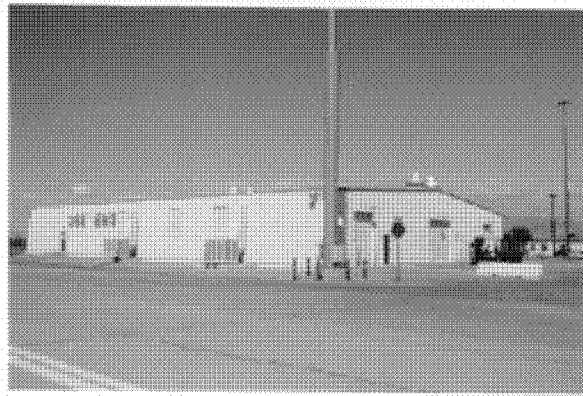
Resource No. 24125, Real Property No. 4819
Air Passenger Terminal



Resource No. 24126, Real Property No. 4826
Fleet Service Terminal



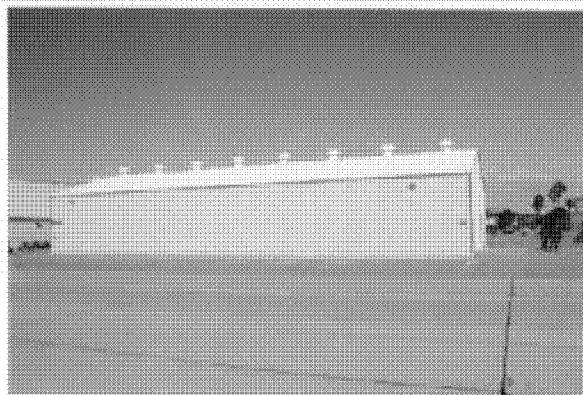
Resource No. 24127, Real Property No. 4809
Small Aircraft Maintenance Dock



Resource No. 24128, Real Property No. 4810
Weapons and Release Systems Shop



Resource No. 24129, Real Property No. 5607
Small Aircraft Maintenance Dock



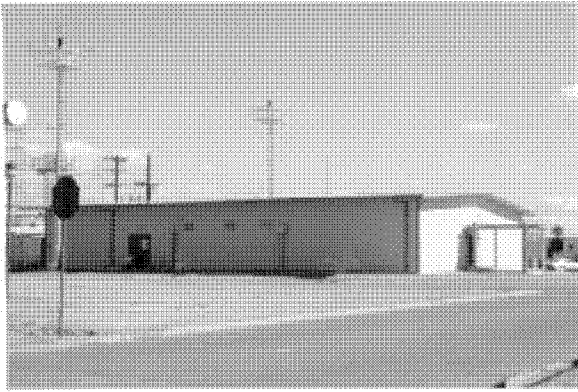
Resource No. 24130, Real Property No. 5605
Squadron Operations



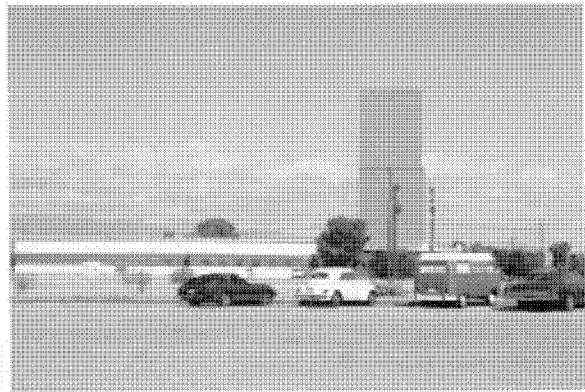
Resource No. 24131, Real Property No. 5430
Small Aircraft Maintenance Dock



Resource No. 24132, Real Property No. 4859
Base Supply and Equipment Warehouse



Resource No. 24133, Real Property No. 4816
Federal Aviation Administration



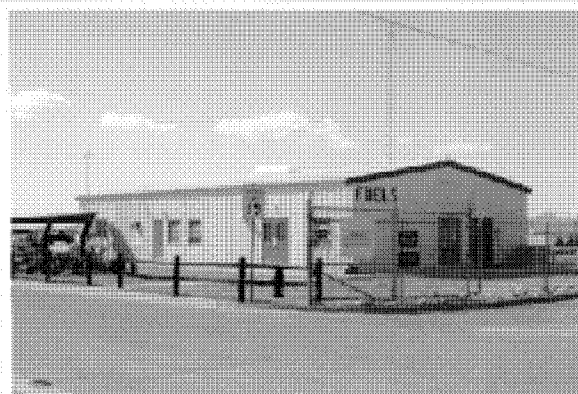
Resource No. 24134, Real Property No. 4824
Survival Equipment Shop



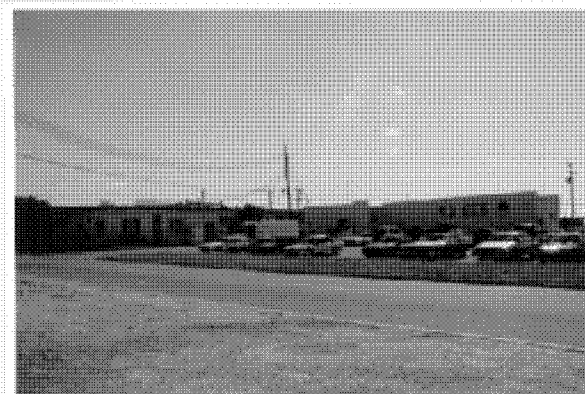
Resource No. 24135, Real Property No. 4853
Squadron Operations



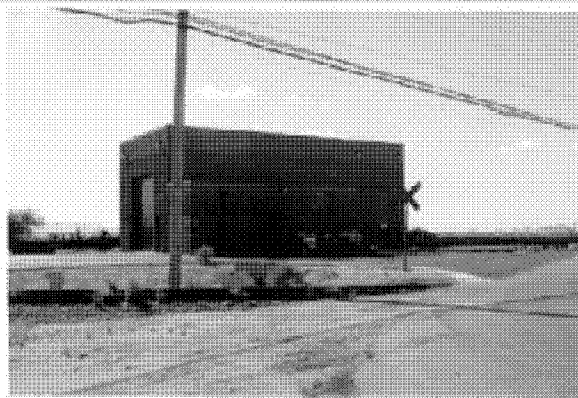
Resource No. 24136, Real Property No. 4851
Squadron Operations



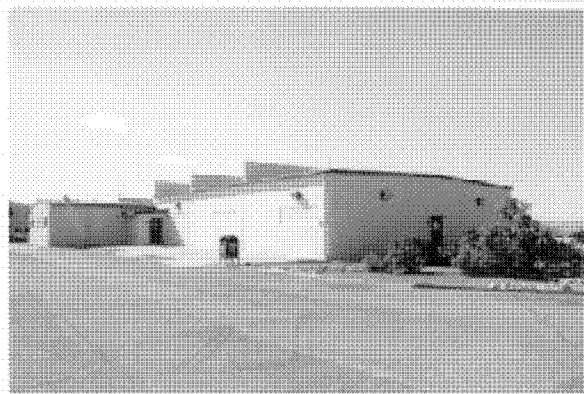
Resource No. 24137, Real Property No. 4857
Petroleum Operations Building



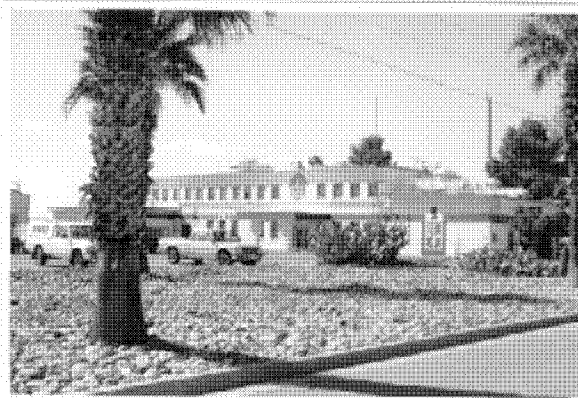
Resource No. 24138, Real Property No. 4850
Squadron Operations



Resource No. 24139, Real Property No. 100
Locomotive Shop Shelter



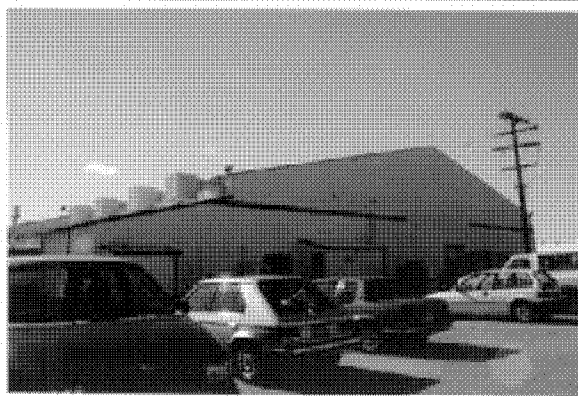
Resource No. 24140, Real Property No. 127
Group Headquarters



Resource No. 24141, Real Property No. 130
Weapons System Maintenance Management
Facility



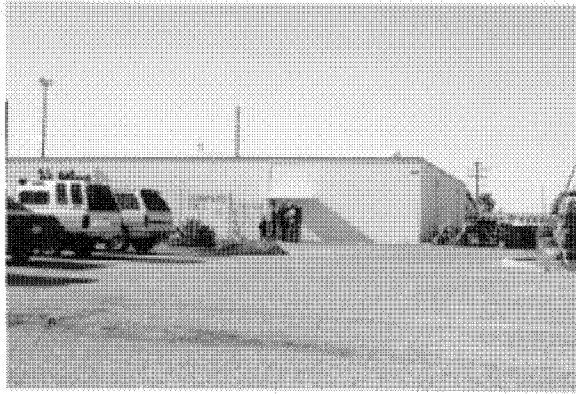
Resource Nos. 24142-24144, Real Property Nos.
10166, 10167, and 10168, Jet Fuel Storages



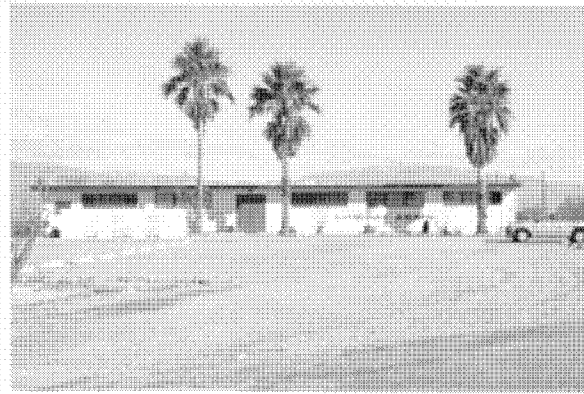
Resource No. 24145, Real Property No. 129
Medium Aircraft Maintenance Dock



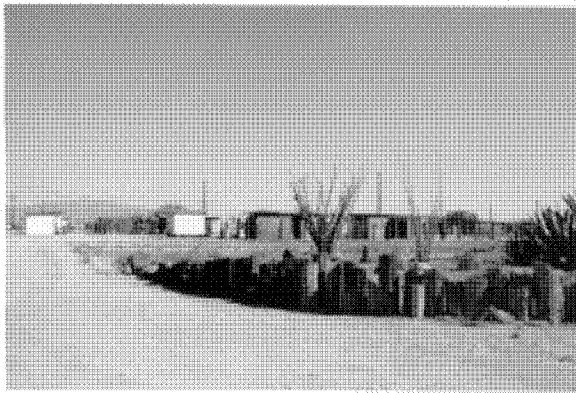
Resource No. 24146, Real Property No. 136
Fuel Systems Maintenance Dock



Resource No. 24147, Real Property No. 131
Flight Simulator Training



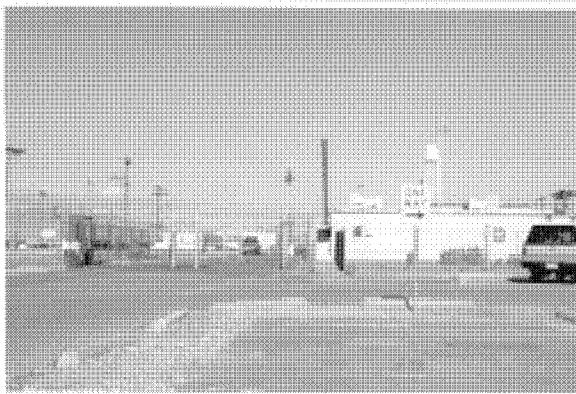
Resource No. 24148, Real Property No. 165
Range Control House



Resource No. 24149, Real Property No. 75046
Riding Stables



Resource No. 24150, Real Property No. 157
Storage Igloo



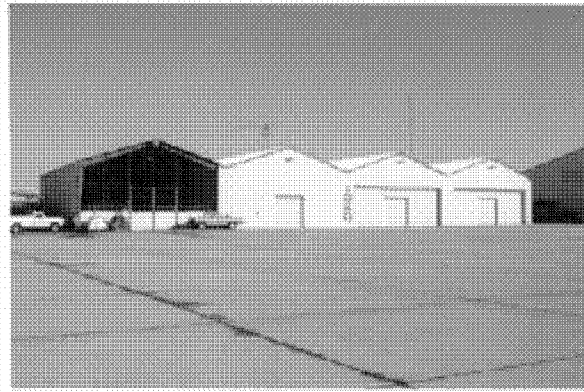
Resource No. 24151, Real Property No. 184
Munitions Maintenance Administration



Resource No. 24152, Real Property No. 144
Security Police Kennel Support Building



Resource No. 24153, Real Property No. 1244
Medium Aircraft Maintenance Dock



Resource No. 24154, Real Property No. 1246
Base Supply and Equipment Warehouse



Resource No. 24155, Real Property No. 1446
Air Force Communications System Maintenance
Facility



Resource No. 24156, Real Property No. 1750
Small Aircraft Maintenance Dock



Resource No. 24157, Real Property No. 75
Security Police Operations



Resource No. 24158, Real Property No. 6040
Branch Exchange



Resource No. 24159, Real Property No. 6000
Youth Center



Resource No. 24160, Real Property No. 6350
Frank Borman Elementary School



Resource No. 24161, Real Property No. 6755
Family Housing (Appr. 1970A)



Resource No. 24162, Real Property No. 6757
Family Housing (Appr. 1970A)



Resource No. 24163, Real Property No. 6728
Family Housing (Appr. 1970A)



Resource No. 24164, Real Property No. 6200
Family Housing (Appr. 1970A)



Resource No. 24165, Real Property No. 6999
Trailer Court Parking



Resource No. 24166, Real Property No. 404
Material Services



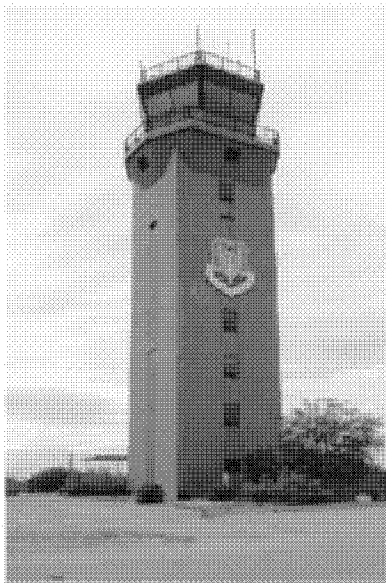
Resource No. 24167, Real Property No. 417
Reserve Forces Operational Training



Resource No. 24168, Real Property No. 400
Composite Medical



Resource No. 24169, Real Property No. 413
Air Force Clinic



Resource No. 24170, Real Property No. 306
Control Tower



Resource No. 24171, Real Property No. 343
Observation Tower



Resource No. 24172, Real Property No. 76003
Static Display (F-100 *Super Sabre* - Warrior Park)



Resource No. 24173, Real Property No. 76003
Static Display (A-7D *Corsair II* - Warrior Park)



Resource No. 24174, Real Property No. 76003
Static Display (F-4 *Phantom* - Warrior Park)



Resource No. 24175, Real Property No. 76003
Static Display (F-105 *Thunderbird* - Warrior Park)



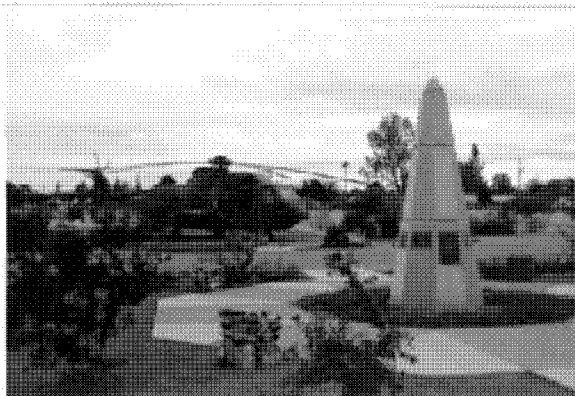
Resource No. 24176, Real Property No. 76003
Static Display (A-10 *Warthog* - Warrior Park)



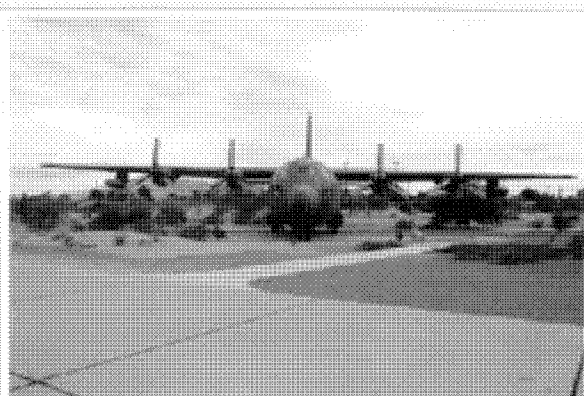
Resource No. 24177, Real Property No. (none)
12th Air Force Command Headquarters



Resource No. 24178, Real Property No. 76003
Static Display (B-52 *Stratofortress* - Warrior Park)



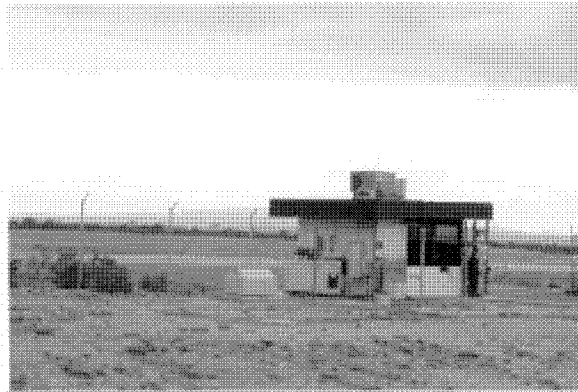
Resource No. 24179, Real Property No. 76003
Static Display (GLCM Memorial and Helicopter - Warrior Park)



Resource No. 24180, Real Property No. 76003
Static Display (C-130 *Hercules* - Warrior Park)



Resource No. 24181, Real Property No. 76003
Static Display (U-2 - Warrior Park)



Resource No. 24184, Real Property No. 146
Security Police Entry Control Building

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT DAVIS-MONTHAN AFB

Resource Number: 24017

Property Description: This facility is a permanent, concrete block, semi-subterranean building with ramped and covered tunnels used for quick egress from both floors of the building. Building has a sun deck on one end of the roof.

Associated Property: 24018

Non-Inventoried Association: Christmas Tree Ramp ("Whiskey Ramp")

Sub-installation:

Address: 5420 S. Herky Blvd.

Base Map Date: 8/1/93

Base Map Building Number: 140

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Bomber/Tanker Alert Facility

Statement of Significance: This facility was utilized as an Alert Facility for B-47s and KC-97s. It exhibits the architectural features common to most Crew Readiness facilities; i.e., had its own aircraft parking apron (Christmas Tree) and attendant security facilities. This facility also served as headquarters (temporarily) for the GLCM Training Units of the 836th Air Division.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats: Vestiges of security fences and traffic check house are no longer in place.

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: NRHP eligible now.

Importance: Exceptional

Eligibility: Eligible

Height: 15
Square Footage: 19866
Original Planned Duration: Permanent
Existing Use: Squadron Operations of the 41st Electronic Combat Squadron (ECS) (C-130s)
Other Use/Dates: Academic Classrooms - 21 Jul 65; HQ WG Multi-purpose use - 18 Apr 72; GLCM HQ ca. 1981(?)
Comments on Use: Original square footage listed as 23,388. During redesignation sq. ft. have been lost.
Primary Building Materials: Concrete
Character Defining Features: Ramped and covered ramps for quick egress from facility.

Resource Number: 24019

Property Description: Titan II ICBM Missile Site with Launch Silo and Retractable Closure Door and Retractable Base , Portable Crane Hardstand, Intake and Exhaust Air Shafts, Antennae and Security Fences are visible from the surface.

Associated Property: 24020, 24021

Non-Inventoried Association: Various antennae arrays and static displays associated with the original function of objects.

Sub-installation: DMAFB Missile Site #8

Address: Green Valley, AZ

Base Map Date:

Base Map Building Number: 8004

Operational Support & Installations:

Combat Weapons and Support Systems: Missiles

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Missile Launch Complex

Statement of Significance: This facility already has been awarded National Landmark status. The site is known as the Titan Missile Museum and is interpreted as a missile facility.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats: This facility has a "national" status by virtue of its inclusion as a National Landmark.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: No

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility Listed

Height: -110

Square Footage:

Original Planned Duration: Permanent

Existing Use: Titan Missile Museum - "Destroyed" Missile in the silo with attendant command, equipment facilities and quarters.

Other Use/Dates: Active missile facility July 1963 through 1983 (?)

Comments on Use: The majority of the facilities of this missile complex are underground.

Primary Building Materials: Poured concrete with reinforced steel plates, ect.
Character Defining Features: Subterranean facilities with hardened silo and command facilities.

Resource Number: 24038

Property Description: This facility is a two story, metal framed, four bay aircraft shelter with doors on front and back. Offices and living quarters are in the center of the facility.

Associated Property: 24039

Non-Inventoried Association:

Sub-installation:

Address: 5895 E. Falcon Street

Base Map Date: 8/27/93

Base Map Building Number: 128

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Fighter Alert Facility

Statement of Significance: This building was the first Alert Facility constructed on the base and served for the Fighter Interceptor Group for Air Defense Command. This facility was an important aspect of the Cold War strategy of defense and warning systems.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 25

Square Footage: 40563

Original Planned Duration: Permanent

Existing Use: Fighter Interceptor Group, Detachment 1, Montana Air Force Reserves.

Other Use/Dates: Alert Hangar - 1956-67. Base Warehouse Supply & Equipment/Flyaway Kit Base 67-73. 1973 to present is Alert Facility for F-16s Detachment 1 ADC

Comments on Use:

Primary Building Materials: Concrete block and concrete

Character Defining Features: Aircraft bays and security fences and check house

Resource Number: 24040

Property Description: Purpose built, two story administration facility made of concrete and brick.

Associated Property: 24041, 24042

Non-Inventoried Association:

Sub-installation:

Address: 5340 E. Gafford Way

Base Map Date: 8/27/93

Base Map Building Number: 70

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities: Missile Training

Material Development Facilities:

Intelligence

Property Type: GLCM Training Facility

Statement of Significance: This facility served as the Headquarters of the Ground Launch Cruise Missile Training Squadron and then Group. It was the only training facility for this weapons systems in the Air Force.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 1

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 17

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: The GLCM mission undertaken at this facility should be documented and noted from all aspects.

Importance: Exceptional

Eligibility Eligible

Height: 25

Square Footage: 39499

Original Planned Duration: Permanent

Existing Use: 12 AF Headquarters

Other Use/Dates: GLCM Headquarters and Training Facility under the 836th Air Division 1983-1990.

Comments on Use: This facility's true significance is in its original function as a training center for a Cold War generated weapons system that figured prominently in the Intermediate Range Nuclear Forces Treaty with the Soviet Union and now Russia. All GLCMs have been destroyed under the directions of the INF Treaty, thus the Training and Operations of the GLCM facility

are no longer extant.

Primary Building Materials: Concrete and brick

Character Defining Features: The only remaining feature is this facility's proximity to the "GLCM Ramp" as it is termed on the base map.

Resource Number: 24182

Property Description: Records, documents, photographic collections
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date:
Base Map Building Number: inside 2300

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Documentary Collection

Statement of Significance: Collection of documents, files, written histories, and photographs may represent unique resources pertaining to the base history.

Cold War Relationship-Nat'l. Recognition: 3
Theme Relationship: 4
Temporal Phase Relationship: 4
Level of Importance: 2
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 18
Comments on Threats:

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: Yes
Preservation/Conservation/Repair: Yes
Comments on Resource Management: On-going organization and cataloguing of slides and prints should be continued.

Changes to the Resource:

Object Condition: Being Preserved
Record/Document Category: Reports, histories, newsclippings, photos, slides
Year of Document: Various
Period of Association: All

Resource Number: 24183

Property Description: Architectural Drawings
Associated Property: 24017,24019,24027,24037,24038,24040,24043
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date:
Base Map Building Number: inside 5315

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Documentary Collection

Statement of Significance: Unique drawings of all existing buildings and other facilities on base. Also includes buildings and facilities that have been destroyed such as the Titan installations. These are unique and original documents describing the initial construction and subsequent modifications.

Cold War Relationship-Nat'l. Recognition: 3
Theme Relationship: 2
Temporal Phase Relationship: 4
Level of Importance: 3
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 17
Comments on Threats:

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: Yes
Preservation/Conservation/Repair: Yes
Comments on Resource Management: Other than a few archival drawers, this collection is in excellent condition and organization. It is an extremely important reference collection that should be stewarded.

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: Various
Period of Association: All
Comments on Condition: All the building and facility plans are well organized and currently being used. Archival files are not organized and could use some organization to prevent wear and tear by users.

APPENDIX E:
DETAILED RESOURCE INVENTORY

Documentary Collection (Resource No. 24183, Located in Real Property No. 5313)

295 Flat File Drawers containing:

265 files labelled by real property number with plans and modifications of individual buildings. Files include mylar, paper, and cloth drawings dating to 1941. The following drawers contain drawings associated with evaluated buildings:

Drawers 136-5/140-4 and 140-3/146-1 - building No. 140

Drawers S-1-12/7006, 70-5/70-5, and 70-4/70-1 - building No. 70

Drawers 72-1/118-1, 72-1/118-1, and 128-1/128-48 - building Nos. 70 and 128

20 files of plans and as-built drawings of general systems (i.e. base parking, railroads, roads, lighting, aprons, and taxiways, etc.). Spans 1940s-1990s. Drawings are on mylar, vellum, and sailcloth.

5 assorted files labelled

Ft. Huachuca/Marana Air Park

Mt. Lemmon Drawings

AFDAT Moss

1984 aerial photos with negatives

1990s aerials 4 files

5 archival files including

11 x 17 drawings, various projects and dates

Alert facility modifications

Site plans - deactivated missile status

Documentary Collection (Resource No. 24182, Located in Real Property No. 2300)

File Cabinets:

1 Classified File safe with 355th Wing Histories

1 File Cabinet with Active Files:

Drawer #1 Storage

Drawer #2 Base Archives

- Copy of Treaty between USA and USSR on the Elimination of Intermediate-Range and Shorter-Range Missiles dated Dec 1987
 - Early Davis-Monthan files
 - Davis and Monthan
 - 1940 - 1941
 - World War II
 - Base Guides from 1940s, 1955-1957, 1976, 1980, 1981, 1983, 1986, 1987, 1988, 1990, and 1992
 - Davis-Monthan Statements of Resource and Economic Impact - 1977, 1978, 1979, and 1982-1989
 - Commander's Facts Books - various years.
 - Various social items
 - Davis-Monthan Active Units & Inactive Units
 - AMARC
 - 23d Photographic Reconnaissance
 - 868th TMTG
 - Past Units
 - Davis-Monthan aircraft
 - Aircraft accidents
 - overflight
 - AICUZ
 - Libby airfield
 - Marana Airfield
 - Facilities and Land Use
 - Base Closure studies
 - Land Issues
 - Road Extensions
 - Aircraft on Display at Warrior Park
 - Davis-Monthan memorialization
 - Hangar 8030
 - Environmental Impact
 - Protestors at Davis-Monthan: newspaper articles, etc. 1983 through 1985
 - INF Treaty Compliance
-

Drawer #3 Wing Archives

- General emblems
- Honors
- General orders
- Commanders and key personnel
- Organizations and functions
- Chartbooks 1987 and 1989
- Southeast Asia
- River Rats Songbook
- Active Unit Information - Operations Group, Support Group, Wing aircraft, deployments, exercises, and inspections

Drawer #4 Active Files

- Chapter 1, Miss. & Org.
- Chapter 2, Operations and Training
- Chapter 3, Maintenance

Drawer #5 (drawer is stuck and contents are inaccessible)

Assorted Holdings on Shelves:

Above Shelves

- 1941 newspaper clipping scrapbook
- "Desert Airman" base newspaper, 1951-1984

1st Shelf

- USAF Historical Publications

2nd Shelf

- *Air Force Magazine*, 1960-92
- *Airman Magazine*, various years 1960-93
- Other magazines: *Aviation Week*, *Space Tech*, *Airpower Journal*, *Combat Edge*, *USAF Weapons Review*, *Sergeants*

3rd Shelf

- 25 videotapes and 1991 newsclippings
 - 1990 Economic Impact Study
 - 1988 Aerial Victory Credits Reprint
 - Anti-terrorism program
 - 355 TFW/432 TDG histories
 - 1976 Headquarters Tactical Training histories, 1976-1977
-

4th Shelf

- 355th TFW histories, 1971
- HQ Tactical Training histories, 1978-1982
- 355th TFW histories, 1972-1976

5th Shelf

- Newspaper clippings 1919-1988 (4 ring binder notebooks)
- Planning documents (2 notebooks)
- 1980 slides (large ring binder)
- 1983 slides (large ring binder)
- One B/W print of Titan construction
- 1987 slides (ring binder)
- 1980s slides (ring binder)
- 836 AD/355 TFW histories, 1982-1985

6th Shelf

- 836 AD/355 TFW histories, 1985-1989
- 836 Combat Support - Chaplain histories, 1985-1989
- Titan II history of SATAF, 1961 and 1962

Assorted Holdings:

- Photos being processed and cataloged for files
 - Slide files: Historic aircraft, current aircraft, early Davis-Monthan AFB slides through 1945, AMARC, Chemical Warfare Exercises, INF Treaty Cuts, GLCM Ops-Treaty Elimination, Davis-Monthan AFB people and facilities
 - 29 microfilmed case histories of various organizations
 - Files (4) on Marana & Libby Air Fields
 - AMARC histories, 1946-1974
 - MASCS histories, 1979-1983
 - Early pilots register, 1925-1936
 - Ribbons and flags from various units
 - Two bookcases:
 - videos/publications/AMARC histories, 1941-1982
 - video of GLCM mission
 - slides from 1989 of people and buildings
 - general publications
-

APPENDIX F:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Davis-Monthan AFB, and to provide research materials for this study:

Mrs. Gwen Lisa
Cultural/Natural Resource Manager
355 CES/CEQ
5285 E. Madera Street
Davis-Monthan AFB, Arizona 85707
(520) 750-4885

Mr. John Thompson
Chief, Environmental Flight
355 CES/CEQ
5285 E. Madera Street
Davis-Monthan AFB, Arizona 85707
(520) 750-5372

Mr. Gino Patriarka
Community Planner, Engineering & Construction Flight
355 CES/CEEV
5220 E. Madera Street
Davis-Monthan AFB, Arizona 85707
(520) 750-5791

Mr. Ben V. Kaiser
CADD Manager, Engineering & Construction Flight
5220 E. Madera Street
Davis-Monthan AFB, Arizona 85707-4926
(520) 750-2304

Mrs. Jan DeMaria
Real Property Office, Resources Flight
355 CES/CERR
5220 E. Madera Street
Davis-Monthan AFB, Arizona 85707-4926
(520) 750-2305

TSgt Kim R. Smith
Wing Historian
355 WG/HO
5275 E. Granite Street
Davis-Monthan AFB, Arizona 85707-3012
(520) 750-4669

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Davis-Monthan AFB history and Cold War context.

Dr. Larry Lashbrook
Director, 355 Wing Treaty Compliance Office
355 WG/CCI
5085 E. Granite Street
Davis-Monthan AFB, Arizona 85707
(520) 750-3154

Major Alan Blackburn
Deputy Director, 355 Wing Treaty Compliance Office
355 WG/CCI
5085 E. Granite Street
Davis-Monthan AFB, Arizona 85707
(520) 750-3154

Mr. Michael Mazur
Civilian, 355 Wing Treaty Compliance Office
355 WG/CCI
5085 E. Granite Street
Davis-Monthan AFB, Arizona 85707
(520) 750-3154

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-6: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT DYESS AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
Patience Elizabeth Patterson
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

June 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Dyess Air Force Base was inventoried by Mariah Associates, Inc. between April 4 and 13, 1994 as part of the Air Combat Command Cold War study for the on-going Department of Defense Legacy Program. Information was obtained on base from the Real Property files, the Drawing Room files, and from an assortment of photographs, documents, and memorabilia located in the 7th Civil Engineering Squadron files. Additional information was secured from the Wing Historian's Office, the Base Library, and from the Director of Dyess Air Park.

The Deputy Base Civil Engineer accompanied the field team on an initial reconnaissance of the base which provided the necessary orientation to achieve perspective and focus for base research. Security personnel from the civil engineering squadron conducted a photographic tour of restricted areas and resources on base, and additional photographs were taken of representative property types by the investigators. On-site inspections were also conducted.

From this research and inventory, two resources were determined to be important in their relationship to Dyess Air Force Base's Cold War mission and history. These resources are both mission oriented and one is the direct result of research and development in the 1980s. The properties chosen are representative of temporal phases II through IV as discussed in the Cold War historic context and methodology document written for this project (Lewis et al. 1995). Recommendations for the resources include stewardship, further documentation, and National Register of Historic Places eligibility for the Bomber Alert Facility, and stewardship and further documentation for the Large Aircraft Maintenance Dock.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AGE	- Air Ground Equipment
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
BMW	- Bombardment Wing
DoD	- Department of Defense
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc
MMS	- Munitions Maintenance Squadron
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCNUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TAW	- Tactical Airlift Wing
USAF	- United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Capehart Housing Act - passed in 1955 as an amendment to the National Housing Act. It authorized the use of quarters allowances to pay off Wherry housing mortgages. Construction of new houses was set at 46,500 units at 88 bases. Construction was begun on 9,000 units by 1957.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

GLOSSARY (Continued)

New Look - a policy designed to balance the U.S.'s global military commitments with its finite fiscal resources. The policy focuses on strategic nuclear striking power and massive retaliation as a better and cheaper way of deterring communist aggression.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion on the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	10
3.0 HISTORICAL OVERVIEW	15
3.1 BASE HISTORY AND COLD WAR CONTEXT	15
3.2 BASE DEVELOPMENT	18
4.0 METHODOLOGY	24
4.1 INVENTORY	24
4.2 EVALUATION OF IMPORTANT RESOURCES	25
4.2.1 Documentation	25
4.2.2 Evaluation of Importance	25
4.2.2.1 Cold War Context	25
4.2.2.2 NRHP Criteria	26
4.2.2.3 Exceptional Importance	27
4.2.3 Evaluation of Integrity	27
4.2.4 Priority Matrix	28
4.2.5 Resource Organization	29
4.3 BASE SPECIFIC METHODS	29
5.0 RECONNAISSANCE INVENTORY RESULTS	31
6.0 EVALUATION RESULTS	32
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	32
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	32
6.2.1 Alert Facilities	32
6.2.1.1 Bomber Alert Facility	32
6.2.2 Maintenance Docks/Hangars	35
6.2.2.1 Large Aircraft Maintenance Dock	35
6.3 MATERIEL DEVELOPMENT FACILITIES	35

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.4 TRAINING FACILITIES	36
6.5 INTELLIGENCE FACILITIES	36
7.0 UNDOCUMENTED RESOURCES	37
8.0 FUTURE THREATS TO RESOURCES	39
9.0 PRELIMINARY RECOMMENDATIONS	40
9.1 NRHP ELIGIBILITY	40
9.1.1 Evaluation and Determination of NRHP Eligibility.....	40
9.1.2 Implications of NRHP Eligibility.....	42
9.2 EVALUATED RESOURCE RECOMMENDATIONS	43
9.2.1 Bomber Alert Facility.....	45
9.2.2 Large Aircraft Maintenance Dock	46
10.0 REFERENCES CITED	47
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: ADDITIONAL UNDOCUMENTED RESOURCES	
APPENDIX F: SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Dyess Air Force Base	5
Figure 2.2 Dyess Air Force Base Layout	7
Figure 2.3 Standard Strategic Air Command Base Layout	8
Figure 2.4 "Future" Dyess Air Force Base, 1940s	9
Figure 2.5 Dyess Air Force Base Land Use Diagram	12
Figure 2.6 Standard Strategic Air Command Base Land Use Diagram	13
Figure 3.1 Dyess Air Force Base, 1953	19
Figure 3.2 Dyess Air Force Base, 1960-1970	20
Figure 3.3 Dyess Air Force Base, 1983	22
Figure 3.4 Dyess Air Force Base, 1994	23

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	33
Table 6.2 Evaluated Resource Prioritization by Priority Rank	33
Table 9.1 Recommendations for Evaluated Resources	44

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

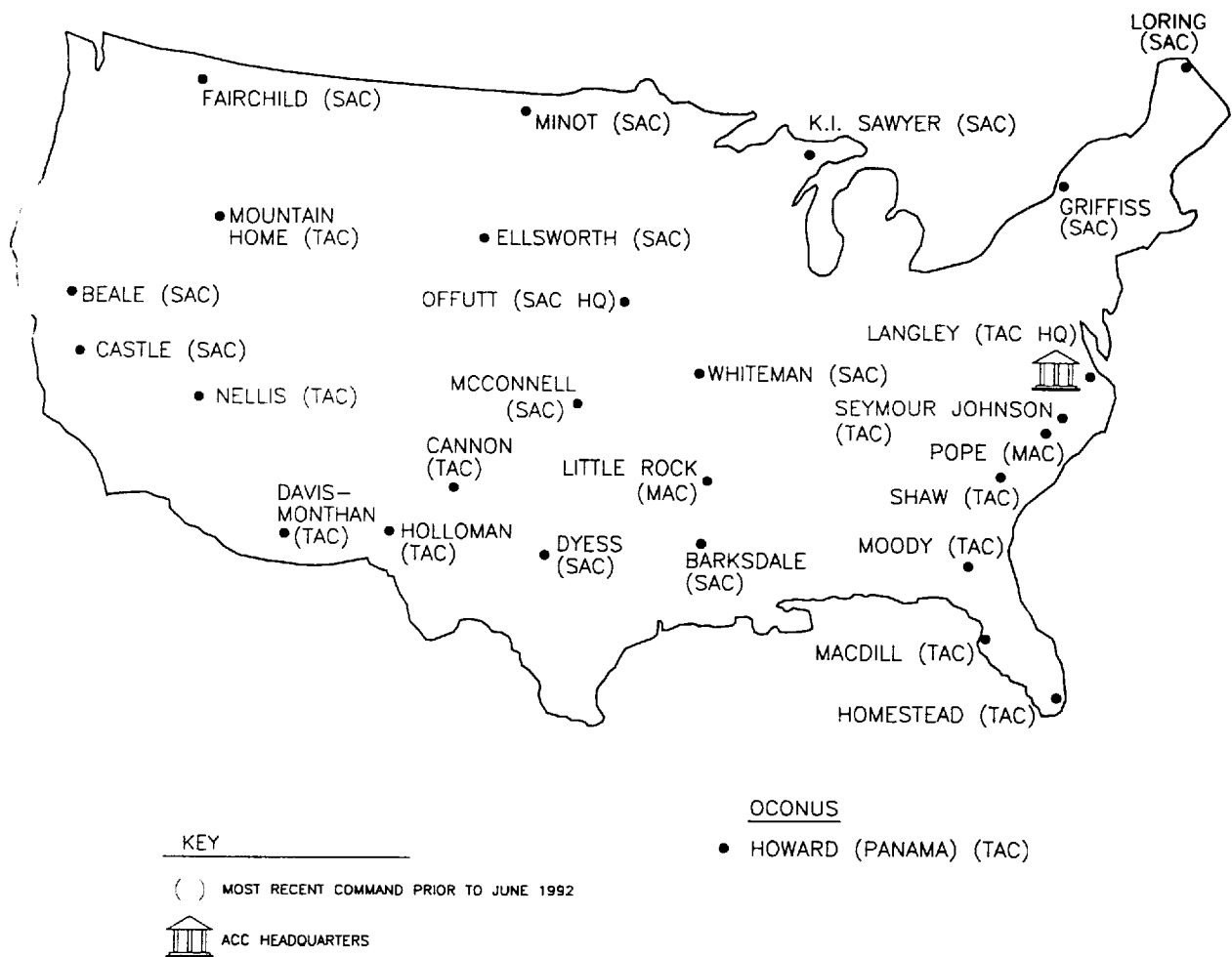
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\DYESS\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to the Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Dyess Air Force Base (AFB). Dyess AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Dyess AFB is the home of the 7th Wing of the ACC. The mission of the host unit includes strategic deterrence, support of combat theater commanders with conventional bombing capability, and theater airlift support. The base mission is to provide support for long-range bombing capability for deterrence of hostile nuclear attack and for tactical airlift support.

The mission is accomplished by the following assigned supporting organizations: 7th Logistics Group (maintenance and scheduling of 32 B-1B and 18 C-130 aircraft), 7th Operations Group (organizing and executing strategic nuclear and conventional bombing, and tactical airdrop and airlift by proper command authority), 7th Support Group (base support services, Civil Engineering, Security Police, Personnel, Communications, Emergency Ordnance, and International Military Student Office for 6,000 personnel assigned to the 7th Wing and all associated units), and the 7th Medical Group (comprehensive healthcare, maintenance of a safe industrial and community environment, and maintenance of wartime readiness in support of the 7th Wing and Air Force missions) (Dyess AFB 1994).

2.2 GEOGRAPHIC DESCRIPTION

Dyess AFB is situated on approximately 5,386 acres on the west side of the city of Abilene located in Taylor County in north-central Texas (Figure 2.1). Characterized by an environment that consists of gently rolling hills and broad flat plains, elevations at Dyess AFB range from 1,733 ft (528 m) to 1,820 ft (555 m) above mean sea level (USAF 1989:4.4-1,4.4-38). West of Dyess AFB lies Callahan Divide, a mountain uplift that trends in a northwestern to southwestern direction. The High Plains are west of the area, and the Great Plains are south and east. Farming and ranching activities dominate the landscape within a 1 mi (1.6 km) radius of the base.

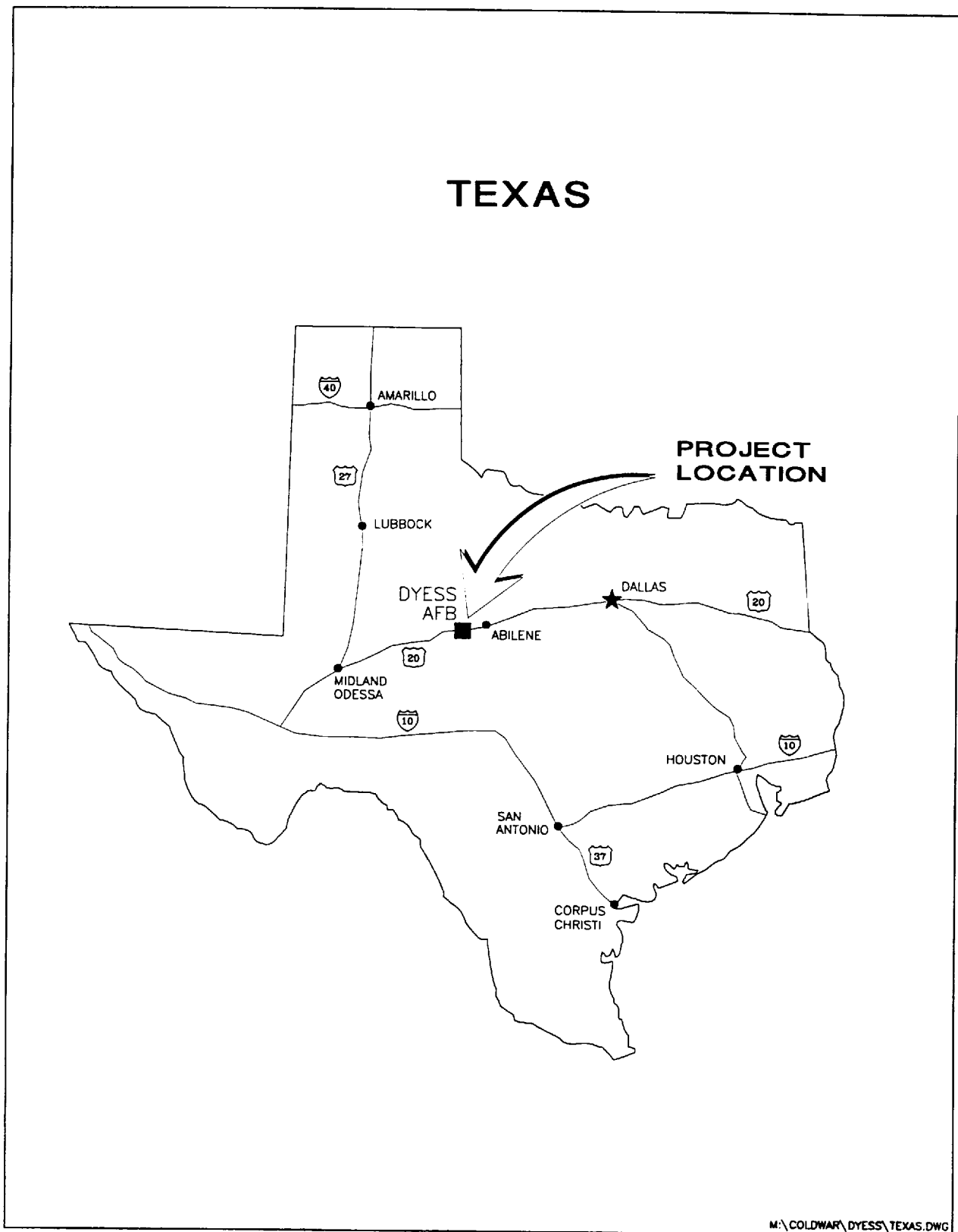


Figure 2.1 Location of Dyess Air Force Base.

To the south, the landscape is dominated by a grassland habitat; to the north, shrubland habitat predominates (USAF 1989: 4.4-4.29; Hatcher 1963: 41,45; Fenneman 1931:57-58).

2.3 CURRENT BASE LAYOUT

The layout of buildings and facilities at Dyess AFB (Figure 2.2) conforms to that of a standard SAC base (Figure 2.3). The flight line forms one edge of the base with most buildings and facilities located to one side of the flight line. The buildings closest to the flight line are mission-related and support facilities. Buildings further away include housing and community buildings. Few buildings or structures are found near either end of the flight line.

Tye Army Air Field, built in 1942, originally occupied the site on which Dyess AFB is built (Figure 2.4). Major portions of the original runways that comprised the Air Field have either been removed or have disintegrated through the decades. These runways, taxiways, and apron, constructed in 1943, were connected to form roughly an "A" shape. One runway was oriented north and south with additional runways emanating from either end: one to the northwest, the other to the northeast. The two additional runways intersected each other at 90 degrees. The old Army air base was located west of the current north-south runway (Mueller 1989:120).

Construction of the present flight line and runway at Dyess AFB was begun in 1953. Both trend in a general north-south direction. All base properties are east of the flight line with the runway west of the flight line. A grassy area between the flight line and runway contains a portion of the old army runway. Taxiways are located on each end of the runway, with three additional taxiways connecting the center of the runway with the flight line. Building foundations and segments of the old runways are extant on the west side of the runway; these are the remains of the original air field. This area now has a dirt runway, built in 1975, which is utilized by C-130s for exercises that include takeoffs, landings, and accuracy drops of dummy cargo. Clear zones (areas with no development) are located immediately north and south of the runway. These areas are likely for buffers and were purchased from the city of Abilene to facilitate public safety.

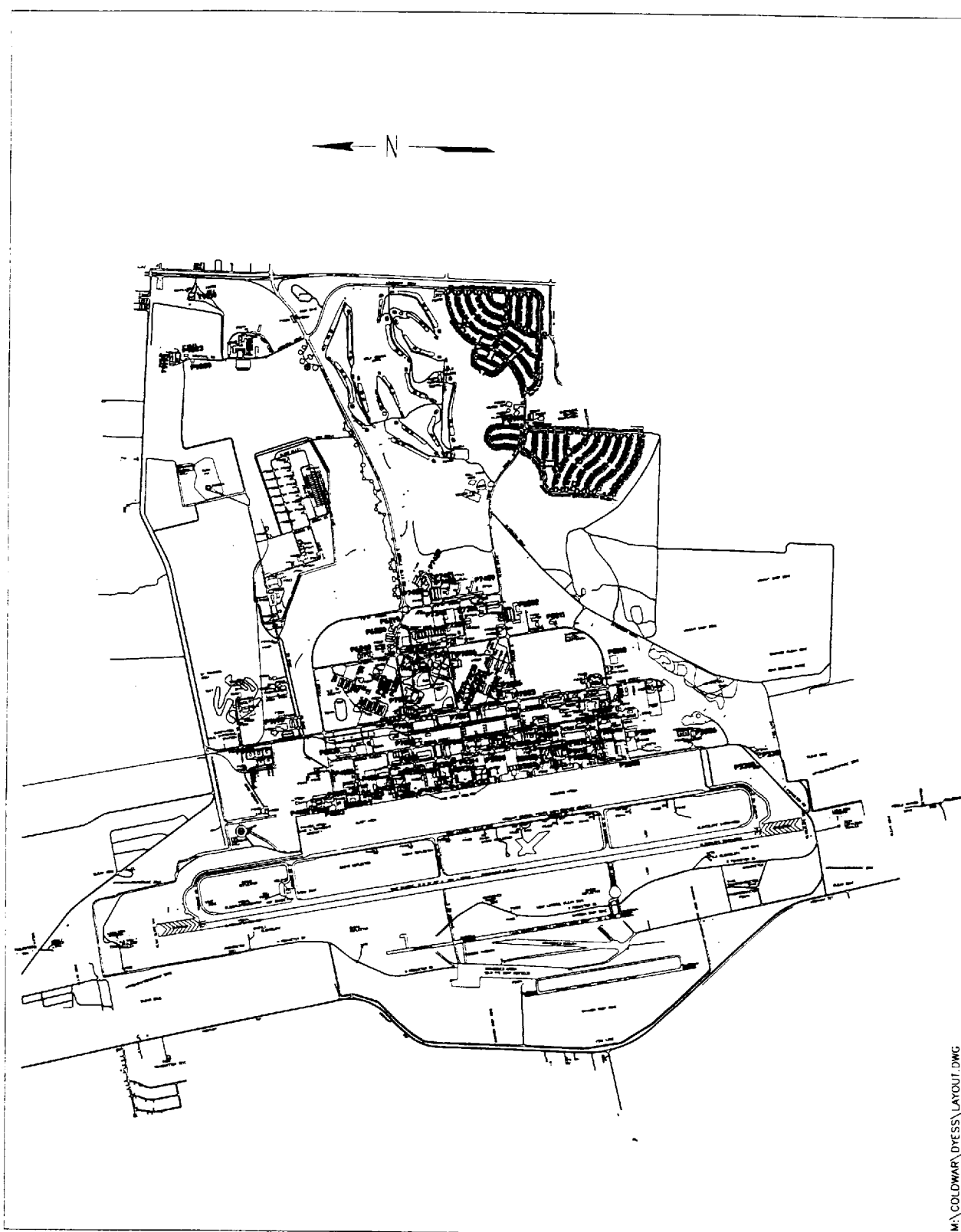


Figure 2.2 Dyess Air Force Base Layout.

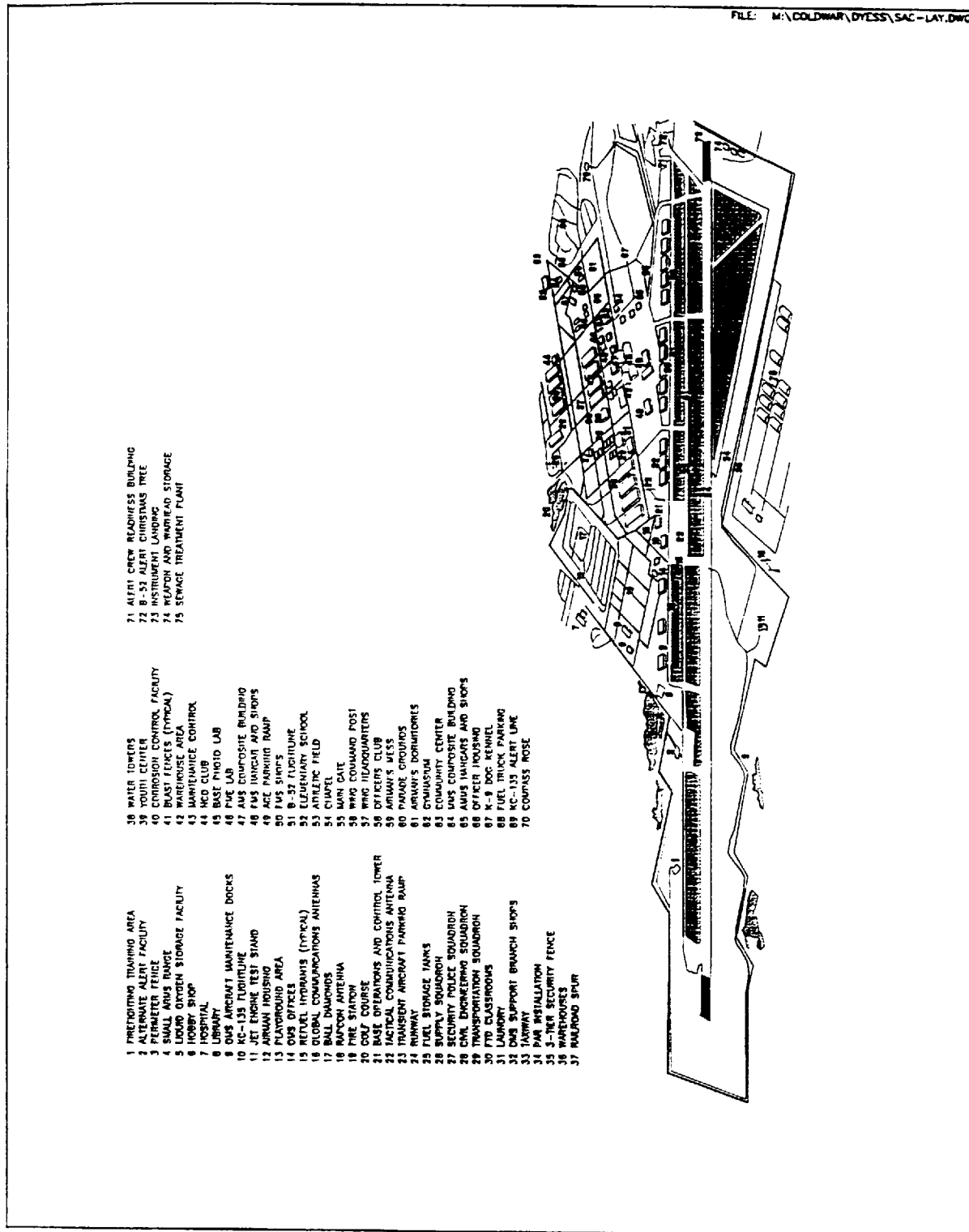


Figure 2.3 Standard Strategic Air Command Base Layout.

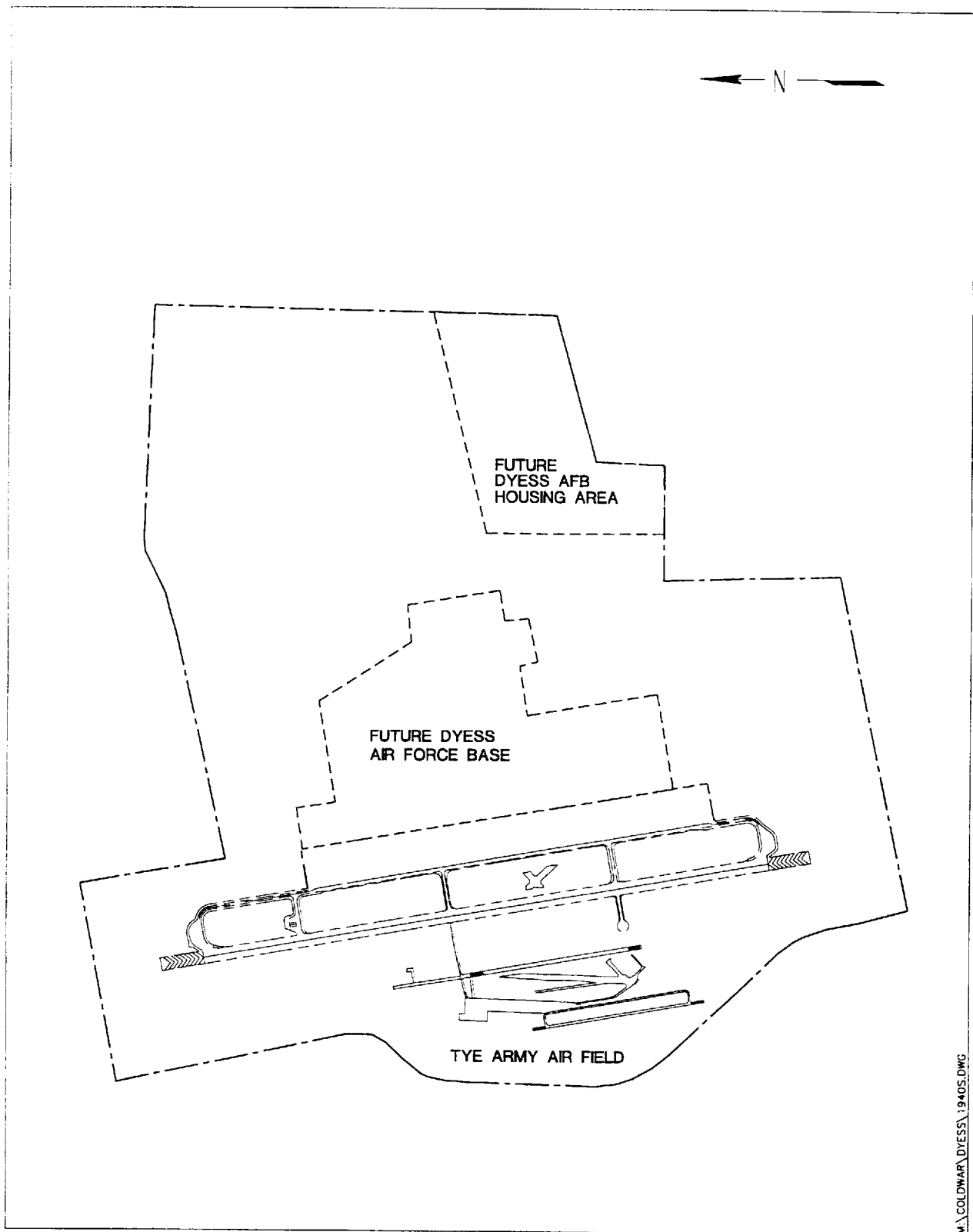


Figure 2.4 "Future" Dyess Air Force Base, 1940s.

All the mission-related buildings and structures are located immediately to the east of the flight line. According to the Real Property records at Dyess AFB, most of these buildings date to 1955 and 1956. The alert facility, control towers (old and new), hangars, and maintenance docks are adjacent to the flight line. Additional support facilities such as the jet engine maintenance shop and test facility, base operations, warehouses, and wing headquarters are located in the first three blocks east of the flight line.

Dormitories, some of which are utilized for administrative purposes, civil engineering, and recreational facilities are further east with the community buildings located in the center of base development. A fuel tank farm is located northeast of the flight line and runway. A missile assembly building and adjacent nuclear and conventional weapons igloos are located east of the community buildings. The main gate at Dyess AFB is located on the eastern side of the base with a golf course along the southern portion of the access road. The bulk of base housing is located south of the golf course in the southeastern portion of the base.

It must be noted that all the buildings on the base, with the exception of the mission buildings, are constructed of red brick, which is atypical of military base construction. The use of brick and the fact that most of the buildings were constructed to be permanent, was proposed by the city of Abilene in anticipation that Dyess AFB might be closed. This would allow the city to more easily absorb the buildings back into the local community.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers between base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.5 is a diagrammatic land use plan for Dyess AFB and Figure 2.6 is a diagrammatic land use plan of a standard SAC base. Dyess AFB follows the standard plan in a majority of ways. In both plans, all of the areas are located to one side of the flight line, with the mission buildings against the flight line. The headquarters tend to be located away from the flight line near the middle of the base. Community areas concentrate in the middle of the base and may act as a division between the mission/base support areas and the majority of the housing areas, which are located near the edge of the base furthest from the flight line. Recreation areas tend to cluster next to the housing and community areas.

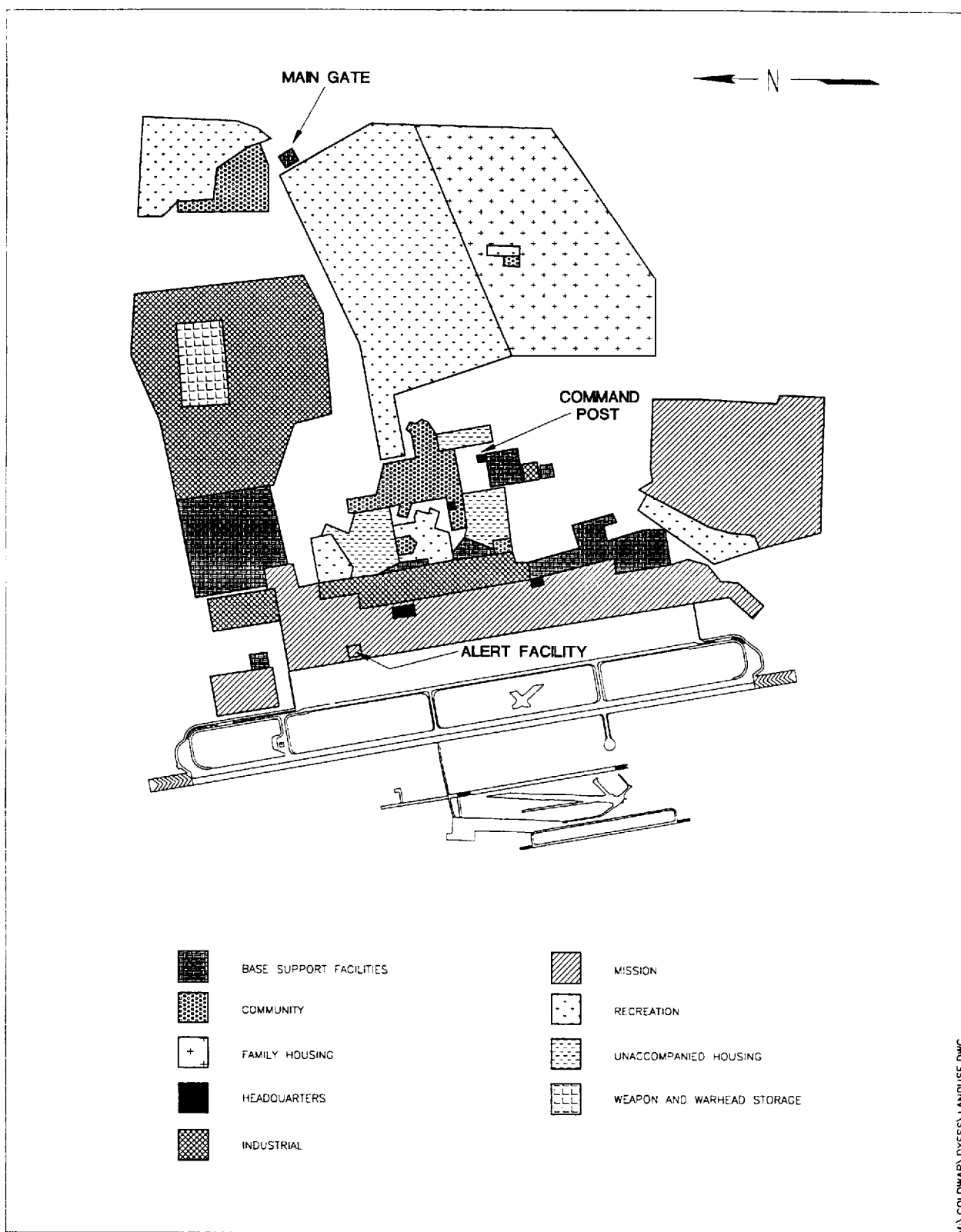


Figure 2.5 Dyess Air Force Base Land Use Diagram.

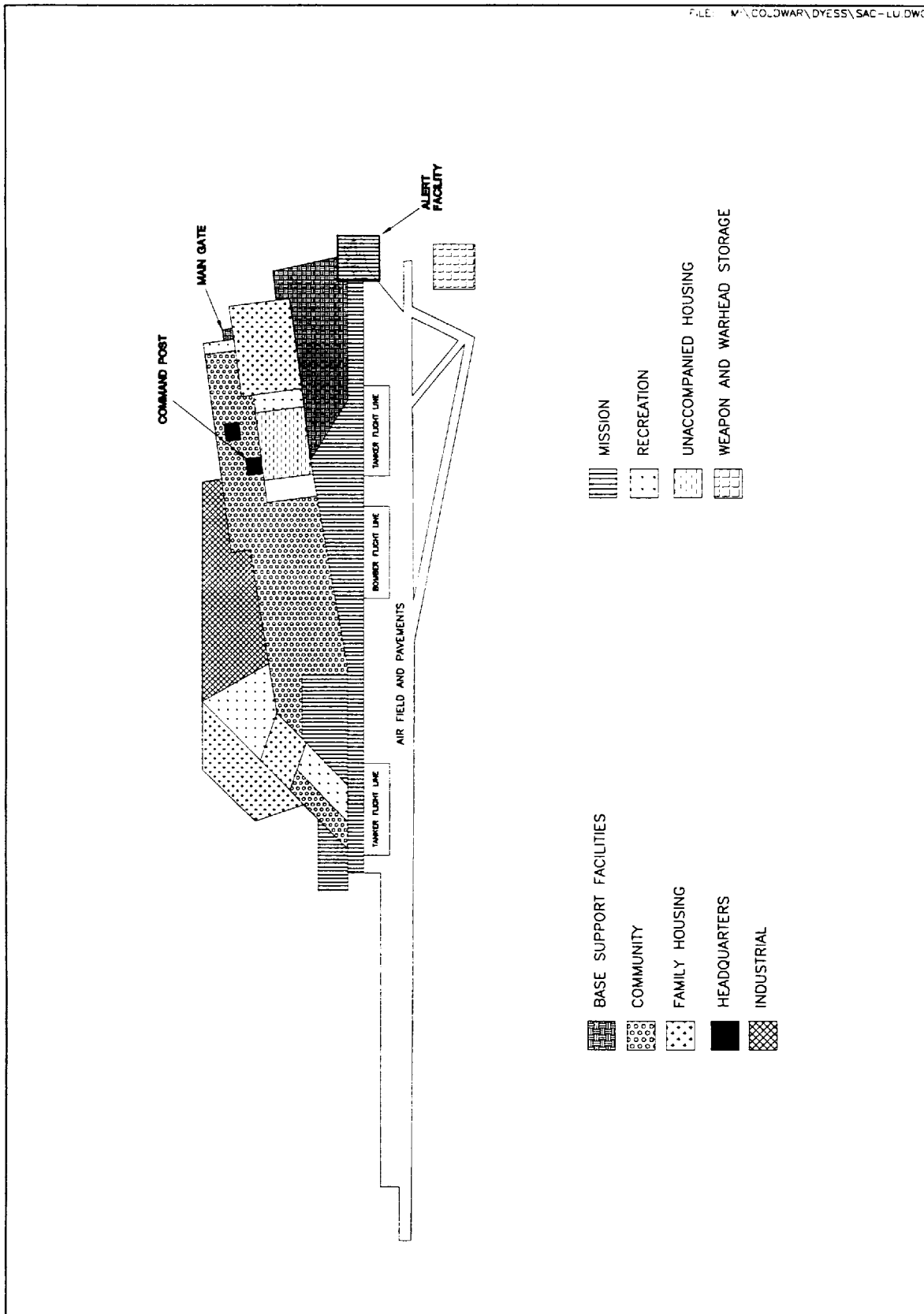


Figure 2.6 Standard Strategic Air Command Base Land Use Diagram.

Differences between Dyess AFB and the standard SAC base land use are few. Dyess AFB has two mission areas separate from the main mission area along the flight line, whereas the standard base diagram shows only one mission area along the flight line. Also, Dyess AFB has a large amount of open space, whereas the standard base diagram shows none.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

The origins of Dyess AFB date to 1942 when Tye Army Air Field began operations as an adjunct training facility to Camp Barkeley. Army Air Corps cadets flew trainers and P-47 *Thunderbolts* at the air field during World War II. Between 1943-1947, the air field was known as Abilene Army Air Field. Camp Barkeley and the air field were deactivated in January 1947 after the war. The city of Abilene purchased the air field for one dollar and loaned the land to the Texas National Guard for use as a training facility (Mueller 1989:117; Engineering-Science 1985:1,2-1,2-5).

In response to the situation in Korea and National Security Council document No. 68, which advocated the build-up of U.S. military capabilities, defense spending tripled in 1950. The United States Air Force (USAF) planned to grow from 48 wings to 143 wings. Also in 1950, after the outbreak of the Korean conflict, the City of Abilene petitioned Washington, D.C. and the Pentagon for a permanent military base. To show that they were serious, the city raised \$893,000 to purchase 3,500 additional acres of land to augment the 1,500 acres already in their possession. City officials travelled to Offutt AFB, Nebraska, to make their case to General Curtis LeMay, commander-in-chief of the new SAC. Congress approved \$32,273,000 for construction of a new SAC air base in Abilene in mid-1952, and construction began in September 1953. The following month, the base was temporarily designated Abilene AFB (United Forces Guides Publications 1959; City of Abilene 1988:28-29; Mueller 1989:117).

Construction began but only two officers were permanently assigned to the base during 1954, both as construction overseers. In July 1955, military officials sponsored a drive to select a formal name for the new base. The final decision was made in Washington, D.C., and it was announced April 14, 1956 that the base was to be named in honor of Lt. Colonel William E. Dyess (Leavelle 1976).

Lt. Colonel Dyess had led initial air attacks on the Japanese from the Philippines shortly after the attack on Pearl Harbor. Dyess and his men, suffering from constant attrition of manpower and materiel, were finally cornered on Bataan and captured by the Japanese. He was a participant and survivor of the infamous Bataan death march. Upon returning to the United States, Dyess began training again for an overseas assignment but was killed in a plane crash near Burbank, California. Although he had the capability to bail out of his aircraft, Dyess chose instead to divert his plane from a populated area and therefore died in the crash (Leavelle 1976:19; City of Abilene 1988:30; Hatcher 1963:185-86; Mueller 1989:117).

The assignment of the new base as a SAC facility was solidified in 1953 with President Eisenhower's New Look, a policy that focused on increased strategic nuclear force and reduced conventional forces. Dyess AFB was activated September 1, 1955 and assigned to SAC. The 341st Bombardment Wing (BMW) arrived at Dyess AFB in September 1955 and was the first host wing. The 96th BMW arrived two years later in September 1957. The motto of the 96th remained the same during its entire tenure at Dyess AFB: *E Sempre L'Ora* - It Is Always the Hour (Floyd Ball, personal communication, April 1994) (Leavelle 1976:6).

The Soviet Union successfully detonated a hydrogen device in August of 1953. The Killian Report soon followed, recommending that highest priority be placed on the development of the Air Force missile program. President Eisenhower accepted this recommendation in 1955, and in 1958, he called for deployment of Atlas and Titan missile squadrons at 16 SAC bases. In 1959, the decision was made to deploy the Atlas F missile at Dyess AFB. This resulted in 700 men, 400 of them with families, relocating to Dyess AFB for construction and maintenance of the new launch complexes and support facilities. The 341st BMW was moved to another base in June 1961, leaving the 96th BMW as the host unit, armed with a mixed inventory of manned and unmanned weapons. The 578th Strategic Missile Squadron, an Atlas F unit, was activated July 1, 1961 and assigned to the 96th BMW. In April 1962, the wing was redesignated the 96th Strategic Aerospace Wing, and the Atlas squadron was deactivated March 25, 1965 (Hatcher 1963:247-48,271; Leavelle 1976:5).

The Killian Report also recommended that the USAF long-range bomber force be dispersed across the country. In 1955, Dyess AFB received the B-47 *Stratojet* bomber and the KC-97 *Stratofreighter* propeller tanker. These were replaced between 1962-1965 by the B-52 *Stratofortress* and the KC-135 *Stratotanker*. The last B-47 left the base in March 1963. The C-130 *Hercules* cargo plane arrived at Dyess AFB in 1963 (Mueller 1989:120; Leavelle 1976:2).

Throughout the 1960s and 1970s, the mission at Dyess AFB remained constant — strategic bombing and tactical airlift support whenever and wherever needed. The 463rd Tactical Airlift Wing (TAW) was activated at Dyess AFB in June 1972 as part of the C-130 force. It was the largest tenant unit assigned to the base. Also in 1972, the 96th was redesignated the 96th BMW. The B-52s and C-130s remained the work horses of the base arsenal until 1983, when it was announced that Dyess AFB would receive the supersonic B-1B *Lancer* bomber.

Development of the B-1B began in 1966 as the replacement for the aging B-52. The aircraft was designed to penetrate enemy airspace at low altitudes and evade radar detection. President Carter cancelled the B-1B program in 1977 for economic reasons; however, President Reagan reactivated it in 1981. This signaled the end of an era and the drawdown of the B-52. Many of the B-52s went to Carswell AFB with the last leaving Dyess AFB on January 18, 1985. The 96th BMW was chosen in 1983 to be the first wing to receive the B-1B, and they were to participate in the development of baseline operations and logistic procedures to be followed throughout the USAF for the B-1B. The 96th BMW at Dyess AFB also became the focal point for all initial training of B-1B crews. The first B-1B arrived at Dyess AFB on June 29, 1985. The increase in workload due to the conversion from B-52s to B-1Bs resulted in a personnel increase from 1,796 to 2,097 between 1986 and 1987.

In 1971, development of the Peacekeeper missile was begun. When the Soviets invaded Afghanistan in 1979, President Carter called for full development of the missile even though a method of deployment had not yet been found. The decision of how to deploy the Peacekeeper was finally made in 1985. Fifty of the missiles would be placed in modified silos at F. E. Warren

AFB, while the other fifty would be deployed on a mobile rail garrison system. Dyess AFB was selected in 1987 as one of ten USAF bases in the continental United States to receive the proposed Rail Garrison because it still maintained its rail system. Although it was proposed and a final environmental impact statement was completed for the ten bases, the Rail Garrison was never built (USAF 1989: S-1 thru S-4).

In June 1992, Dyess AFB was reassigned to the Air Combat Command. The 463rd TAW and 96th Wing remained at Dyess AFB until the Fall of 1993, when the 7th Wing was assigned to Dyess AFB and replaced the 96th as the host wing. The 7th Wing is the current host and includes the 9th Bomb Squadron (B-1B), the 39th and 40th Airlift Squadrons (C-130s), the 337th Training Squadron, along with other support groups.

3.2 BASE DEVELOPMENT

The Capehart Housing Act was passed by Congress on August 2, 1955 to provide for the needs of an expanding military force. The following February, \$12,400,000 was appropriated to build 944 units on the northeastern portion of Dyess AFB, to meet the housing needs at the base (Figures 3.1 and 3.2). By 1958, several dormitories were built, and Dyess AFB was the first to receive Capehart housing for married officers and enlisted personnel. The exterior of these buildings was constructed of the red brick, prevalent among the community and administrative buildings found on the base today (City of Abilene 1988:29).

Construction of 12 Atlas missile sites around Abilene by the Corps of Engineers required approximately \$50,000,000 for construction, added 700 people to the military population, and brought 400 families to Abilene. This influx of personnel required more housing, which was begun in 1957. However, the housing programs at Dyess AFB and other bases were halted in 1965 to re-allocate funds to the Vietnam War effort.

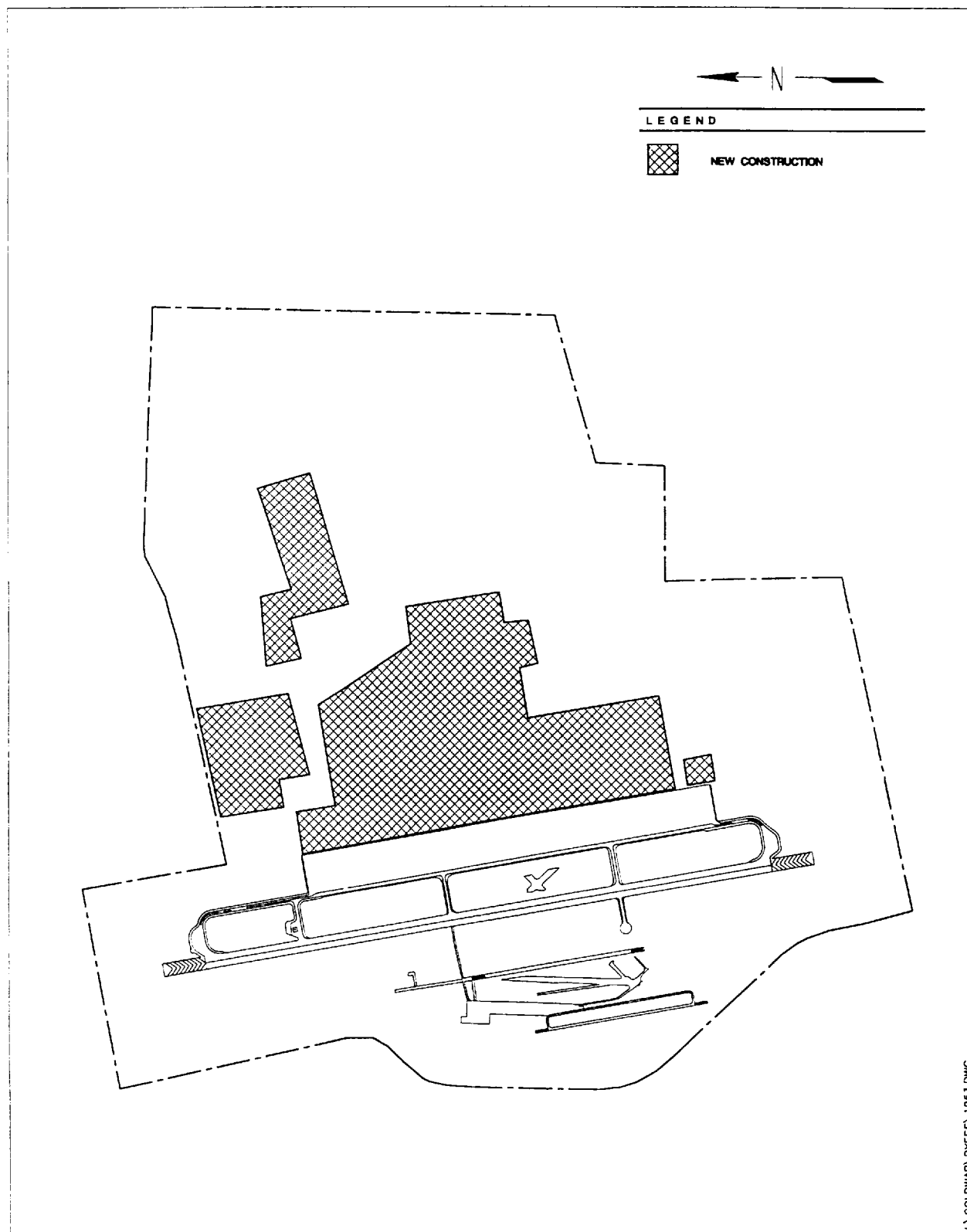
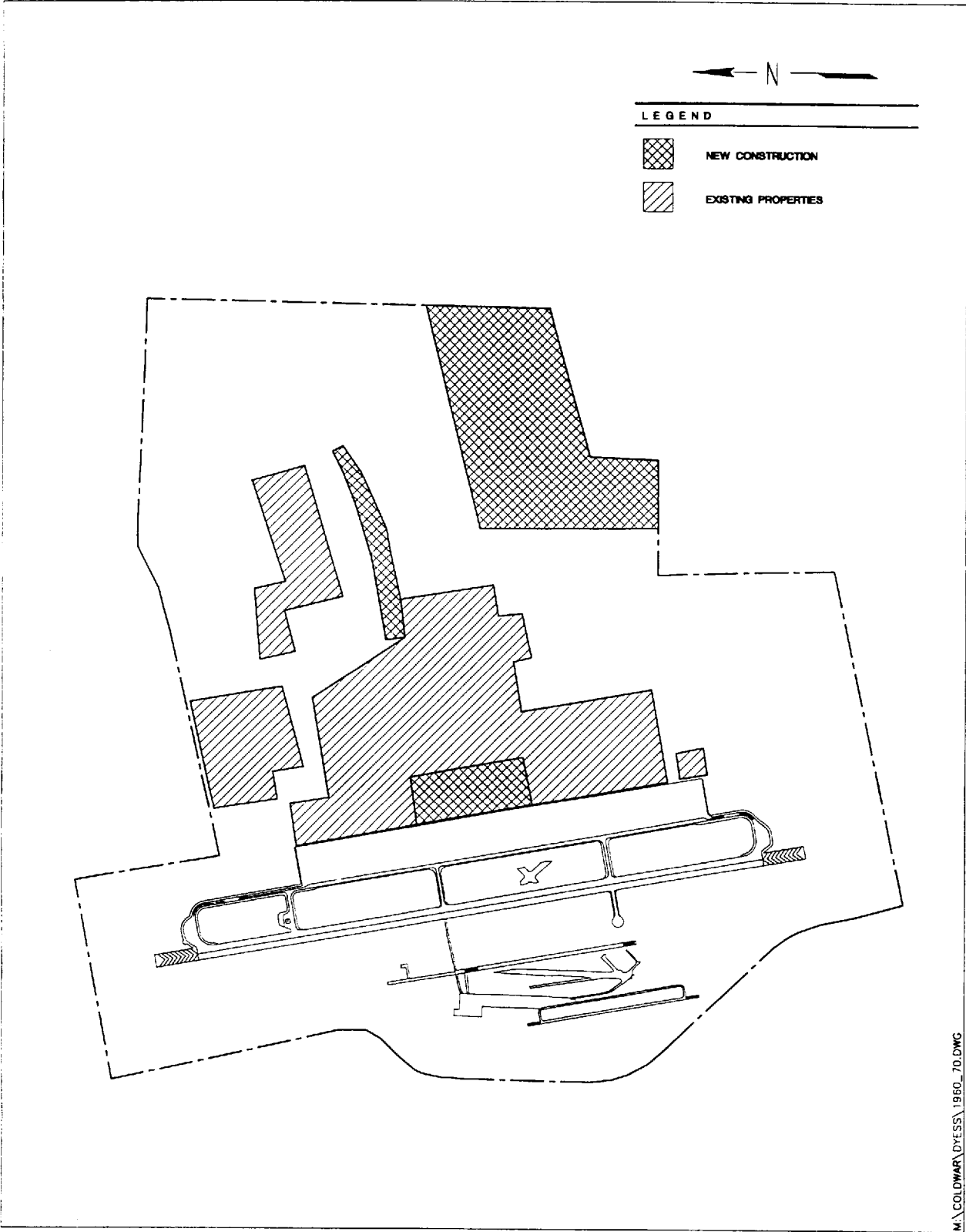


Figure 3.1 Dyess Air Force Base, 1953.



During the Cold War era, bomber aircraft technology at Dyess AFB proceeded from the B-47, to the B-52, to the B-1. Along with changes in aircraft came changes in the support facilities and runways for these aircraft. In 1963, the runway at Dyess AFB was converted to accommodate the weight and jet fuel of the B-52. A new, Tri-Service Landing Mat Assault runway was completed in 1966, and the arrival of additional B-52s prompted upgrading of hangars and concrete areas (Figure 3.2). The primary runway is 13,500 ft in length and one of the longest conventional runways in the United States (Mueller 1989:120). The Bomber Alert Facility for the B-52 pilots played the most significant role in SAC strategy at Dyess AFB during the Cold War. Adjacent to the flight line, the alert facility was a self-contained portion of the base where security was extremely tight and pilots spent active duty shifts awaiting the possibility of immediate offensive or defensive duty assignments at a moments notice (Figure 3.3). This facility allowed maximum readiness for reaction to enemy aggression (Hatcher 1963:230-35).

After the last B-52s left the base in early 1985, personnel levels dropped significantly, from approximately 1,500 to 720 (Goddard and O'Brian 1985:2,33-35; Newell 1993:3). The conversion to the B-1 required major expansion of the base after this brief downsizing, and the squadrons of the 96th Support Group projected large increases in workload due to the impending conversion to the B-1. A flight simulator/classroom building, a new 3-bay hangar, fuel system maintenance dock, and jet engine maintenance building with near-by test cell had to be constructed specifically for the B-1 (Figure 3.4). Expansion also included renovating seven dormitories and constructing three additional units to support the increase in personnel due to the overall B-1 conversion program. Personnel levels had increased to 1,796 by 1986, further increasing to 2,097 by 1987, the highest ever (Goddard and O'Brian 1985:7,31-35).

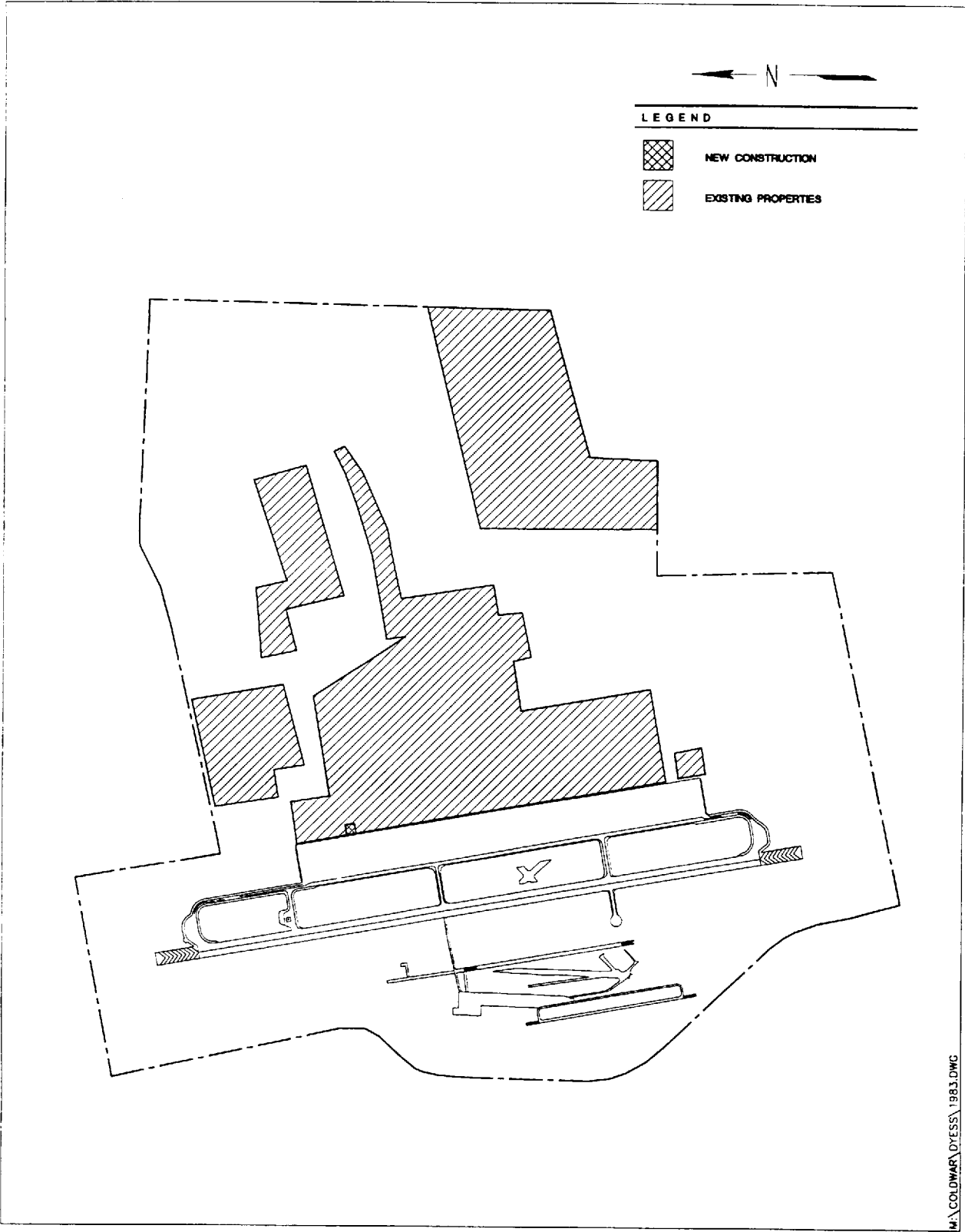
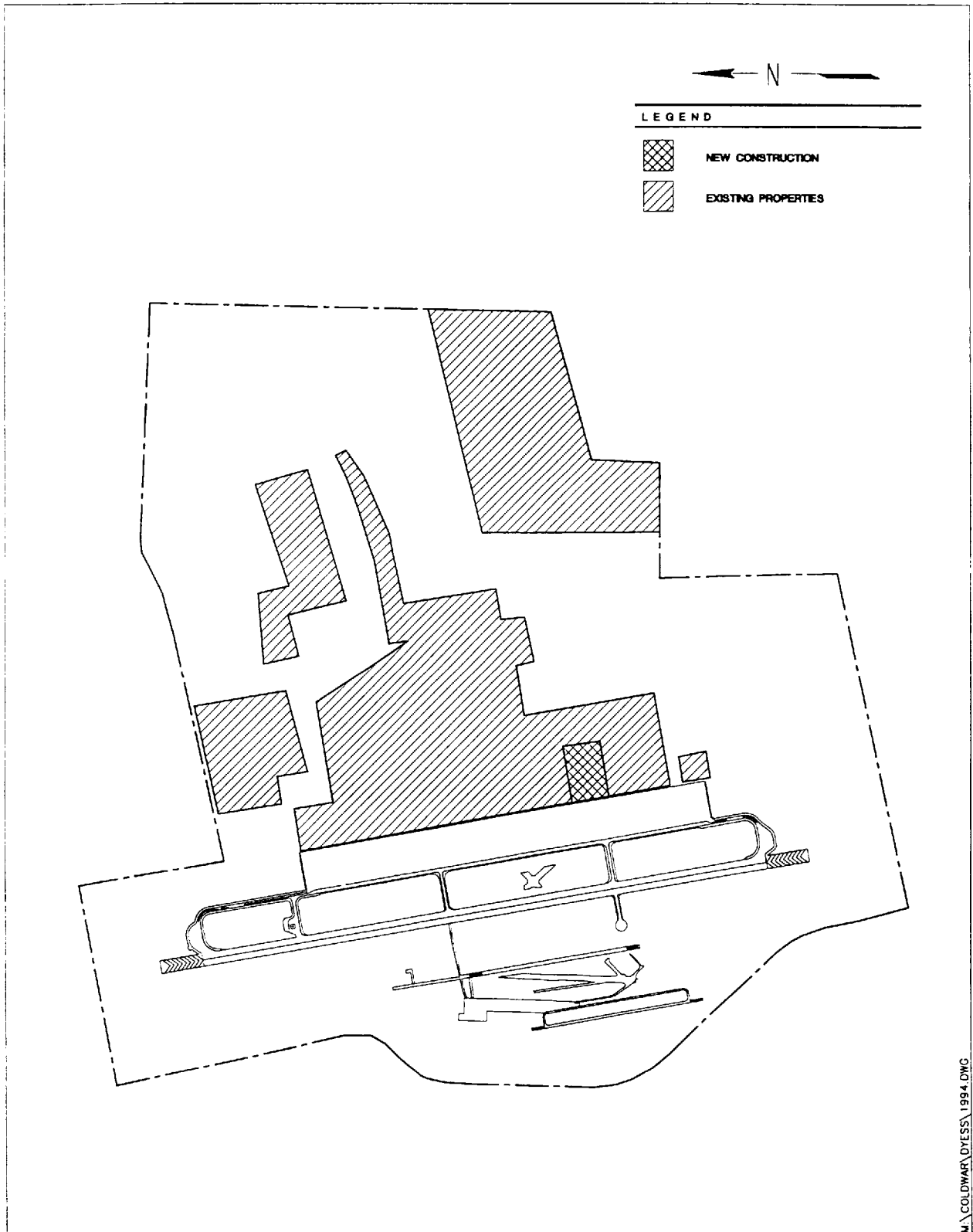


Figure 3.3 Dyess Air Force Base, 1983.



4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Dyess AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Dyess AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Dyess AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

The Mariah field team, James A. Lowe and Patience Elizabeth Patterson, contacted the Base Engineer, Mr. Floyd Ball, upon arrival at Dyess AFB. Research objectives and needs for accomplishing the base inventory were discussed, then Mr. Ball and the field team toured the base facilities. Mr. Ball has been at Dyess AFB since 1972 and was the ideal point of contact and informant. The field team met with personnel from the Civil Engineering, Real Property, and Drafting Section offices, and also with the Wing Historian and the Air Park Director. The field team briefed these personnel on the inventory project, and established needs from each of them in regard to computerized and earlier Property Change Lists and cards, planning documents and maps, and base layout plans, maps, and drawings from each decade for the base. A time frame and the possibility of more requests was presented. The field team was in contact with the personnel on a daily basis during the base visit.

Fieldwork began with a photographic inventory of those portions of the base which did not require a clearance or an escort. Some photography was accomplished each day. The base historian was informally interviewed and a document inventory was conducted in the History

Office as well as in other offices. Arrangements were made to complete the photography of base resources located within secure areas. Finally, resources were selected for evaluation and were more fully documented. In closing out the fieldwork, the field team met briefly with the Base Commander to discuss the base visit and answer his questions, and then conducted a final coordination with their contacts.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Dyess AFB, 121 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Two resources were evaluated at Dyess AFB, both of them falling under the DoD category of real property. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to the evaluated buildings could not be obtained. In lieu of direct observation, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

None were evaluated at Dyess AFB.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 2122, Real Property No. 4120)

Completed in 1959, the Bomber Alert Facility is located at the northern end of the flight line and immediately adjacent to the parking apron. The facility is a permanent, two-story structure. The first floor is below ground and consists primarily of bedrooms, bathrooms, and a mechanical room. The second story is above ground and has bedrooms, bathrooms, briefing room, library, kitchen, war room, and recreational areas. This facility was for alert crews of B-52 aircraft that were in direct support of the National Emergency War Order and were in continuous ready-to-go status. The facility also included a swimming pool (no longer in existence), a facility for

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	2122	4120	Real/Bldg	20
Maintenance Docks/Hangars	Large Aircraft Maintenance Dock	2002	5110	Real/Bldg	16

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	2122	4120	Bomber Alert Facility
16	2002	5110	Large Aircraft Maintenance Dock

conjugal visits, and a building for barbecues and other family gatherings. There were emergency generators which would allow the facility to operate independently in case of infiltration or sabotage.

During the Cold War period this facility was under heavy security, with a manned guardhouse at the entrance, as well as several detection devices, such as heat, movement, and weight sensors. The perimeter of the alert facility compound is still encircled by a 10-ft high chainlink fence crowned with barbed wire and razor wire. Exit ramps, facilitating a quick egress to the flight line, are extant, and blast deflectors are still in place on the parking apron in the formation that allowed aircraft to start their engines and proceed one at a time out onto the runway for expedient takeoff in the event of an emergency. Thus the facility's exterior integrity remains intact.

Access to the interior of the facility was not obtained; however, due to its sole function as an alert facility, and because the real property card for the facility indicates no major renovations and no changes in use, the integrity of the interior is also determined to be intact.

This facility allowed for maximum readiness and rapid deployment in response to enemy aggression, and thereby embodied the SAC strategy of deterrence. Its design, association, and setting embody and convey U.S. military policy of global deterrence that was evident during the Cold War as the United States sought to maintain a defensive edge over the Soviet Union through military and technological superiority.

The Bomber Alert Facility is exceptionally important to Dyess AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). This facility was used for this purpose during Phases II through IV of the Cold War and meets NRHP criteria (a) and (c).

6.2.2 Maintenance Docks/Hangars**6.2.2.1 Large Aircraft Maintenance Dock** (Resource No. 2002, Real Property No. 5110)

Completed in 1987, this massive three-bay hangar was built specifically to accommodate the B-1B. This permanent, concrete and steel frame building has a unique stepped-in, triangular configuration in plan. The first tier of that configuration has rounded ends which hold the massive bay doors as they move on their rail-tracks. This facility provides protected space for the maintenance of the large aircraft and self-contained utility systems. Unlike many aircraft, the B-1B requires an enclosure when undergoing maintenance due to the costly electronic components used in the defensive and offensive avionics. The large size (three bays) of the hangar was necessary due to the required inspection of two aircraft each week, plus the potential for unscheduled maintenance on a third aircraft.

Access to the hangar was not available. However, due to the young age of the building and its sole use for the mission of B-1B aircraft maintenance, the interior and exterior integrity of the hangar is determined to be intact.

This maintenance dock was of primary importance to the maintenance of B-1B aircraft and, therefore, was important to the base in utilizing this aircraft in the overall defense mission of SAC during the later part of the Cold War period. This facility was used for this purpose during Phase IV of the Cold War and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Dyess AFB.

6.4 TRAINING FACILITIES

None were evaluated at Dyess AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Dyess AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Dyess AFB. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Dyess AFB. These resources should be investigated further for a more comprehensive analysis. A listing of these resources and their general location is provided in Appendix E.

Several documents, objects, and static displays are extant at Dyess AFB. The Civil Engineering Squadron has a large photo of the base (circa 1960) located in the drafting department, as well as documents and maps pertaining to the Rail Garrison proposed for select SAC bases during the 1980s. There are also numerous, large format photographs of early base construction. The Wing Historian's office has in its possession complete histories of the 96th BMW and the 463rd TAW as well as other base tenant units. An adjacent room is full of memorabilia including flags, trophies, and numerous photographs of personnel, planes, and property construction. A collection of base newspapers for the past 5 years is extant as well. These resources are scheduled to be inventoried by the two wing historians. On display in the lobby at the base officer's mess is a collection of personal artifacts and memorabilia that belonged to Colonel Dyess; a similar collection is on display at Wing Headquarters. An aerial photograph of the base dating to 1964 is on display at the visitor center at the main entrance to the base.

Dyess AFB has a linear airpark consisting of 28 aircraft, several of which played important roles during the first three temporal phases of the Cold War. The base also has an Airfield Operations Specialist/Airpark Director who has in his possession a collection of historic USAF clothing, flags, banners, objects, and memorabilia that has already been inventoried and catalogued.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Dyess AFB revealed approximately 150 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the B-52 and then the B-1B, and retirement and acquisition of various missile systems. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Dyess AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix F.

8.0 FUTURE THREATS TO RESOURCES

The only capital improvement project currently planned at Dyess AFB that may impact important historic properties and resources related to the Cold War is interior upgrading conducted as needed for mission-oriented facilities. No exterior work is planned that would alter the character or integrity of these buildings.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Dyess AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Dyess AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Dyess AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Dyess AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

			Management Recommendations*					
Real Resource Property No.	No.	Property Type	No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	Comments
Real Property - Building								
2002	5110	Large Aircraft Maintenance Dock		*		*		NRHP eligible in the future.
2122	4120	Bomber Alert Facility		*	*	*		NRHP eligible now.

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Bomber Alert Facility (Resource No. 2122, Real Property No. 4120)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based upon its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its features is intact based upon partial observation and a lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and features, and further documentation for nomination of this resource to the NRHP.

9.2.2 Large Aircraft Maintenance Dock (Resource No. 2002, Real Property No. 5110)

This building is evaluated as important to the base and national Cold War contexts during Phase IV. It meets NRHP criteria (a) and (c) for its role in sustaining a survivable force to meet the needs of deterrence and its distinctive architectural style, and exhibits intact integrity. However, the building neither meets the 50 year criterion for eligibility, nor is it considered exceptionally significant within the Cold War context. Therefore, it is recommended as currently ineligible to the NRHP. It is additionally recommended that this building undergo stewardship to retain its current level of integrity and, when it meets the 50 year criterion, further documentation and re-evaluation for NRHP eligibility.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

City of Abilene

- 1988 Community Award Publication. On file, Wing Historian's Office, Dyess Air Force Base, Texas.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Dyess Air Force Base

- 1994 *Real Property Survey Report FY 1994, Executive Order 12512*. Dyess Air Force Base, Texas.

Engineering-Science

- 1985 *Installation Restoration Program, Phase I: Records Search, Dyess AFB, Texas*. Engineering-Science, Atlanta, Georgia.

Fenneman, N. M.

- 1931 *Physiography of Western United States*. McGraw-Hill Book Company, New York.

Goddard, B. D. and P. A. O'Brian

- 1985 *Preparations to Receive the World's First Operational B-1B*. 96th Bombardment Wing History Office, Dyess Air Force Base, Texas.

Hatcher, J. H.

- 1963 *A History of Dyess Air Force Base in Its First Decade: A Study in Community Relations*. Unpublished Master's Thesis. On file, Hardin-Simmons University, Abilene, Texas.

Leavelle, C., ed.

- 1976 *The Dyess Story: The Eye-Witness Account of the Death March From Bataan and the Experiences in Japanese Prison Camps and of Eventual Escape*. G. P. Putnam's Sons, New York. Originally published 1944.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.
-

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.

- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Newell, C.

- 1993 *History of the 96th Wing and Dyess Air Force Base*. On file, Wing Historian's Office, Dyess Air Force Base, Texas.

United Forces Guides Publications

- 1959 *Dyess Air Force Base Guidebook*. Abilene, Texas.

United States Air Force

- 1989 *Final Environmental Impact Statement: Peacekeeper Rail Garrison Program*. Vol. I.

- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property-Building				
	2001	5020	Large Aircraft Maintenance Dock	1956
	2002	5110	Large Aircraft Maintenance Dock	1987
	2003	5105	Fuel System Maintenance Dock	1986
	2004	5112	Aircraft Corrosion Control and Maintenance	1986
	2005	4003	Fire Station	1955
	2006	4002	Miscellaneous Recreation Building	1963
	2007	9001	Base Operations	1955
	2008	6030	Flight Simulator Training	1988
	2009	4005	Traffic Check House	1959
	2010	5018	Medium Aircraft Maintenance Dock	1956
	2011	6015	Group Headquarters	1955
	2012	4116	Refueling Vehicle Shop	1956
	2015	5111	Jet Engine Inspection/Maintenance Shop	1986
	2017	8023	Survival Equipment Shop (Parachute Drying	1957
	2019	5226	Liquid Fuel Pumping Station	1988
	2020	4201	Security Police Central Control	1956
	2021	4112	Squadron Operations	1956
	2022	4214	Squadron Operations	1955
	2023	7040	Aerial Delivery Facility	1986
	2024	4315	Large Aircraft Maintenance Dock	1958
	2025	4314	Medium Aircraft Maintenance Dock (Isochronal Hangar)	1955
	2026	4316	Fuel System Maintenance Dock	1956
	2027	5102	Squadron Operations	1955
	2028	5204	Aircraft Support Equipment Shop	1983
	2031	8030	Wing Headquarters	1955
	2032	9112	Missile Assembly Shop	1986
	2033	7007	Weapons Systems Maintenance Management	1961
	2034	7000	Flight Simulator Training	1983
	2035	8006	Base Engineering Administration	1955
	2036	5006	Communication Facility	1959
	2037	4311	Jet Engine Inspection and Maintenance Shop	1956
	2038	7316	Wing Headquarters	1956
	2039	9198	Weapons and Release Systems Shop	1986
	2040	5005	Avionics Shop	1956
	2041	9030	Rapcon Building	1960
	2043	4125	Miscellaneous Outdoor Recreation Facility	1971
	2044	4126	Squadron Operations	1976
	2045	4218	Air Freight Passenger Terminal (Mobility Hangar)	1956
	2046	4215	Aircraft Maintenance Organizational Shop	1956
	2047	4300	Control Tower	1990
	2048	4301	Aircraft Maintenance Organizational Shop	1956

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	2049	5130	Aircraft Maintenance Organizational Shop	1988
	2050	Unknown	Old Fireman Training Facility	
	2054	5280	Supply and Equipment Base Warehouse	1987
	2055	Unknown	Mental Health and Bioengineering Building	
	2056	9201	Composite Medical Facility	1956
	2057	9195	Riding Stables	1959
	2060	9223	Animal Clinic	1991
	2061	9220	MWR Supply and NAF Central Storage	1986
	2062	9260	Traffic Check House	1986
	2063	9265	Security Police Control and Identification	1986
	2066	9140	Observation Tower	1976
	2067	9113	Inert Spares Storage	1955
	2072	6220	Base Chapel	1955
	2073	7338	Base Exchange	1976
	2074	7340	Commissary Store	1981
	2075	7329	Base Library and Recreation Building	1956
	2076	7301	Base Theater	1956
	2077	7110	Swimmers Bath House	1957
	2078	7113	Recreation Center	1955
	2079	7206	Credit Union	
	2080	7232	Education Center & Base Personnel Office	1993
	2081	7233	Air Force Headquarters	1990
	2082	7234	Permanent Party Airmen Dormitory	1956
	2083	7235	Group Headquarters	1955
	2084	7238	Group Headquarters	1984
	2085	7237	Family Support Center	1985
	2086	7008	Housing Supply and Storage Facility	1956
	2087	7004	Base Supply and Equipment Warehouse	1955
	2088	6133	Dental Clinic	1991
	2089	7102	Gymnasium	1959
	2090	7106	NCO Open Mess	1956
	2091	6125,6126, 6127	Permanent Party Airmen's Dormitories	1956
	2092	6240	Transient Lodging Facility	1986
	2093	7225,7226, 7227	Child Care Center	1961
	2094	8016	Vehicle Operations Administration	1955
	2095	8118	Small Arms Firing Range	1989
	2096	8211	Precision Measurement Equipment Lab	1986
	2097	8202	Field Training Facility	1986
	2098	7409	Visiting Officer's Quarters (Dyess Inn)	1955
	2099	7402	Officer's Open Mess	1956
	2100	7420,7421, 7422	Visiting Officer's Quarters	1966

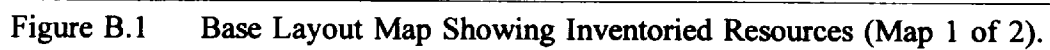
Table A.1 (Continued)

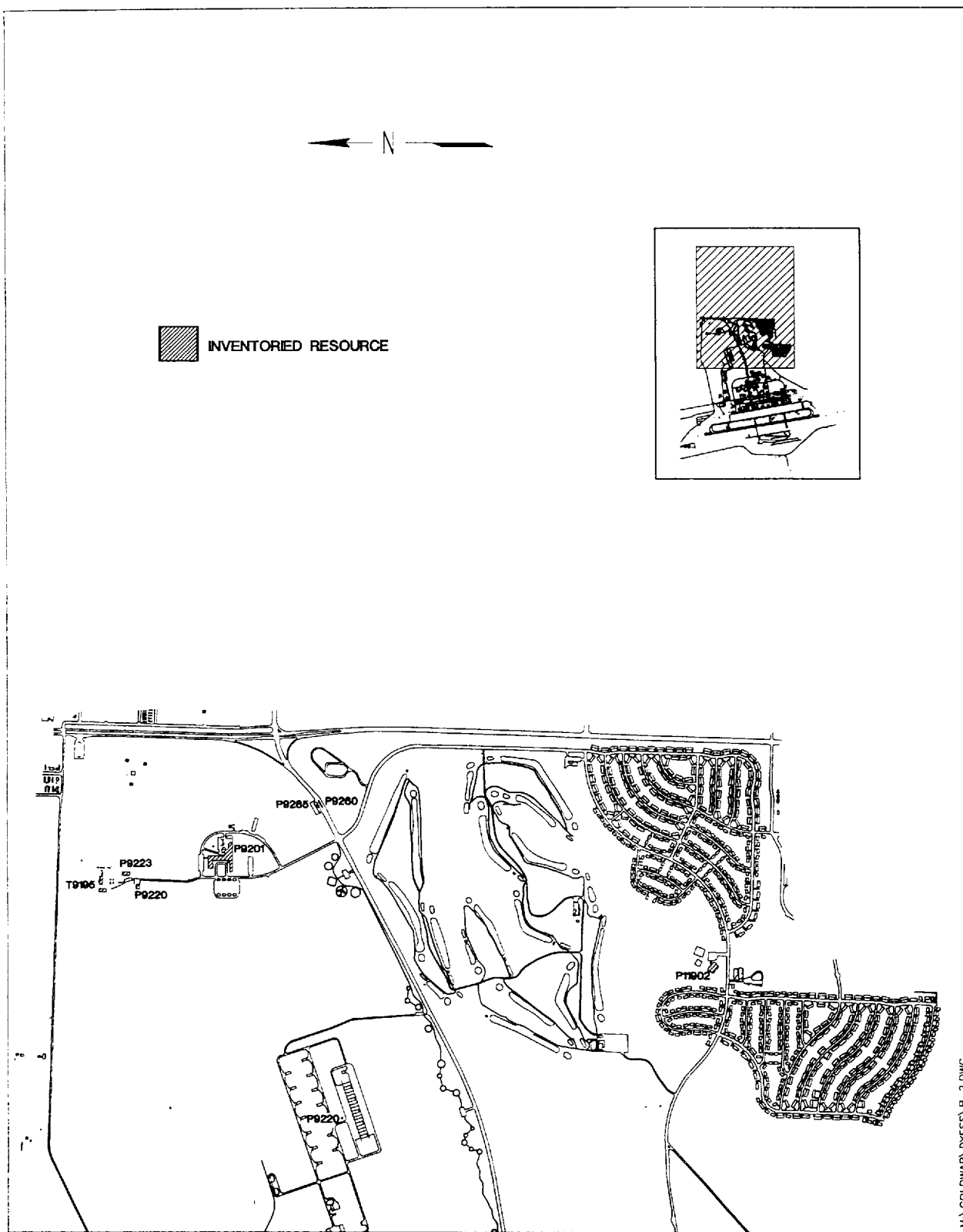
Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	2101	Unknown	Capehart Family Housing Units	
	2102	Unknown	Colonel's Housing	
	2103	11902	Youth Center	1982
	2106	8019	Correction Facility	1956
	2109	5017	Medium Aircraft Maintenance Dock	1956
	2119	Unknown	Alert Facility	
	2120	Unknown	Alert Facility	
	2121	Unknown	Maintenance Dock	
	2122	4120	Bomber Alert Facility	1959
Real Property-Landscape				
	2058	Unknown	Riding Arena	
Real Property-Site				
	2014	9034	Fireman Training Facility	1990
Real Property-Structure				
	2016	5138	Test Cell (Hush House)	1988
	2018	9010	Jet Fuel Storage	1954
	2029	5305	Test Cell	1977
	2030	5301	Support Structures	1956
	2042	9009	Diesel Storage	1955
	2051	None	Blast Deflectors	
	2052	None	Old Aircraft Maintenance Training	
	2053	None	Blast Deflector No. 6	
	2059	Unknown	Storage Igloo	
	2104	None	Base railroad tracks and switch	
	2105	None	Rails	
Real Property-Object				
	2064	None	Linear Air Park Static Display #1-B-52,KC-97,B 17;B-47,KC-135,B-52	
	2065	None	Linear Air Park Static Display #2-A-26,EB-57,0- 2;C-130	
	2068	None	Linear Air Park Static Display #3-C-7,C-47;C- 123,HU66 (Albatross)	
	2069	None	Linear Air Park Static Display #4-T-34B,T-39 Sabreliner,T-29C;T-33A,T-6F	
	2070	None	Linear Air Park Static Display #5-F-84,F-86;F- 89J,RF-84F	
	2071	None	Linear Air Park Static Display #6-F-105D,F- 100C;F-104A,F-101B	
	2107	None	State Flags along 5th Street (Across from Officer's Club)	
	2108	None	Flag Display (Front Gate)	

Table A.1 (Continued)

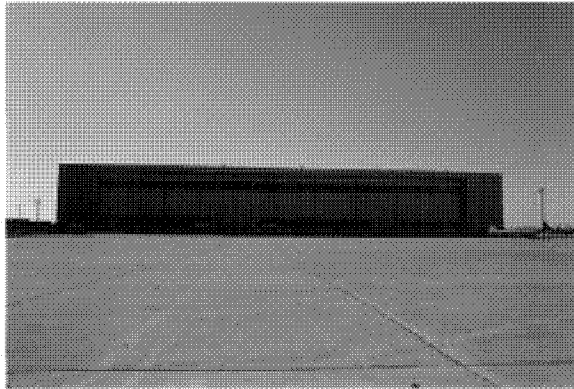
Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	2110	None	Linear Air Park Static Display-F-101B "Voodoo"	
	2111	None	Linear Air Park Static Display-F-89H "Scorpion"	
	2112	None	Linear Air Park Static Display-F-84F "Thunderstreak"	
	2113	None	Linear Air Park Static Display-KC-97L "Stratotanker"	
	2114	None	Linear Air Park Static Display-KC-97L "Stratotanker"	
	2115	None	Linear Air Park Static Display-B-52D "Stratofortress"	
	2116	None	Linear Air Park Static Display-KC-135A "Stratotanker"	
	2117	None	Linear Air Park Static Display-B-47E "Stratojet"	
	2118	None	Linear Air Park Static Display-B-52D "Stratofortress"	

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

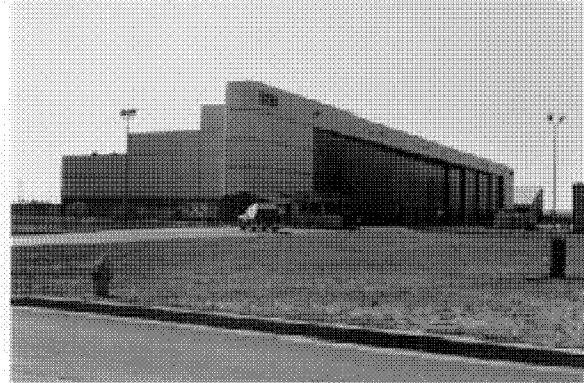




APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 2001, Real Property No. 5020
Large Aircraft Maintenance Dock



Resource No. 2002, Real Property No. 5110
Large Aircraft Maintenance Dock (B-1B Hanger)



Resource No. 2003, Real Property No. 5105
Fuel System Maintenance Dock



Resource No. 2004, Real Property No. 5112
Aircraft Corrosion Control and Maintenance
Hangar



Resource No. 2005, Real Property No. 4003
Fire Station



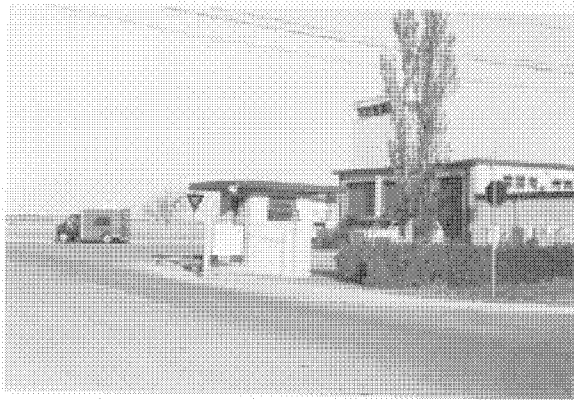
Resource No. 2006, Real Property No. 4002
Miscellaneous Recreation Building



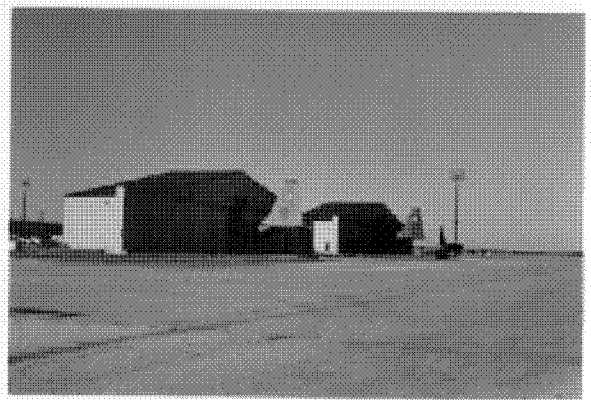
Resource No. 2007, Real Property No. 9001
Base Operations



Resource No. 2008, Real Property No. 6030
Flight Simulator Training



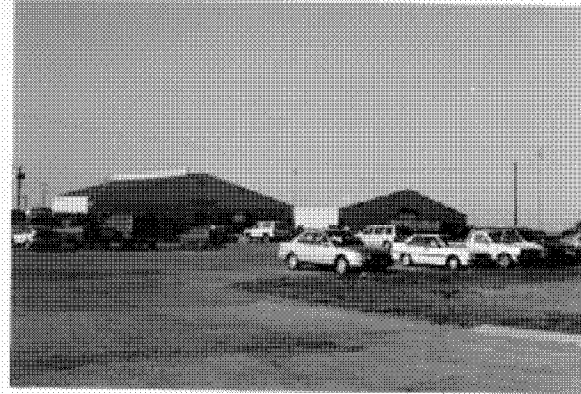
Resource No. 2009, Real Property No. 4005
Traffic Check House



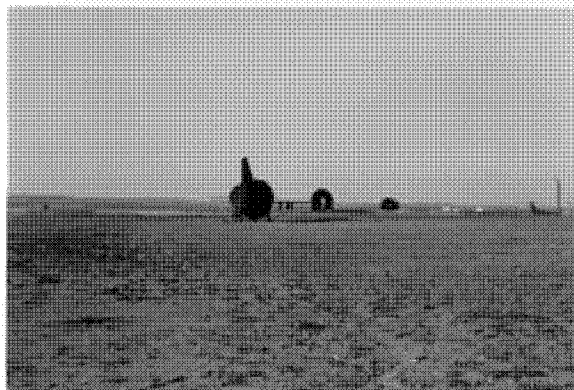
Resource No. 2010, Real Property No. 5018
Medium Aircraft Maintenance Dock



Resource No. 2011, Real Property No. 6015
Group Headquarters



Resource No. 2012, Real Property No. 4116
Refueling Vehicle Shop



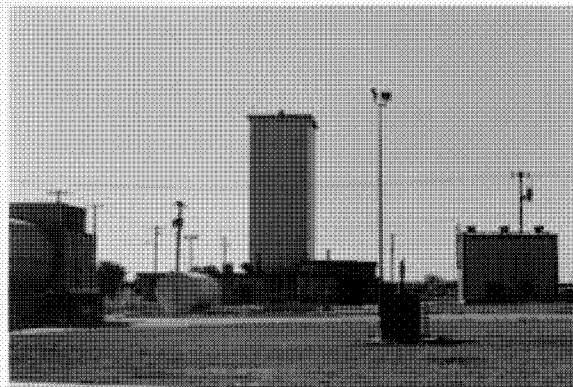
Resource No. 2014, Real Property No. 9034
Fireman Training Facility



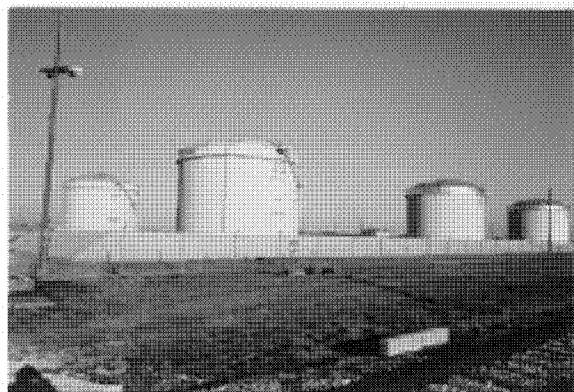
Resource No. 2015, Real Property No. 5111
Jet Engine Inspection/Maintenance Shop



Resource No. 2016, Real Property No. 5138
Test Cell (Hush House)



Resource No. 2017, Real Property No. 8023
Survival Equipment Shop (Parachute Drying
Tower)



Resource No. 2018, Real Property No. 9010
Jet Fuel Station



Resource No. 2019, Real Property No. 5226
Liquid Fuel Pumping Station



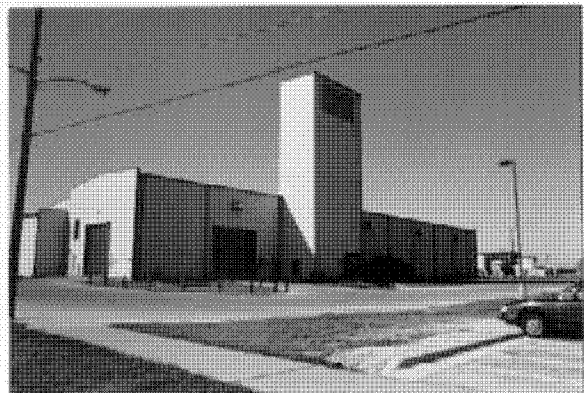
Resource No. 2020, Real Property No. 4201
Security Police Central Control



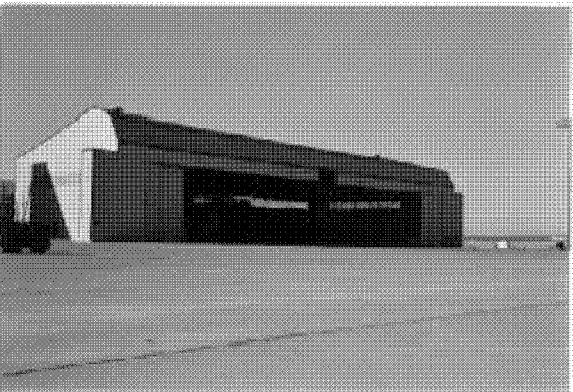
Resource No. 2021, Real Property No. 4112
Squadron Operations



Resource No. 2022, Real Property No. 4214
Squadron Operations



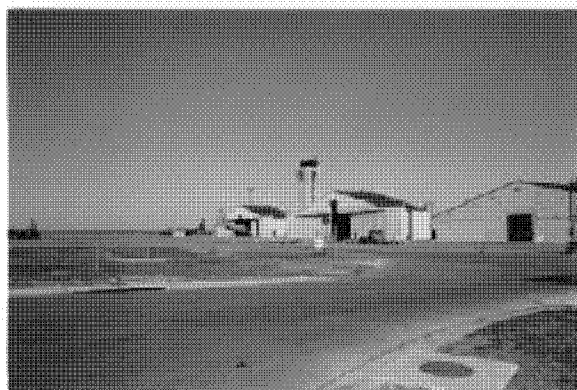
Resource No. 2023, Real Property No. 7040
Aerial Delivery Facility



Resource No. 2024, Real Property No. 4315
Large Aircraft Maintenance Dock



Resource No. 2025, Real Property No. 4314
Medium Aircraft Maintenance Dock (Isochronal
Hangar)



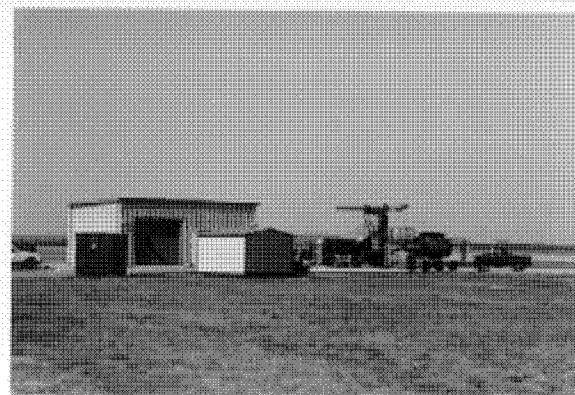
Resource No. 2026, Real Property No. 4316
Fuel System Maintenance Dock



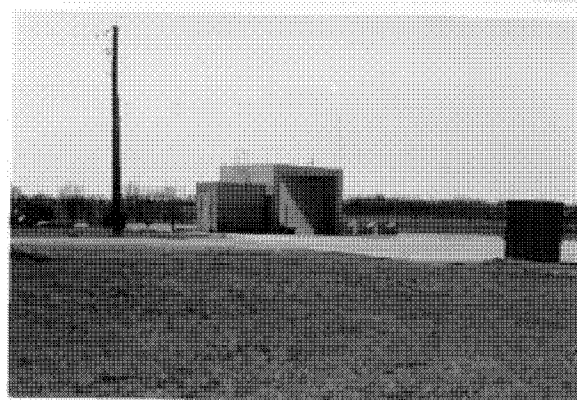
Resource No. 2027, Real Property No. 5102
Squadron Operations



Resource No. 2028, Real Property No. 5204
Aircraft Support Equipment Shop



Resource No. 2029, Real Property No. 5305
Test Cell



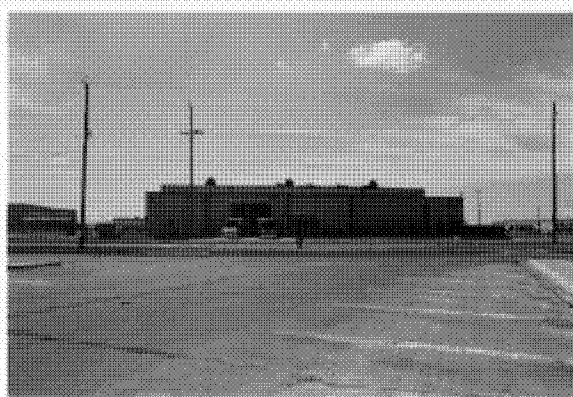
Resource No. 2030, Real Property No. 5301
Support Structures



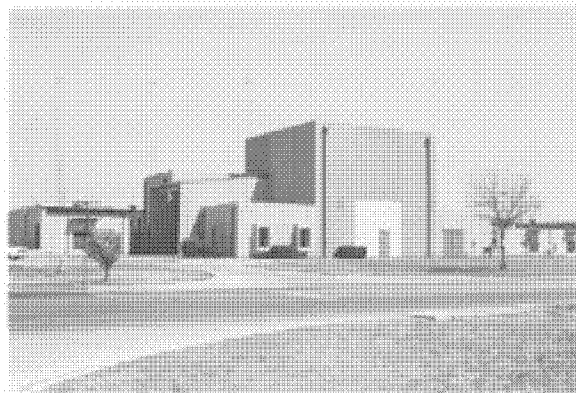
Resource No. 2031, Real Property No. 8030
Wing Headquarters



Resource No. 2032, Real Property No. 9112
Missile Assembly Shop



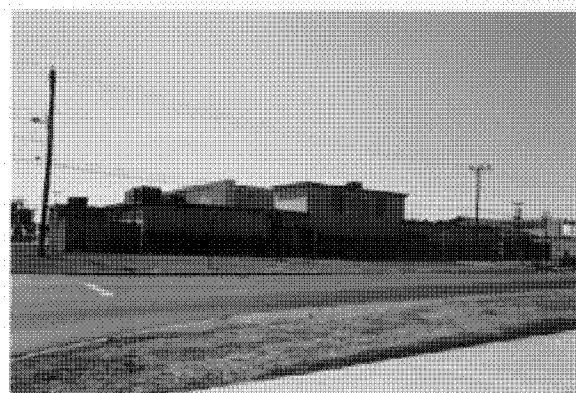
Resource No. 2033, Real Property No. 7007
Weapons Systems Maintenance Management
Facility



Resource No. 2034, Real Property No. 7000
Flight Simulator Training



Resource No. 2035, Real Property No. 8006
Base Engineering Administration



Resource No. 2036, Real Property No. 5006
Communication Facility



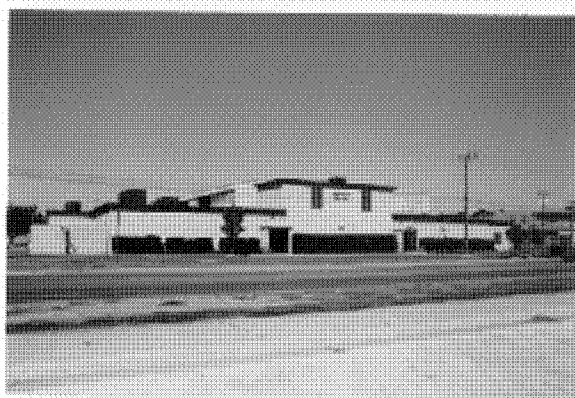
Resource No. 2037, Real Property No. 4311
Jet Engine Inspection and Maintenance Shop



Resource No. 2038, Real Property No. 7316
Wing Headquarters



Resource No. 2039, Real Property No. 9198
Weapons and Release Systems Shop



Resource No. 2040, Real Property No. 5005
Avionics Shop



Resource No. 2041, Real Property No. 9030
Rapcon Building



Resource No. 2042, Real Property No. 9009
Diesel Storage



Resource No. 2043, Real Property No. 4125
Miscellaneous Outdoor Recreation Facility



Resource No. 2044, Real Property No. 4126
Squadron Operations



Resource No. 2045, Real Property No. 4218
Air Feight Passenger Terminal (Mobility Hangar)



Resource No. 2046, Real Property No. 4215
Aircraft Maintenance Organizational Shop



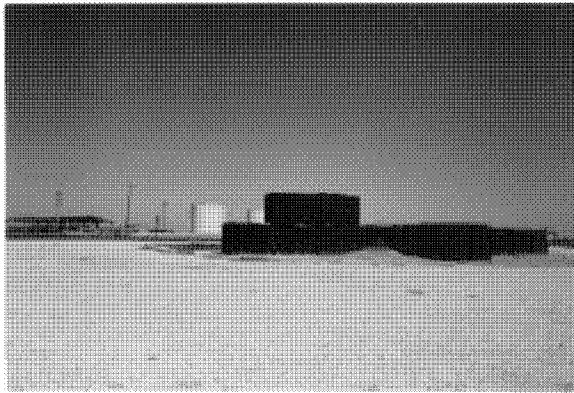
Resource No. 2047, Real Property No. 4300
Control Tower



Resource No. 2048, Real Property No. 4301
Aircraft Maintenance Organizational Shop



Resource No. 2049, Real Property No. 5130
Aircraft Maintenance Organizational Shop



Resource No. 2050, Real Property No. (unknown), Old Fireman Training Facility



Resource No. 2051, Real Property No. (none)
Blast Deflectors



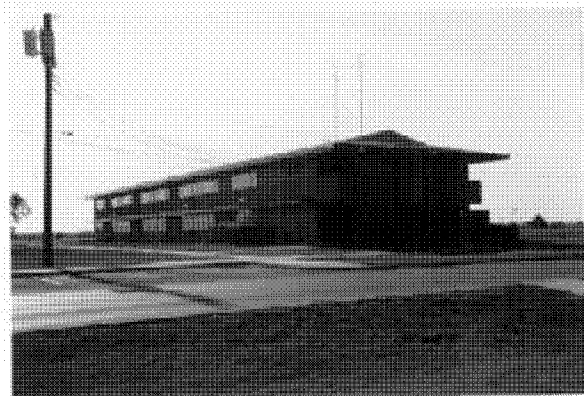
Resource No. 2052, Real Property No. (none)
Old Aircraft Maintenance Training



Resource No. 2053, Real Property No. (none)
Blast Deflector No. 6



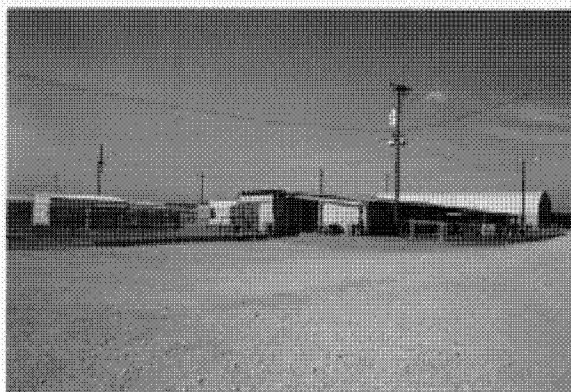
Resource No. 2054, Real Property No. 5280
Supply and Equipment Base Warehouse



Resource No. 2055, Real Property No. (unknown), Mental Health and Bioengineering Building



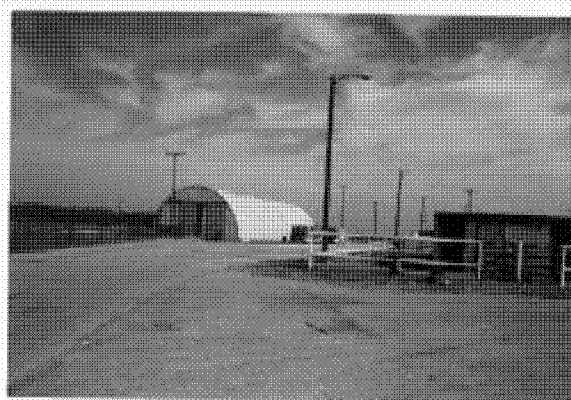
Resource No. 2056, Real Property No. 9201
Composite Medical Facility



Resource No. 2057, Real Property No. 9195
Riding Stables



Resource No. 2058, Real Property No.
(unknown), Riding Arena



Resource No. 2059, Real Property No.
(unknown), Storage Igloo



Resource No. 2060, Real Property No. 9223
Animal Clinic



Resource No. 2061, Real Property No. 9220
MWR Supply and NAF Central Storage



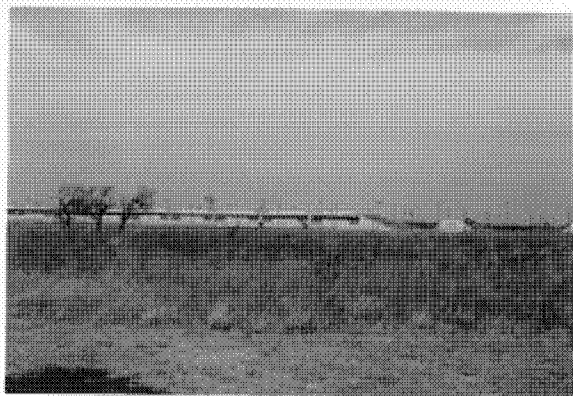
Resource Nos. 2062 and 2063, Real Property Nos. 9260 and 9265, Traffic Check House and Security Police Control and Identification



Resource No. 2064, Real Property No. (none)
Linear Air Park Static Display #1



Resource No. 2065, Real Property No. (none)
Linear Air Park Static Display #2



Resource No. 2066, Real Property No. 9140
Observation Tower (in far background)



Resource No. 2067, Real Property No. 9113
Inert Spares Storage



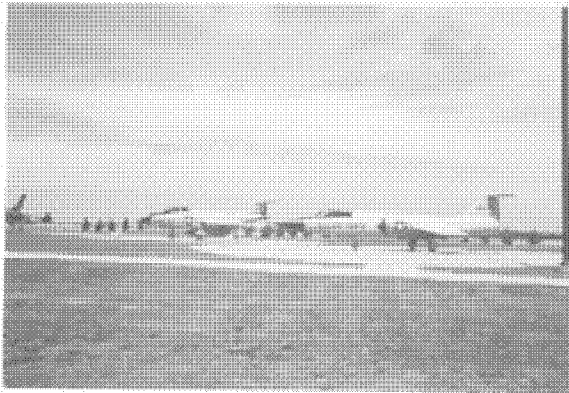
Resource No. 2068, Real Property No. (none)
Linear Air Park Static Display #3



Resource No. 2069, Real Property No. (none)
Linear Air Park Static Display #4



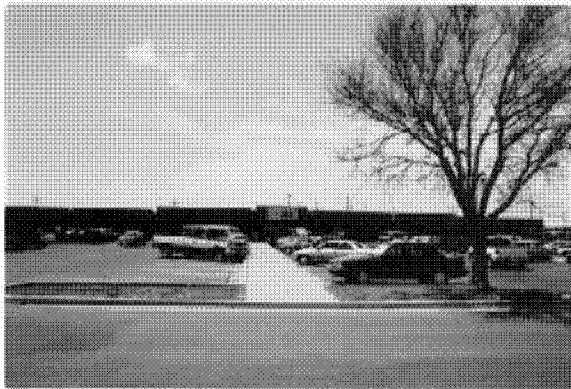
Resource No. 2070, Real Property No. (none)
Linear Air Park Static Display #5



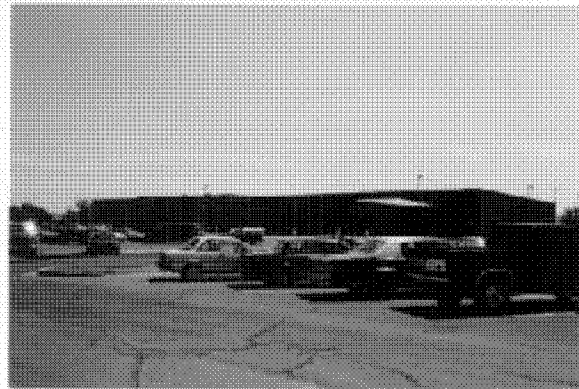
Resource No. 2071, Real Property No. (none)
Linear Air Park Static Display #6



Resource No. 2072, Real Property No. 6220
Base Chapel



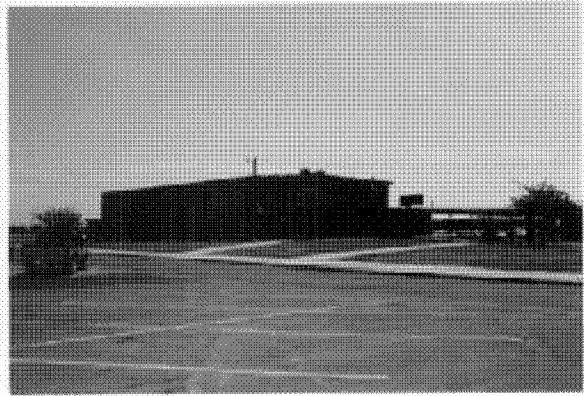
Resource No. 2073, Real Property No. 7338
Base Exchange



Resource No. 2074, Real Property No. 7340
Commissary Store



Resource No. 2075, Real Property No. 7329
Base Library and Recreation Building



Resource No. 2076, Real Property No. 7301
Base Theater



Resource No. 2077, Real Property No. 7110
Swimmer's Bath House



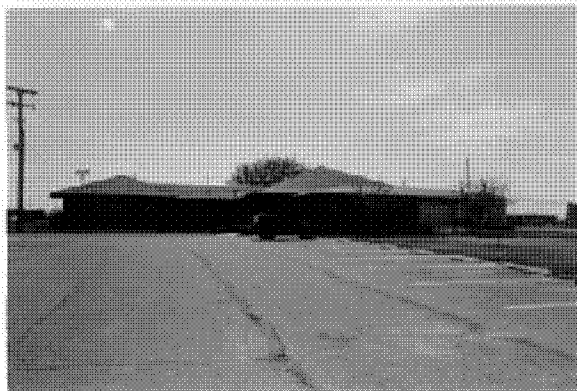
Resource No. 2078, Real Property No. 7113
Recreation Center



Resource No. 2079, Real Property No. 7206
Credit Union



Resource Nos. 2080-2083, Real Property Nos.
7232-7235, Education Center and Base Personnel
Office, Air Force Headquarters, Permanent Party
Airman's Dormitory, and Group Headquarters



Resource No. 2084, Real Property No. 7238
Group Headquarters



Resource No. 2085, Real Property No. 7237
Family Support Center



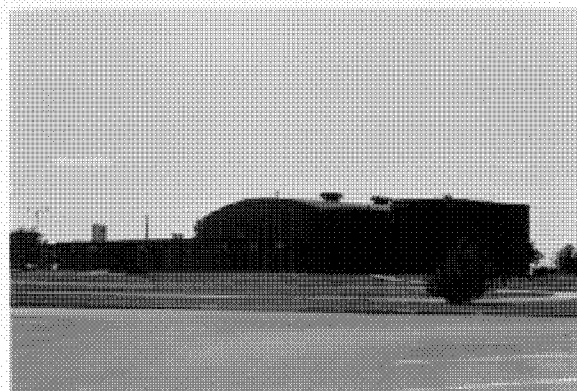
Resource No. 2086, Real Property No. 7008
Housing Supply and Storage Facility



Resource No. 2087, Real Property No. 7004
Base Supply and Equipment Warehouse



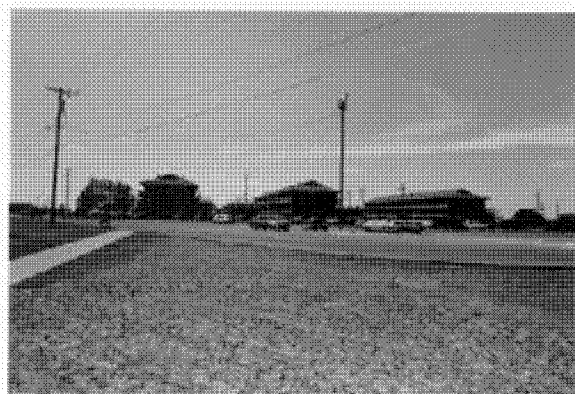
Resource No. 2088, Real Property No. 6133
Dental Clinic



Resource No. 2089, Real Property No. 7102
Gymnasium



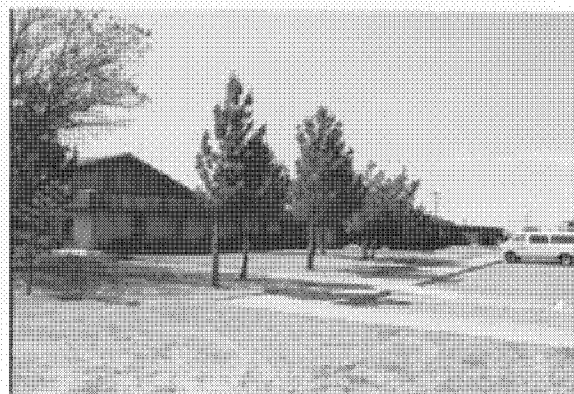
Resource No. 2090, Real Property No. 7106
NCO Open Mess



Resource No. 2091, Real Property Nos. 6125-
6127, Permanent Party Airman's Dormitories



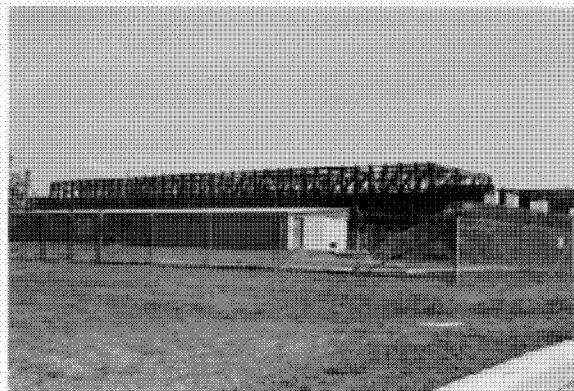
Resource No. 2092, Real Property No. 6240
Transient Lodging Facility



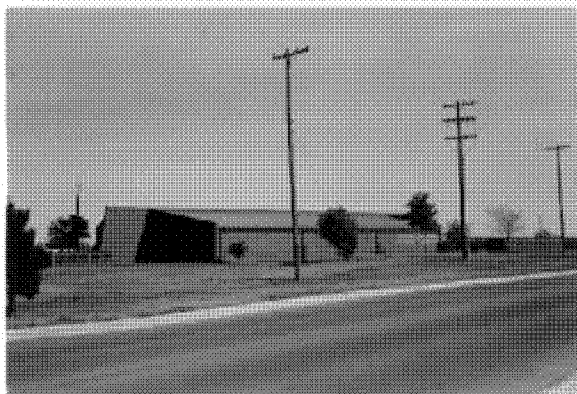
Resource No. 2093, Real Property Nos. 7225-
7227, Child Care Center



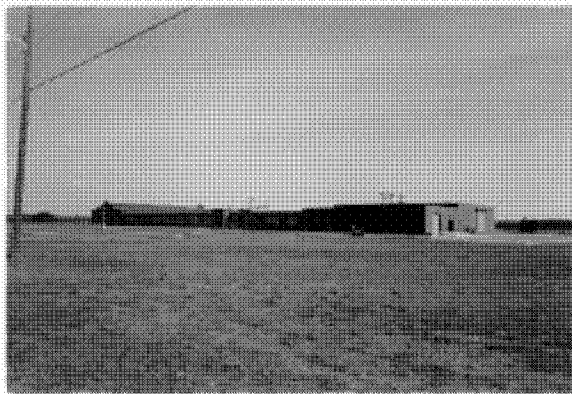
Resource No. 2094, Real Property No. 8016
Vehicle Operations Administration



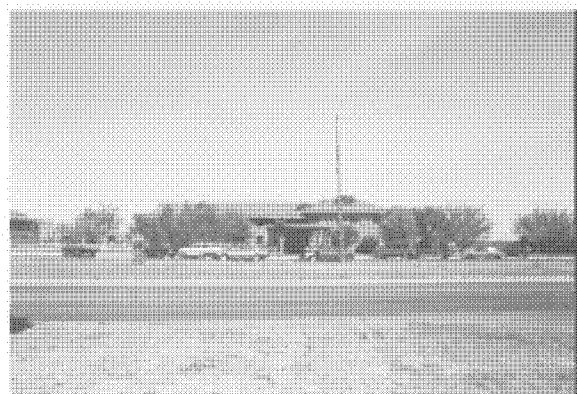
Resource No. 2095, Real Property No. 8118
Small Arms Firing Range



Resource No. 2096, Real Property No. 8211
Precision Measurement Equipment Lab



Resource No. 2097, Real Property No. 8202
Field Training Facility



Resource No. 2098, Real Property No. 7409
Visiting Officer's Quarters



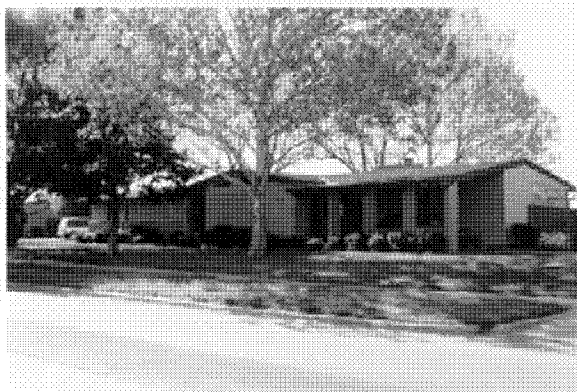
Resource No. 2099, Real Property No. 7402
Officer's Open Mess



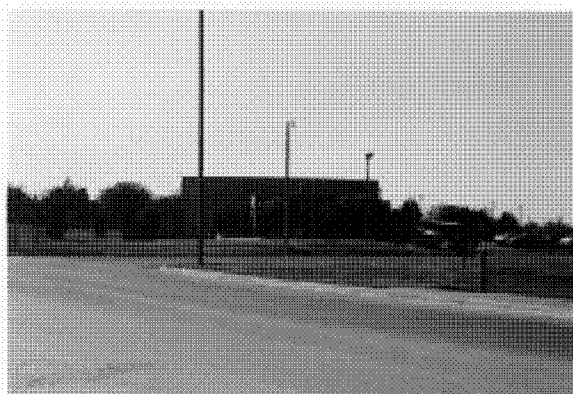
Resource No. 2100, Real Property Nos. 7420-
7422, Visiting Officer's Quarters



Resource No. 2101, Real Property No.
(unknown), Capehart Family Housing Units



Resource No. 2102, Real Property No. (unknown), Colonel's Housing



Resource No. 2103, Real Property No. 11902 Youth Center



Resource No. 2104, Real Property No. (none) Base Railroad Tracks and Switch



Resource No. 2105, Real Property No. (none) Rails



Resource No. 2106, Real Property No. 8019 Correction Facility



Resource No. 2122, Real Property No. 4120 Crew Readiness

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT DYESS AFB

Resource Number: 2002

Property Description: Maintenance of B1-B aircraft.
Associated Property: #5118
Non-Inventoried Association:
Sub-installation:
Address: 797 First St.
Base Map Date: 6/19/91
Base Map Building Number: 5110

Operational Support & Installations:
Combat Weapons and Support Systems: Maintenance Docks/Hangars
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Large Aircraft Maintenance Dock

Statement of Significance: Of primary importance to the maintenance of B1-B aircraft and the overall ACC defense mission.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 3
Temporal Phase Relationship: 1
Level of Importance: 3
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 16
Comments on Threats:

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: Important within Cold War context, but doesn't meet 50 year criterion. Therefore, stewardship is recommended for now, and further documentation with re-evaluation is recommended when it meets the 50 year criterion.

Importance: Important
Eligibility: Future

Height: 60
Square Footage: 91395
Original Planned Duration: Permanent
Existing Use: Maintenance of B1-Bomber.
Other Use/Dates:
Comments on Use:
Primary Building Materials: Steel Frame

Character Defining Features: Rounded ends of first tier to hold bay doors as they are opened and a stepped-in, triangular configuration of the building plan.

Comments on Architecture: Built especially for the B1-B aircraft.

Resource Number: 2122

Property Description: Alert Facility: Consists of swimming pool, (no longer extant) facility for conjugal visits, barbeque, emergency generators, exit ramps from facility, blast deflectors, high speed refueling pump facility

Associated Property: 2009

Non-Inventoried Association:

Sub-installation:

Address: 498 Alert Avenue

Base Map Date: 6/19/91

Base Map Building Number: 4120

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Bomber Alert Facility

Statement of Significance: This facility allowed maximum readiness for deterrence against enemy aggression

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 20

Comments on Threats: The facility is utilized periodically when SAC (now ACC) personnel come to Dyess AFB

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: The building embodies SAC readiness and alert strategy and the associated facilities that supported the operational status. NRHP eligibility is recommended.

Importance: Exceptional

Eligibility Eligible

Height: 15

Square Footage: 27301

Original Planned Duration: Permanent

Existing Use: Periodic SAC alert exercises

Other Use/Dates:

Comments on Use: Real Property Cards show 23,033 sf.

Primary Building Materials: Concrete

Character Defining Features: Outside ramps from lower and upper levels. Placement immediately on the flight apron with attendant blast deflectors for each aircraft.

Comments on Architecture: First floor is below grade and consists primarily of bedrooms (40) and toilets and a mechanical room. The second story is above grade and has bedrooms, bathrooms, briefing room, library, kitchen, War room, and recreational rooms (T.V. & Lounge).

APPENDIX E
ADDITIONAL UNDOCUMENTED RESOURCES

Civil Engineering Office

Final Draft/Environmental Impact Statement for Peacekeeper Rail Garrison Program

Green Photo Album-Facility Construction dating 1955-1957

Includes: Base Operations, Hospital, Hangars, Control Tower, Runway, Nose Docks, Fire Station, Base Housing, Base Exchange, Library, Chapel, Fuel Storage, Railroad tracks, Ordnance Igloos, Service Club, Officer's Mess, Women's Officer Quarters.

Notebook-ICBM Modernization Program - January 1988

Need to modernize - "growing Soviet threat" - maintain effectiveness of current systems. Minuteman, Peacekeeper-Advanced Inertial Reference Sphere (AIRS), Small ICBM

Aerial photos (10) of Dyess AFB 1950s, 60s and possibly 70s (2) 8x8" and (3) 12x14, all b/w.

Aerial photos of Dyess AFB for 1940's, 1964, 1967, 1976, and 1986.

1960: Large (approximately 5'x 5') Aerial Photograph of Base, located in the Drafting Room at 7th CES

Draft Environmental Impact State
Peacekeeper Rail Garrison Program - June 1988 Vols 1&2

B/W aerial photos (35) of Dyess AFB 1976.

B/W aerial photos (5) of clear zone with end of runway March 17, 1964.

B/W aerial photos (25) north and south ends of clear zones of runways and flight apron - dating from 1971 through 1976. 1 b/w aerial 33,000 feet - National Guard Gunnery Range.

B/W aerial photo (1 16"x20") of Dyess AFB at 9,000 feet on 28/5/76.

96 Civil Engineering Squadron scrapbook - wooden front and back. Copy of telephone directory (?) date. Various newspaper articles on Dyess from the Peacemaker - the base "unofficial" newspaper. Dates - 1966 to 79 or 1980. Articles of concern or general interest regarding civil engineering on Dyess AFB.

Cardboard box containing records of: Construction projects B-1B Horseblanket - FY 85 & 86.

Munitions maintenance facility

CCTS

ADAL miscellaneous facilities

Aerial Delivery System

Apron Support

B-1B General

Blast Deflectors

Flight simulator FY86

Folders:

B-1B Construction concerns - 1985

"Point Papers" - B-1B facility status FY84/85

Fire Department UHF radios

Folders on B-1B facilities/support work group - 1985

DX rating - Defense materials priorities systems.

Manpower/personnel - B-52H manpower drawdown and B-1B manpower build-up furniture.

FY 84 - Financial working group minutes, B-1B enhancements, etc.

B-1B construction, etc. concerns - misc. mtgs.

SATAF information.

Scheduling and visits, B-1B related

B-1B working group minutes

B-1B construction schedules, etc., FY85 through March 85.

Teleconference files on B-1B Horseblanket

Technical Orders - 84-85

Facilities brains

B-1B maintenance complex

B-52 D to H

ORI - Operational Readiness Inspection (pertaining to A.F. Achievement Medal to Captain Joseph Burns)

B-1B "bed-down" materials

Munitions facilities - construction project

Drawings - maps (2) of Rail Garrison Baseline concept plan - Nov. 29, 1989

Weapons Storage Area (WSA) construction - June 1985 - Overhead transparencies large format (6).

Conventional munitions. Box - 16" x 20" full of large format OHP transparencies pertaining to construction and refurbishment projects all over the base. Various states involved. many have to do with B-1B facilities or support facilities for B-1B (500 +/- OHP transparencies).

Cardboard box 16" x 20" of OHP transparencies (and large format) CES mtgs - slides for presentation - FY projects and numbers met. B-1B bed down projects for facilities etc. change over from B-52 Ds to Hs to B-1B, etc.

Wing Historian's Office

Wing Histories:

463rd TAW 1960s-1993, 96th BMW (classified)

(older histories of the 96th on microfiche, 1943-1987).

516th TAW 1963-1968; 64th Troop Carrier Wing, 1961-1962.

Base Newspaper/"Peacekeeper" 5 year collection, the rest should be on file at the Abilene City Newspaper Office where they are published; 1 year collection at Base Library. Public Affairs Office?

Assorted Office of Air Force History books

Master's Thesis/*Dyess AFB: The First Decade*

Base Guidebooks (approximately 25) since 1959

File Cabinets:

Archive photos/KC-97 & B-47 refueling

Colonel Dyess file

Facilities photos

Missile Milestones file

7th Wing "

B-17 "

B-47 "

B-1B "

Desert Shield "

Dyess/Abilene Histories

Dyess AFB

Various Bomb Wings (96th, 341st, 917th Air Refueling Sq.

Air Force History Files: 8th, 15th Air Force

12th Air Division

Base/Community

B-1B Operations/Test Evaluations/General info. file

Peacekeeper Rail Garrison file

Drawer full of Misc. video tape: B-1B, SAC, 96th BMW
(all from Public affairs office-not viewed by Wing Historian).

Storage Room:

Large framed photos of 96th BMW (50-75)

Trophies (2)

Surplus book collection (USAF histories)

Slide collection/several notebooks full

Catalog of Oral Histories on file at Maxwell AFB

Boxes of Misc. reports

Misc. photos

Globe on stand

Scrap book of newspaper clippings from World War II/Colonel Dyess

Flag/463rd TAW

Base Library

Thesis/*Dyess AFB: The First Decade*

Report-Installation Restoration Program: Phase I Dyess AFB

Collection of newspaper clippings about Colonel Dyess, 2 vols. = 60 pp.

APPENDIX F
SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the Mariah field team to help identify Cold War material culture extant on Dyess AFB and to provide research materials for this study:

Floyd Ball, Deputy Base Civil Engineer
7 CES/CEEC
710 3rd Street
Dyess AFB, TX 79607-1670
(915) 696-2250

1st Lt. James Sackett, Civil Engineer/Squadron Security Mgr.
7 CES/CEEC
710 3rd Street
Dyess AFB, TX 79607-1670
(915) 696-4316

SrA Charles Newell, Wing Historian
7 WG/HO
650 2nd Street
Dyess AFB, TX 79607-1918
(915) 696-3312

Carlene Wood, Real Property Officer
7 CES/CEEC
710 3rd Street
Dyess AFB, TX 79607
(915) 696-4209

Elaine Mason, Chief of Resources
7 CES/CER
710 3rd Street
Dyess AFB, TX 79607
(915) 696-4265

TSgt Richard Warner (retired), Airfield Operations Specialist/Airpark Director
7WG/CVM
650 2nd Street
Dyess AFB, TX 79607-1960
(915) 696-2636

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as individuals possessing extensive knowledge of Dyess AFB history and Cold War context.

Floyd Ball, Deputy Base Civil Engineer, April 4, 1994

SrA Charles Newell, Wing Historian, April 12 and 13, 1994

1st Lt. James Sackett, Civil Engineer/Squadron Security Manager, April 5 and 12, 1994

TSgt Richard Warner, Airfield Operations Specialist/Airpark Director, April 7, 1994

Carlene Wood, Real Property Officer, April 5, 1994

KNOWLEDGEABLE INDIVIDUALS

The following individuals were identified during the investigations as people with extensive knowledge of base history during the Cold War. They possess much more information than could be documented during this preliminary reconnaissance.

Floyd Ball, Deputy Base Civil Engineer

TSgt Richard Warner, Airfield Operations Specialist/Airpark Director

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-7: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT ELLSWORTH AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Karen Lewis
R. Blake Roxlau
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Ellsworth Air Force Base was inventoried for Cold War material culture between July 25 and August 2, 1994 as part of the Air Combat Command Cold War Study for the on-going Department of Defense Legacy Program. R. Blake Roxlau and Karen Lewis of Mariah Associates, Inc. conducted the inventory. Information was obtained from the base Real Property files, the Civil Engineering drawing vault, and the Public Affairs office. Additional information was secured from the Wing Historian after the visit; the historian was on leave during the field investigation.

After a meeting with base personnel and with a National Park Service contractor doing a similar survey of base properties, an initial reconnaissance was conducted with Dr. Dan Friesen of the Civil Engineering Squadron. A photographic survey of property types and on-site inspections of resources led to a determination of seven resources as important in their relationship to the base's Cold War history and context. These resources were further documented and evaluated. The properties selected are representative of all four temporal phases of the Cold War era, as discussed in the historic context and methodology document written for this project (Lewis et al. 1995).

Recommendations for the Documentary Collection and Architectural Drawing Files include stewardship, further documentation, and conservation. Eligibility to the National Register of Historic Places is recommended for the Bomber Alert Facility, Large Aircraft Maintenance Dock, Missile Launch Complex, and the Segregated Storage Igloo. Stewardship and further documentation are also recommended for these four resources. Finally, the Tanker Alert Facility is recommended as potentially eligible to the National Register of Historic Places, with stewardship and further documentation also recommended.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACCS	- Airborne Command and Control Squadron
ACHP	- Advisory Council on Historic Preservation
AEC	- Atomic Energy Commission
AFB	- Air Force Base
AFS	- Air Force Station
AGE	- Air Ground Equipment
ALCS	- Airborne Launch Control System
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
BMW	- Bombardment Wing
DoD	- Department of Defense
FMS	- Field Missile Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
LCF	- Launch Control Facility
LF	- Launch Facility
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Non-Commissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCNUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PACCS	- Post Attack Command and Control System
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center
SAC	- Strategic Air Command
SAD	- Strategic Aerospace Division
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SMW	- Strategic Missile Wing
SRW	- Strategic Reconnaissance Wing
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
USAF	- United States Air Force
VHF	- Very High Frequency
WSA	- Weapons Storage Area

GLOSSARY

Airborne Launch Control System - a system which allowed an airborne aircraft to transmit launch codes to underground Minuteman ICBMs in their silos from a distance of hundreds of miles.

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

GLOSSARY (Continued)

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Post Attack Command and Control System - a system of airplanes that could serve as U.S. command posts should command centers on the ground become inoperable. These modified Boeing 707 aircraft were originally supervised by the Strategic Air Command. They are now under the control of U.S. Strategic Command.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	5
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	16
4.0 METHODOLOGY	22
4.1 INVENTORY	22
4.2 EVALUATION OF IMPORTANT RESOURCES	23
4.2.1 Documentation	23
4.2.2 Evaluation of Importance	23
4.2.2.1 Cold War Context	23
4.2.2.2 NRHP Criteria	24
4.2.2.3 Exceptional Importance	25
4.2.3 Evaluation of Integrity	25
4.2.4 Priority Matrix	26
4.2.5 Resource Organization	27
4.3 BASE SPECIFIC METHODS	27
5.0 RECONNAISSANCE INVENTORY RESULTS	29
6.0 EVALUATION RESULTS	30
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	30
6.1.1 Documentation	30
6.1.1.1 Documentary Collection	30
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	33
6.2.1 Alert Facilities	33
6.2.1.1 Tanker Alert Facility	33

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1.2 Bomber Alert Facility	34
6.2.2 Documentation	35
6.2.2.1 Architectural Drawing Files	35
6.2.3 Maintenance Docks/Hangars	35
6.2.3.1 Large Aircraft Maintenance Dock	35
6.2.4 Missiles	37
6.2.4.1 Missile Launch Complex	37
6.2.5 Storage	38
6.2.5.1 Segregated Storage Igloo	38
6.3 MATERIEL DEVELOPMENT FACILITIES	39
6.4 TRAINING FACILITIES	39
6.5 INTELLIGENCE FACILITIES	39
7.0 UNDOCUMENTED RESOURCES	40
8.0 FUTURE THREATS TO RESOURCES	42
9.0 PRELIMINARY RECOMMENDATIONS	43
9.1 NRHP ELIGIBILITY	43
9.1.1 Evaluation and Determination of NRHP Eligibility	43
9.1.2 Implications of NRHP Eligibility	45
9.2 EVALUATED RESOURCE RECOMMENDATIONS	47
9.2.1 Documentary Collection	47
9.2.2 Tanker Alert Facility	49
9.2.3 Bomber Alert Facility	49
9.2.4 Architectural Drawing Files	49
9.2.5 Large Aircraft Maintenance Dock	50
9.2.6 Missile Launch Complex	50
9.2.7 Segregated Storage Igloo	50
10.0 REFERENCES CITED	52
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Ellsworth Air Force Base	6
Figure 2.2 Ellsworth Air Force Base Layout	7
Figure 2.3 Standard Strategic Air Command Base Layout	8
Figure 2.4 Ellsworth Air Force Base Land Use Diagram	11
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	12
Figure 3.1 Ellsworth Air Force Base 1940-1950	17
Figure 3.2 Ellsworth Air Force Base 1950-1960	18
Figure 3.3 Ellsworth Air Force Base 1960-1970	19
Figure 3.4 Ellsworth Air Force Base 1970-1990	20
Figure 3.5 Ellsworth Air Force Base 1990-Present	21

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	31
Table 6.2 Evaluated Resource Prioritization by Priority Rank	32
Table 9.1 Recommendations for Evaluated Resources	48

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

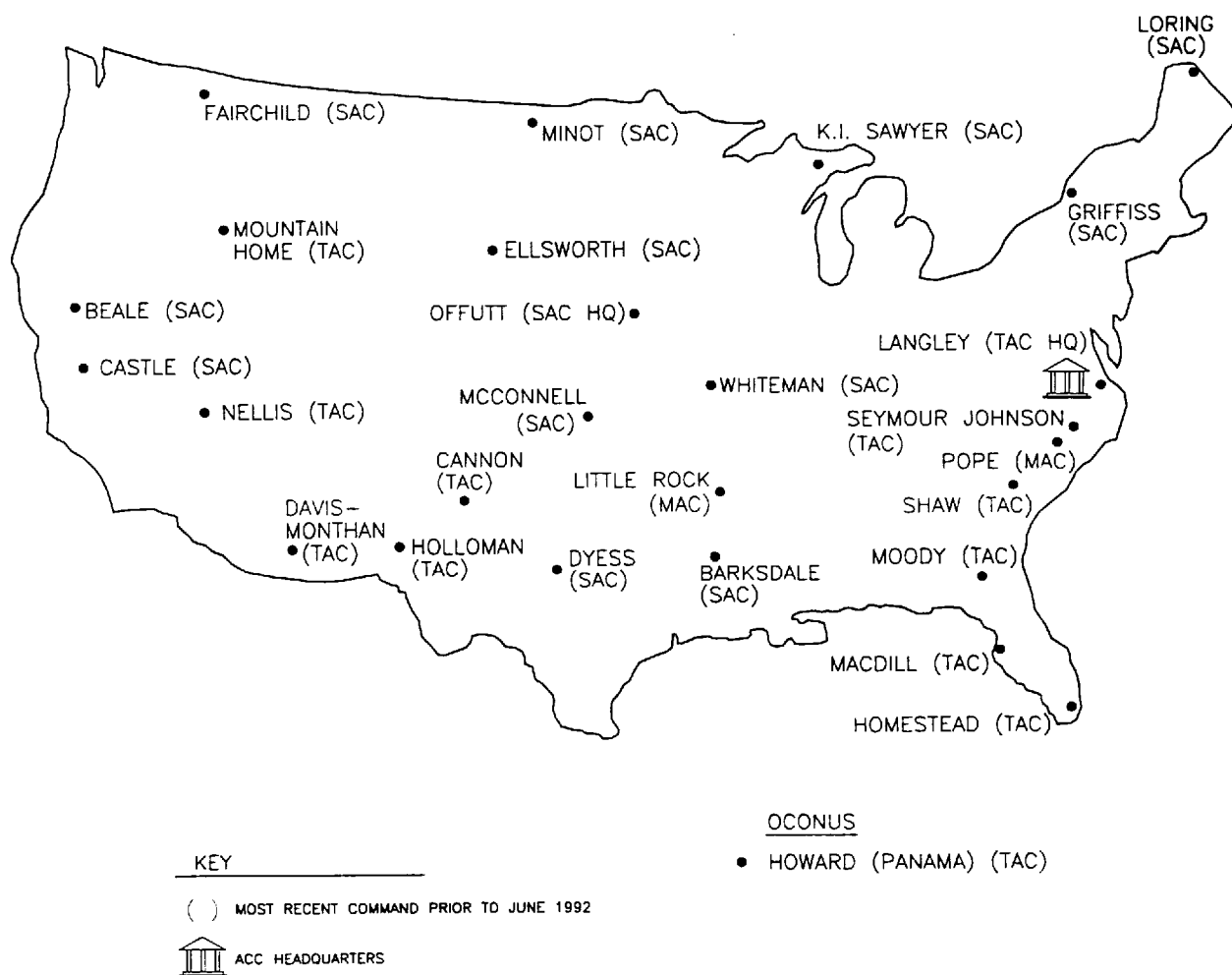
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: ELLSWORTH\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Ellsworth Air Force Base (AFB). Ellsworth AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Ellsworth AFB is home to the 28th Bomb Wing and the 99th Wing. It was also home of the 44th Strategic Missile Wing (SMW) prior to its 1994 deactivation. The 28th Bomb Wing is assigned to the 8th Air Force and is the host wing at Ellsworth AFB. The mission of the bomb wing is "first to the fight with decisive combat air power that achieves the aims of the combatant commander's campaign" (United States Air Force [USAF] 1994).

The 28th Bomb Wing is divided into four groups. The Operations Group operates, supports, and maintains the largest B-1B *Lancer* bomber force in the USAF. The group includes aircrew, maintenance, and support functions. The Logistics Group provides aircraft back-shop repair, vehicle maintenance, supplies, contracting for goods and services, and B-1B engineering, maintenance training, and quality assurance. The Support Group provides civil engineering, real property control, security police, communications, and other services such as billeting. The Medical Group provides all medical services for Ellsworth AFB.

The 99th Wing is the Air Force heavy bomber tactical employment center and includes three groups, the Test Group, Operations Group, and Electronic Combat Range Group, that support the four missions of the 99th Wing. The missions include tactics development, tactical employment training, operational unit support, and employment data clearinghouse. The wing develops and disseminates plans for offensive and defensive tactics across the spectrum of conflict and establishes requirements for gathering of intelligence and analysis of weapons systems, tactics, and adversary defensive measures. The wing also trains aircrews for effective weapons delivery (USAF 1994).

Prior to the deactivation of the 44th SMW, its mission at Ellsworth AFB was to exercise command and control of the Minuteman II missiles throughout western South Dakota. There

were 150 missile silos located across 13,500 mi² (34,962 km²). The 44th SMW began deactivation in 1991 with the removal of the first missile from launch facility "Gulf Two." Approximately six missiles per month were removed. By September 1994, all were removed and the wing was deactivated (USAF 1993a). The National Park Service (NPS) is in the process of accessioning *Delta One* launch control facility (LCF) and *Delta Nine* launch facility (LF) for public visitation and interpretation.

2.2 GEOGRAPHIC DESCRIPTION

Ellsworth AFB is located 12 mi (19.3 km) northeast of Rapid City, South Dakota (Figure 2.1). The land surrounding the base consists of the rolling grassy hills that characterize the northwestern Plains region. Located to the east and north of the base are badlands, and to the west are located the Black Hills.

2.3 CURRENT BASE LAYOUT

The layout of buildings on Ellsworth AFB (Figure 2.2) is very similar to the standard SAC layout (Figure 2.3). The runway extends in a northwest/southeast direction, forming one edge of the base. Most of the buildings and facilities are located to the northeast of the flight line. Southwest of the flight line are some conventional weapons storage bunkers and the Bomber Alert Facility.

The "christmas tree" pattern of the alert apron has been filled in to create an oblong shape. The mission and administrative facilities are located directly on the northeastern edge of the flight line. The golf course is located to the south/southeast of the flight line and the weapons storage area is located to the north/northwest, with a small open-space buffer. The community and housing areas are to the north/northeast of the flight line and mission areas.

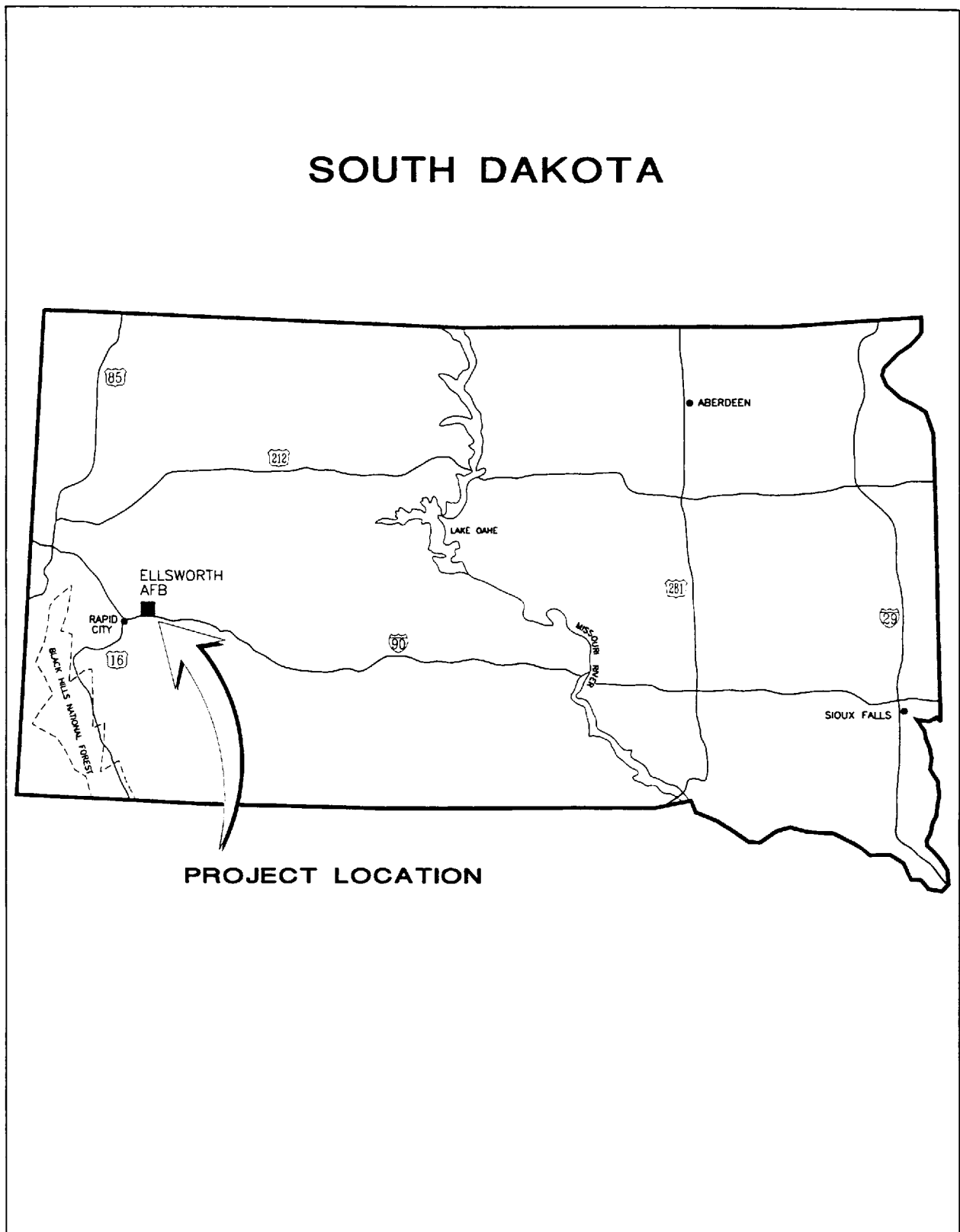


Figure 2.1 Location of Ellsworth Air Force Base.

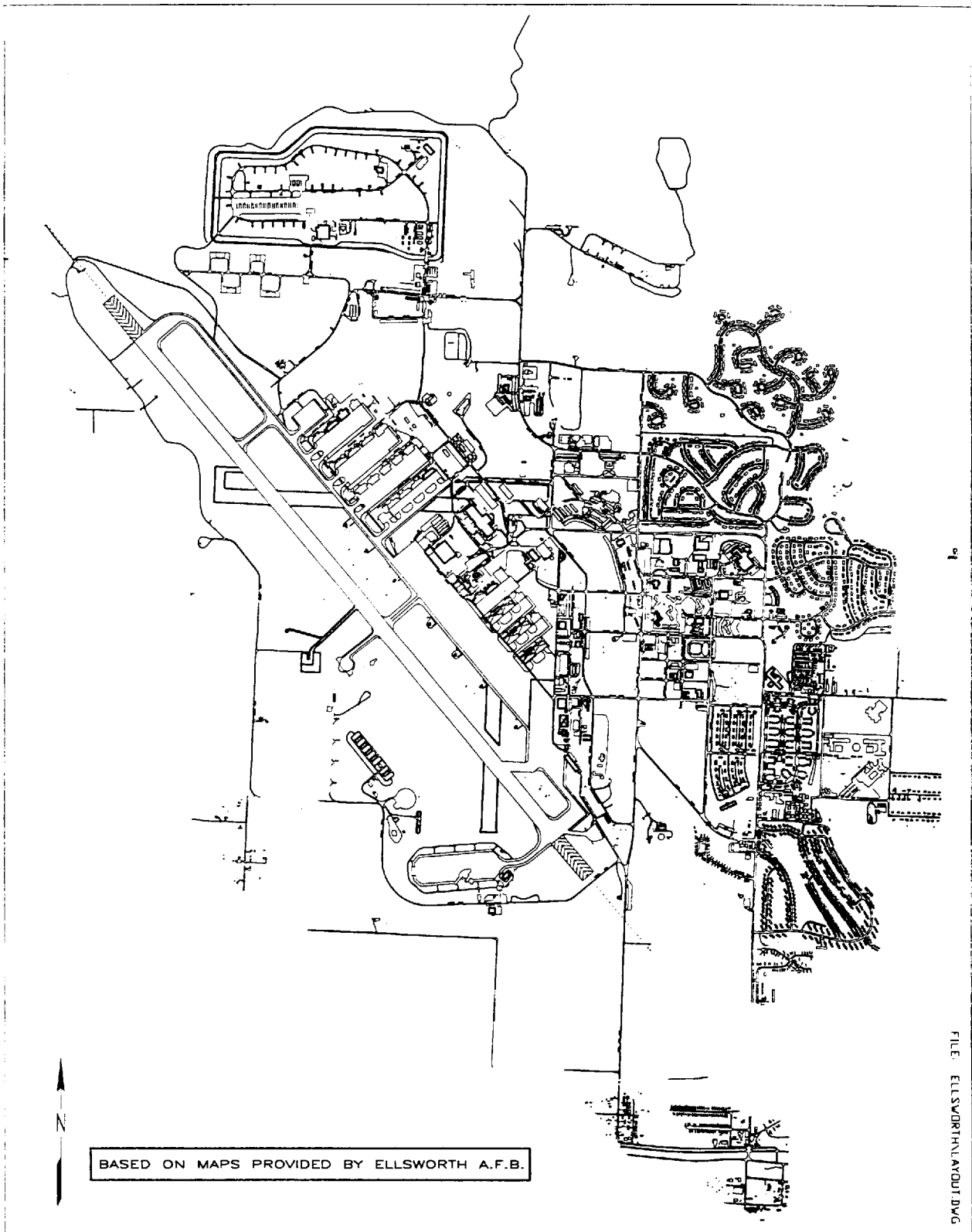


Figure 2.2 Ellsworth Air Force Base Layout.

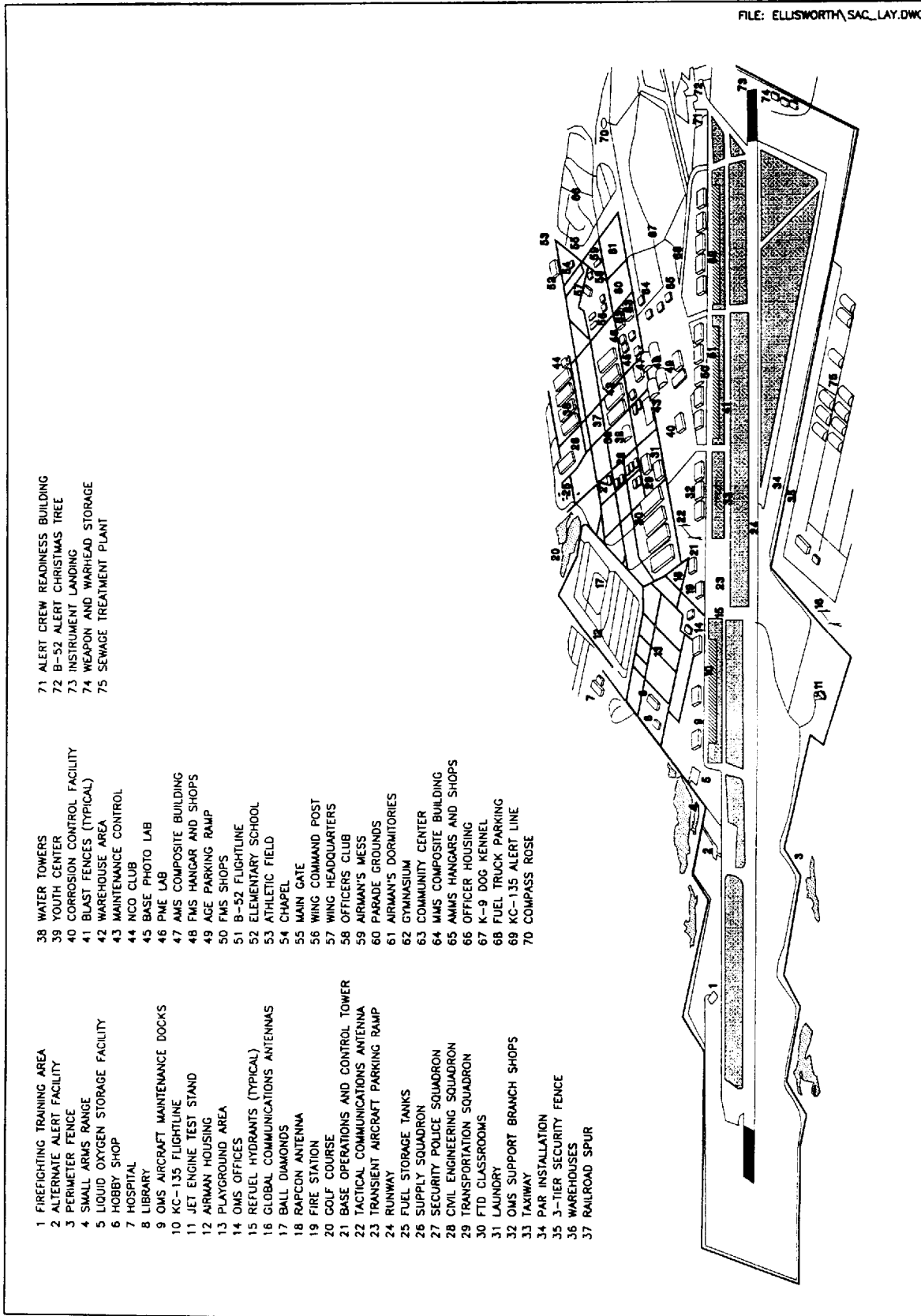


Figure 2.3 Standard Strategic Air Command Base Layout.

Much of the old accompanied and unaccompanied housing has been demolished. This includes Wherry Housing to the east of the flight line and dormitories in the center of the base. New housing areas have recently been completed and are located to the north. These new housing areas include three large houses for the wing commanders.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facility - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but

provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan for Ellsworth AFB and Figure 2.5 is a diagrammatic land use plan of a standard SAC base. Ellsworth AFB follows the standard SAC plan in that the housing area is located at the farthest point from the flight line and the mission related facilities are directly on the flight line. The two areas are separated by the base support and community facilities, and the unaccompanied housing is located in the center of the community facilities. The recreation area is located to the south of the mission facilities and adjoins the accompanied housing area to the east.

The only difference between the two land use plans is that Ellsworth AFB has two weapons storage areas instead of one, as in the standard SAC plan. At Ellsworth AFB, the nuclear storage area is located to the northeast of the flight line and the conventional weapons storage area is located to the southwest of the flight line.

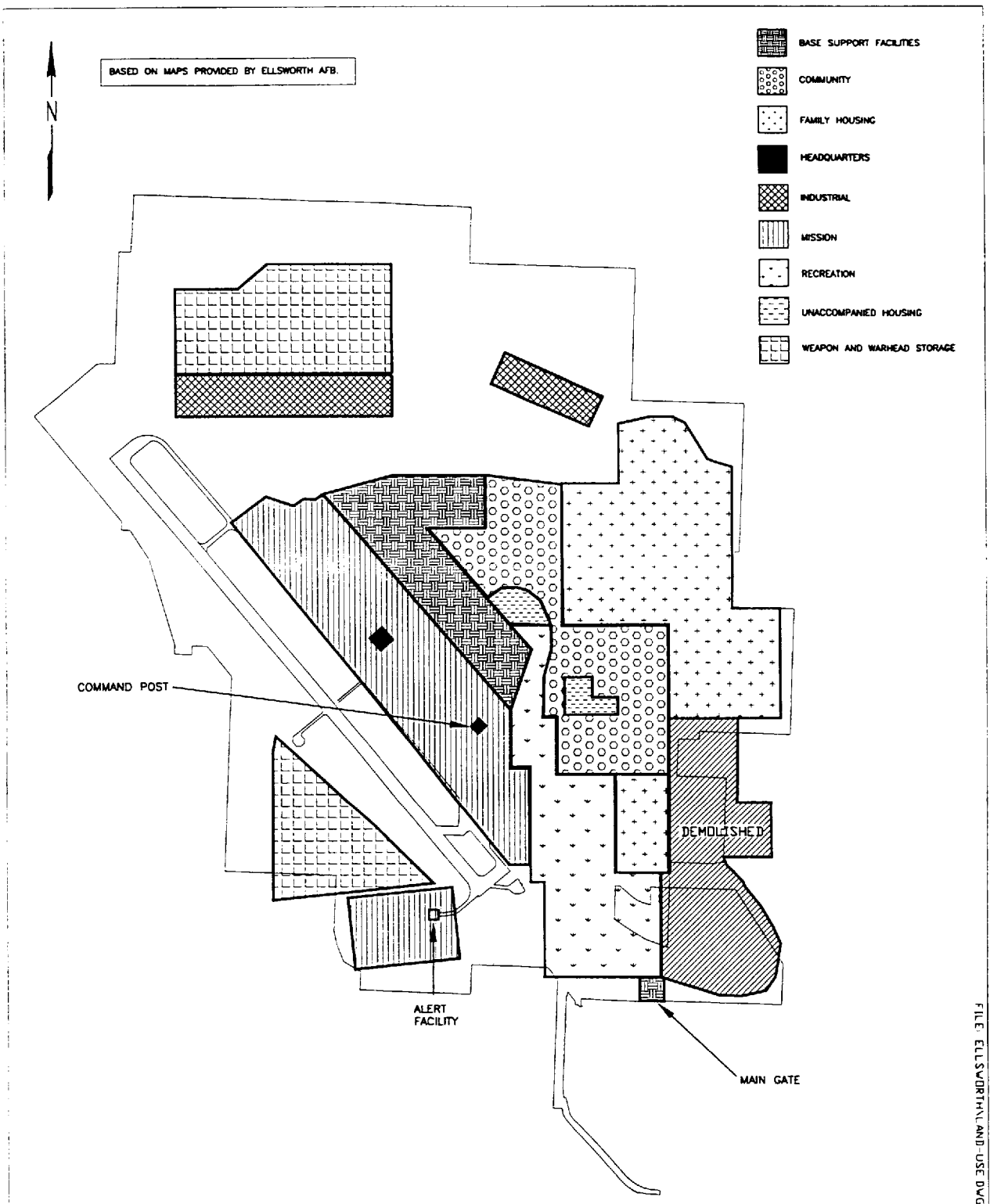


Figure 2.4 Ellsworth Air Force Base Land Use Diagram.

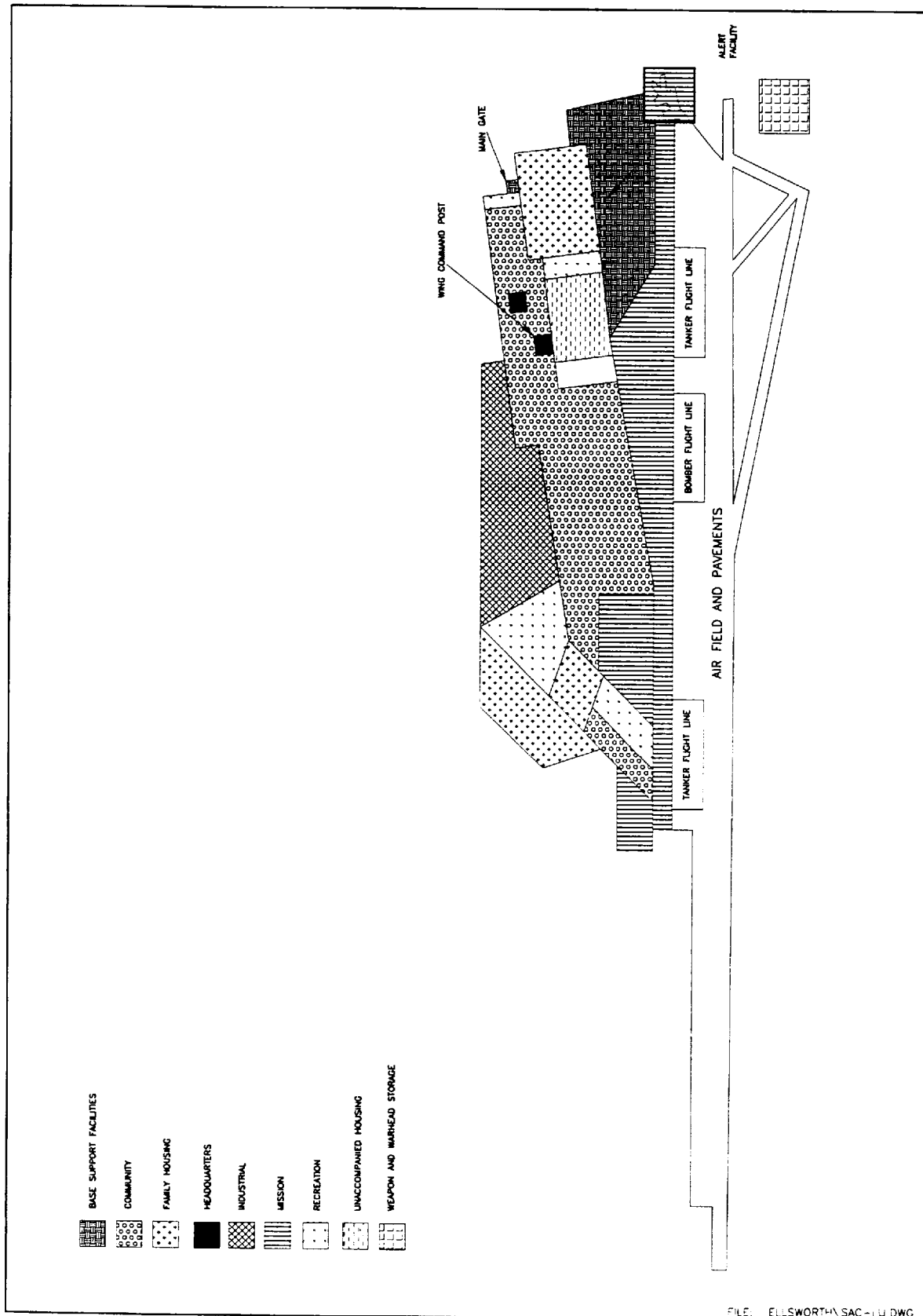


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Rapid City Army Air Base was established in 1942 to provide training for the B-17 *Flying Fortress* bomber crews. The training included all personnel related to the operation of the B-17, including pilots, radio operators, navigators, and gunners. By 1945, the mission had changed to training weather reconnaissance squadrons and combat crews flying the P-61 *Black Widow*, P-38 *Lightning*, and P-51 *Mustang* fighters, and the B-25 *Mitchell* bomber. In 1946, the missions associated with these aircraft at the base were deactivated and the base was closed until 1947. The base reopened in late 1947 as a base, called Rapid City AFB, and became the home of the 28th Bombardment Wing (BMW).

In 1948, the base was declared a permanent installation, and in 1949, runway improvements were completed for the 28th BMW conversion from the B-29 *Superfortress* bomber to the B-36 *Peacemaker*. In 1950, Rushmore Air Force Station (AFS) was established as a separate installation from the base. Rushmore AFS primarily consisted of the current weapons storage area (WSA) and was jointly operated by the Atomic Energy Commission (AEC), Armed Forces Special Weapons Project, and Air Force Materiel Command. Sandia National Laboratories provided maintenance and quality assurance at the site under contract to the AEC. The AEC operated the WSA until 1962, when Ellsworth AFB took over the station (Sandia National Laboratories 1994).

In 1950, the 28th BMW was redesignated from a bombardment wing to a strategic reconnaissance wing (SRW) in a SAC effort to make the numbered Air Forces self-sufficient by giving each one fighter, bomber, and reconnaissance capabilities (Reyes 1980). In 1952, the wing mapped most of Western Europe through visual and radar photography. In 1953, twelve B-36 bombers from the base participated in simulated combat missions from Lajes Field, Azores, during which photographs were produced and countermeasure training was gained. Later that

year, the base was renamed Ellsworth AFB in memory of Brigadier General Richard E. Ellsworth, former commander of the 28th SRW, who died in an RB-36 crash in Newfoundland while returning from the Lajes Field training.

In 1955, the mission of the 28th SRW was again changed, this time from reconnaissance back to bombardment. In 1956, plans were made to convert the wing from the B-36 to the B-52 *Stratofortress*, and in the spring of 1957, the B-36s were transferred to Davis-Monthan AFB, Arizona, and replaced with B-52s.

From 1956 to 1959, four Nike missile sites were constructed around Ellsworth AFB and designated the North, South, East, and West Nike Sites. The sites were operated by the United States Army and each consisted of 64 housing units, concrete block training and office buildings, and the missile launch sites. The sites were considered obsolete shortly after their construction; South Nike was retained as an Education Annex, and the housing areas from all four sites were used as additional base housing. Over time, all sites were sold except the housing area of the South Nike site (USAF 1973).

The 821st Strategic Aerospace Division (SAD) became the host unit for Ellsworth AFB in 1958. Colonel Loran D. Briggs assumed command for both the 821st SAD and the 28th BMW. In 1959, the base received its first KC-135 *Stratotanker* refueling aircraft to support the deterrence mission of the 28th BMW and its B-52 bombers.

From 1960 to 1962, the base prepared for the installation of the Titan I intercontinental ballistic missile (ICBM). Three hardened Titan I ICBM sites were constructed by the Army Corps of Engineers and were located in Wicksville, Hermosa, and Sturgis, South Dakota. The Titan I launch sites were constructed underground with steel-reinforced concrete, protecting them from all but a direct hit. Each site consisted of three underground concrete domes that housed power plant and control functions and that were connected by a series of tunnels. The Titan I ICBMs required loading with liquid fuel prior to launch and then elevation to the surface for launch.

Shortly after the Titan I missiles arrived, they were replaced by the Minuteman I ICBMs, which had solid fuel and could be launched from underground in seconds. The first operational Titan I was received in June of 1962, and the first operational Minuteman I was received in July of that same year.

In 1962, the 44th SMW was assigned to Ellsworth AFB and assumed command of the ICBM sites for the USAF. Three squadrons of the 44th SMW were assigned, each to support five LCF and 50 LF. There were 150 missiles throughout 13,500 acres (5,463 ha) in western South Dakota. In 1965, the last Titan I was removed from its silo, and the Minuteman Procedures Trainer was installed on the base. In that same year "Project Long Life" was carried out. This was a test of the Minuteman system during which a Minuteman I containing enough fuel for a few seconds of flight was launched from an operational site under controlled conditions. The 44th SMW is the only SAC unit that has ever launched a Minuteman ICBM. In 1971, the 821st SAD was deactivated and the missiles were upgraded to the Minuteman II.

In 1965, the 28th BMW received EC-135 aircraft to support the Post Attack Command and Control System (PACCS) airborne command post mission of SAC. The EC-135 was specially equipped with VHF radio and multiplex equipment, which was designed to allow SAC's commander to continue communications during a nuclear attack. In the late 1960s, the 44th SMW was responsible for testing and development of the Airborne Launch Control System (ALCS) that would link the PACCS aircraft to the Minuteman ICBMs. The 44th SMW had ALCS responsibility for Minot AFB and Grand Forks AFB, North Dakota; Malmstrom AFB, Montana; and Ellsworth AFB. In April of 1970, the ALCS was combined with the PACCS and the Western Auxiliary Command Post, forming the 4th Airborne Command and Control Squadron (ACCS), which was then assigned to the 28th BMW (Reyes 1980).

In 1966, the first Ellsworth AFB B-52 bombers were sent to Korea and the 28th BMW continued involvement until the United States withdrew from the war. In 1986, the 28th BMW began to phase out the B-52s and prepared to become the home for the B-1B Lancer. The preparation for

the change in aircraft included upgrading the runway and constructing new dormitories. In 1992, the base was reassigned from SAC to ACC, and the 28th BMW was redesignated the 28th Bomb Wing. The mission of the 28th Bomb Wing was changed from strategic bombardment to world-wide conventional munitions delivery (Whitmore 1994).

3.2 BASE DEVELOPMENT

In 1942, Rapid City Army Air Base was established, and wooden structures were constructed to house the training and later reconnaissance functions of the base (Figure 3.1). In 1948, runway conversions were completed to allow for the B-36 bomber. In 1950, Rushmore Air Force Station was constructed to the north (Figure 3.2). Rushmore AFS was a separate facility which housed nuclear weapons and had some unaccompanied housing and dining facilities attached. Other developments at Ellsworth AFB during the 1950s included accompanied housing, conventional munitions storage south of the flight line, and a new apron and mission structures along the flight line. One of the new mission structures was the large span hangar which could house two B-36s.

During the late 1950s and into the 1960s, development on the base increased with housing, infrastructure, and mission construction (Figure 3.3). To support the new mission of the B-52s, developments included a longer runway, an alert "christmas tree" apron, and maintenance dock aprons oriented perpendicular to the runway.

During the 1970s and 1980s, base development consisted primarily of a small amount of housing on the east side of the base (Figure 3.4). In 1993, demolition of the 1960s Wherry Housing on the eastern edge of the base was begun (Figure 3.5).

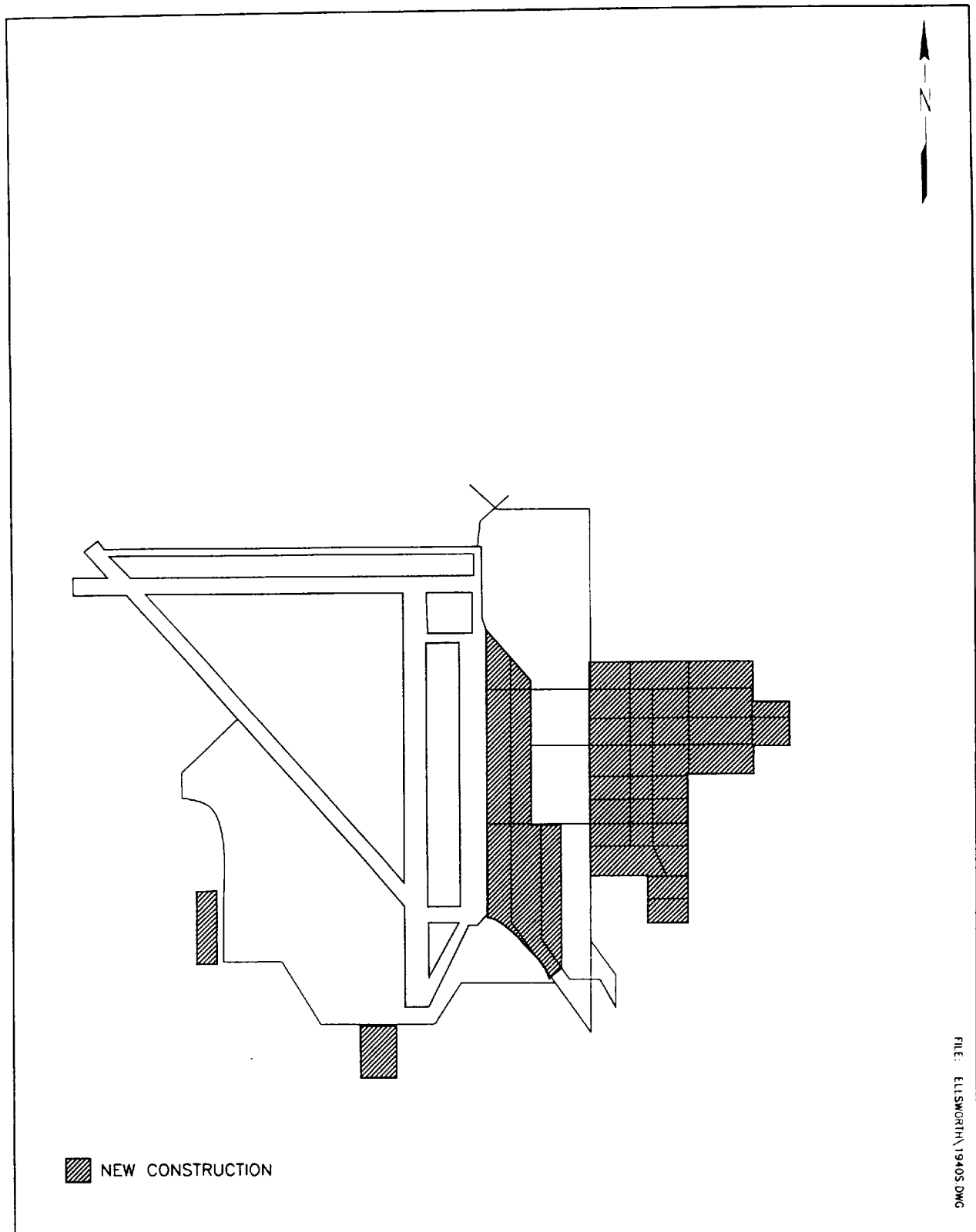


Figure 3.1 Ellsworth Air Force Base 1940-1950.

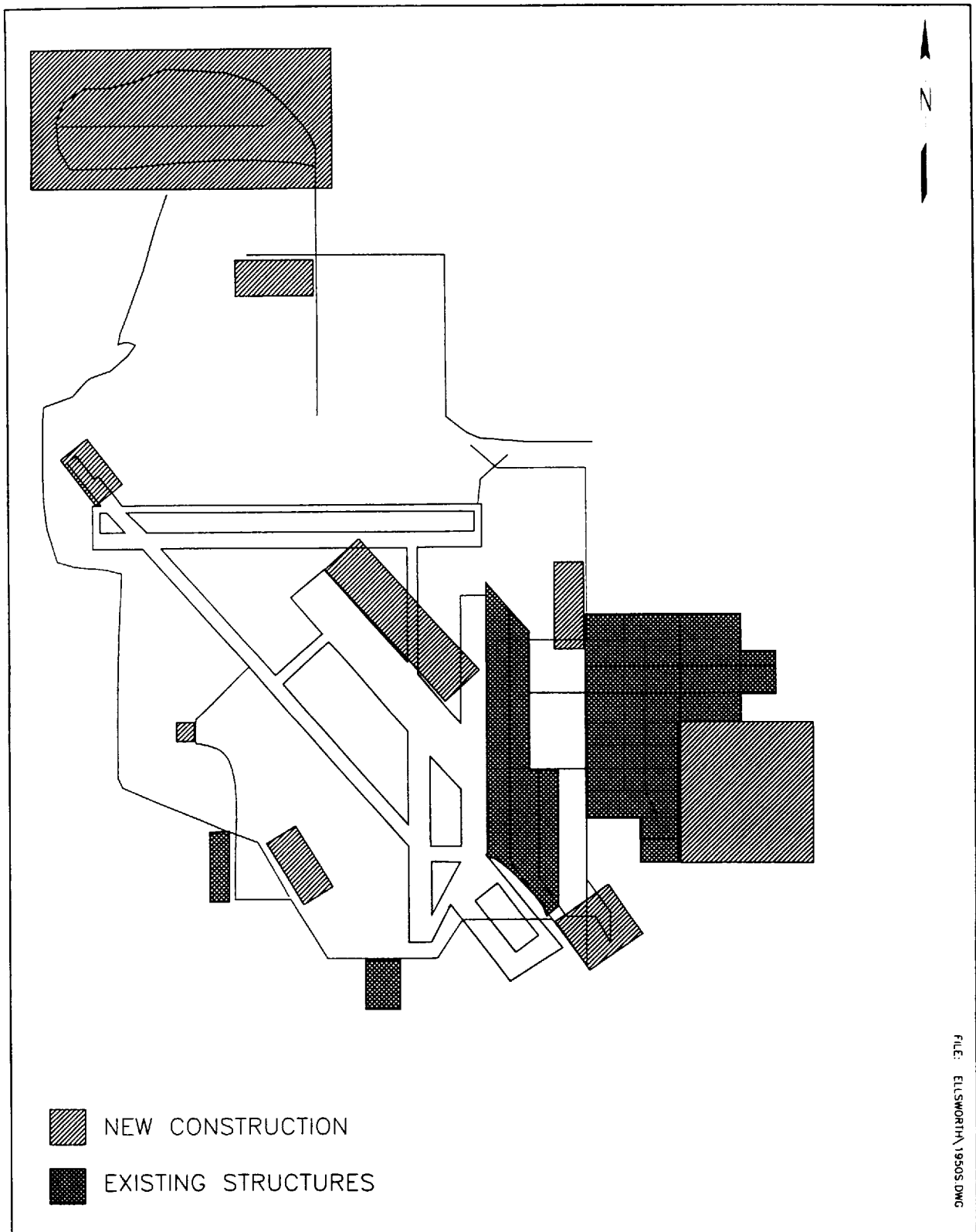


Figure 3.2 Ellsworth Air Force Base 1950-1960.

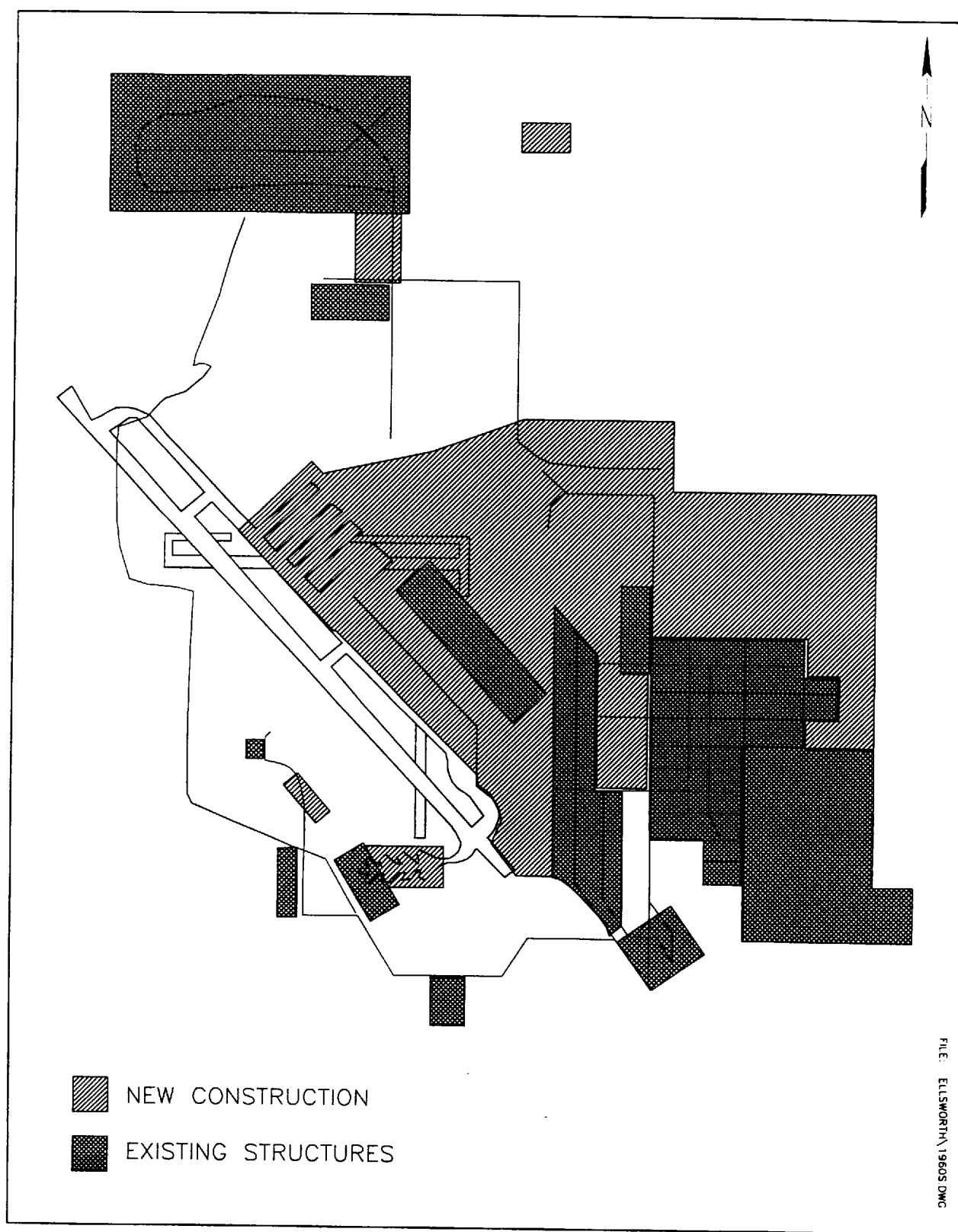


Figure 3.3 Ellsworth Air Force Base 1960-1970.

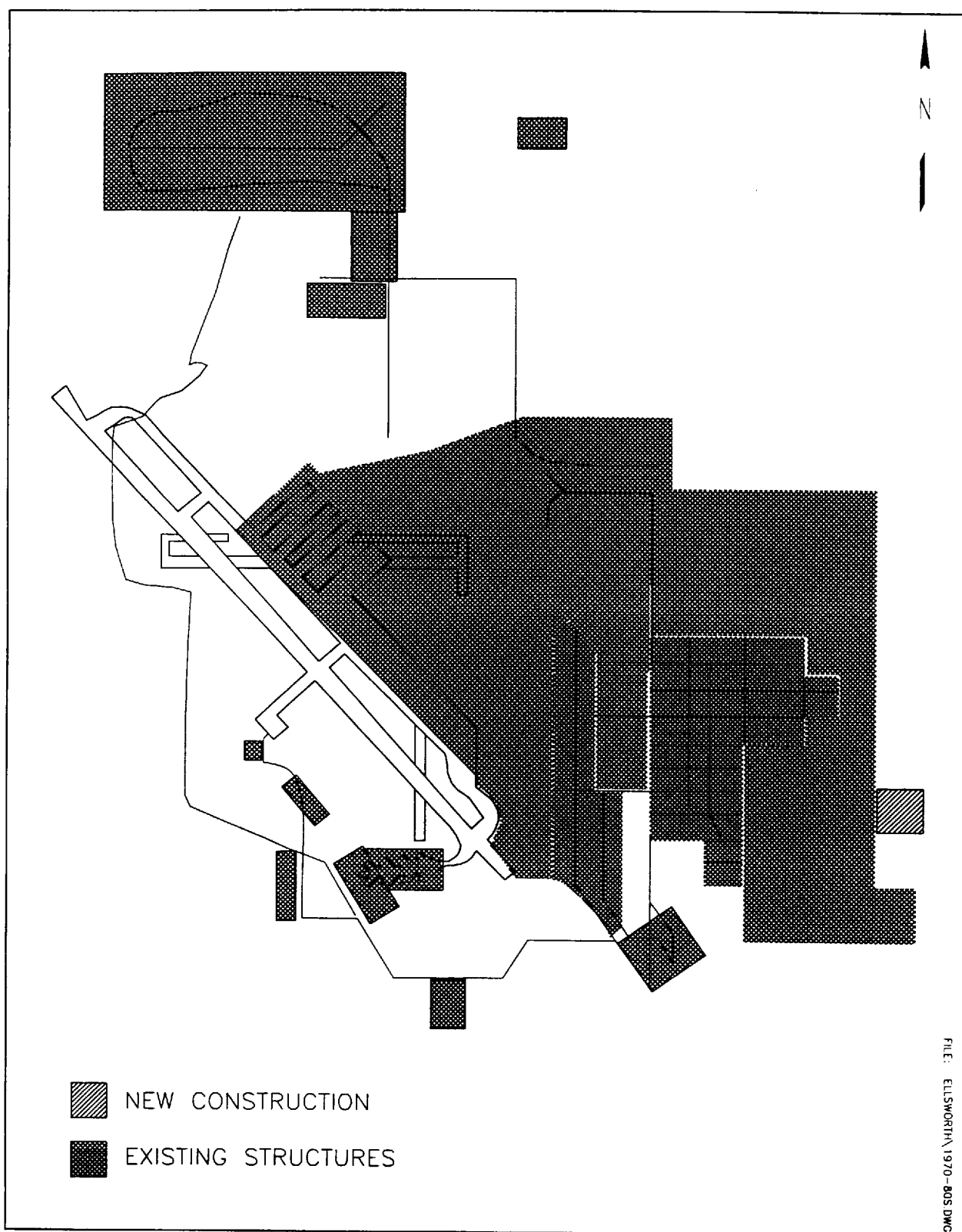


Figure 3.4 Ellsworth Air Force Base 1970-1990.

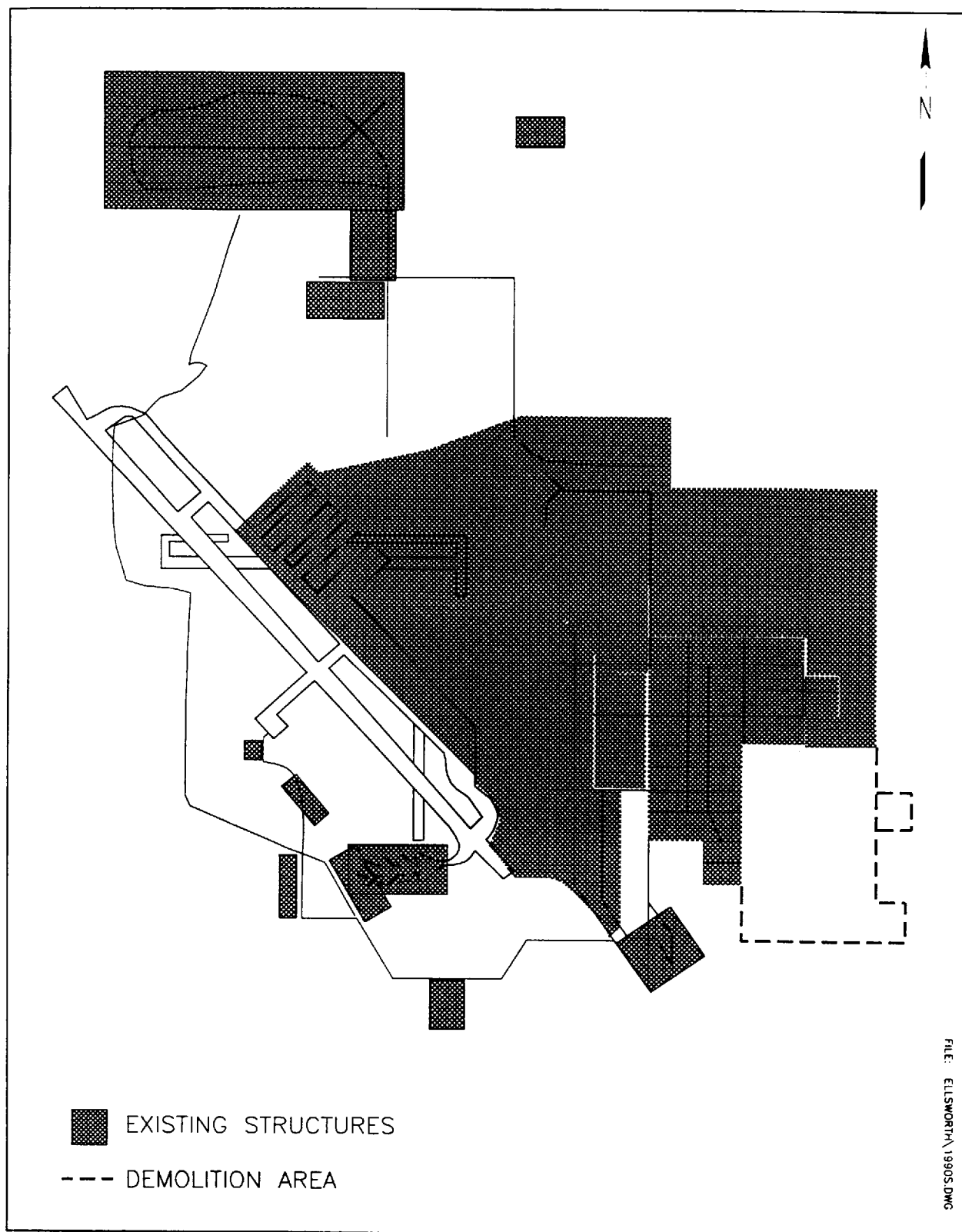


Figure 3.5 Ellsworth Air Force Base 1990-Present.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Ellsworth AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993b:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Ellsworth AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Ellsworth AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the NPS Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993b) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993b) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

The Mariah field team initially met with Dr. Dan Friese, the Resources Manager for Ellsworth AFB. Dr. Friese requested that the team meet with himself, security police, real property personnel, and another cultural resource team also completing an inventory on the base. During this meeting, the team was asked to describe the project goals, methods, and requirements for access. After the meeting, Dr. Friese took the Mariah team on a tour of the base and historic facilities. Through visual identification during the tour and through the history related by Dr. Friese, the team identified numerous resources to evaluate. Other resources were added to this list when the team scanned real property cards and base maps to locate resources that were not identified during the tour.

The field team was required to coordinate access to secured areas with the other cultural resource team. During the field work, the 28th Wing Historian was on temporary duty elsewhere, and the museum director could not readily provide the team with historical material. A list of questions and a request that information be sent to Mariah was left with the museum director. Historic

drawings were collected from the drawing room and base layouts from each decade were provided by the drafter in Civil Engineering.

Field work continued with an escorted visit to the weapons storage area and visits to areas that did not require an escort. While waiting for flight line access, the team completed entry of all non-flight line properties into the database, including evaluations of properties. After the photography on the flight line was completed, those properties were also entered into the database.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Ellsworth AFB, 109 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Seven resources were evaluated at Ellsworth AFB, five of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 11105, Located in Real Property No. 8203)

This documentary collection is located in the Civil Engineering building drawing vault and includes six cabinets of flat files. The files include numerous historical maps, original base master layout drawings, construction and utility project drawings, topographic maps, aerial photographs, and standard photographs, all of Ellsworth AFB and related facilities. The drawings and maps are of paper, linen, mylar, vellum, and blue line. Additional rolled drawings are stored on top of the cabinets. The documentary collection spans the decades from the 1940s to the 1990s, including all the Cold War periods, and provides information on base development and history and on resources evaluated in this study.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	11105	None	RecDoc/ Obj	18
Combat Weapons and Support Systems					
Alert Facilities	Tanker Alert Facility	11095	606	Real/Bldg	21
Alert Facilities	Bomber Alert Facility	11100	7430	Real/Bldg	21
Documentation	Architectural Drawing Files	11109	None	RecDoc/ Obj	21
Maintenance Docks/Hangars	Large Aircraft Maintenance Dock	11075	7504	Real/Bldg	20
Missiles	Missile Launch Complex	11088	D11	Real/Bldg	20
Storage	Segregated Storage Igloo	11001	88106	Real/Bldg	21

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
21	11001	88106	Segregated Storage Igloo
21	11095	606	Tanker Alert Facility
21	11100	7430	Bomber Alert Facility
21	11109	None	Architectural Drawing Files
20	11075	7504	Large Aircraft Maintenance Dock
20	11088	D11	Missile Launch Complex
18	11105	None	Documentary Collection

In general, the resources are kept in a secure, climate-controlled room. Unfortunately, the older, more fragile documents are not being preserved separately, resulting in some being torn.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Tanker Alert Facility (Resource No. 11095, Real Property No. 606)

The Tanker Alert Facility was constructed in 1952 of reinforced concrete and asbestos shingles. The facility and its associated structures were all originally owned by the Air Defense Command and were eventually turned over to SAC. The buildings associated with this main alert facility are No. 605, constructed in 1942; No. 608, constructed in 1959; and No. 609, constructed in 1954. Each provided various functions throughout the period of crew readiness including maintenance dock, squadron operations, dining hall, and even wing headquarters.

Real Property No. 606 had to be adapted for use as crew readiness and is an example of a makeshift alert facility. The plan is somewhat awkward in that it is L-shaped and the bedrooms are divided between two floors. This building does not have the clarity of the standard plan alert facility. The integrity of the exterior of the facility appears to be intact. However, access to the interior was not secured, thus integrity of the interior remains unknown.

This alert facility was in use from 1959 to 1991. The presence of the Tanker Alert Facility allowed tanker crews to stay close to their planes and have the capability to be airborne in a short span of time in order to support bombers and the Looking Glass aircraft stationed at Ellsworth AFB.

The Tanker Alert Facility was extremely important within the base and national Cold War contexts. The alert facility was constructed in response to NSC-68 and the Killian Report which

recommended the dispersion of the nation's bombers across the country (Lewis et al. 1995). The dispersion of bombers required the dispersion of tankers to support them, thus the facility illustrates the concept of deterrence through a survivable force. This facility performed this role through Phases II, III, and IV of the Cold War era, and meets NRHP criterion (a).

6.2.1.2 Bomber Alert Facility (Resource No. 11100, Real Property No. 7430)

This facility was constructed in 1959 of reinforced concrete using a standard plan for Bomber Alert Facilities. The main floor housed offices, activities rooms, dining hall, and the briefing room, while the below-ground level housed corridors with bedrooms. Ramps extend from both levels out from all four sides of the building. The facility is located to the south of the runway and includes a "christmas tree" apron and security facilities. This facility was briefly used for the B-1B from 1987 to 1991. In 1991 the facility was removed from alert. Currently, the building is being used as an Non-Commissioned Officer (NCO) education center.

The building retains its exterior integrity; however, access into the alert facility was not secured, thus integrity of the interior was not assessed. Due to the current use of the building as an education center, a function that would probably not require major renovations, it is determined that interior integrity is also intact.

The Bomber Alert Facility is extremely important to Ellsworth AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the concept of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of the DoD defense triad, and was relied upon as the United State's primary manned bomber force for over 30 years. This facility fulfilled this role during Phases II through IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.2 Documentation**6.2.2.1 Architectural Drawing Files** (Resource No. 11109, Located in Real Property No. 8203)

These drawings, located in the drawing vault of the Civil Engineering building, are currently in good condition. There are two drawers dedicated to drawings of the Large Aircraft Maintenance Dock (Real Property No. 7504), but the original construction record documents are of particular interest. These are a set of 40 ink on linen drawings, and are in good condition. The set includes structural details, plans, elevations, and other important construction information.

This set of drawings is important to understanding the construction of Real Property No. 7504. The drawings show structural details and give an understanding of how the building's 340 ft (103.6 m) concrete arch span was achieved. The building is important because of its relationship to the B-36 and its importance during Phase I of the Cold War. The drawings are important because they show how the hangar was constructed and embody the technology available to provide shelter for the B-36.

6.2.3 Maintenance Docks/Hangars**6.2.3.1 Large Aircraft Maintenance Dock** (Resource No. 11075, Real Property No. 7504)

This is a large, concrete-arched structure originally built in 1949 as a hangar and adapted during the 1960s to serve as offices for the 44th SMW. The structure was constructed to provide protection and maintenance for two B-36 bombers at once. These bombers were integral to the base mission from 1949 until 1957, when the 28th BMW changed to B-52s. In 1958, the building became a missile assembly shop, and by 1966, the building had been renovated as offices for the 44th SMW Headquarters.

The building is constructed of brick and reinforced concrete. The primary structural system is reinforced concrete arches with a clear span of 340 ft. The arches are buttressed by 14 ft x 20 in (4.3 m x 50.8 cm) concrete structures at the base of each arch. The arches define nine bays which are 24 ft (7.3 m) wide, making the building dimensions 219 x 368 ft (66.7 x 112.1 m). This is the largest structure on Ellsworth AFB and can be seen from most areas of the base. The building has an uncomplicated grace that arises from its concrete arches, rounded massing, and clean lines. The reinforced concrete arch construction is unique to two bases, Ellsworth AFB and Loring AFB, Maine.

Although offices have been constructed in the interior, they have not compromised the overall integrity of the building, and the exterior has been modified little. The interior space can still be perceived from the central entrance as the offices are only one story and the space rises to nine stories. Thus, the integrity of the building is intact.

The B-36 was critical to Phase I of the Cold War, in that it was the world's largest bomber and the only bomber at that time that could reach the Soviet Union (Knaack 1988). This capability answered directly to the National Security Council's 1949 declaration that deterrence would be the national military strategy (McDougall 1985). The B-36 has a large bomb and fuel capacity, which allow it to reach its target, drop its bomb load, and return to its home base. When the B-36 was operationalized, the B-29 and B-50s lost their heavy bomber status and were reclassified as medium bombers, while the B-36 was classified a heavy bomber (Polmar and Laur 1990). The B-36's wingspan is 230 ft (70.1 m) and its length is 160 ft (48.8 m); the hangar can fit two of these aircraft placed nose to nose. The arched reinforced concrete construction, large span, and use for B-36s give this structure its primary Cold War significance; its use as the 44th SMW Headquarters gives it a secondary significance. This building fulfilled its primary role during Phases I and II of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.4 Missiles

6.2.4.1 Missile Launch Complex (Resource No. 11088, Real Property No. D11)

This complex, built in 1962, includes the Minuteman missile system *Delta One* LCF and *Delta Nine* LF, both of which are currently being accessioned by the NPS, pending congressional approval. Although the missile is no longer in the silo at *Delta Nine* LF, the mechanical room, the above ground features, the collimator track, the capsule, and the silo itself retain their integrity and provide the physical elements required for interpretation of the site to the public.

The *Delta One* LCF was left intact the day the missile wing deactivated the site and thus retains its integrity. Magazines, sheets, dining hall wall menu, security police log, and other artifacts were all left in place and the doors were locked. The entire facility is surrounded by a security fence and sensors. Above ground there is a security police garage, for heated storage and the storage of snow removal and water control equipment. North of this structure is the main building, which houses sleeping facilities, dining hall, lounge area, security police, and various mechanical rooms. These above ground structures are referred to as "soft," indicating they would be destroyed in a nuclear attack.

Access to the underground LCF capsule is through the above ground security police station. When the complex was active, gaining access required code words and daily passwords that had to be combined, decoded, and accepted by the capsule crew. This occurred both at the perimeter fence and inside the facility at the security police station. Once the codes were accepted, a door was opened that allowed access to an elevator. The elevator descends approximately 30 ft (19 m) and opens onto a small concrete room. To the left of the elevator is a mural of a Minuteman missile tearing through a Soviet flag and to the front is a mural of a Domino's Pizza box and the inscription, "World-wide delivery in 30 minutes or the next one is free." The second mural is on the massive steel door to the capsule. Currently, the capsule is intact with the two stations, equipment panels, covered launch key holes, sleeping facility, and technical books present.

This complex is exceptionally important to the Cold War and reflects the strategies of deterrence and survivability. The Minuteman ICBM system represents an advance in missile technology, allowing for multiple missiles to be operated from one missile LCF and for the use of solid fuel, which was not only safer but could be installed well in advance of a launch. The Minuteman system allowed a great proliferation of missiles and quick response time, which maximized the strategy of deterrence through intimidation. This complex fulfilled this role during Phases II and III of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.5 Storage

6.2.5.1 Segregated Storage Igloo (Resource No. 11001, Real Property No. 88106)

This building was constructed in 1952 in the weapons storage area. This storage facility provides the means of properly storing and separating small quantities of explosives which may not be compatible. Over the years, the structure has had different nomenclature. Originally it was called "Storage: A-Structure," later it was referred to as a Storage Igloo, and later as Segregated Magazine Storage.

The building is approximately 55 x 40 ft (16.7 x 12 m) and constructed of 10 ft (3 m) thick, reinforced concrete walls with false windows delineated on the north and south elevations. This design gave the structure the appearance of a staff building if photographed or viewed from a distance, thus providing a security measure. The interior is divided into four equally sized rooms (approximately 10 x 12 ft [3 x 3.6 m]) with 10 in (25 cm) thick steel vault doors on each room. The structure was originally the property of the AEC and was eventually turned over to SAC. The AEC ownership points to the structure having had a nuclear role related to the mission of Ellsworth AFB. The building was originally constructed to store "bird cages" containing nuclear components for weapons systems, and was designed to protect these capsules from attack, rather than to contain accidental detonations (Sandia National Laboratories 1994). The interior room

layout and steel vault doors are intact. The exterior massing, false windows, and entrance are also intact. Thus this building has a high level of integrity.

According to the Real Property records, in 1967, the building's function was changed to sterile, probably indicating that nuclear materials were no longer stored in this facility. Although the structure is referred to as a weapons storage building, it is currently empty.

This facility is extremely important because it is one of the first operational nuclear weapons storage sites maintained under the control of AEC and then SAC in response to the onset of the Cold War. During its operation, it played a significant role on the waging of the Cold War and represents the significant warfighting capability of the USAF. Its construction illustrates the importance of security and survivability during the Cold War. It fulfilled this function during Phases II and III of the Cold War era, and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Ellsworth AFB.

6.4 TRAINING FACILITIES

None were evaluated at Ellsworth AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Ellsworth AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Ellsworth AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Ellsworth AFB. These resources should be investigated further for a more comprehensive analyses.

Due to an oversight while at the base, the Mariah field team was not able to evaluate the missile LF maintenance trainer located on the base. Similar maintenance trainers located on other AFBs in this study have been found to be of exceptional significance with intact integrity, and thus NRHP eligibility was recommended for them. It is recommended that this maintenance trainer be evaluated for NRHP eligibility prior to any undertakings that would affect the maintenance trainer's integrity.

Mariah team members inquired about the potential for historic properties at the Badlands Air Force Range, a bombing and gunnery range used by Ellsworth AFB for training. Base personnel from the Real Property office informed the Mariah team that no buildings are extant at the range, and that the range is considered contaminated and condemned (personal communication, Barb Nichols, January 11, 1995). Based on this information, the decision was made by the Mariah field team to not visit Badlands Air Force Range.

The USAF Historical Research Agency at Maxwell AFB, Alabama is the repository for all Air Force historical documents. A computerized search for materials related to Ellsworth AFB revealed approximately 260 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the B-52 and then the B-1B, and retirement and acquisition of various missile systems. The vast majority of

these documents are available on microfilm. Future studies of Cold War history at Ellsworth AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

The Delta One and Delta Nine missile launch complex may not be accessioned by the NPS. According to a Special Resource Study published by the Department of the Interior, NPS, there are three preliminary management alternatives for the sites. Alternative 1 is to implode the sites and sell the land to local farmers. Alternative 2 allows for some other agency or non-profit group to preserve the sites for visitation. Alternative 3 is to accession the site to the NPS as a National Historical Site. These three alternatives were presented to the public and response was requested by July 29, 1994. What the response determined is unknown at this time.

The current use of the Bomber Alert Facility as an education center may threaten the building's integrity due to modifications made to accommodate the new function.

There are no other known threats to the evaluated resources.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Ellsworth AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Ellsworth AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Ellsworth AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Ellsworth AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 11105, Located in Real Property No. 8203)

This collection of maps, drawings, and photographs is currently stored in a secure area; however, the collection is used often, resulting in some of the older resources being torn. It is recommended that the collection be inventoried and copied, with the copies retained by the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation.

Table 9.1 Recommendations for Evaluated Resources.

			Management Recommendations*					
Resource No.	Real Property No.	Property Type	No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	Comments
Real Property - Buildings								
11001	88106	Segregated Storage Igloo		*	*	*		NRHP eligible now.
11075	7504	Large Aircraft Maintenance Dock		*	*	*		NRHP eligible now.
11088	D11	Missile Launch Complex		*	*	*		NPS is attempting to gain ownership and maintain the complex as a National Historic Site. NRHP eligible now.
11095	606	Tanker Alert Facility		*	*	*		Potentially NRHP eligible now.
11100	7430	Bomber Alert Facility		*	*	*		NRHP eligible now.
Record or Document - Object								
11105	None	Documentary Collection		*		*	*	
11109	None	Architectural Drawing Files		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Tanker Alert Facility (Resource No. 11095, Real Property No. 606)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criterion (a) based upon its role in sustaining a survivable force to meet the needs of deterrence. However, the integrity of the interior of the building remains unknown. Therefore, this building is recommended as potentially eligible to the NRHP. Further documentation to determine the level of integrity and to explore NRHP eligibility is recommended. Stewardship of the building to retain its current level of integrity is recommended in the interim during this evaluation.

9.2.3 Bomber Alert Facility (Resource No. 11100, Real Property No. 7430)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building and identify it as an example of Cold War military architecture. The integrity of the building is determined to be intact based upon partial observation and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.4 Architectural Drawing Files (Resource No. 11109, Located in Real Property No. 8203)

This collection of drawings of the B-36 Large Aircraft Maintenance Dock is currently in good condition, but is not protected. It is recommended that the drawings be inventoried and copied, with the copies retained by the base for its use and the originals sent to a permanent curatorial facility for conservation and stewardship.

9.2.5 Large Aircraft Maintenance Dock (Resource No. 11075, Real Property No. 7504)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases I and II. It meets NRHP criteria (a) and (c) based on its role in maintaining the B-36 force and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is determined to be intact. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.6 Missile Launch Complex (Resource No. 11088, Real Property No. D11)

This complex is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III. It meets NRHP criteria (a) and (c) based on its role in enforcing deterrence through the survivability of the nation's forces and on its structural components which are unique to this complex and identify it as an example of Cold War military architecture. The integrity of the complex is intact based upon observations. Therefore, this complex is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the complex and its features, and further documentation to nominate this resource to the NRHP.

9.2.7 Segregated Storage Igloo (Resource No. 11001, Real Property No. 88106)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact. Therefore, this building is recommended as

eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Knaack, M. S.

- 1988 *Post World War II Bombers*. Office of Air Force History, Washington, D.C.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

McDougall, W. A.

- 1985 *The Heavens and the Earth: A Political History of the Space Age*. Basic Books, Inc., New York.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Polmar, N., and T. Laur, Eds.

- 1990 *Strategic Air Command: People, Aircraft and Missiles*. Second edition. The Nautical & Aviation Publishing Company of America, Inc., Baltimore, Maryland.

Reyes, 2 Lt V. J., 1 Lt K. M. Wald, and Lt Col C. E. Gowins

- 1980 *A History of Ellsworth Air Force Base*. Ellsworth Air Force Base, South Dakota.
-

Sandia National Laboratories

- 1944 Trip Report - Ellsworth AFB Weapons Storage Area. Prepared by Otto D. Laursen, Task Leader, Sandia National Laboratories Organization 7583. Albuquerque, New Mexico.

United States Air Force

- 1973 Ellsworth Air Force Base Annexes. Ellsworth Air Force Base, South Dakota.
- 1993a *Fact Sheet: 44th Missile Wing*. Public Affairs Office, Ellsworth Air Force Base, South Dakota.
- 1993b *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
- 1994 *Fact Sheet: Ellsworth Air Force Base*. Public Affairs Office, Ellsworth Air Force Base, South Dakota.

Whitmore, TSgt B. S.

- 1994 Brief History of Ellsworth Air Force Base. Ellsworth Air Force Base, South Dakota.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	11001	88106	Segregated Storage Igloo	1952
	11002	88109	Security Guard Tower	1977
	11004	88240	Conventional Munitions Shop	1983
	11008	88031	Conventional Munitions Shop	1952
	11009	88020	Vehicle Operations Heated Parking	1952
	11011	88149	Conventional Munitions Shop	1973
	11012	5208	Museum Building	1989
	11013	5202	Security Police Identification Control	1992
	11014	5201	Traffic Checkhouse	1975
	11015	5311	Family Housing APPR 1950	1948
	11016	None	Wherry Housing	1964
	11017	4704	Exchange Service Station	1965
	11018	4610	Arts and Crafts Center	1978
	11019	4612	Group Headquarters	1943
	11020	3405	Chapel Center	1959
	11021	4500	Bowling Center	1964
	11022	4400	Security Police Operations	1986
	11023	2405	Education Center	1991
	11024	2306	Housing Supply and Storage Facility	1986
	11025	2106	Airmen's Dining Hall	1983
	11026	3901	Base Theater	1969
	11027	3910	Recreation Library	1980
	11028	4001	Exchange Sales Store	1969
	11029	4020	Branch Exchange	1991
	11030	5903	Officers Open Mess	1971
	11031	4304	ICBM/TAC Communications and Electronics Shop	1974
	11032	6000	Composite Medical Facility	1982
	11033	3920	Commissary Store	1991
	11034	100	Leased Family Housing	1990
	11035	113	Leased Family Housing	1990
	11037	Unknown	Leased Family Housing	Unknown
	11038	Unknown	Leased Family Housing	Unknown
	11039	Unknown	Leased Family Housing	Unknown
	11040	7812	Base Personnel Office	1976
	11041	9867	Capehart Family Housing	1963
	11042	9830	Capehart Family Housing	1963
	11043	2	Family Housing APPR 1970	1988
	11044	9656	Capehart Family Housing	1961
	11045	9207	Capehart Family Housing	1962
	11046	9201	Capehart Family Housing	1962
	11047	8001	Youth Center	1980

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	11048	5912	Branch Exchange	1992
	11049	8003	Child Care Center	1976
	11050	8000	Family Housing Management Office	1993
	11051	8008	Temporary Lodging Facility	1989
	11052	5902	Heating Facility Building	1954
	11053	4101	Officers' Quarters	1983
	11054	6010	Medical Command Administration	1960
	11055	1107	Family Support Center	1952
	11056	1110	Non-Air Force Administration Office	1976
	11057	7712	Youth Center	1963
	11058	7709	Gymnasium	1957
	11059	1103	Visiting Officers' Quarters	1990
	11060	109	Visiting Airmen's Dormitory	1979
	11061	7530	Exchange Cafe Snack Bar	1989
	11062	7806	Field Training Facility	1986
	11063	7925	Target Intelligence Training	1991
	11064	8116	Base Engineering Administration	1958
	11065	8115	Base Engineering Maintenance Shop	1958
	11066	8201	Base Engineering Administration	1987
	11067	8203	Base Engineering Administration	1954
	11068	8117	Base Engineering Maintenance Shop	1957
	11069	9022	Small Arms System Range	1989
	11070	88538	Fire Station	1957
	11071	88408	Base Engineering Maintenance Shop	1952
	11072	88513	Steam Facility Building	1952
	11073	88501	Officers' Quarters	1952
	11075	7504	Large Aircraft Maintenance Dock (Missile Service Shop)	1949
	11076	7506	Base Operations	1951
	11077	7507	Rapcon Center	1973
	11078	7510	Warehouse Supply and Equipment Base	1976
	11079	104	Vehicle Operations Heated Parking	1986
	11080	1007	Wing Headquarters	1970
	11081	903	Command Center	1989
	11082	905	Nondestructive Inspection Shop	1972
	11083	1009	Squadron Operations	1988
	11084	1011	Squadron Operations	1988
	11086	None	Vandenberg School	Unknown
	11087	None	Golf Clubhouse	Unknown
	11088	D11	Missile Launch Complex (Delta 1 LCF)	1962
	11089	7232	Large Aircraft Maintenance Dock	1988
	11090	7234	Aircraft Corrosion Control	1988

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	11091	7256	Large Aircraft Maintenance Dock	1992
	11092	7279	Security Police Entry Control Point	1988
	11093	7612	Base Engineering Paving Ground Facility	1952
	11094	601	Jet Engine I/Maintenance Shop	1942
	11095	606	Tanker Alert Facility	1952
	11096	605	Base Engineer Storage CV Facility	1942
	11097	608	Crew Readiness Facility	1954
	11098	609	Crew Readiness Facility	1959
	11099	618	Small Aircraft Maintenance Dock	1987
	11100	7430	Bomber Alert Facility (NCO Professional Education Center)	1959
	11101	7450	Flight Simulator	1987
	11103	7107	Missile Transfer Building	1962
	11104	7104	Control Tower	1988
	11106	11000	Communications Transmitter	1953
	11107	7595	Technical Training Laboratory Shop	1967
	11108	1500	Engine Test Cell	1987
Real Property - Landscape				
	11036	None	Playground	Unknown
	11074	None	Obstacle Course	Unknown
	11102	6900	Firemen Training Facility	1967
Real Property - Object				
	11085	None	B-52 Static Display	Unknown
Real Property - Structure				
	11003	88801	Storage Igloo	1983
	11005	88231	Storage Igloo	1952
	11006	88257	Segregated Magazine Storage	1954
	11007	88262	Spare Inert Storage	1952
	11010	88150	Spare Inert Storage	1952
Record or Document - Object				
	11105	None	Documentary Collection	None
	11109	None	Architectural Drawing Files	1950

APPENDIX B

BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

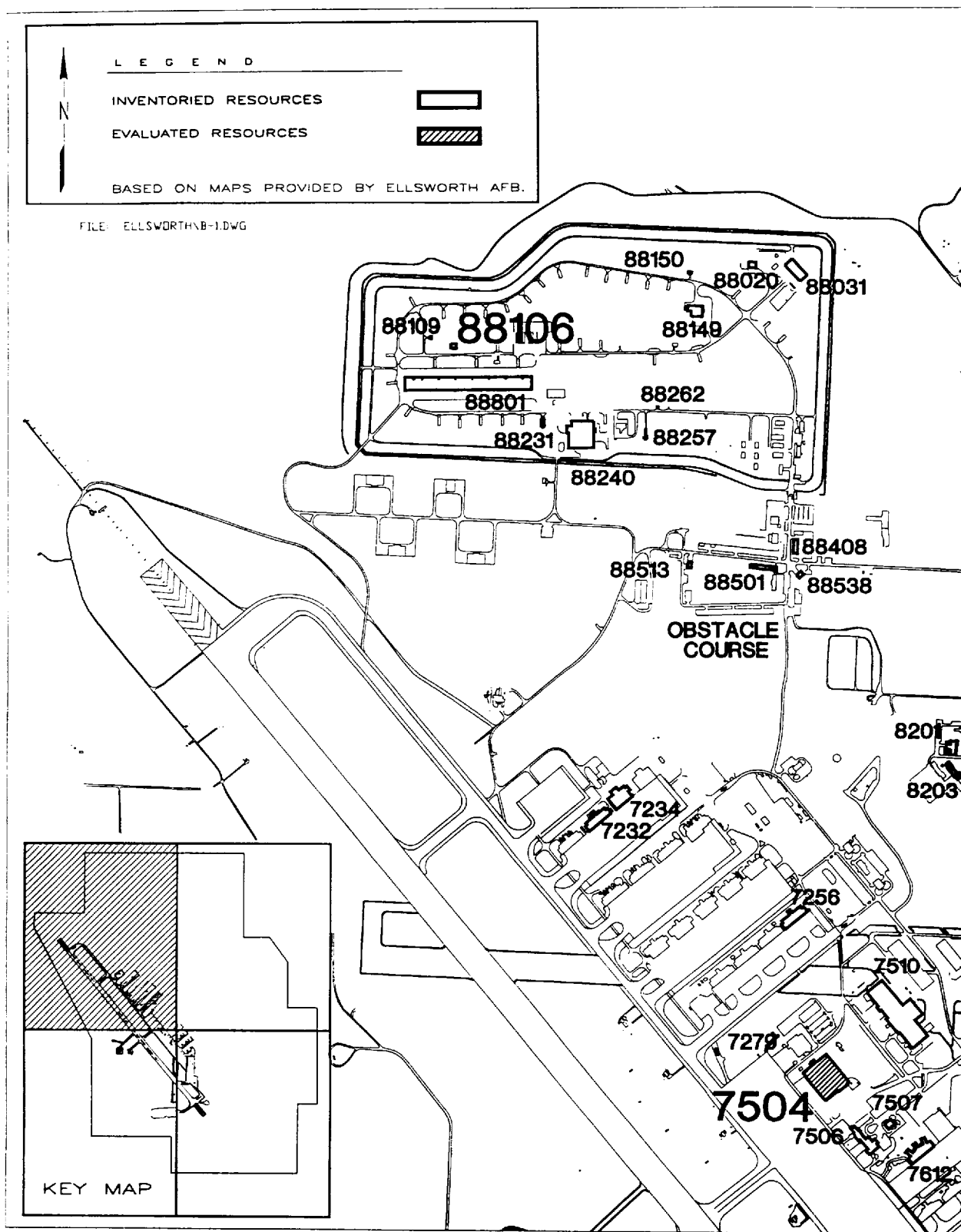


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 1 of 4).

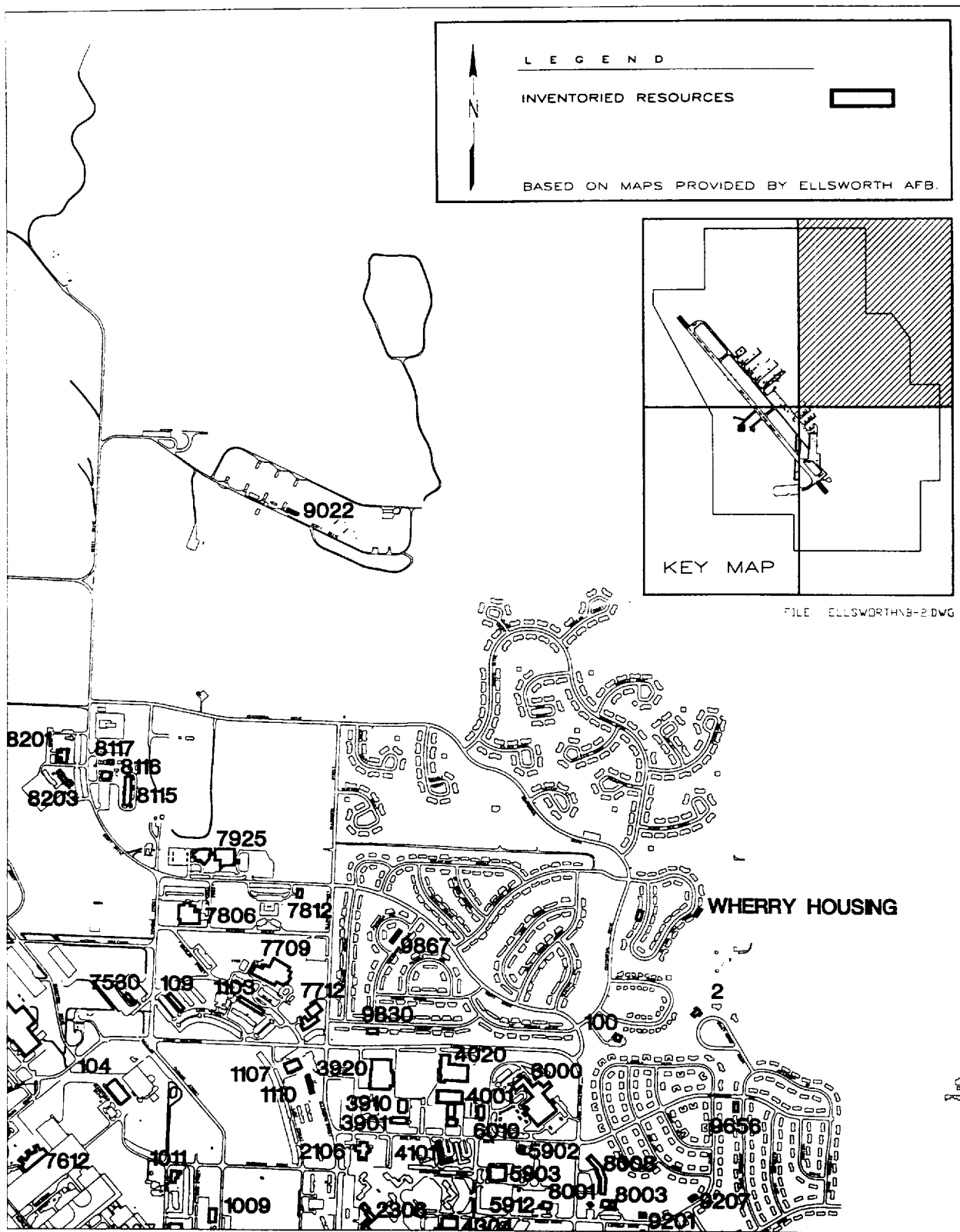


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 2 of 4).

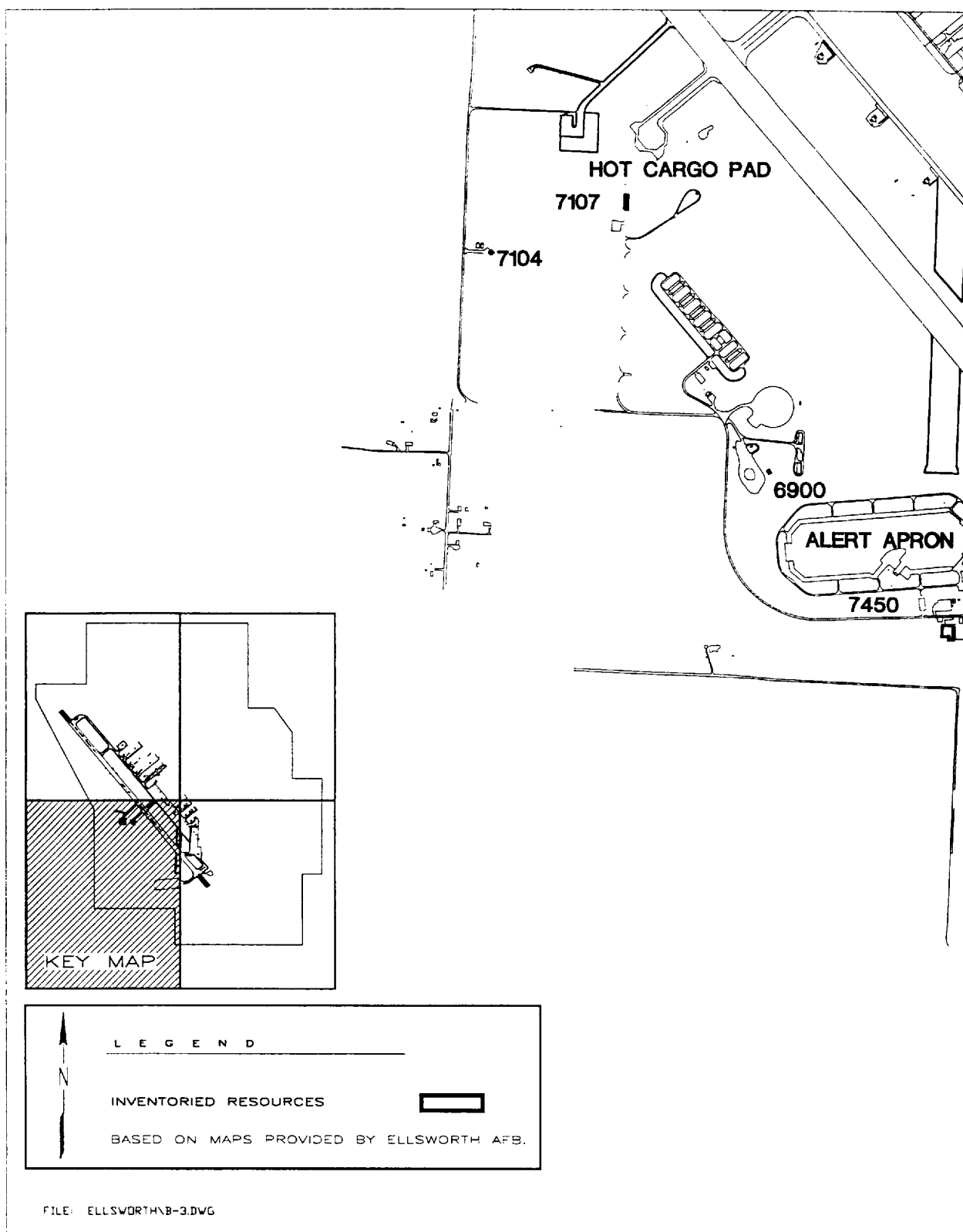


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 3 of 4).

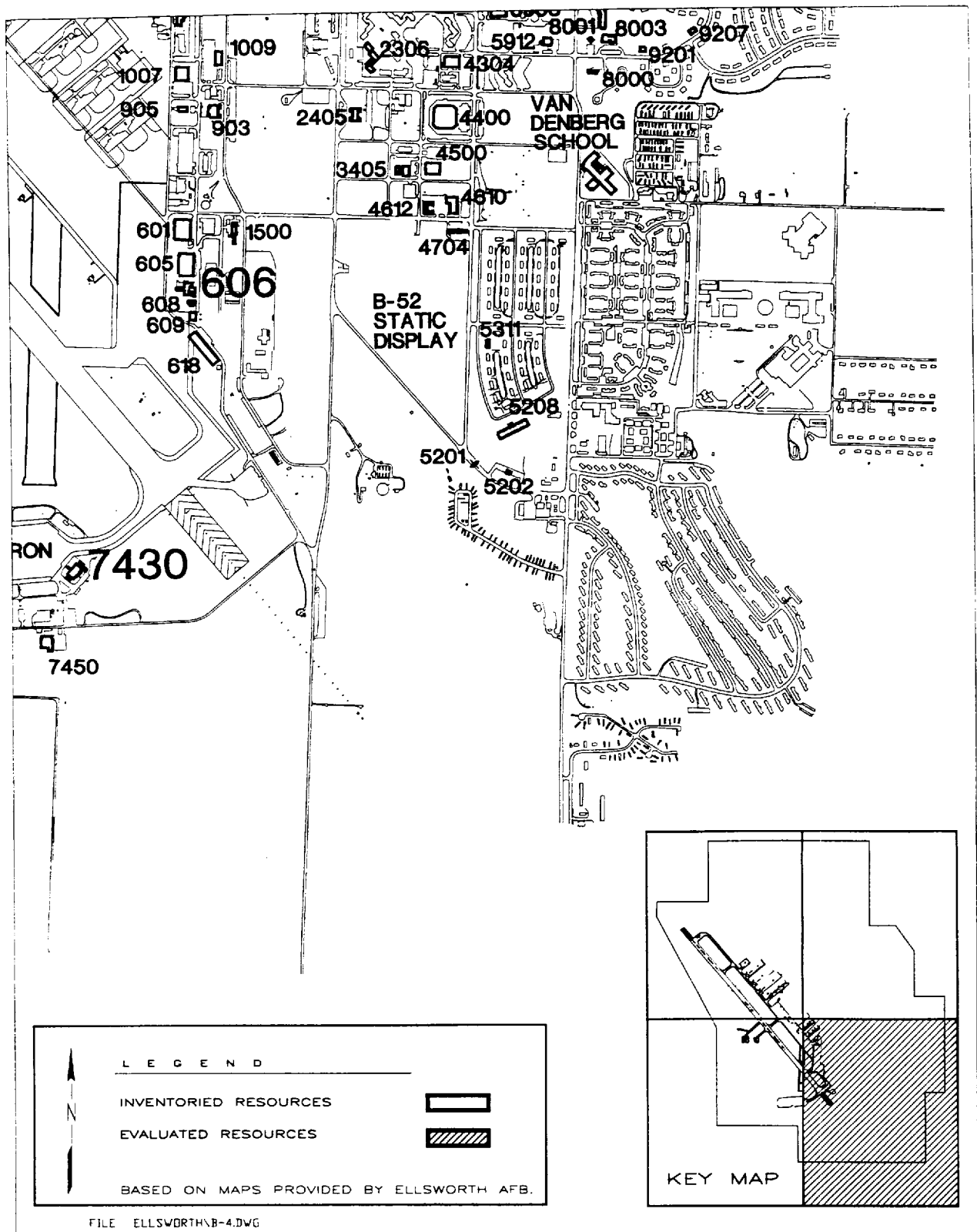
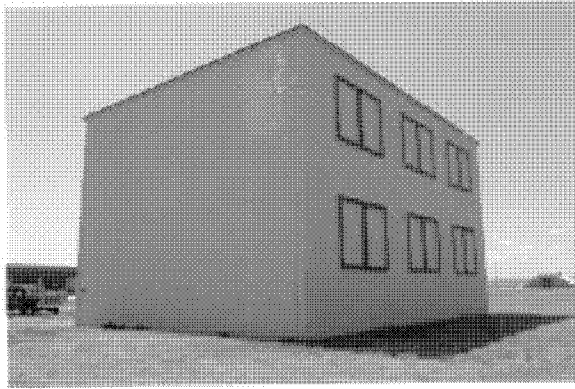
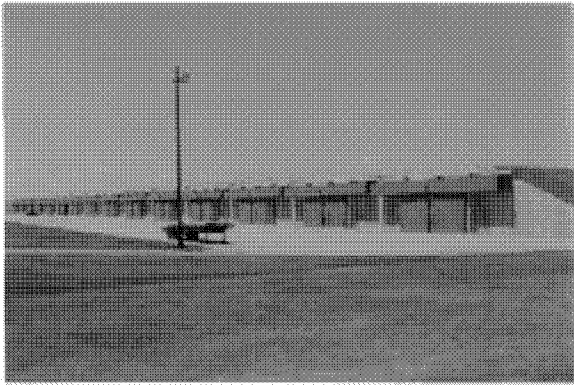


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 4 of 4).

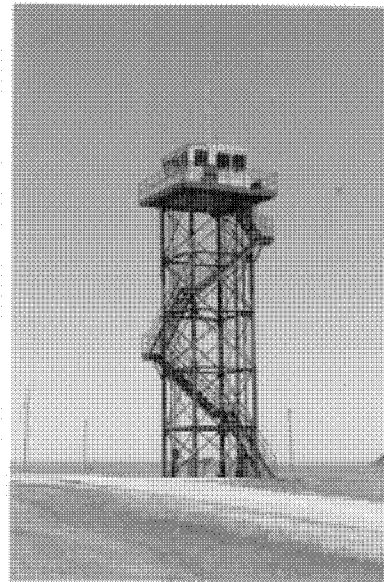
APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



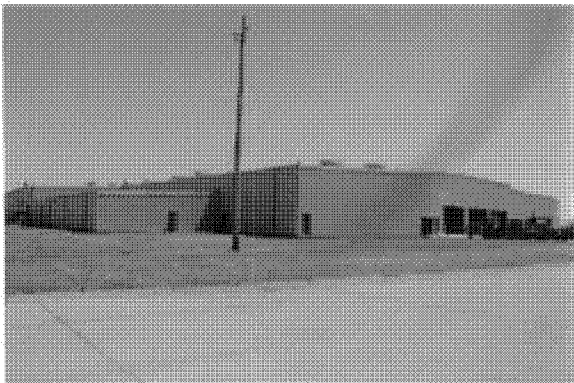
Resource No. 11001, Real Property No. 88106
Segregated Magazine Storage



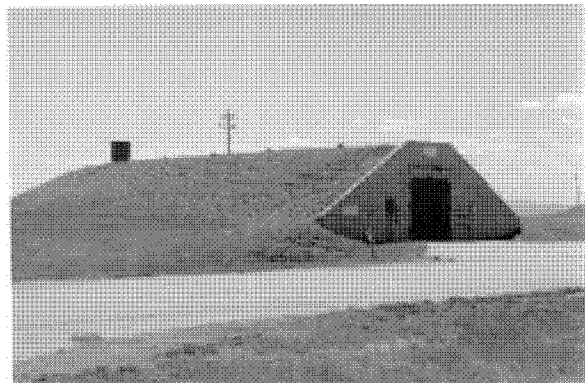
Resource No. 11003, Real Property No. 88801
Storage Igloo



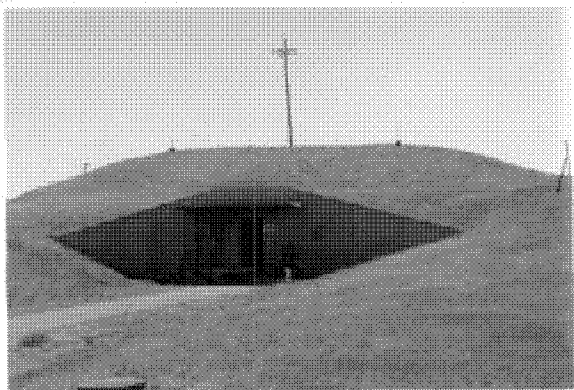
Resource No. 11002, Real Property No. 88109
Security Guard Tower



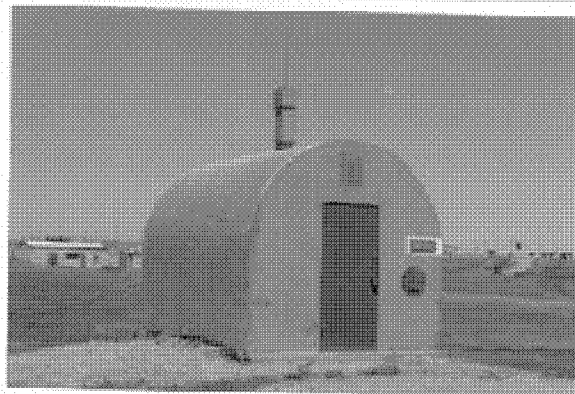
Resource No. 11004, Real Property No. 88240
Conventional Munitions Shop



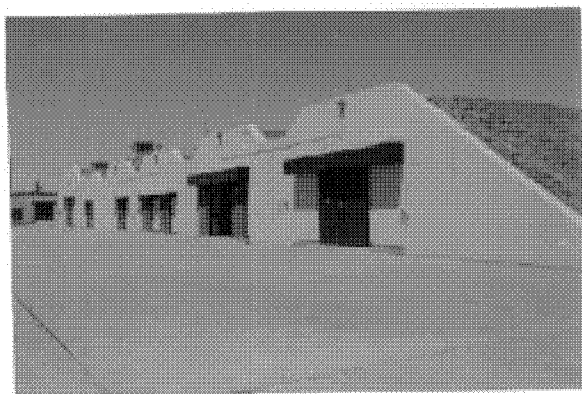
Resource No. 11005, Real Property No. 88231
Storage Igloo



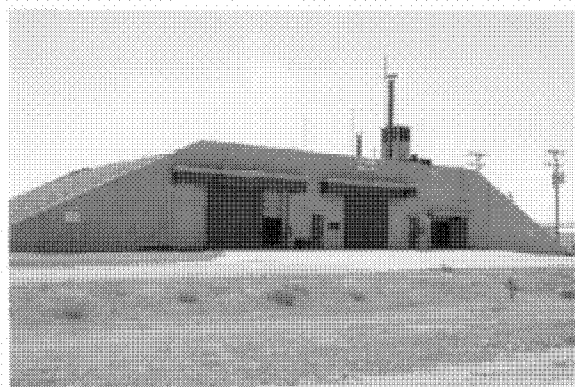
Resource No. 11006, Real Property No. 88257
Segregated Magazine Storage



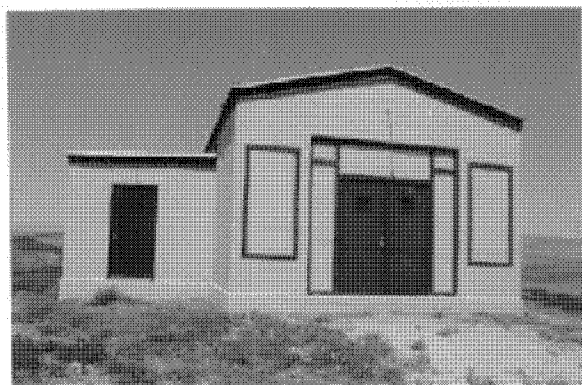
Resource No. 11007, Real Property No. 88262
Spare Inert Storage



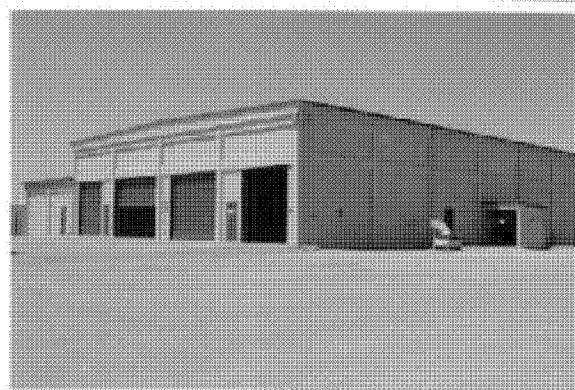
Resource No. 11008, Real Property No. 88031
Conventional Munitions Shop



Resource No. 11009, Real Property No. 88020
Vehicle Operations Heated Parking



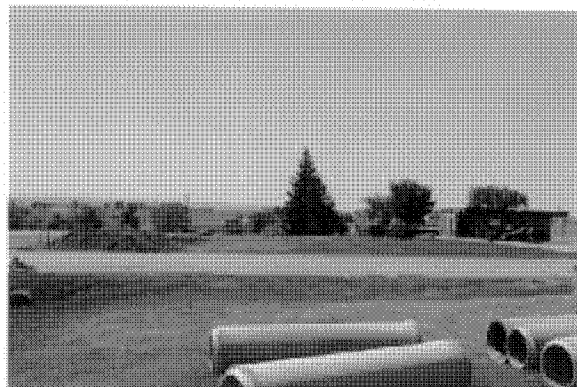
Resource No. 11010, Real Property No. 88150
Spare Inert Storage



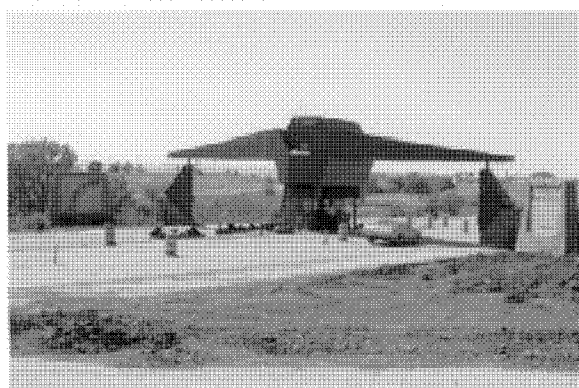
Resource No. 11011, Real Property No. 88149
Conventional Munitions Shop



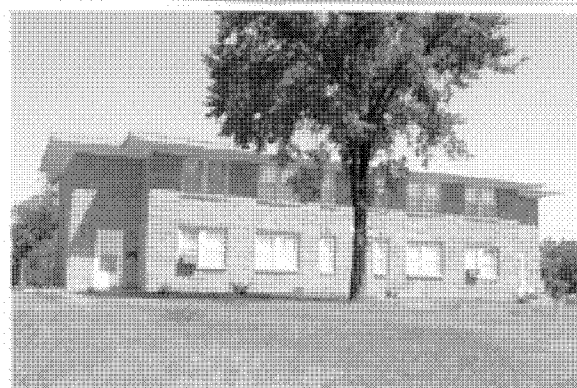
Resource No. 11012, Real Property No. 5208
Museum Building



Resource No. 11013, Real Property No. 5202
Security Police Identification Control



Resource No. 11014, Real Property No. 5201
Traffic Checkhouse



Resource No. 11015, Real Property No. 5311
Family Housing Appr. 1950



Resource No. 11016, Real Property No. (none)
Wherry Housing



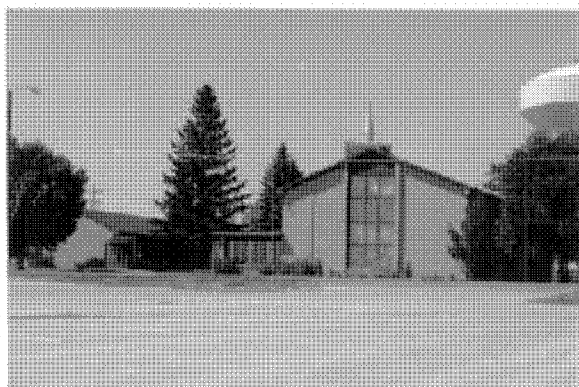
Resource No. 11017, Real Property No. 4704
Exchange Service Station



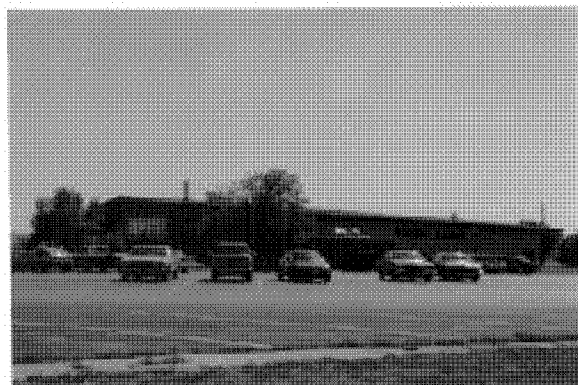
Resource No. 11018, Real Property No. 4610
Arts and Crafts Center



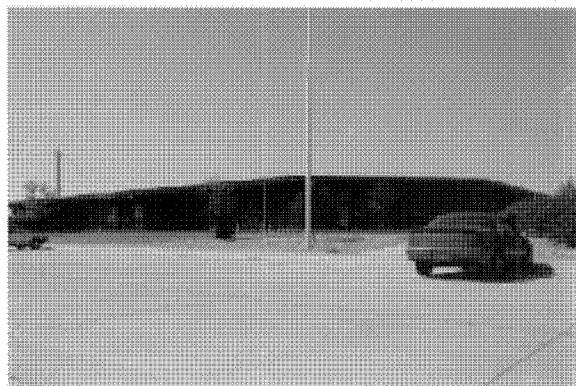
Resource No. 11019, Real Property No. 4612
Group Headquarters



Resource No. 11020, Real Property No. 3405
Chapel Center



Resource No. 11021, Real Property No. 4500
Bowling Center



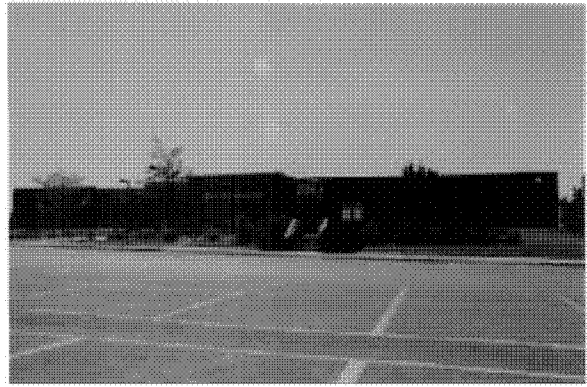
Resource No. 11022, Real Property No. 4400
Security Police Operations



Resource No. 11023, Real Property No. 2405
Education Center



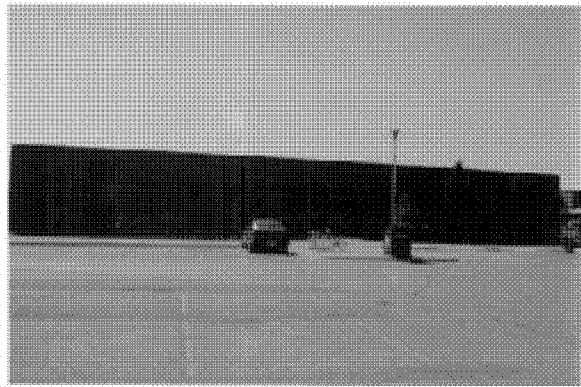
Resource No. 11024, Real Property No. 2306
Housing Supply and Storage Facility



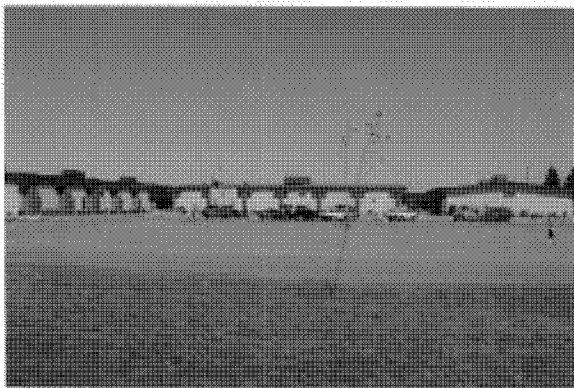
Resource No. 11025, Real Property No. 2106
Airman's Dining Hall



Resource No. 11026, Real Property No. 3901
Base Theater



Resource No. 11027, Real Property No. 3910
Recreation Library



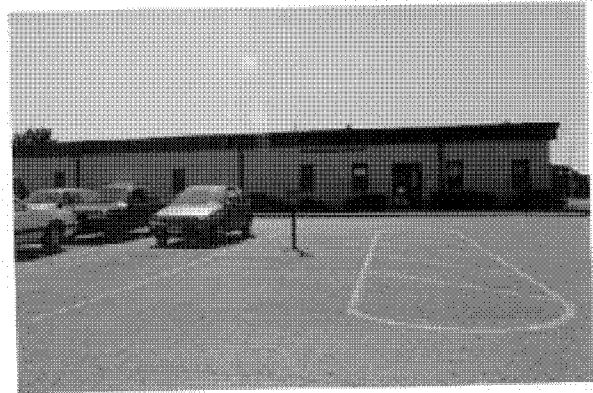
Resource No. 11028, Real Property No. 4001
Exchange Sales Store



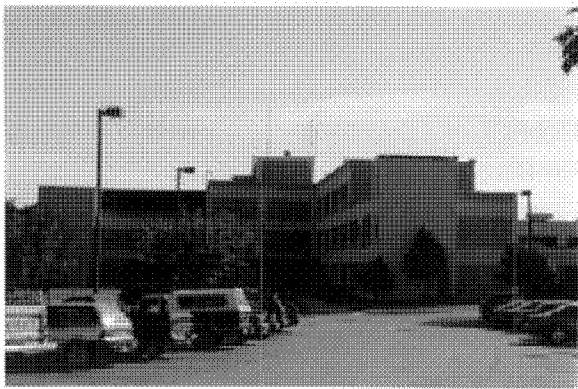
Resource No. 11029, Real Property No. 4020
Branch Exchange



Resource No. 11030, Real Property No. 5903
Officer's Open Mess



Resource No. 11031, Real Property No. 4304
ICBM/TAC Communications and Electronics
Shop



Resource No. 11032, Real Property No. 6000
Composite Medical Facility



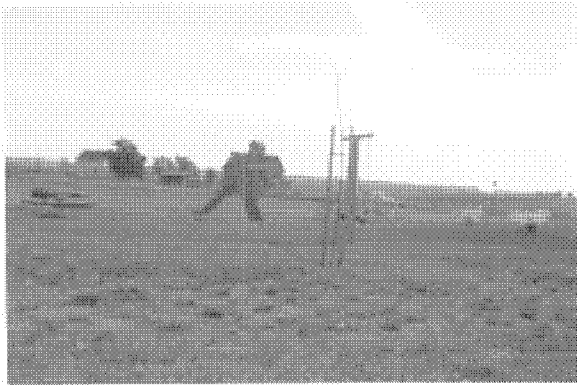
Resource No. 11033, Real Property No. 3920
Commissary Store



Resource No. 11034, Real Property No. 100
Leased Family Housing



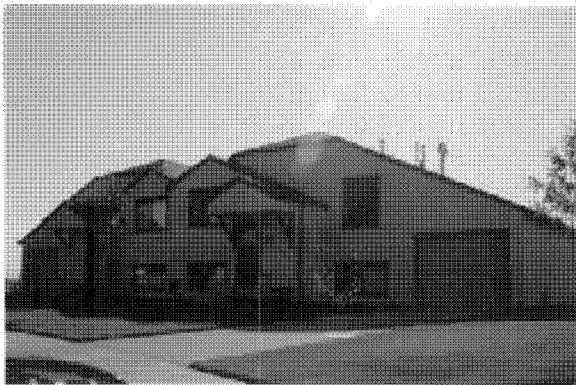
Resource No. 11035, Real Property No. 113
Leased Family Housing



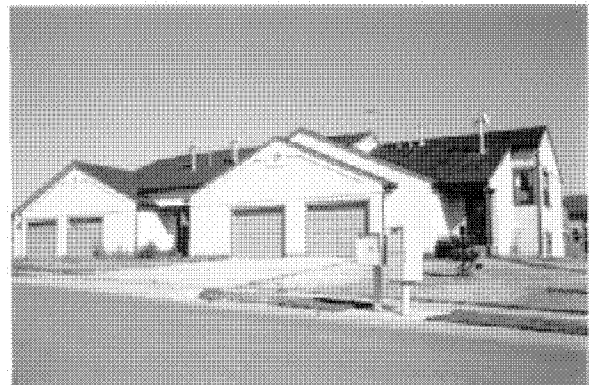
Resource No. 11036, Real Property No. (none)
Playground



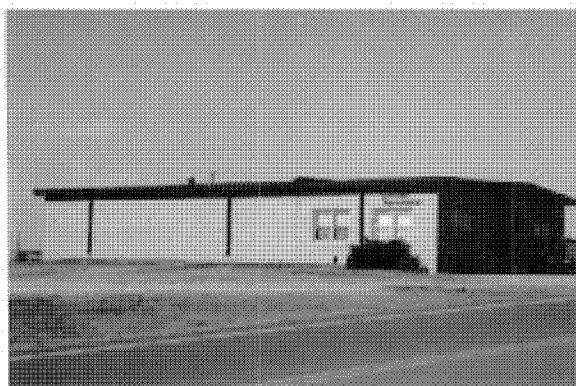
Resource No. 11037, Real Property No.
(unknown), Leased Family Housing



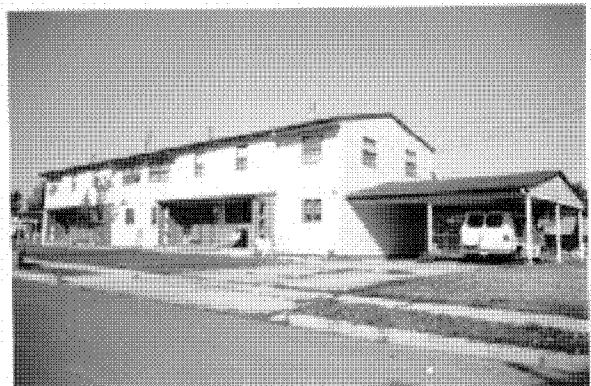
Resource No. 11038, Real Property No.
(unknown), Lease Family Housing



Resource No. 11039, Real Property No.
(unknown), Leased Family Housing



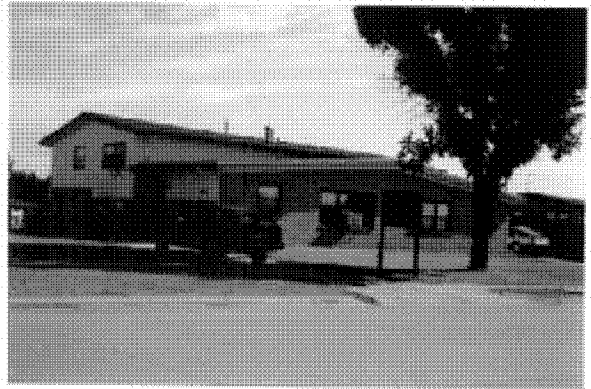
Resource No. 11040, Real Property No. 7812
Base Personnel Office



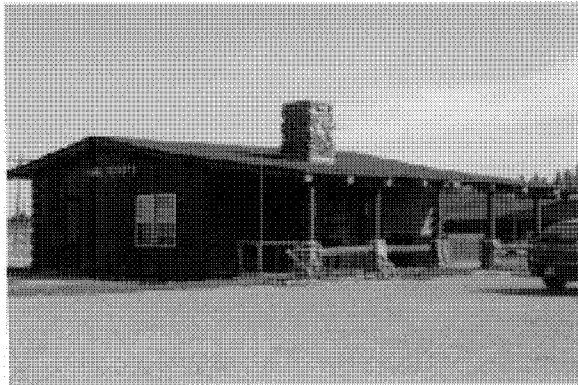
Resource No. 11041, Real Property No. 9867
Capehart Family Housing



Resource No. 11043, Real Property No. 2
Family Housing Appr. 1970



Resource No. 11046, Real Property No. 9201
Capehart Family Housing



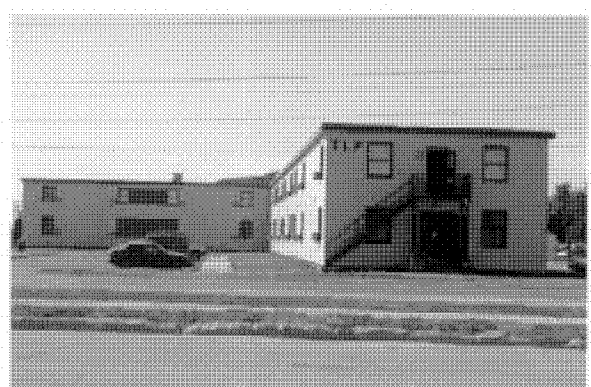
Resource No. 11047, Real Property No. 8001
Youth Center



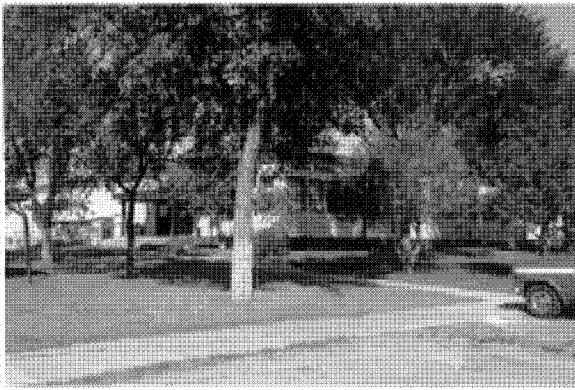
Resource No. 11049, Real Property No. 8003
Child Care Center



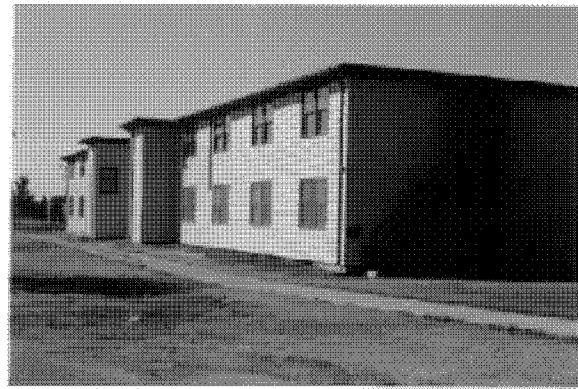
Resource No. 11050, Real Property No. 8000
Family Housing Management Office



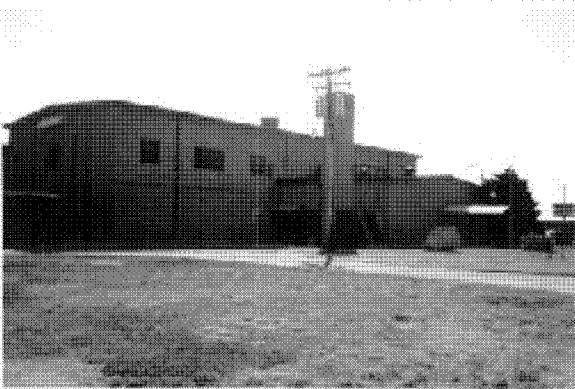
Resource No. 11053, Real Property No. 4101
Officer's Quarters



Resource No. 11055, Real Property No. 1107
Family Support Center



Resource No. 11056, Real Property No. 1110
NAF Administration Office



Resource No. 11057, Real Property No. 7712
Youth Center



Resource No. 11059, Real Property No. 1103
Visiting Officer's Quarters



Resource No. 11061, Real Property No. 7530
Exchange Cafe Snack Bar



Resource No. 11062, Real Property No. 7806
Field Training Facility



Resource No. 11063, Real Property No. 7925
Target Intelligence Training



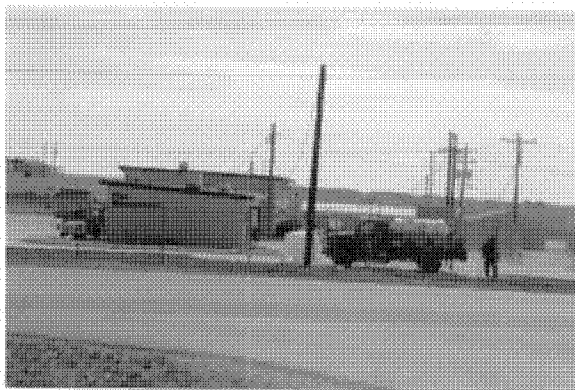
Resource No. 11064, Real Property No. 8116
Base Engineering Administration



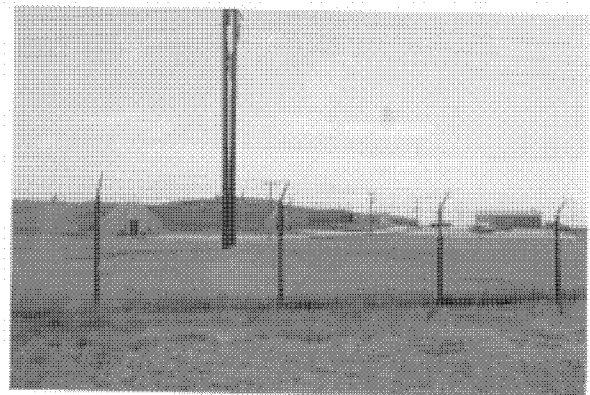
Resource No. 11066, Real Property No. 8201
Base Engineering Administration



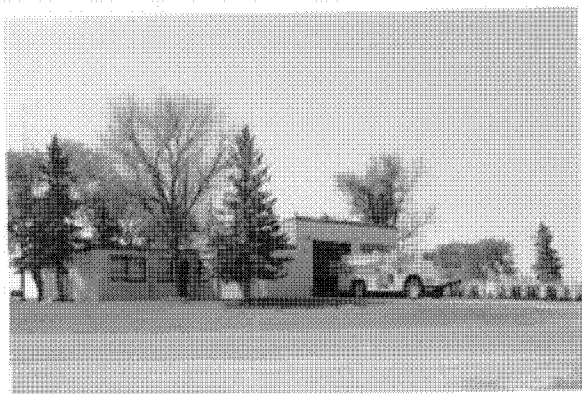
Resource No. 11067, Real Property No. 8203
Base Engineering Administration



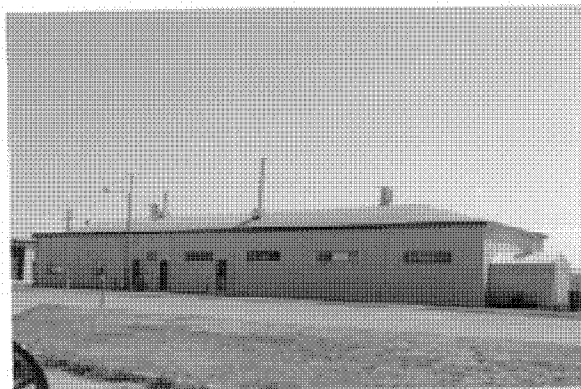
Resource No. 11068, Real Property No. 8117
Base Engineering Maintenance Shop



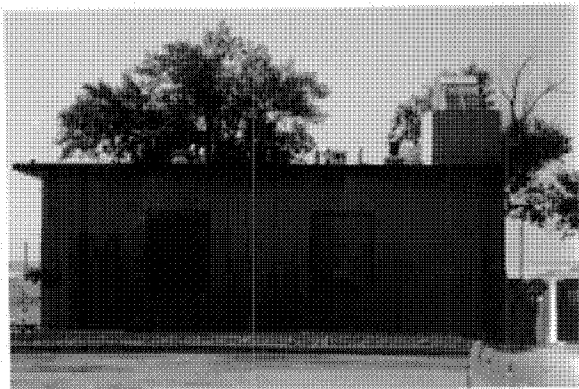
Resource No. 11069, Real Property No. 9022
Small Arms System Range



Resource No. 11070, Real Property No. 88538
Fire Station



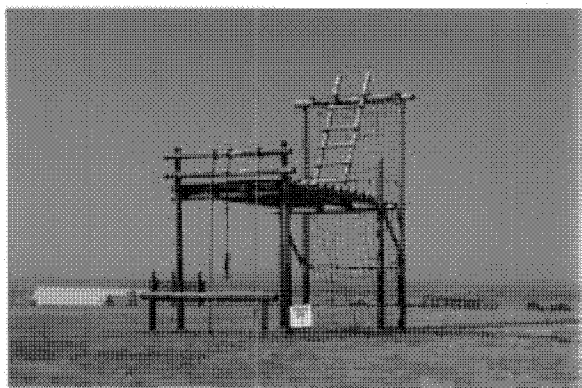
Resource No. 11071, Real Property No. 88408
Base Engineering Maintenance Shop



Resource No. 11072, Real Property No. 88513
Steam Facility Building



Resource No. 11073, Real Property No. 88501
Officer's Quarters



Resource No. 11074, Real Property No. (none)
Obstacle Course



Resource No. 11075, Real Property No. 7504
Missile Service Shop



Resource No. 11076, Real Property No. 7506
Base Operations



Resource No. 11077, Real Property No. 7507
Rapcon Center



Resource No. 11078, Real Property No. 7510
Warehouse Supply and Equipment Base



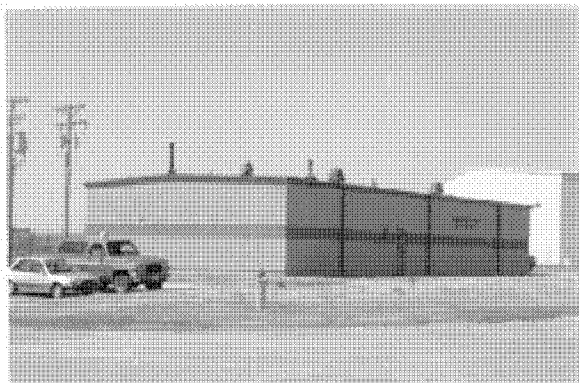
Resource No. 11079, Real Property No. 104
Vehicle Operations Heated Parking



Resource No. 11080, Real Property No. 1007
Wing Headquarters



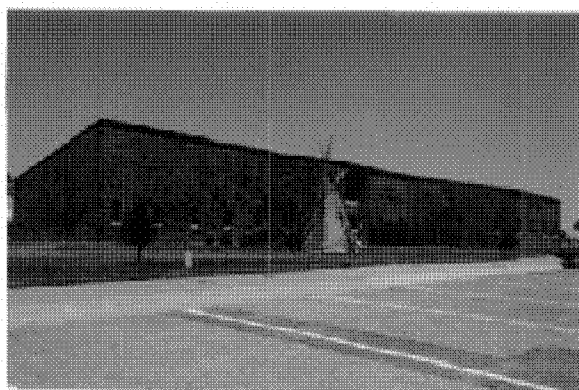
Resource No. 11081, Real Property No. 903
USAF Command Post



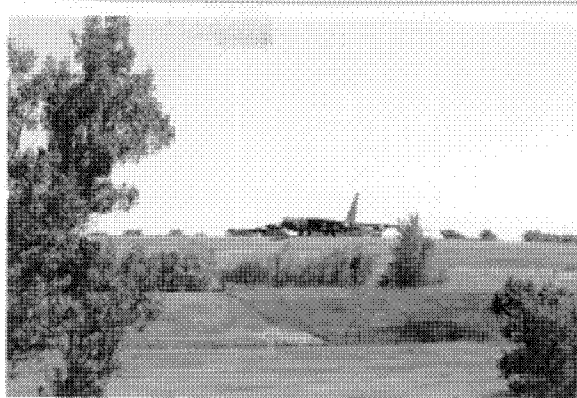
Resource No. 11082, Real Property No. 905
Nondestructive Inspection Shop



Resource No. 11083, Real Property No. 1009
Squadron Operations



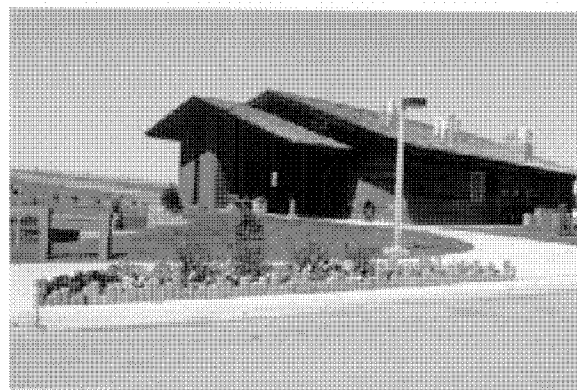
Resource No. 11084, Real Property No. 1011
Squadron Operations



Resource No. 11085, Real Property No. (none)
B-52 Static Display



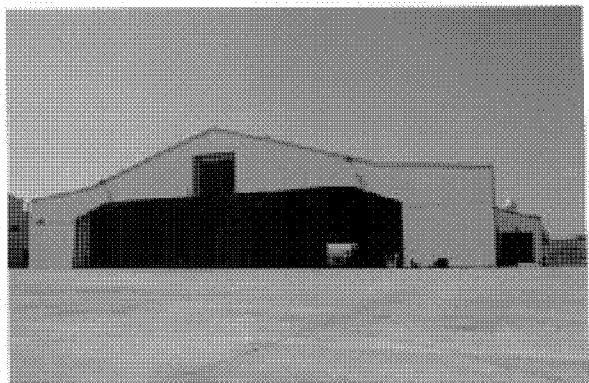
Resource No. 11086, Real Property No. (none)
Vandenberg School



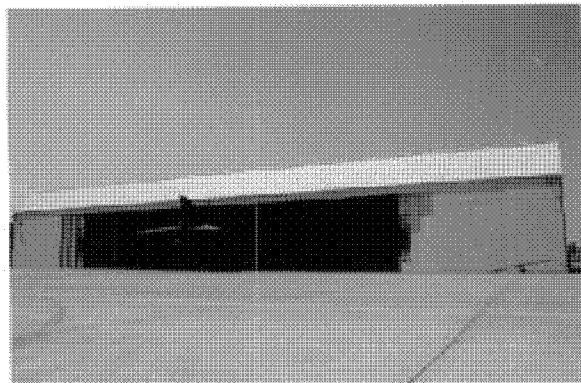
Resource No. 11087, Real Property No. (none)
Golf Clubhouse



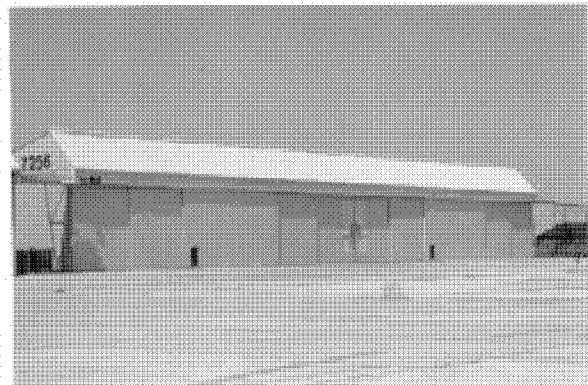
Resource No. 11088, Real Property No. D11
Missile Operations Building (*Delta 1* LCF)



Resource No. 11089, Real Property No. 7232
Large Aircraft Maintenance Dock



Resource No. 11090, Real Property No. 7234
Aircraft Corrosion Control



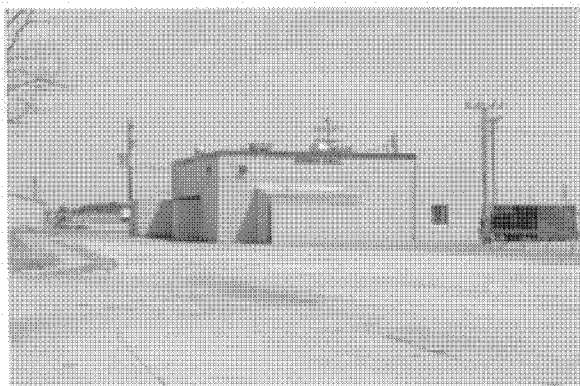
Resource No. 11091, Real Property No. 7256
Large Aircraft Maintenance Dock



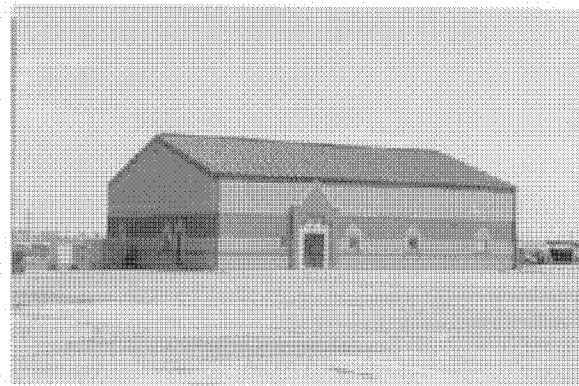
Resource No. 11093, Real Property No. 7612
Base Engineering Paving Ground Facility



Resource No. 11095, Real Property No. 606
Crew Readiness Facility



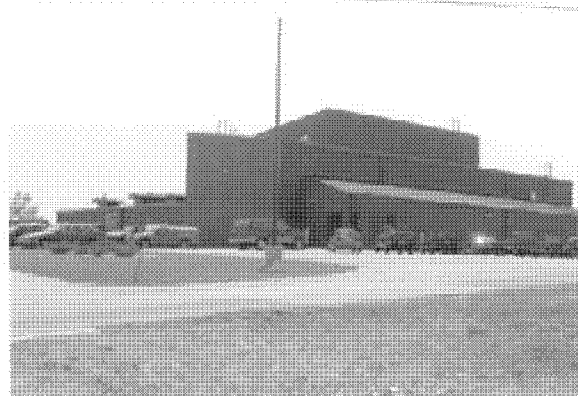
Resource No. 11097, Real Property No. 608
Crew Readiness Facility



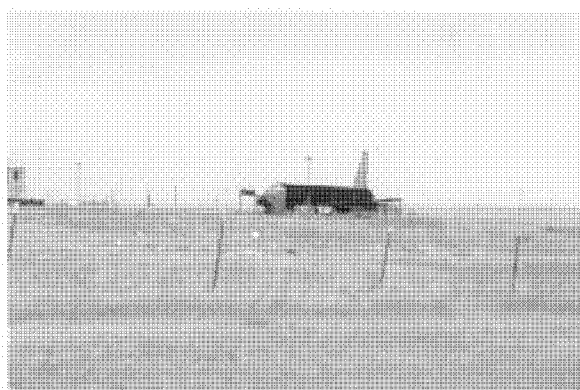
Resource No. 11098, Real Property No. 609
Crew Readiness Facility



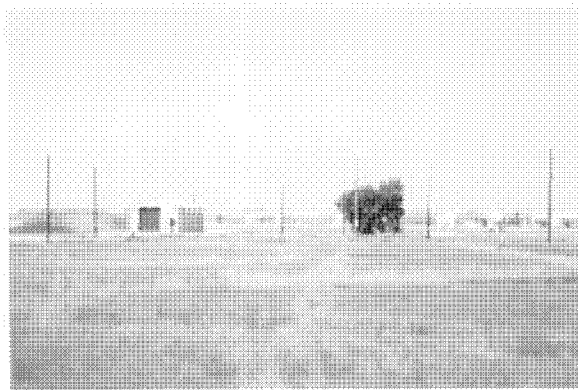
Resource No. 11099, Real Property No. 618
Small Aircraft Maintenance Dock



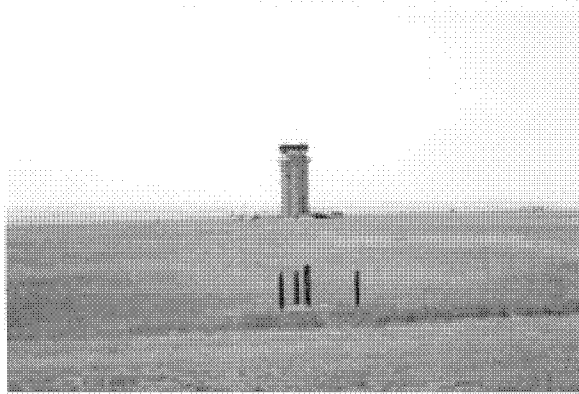
Resource No. 11101, Real Property No. 7450
Flight Simulator Training



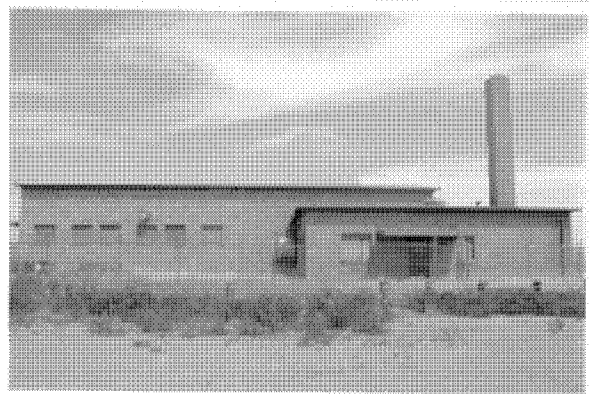
Resource No. 11102, Real Property No. 6900
Fireman Training Facility



Resource No. 11103, Real Property No. 7107
Missile Transfer Building



Resource No. 11104, Real Property No. 7104
Control Tower



Resource No. 11106, Real Property No. 11000
Communications Transmitter

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT ELLSWORTH AFB

Resource Number: 11001

Property Description: Ten foot thick reinforced concrete wall with false windows on exterior and four interior rooms with steel vault doors

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 9/30/84

Base Map Building Number: 88106

Operational Support & Installations:

Combat Weapons and Support Systems: Storage

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Segregated Storage Igloo

Statement of Significance: The 10 foot thick walls indicate nuclear resistant construction and false windows indicate camouflage. Building was originally used by AEC and has direct relationship to early storage and maintenance of early nuclear weapons.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 21

Comments on Threats: The structure is currently stable but abandoned. Abandonment raises the concern of possible demolition in the future.

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally important and NRHP eligible.

Importance: Exceptional

Eligibility: Eligible

Height: 25 F
Square Footage: 2326
Original Planned Duration: Permanent
Existing Use: Abandoned
Other Use/Dates: Munitions Storage
Comments on Use:
Primary Building Materials: Poured Concrete
Character Defining Features: 10 foot thick walls, false windows

Resource Number: 11075

Property Description: Large hangar for two heavy bombers, designed and used for B-36

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 9/30/84

Base Map Building Number: 7504

Operational Support & Installations:

Combat Weapons and Support Systems: Maintenance Docks/Hangars

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Large Aircraft Maintenance Dock

Statement of Significance: The building is a hangar specifically designed for and used for B-36 and RB-36 Strategic bombers and Reconnaissance planes. These were early nuclear long range bombers and long range reconnaissance planes important in strategic defense in the initial phase of the Cold War.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 20

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally significant and NRHP eligible.

Importance: Exceptional

Eligibility: Eligible

Height: 95

Square Footage: 128062

Original Planned Duration: Permanent

Existing Use: Office Space

Other Use/Dates: Aircraft hangar

Comments on Use:

Primary Building Materials: Brick and concrete

Character Defining Features: Large arched concrete structural ribs; massing; large divided light, aircraft doors.

Resource Number: 11088

Property Description: Delta Launch Control Facility consists of aboveground "soft" structures (quarters, security, powerplant) and hardened below ground launch control capsule.

Associated Property: Delta 9 Launch Facility

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date:

Base Map Building Number: D11

Operational Support & Installations:

Combat Weapons and Support Systems: Missiles

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Missile Launch Complex

Statement of Significance: The Delta 1 Launch Control Facility has been chosen as a potential NPS National Historic Site. It is a pristine example of an early Minuteman LCF with "soft" structures. It is likely that few examples of this type remain and most deactivated Minuteman LCFs are being disposed of as surplus property.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: NPS is attempting to gain ownership and maintain the site and associated Launch Facility as a National Historic Site.

Importance: Exceptional

Eligibility: Eligible

Height: 12

Square Footage: 5999

Original Planned Duration: Permanent

Existing Use: mothballed

Other Use/Dates: Missile Launch Control

Comments on Use:

Primary Building Materials: Poured Concrete and asbestos shingles

Character Defining Features: Control Capsule

Changes to the Resource:

Resource Number: 11095

Property Description: Crew Readiness Facility Tanker
Associated Property: Tanker alert support facilities 605-maintenance, 608,
Non-Inventoried Association:
Sub-installation:
Address: 810 Kenney Rd.
Base Map Date: 9/30/84
Base Map Building Number: 606

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Tanker Alert Facility

Statement of Significance: The building and associated buildings served as tanker alert facilities for nuclear bomber support throughout the Cold War. They contained all facilities for support of alert crews

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	21
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Unknown interior integrity.

Importance: Exceptional
Eligibility Potential

Height: 15
Square Footage: 16196
Original Planned Duration: Permanent
Existing Use: Offices, storage
Other Use/Dates: Crew Readiness
Comments on Use:
Primary Building Materials: Poured Concrete
Character Defining Features: L-shaped plan, stepped massing, alert and crew support facilities room arrangement.

Resource Number: 11100

Property Description: Bomber Alert Facility located near bomber apron, contains crew quarters , support facilities

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 250 Kenney Rd.

Base Map Date: 9/30/94

Base Map Building Number: 7430

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Bomber Alert Facility

Statement of Significance: The building served as a bomber alert facility and contains crew accomodations, support facilities, and features that allowed rapid deployment of bomber crews and therefore is directly related to the nuclear bomber mission of Ellsworth AFB

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	21
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally significant and NRHP eligible.

Importance: Exceptional

Eligibility Eligible

Height: 15

Square Footage: 17994

Original Planned Duration: Permanent

Existing Use: Education Center

Other Use/Dates: Bomber Alert

Comments on Use:

Primary Building Materials: Poured Concrete

Character Defining Features: Room Arrangement, Crew Ramps to Apron, Christmas Tree Apron

Resource Number: 11105

Property Description: Drawing Files Vault, contains numerous architectural drawings of base facilities

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date:

Base Map Building Number: inside 8203

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: The files are significant as they contain architectural information on base facilities

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 3

Total Score for Priority Matrix: 18

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Many drawings are in poor condition and in a disorganized state. Improved storage and organization is recommended.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Architectural Drawing

Year of Document: Various

Period of Association: various

Comments on Condition: Some files are in poor condition and disorganized

Resource Number: 11109

Property Description: Construction record documents for hangar 07504. A full set of 40 sheets on linen.

Associated Property: Building 07504

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date:

Base Map Building Number: inside 8203

Operational Support & Installations:

Combat Weapons and Support Systems: Documentation

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Architectural Drawing Files

Statement of Significance: These are a record of the building at the time it was used for B-36s - the primary period of significance.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 21

Comments on Threats: In storage, but not being handled as an important document.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Importance:

Eligibility

Record/Document Category: Architectural Drawing

Year of Document: 1950

Period of Association: Phase I

Comments on Condition: Good

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Ellsworth AFB, and to provide research materials for this study:

Dr. Dan Frieze
28 CES/CEV
8203 Scott Drive
Ellsworth AFB, SD 57706
(605) 385-6624

TSgt Bret Whitmore
Base Historian
(605) 385-4970

Barbara Nichols and Cheryl Cordright
Real Property Office
28 CES/CERR
2149 Scott Drive
Ellsworth AFB, SD 57706
(605) 385-2669

Major Joseph Mecadon
Public Affairs Office
(605) 385-5056

1st Lt Robert Licciardi
Section Commander
Security Office
28 CES
2116 Scott Drive
Ellsworth AFB, SD 57706
(605) 385-2650

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Ellsworth AFB history and Cold War context.

Dr. Daniel Friese, Civil Engineering Squadron, July 27, 1994

Ronald Alley, Curator, South Dakota Air and Space Museum, July 28, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-8: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT FAIRCHILD AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
Lori E. Rhodes
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

February 1996

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. conducted a material culture inventory at Fairchild Air Force Base, Washington, between August 16 and 22, 1994 to identify extant Cold War resources important to the base, its history, and its Cold War mission as discussed in the historic context and methodology written for the study (Lewis et al. 1995). A variety of repositories at the base were inventoried: the Wing History Office, Public Affairs Office, Civil Engineering Office and Drafting Department, Real Estate Office, Environmental Office, and Fairchild Heritage Museum. A photographic reconnaissance of the base was conducted to document Cold War resources as well as representative architecture on the base.

Seven resources were selected for documentation and evaluation. These resources include buildings, objects, and records/documents. These resources represent the United States Air Force alert posture, weapons delivery potential, and deterrence capabilities during the Cold War era. Recommendations for these resources range from stewardship to National Register of Historic Places eligibility. Two resources are recommended as currently eligible to the National Register and one as eligible in the future.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AEC	- Atomic Energy Commission
AFB	- Air Force Base
AFS	- Air Force Station
AGE	- Air Ground Equipment
AMC	- Air Mobility Command
AMC	- Air Materiel Command
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
amsl	- above mean sea level
ANG	- Air National Guard
ARS	- Air Refueling Squadron
ARW	- Air Refueling Wing
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
CCTG	- Combat Crew Training Group
DoD	- Department of Defense
FICON	- Fighter Interceptor Carrier Reconnaissance Project
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OMS	- Organizational Maintenance Squadron
POW	- Prisoner of War
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SAW	- Strategic Aerospace Wing
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SMS	- Strategic Missile Squadron
SRAM	- Short Range Attack Missile
TAC	- Tactical Air Command
USAF	- United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the United States military forces. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

GLOSSARY (Continued)

Section 110 - a requirement in the National Historic Preservation Act that all federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion to the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	6
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	16
4.0 METHODOLOGY	24
4.1 INVENTORY	24
4.2 EVALUATION OF IMPORTANT RESOURCES	25
4.2.1 Documentation	25
4.2.2 Evaluation of Importance	25
4.2.2.1 Cold War Context	25
4.2.2.2 NRHP Criteria	26
4.2.2.3 Exceptional Importance	27
4.2.3 Evaluation of Integrity	27
4.2.4 Priority Matrix	28
4.2.5 Resource Organization	29
4.3 BASE SPECIFIC METHODS	29
5.0 RECONNAISSANCE INVENTORY RESULTS	31
6.0 EVALUATION RESULTS	32
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	32
6.1.1 Documentation	32
6.1.1.1 Photograph Collection	32
6.1.1.2 Museum Collection	32
6.1.1.3 Office Files	35
6.1.1.4 Documentary Collection	35

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	36
6.2.1 Alert Facilities	36
6.2.1.1 Bomber Alert Facility	36
6.2.2 Maintenance Docks/Hangars	37
6.2.2.1 Engine Test Building	37
6.2.3 Storage	38
6.2.3.1 Segregated Storage Igloo	38
6.3 MATERIEL DEVELOPMENT FACILITIES	39
6.4 TRAINING FACILITIES	39
6.5 INTELLIGENCE FACILITIES	39
 7.0 UNDOCUMENTED RESOURCES	 40
 8.0 FUTURE THREATS TO RESOURCES	 41
 9.0 PRELIMINARY RECOMMENDATIONS	 42
9.1 NRHP ELIGIBILITY	42
9.1.1 Evaluation and Determination of NRHP Eligibility	42
9.1.2 Implications of NRHP Eligibility	44
9.2 EVALUATED RESOURCE RECOMMENDATIONS	45
9.2.1 Photograph Collection	47
9.2.2 Museum Collection	47
9.2.3 Office Files	48
9.2.4 Documentary Collection	48
9.2.5 Bomber Alert Facility	48
9.2.6 Engine Test Building	48
9.2.7 Segregated Storage Igloo	49
 10.0 REFERENCES CITED	 50
 APPENDIX A: RECONNAISSANCE INVENTORY	
 APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
 APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
 APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
 APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Fairchild Air Force Base	5
Figure 2.2 Fairchild Air Force Base Layout	7
Figure 2.3 Standard Strategic Air Command Base Layout	8
Figure 2.4 Fairchild Air Force Base Land Use Diagram.....	10
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.....	11
Figure 3.1 Fairchild Air Force Base, 1940s	18
Figure 3.2 Fairchild Air Force Base, 1950-1960	19
Figure 3.3 Fairchild Air Force Base, 1960-1970	20
Figure 3.4 Fairchild Air Force Base, 1970-1980	21
Figure 3.5 Fairchild Air Force Base, 1980-present.....	23

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	33
Table 6.2 Evaluated Resource Prioritization by Priority Rank	34
Table 9.1 Recommendations for Evaluated Resources.....	46

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.

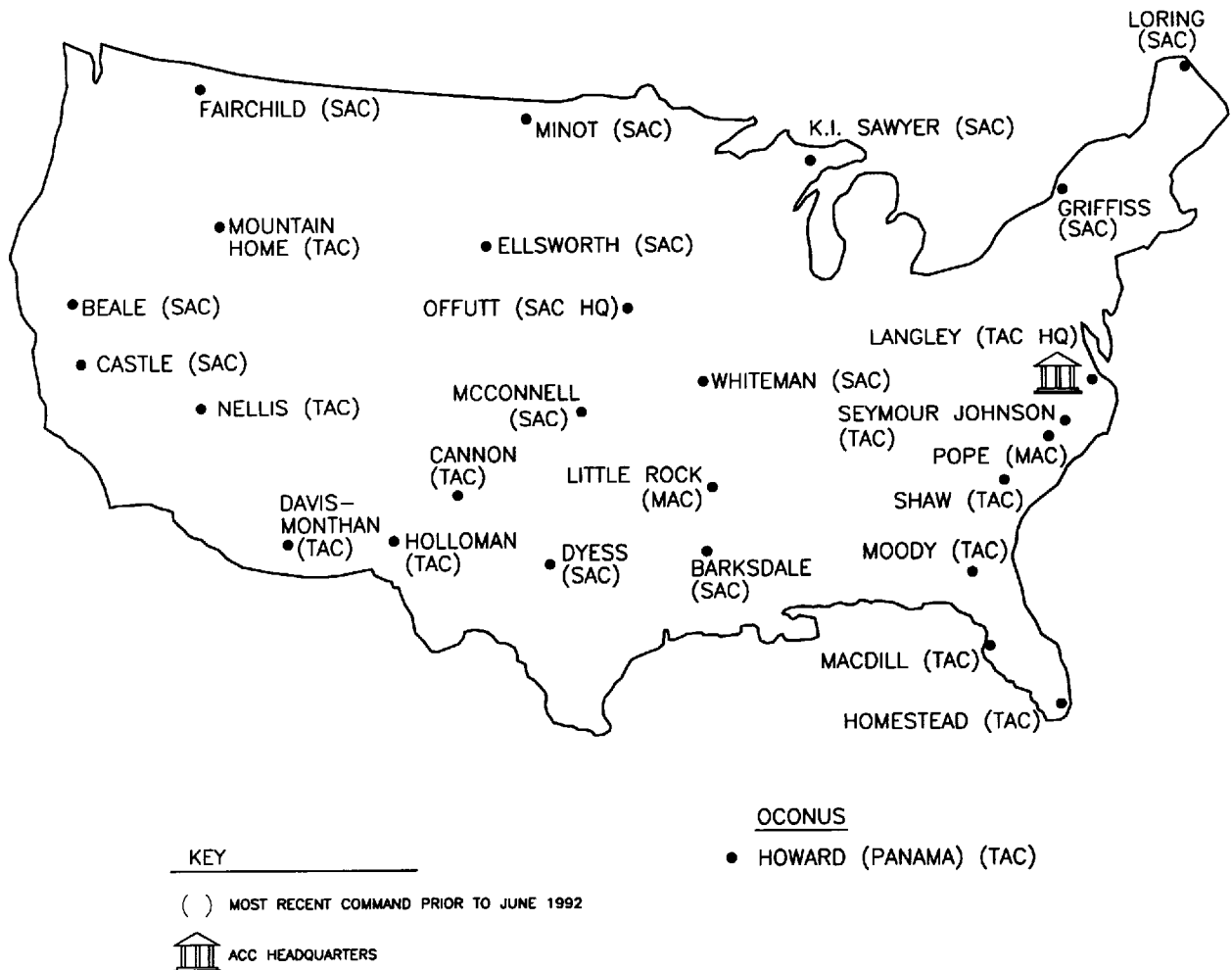


Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

The phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

The phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing in the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Fairchild Air Force Base (AFB). Fairchild AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Fairchild AFB supported the mission of the 92nd Bombardment Wing (BMW) from 1947 until July 1994. While on alert, the 92nd BMW remained in a constant state of readiness to immediately respond to a National Emergency War Order and to sustain long-range bombardment with aerial refueling on a global scale (Johnson 1971:1). However, due to the July 1, 1994 realignment of Fairchild AFB from ACC to Air Mobility Command (AMC), the present mission at Fairchild AFB is strictly air refueling. The 92nd and 43rd Air Refueling Squadrons (ARS) and the 453rd Operations Support Squadron were reassigned to the 92nd Air Refueling Wing (ARW) July 1, 1994. The 92nd ARW's primary responsibility is to provide immediately responsive KC-135 air refueling and airlift support to the United States and friendly forces (personal communication, William J. Summers, May 4, 1995). The base is also host to the 141st ARW of the Washington Air National Guard (ANG), the 36th Rescue Flight, the 50th Space Wing, and the 336th Crew Training Group, which operates the only survival school in the United States Air Force (USAF) (Fairchild AFB 1994:20).

2.2 GEOGRAPHIC DESCRIPTION

Fairchild AFB is located approximately 12 mi (19.3 km) west of Spokane, Washington, in Spokane County (Figure 2.1). Situated on the western Spokane Plain and near the northwestern edge of the Columbia Basin, the base landscape is relatively flat. The base occupies approximately 4,300 acres (1,740 ha), with elevations ranging from 2,400 ft (731 m) above mean sea level (amsl) in the east to 2,462 ft (750 m) amsl in the west (Chatters 1994:28). In this semi-arid climate, centuries of wind erosion have resulted in a deposit of fine, sandy loam soil and dry agricultural techniques now prevail, especially wheat production.

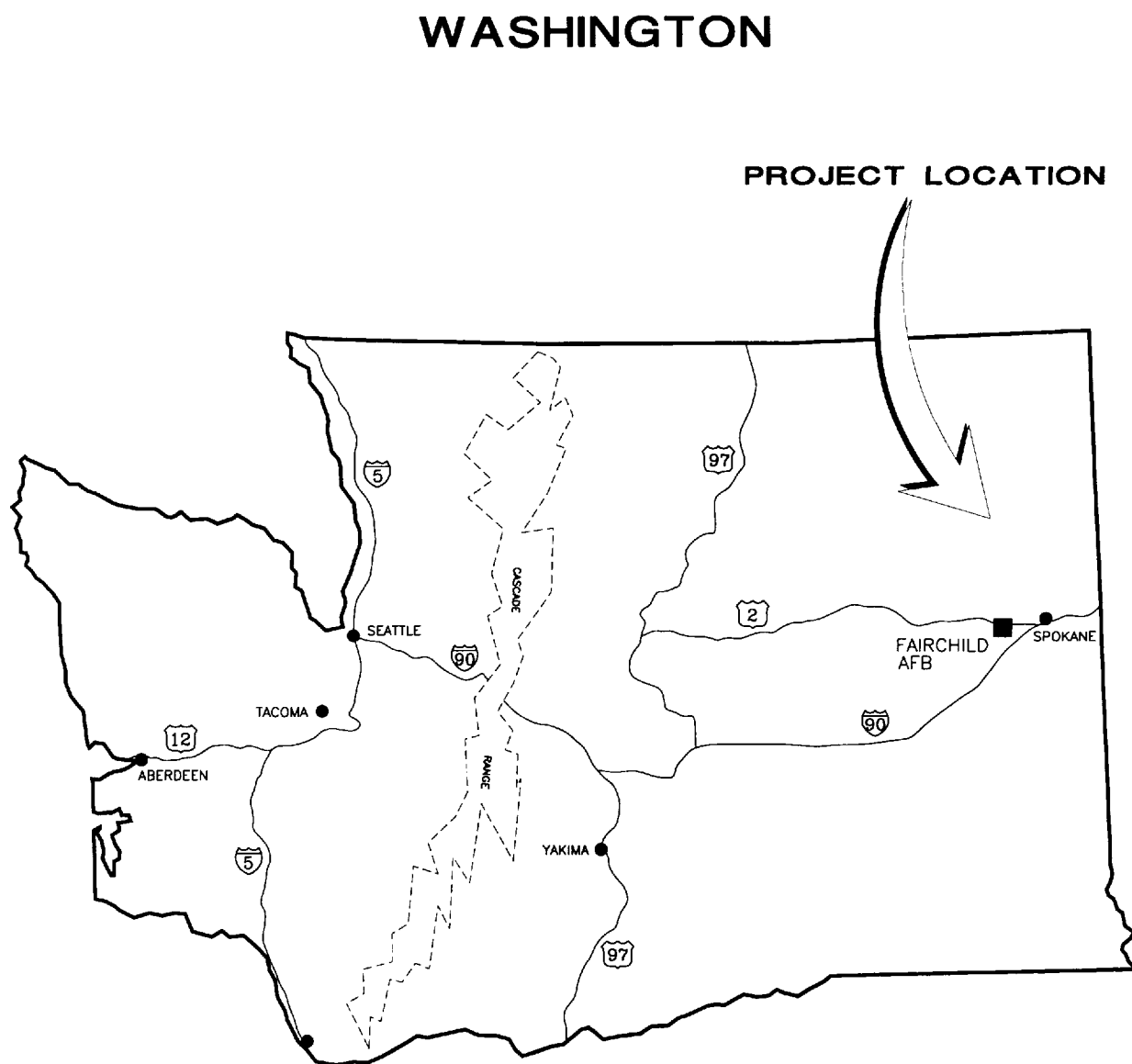


Figure 2.1 Location of Fairchild Air Force Base.

2.3 CURRENT BASE LAYOUT

Fairchild AFB (Figure 2.2) closely resembles the standard SAC base layout (Figure 2.3). The 13,900 ft (4,236 m) runway and associated taxiways and aprons are oriented from northeast to southwest, bisecting the base into two sections, one to the north of the runway, the other to the south. The location of the main gate to the base west of the northernmost housing area coincides with the standard layout. The alert apron at Fairchild AFB is located adjacent to and north of the northeastern end of the runway, also resembling the standard layout. Wing Headquarters is located southwest of the northernmost housing area in a location similar to that of the standard layout. The location of the base hospital near the same family housing development corresponds roughly to the standard plan for community buildings, although the standard does not explicitly show where the hospital should be located within the community buildings.

The USAF Survival School, complete with dormitories, classrooms, and training facilities, is located south of the runway, just southwest of the weapons storage area. The mission-related prisoner of war (POW) camp is located further south of the weapons storage area. Because many of the buildings from the former Deep Creek Air Force Station (AFS) were utilized for the Survival School, the positioning of this training area on base does not correspond to the standard layout, which shows training areas on the mission side of the flightline and runway.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

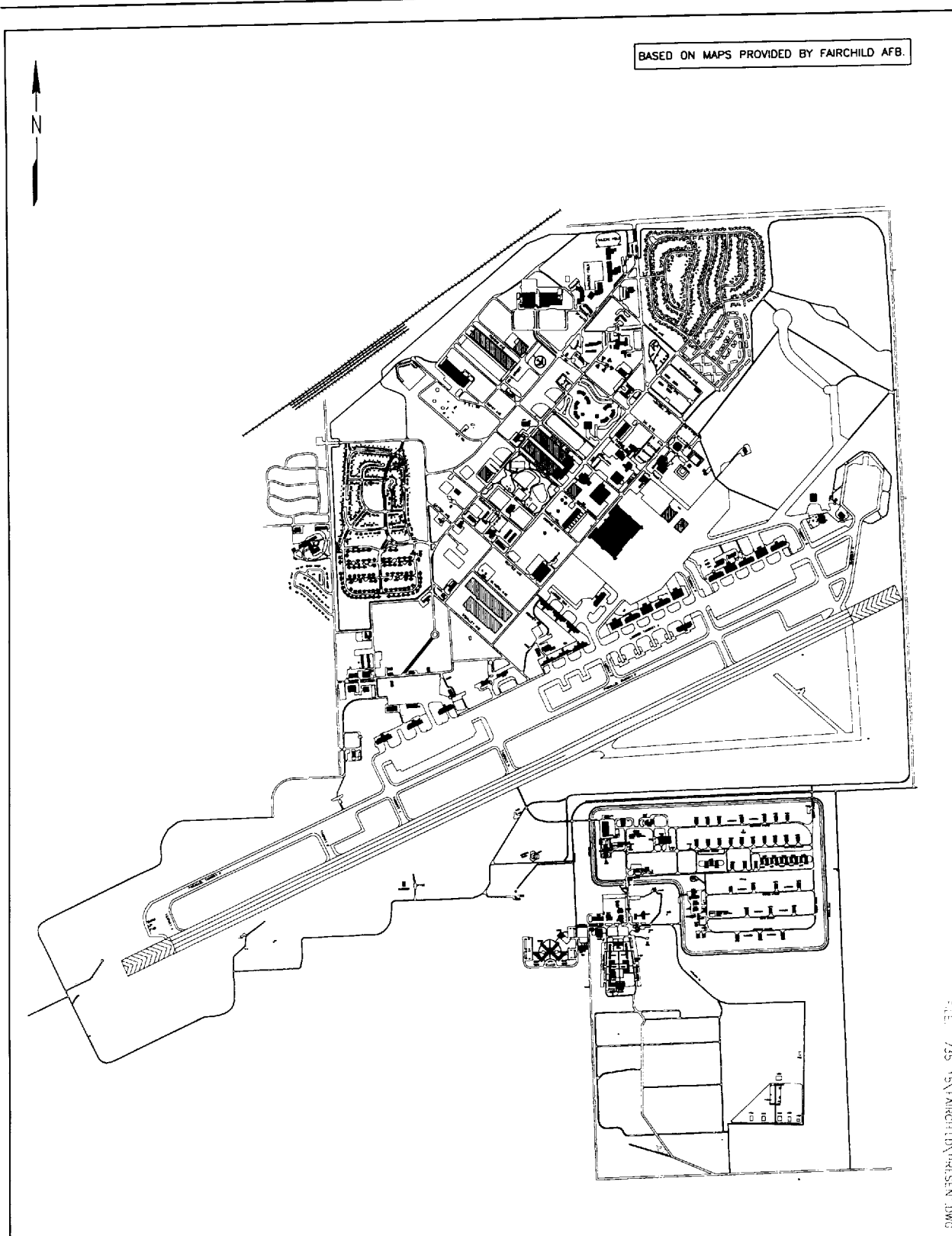


Figure 2.2 Fairchild Air Force Base Layout.

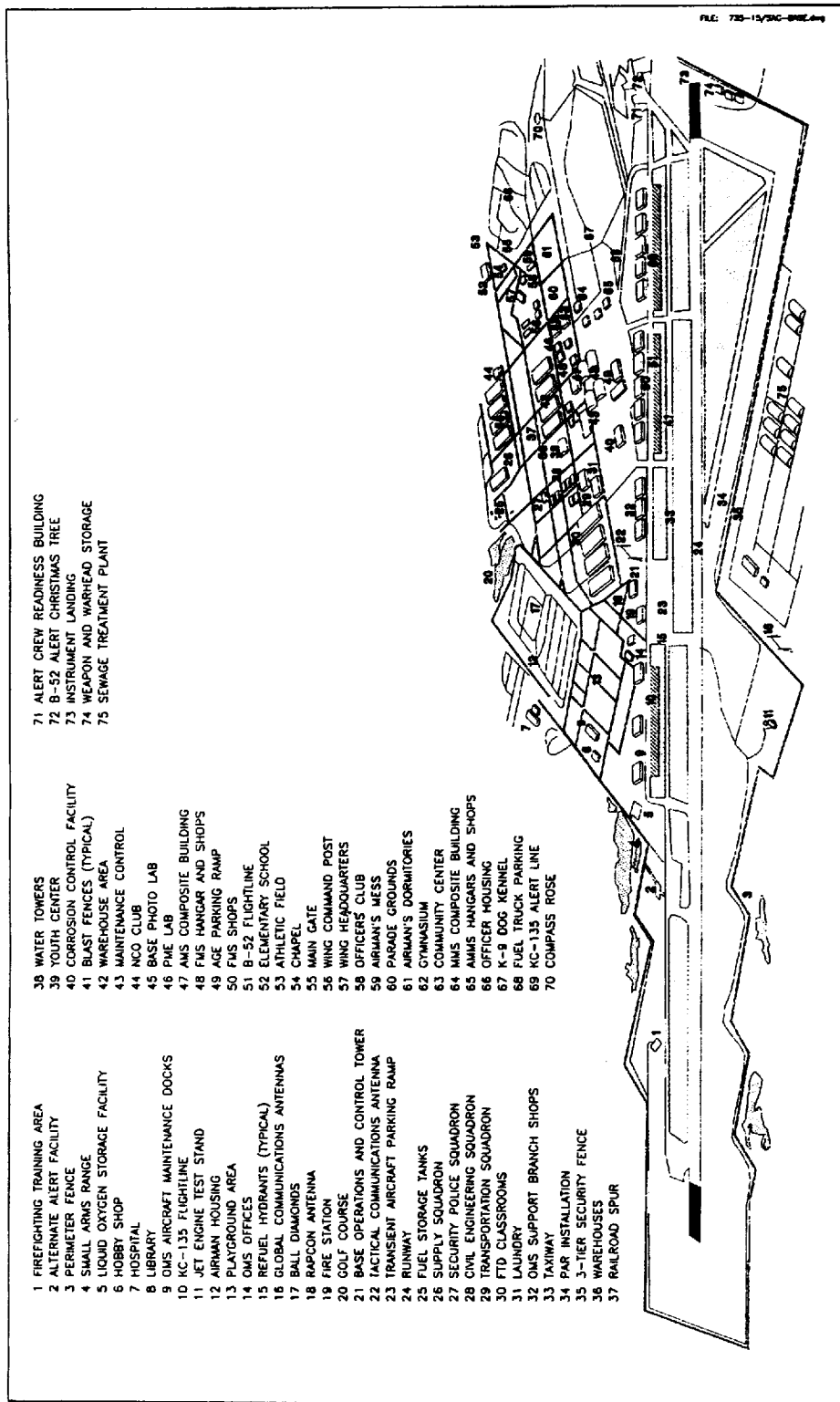


Figure 2.3 Standard Strategic Air Command Base Layout.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Land use at Fairchild AFB (Figure 2.4) closely resembles the standard SAC land use diagram (Figure 2.5). Mission-oriented buildings at Fairchild AFB are situated north of the main runway and adjacent to the taxiways and parking aprons for the full length of the flightline, the same as depicted in the SAC diagram. The central location north of the mission area of a mixture of base support, community, recreational, and industrial buildings and facilities generally corresponds to the standard land use diagram. Primary family housing areas at Fairchild AFB are located in two areas: one is north of the northeastern end of the runway near the main gate, and the other is located on the opposite side of the base, west of the large base support and recreational areas of the base. This differs from the SAC diagram, which shows only one area defined for family housing. Recreational facilities are interspersed within the community area and accessible to the family housing areas on both sides of the base. Unaccompanied housing is located southwest of the community area in a location similar to the standard diagram.

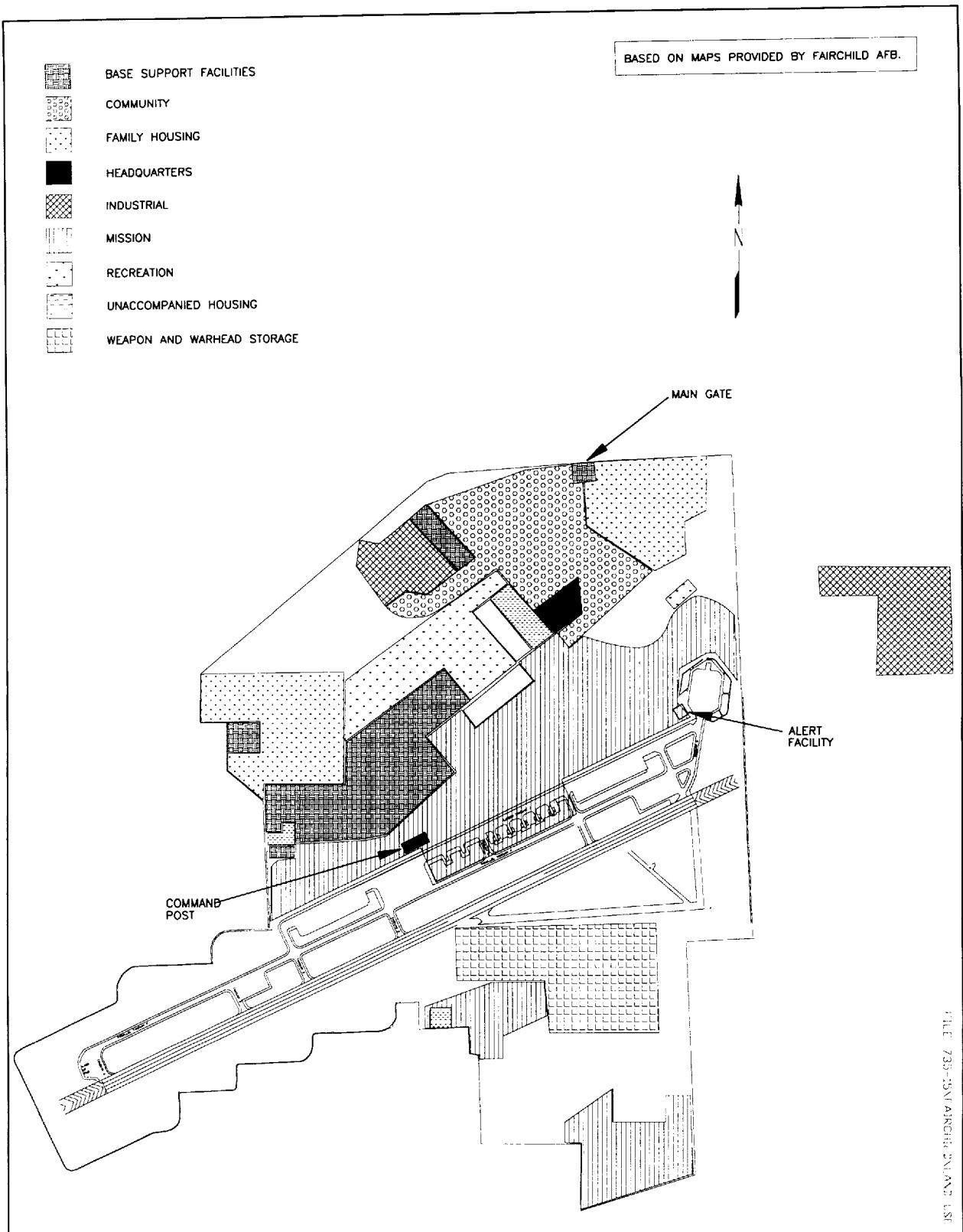


Figure 2.4 Fairchild Air Force Base Land Use Diagram.

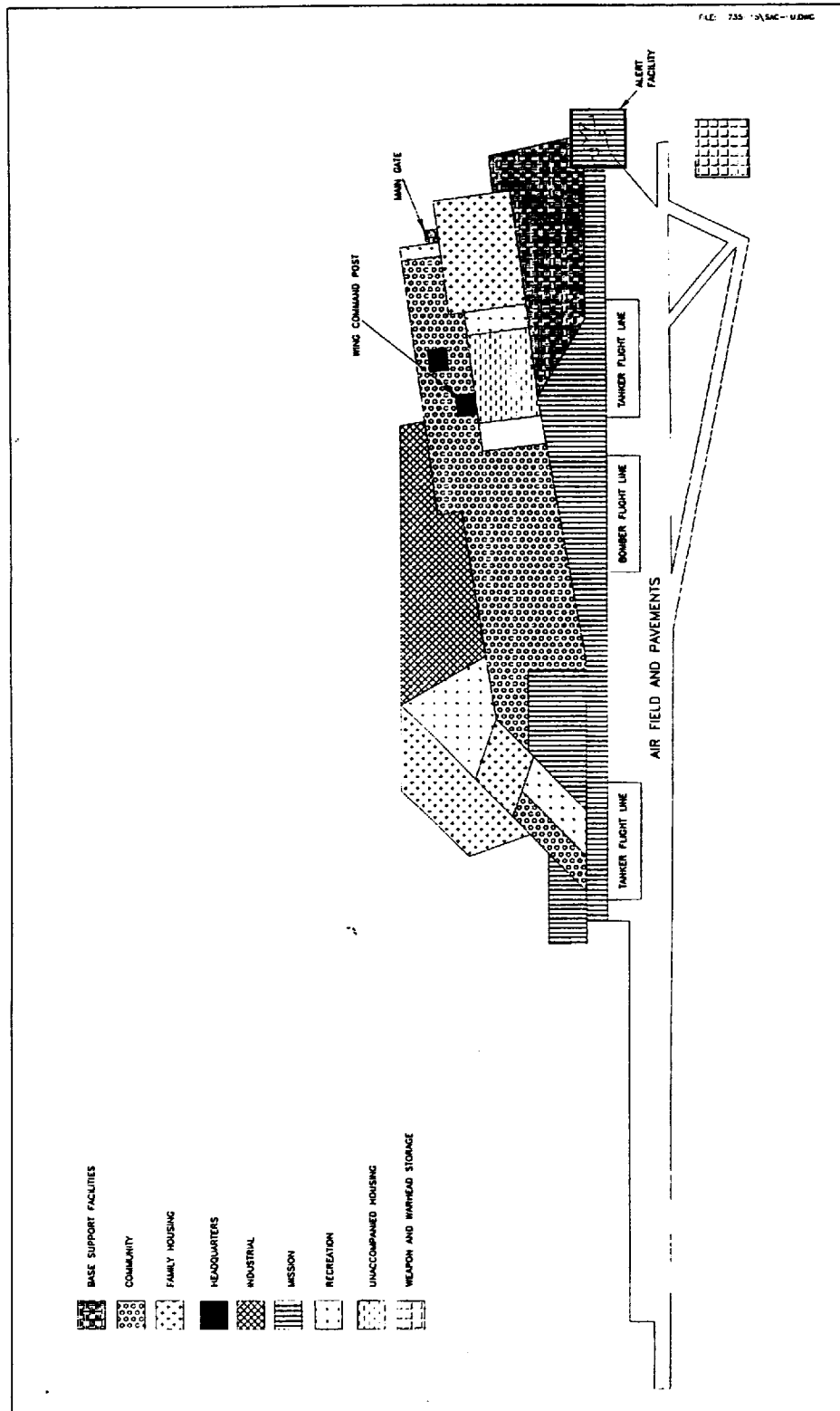


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

Unlike the SAC diagram, however, unaccompanied housing for USAF Survival School participants is also found on the other side of the runway and flight line.

The weapons storage area is located south of the central portion of the runway, with the sewage treatment facilities further to the southeast. The location of the weapons storage area at Fairchild AFB does not correspond with that on the standard diagram: the standard diagram depicts the location of the weapons storage area in closer proximity to the alert facility than shown for Fairchild AFB. Although not depicted on either of the land use diagrams, clear zones for explosions and air traffic have been incorporated into the planned development at Fairchild AFB.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

The need for an aircraft repair center during World War II provided the catalyst for the construction of the air depot that eventually became Fairchild AFB. The geographic location of Spokane, Washington 300 mi (483 km) inland from coastal Seattle made it less vulnerable to attack and further helped determine the site of the depot. The decision was made on September 12, 1941 to establish Spokane Army Air Depot under Air Materiel Command (AMC) (Fairchild AFB 1992:1,4,7).

Official recognition of the depot's name came in March 1942, and construction of over 262 buildings continued throughout the year. Between 1943 and 1946, the depot served as a major repair center for aircraft (mostly B-17 *Flying Fortresses*) returning from the Pacific theater. Specialized engine maintenance began when a 12 acre (5 ha) hangar was completed in October 1943. Planes entered on the eastern side, gliding through on rails, and workers in three shifts completed repairs in three or four days (Fairchild AFB 1992:12,14; Fairchild AFB 1994:14; Chatters 1994:12).

The end of World War II would have necessitated the deactivation of Spokane Army Air Depot in March 1947 (Fairchild AFB 1992:17) had it not been obtained by the newly created SAC and USAF (Lewis et al. 1995; Goldberg 1957:102-103, 121). Two bombardment wings utilizing the B-29 *Superfortress*, the 92nd and the 98th, were assigned to the base in November 1947, making the base the largest B-29 organization in SAC. The base was renamed Spokane AFB in 1948 (Fairchild AFB 1994:14; Fairchild AFB 1992:22).

The 92nd and 98th BMW were deployed to Japan in 1950 as part of the air campaign against North Korea. The 92nd in particular was designed as a global combat force responsible for maintaining a state of readiness, being deployed worldwide, and operating independently or in conjunction with

land or naval forces (McFarland 1950:1; Fairchild AFB 1994:14; Fairchild AFB 1992:23). Upon its return from the Far East in October 1950, the 92nd BMW resumed its long affiliation with Fairchild AFB.

In September 1950, the base was renamed in honor of General Muir S. Fairchild. A native of Bellingham, Washington, he had been commandant of the Air University and had recently passed away while serving at the Pentagon as Vice Chief of Staff, USAF. The official dedication of the base in his memory on July 20, 1951 coincided with the arrival of the first B-36 *Peacemaker* aircraft (Mueller 1989:171; Fairchild AFB 1992:23-24; Fairchild AFB 1994:14).

The Deep Creek AFS was constructed in the early 1950s as part of research and development early in the nuclear age. Located south of the eastern end of the main runway, the station was established to manage nuclear weapons supporting air operations at Fairchild AFB and other SAC bases. The mission of Deep Creek AFS was "to store, control, and maintain nuclear weapons for use on Strategic Air Command aircraft under conditions rigidly controlled by national security procedures..." (Fairchild AFB 1993:ES1, 1-1). The 3082nd Aviation Group, a nuclear armament group supervised by the Atomic Energy Commission (AEC), remained at the station for approximately 10 years. These early storage areas are now part of the conventional storage area within and south of the main weapons storage area at Fairchild AFB.

The 92nd BMW received the B-36 bomber, which replaced the B-29, in July 1951. Having never dropped a bomb in defense of the country, the B-36 still served SAC for half a decade as its primary weapon system. From October 1, 1956 through October 1, 1957, Fairchild AFB converted to the new B-52 *Stratofortress*. Strike capabilities were expanded in July 1957 with the arrival at Fairchild AFB of the 92nd ARS. The following February, the 92nd ARS received the new KC-135 *Stratotanker*. Air refueling capabilities were further supplemented in 1960 with the arrival of the 43rd ARS. The 92nd and 43rd ARS are still assigned to Fairchild AFB (Fairchild AFB 1992:24,26; Fairchild AFB 1994:18,20). The arrival of the Hound Dog missile at

Fairchild AFB in November 1961 further augmented the striking power of the B-52 (Mueller 1989:174).

Construction of launch complexes for the Atlas missile at Fairchild AFB began in 1959. These sites encircled Fairchild AFB. On April 1, 1960, the 567th Strategic Missile Squadron (SMS) was activated at the base, and all nine Atlas complexes were completed in 1961. The 92nd BMW was redesignated the 92nd Strategic Aerospace Wing (SAW) in March of 1962. The mission of the 92nd SAW in 1962 was to supply trained men and equipment for operations involving long range bombardment with atomic or conventional weapons and air refueling operations (Lewis 1962). Fairchild AFB was the first base to incorporate both manned aircraft and intercontinental ballistic missiles (ICBM) under the same wing (Fairchild AFB 1992:26; Fairchild AFB 1972:13).

During the Cuban Missile Crisis, President Kennedy initiated a naval quarantine of Cuba. The 92nd SAW at Fairchild AFB "was placed on DEFCON TWO and both ground and airborne alert forces were increased...all leaves were cancelled...and there was substantial tightening of security control at all SAC installations." Although SAC had required aircraft and missiles to be on a 15 minute alert status since July 1961, SAC further increased its alert capability following Kennedy's decision (Hartsfield 1962:4-5).

Beginning in 1964, Fairchild AFB deployed the 92nd and 43rd ARS to Southeast Asia during the Vietnam conflict. The following year, B-52s from the 92nd SAW became involved as well. The wing's bombers and tankers participated in operation Arc Light until 1973, rotating aircraft and crews with the ebb and flow of the bombing missions (Fairchild AFB 1992:27-28; Fairchild AFB 1994:18).

The Atlas complexes were deactivated in 1965, and the sites were sold to individual landowners. Most of the old Deep Creek AFS property became associated with the 3636th Combat Crew Training Group (CCTG) in 1966, and facilities were converted for use as a survival training school. The 3636th (CCTG) assumed responsibility for all USAF survival training in 1971. This facility

was constructed primarily due to the United States involvement in Vietnam; a mock POW camp was created and parachute training facilities were constructed. This survival school is still in use today (Chatters 1994:13-14; Fairchild AFB 1994:14,20).

With the Atlas missiles gone, the 92nd SAW was redesignated the 92nd BMW (Heavy) on July 1, 1972. The mission of its three squadrons remained unchanged during the 1970s: nuclear deterrence by maintaining a capability to conduct long-range bombing operations with assigned weapons, and sustaining that capability by engaging in air refueling operations. Crews of the 325th Bombardment Squadron (BMS) trained B-52 crews in aerial bombardment utilizing conventional or nuclear weapons. The 92nd and 43rd ARS refined their techniques as well. Certain aircrews from each squadron rotated on alert status to maintain a constant state of readiness for immediate response to a National Emergency War Order (Johnson 1971:1; 1972:1; Eichelberger 1978:ix).

Throughout the remainder of the 1970s and 1980s, the 92nd BMW remained on alert until the Cold War era came to an end. On September 28, 1991, crews left the alert facility for the last time and alert aircraft were downloaded and taken off alert (Fairchild AFB 1992:38). Fairchild AFB's status as a SAC base changed in June 1992, when it was reassigned to the newly created ACC. In July 1994, Fairchild AFB was reassigned from ACC to AMC. With this reassignment, the mission of the base was redesignated from bombardment and refueling to strictly air refueling. The 92nd BMW was redesignated the 92nd ARW.

3.2 BASE DEVELOPMENT

The most active periods of development at Fairchild AFB occurred during wartime situations. Consequently, World War II in the 1940s, Korea in the early 1950s, and the Vietnam Conflict in the 1960s and early 1970s were the catalysts for base development (Chatters 1994:13). Further construction and renovations occurred as needed throughout the 50 year history of the base.

Many of the buildings and facilities at Fairchild AFB were constructed between 1943 and approximately 1952, including a 12 acre maintenance hangar (Real Property No. 2050) and the Engine Test building (Real Property No. 2150) (Figure 3.1). Directly related to the early research and development of nuclear weapons, Deep Creek AFS was constructed in the early 1950s south of the main runway to facilitate the storage, control, and maintenance of SAC nuclear weapons components for the AEC (Figure 3.2). Expansion and realignment of the original runway for the B-36 was completed in 1952, and a Control Tower and Base Operations building were constructed that year as well. Due to the increased loads on the older asphalt runways and the use of jet fuel, which dissolved asphalt, the USAF decided in 1956 that all primary airfield pavement should be constructed of concrete (Goldberg 1957:195; Lewis et al. 1995). Concrete replacement and extension of the runways at Fairchild AFB were completed by the fall of 1958 (Mueller 1989:174).

To alleviate the housing shortage and to provide more comfortable housing for base personnel, a 1,000 unit Wherry housing project was constructed in the northeastern portion of Fairchild AFB in 1957-1958. This was completed under the auspices of the 1949 National Housing Act. Another housing development, completed under the 1956 Capehart Housing Act, was constructed by 1960 on the western side of the base and north of the runway (Mueller 1989:174; Goldberg 1957:190,194).

Because SAC planned in the late 1950s for increased deterrence capabilities and faster response times to operational readiness inspections, the alert apron and crew readiness facility were constructed in 1959-1960 north of and adjacent to the northeastern end of the runway (Figure 3.3). Deep Creek AFS was closed sometime in the early to mid-1960s, and many of the facilities associated with the station were converted to use for the USAF Survival School.

New construction and major modifications were completed in the early 1970s to accommodate the 141st ANG Refueling Wing located north of the runway and south of the Wherry housing area on the western side of the base (Figure 3.4).

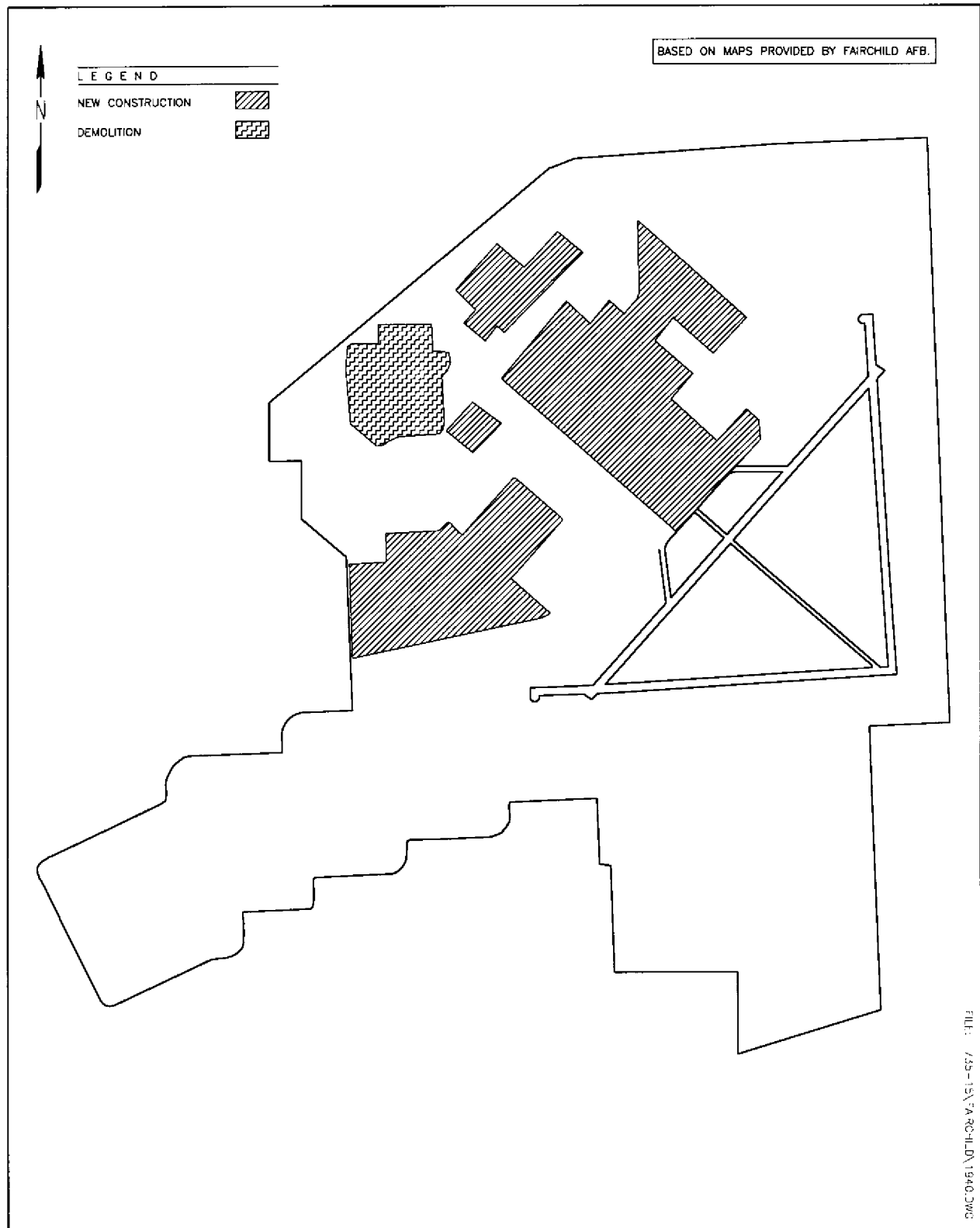


Figure 3.1 Fairchild Air Force Base, 1940s.

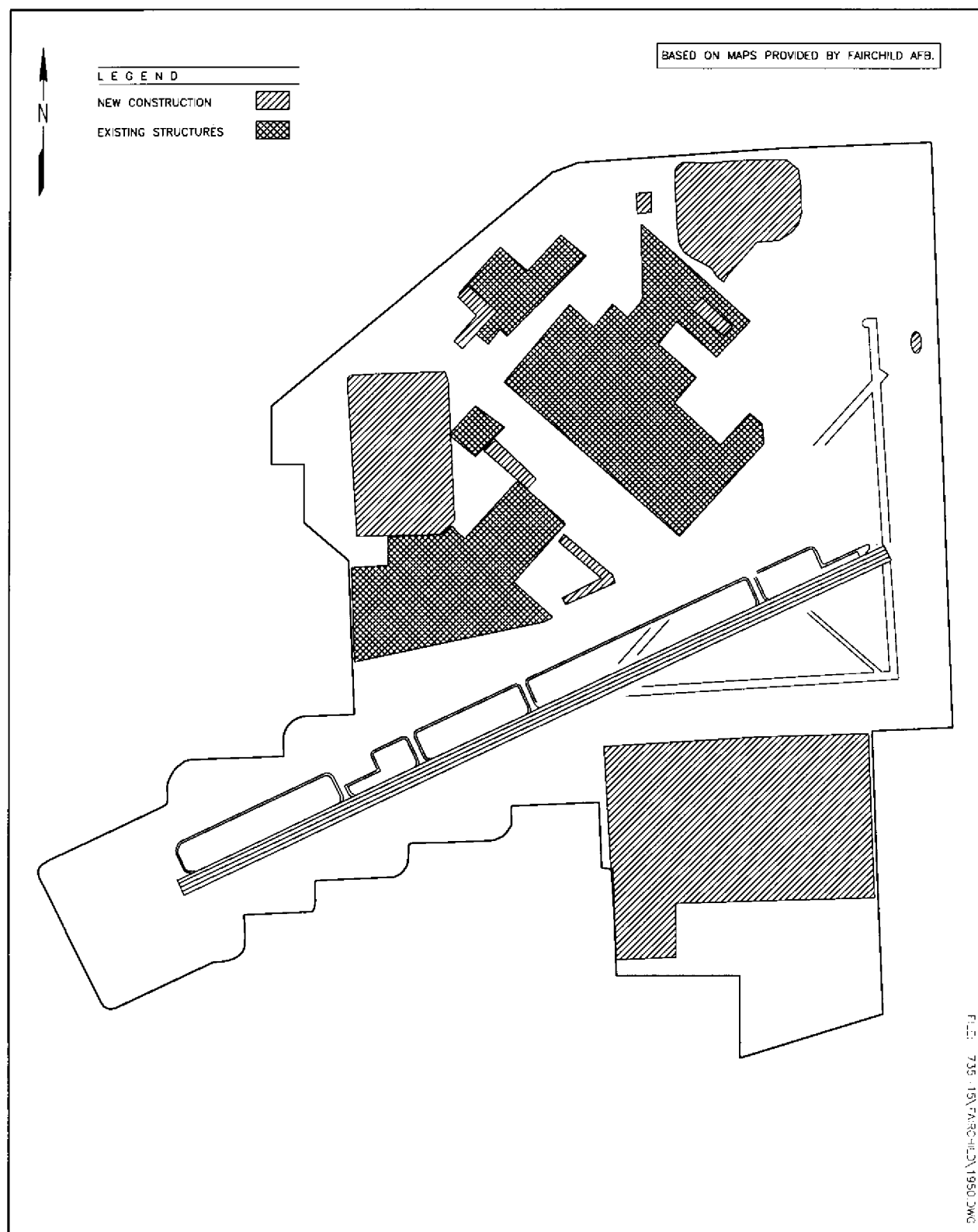


Figure 3.2 Fairchild Air Force Base, 1950-1960.

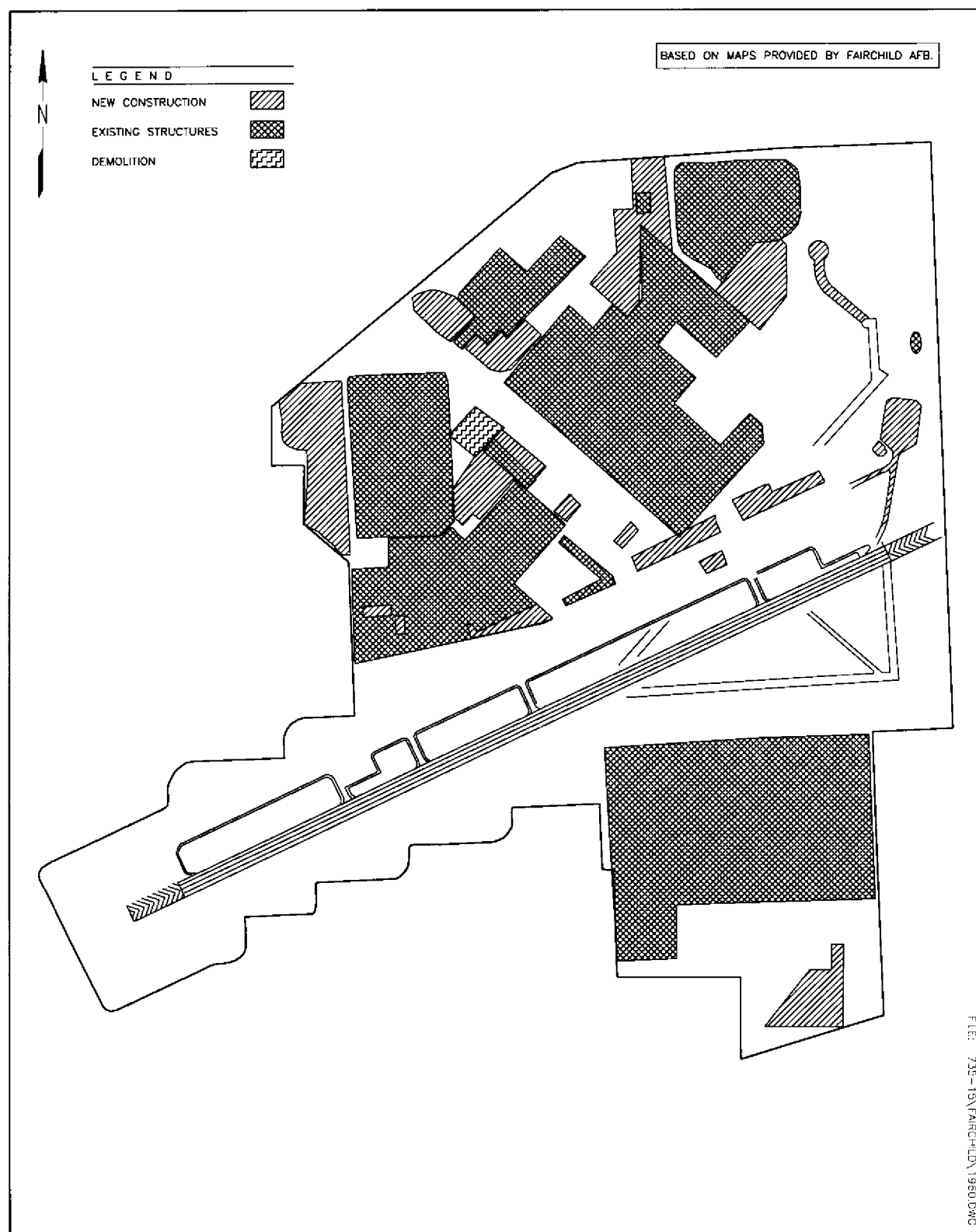


Figure 3.3 Fairchild Air Force Base, 1960-1970.

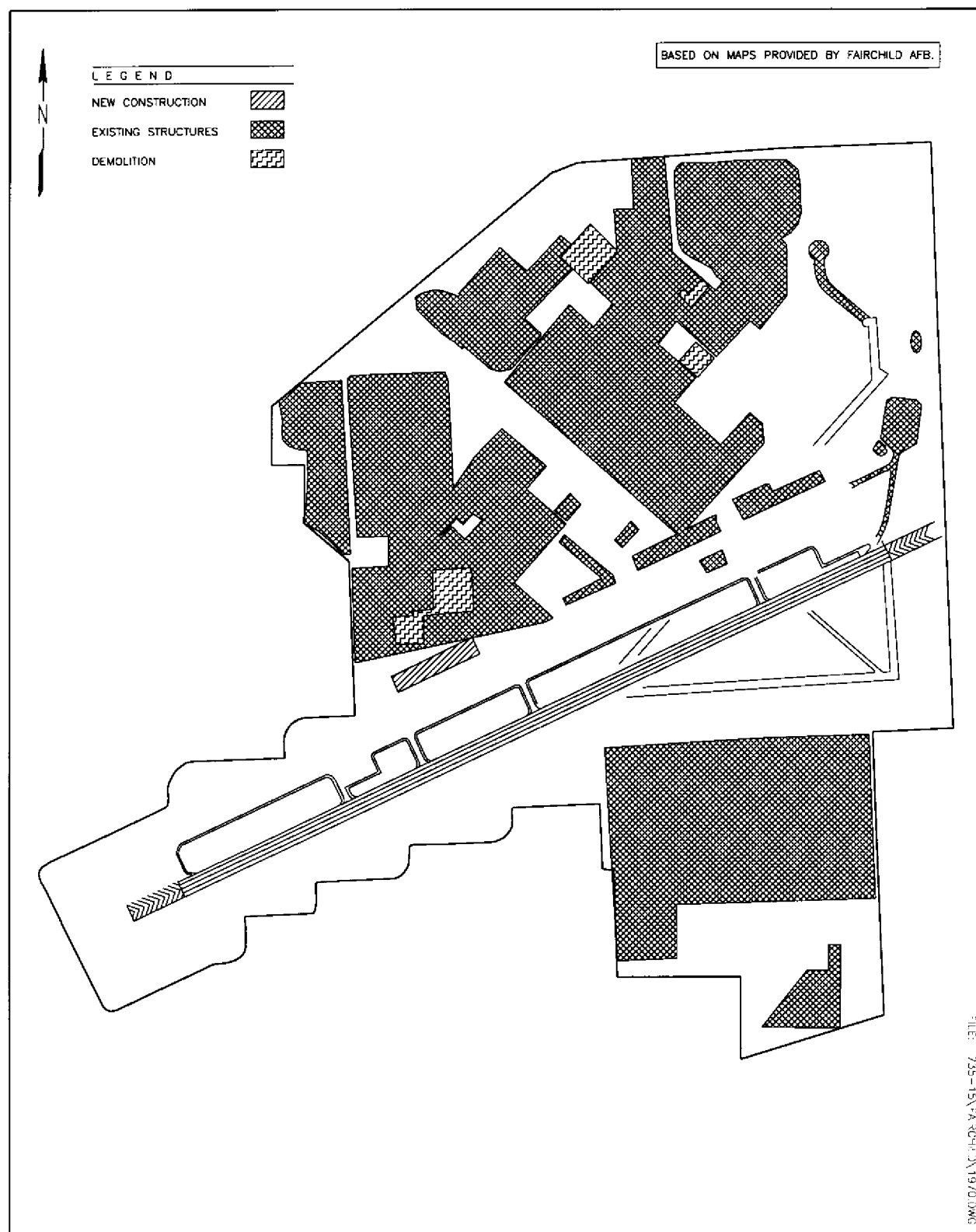
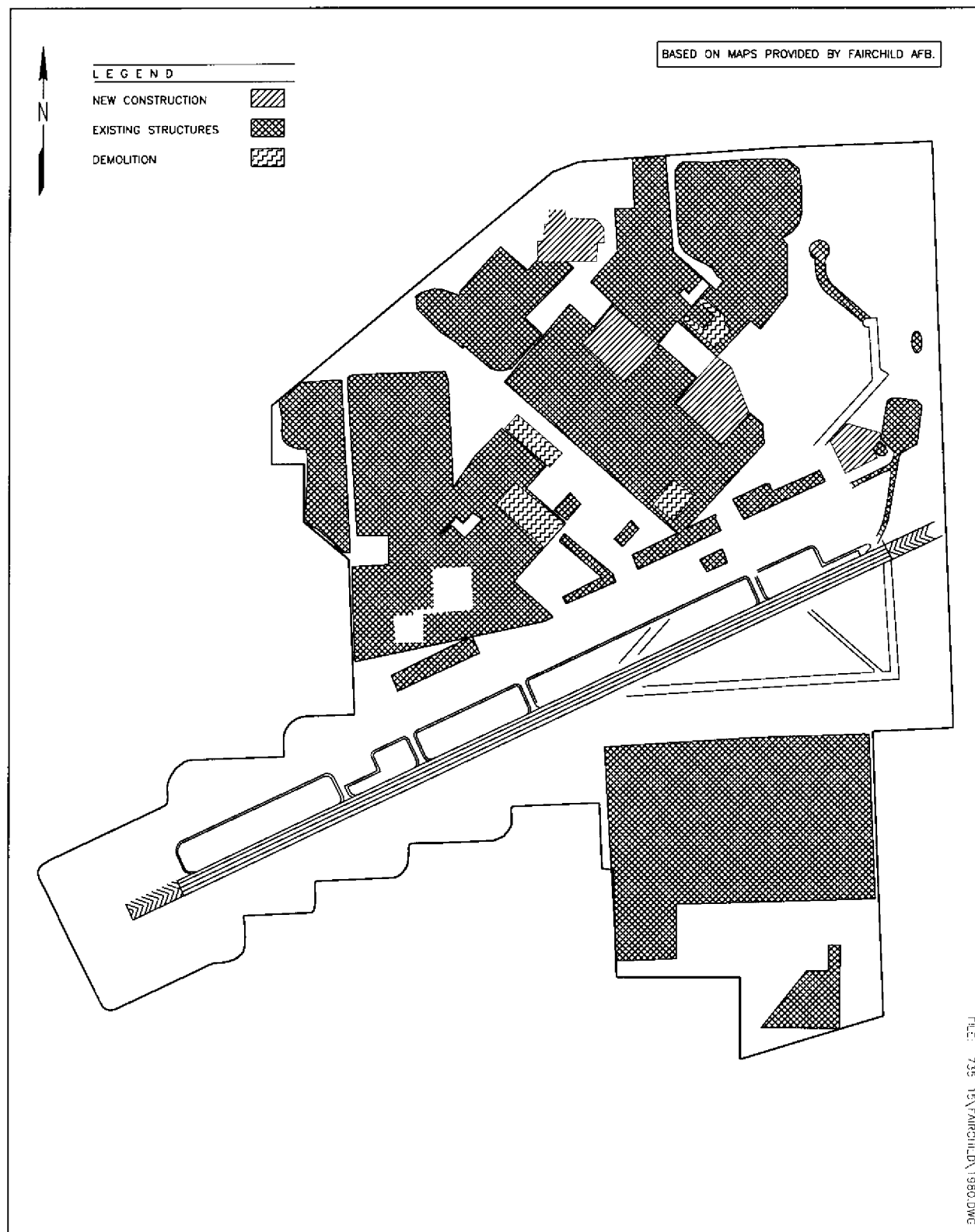


Figure 3.4 Fairchild Air Force Base, 1970-1980.

A major runway renovation project was completed in 1983 (Fairchild AFB 1992:30) (Figure 3.5). Further construction was completed on the 12 acre maintenance hangar in November 1986. This construction improved Fairchild AFB's ability to repair assigned aircraft (Fairchild AFB 1992:34). The housing developments underwent major renovations between 1989 and 1990 and in 1992.



4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Fairchild AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to this list to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Fairchild AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Fairchild AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF Interim Guidance (1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that area may not preclude intact integrity for the resource. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance

of the resource. The fifth is the percentage of remaining historic fabric, or integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF Interim Guidance (1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Fairchild AFB, the Mariah field team began their research on base. The Wing History Office supplied wing histories that augmented base historical information provided by the Public Affairs Office. These histories were examined to determine the mission at Fairchild AFB and to link the base to significant events that occurred during the Cold War era as discussed in Lewis et al. (1995). The drawing files in the Drafting Department of the Civil Engineering Office were inventoried, and the office also supplied the field team with base layout maps on computer discs, as well as current hard copies of base maps. Property cards from the Real Estate Office established information pertinent to the resources chosen to be documented and evaluated for their Cold War significance. A photographic reconnaissance was also conducted to document Cold War properties and representative architecture on base.

The Environmental Office provided several resources useful for determining the history of the base. Of special note is a collection of aerial photographs on file in the office, which proved to be useful in plotting base development through the decades of the Cold War era. The Fairchild Heritage Museum was also inventoried. Located on base, the museum has a base newspaper collection

dating to 1952. A B-52 flight simulator is located in one of four railroad cars adjacent to the museum. The museum has additional Cold War memorabilia that includes an uninventoried collection of slides and photographs, an emergency controller SAC command post with phones, and static weapons that include Quail and Air Launched Cruise Missiles and hard target gravity bombs (nuclear capability).

The base library was explored as a possible source of research information, but most of the material pertinent to Fairchild AFB was located in the repositories mentioned above. Interviews were conducted with the Natural Resources Officer, Wing Historian, and ranking officers currently assigned to the base museum. These interviews expanded the field team's knowledge and understanding of the mission of Fairchild AFB since its post-war debut as a SAC base.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Fairchild AFB, 113 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried properties are presented in Appendix C.

6.0 EVALUATION RESULTS

Seven resources were evaluated at Fairchild AFB, four of them falling under the DoD category of real property and three under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Photograph Collection (Resource No. 14115, Located in Real Property No. 2451)

This collection of high quality aerial photographs of Fairchild AFB depicts development at the base from 1950 through 1991. The photographs are currently stored in a map file drawer and are used by base personnel in the Environmental Office. The photographs appear to be in good condition.

6.1.1.2 Museum Collection (Resource No. 14116, Located in Real Property No. 3511)

This museum collection is being curated at the Fairchild Heritage Museum and includes a base newspaper collection, a B-52 pilot training simulator in a railroad car, and a Quail Missile. The base newspaper collection is continuous from the early 1950s and is a valuable resource for details

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

USAF Group and Subgroup Property Type		Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Photograph Collection	14115	N/A	RecDoc/Obj	15
Documentation	Museum Collection	14116	3511	Real/Obj	13
Documentation	Office Files	14117	N/A	RecDoc/Obj	17
Documentation	Documentary Collection	14118	N/A	RecDoc/Obj	16
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	14004	2080	Real/Bldg	19
Maintenance Docks/Hangars	Engine Test Building	14002	2150	Real/Bldg	21
Storage	Segregated Magazine Storage Igloo	14003	1467	Real/Bldg	19

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
21	14002	2150	Engine Test Building
19	14003	1467	Segregated Storage Igloo
19	14004	2080	Bomber Alert Facility
17	14117	N/A	Office Files
16	14118	N/A	Documentary Collection
15	14115	N/A	Photograph Collection
13	14116	3511	Museum Collection

concerning Fairchild AFB during the Cold War period. The B-52 simulator traveled to SAC bases around the country to train pilots in the operation of the B-52 during the Cold War era. As such, it conveys to the public the concept of the mission of a B-52 crew: long-range bombardment in case of a crisis situation. The static Quail Missile display represents American missile technology in the early 1960s, specifically that which guided enemy radar away from the airborne B-52. The objects are currently on display, are in good condition, and are well maintained. Continued stewardship is recommended.

6.1.1.3 Office Files (Resource No. 14117, Located in Real Property No. 2285)

The Wing History Office possesses written histories that provide details and insights into the activities of the Wing, Groups, and Squadrons as they pertain to the overall mission at Fairchild AFB during the Cold War era. It is an important resource as it illustrates the development of the base's mission throughout the Cold War. The collection is located in a secured area in the office. It is in good condition and is well maintained.

6.1.1.4 Documentary Collection (Resource No. 14118, Located in Real Property No. 2451)

This collection of drawings, maps, and photographs is stored in a vault in the Civil Engineering Office. Organized in a coherent manner, the collection includes drawings for most buildings on base as well as annexes, utility layouts, communications, and housing. The type of drawings include original ink on linen, vellum, mylar, and sepia. A collection of aerial photographs is extant as well, consisting of two sets of 100 photographs each. The photographs measure 10 x 10 inches and, when put together, form an aerial composite of the base. A specific archive drawer pertinent to the Cold War era, No. 122, contains map layouts of the base from 1942 through 1969.

Overall, this collection is significant for the information it contains regarding important properties on Fairchild AFB. The collection is in the process of being inventoried. The number of maps from earlier decades of the Cold War is noted as lower than at some other bases.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 14004, Real Property No. 2080)

The Bomber Alert Facility was constructed in 1960 and is located adjacent to the alert apron at the northeastern end of the runway. Specially constructed to house B-52 alert crews, this facility played an integral role in the mission at Fairchild AFB to maintain SAC's capability of nuclear deterrence by sustaining long-range bombardment and aerial refueling operations during the Cold War. The building itself was designed to facilitate rapid egress to the mission aircraft during a National Emergency War Order or during operational readiness inspections.

The building is characterized by its ramped exterior entrances and the earthen berm surrounding the exterior walls. The real property card indicates some renovations to the building for maintenance of operations, and the addition of 770 ft². As the building is currently used as a tanker alert facility, its function has basically not changed. Based on visual inspection, the exterior integrity of the building is intact. Interior integrity of the building is also determined to be intact.

The Bomber Alert Facility exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the concept of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of the DoD defense triad and was relied upon as the United States primary manned nuclear bomber

force for over 30 years. This facility was used for this purpose during Phases II through IV, and meets NRHP criteria (a) and (c).

6.2.2 Maintenance Docks/Hangars

6.2.2.1 Engine Test Building (Resource No. 14002, Real Property No. 2150)

Real Property No. 2150, constructed in 1943, was designed and utilized for the testing of B-17, B-29, and B-36 engines. Following the arrival of the B-52 at Fairchild AFB, this function ceased. The massive concrete design of the building was conducive for use as a "survivable" building, and, from 1955-1956, the building housed an intelligence and planning division in its below ground operations section. The Fighter Interceptor Carrier Reconnaissance Project (FICON) was the focus of this division, testing the feasibility of carrying RF-84 reconnaissance aircraft under the fuselage of the B-36 to extend the range of interceptors. The building was decommissioned sometime prior to the mid-1960s. Since then, it has functioned as a disaster preparedness facility, a contractor staging area, and a hazardous waste storage building.

The building retains interior and exterior integrity. The test cell architectural design of the building, with its 4 ft thick concrete walls and louvered sections incorporated into the exterior, is unique.

This building functioned in tandem with a maintenance hangar (Real Property No. 2050) in maintaining aircraft during World War II. It also continued in this capacity during the first decade of the Cold War. During Phase II of the Cold War, this facility housed intelligence operations to help SAC fulfill its mission in the Northwest. These intelligence operations were integral to operational planning at SAC headquarters and provide the context of this facility's importance. This facility meets NRHP criteria (a) and (c).

6.2.3 Storage

6.2.3.1 Segregated Storage Igloo (Resource No. 14003, Real Property No. 1467)

Real Property No. 1467 was built in 1955 and is currently located in the conventional weapons storage area south of the main runway. Deep Creek AFS was constructed in this area of the base during the early years of the Cold War and was operated by the AEC. The mission of Deep Creek AFS was "to store, control, and maintain nuclear weapons for use on SAC aircraft under conditions rigidly controlled by national security procedures. The nuclear components of the weapons were maintained under custody of the AEC..." (Fairchild AFB 1993:ES1,1-1). This structure, built as a nuclear components storage facility for Deep Creek AFS, was one of a limited number of facilities in the United States designed to function in this capacity. This building, its features, and its function all embody the feeling and association of the nuclear threat that was so significant during the decades of the Cold War.

This structure is characterized by massive 10 ft thick reinforced concrete walls with four interior vaults that have heavy steel vault doors. The exterior of the structure consists of two stories. The upper story has false windows to simulate a staff or office building, and the lower story is bermed with earth and is the actual storage area. This structure has excellent exterior integrity due to its massive reinforced concrete construction. The real property card for this building indicates no major renovations, and it continues its use as magazine storage. Thus interior integrity is also intact.

This structure is exceptionally important for the role it played during the early years of the Cold War and the arms race with the Soviet Union. It was one of only 13 operational storage sites in the nation maintained by the AEC. During its operation, it played a significant part in the waging of the Cold War and represents the significant warfighting capability of the USAF. Its construction illustrates the importance of security and survivability during the Cold War. The date of construction early in the Cold War, the security facilities associated with the structure, and the

architectural style designed to store nuclear weapons components make this structure unique among USAF properties. This structure was used in this capacity during Phase II of the Cold War, and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Fairchild AFB.

6.4 TRAINING FACILITIES

None were evaluated at Fairchild AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Fairchild AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Fairchild AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Fairchild AFB. These resources should be investigated further for a more comprehensive analysis.

While conducting their research, the team discovered that additional information concerning Fairchild AFB is located at the Spokane City/County Historical Preservation Office in downtown Spokane, Washington. However, due to time constraints, the field team was unable to visit that facility.

The USAF Historical Research Agency at Maxwell AFB, Alabama is the repository for all Air Force historical documents. A computerized search for materials related to Fairchild AFB revealed approximately 170 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Fairchild AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

Fairchild AFB has recently implemented a Cultural Resource Management Plan, which is now complete and signed by the State Historic Preservation Officer (SHPO) (Chatters 1994). However, the plan focuses on World War II and the Vietnam War as the context for its determinations of what is an important cultural resource. Since Fairchild AFB was a SAC base and played a key role in the deterrence of nuclear war, any focus on historic preservation should include the base's overall importance during the Cold War.

Real Property No. 2150 (Engine Test Building) has been decommissioned and has been utilized for a variety of non-mission oriented functions. The threat to this facility is considered severe since it has been periodically considered for removal. Only the high cost of demolition has kept this facility from being destroyed. The current historic preservation plan does not consider the building significant.

Personnel at the Fairchild Heritage Museum expressed concern for the future of the museum due to limited funding and the need for properly trained curators to manage the collections.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Fairchild AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the SHPO. If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Fairchild AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Fairchild AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Fairchild AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

			Management Recommendations*					
Resource No.	Real Property No.	Property Type	No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	Comments
Real Property - Buildings								
14002	2150	Engine Test Building		*		*		NRHP eligible in the future. NRHP eligible now. NRHP eligible now.
14003	1467	Segregated Storage Igloo		*	*	*		
14004	2080	Bomber Alert Facility		*	*	*		
Real Property - Object								
14116	3511	Museum Collection		*			*	
Record or Document - Object								
14115	N/A	Photograph Collection		*		*	*	
14117	N/A	Office Files		*				
14118	N/A	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Photograph Collection (Resource No. 14115, Located in Real Property No. 2451)

This collection of aerial photographs is currently in good condition. The collection is a valuable resource in that it documents the growth of the base from 1950 through 1991. It is recommended that this collection be inventoried and duplicated. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.2 Museum Collection (Resource No. 14116, Located in Real Property No. 3511)

This collection is currently on display and is in good condition. Continued stewardship and conservation of the collection is recommended.

9.2.3 Office Files (Resource No. 14117, Located in Real Property No. 2285)

This collection of written histories, illustrating the development of the base's mission during the Cold War, is in good condition. Continued stewardship of the collection is recommended.

9.2.4 Documentary Collection (Resource No. 14118, Located in Real Property No. 2451)

This collection of drawings, maps, and photographs is currently in good condition. At the time of the inventory, the collection was in the process of being inventoried. It is recommended that this collection be duplicated. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.5 Bomber Alert Facility (Resource No. 14004, Real Property No. 2080)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV, and meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence. The integrity of the building is determined to be intact based upon inspection and review of documentation. Therefore, this building is recommended as eligible to the NRHP. Further documentation is recommended to nominate the resource to the NRHP. Stewardship is also recommended to retain the building's current level of integrity.

9.2.6 Engine Test Building (Resource No. 14002, Real Property No. 2150)

This building is evaluated as important within the base and national Cold War contexts during Phase II. It exhibits intact integrity and meets NRHP criteria (a) and (c). However, the building neither meets the 50 year criterion for eligibility, nor is it considered exceptionally significant within the Cold War context. Therefore, it is recommended as currently ineligible to the NRHP. It is additionally recommended that this building undergo stewardship to retain its current level of

integrity, and when this building meets the 50 year criterion, further documentation and re-evaluation for NRHP eligibility.

9.2.7 Segregated Storage Igloo (Resource No. 4003, Real Property No. 1467)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II, and meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence. The integrity of the building and its features are intact. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington D.C.

Chatters, J. C.

- 1994 *Cultural Resource Management Plan, Fairchild Air Force Base*. North American PaleoScience, Richland, Washington. On file, Environmental Office, Fairchild Air Force Base, Washington.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Eichelberger, C. L.

- 1978 History of the 92nd Bombardment Wing (Heavy) and 92nd Combat Support Group, January-March 1978. On file, Wing History Office, Fairchild Air Force Base, Washington.

Fairchild Air Force Base

- 1972 Executive Order 11508 Installation Survey Report, Fairchild Air Force Base, Spokane, Washington. On file, Real Estate Office, Fairchild Air Force Base, Washington.
- 1992 *Fairchild-Spokane: 50 Golden Years, 1942-1992*. On file, Wing History Office, Fairchild Air Force Base, Washington.
- 1993 Installation Restoration Program: Priority 2a Sites, Remedial Investigation/Feasibility Study Work Plan Addendum. ICF Technology Incorporated, Richland, Washington. On file, Environmental Office, Fairchild Air Force Base, Washington.
- 1994 Welcome to Fairchild Air Force Base. Marcoa Publishing Incorporated, San Diego, California. On file, Public Affairs Office, Fairchild Air Force Base, Washington.

Goldberg, A., ed.

- 1957 *A History of the United States Air Force, 1907-1957*. D. Van Nostrand Company, Inc., Princeton, New Jersey.
-

Hartsfield, R.J.

- 1962 History of the 92nd Strategic Aerospace Wing (Heavy) and 92nd Combat Support Group, 1-31 October 1962. On file, Wing History Office, Fairchild Air Force Base, Washington.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systematic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Johnson, M. M.

- 1971 History of the 92nd Strategic Aerospace Wing (Heavy) and 92nd Combat Support Group, 1 January-31 March 1971. On file, Wing History Office, Fairchild Air Force Base, Washington.
- 1972 History of the 92nd Strategic Aerospace Wing (Heavy) and 92nd Support Group, 1 January-31 March 1972. On file, Wing History Office, Fairchild Air Force Base, Washington.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, R.

- 1962 History of the 92nd Strategic Aerospace Wing and 92nd Combat Support Group, May-June 1962. On file, Wing History Office, Fairchild Air Force Base, Washington.

McFarland, K.D.

- 1950 History of the 92nd Bombardment Wing (M), Spokane Air Force Base, January 1950. On file, Wing History Office, Fairchild Air Force Base, Washington.

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*. vol. 1. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *National Register Bulletin 22: Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*. Report prepared by M. Sherfy and W. R. Luce, National Park Service. Washington, D.C.
-

-
- 1991 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (revised)*. Report prepared by the National Register Branch, National Park Service. Washington D.C.

United States Air Force

- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	14001	2125	Operations Plans (Wing Headquarters)	1943
	14002	2150	Test Cell/Engine Test Building (Operations Planning & Intelligence Facility)	1943
	14004	2080	Squadron Operations (Alert Facility)	1959
	14005	2050	Maintenance Hangar	1943
	14007	2301	Youth Center (Family Support)	1943
	14008	610	Base Theatre	1968
	14009	644	Base Warehousing - Forms & Publications Equipment (Post Office)	1952
	14010	621	Airman's Dormitory Permanent Party/PCS Student	1958
	14011	622	Airman's Dormitory (ARC Lite Manor)	1986
	14013	617	Wing Headquarters (Former Women's Dormitory)	1971
	14014	620	Housing Supply and Storage Facility	1958
	14015	716	Base Library	1953
	14016	2248	Bowling Center	1943
	14017	2320	POV Wash Rack	1986
	14018	2272	VAQ Dormitory	1986
	14019	2365	Education Center	1943
	14020	2383	Branch Exchange (Shoppette)	1943
	14021	2285	Wing Headquarters	1943
	14022	2185	Recreation Center	1943
	14023	3511	Museum Building (Fairchild Heritage Museum)	1943
	14024	2040	Squadron Operations (Security Police)	1990
	14025	2392	Visiting Officer's Quarters (VOQ)	1959
	14026	2096	Explosive Ordnance Disposal (EOD)	1962
	14027	2060	Crew Readiness	1985
	14028	2065	Airman's Dining Hall (next to Alert Facility)	1990
	14029	1001	Small Aircraft Maintenance Dock	1955
	14030	1007	Large Aircraft Maintenance Dock	1958
	14031	2025	Base Engineer Pavement and Grounds Facility	1943

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	14032	2030	Base Warehousing Supplies & Equipment	1943
	14033	1011	Large Aircraft Maintenance Dock	1958
	14034	1017	Large Aircraft Maintenance Dock	1955
	14035	1023, 1024, 1025	Aircraft Corrosion Control/ Aircraft Maintenance & Organizational Shop/Lrg Aircraft Maintenance Dock	1952
	14036	1027	Base Storage Shed	1952
	14037	1	Base Operations	1953
	14038	3	Fire Station	1955
	14039	1033	Large Aircraft Maintenance Dock	1955
	14043	2092	Crew Readiness (Memorial Visitation Center)	1976
	14044	4200	Center Chapel	1962
	14045	2550L	Blair Elementary School	Unknown
	14046	2464	Commissary Store	1985
	14047	2465	Exchange Sales Store	1988
	14048	2386	Exchange Service Station (Car Care Center)	1955
	14050	2367, 2368, 2369	Education Center	1979, 1978
	14051	2451	Base Covered Storage Facility (Civil Engineering)	1943
	14052	2452	Open Mess-CONSOL (Club Fairchild)	1943
	14053	2447	Base Warehousing Equipment & Supply	1952
	14054	2459	Fast Food Service (Burger King)	1987
	14057	2001	Aircraft Maintenance Organizational Shop (Communications)	1943
	14058	2004	Communication Facility	1952
	14059	2003	Branch Bank	1969
	14060	261	Group Headquarters (Area Defense Counsel)	1954
	14062	1029	Large Aircraft Maintenance Dock (Air National Guard)	1955
	14063	159	Mission Support Building	1955
	14064	286	US Army COE Outgrant	Unknown
	14065	1033	Large Aircraft Maintenance Dock (Air National Guard)	1955
	14066	447	Reserve Forces Operational Training	1978

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	14067	450/451	Airman's Dormitory Permanent Party/PCS Student	1953, 1953
	14068	460	Band Center	1956
	14070	350	Communication Facility	1982
	14071	2163	Jet Engine Inspection and Maintenance Shop (Propulsion)	1953
	14072	2120	Squadron Operations (43rd Air Refueling Squadron)	1943
	14073	2245	Base Personnel Office	1943
	14074	2175	Steam Facility Building	1944
	14075	2135	Audiovisual Facility (PMEL)	1943
	14076	2140	USAF Command Post	1992
	14077	2048	Flight Simulator Training	1943
	14078	2071	Special Operations (Security Police)	1988
	14079	2074/2076	Machine Gun Range/Small Arms Systems Range	1990
	14080	2094	Vehicle Filling Station	1962
	14081	2075	Combat Arms Training Maintenance Building	1990
	14083	2034-2037	Mission Support Buildings (Petroleum Ops, Hydr Fl etc.)	1953/1955
	14084	2396	Billboard (Credit Union)	1987
	14085	7136	Wherry Family Housing (Remodeled) 7136 Dakota A & B	1993
	14086	7488	Wherry Family Housing (Remodeled) 7488 Connecticut A & B	1991
	14087	7499	Wherry Family Housing (Remodeled) 7499 Maine A & B	1992
	14088	9000	Composite Medical Facility (Base Hospital)	1956
	14089	9010	Medical Command and Administration (Medical Annex)	1958
	14090	7692	Wherry Family Housing (Remodeled) 7692 A & B	1993
	14091	9008	Dental Clinic	1969
	14092	8002	Family Housing 8002 Maple	Unknown
	14093	8542	Family Housing 8542 Elm	Unknown
	14094	6036	Capehart Family Housing 6036 Oak/Linden	1959
	14095	6018	Capehart Family Housing 6018 Linden A & B	1959

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	14096	6098	Capehart Family Housing 6098 Walnut	1959
	14097	1254	Parachute Training	Unknown
	14098	1258	Airman's Dining Hall	1991
	14100	1207	Academic Exhibit Facility (Survival Exhibit Lab)	1956
	14101	1324	Wing Headquarters (336th Training Group)	1952
	14102	1306	Gymnasium	1956
	14103	1336	Barracks	Unknown
	14104	1314	Fire Station	1957
	14105	1212	ATC Technical Training Support (Resistance Academics)	1952
	14106	1225	Survival Academics	Unknown
	14107	1204	Control Tower	1985
	14108	3518, 3509	Museum Buildings/Social Activity Facility (with B-57 Canberra Static Display)	1943
	14110	2291	Outdoor Swimming Pool CONSOL (Old Officer's Club)	1965
	14114	2170	Vehicle Operations/Heated Parking	1943
Real Property/Landscape				
	14040	N/A	Base Overview	N/A
	14055	2304, 2305	Recreation Court/Athletic Field Softball	1952
	14069	N/A	Family Campground	Unknown
Real Property/Object				
	14049	N/A	B-52 Static Display on Fairchild HWY	N/A
	14061	N/A	Static Display (F-106 Delta Dart) on Patriot Blvd.	N/A
	14109	N/A	Heritage Park/7 Static Displays (Aircraft)	Unknown
	14116	3511	Base Museum Collections and Exhibit	N/A
Real Property/Site				
	14041	N/A	POW Training Area	N/A
	14099	N/A	B-52 Crash Site	N/A

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Structure				
	14003	1467	Segregated Storage Magazine (Nuclear Components Storage Facility)	1955
	14006	2400, 2405, 2406, 2410	Jet Fuel Storage (Tank Farm)	1953, 1957
	14012	N/A	Water Tank	N/A
	14042	N/A	Weapons Storage Area	N/A
	14056	2155	Test Stand	1988
Record or Document/Object				
	14115	N/A	Aerial Photograph Collection	N/A
	14117	N/A	Wing History Collection	N/A
	14118	N/A	Architectural Drawing Files	N/A

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

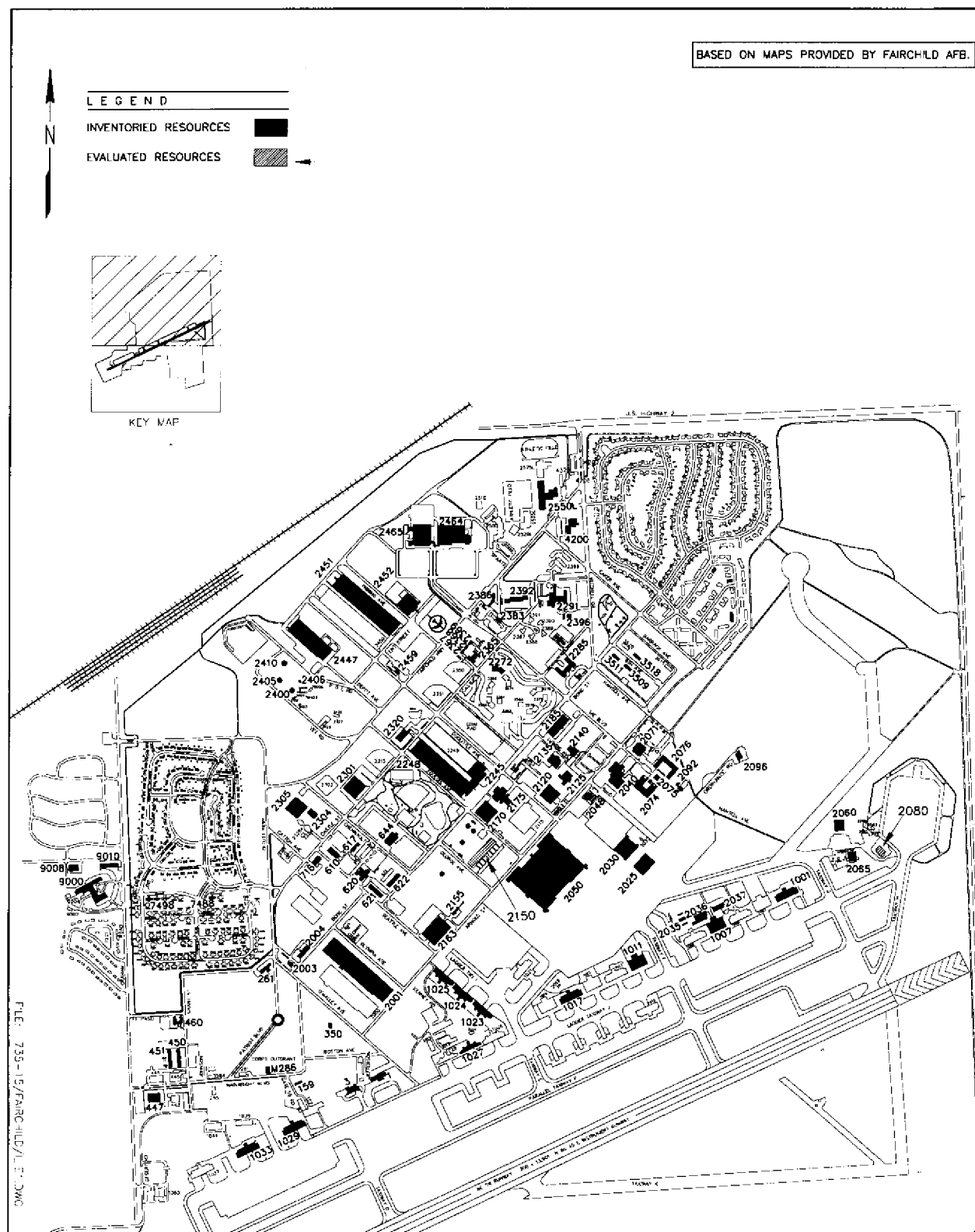
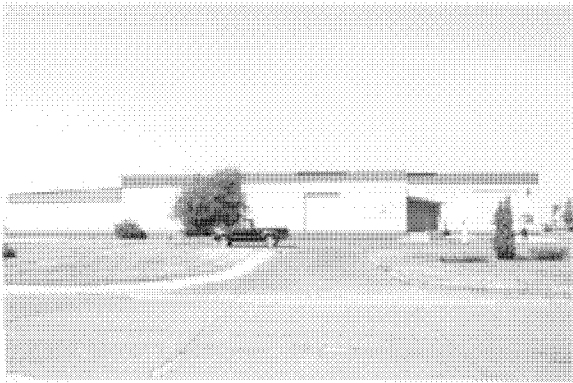


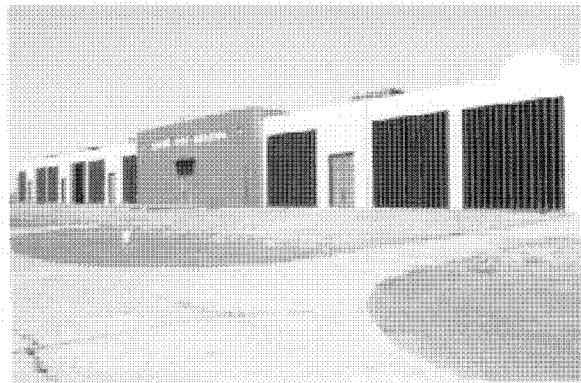


Figure B.2 Base Layout Map Showing Inventoried Resources (Map 2 of 2).

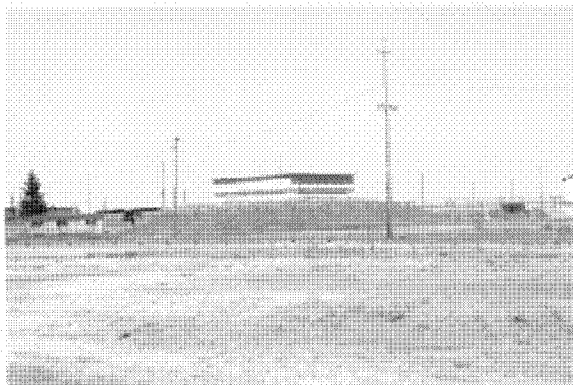
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 14001, Real Property No. 2125
Operations Plans (Wing Headquarters)



Resource No. 14002, Real Property No. 2150
Test Cell/Test Building



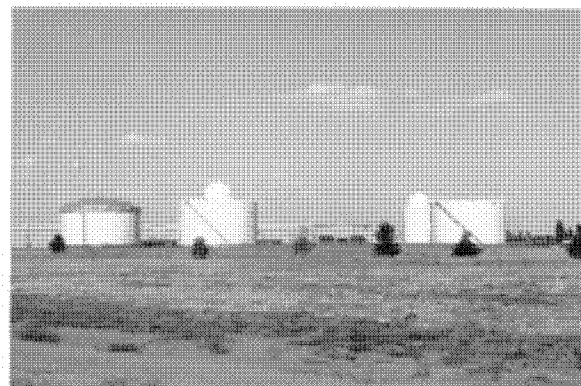
Resource No. 14003, Real Property No. 1467
Segregated Storage Magazine



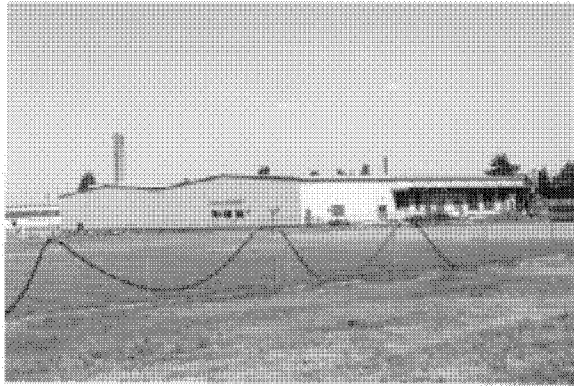
Resource No. 14004, Real Property No. 2080
Squadron Operations (Alert Facility)



Resource No. 14005, Real Property No. 2050
Maintenance Hanger



Resource No. 14006, Real Property Nos. 2400,
2405, 2406, 2410, Jet Fuel Storage (Tank Farm)



Resource No. 14007, Real Property No. 2301
Youth Center (Family Support)



Resource No. 14008, Real Property No. 610
Base Theatre



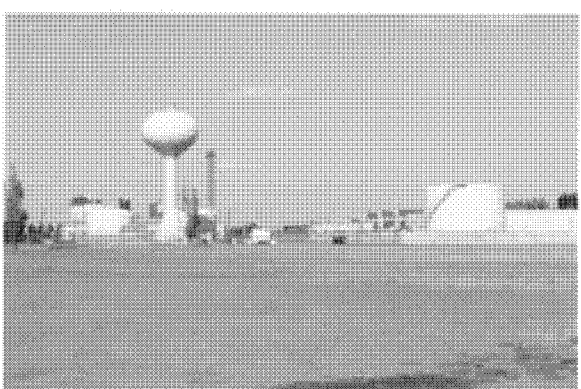
Resource No. 14009, Real Property No. 644
Base Warehousing



Resource No. 14010, Real Property 621
Airman's Dormitory Permanent Party/PCS
Student



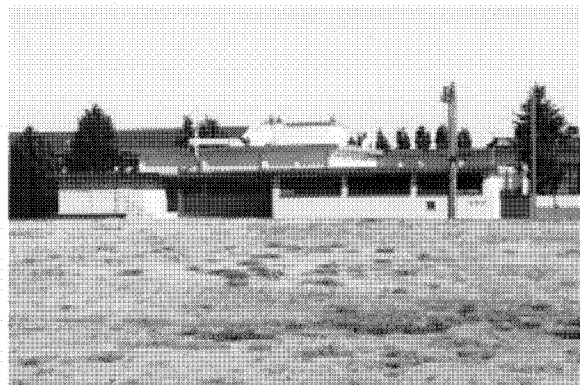
Resource No. 14011, Real Property No. 622
Airman's Dormitory (ARC Lite Manor)



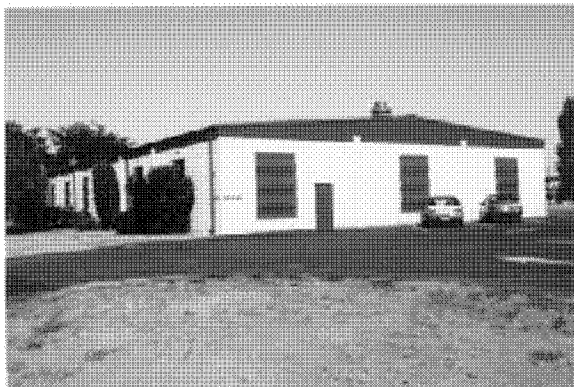
Resource No. 14012, Real Property No. (none)
Water Tank



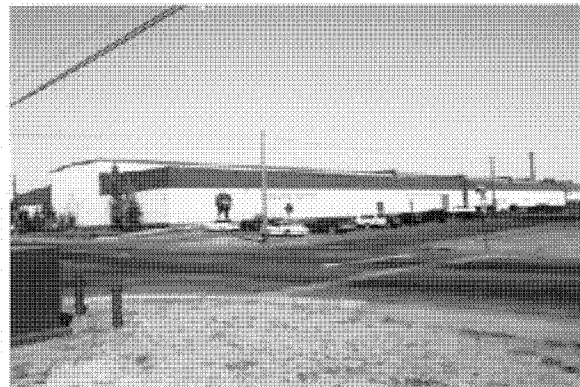
Resource No. 14013, Real Property No. 617
Wing Headquarters (Former Women's
Dormitory)



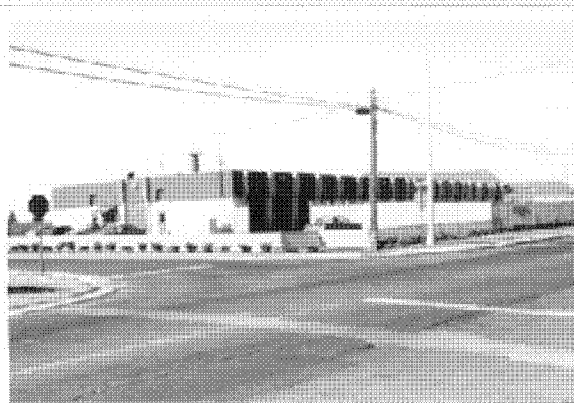
Resource No. 14014, Real Property No. 620
Housing Supply and Storage Facility



Resource No. 14015, Real Property No. 716
Base Library



Resource No. 14016, Real Property No. 2248
Bowling Center



Resource No. 14017, Real Property No. 2320
POV Wash Rack



Resource No. 14018, Real Property No. 2272
VAQ Dormitory



Resource No. 14019, Real Property No. 14019
Education Center



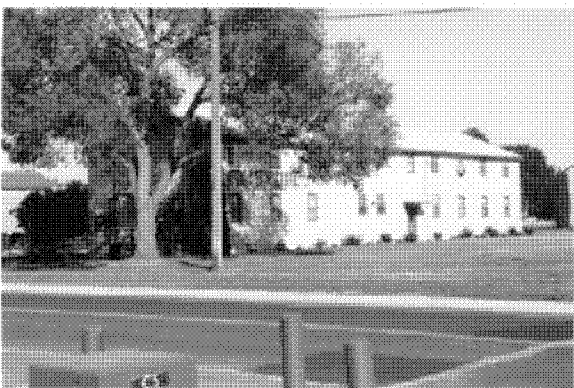
Resource No. 14020, Real Property No. 2383
Branch Exchange (Shoppette)



Resource No. 14021, Real Property No. 2285
Wing Headquarters



Resource No. 14022, Real Property No. 2185
Recreation Center



Resource No. 14023, Real Property No. 3511
Museum Building (Fairchild Heritage Museum)



Resource No. 14024, Real Property No. 2040
Squadron Operations (Security Police)



Resource No. 14025, Real Property No. 2392
Visiting Officer's Quarters (VOQ)



Resource No. 14026, Real Property No. 2096
Explosive Ordnance Disposal (EOD)



Resource No. 14027, Real Property No. 2060
Crew Readiness



Resource No. 14028, Real Property No. 2065
Airman Dining Hall



Resource No. 14029, Real Property No. 1001
Small Aircraft Maintenance Dock



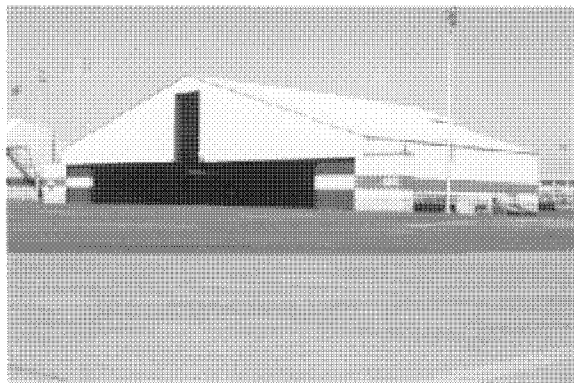
Resource No. 14030, Real Property No. 1007
Large Aircraft Maintenance Dock



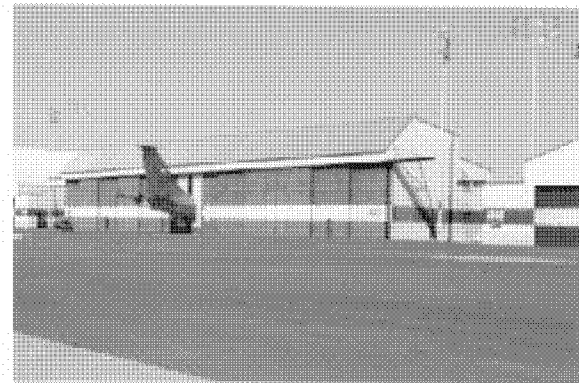
Resource No. 14031, Real Property No. 2025
Base Engineer Pavement and Grounds Facility



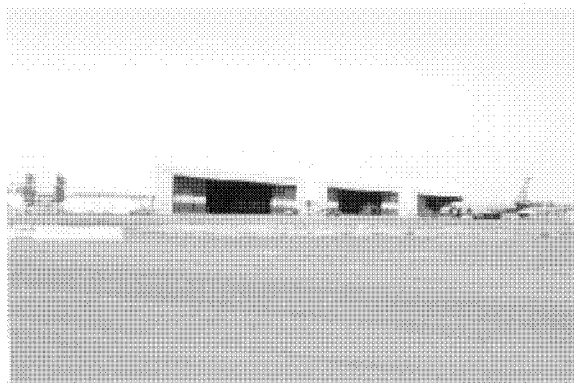
Resource No. 14032, Real Property No. 2030
Base Warehousing Supplies and Equipment



Resource No. 14033, Real Property 1011
Large Aircraft Maintenance Dock



Resource No. 14034, Real Property No. 1017
Large Aircraft Maintenance Dock



Resource No. 14035, Real Property No. 1023,
1024, 1025, Aircraft Corrosion Control and
Maintenance



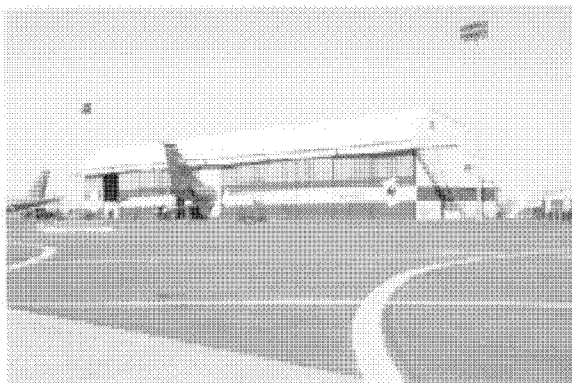
Resource No. 14036, Real Property No. 1027
Base Storage Shed



Resource No. 14037, Real Property No. 1
Base Operations



Resource No. 14038, Real Property No. 3
Fire Station



Resource No. 14039, Real Property No. 1033
Large Aircraft Maintenance Dock



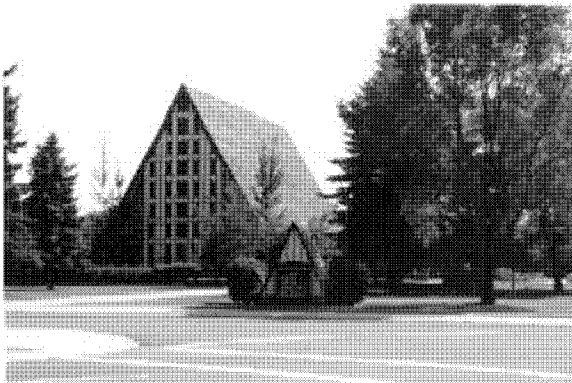
Resource No. 14041, Real Property No. (none)
POW Training Area



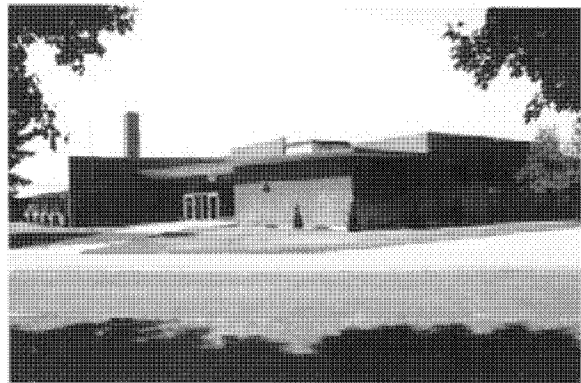
Resource No. 14042, Real Property No. (none)
Weapons Storage Area



Resource No. 14043, Real Property No. 2092
Crew Readiness (Memorial Visitation Center)



Resource No. 14044, Real Property No. 4200
Center Chapel



Resource No. 14045, Real Property No. 2550L
Blair Elementary School



Resource No. 14046, Real Property No. 2464
Commissary Store



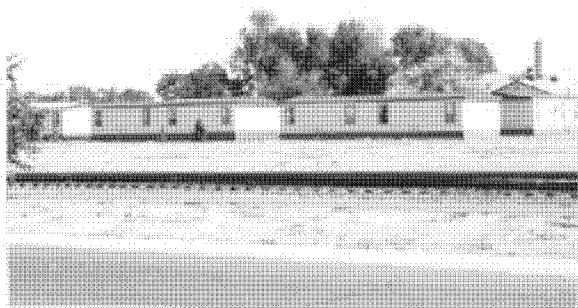
Resource No. 14047, Real Property No. 2465
Exchange Sales Store



Resource No. 14048, Real Property No. 2386
Exchange Service Station (Car Care Center)



Resource No. 14049, Real Property No. (none)
B-52 Static Display



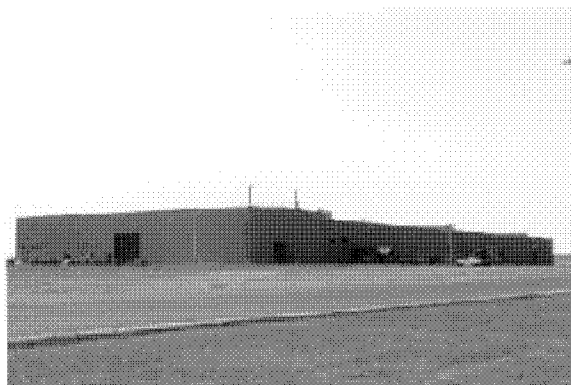
Resource No. 14050, Real Property Nos. 2367, 2368, 2369, Education Center



Resource No. 14051, Real Property No. 2451
Base Covered Storage Facility (Civil Engineering)



Resource No. 14052, Real Property No. 2452
Open Mess-CONSOL (Club Fairchild)



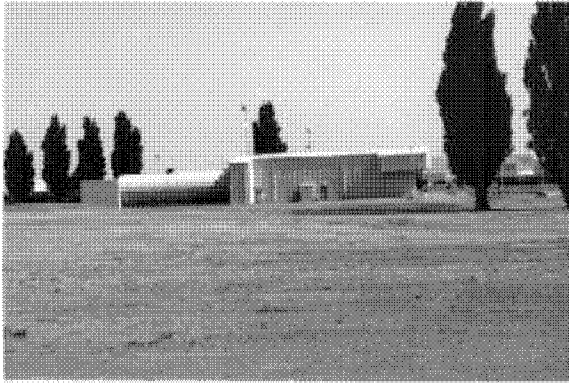
Resource No. 14053, Real Property No. 2447
Base Warehousing Equipment and Supply



Resource No. 14054, Real Property No. 2459
Fast Food Service (Burger King)



Resource No. 14055, Real Property Nos. 2304, 2305, Recreation Court/Athletic Field Softball



Resource No. 14056, Real Property No. 2155
Test Stand



Resource No. 14057, Real Property No. 2001
Aircraft Maintenance Organizational Shop
(Communications)



Resource No. 14058, Real Property No. 2004
Communication Facility



Resource No. 14059, Real Property No. 2003
Branch Bank



Resource No. 14061, Real Property No. (none)
Static Display (F-106 Delta Dart) on Patriot
Blvd.



Resource No. 14062, Real Property No. 1029
Large Aircraft Maintenance Dock (Air National
Guard)



Resource No. 14063, Real Property No. 159
Mission Support Building



Resource No. 14064, Real Property No. 286
U.S. Army COE Outgrant



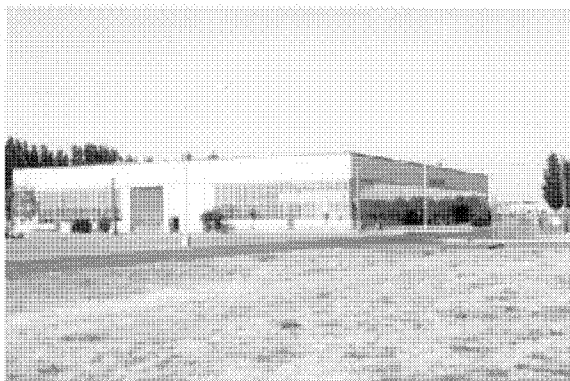
Resource No. 14067, Real Property Nos. 450,
451, Airman's Dormitory Permanent Party/PCS
Student



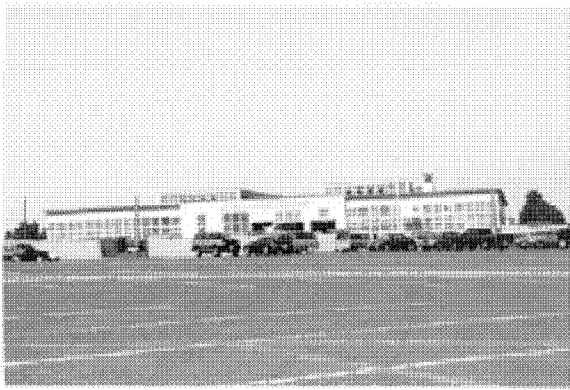
Resource No. 14069, Real Property No. (none)
Family Campground



Resource No. 14070, Real Property No. 350
Communication Facility



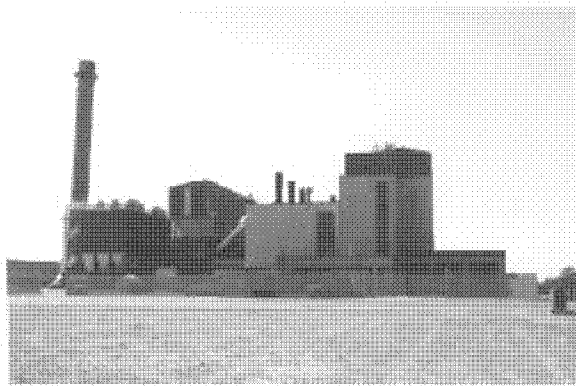
Resource No. 14071, Real Property No. 2163
Jet Engine Inspection and Maintenance Shop
(Propulsion)



Resource No. 14072, Real Property No. 2120
Squadron Operations (43rd Air Refueling
Squadron)



Resource No. 14073, Real Property No. 2245
Base Personnel Office



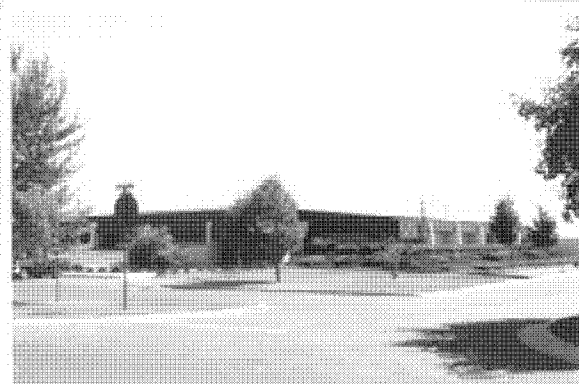
Resource No. 14074, Real Property 2175
Steam Facility Building



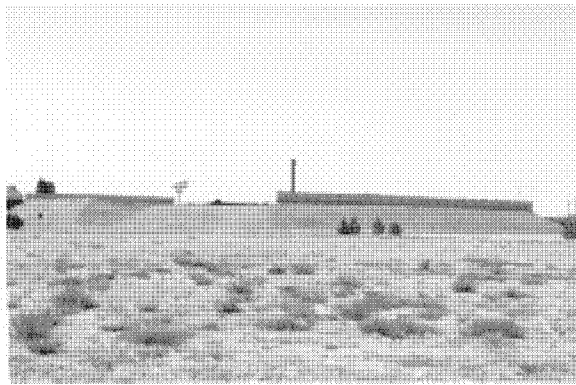
Resource No. 14075, Real Property No. 2135
Audiovisual Facility (PMEL)



Resource No. 14076, Real Property 2140
USAF Command Post



Resource No. 14078, Real Property No. 2071
Special Operations (Security Police)



Resource No. 14079, Real Property Nos. 2074, 2076, Machine Gun Range/Small Arms Systems Range



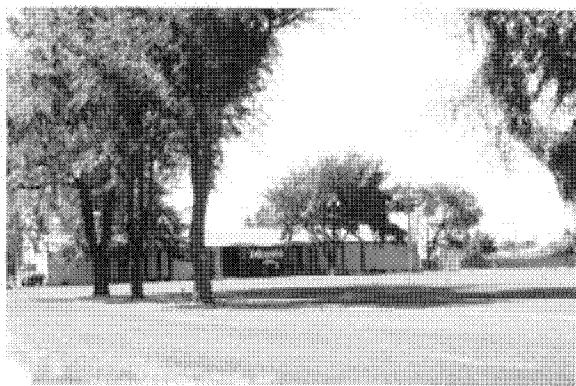
Resource No. 14080, Real Property No. 2094 Vehicle Filling Station



Resource No. 14081, Real Property No. 2075 Combat Arms Training Maintenance Building



Resource No. 14083, Real Property Nos. 2034-2037, Mission Support Buildings



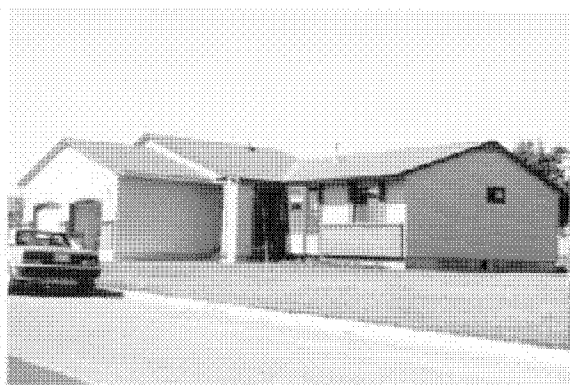
Resource No. 14084, Real Property No. 2396 Bill Board (Credit Union)



Resource No. 14085, Real Property No. 7136 Wherry Family Housing, 7136 Dakota A and B



Resource No. 14086, Real Property No. 7488
Wherry Family Housing, 7488 Connecticut A
and B



Resource No. 14087, Real Property No. 7499
Wherry Family Housing, 7499 Maine A and B



Resource No. 14088, Real Property No. 9000
Composite Medical Facility (Base Hospital)



Resource No. 14089, Real Property 9010
Medical Command and Administration (Medical
Annex)



Resource No. 14090, Real Property No. 7692
Wherry Family Housing, 7692 A and B



Resource No. 14092, Real Property No. 8002
Family Housing, 8002 Maple



Resource No. 14093, Real Property No. 8542
Family Housing, 8542 Elm



Resource No. 14095, Real Property No. 6018
Capehart Family Housing, 6018 Linden A and B



Resource No. 14096, Real Property No. 6098
Capehart Family Housing, 6098 Walnut



Resource No. 14097, Real Property No. 1254
Parachute Training



Resource No. 14099, Real Property No. (none)
B-52 Crash Site



Resource No. 14100, Real Property No. 1207
Academic Exhibit Facility (Survival Exhibit Lab)



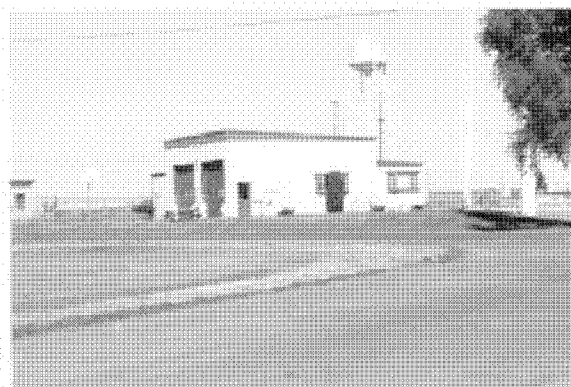
Resource No. 14101, Real Property No. 1324
Wing Headquarters (336th Training Group)



Resource No. 14102, Real Property No. 14102
Gymnasium



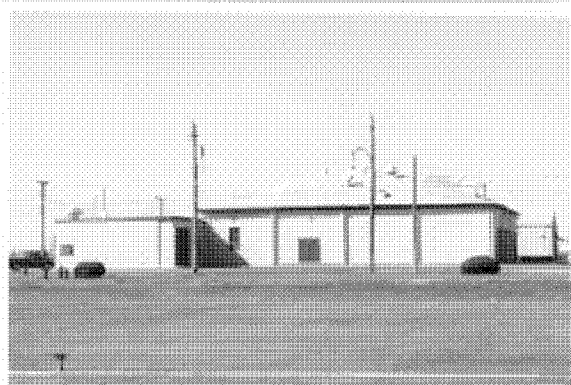
Resource No. 14103, Real Property No. 1336
Barracks



Resource No. 14104, Real Property No. 1314
Fire Station



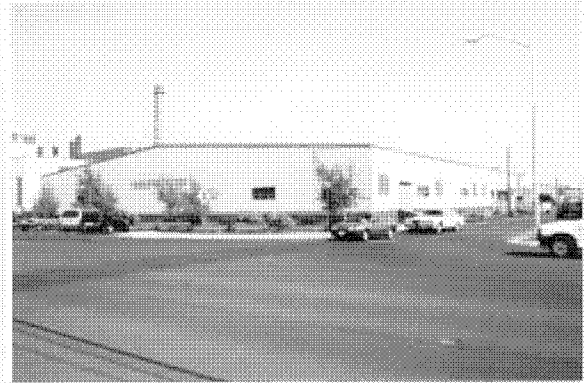
Resource No. 14105, Real Property No. 1212
ATC Technical Training Support (Resistance
Academics)



Resource No. 14106, Real Property No. 1225
Survival Academics



Resource No. 14107, Real Property No. 1204
Control Tower



Resource No. 14414, Real Property No. 2170
Vehicle Operations/Heated Parking

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

PROPERTY MANAGEMENT

08-Feb-96

Resource Number: 14002

Property Description: Test Cell/Engine Test Building is a property that apparently was originally used for engine testing and was later used to house alert operations planning and intelligence activities during the Cold War period.

Associated Property: 14118-Drawer 40 (88 drawings)

Non-Inventoried Association:

Sub-installation:

Address: 300 W. Arnold Street

Base Map Date: 10/1/93

Base Map Building Number: 2150

Operational Support Installations:

Combat Weapons and Support Systems: Maintenance Docks/Hangars

Training Facilities:

Material Development Facilities:

Intelligence Facilities:

Property Type: Engine Test Building

Statement of Significance: This building achieved further Cold War significance during Phase II when, in 1955, its use shifted from an engine test cell to a facility housing the Fighter Interceptor Carrier Reconnaissance Project (FICON) in the below ground operations section of the building--which was essentially "survivable". It functioned in this intelligence role until the 1960s.

Cold War Relationship-National Recognition: 3

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 4

Total Score for Priority Matrix: 21

Comments on Threats: The threat to this building is ranked as severe based on verbal statements by numerous individuals who believe it is slated for demolition in the near future.

No Further Work: 0

Stewardship: 00

National Register Listing: 0

Further Documentation: 00

Preservation/Conservation/Repair: 0

Comments on Resource Management: This building is evaluated as significant within the base Cold War context, as described in the significance statement above. The building does not meet the 50 year criterion. Further documentation, to include complete recording and archival research identifying its exact Cold War role, is recommended to confirm this assessment. Stewardship is recommended in the interim.

Importance: Important

Eligibility: Future

Height: 20

Square Footage: 79384

Original Planned Duration: Permanent

Existing Use: This facility is no longer in use

Other Use/Dates: This facility was constructed for the testing of B-36 aircraft engines. During the late 1950s this building was used for intelligence and planning for combat situations.

Comments on Use: The building is being considered for demolition

Primary Building Materials: Concrete Masonry Unit

Character Defining Features: The exterior walls have louvered sections/panels that give the building a unique exterior design

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition:

Record/Document Category:

Year of Document:

Period of Association:

Comments on Condition:

Resource Number: 14003

Property Description: Segregated Storage Magazine is a storage bunker located in the WSA (Weapons Storage Area) where nuclear components were apparently stored during the early decades of the Cold War period.

Associated Property: 14042; 14118-Drawer 20

Non-Inventoried Association: Weapons storage area buildings: 1468, 1469 (Guard Towers); 1410, 1413, 1448, 1466

Sub-installation:

Address: Fortress Road

Base Map Date: 10/1/93

Base Map Building Number: 1467

Operational Support Installations:

Combat Weapons and Support Systems: Storage

Training Facilities:

Material Development Facilities:

Intelligence Facilities:

Property Type: Segregated Storage Igloo

Statement of Significance: This facility is one of 13 specially constructed structures nationwide that stored, maintained, and protected nuclear components for weapons that could be utilized by SAC aircraft during Phase II of the Cold War period. Its significance lies not only in its function but also in its specialized construction which utilizes a false fenestration on the upper story to simulate an office building, thus concealing its true weapons storage function from certain vantage points.

Cold War Relationship-National Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats: Due to building's mammoth concrete construction and its location within a maximum security area, the current threat to the facility appears low.

No Further Work: 0

Stewardship: 00

National Register Listing: 00

Further Documentation: 00
Preservation/Conservation/Repair: 0
Comments on Resource Management: Exceptionally important and NRHP eligible.
Importance: Exceptional
Eligibility: Eligible
Height: 20
Square Footage: 2572
Original Planned Duration: Permanent
Existing Use: This facility is no longer in use
Other Use/Dates: Stored nuclear componets during the 1950s and early 1960s.
Comments on Use:
Primary Building Materials: Poured Concrete
Character Defining Features: This structure is characterized by its massive concrete construction, interior vaults with heavy steel vault doors, and false exterior window design on the second story
Comments on Architecture:
Site Function:
Present Site Function:
Year of Association:
Associated Event/Activity:
Physical Remains/Features:
Changes to the Resource:
Object Category:
Construction Materials of Object:
Year of Manufacture:
Object Condition:
Record/Document Category:
Year of Document:
Period of Association:
Comments on Condition:

Resource Number: 14004

Property Description: This Squadron Operations building is actually the bomber Alert Facility, and apparently functioned as such throughout much of the Cold War period.

Associated Property: 14028; 14118-Drawer 38 (121 drawings)

Non-Inventoried Association:

Sub-installation:

Address: 803 S. Taxiway G Road

Base Map Date: 10/1/93

Base Map Building Number: 2080

Operational Support Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence Facilities:

Property Type: Bomber Alert Facility

Statement of Significance: This alert facility played an integral role in the base's mission to maintain and sustain SAC's capability of nuclear deterrence through long-range bombardment and air refueling during Phases II-IV of the Cold War period.

Cold War Relationship-National Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 4

Percent Historic Fabric: 3

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats:

No Further Work: 0

Stewardship: 00

National Register Listing: 00

Further Documentation: 00

Preservation/Conservation/Repair: 0

Comments on Resource Management: This facility is currently in use by one of the air refueling squadrons; therefore, the threat to this facility should remain low.

Importance: Exceptional

Eligibility: Eligible

Height: 20

Square Footage: 22679

Original Planned Duration: Permanent

Existing Use: This facility is being utilized by one of the air refueling squadrons at Fairchild AFB

Other Use/Dates: This building was used by the bomber squadrons while on alert duty at Fairchild AFB during the Cold War

Comments on Use:

Primary Building Materials: Concrete Masonry Unit

Character Defining Features: The defining features include the earthen berm which slopes upward to the building, and the covered ramps which facilitate rapid egress from all sides of the building during an alert situation.

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition:

Record/Document Category:

Year of Document:

Period of Association:

Comments on Condition:

Resource Number: 14115
Property Description: Aerial Photograph Collection/Photo Archive
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 100 Ent Street
Base Map Date: 10/1/93
Base Map Building Number: inside 2451
Operational Support Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence Facilities:
Property Type: Photograph Collection
Statement of Significance: The aerial photos in the collection are of high quality and depict the development at Fairchild AFB from 1950 through 1991.
Cold War Relationship-National Recognition: 2
Theme Relationship: 2
Temporal Phase Relationship: 4
Level of Importance: 2
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 15
Comments on Threats:
No Further Work: 0
Stewardship: 00
National Register Listing: 0
Further Documentation: 00
Preservation/Conservation/Repair: 00
Comments on Resource Management:
Importance:
Eligibility:
Height:
Square Footage:
Original Planned Duration:

Existing Use:

Other Use/Dates:

Comments on Use:

Primary Building Materials:

Character Defining Features:

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition: In Storage/Benign Neglect

Record/Document Category: Photo Archive

Year of Document: Various

Period of Association: 1950-1991

Comments on Condition: These aerial Photographs are stored in a map file drawer and are used by base personnel in the Environmental Office.

Resource Number:	14116
Property Description:	Base Museum Collections including newspaper collection; B-52 simulator in railcar; and Quail Missile. There are also a couple boxes of uninventoried slides and photographs.
Associated Property:	
Non-Inventoried Association:	
Sub-installation:	
Address:	100 East Bong Street
Base Map Date:	10/1/93
Base Map Building Number:	inside 3511
Operational Support Installations:	Memorial
Combat Weapons and Support Systems:	
Training Facilities:	
Material Development Facilities:	
Intelligence Facilities:	
Property Type:	Museum Collection
Statement of Significance:	The base newspaper collection is continuous from the early 1950s and is a valuable resource for details concerning Fairchild AFB during the Cold War period. The museum collections also include the B-52 simulator located in the rail car that traveled to SAC bases around the country to train pilots in the operation of the B-52 during the Cold War era. As such it conveys to the public the concept of the mission of a B-52 crew: long-range bombardment in case of a crisis situation. The static Quail Missile display represents American missile technology in the early 1960s that guided enemy radar away from the B-52.
Cold War Relationship-National Recognition:	2
Theme Relationship:	1
Temporal Phase Relationship:	4
Level of Importance:	1
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	13
Comments on Threats:	
No Further Work:	0
Stewardship:	00
National Register Listing:	0

Further Documentation: 0

Preservation/Conservation/Repair: 00

Comments on Resource Management: These resources are being curated at the Fairchild Heritage Museum, but there is concern for funding in the future to acquire a curator(s) and to keep the museum open.

Importance:

Eligibility:

Height:

Square Footage:

Original Planned Duration:

Existing Use:

Other Use/Dates:

Comments on Use:

Primary Building Materials:

Character Defining Features:

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition: Being Preserved

Record/Document Category: Newspapers; B-52 simulator: static display

Year of Document: Various

Period of Association: Various

Comments on Condition:

Resource Number:	14117
Property Description:	Wing History Collection
Associated Property:	
Non-Inventoried Association:	
Sub-installation:	
Address:	1 East Bong Street
Base Map Date:	10/1/93
Base Map Building Number:	inside 2285
Operational Support Installations:	Documentation
Combat Weapons and Support Systems:	
Training Facilities:	
Material Development Facilities:	
Intelligence Facilities:	
Property Type:	Office Files
Statement of Significance:	This collection of histories provides details and insights into the activities of the Wing, Units, and Squadrons as they pertain to the overall mission at Fairchild AFB during the Cold War era. Located in the Wing History Office.
Cold War Relationship-National Recognition:	2
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	
No Further Work:	0
Stewardship:	00
National Register Listing:	0
Further Documentation:	0
Preservation/Conservation/Repair:	0
Comments on Resource Management:	
Importance:	
Eligibility:	
Height:	
Square Footage:	

Original Planned Duration:

Existing Use:

Other Use/Dates:

Comments on Use:

Primary Building Materials:

Character Defining Features:

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition: Being Preserved

Record/Document Category: Report

Year of Document: Various

Period of Association: 1943-1993

Comments on Condition:

Resource Number: 14118

Property Description: Architectural Drawing Files located in vault in CE drawing room consist of 8 banks of flat files (total of 205 drawers). Organization varies as follows: (1) 1-63 are arranged by building number; 64-74 are utilities; 75-90 are services, airfield, layouts, and outlying (Clear Lake in 86, Cusik and Mica Peak in 87, Ft. Wright and cemetery in 88, 7 Mile and ANG in 89 and White Bluffs in 90). Some of the remaining files are labeled while others are not; some files are empty while others contain a variety of seemingly unrelated maps. Labeled flat files include: 99-107 include Old Tabs (base layout and master plans in 99, land management in 100, utilities in 101-106, communications in 107); 108-113 are New Tabs; 124-129 are housing; 130-131 include Geigher Field; 132 is Army Cheney; 133-142 are project drawings current and cancelled; 143-148 are old maps; tower erection drawings (Othello Radar Tower) in 151; misc. facilities (MICA Peak) in 155; 161-163 include old radar facilities from 1950s; 165-166 Security Police; 168 is Air Force dispensary; 169-171 are utility projects; 172 is airfield markings including KLAXON lights and sirens from 1986; and 173 is OBSO Tabs (Approach Zone Obstruction Details). In general, the flat files contain Record Drawings (as-builts) for most real property on base. Drawings consist of a variety of types, including original ink on linen, vellum, mylar, and sepia. The "Archives" drawer (122) is pertinent to the Cold War period and contains 1942 to 1969 misc. projects, a Garden Springs 1973 Alert Posture Striping Map and an accident map of the 1987 KC 135 crash. Also in Archives are photographs including 2 sets of 100 each 10 x 10 " aerials of base forming composites, and 2 large format aerials from 1983.

Associated Property: Various; Inside 2451

Non-Inventoried Association: Various

Sub-installation:

Address: 100 Ent Street

Base Map Date:

Base Map Building Number: inside 2451

Operational Support Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence Facilities:

Property Type: Documentary Collection

Statement of Significance: The significance of these drawing files lies in the information they contain regarding important properties on Fairchild AFB.

Cold War Relationship-National Recognition: 2

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats: Architectural drawing files are in a protected room adjacent to the drafting area. The collections are generally organized.

No Further Work: 0

Stewardship: 00

National Register Listing: 0

Further Documentation: 00

Preservation/Conservation/Repair: 00

Comments on Resource Management: It is understood that the drawing files are in the process of being better organized. It is recommended that care be taken during this process with the old, fragile maps, since the number of remaining base layouts from decades of the Cold War is noted as lower than at some other bases.

Importance:

Eligibility:

Height:

Square Footage:

Original Planned Duration:

Existing Use:

Other Use/Dates:

Comments on Use:

Primary Building Materials:

Character Defining Features:

Comments on Architecture:

Site Function:

Present Site Function:
Year of Association:
Associated Event/Activity:
Physical Remains/Features:
Changes to the Resource:
Object Category:
Construction Materials of Object:
Year of Manufacture:
Object Condition: Being Preserved
Record/Document Category: Architectural Drawing
Year of Document:
Period of Association: 1940s to 1980s, spanning Cold War Phases I-IV
Comments on Condition:

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the Mariah field team to help identify Cold War material culture extant on Fairchild AFB and to provide research materials for this study:

Linda Brophy
Real Property Officer
92 CES/CER
100 Ent Street Suite 140
Fairchild AFB, Washington 99011-9404
(509) 247-2533

TSgt Donald Dare
Drafting Supervisor
92 CES/CEEE
100 Ent Street
Fairchild AFB, Washington 99011
(509) 247-5847

Gary Jespersen
Chief, Environmental Flight
92 CES/CEVN
100 Ent Street Suite 155
Fairchild AFB, Washington 99011
(509) 247-2421

Jerry Johnson
Natural Resources Officer
92 CES/CEVN
100 Ent Street Suite 155
Fairchild AFB, Washington 99011
(509) 247-2421

Lt Colonel William Keith
Fairchild Heritage Museum 92 ARW/CCM
100 E. Bong Street Suite 100
Fairchild AFB, Washington 99011

SSgt Keller
Facility Security Officer
92 SPS/SPAI
2 E. Arnold Street Suite 101
Fairchild AFB, Washington 99011
(509) 247-5860

SSgt Lisa Morales
92 LSS
Fairchild AFB, Washington 99011
(509) 247-5362

SSgt Tracy Partelow
Wing Historian
92 BMW/HO
1 E. Bong Street Suite 229
Fairchild AFB, Washington 99011-9588
(509) 247-2173

Stan Williams
Fairchild Heritage Museum 92 ARW/CCM
100 E. Bong Street
Fairchild AFB, Washington 99011

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Fairchild AFB history and Cold War context.

Lt Colonel William Keith, Fairchild Heritage Museum, August 19, 1994

Jerry Johnson, Natural Resources Officer, August 17, 1994

SSgt Tracy Partelow, Wing Historian, August 17, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-9: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT GRIFFISS AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

A Mariah Associates, Inc. field team conducted a cultural resource inventory at Griffiss Air Force Base, New York, between July 5 and 15, 1994, to identify extant Cold War material culture resources important to the base and its Cold War mission and history, as part of the Air Combat Command Cold War Study under the Department of Defense Legacy Program. During field investigations, team members James A. Lowe and David P. Staley gathered information from the Civil Engineering, Planning, Real Property, Public Affairs, and Historian's Offices at the base. An initial reconnaissance of the base enabled the team to become familiar with facilities and determine which property types to inventory. These resources were photographed and catalogued.

Using the inventory, research, and on-site inspections, three resources were selected to be further documented and evaluated as important to the base's Cold War context. These include the Rome Laboratory Headquarters, the Command Center of the Northeast Air Defense Sector/Sector Operations Control Center, and the Bomber Alert Facility. The Rome Laboratory Headquarters and Command Center are both recommended as eligible to the National Register of Historic Places. Due to an unknown level of integrity, the Bomber Alert Facility is recommended as potentially eligible to the National Register. Further documentation and stewardship are recommended for all three resources.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
AFB	- Air Force Base
AFCC	- Air Force Communications Command
AFCS	- Air Force Communications Service
AFLC	- Air Force Logistics Command
AFMC	- Air Force Materiel Command
AFSC	- Air Force Systems Command
AGE	- Air Ground Equipment
ALCM	- Air-Launched Cruise Missile
AMC	- Air Materiel Command
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
amsl	- above mean sea level
ARDC	- Air Research and Development Command
AREFS	- Air Refueling Squadron
AWACS	- Airborne Warning and Control System
BMEWS	- Ballistic Missile Early Warning System
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
BS	- Bomb Squadron
BW	- Bomb Wing
CCD	- Continental Communications Division
C ³ I	- Command, Control, Communications, and Intelligence
DEW	- Distant Early Warning
DoD	- Department of Defense
EIG	- Engineering Installations Group
FIS	- Fighter Interceptor Squadron
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
GEEIA	- Ground Electronics Engineering Installation Agency
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCA	- Northern Communications Agency
NCO	- Noncommissioned Officer
NEADS	- Northeast Air Defense Sector

LIST OF ACRONYMS (Continued)

NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
ORI	- Operation Readiness Inspection
OTH-B	- Over-the-Horizon Backscatter
PME	- Precision Measurement Equipment
RADC	- Rome Air Development Center
RAPCON	- Radar Approach Control Center
R&D	- research and development
SAC	- Strategic Air Command
SAGE	- Semi-Automatic Ground Environment
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SOCC	- Sector Operations Control Center
SRAM	- Short Range Attack Missile
START	- Strategic Arms Reduction Talks
SW	- Strategic Wing
TAC	- Tactical Air Command
USAF	- United States Air Force
WACS	- White Alice Communication System

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Capehart Housing Act - passed in 1955 as an amendment to the National Housing Act. It authorized the use of quarters allowances to pay off Wherry housing mortgages. Construction of new houses was set at 46,500 units at 88 bases. Construction was begun on 9,000 units by 1957.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

GLOSSARY (Continued)

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	5
2.4 BASE LAND USE	7
3.0 HISTORICAL OVERVIEW	14
3.1 BASE HISTORY AND COLD WAR CONTEXT	14
3.2 BASE DEVELOPMENT	20
4.0 METHODOLOGY	27
4.1 INVENTORY	27
4.2 EVALUATION OF IMPORTANT RESOURCES	28
4.2.1 Documentation	28
4.2.2 Evaluation of Importance	28
4.2.2.1 Cold War Context	28
4.2.2.2 NRHP Criteria	29
4.2.2.3 Exceptional Importance	30
4.2.3 Evaluation of Integrity	30
4.2.4 Priority Matrix	31
4.2.5 Resource Organization	32
4.3 BASE SPECIFIC METHODS	32
5.0 RECONNAISSANCE INVENTORY RESULTS	34
6.0 EVALUATION RESULTS	35
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	35
6.1.1 Base and Command Centers	35
6.1.1.1 Command Center	35
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	37
6.2.1 Alert Facilities	37
6.2.1.1 Bomber Alert Facility	37

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.3 MATERIEL DEVELOPMENT FACILITIES	38
6.3.1 Research Laboratories	38
6.3.1.1 Rome Laboratory Headquarters	38
6.4 TRAINING FACILITIES	40
6.5 INTELLIGENCE FACILITIES	40
7.0 UNDOCUMENTED RESOURCES	41
8.0 FUTURE THREATS TO RESOURCES	42
9.0 PRELIMINARY RECOMMENDATIONS	43
9.1 NRHP ELIGIBILITY	43
9.1.1 Evaluation and Determination of NRHP Eligibility	43
9.1.2 Implications of NRHP Eligibility	45
9.2 EVALUATED RESOURCE RECOMMENDATIONS	46
9.2.1 Command Center	48
9.2.2 Bomber Alert Facility	49
9.2.3 Rome Laboratory Headquarters	49
9.3 PENDING BASE CLOSURE	49
10.0 REFERENCES CITED	51
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Griffiss Air Force Base	6
Figure 2.2 Griffiss Air Force Base Layout	8
Figure 2.3 Standard Strategic Air Command Base Layout	9
Figure 2.4 Griffiss Air Force Base Land Use Diagram	11
Figure 2.3 Standard Strategic Air Command Base Land Use Diagram	12
Figure 3.1 Griffiss Air Force Base, 1950	22
Figure 3.2 Griffiss Air Force Base, 1950-1960	23
Figure 3.3 Griffiss Air Force Base 1960-1970	25
Figure 3.4 Griffiss Air Force Base, 1970-1980	26

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	36
Table 6.2 Evaluated Resource Prioritization by Priority Rank	36
Table 9.1 Recommendations for Evaluated Resources	47

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

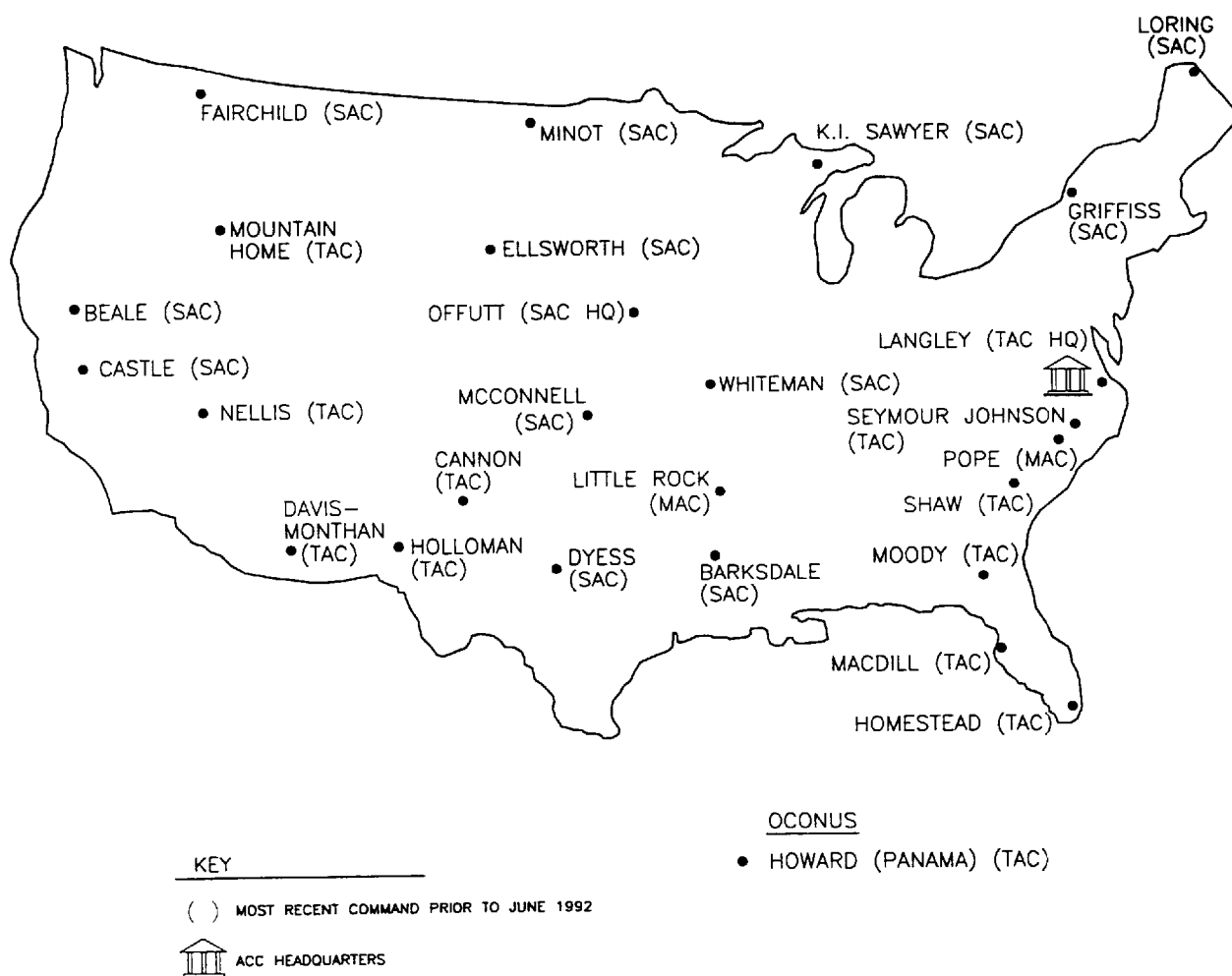
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: GRIFFISS\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Griffiss Air Force Base (AFB). Griffiss AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The current ACC mission at Griffiss AFB is to "provide immediate and sustained, worldwide, long-range force projection to achieve 'Global Power for America'" (Kaye 1993:4). The mission of the host unit, the 416th Bomb Wing (BW), is "to develop and maintain the capability to conduct long-range strategic bombardment and air refueling operations worldwide" (Environmental Office, Griffiss AFB 1989:5). The 668th Bomb Squadron (BS) and the 509th Air Refueling Squadron (AREFS) are the key aircraft squadrons stationed at Griffiss AFB.

Important tenant and associated organizations located on the base include Rome Laboratory, the Northeast Air Defense Sector/Sector Operations Control Center (NEADS/SOCC), and the 485th Engineering Installations Group (EIG). Rome Laboratory has been important to the mission at Griffiss AFB by playing an integral role in United States Air Force (USAF) development of communication, satellite, and radar systems for the past 40 years. Security of the air space over the northeastern United States is handled by NEADS/SOCC, while the 485th EIG "accomplishes program management, engineering, and installation of Air Force communication-computer systems worldwide . . . , " especially in the United States and Europe (Kaye 1993:8-14; Public Affairs Office, Griffiss AFB 1992a:1).

The base is currently scheduled to be closed in September 1995, and preparations are currently underway. [Editor's Note: This report is written based upon the existing conditions and findings made during the field reconnaissance. Since that time, Griffiss AFB has been closed by the Base Re-Alignment and Closure Commission.]

2.2 GEOGRAPHIC DESCRIPTION

Griffiss AFB consists of approximately 3,900 acres (1,578 ha) located in Oneida County, New York, 2 mi (3.2 km) east of downtown Rome, New York and 12 mi (19.3 km) west of Utica, New York (Figure 2.1). Although bordered on the west by the urbanized area of Rome, the lands bordering the base to the east, north, and south are primarily agricultural with intermittent forest (Environmental Office, Griffiss AFB 1989:6).

The base is located in the Mohawk Section of the Appalachian Plateaus Physiographic Province, which has been shaped and reshaped by advancing glacial activity and by the deposition of gravel, sand, silt, and clay during the last glacial retreat (Fenneman 1938:323-328; Law Environmental, Inc. 1994:1-5). The base is situated within the floodplain of the Mohawk River Valley and is oriented in a northwest-southeast direction. This area is characteristic of the eastern-most extremity of the Central Lowland region, and the topography of the valley is relatively flat. Elevations on Griffiss AFB range from 460 ft (140 m) to 525 ft (160 m) above mean sea level (amsl); however, there is a plateau northeast of the base that rises to a height of 1300 ft (396 m) amsl.

2.3 CURRENT BASE LAYOUT

The original runways at Griffiss AFB, completed in October 1941, were configured like a triangle and allowed three airfield surfaces for operations. The portion of the runway oriented east-west was located just north of the mission and industrial areas of the original base; the other runways connected with the above mentioned portion, with one oriented to the northeast, the other to the northwest. The current instrument runway, constructed in 1958, is 11,820 ft (3,603 m) in length, is oriented southeast-northwest, and is adjacent to the original northwest runway which is currently used for a taxiway.

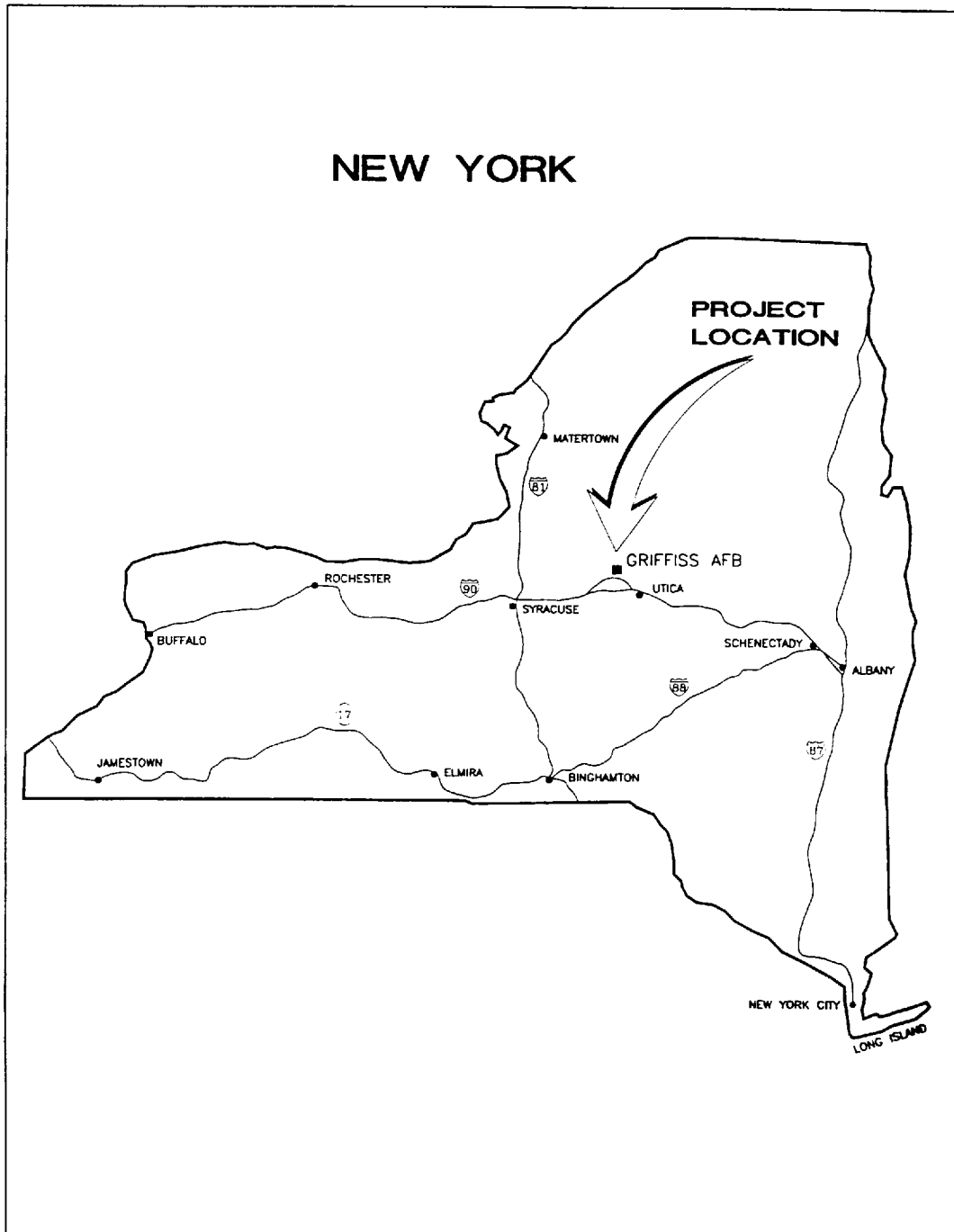


Figure 2.1 Location of Griffiss Air Force Base.

The overall layout of Griffiss AFB is somewhat similar to the standard SAC base layout (Figures 2.2 and 2.3). The layout of the northeastern side of the runway consists of the weapons storage area, missile assembly shops, a small arms range, antennae farms for NEADS/SOCC communication, and open space and clear zones. Southwest of the northwestern end of the runway are recreation areas, including a golf course and club house, a family camping area, and baseball fields. Located in this same area along the Perimeter Road are two homes for commanding officers. Hot cargo storage pads (loading and unloading) are located on that portion of the old runway oriented northeast-southwest. The old runway oriented east-west is no longer utilized for aircraft operations.

In the center of the base, south of the old east-west runway and southwest of the current runway, is a mixture of base properties related to mission, industry, research, administration, and support. The Bomber Alert Facility, the 668th BS, and aircraft (B-52 *Stratofortress* bombers and KC-135 *Stratotanker* refuelers) are located on the alert apron just southwest of the instrument runway at its southeastern end. Also in this area, located on Apron 2, are the maintenance hangars that support the mission of the aircraft and crew. Located immediately southwest of Apron 2 on SAC Hill are squadron operation facilities. The headquarters of NEADS/SOCC is located northwest of the squadron operations facilities and south of the industrial/mission area of the base.

One major difference in layout between Griffiss AFB and the standard SAC base layout is the placement of the base hospital at Griffiss AFB in the center of community development rather than on the outskirts of the base, as shown in the SAC base layout.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

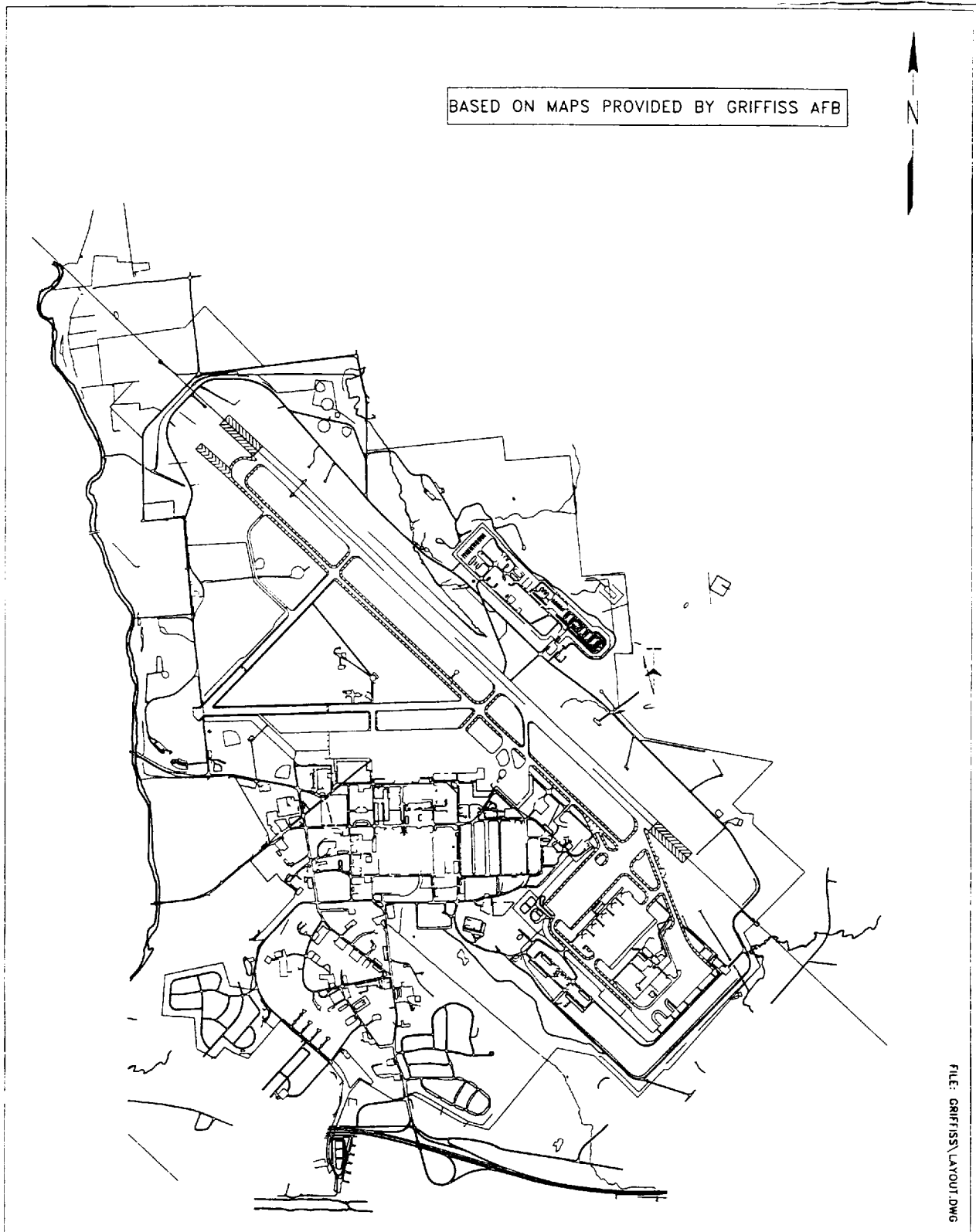


Figure 2.2 Griffiss Air Force Base Layout.

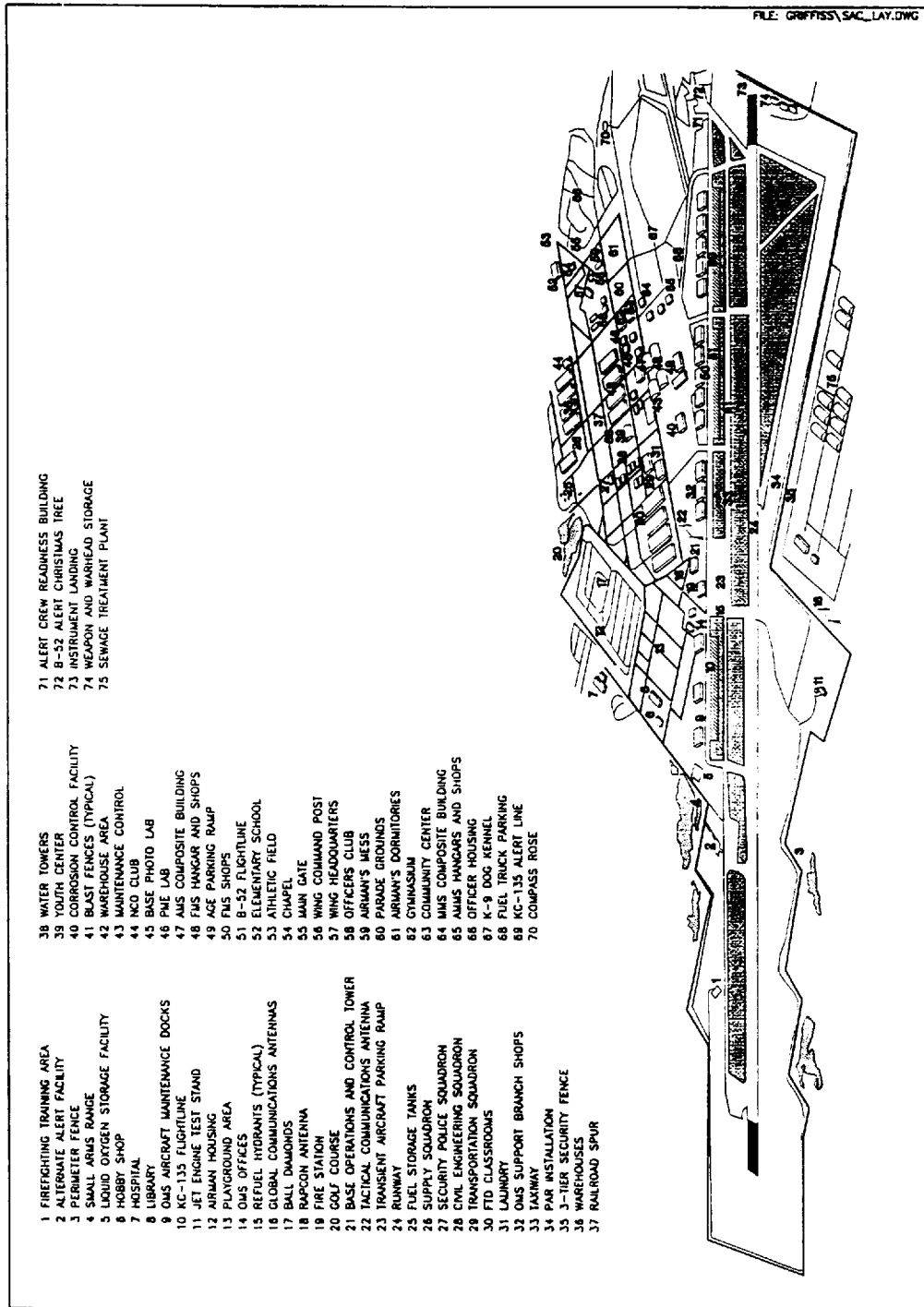


Figure 2.3 Standard Strategic Air Command Base Layout.

Command Post - to provide tracking of all base activities and communication between battle staff and SAC headquarters.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Land use planning at Griffiss AFB differs somewhat from standard SAC land use (Figures 2.4 and 2.5). Griffiss AFB has its industrial area between the mission and community areas, whereas the standard SAC base arrangement has the community area between the mission and industrial areas. The arrangement at Griffiss AFB is undoubtedly due to the early construction of Rome Air Development Center (RADC) facilities for research and development (R&D) during the early 1950s. Whereas the recreation areas in the standard plan are scattered throughout the base, recreation at Griffiss AFB is concentrated in two areas, one large and one small. The weapons storage area at Griffiss AFB is centrally located on the far side of the instrument runway, unlike the standard SAC land use plan which has the weapons and warhead storage area near the alert area of the runway. Finally, the SAC plan shows no designated clear zones or open space for the

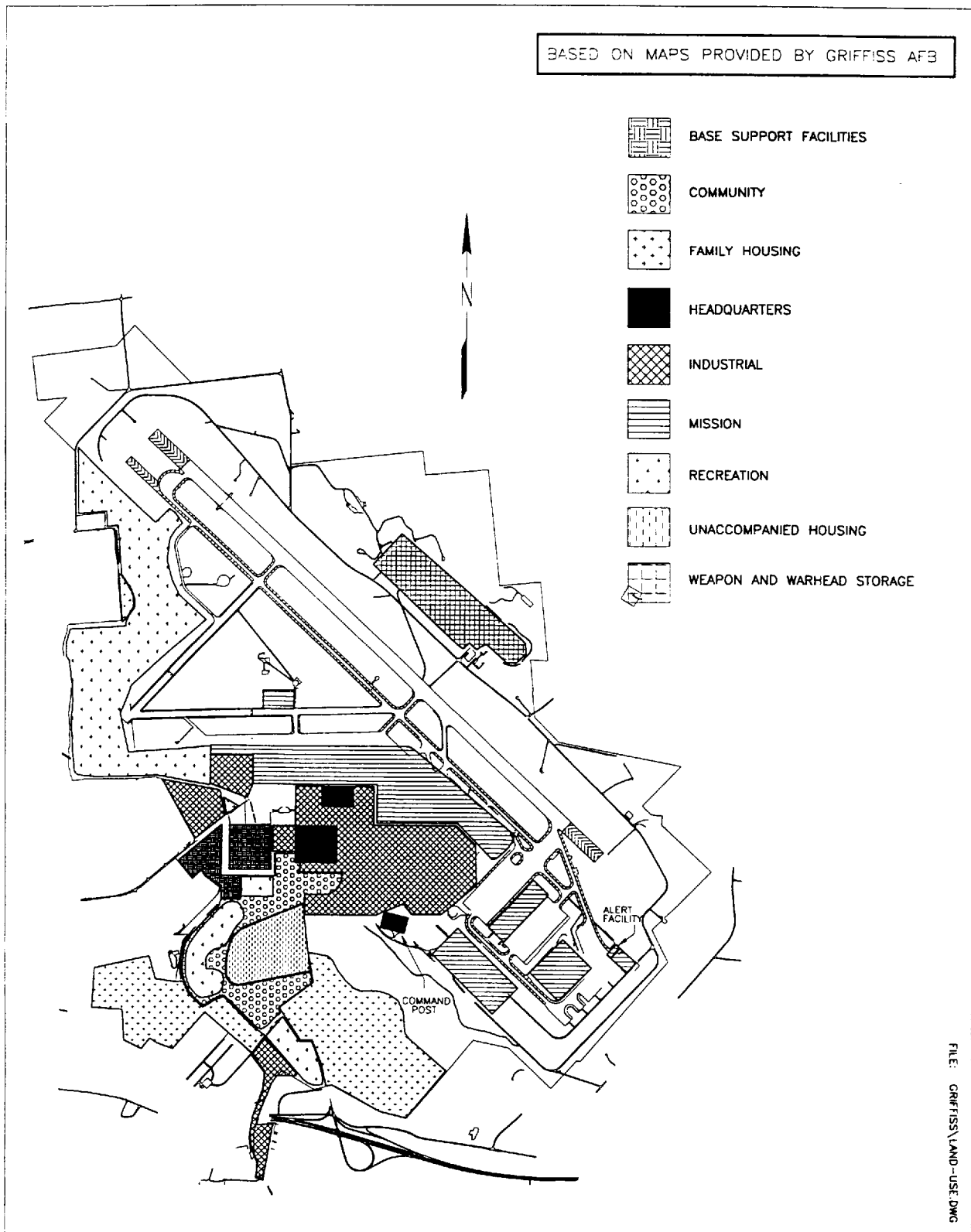


Figure 2.4 Griffiss Air Force Base Land Use Diagram.

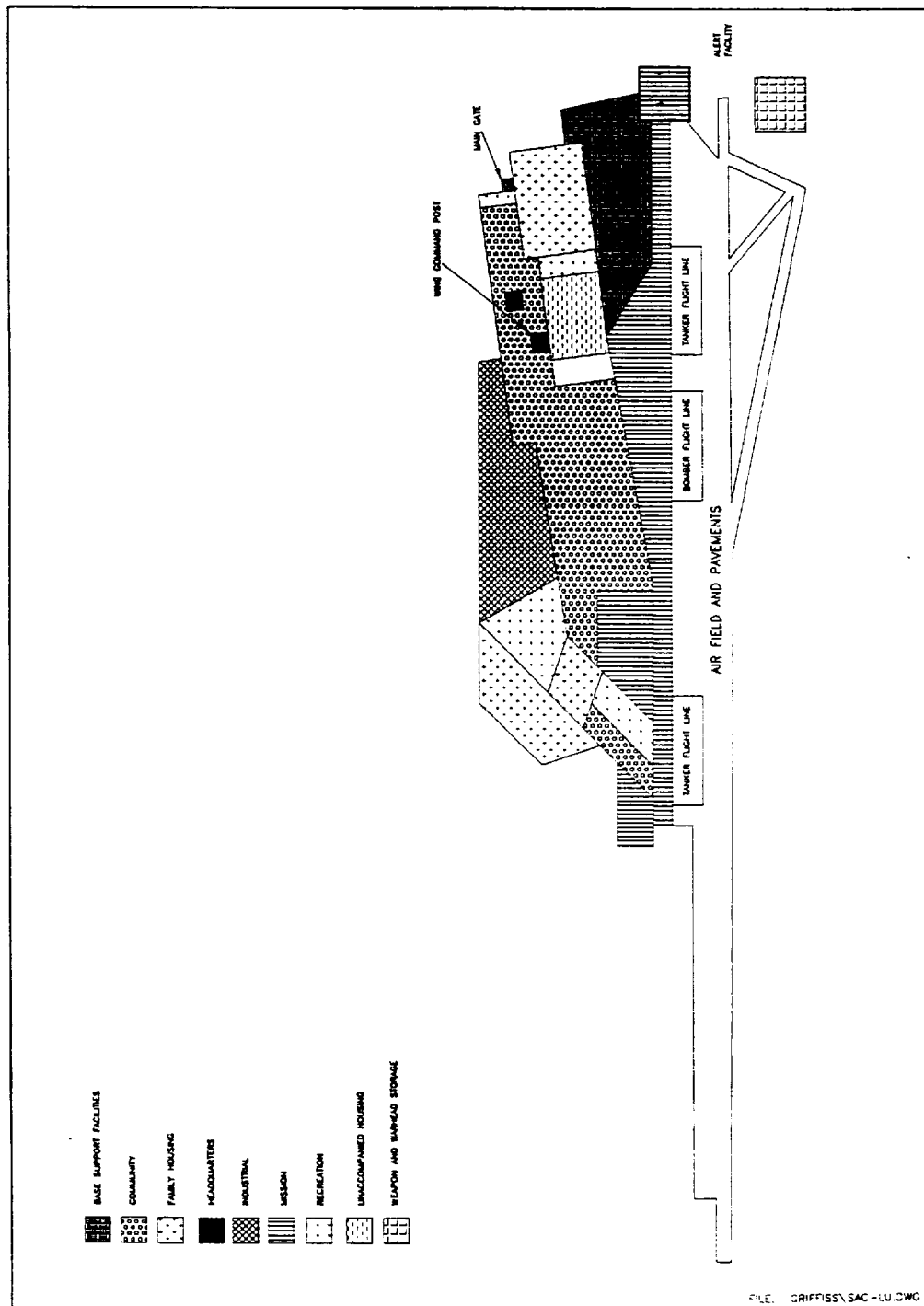


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

take off and landing of aircraft or for weapons storage areas. These areas are designated as part of the land use plan at Griffiss AFB.

Similarities between the Griffiss AFB and the SAC land use plans include the location of the Alert apron, except that the apron at Griffiss AFB does not have a "christmas tree" formation. The location of family housing on the perimeter of the base as far as possible from the runway and mission areas corresponds roughly to that of the standard SAC plan. The positioning of unaccompanied housing and community areas between family housing and the mission areas is another similarity between Griffiss AFB and standard SAC base land use.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

The origins of Griffiss AFB date to 1941, when a War Department survey concluded that Rome, New York, was an ideal place to establish an air depot to serve the strategic northeastern portion of the United States during World War II. A contract was let to the Turner Construction Company of New York City and Louis Mayersohn of Albany, New York, for the construction of Rome Air Depot. The first runway was completed in October 1941 and the depot was activated February 1, 1942, with the runways open for landing and departure on February 14 (Kaye 1993:3; Mueller 1989:205; Wing History Office, Griffiss AFB 1992:2-5).

Initial construction of the depot buildings was completed in 1944. During World War II and for six years after, the depot was under the jurisdiction of Air Materiel Command (AMC), and served the Army Air Force as a storage, shipping, and maintenance center (Environmental Office, Griffiss AFB 1982:3; Wing History Office, Griffiss AFB 1992:2). The depot underwent several name changes between the date of activation and January 29, 1948, when it was officially designated Griffiss AFB (Kaye 1993:3; Mueller 1989:205). Lt. Colonel Townsend E. Griffiss, after whom the base is named, was a native of Buffalo, New York, and was the first American airman killed in the European theater when he was shot down February 15, 1942 (Kaye 1993:3; Mueller 1989:205).

In 1947, the National Security Act reorganized the R&D programs emanating from the War Department. In September 1948, Griffiss AFB was assigned the mission of research, development, and testing of electronic equipment (Environmental Office, Griffiss AFB 1982:3). The Army R&D facility at Watson Laboratories was divided, with a portion of the work force and facilities transferred to Griffiss AFB (Lewis et al. 1995).

Due to the increasing tension in the world during the late 1940s and 1950s following events in China, the Soviet Union, and Korea, emphasis on R&D increased dramatically. A new electronic development center to be located at Griffiss AFB was authorized by Congress in September of 1950. The Air Force christened the new facilities RADC in June 1951. Griffiss AFB, with its new research mission and facilities, was subsequently transferred in 1951 to the newly created Air Research and Development Command (ARDC), and RADC became the base host (Environmental Office, Griffiss AFB 1982:3; Thompson and Scott 1986:iii; Wing History Office, Griffiss AFB 1992:14).

RADC functioned as the Air Force's center of excellence for command, control, communication, and intelligence (C³I) R&D (Kaye 1993:12; Smith and Byrd 1992:1; Thompson and Scott 1986:iii). The original mission at RADC was "to accomplish applied research, development and test of electronic air-ground systems such as detection, control, identification and countermeasures, navigation, communications, and data transmission systems, associated components, and related flight equipment, in support of the mission of the Air Research and Development Command"; and as host at Griffiss AFB, to provide "logistical and administrative support to tenant units and organizations" (Smith and Byrd 1992:2). Throughout the years, the research mission at RADC evolved with technological advancements in communication and weaponry, but C³I remained the paramount focus (Kaye 1993:12).

Of the many RADC research and development contributions to the Air Force during the Cold War, perhaps the most important were those which involved communication and radar and allowed the USAF and Department of Defense (DoD) to successfully monitor U.S. air space to detect intercontinental ballistic missile (ICBM) and bomber threats to the United States. Between the early 1950s and the 1970s, RADC invented or helped to develop the following systems: Distant Early Warning (DEW) Line, White Alice Communication System (WACS), Ballistic Missile Early Warning System (BMEWS), Semi-Automatic Ground Environment (SAGE) system, Over-the-Horizon Backscatter (OTH-B) radar, and the Airborne Warning and

Control System (AWACS). These developments played an integral role in monitoring the Soviet Union and deterring a nuclear threat to the United States during the Cold War.

During the Korean Conflict in 1950, the Air Defense Command (ADC) established the 27th Fighter Interceptor Squadron (FIS) as a tenant unit at Griffiss AFB for the defense of the northeastern United States. On July 1, 1954, AMC resumed command of the base (Kaye 1993:3).

The fighter force was augmented in 1955 with the arrival of the 465th FIS. Both the 27th and 465th FIS were relocated off Griffiss AFB in 1959 with the arrival of the 49th FIS, a major Tactical Air Command (TAC) tenant at Griffiss AFB until 1987. Air defense of the northeastern United States was the primary mission of the 49th FIS, including the interception, identification, and destruction of enemy aircraft across 400,000 mi² of airspace covering nine northern states and Nova Scotia.

Headquarters for the Ground Electronics Engineering Installation Agency (GEEIA) was established at Griffiss AFB in June 1958. This agency directed the engineering and installation of Air Force ground communications equipment around the world.

SAC activated the 4039th Strategic Wing (SW) as a tenant unit at Griffiss AFB in August 1959. The 41st AREFS was activated under the 4039th SW in January 1959. The 4039th SW and 41st AREFS utilized the B-52 bomber and the KC-135 refueler to carry out their mission: "primarily to organize and train a force capable of immediate and sustained long-range offensive bombardment and air-to-air refueling operations in any part of the world" (Schubert 1959:1). The 75th Bombardment Squadron (BMS) was assigned from Loring AFB, Maine, to Griffiss AFB in October 1959 and awaited the arrival of their aircraft. The first B-52G arrived at Griffiss AFB the following January and was christened the "Mohawk Valley." This aircraft is the second of two static displays at Griffiss AFB, mounted near the golf course and Mohawk Gate entrance on base (Kaye 1993:4; Stanley 1994:9; Wing History Office, Griffiss AFB 1992:22-23).

Griffiss AFB was still a part of AMC in 1961, when AMC was redesignated as Air Force Logistics Command (AFLC), in charge of logistics, maintenance, and supply of R&D programs. Griffiss AFB was now a part of AFLC.

The 1962 Cuban Missile Crisis precipitated a heightened alert at Griffiss AFB. President Kennedy ordered an increased alert posture in effect throughout the Air Force (Lewis et al. 1995), and B-52 and KC-135 aircraft were launched for airborne alert missions from the 4039th SW at Griffiss AFB from September through November 1962. These airborne missions were flown under two different names: "Hard Head," which flew over the north Atlantic, and "Chrome Dome," which flew over the Mediterranean. The standard alert duty time at the base was 50% duty, 50% off. However, during the Cuban crisis, nearly everyone was on increased alert posture (SSgt Mark Stanley, personal communication, August 4, 1994).

The 4039th SW was deactivated in February 1963 and the 416th Bombardment Wing (BMW) was activated in its place. Similarly, the 75th BMS was deactivated and the 668th BMS, assigned to the 416th BMW, was activated. The 41st AREFS, formerly assigned to the 4039th SW, was reassigned to the 416th BMW and retained its designations.

The 416th BMW retained its global bombing and refueling objectives and capabilities, though the Wing had acquired Hound Dog and Quail missiles (Lewis et al. 1995). In June 1963, the 668th BMS had eight bombers and crews and 11 tankers and crews standing alert cycles. There were 12 Hound Dog and 24 Quail missiles on alert at this time (Hazard 1963:1,9-11).

In 1968, the 49th FIS acquired the F-106 *Delta Dart* to carry out its mission. Capable of twice the speed of sound and altitudes in excess of 65,000 ft (19,812 m), the F-106 was the TAC workhorse in the air defense of the northeastern United States (Environmental Office, Griffiss AFB 1982:3-4; Kaye 1993:4; Schubert 1959:ii; Stanley 1994:8-9).

In 1968, GEEIA replaced RADC as the base host (Kaye 1993:4-5; Stanley 1994:2,9; Wing History Office, Griffiss AFB 1992:2,25). At this time, the base was still a part of AFLC. In 1970, SAC assumed control of the base and the 416th BMW acquired the base host responsibilities.

GEEIA merged with Air Force Communications Service (AFCS) in 1970 to form a single organization under AFCS. AFCS then activated the Northern Communications Agency (NCA) at Griffiss AFB as one of two regional Air Force communications agencies responsible for the continental United States.

RADC developed the "Upside-Down Air Force" in 1971. The Newport Test Annex and Stockbridge Test Annex, both located near Rome, positioned aircraft upside-down on pedestals and conducted tests to determine the effectiveness of various radar and electronic jamming devices on the plane and its electronic equipment. This was thought to be more cost effective than having aircraft continually flying overhead to accomplish the same objective. The aircraft mounted at Newport included the F-4 *Phantom* and the F-15 *Eagle*; those at Stockbridge included the B-52 and C-130 *Hercules* (Smith and Byrd 1992:118, 125, 135).

The 416th BMW received its first Short Range Attack Missile (SRAM) for deployment in November 1972, and on January 9, 1973, it launched its first B-52 bomber carrying 12 SRAMs (Kaye 1993:5; Wing History Office, Griffiss AFB 1992:29, 31). Congress announced in May 1979 that the 416th BMW would receive the country's first Air-Launched Cruise Missile (ALCM). The missiles arrived at Griffiss AFB in early 1981. Initial launch capability of the ALCM was reached in December 1982 (Kaye 1993:5-6; Stanley 1994:9; Wing History Office, Griffiss AFB 1992:2).

In 1981 NCA, which was still under AFCS, merged with two other organizations to form the Continental Communications Division (CCD) at Griffiss AFB. CCD was deactivated at Griffiss AFB on January 1, 1986 when the Air Force restructured from a regional to a command support

management philosophy. CCD was reactivated the following November at Randolph AFB, Texas, as Headquarters Air Training Communications Division. Meanwhile, AFCS became the Air Force Communications Command (AFCC) (Kaye 1993:3-4; Stanley 1994:7; Wing History Office, Griffiss AFB 1992:2).

The 485th EIG is another important tenant organization at Griffiss AFB. Activated at Griffiss in 1972 following six years service in South Vietnam, the 485th EIG provides the AFCC with program management, engineering, and installation of Air Force communication-computer systems worldwide, especially in the eastern United States and Europe (Kaye 1993:14; Public Affairs Office, Griffiss AFB 1992a:1; Stanley 1994:8).

The NEADS was established in July 1987, and is responsible for the sovereignty of the air space over the northeastern United States. It conducts operations through the SOCC, established at Griffiss AFB that same year, and is an integral part of the air defense network. During the latter years of the Cold War, the primary mission at NEADS/SOCC was to provide National Command Authorities with the earliest possible tactical warning and assessment of Soviet bomber and missile threats. The function of NEADS/SOCC is unique within the Air Force in that its mode of operation remains the same during peace or in a war situation: it monitors all aircraft entering U.S. airspace and, when called upon, challenges unidentified aircraft (Public Affairs Office, Griffiss AFB 1993:1-3).

In July 1987, the 49th FIS was deactivated and its air defense mission was transferred to other TAC bases in the northeastern United States (Wing History Office, Griffiss AFB 1992:39-40). Following the end of the Cold War, this mission was reassigned to six Air National Guard bases in the northeast, five of which have the F-16 *Fighting Falcon* (Wing History Office, Griffiss AFB 1992:39-40). Meanwhile, the 509th AREFS was activated at Griffiss AFB in July 1990 to augment the refueling capabilities at the base.

In 1992, Griffiss AFB was still under SAC and the 416th BMW was the base host. With the restructuring of the Air Force, Griffiss AFB fell under ACC and the 416th BMW, retaining its responsibilities as base host, was redesignated the 416th BW of the Ninth Air Force (Stanley 1994:9; Wing History Office, Griffiss AFB 1992:2). As part of the restructuring of the Air Force and the creation of ACC, the 41st AREFS and its KC-135 tanker assets were transferred to Plattsburgh AFB, New York (Kaye 1993:6,13). The 485th EIG, a subordinate unit under the new Air Force Materiel Command (AFMC), remains at Griffiss AFB as a tenant, serving the Air Force's communications and electronics needs. Rome Laboratory, the new name of RADC since 1991, and NEADS/SOCC also remain at Griffiss AFB.

The mission at Griffiss AFB during the post-Cold War era has remained much the same as before 1989. Maintaining the capability to sustain long-range bombing and refueling operations on a global scale, R&D, and the protection of U.S. air space remain the responsibility of the 416th BW, Rome Laboratory, and NEADS/SOCC respectively. Planning for the closure of Griffiss AFB in September 1995 is currently underway. The airfield, the Bomber Alert Facility, and the NEADS facility will be utilized by the Air National Guard, Rome Laboratory will remain indefinitely as a stand alone facility, and most of the recreational facilities including the golf course and club house will be utilized by Oneida County. Final decisions concerning other facilities on base are pending (Mike Bamberger, personal communication, July 6, 1994; Dr. Thomas Thompson, personal communication, July 11, 1994). [Editor's Note: Griffiss AFB was closed September 30, 1995. It is currently still under USAF control and is managed by the Air Force Base Conversion Agency.]

3.2 BASE DEVELOPMENT

Initial construction of Rome Air Depot began in August 1941, and the three sided, triangular-shaped runway was completed in 1942. Construction proceeded on various facilities until 1944, and all were built south of the east-west runway, including maintenance hangars and base operations, maintenance and warehouse storage facilities, initial sewage and electrical stations and

systems, wing and group headquarters, and equipment and electronic research labs (Figure 3.1). These facilities were built to sustain Rome Air Depot's mission of storage, shipment, maintenance, and aircraft engine overhaul for the Army Air Force during World War II. This initial construction prohibited Griffiss AFB from developing along the standard SAC base design.

RADC was approved in 1948 and officially established in 1951. This precipitated further construction on the base in the early 1950s. The existing northwest-southeast runway was expanded and completed in 1952 (Figure 3.2). RADC headquarters was opened in 1952 and other RADC facilities were completed by 1955. A new officer's club and dining hall were also completed in 1955. These facilities were all located south of the original runway, and many still comprise the heart of the mission and industrial area at Griffiss AFB today.

Major expansion occurred at Griffiss AFB in the late 1950s. The deployment of the B-52 at SAC bases throughout the United States, the 1956 directive by the USAF for concrete runways, and the TAC aircraft stationed at Griffiss AFB required the construction and completion of a new, concrete runway on base. Construction began in 1957 and the 2.25 mi (3.6 km) long runway was completed in 1958. The Bomber Alert Facility and maintenance hangars for the B-52 bombers and KC-135 tankers were constructed in 1959 at the southeastern end of the runway. Other support facilities were built in the vicinity of SAC Hill between 1959-1960, including wing headquarters and squadron operations. The base expanded to the south with the construction of a tank farm to supply jet fuel to the base from the New York Barge Canal and New York Central Railroad. Weapons storage facilities, missile assembly shops, and sewage treatment facilities were constructed northeast of the central portion of the new runway during the late 1950s. In 1957, construction of the first Capehart Housing Act project began, located in the southern portion of the base, east of the south entrance. An additional 270 Capehart units were completed in 1960. Known as the Woodhaven family housing area, this development is located on the western side of the base, south of Floyd Road.

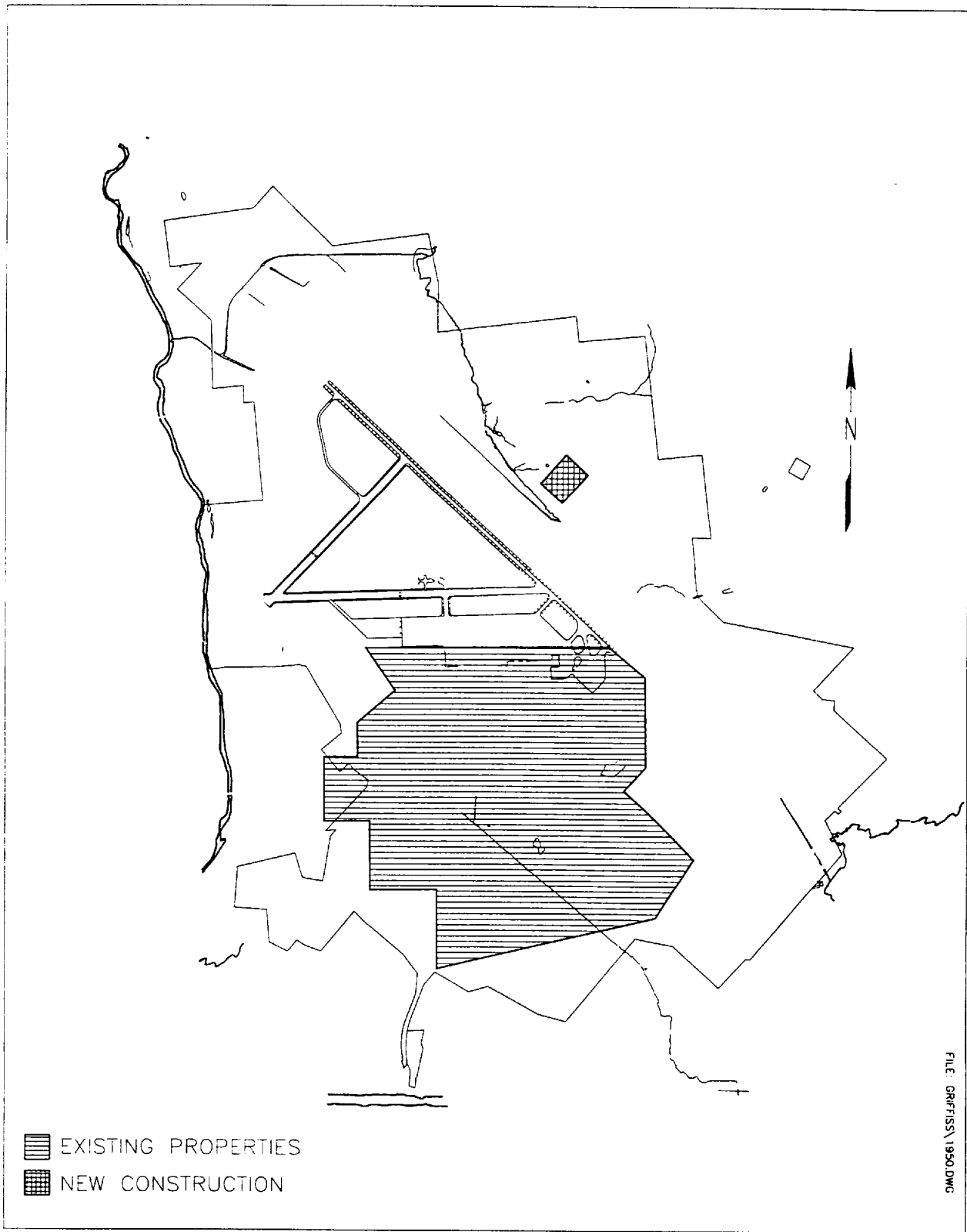


Figure 3.1 Griffiss Air Force Base, 1950.

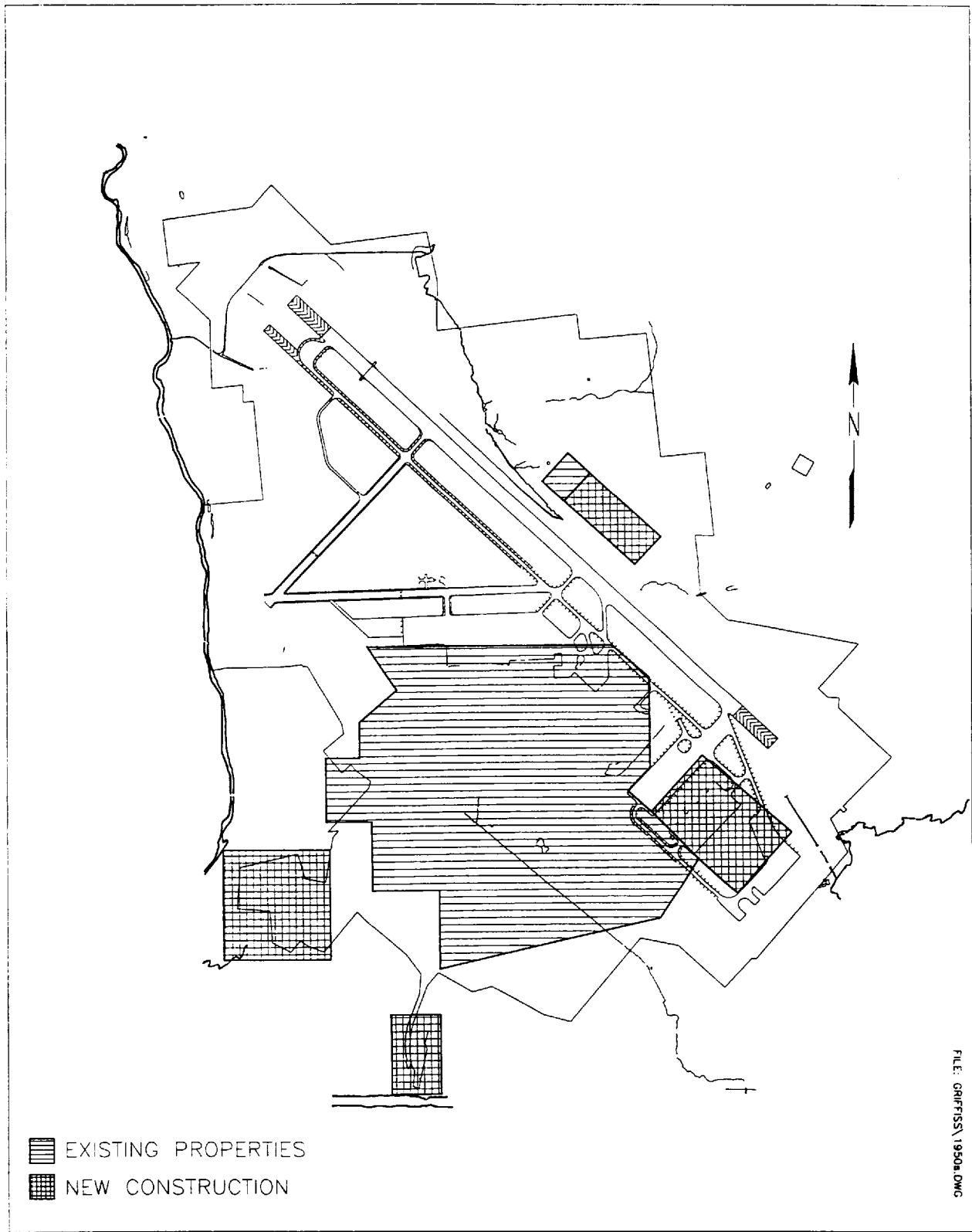


Figure 3.2 Griffiss Air Force Base, 1950-1960.

Griffiss AFB expanded little during the 1960s and 1970s, although the nine hole golf course was completed in 1964 and the family camping area was completed in 1970 (Figure 3.3). The golf course is located west of the old runways, and the family camping area is north of the golf course.

During the 1970s and early 1980s, the weapons storage area was increased in size to accommodate additional storage igloos and missile assembly shops. Missile assembly shops related to the SRAM were constructed in 1973 and 1976, and an additional missile assembly shop was built in 1982 to facilitate the arrival at Griffiss AFB of the ALCM (Figure 3.4).

These are the major expansion periods and programs that occurred at Griffiss AFB during the Cold War era. However, it must be noted that renovation and construction of individual buildings and facilities have continued to the present in all areas of the base.

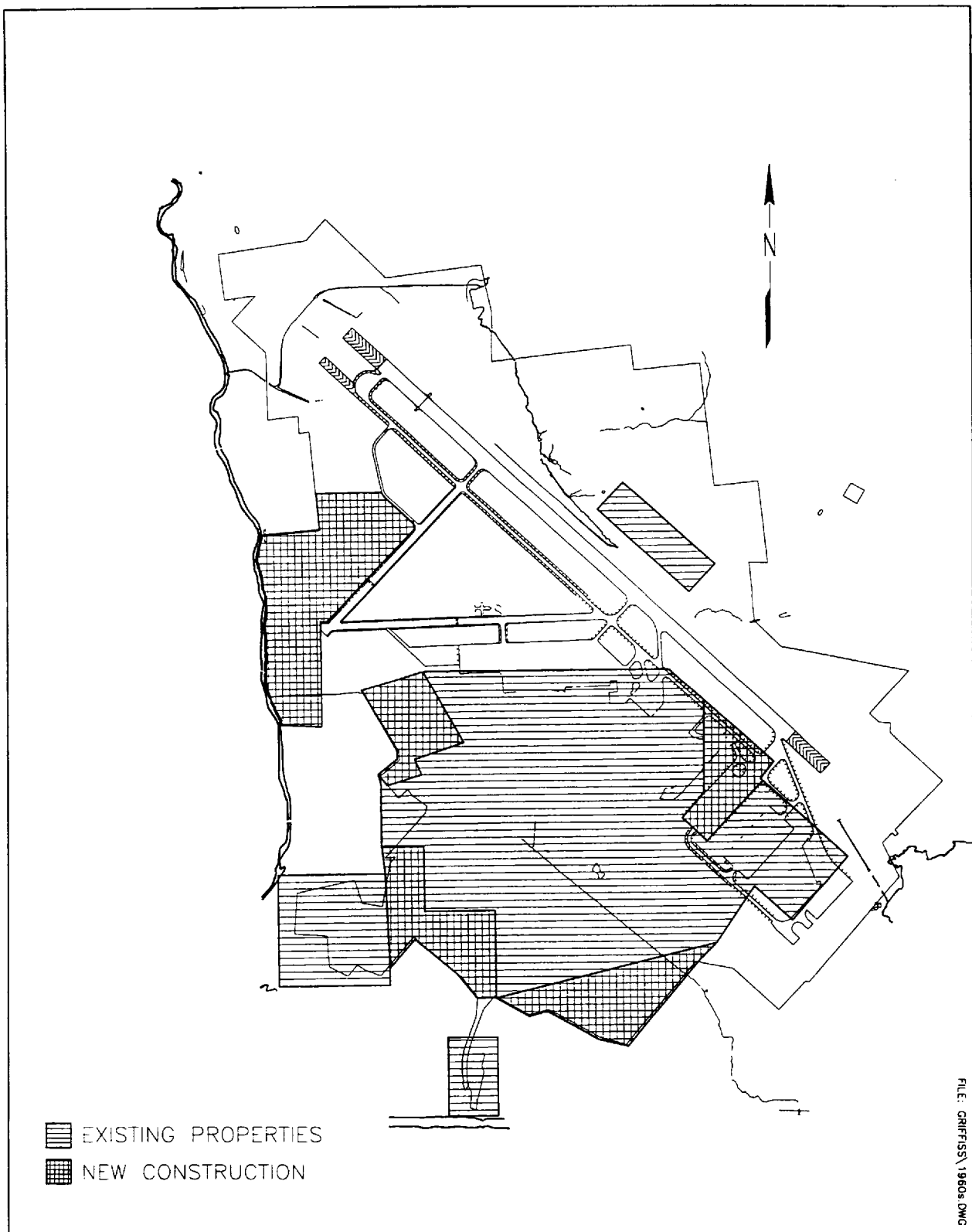


Figure 3.3 Griffiss Air Force Base 1960-1970.

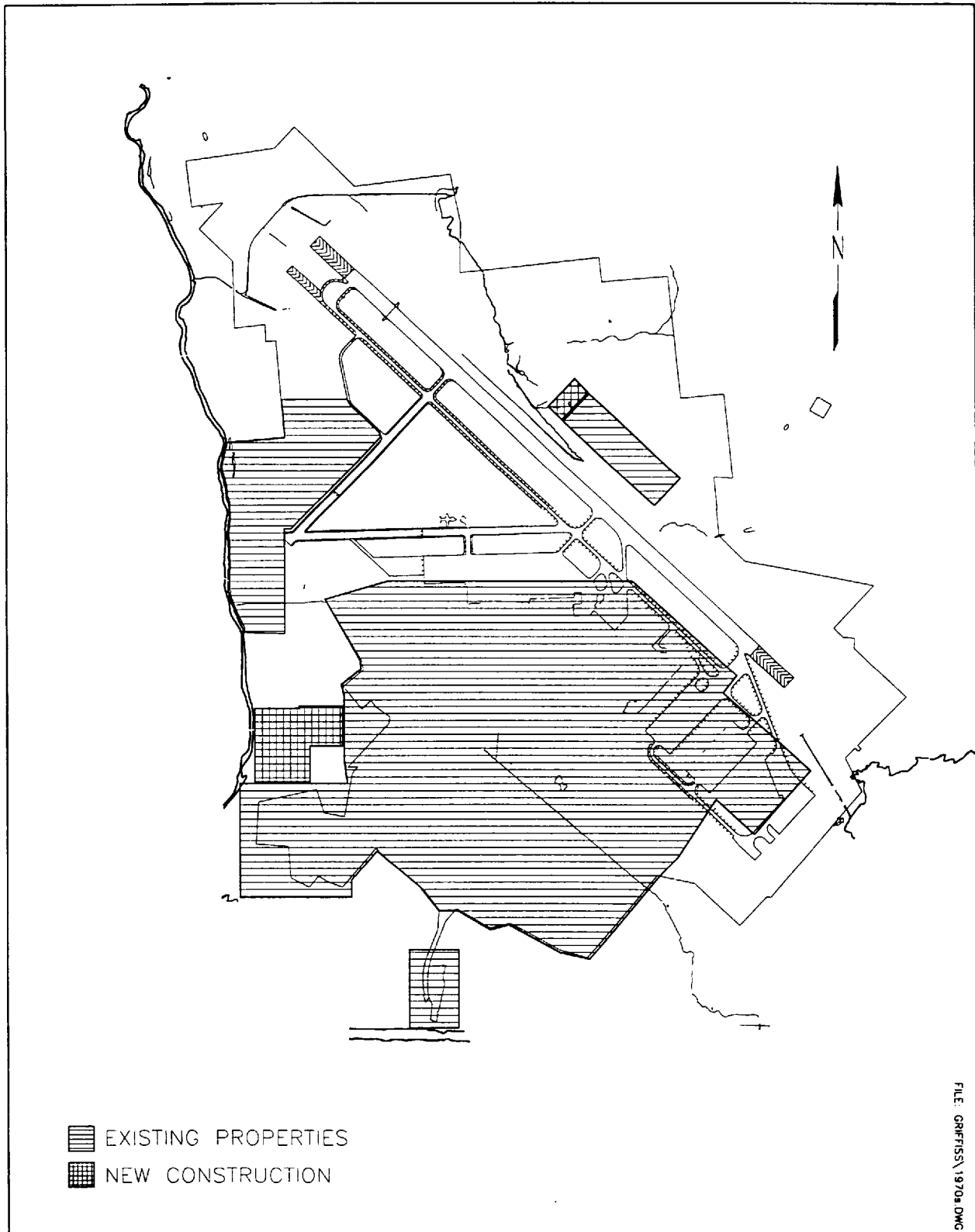


Figure 3.4 Griffiss Air Force Base, 1970-1980.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Griffiss AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Griffiss AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Griffiss AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources, and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) Portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) Portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) Embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War; or
-

-
- d) Have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Griffiss AFB the Mariah team met with their point of contact, Mr. Mike Bamberger, Chief of Natural Resources at the base. Following a discussion of their objectives and needs for completing the base material culture inventory, Mr. Bamberger provided office space in proximity to the Real Property and Civil Engineering offices. The field team was introduced to office personnel and visited the Historian's Office at Rome Laboratory. Mr. Bamberger then took the field team on a tour of the base. The team photographed all representative architecture on the base, including the flight line and secured mission areas with a cleared escort (Mr. Bamberger).

Team members divided tasks to research and inventory documentary resources located in the offices mentioned above. Property Change Lists, Inventory Codes, and cards from the Real Property Office were used to determine the location, current use, date of construction, and building materials of the facilities on base. The Drafting Office in Civil Engineering provided computer files of base maps which depict base layout, building numbers, runways, and roads. Representative base layout maps by decade were obtained from the Civil Engineering Office, and

its flat file collection was inventoried. The Environmental Office provided research material, including a recent Base Comprehensive Plan (Environmental Office, Griffiss AFB 1989). The Wing Historian's Office was inventoried, the Historian interviewed, and research material pertinent to the mission and history of the base obtained. The Office of History at Rome Laboratory was inventoried, and the Historian provided research material and was interviewed. Material researched included a photo archive and yearly histories of the research activities at Rome Lab. The Public Affairs Office provided additional information and literature. The team was also provided with a briefing and tour of the NEADS/SOCC facility toward the end of the visit.

After research was completed, individual resources were selected for further documentation and evaluation, and a Property Management form was completed for each.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Griffiss AFB, 136 resources were inventoried. Appendix A lists the inventoried resources, and Appendix B shows their locations on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at Griffiss AFB, all of them falling under the DoD category of real property. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured, affecting determinations of integrity.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Base and Command Centers

6.1.1.1 Command Center (Resource No. 8029, Real Property No. 700)

The Command Center is the headquarters for NEADS in general and SOCC in particular at Griffiss AFB. The resource is a building specifically designed for use as the Command Center and it continues in this use. Built in 1982, this permanent, 31,500 ft² (2,926 m²) building is located on a hill just south of the main mission and industrial area, and west of SAC Hill. The most notable characteristic of the building is its roof, which is elongated and curved with skylights. The majority of the building is below ground level with an earthen berm sloping up to the entrance. Exterior walls are of thick, reinforced concrete. The interior contains status boards, internal backup power units, and multiple communication systems. All of these features speak to the protection and survival of the occupants during attack, and the survivability of the center to perform its mission. Due to the sole and continuous use of this building as the NEADS/SOCC Command Center, and partial observation, the integrity of the building is determined to be

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Base and Command Centers	Command Center	8029	700	Real/Bldg	18
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	8113	793	Real/Bldg	20
Material Development Facilities					
Research Laboratories	Rome Laboratory Headquarters	8010	106	Real/Bldg	20

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	8010	106	Rome Laboratory Headquarters
20	8113	793	Bomber Alert Facility
18	8029	700	Command Center

intact. Although Griffiss AFB is scheduled for closure in 1995, this facility will remain in operation, continuing its original function as the NEADS/SOCC Command Center.

The mission of the NEADS/SOCC facility, one of four air defense sectors established in 1987, is:

to provide the earliest possible tactical warning and assessment to national command authorities against the manned bomber and cruise missile threats . . . The Sector defends the National Command Authorities strategic military, civil and industrial centers in the northeast against air attack (Kaye 1993:11-12; Public Affairs Office, Griffiss AFB 1993:1).

This facility is not only extremely important to the base's Cold War context, but also to the history of the Cold War at a national level. Its importance lies in its continued use as the Command Center for the protection and survivability of the strategically important northeastern section of the country.

Due to its mission, the facility figured prominently in the deterrence of enemy aggression during the closing years of the Cold War. This building performed this role during Phase IV of the Cold War era, and meets NRHP criterion (a).

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 8113, Real Property No. 793)

The Bomber Alert Facility is located on the southeastern corner of the alert apron. This 18,318 ft² (1,702 m²) facility, constructed in 1959, is a permanent, semisubterranean, two story building. The facility is characterized by the large, corrugated metal tubes which cover the ramp entrances/exits of the building and are designed to keep snow and ice off of the ramps during winter weather and to facilitate rapid egress during an alert situation or Operation Readiness Inspection (ORI) drill. During the Cold War, this facility was under heavy security with armed guards and razor wire on the fences. These security measures no longer exist. The integrity of

the facility's exterior appears intact; however, since the field team was unable to gain access to the building, the integrity of its interior remains unknown.

This facility was used during the Cold War for aircrews and aircraft that directly supported the National Emergency War Order and were in a perpetual ready-to-go status. Because the facility was used to house B-52 aircrews and was located close to the planes, it facilitated rapid deployment of the B-52 bomber force. It allowed for maximum readiness to deter enemy aggression and embodied the SAC strategy of rapid deployment, deterrence, and strike capabilities in a national emergency situation.

The Bomber Alert Facility is extremely important to Griffiss AFB's Cold War context and to the Cold War history of the nation. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to National Security Council document 68, in support of the concept of deterrence through a survivable force, and following the recommendations of the Killian Report for the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of DoD's defense triad and was relied on as the United States's primary manned bomber for over 30 years. This facility fulfilled this role during Phases II through IV and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

6.3.1 Research Laboratories

6.3.1.1 Rome Laboratory Headquarters (Resource No. 8010, Real Property No. 106)

The Rome Laboratory Headquarters at Griffiss AFB is a permanent, three story, red brick building utilized by Rome Laboratory for R&D. This 194,840 ft² (18,101 m²) facility was completed in 1943. It is the headquarters of Rome Laboratory and has been utilized primarily for

surveillance work associated with radar development. One of the original buildings at Griffiss AFB, this facility also houses a technical and professional library to assist in the research conducted at Rome Laboratory. This facility, associated with other Rome Laboratory research and storage buildings, as well as various research annexes and antennae, was singled out for evaluation due to its headquarters function.

The Rome Laboratory research complex is unique because it was established by Congress in 1950. Known as RADC until 1991, it was under the auspices of the Air Force Systems Command (AFSC) and responsible for C³I R&D. Rome Laboratory is currently managed by AFMC. Over the years, the laboratory's technical achievements in C³I have provided the Air Force with a vast array of warning, communication, and guidance systems needed to deter or wage global war. Rome Laboratory was also responsible for the first transmission of a voice message from the Echo 1 balloon satellite in 1960. Rome Laboratory figured significantly in all four temporal phases of the Cold War with technological developments that included BMEWS, the DEW Line, the SAGE system, the OTH-B radar, and AWACS (Kaye 1993:12-13; Public Affairs Office, Griffiss AFB 1992b:1-2; Thompson and Scott 1986:iv; Wing History Office, Griffiss AFB 1992:1-2).

The integrity of the building could not be assessed since the field team was not allowed access to the facility. However, as the facility continues in its R&D function, the integrity of the building is determined to be intact.

The exceptional importance of this facility to the base's Cold War context and to the national Cold War history lies in the technological developments which were made therein. In addition to contributing to national defense and the exploration of outer space, these developments have provided the U.S. military in general, and the USAF in particular, with technological advantages over the Soviet Union in communication, radar, and weapons guidance systems. The developments have provided the United States with the means to either deter or wage global war

because the facility has continued its function of electronic R&D to the present day. This facility has fulfilled this role during all four phases of the Cold War era and meets NRHP criterion (a).

6.4 TRAINING FACILITIES

None were evaluated at Griffiss AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Griffiss AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Griffiss AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted but not inventoried. These resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Griffiss AFB. These resources should be investigated further for more comprehensive analyses.

Due to an oversight while at the base, the Mariah field team was not able to evaluate the fighter alert facility. Similar fighter alert facilities located on other AFBs in this study have been found to be of exceptional significance with intact integrity, and thus NRHP eligibility was recommended for them. It is recommended that this fighter alert facility be evaluated for NRHP eligibility prior to any undertakings which might affect the facility's integrity.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Griffiss AFB revealed approximately 290 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Griffiss AFB should allot time for researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

Griffiss AFB is scheduled for closure in 1995. As of the date of the field team's visit to Griffiss AFB, no historic preservation plan had been drafted or put into effect to deal with preserving the historic resources on base prior to closure. However, an environmental base line survey is scheduled for the near future which will determine the scope of work for an evaluation of historic structures, archaeological investigations, and a cultural resource inventory, all of which will determine the focus and outcome of a future historic preservation plan (Mike Bamberger, personal communication, August 1, 1994).

Current plans call for the NEADS/SOCC Command Center to continue to be operated by the Air National Guard, so the threat to that building appears low. The Air National Guard will also utilize and maintain the Bomber Alert Facility, so the threat to that facility likewise appears low.

The Rome Laboratory Headquarters is in no immediate danger as it is presently scheduled to continue its function. However, no final decision has been made for Rome Laboratory to stay at Griffiss AFB. Should Rome Laboratory be moved, the integrity of the headquarters would be in jeopardy. Also, archived resources from the Wing Historian's Office, such as photos, a newspaper collection, and Wing histories, will be deposited at the historian's office at Rome Laboratory. Should the laboratory be moved, these resources may be lost or damaged.

The Environmental Office at Griffiss AFB also expresses concern regarding the fate of the B-52 (Mohawk Valley) static display located near the golf course. This aircraft was the first B-52 to arrive at Griffiss AFB in 1960 and utilized the latest USAF weapons arsenal (SRAMs and ALCMs) until its retirement in May 1991.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Griffiss AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Griffiss AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Griffiss AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Griffiss AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
8010	106	Rome Laboratory Headquarters		*	*	*		NRHP eligible now.
8029	700	Command Center		*	*	*		NRHP eligible now.
8113	793	Bomber Alert Facility		*	*	*		Potentially NRHP eligible now.

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Command Center (Resource No. 8029, Real Property No. 700)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase IV. It meets NRHP criterion (a) based on its role in detecting and warning of any enemy incursion into United States air space and the protection of the northeastern section of the country. The integrity of the building is determined to be intact based upon the sole and continuous use of the building as the NEADS/SOCC Command Center and partial observation. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the current level of integrity of the building and further documentation to nominate this resource to the NRHP.

9.2.2 Bomber Alert Facility (Resource No. 8113, Real Property No. 793)

This building is evaluated as exceptionally important to the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) due to its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. However, the integrity of the interior of the building remains unknown. Therefore, this building is recommended as potentially eligible to the NRHP. Recommendations include further documentation to determine the level of integrity and to explore NRHP eligibility. Stewardship of the building to retain its current level of integrity is recommended in the interim during this evaluation.

9.2.3 Rome Laboratory Headquarters (Resource No. 8010, Real Property No. 106)

This building is evaluated as exceptionally important within the base and national Cold War contexts during all four Phases. It meets NRHP criterion (a) based upon the technological research and developments made at the facility which strengthened the country's deterrent forces. The integrity of the building is determined to be intact based upon the sole and continued use of the building for R&D. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.3 PENDING BASE CLOSURE

There is no immediate threat to any of the three evaluated facilities on Griffiss AFB. However, the base is scheduled for closure in 1995, with the subsequent transfer of buildings and properties out of Air Force control. These actions constitute a federal undertaking that may have an effect on potentially NRHP-eligible properties. It is therefore recommended, per Section 106 of the NHPA, that the eligibility of the three properties be determined prior to transfer of the buildings

out of USAF control. [Editor's Note: As of this publication, the properties at Griffiss AFB remain under the control of the USAF and are managed by the Air Force Base Conversion Agency.]

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Environmental Office, Griffiss Air Force Base

- 1982 *Griffiss AFB PAT Study*. Planning Assistance Team (PAT) Study. On file, Environmental Office, Griffiss Air Force Base, New York.
- 1989 *Base Comprehensive Plan, Griffiss Air Force Base, New York*. On file, Environmental Office, Griffiss Air Force Base, New York.

Fenneman, N. M.

- 1938 *Physiography of Eastern United States*. McGraw-Hill, New York and London.

Hazard, C. I. TSgt

- 1963 *416th Bombardment Wing, 1-30 June 1963*. On file, Wing Historian's Office, Griffiss Air Force Base, New York.

Kaye, T. SSgt, editor

- 1993 *Griffiss Air Force Base*. Rome Area Chamber of Commerce, Rome, New York.

Law Environmental, Inc.

- 1994 *Remedial Investigation Technical Memorandum No. 3 Cultural Resources Study, Griffiss Air Force Base, New York*. Law Environmental, Inc., Kennesaw, Georgia.

Lewis, K., and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.
-

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*, Vol. 1. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Public Affairs Office, Griffiss Air Force Base

- 1992a *Fact Sheet: 485th Engineering Installation Group*. On file, Public Affairs Office, 416th Bomb Wing (Air Combat Command), Griffiss Air Force Base, New York.
- 1992b *Fact Sheet: Rome Laboratory*. On file, Public Affairs Office, 416th Bomb Wing (Air Combat Command), Griffiss Air Force Base, New York.
- 1993 *Northeast Air Defense Sector, Griffiss AFB, Rome, NY*. On file, Public Affairs Office, 416th Bomb Wing (Air Combat Command), Griffiss Air Force Base, New York.

Schubert, J.A.

- 1959 *History of the 4039th Strategic Wing, 1 August 1958 through 28 February 1959*. On file, Wing History Office, Griffiss Air Force Base, New York.

Smith, J., and D. Byrd

- 1992 *Forty Years of Research and Development at Griffiss Air Force Base, June 1951-June 1991*. Rome Laboratory History Office, Griffiss Air Force Base, New York.

Stanley, M. SSgt

- 1994 *A Brief History of the 416th Bomb Wing and Griffiss Air Force Base, New York*. On file, Wing History Office, Griffiss Air Force Base, New York.

Thompson, T., and SSgt C. A. Scott

- 1986 *RADC History Highlights, 1951-1986*. Rome Air Development Center, Air Force Systems Command, Griffiss Air Force Base, New York.

United States Air Force

- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
-

Wing History Office, Griffiss Air Force Base

1992 *50 Years of Excellence: Griffiss Air Force Base, Rome, New York.* Steffen Printing,
Holland Patent, New York.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	8001	301	Base Engineering Administration	1943
	8002	302	Communication Facility	1943
	8003	303	Reserve Forces General Training Support	1943
	8006	306	POV Washrack	1987
	8007	1	Group and Wing Headquarters	1942
	8008	2	Headquarters Group	1942
	8009	115	Reserve Forces General Training Support	1943
	8010	106	Rome Laboratory Headquarters	1943
	8011	101	Maintenance Hangar	1943
	8012	104	Equipment Research Laboratory	1943
	8013	120	Headquarters	1943
	8014	119	Security Police Operations and Central Control	1942
	8015	102	Northeast Air Defense Sector (NEADS) Headquarters	1943
	8016	3	Electronic Research Lab	1955
	8017	29	Power Generating Plant	1985
	8018	112	Equipment Research Laboratory	1943
	8019	100	Base Operations and Maintenance Hangar	1943
	8020	123	Precision Measurement Equipment Lab	1944
	8022	9	Vehicle Operations Heated Parking	1943
	8023	45	Fire Station	1981
	8024	150	Maintenance Hangars	1953
	8025	145	Administration Office	1956
	8027	133	Flight Simulator Training	1977
	8028	143	Exchange Sales Store	1954
	8029	700	Command Center	1982
	8030	43	Fueling Station	1985
	8031	42	Petroleum Operations Building	1983
	8032	20	Locomotive Shop and Shelter	1943
	8033	14	Base Personnel	1943
	8034	11	Vehicle Maintenance Shop	1985
	8035	346	Commissary	1976
	8037	434	Security Police Operations	1953
	8038	428	Central Plant	1953
	8039	324	Base Cold Storage	1959
	8040	308	Administration Office	1943
	8041	311	Data Processing Installation	1959
	8042	300	Federal Credit Union	Unknown
	8043	321	Base Engineering Pavement and Grounds Facility	1954
	8044	144	Base Exchange	1954
	8045	329	Branch Exchange	1982
	8046	337	Exchange Service Station	1961
	8048	923	Group Headquarters	1943

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	8050	334	Base Engineer Covered Storage	1943
	8051	750	Air Force Office of Special Investigation	1954
	8053	773	Hydrant Fueling Building	1959
	8054	796	Flight Simulator Traing	1982
	8055	776	Weapons System Management Facility	1959
	8056	1477	Electronic Research Test Facility (Stockbridge Annex-Rome Labs)	1959
	8057	778	Wing Headquarters	1959
	8058	780	Wing Headquarters and Squadron Operations	1959
	8059	1245	Electronic Research Test Facility (Verona Annex-Rome Labs)	1952
	8060	1250	Equipment Research Test Facility (Verona Annex-Rome Labs)	1953
	8061	232	Appropriated Family Housing	1943
	8062	274	Traffic Check House (Floyd Gate)	1969
	8063	240	Electronic Research Lab	1955
	8064	231	Appropriated Family Housing	1943
	8066	212	Survey Equipment Shop	1958
	8067	210, 211	WaterPump Station and Building Water Supply	1943
	8068	216	Base Maintenance Shop	1942
	8069	220	Wing Headquarters	1942
	8070	214	Base Maintenance Shop	1942
	8071	255	Base Maintenance Shop	1944
	8075	245	MWR Supply & Non-Appropriated Fund Central Storage	1958
	8077	890	Open Mess and Golf Club House	1992
	8078	277	Security Police Entry Control Station (Mohawk Entrance)	1988
	8079	880	Appropriated Family Housing	1943
	8080	883	Appropriated Family Housing	1943
	8081	885	Family Housing Detached Garage	1943
	8083	437	Library	1959
	8084	448	Airman's Dormitory	1977
	8085	442	Airman's Dormitory	1958
	8086	443	Airman's Dining Hall	1958
	8087	482	Child Care Center	1975
	8088	400	Bowling Center	1968
	8089	520	Recreation Center	1958
	8090	774	Avionics Shop	1959
	8091	510	Composite Medical Center	1974
	8092	517	Chapel Center	1970
	8093	439	Base Theater	1972

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	8094	488, 490-492	Transient Lodging Support Facility and Transient Lodging Facilities	1972-1977
	8096	2401	Capehart Family Housing	1959
	8097	2704	Capehart Family Housing	1059
	8098	2705	Capehart Family Housing	1959
	8099	2714	Capehart Family Housing	1959
	8100	704	Visiting Officer's Quarters	1953
	8101	480	Appropriated Family Housing	1943
	8102	520, 712	Recreation Center and Officer's Quarters	1958, 1959
	8103	5773	Power Check Pad w/Suppressor	1988
	8104	5774	Power Check Pad w/ Suppressor	1979
	8106	504	Control Tower	1981
	8107	23	Base Warehouse Supply & Equipment	1943
	8108	786	Maintenance Hangar	1959
	8109	706	Youth Center	1943
	8110	724	Recreation Center	1955
	8112	790	Missile Run-up Shop	1961
	8113	793	Bomber Alert Facility	1959
	8114	221	Small Aircraft Maintenance Hangar	1942
	8116	917	Missile Assembly Shop	1982
	8117	854, 6025	Combat Arms Training Maintenance Building and Small Arms Range System	1944, 1961
	8120	440	Gymnasium	1977
	8123	764	Crew Readiness Building	1963
	8131	None	Floyd Test Annex	1951-1952
	8132	None	Newport Test Annex	1954
Real Property - Landscape				
	8049	6099	Tennis Courts	1976
	8073	5460	Athletic Field Softball	1943
	8082	6310	Family Campgrounds	1970
	8095	6315	Consolidated Swimming Pool	1969
	8105	None	"Honor Yard of the Month" - Plow Blade w/ Floral Display	Unknown
	8111	None	Children's Playground	Unknown
	8119	5030	Trailer Court Parking	1977
	8121	6100	Recreation Court	1977
Real Property - Object				
	8004	6313	Base Flag Pole	1943
	8005	6257	Monuments/Memorial	1976
	8021	6259	Static Display Aircraft (F-106 <i>Delta Dart</i>)	1986
	8047	None	Base Railroad Engine	Unknown
	8052	None	Static Display (Metal Frame Aircraft Model)	Unknown

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	8076	None	B-52 & Air Launch Cruise Missile	Unknown
	8129	None	4 Base Aerial Photographs	1945-1976
	8130	None	Miscellaneous Framed Photographs, Awards, etc.	Unknown
Real Property - Structure				
	8026	144	Base Hazardous Storage	1955
	8036	27	Electrical Switch Station	1942
	8065	209	Water Tank Storage	1943
	8072	None	Pavillion Style Open Shed	Unknown
	8074	None	RAPCON	Unknown
	8115	900-907	Storage Igloos	1982
	8122	None	Northeast Air Defense Sector Antennae	1987
Record or Document - Object				
	8118	None	Architectural Files	Unknown
	8124	None	Rome Laboratory History Office Photo Archive	Unknown
	8125	None	Rome Laboratory Archival Newspaper Clipping Collection	Unknown
	8126	None	Old Electronics and Radar Books from Rome Lab Library	Unknown
	8127	None	Rome Laboratory Yearly History Collection	1951-1992
	8128	None	Collection of Communication Documents, Rome Air Depot and Griffiss Air Force Base Histories	Unknown
	8133	None	Wing Historian Office Photo Archive Collection	Unknown
	8134	None	Wing Histories/Wing Historian's Office	1958-1993
	8135	None	Base Newspaper Collection/Wing Historian's Office	Unknown
	8136	None	Miscellaneous documents/photos/newspaper clippings	Unknown

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

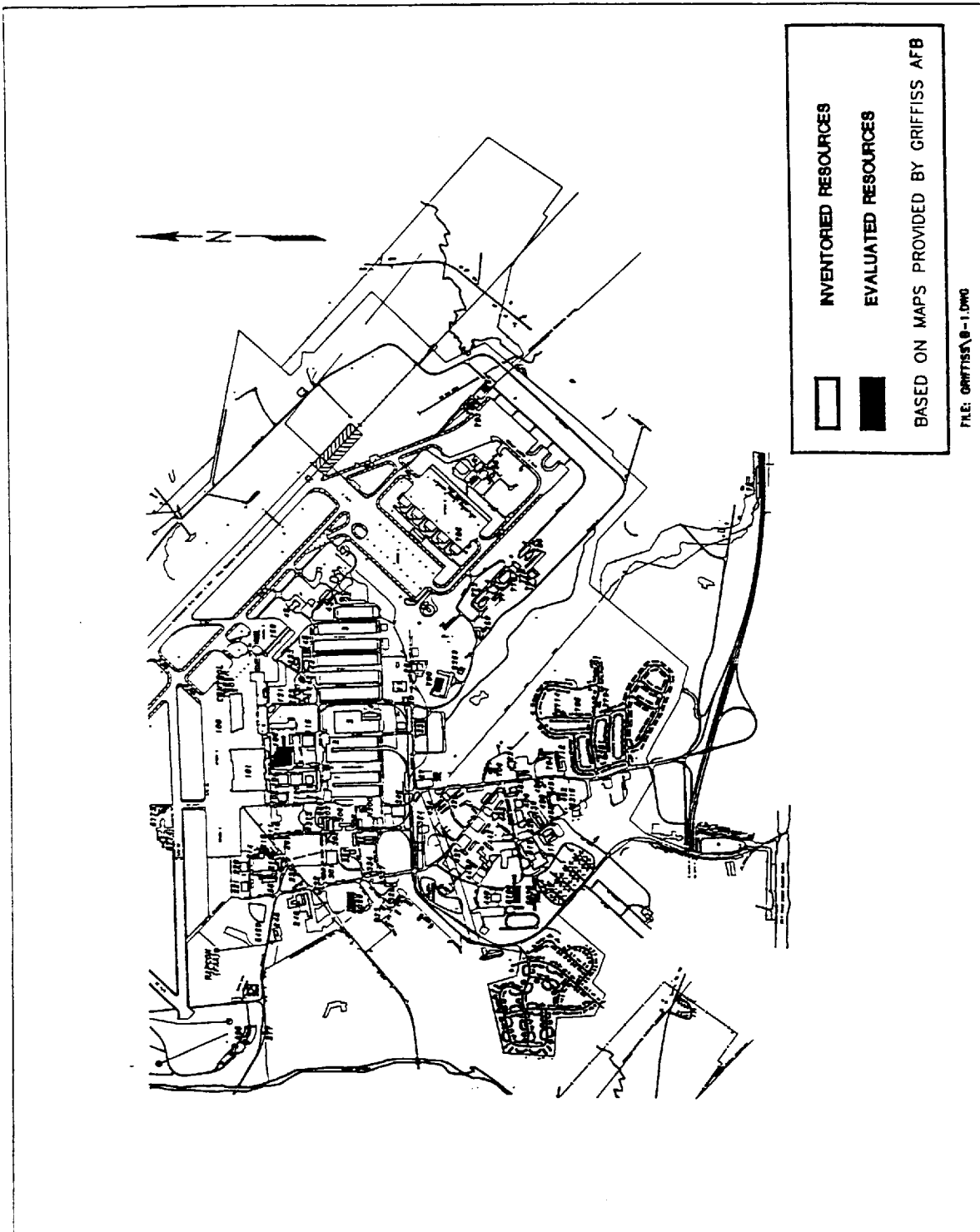


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 2).

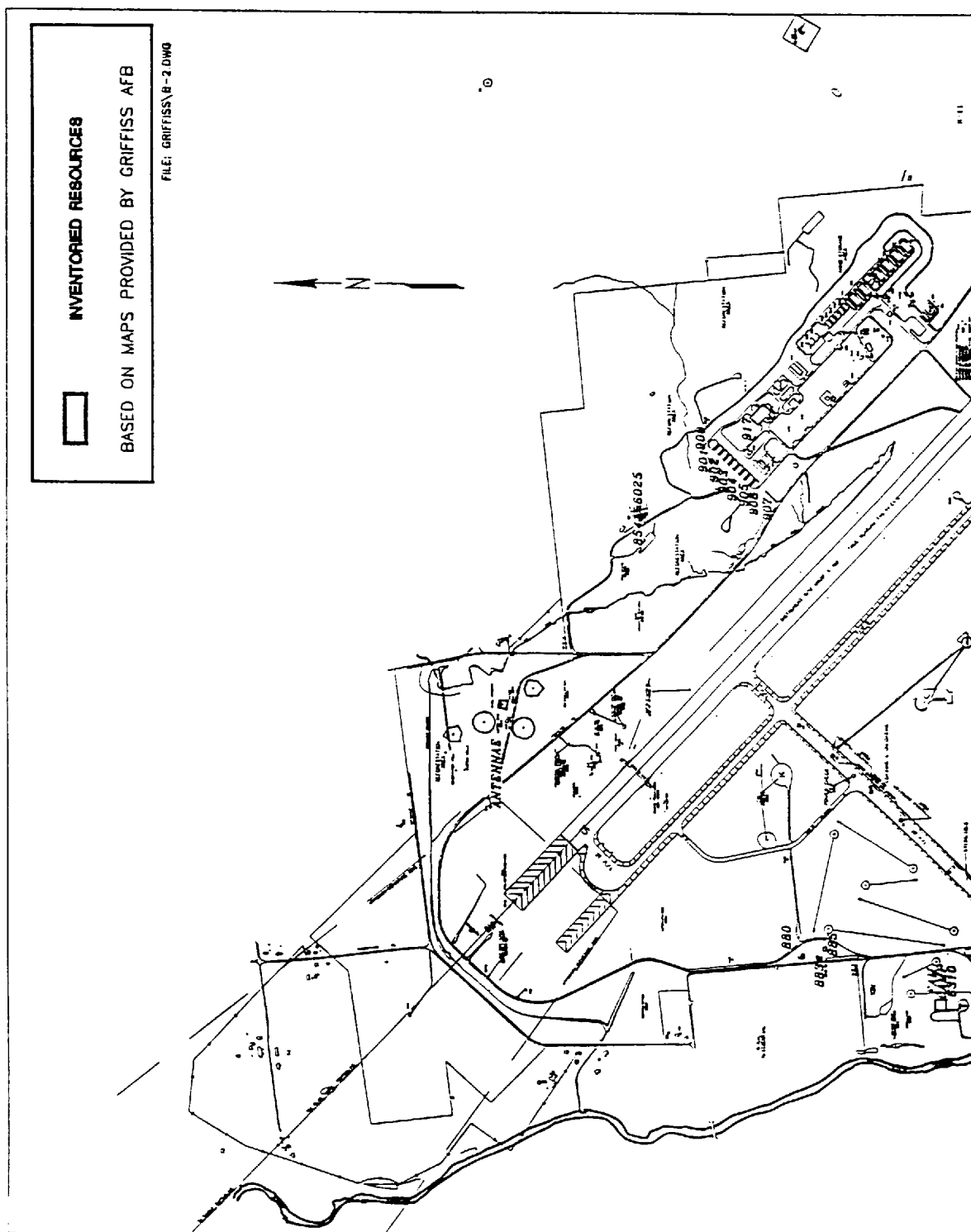
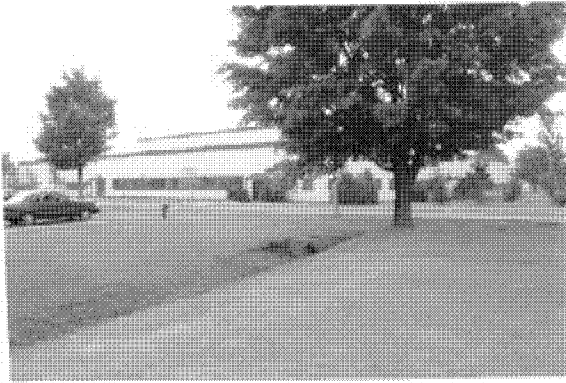


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 2).

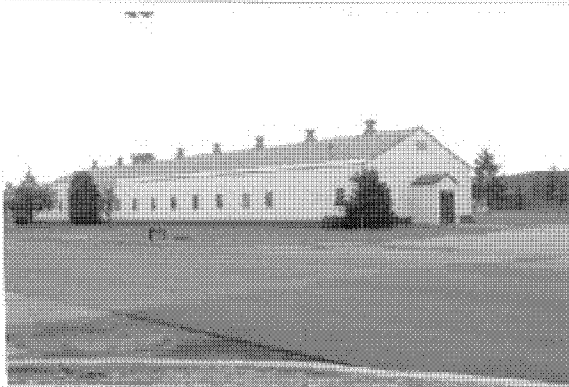
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 8001, Real Property No. 301
Base Engineering Administration



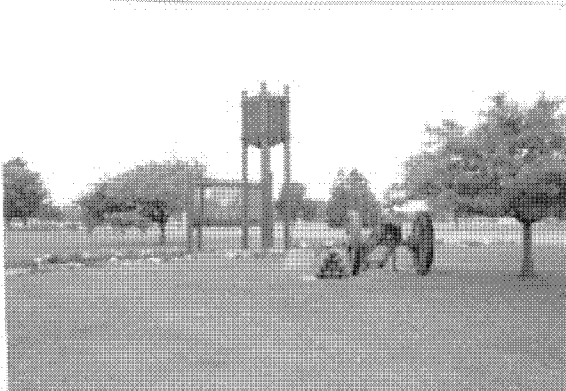
Resource No. 8002, Real Property No. 302
Communication Facility



Resource No. 8003, Real Property No. 303
Reserve Forces General Training Support



Resource No. 8004, Real Property No. 6313
Base Flag Pole



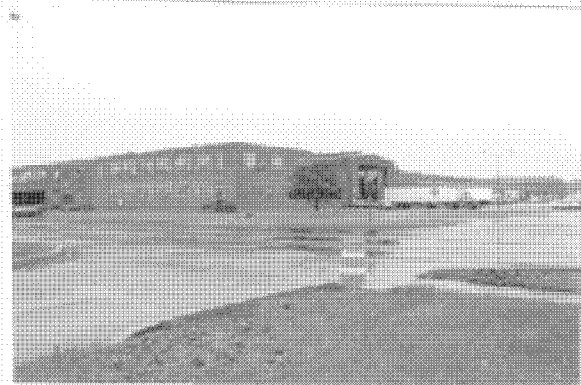
Resource No. 8005, Real Property No. 6257
Monuments/Memorial



Resource No. 8006, Real Property No. 306
POV Washrack



Resource No. 8007, Real Property No. 1
Group and Wing Headquarters



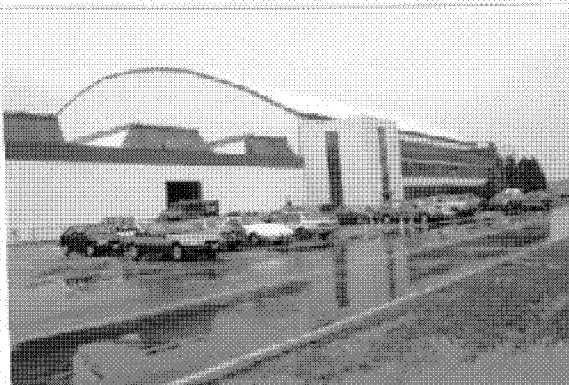
Resource No. 8008, Real Property No. 2
Group Headquarters



Resource No. 8009, Real Property No. 115
Reserve Forces General Training Support



Resource No. 8010, Real Property No. 106
Electronic Research Laboratory



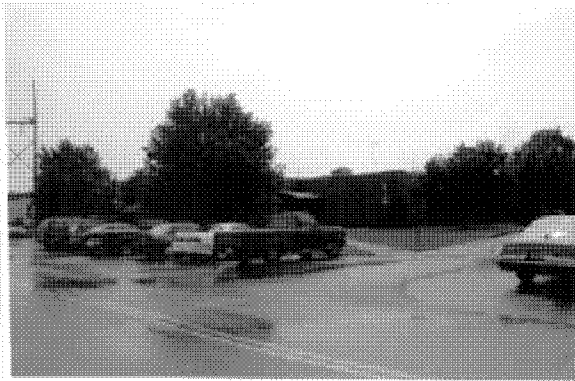
Resource No. 8011, Real Property No. 101
Maintenance Hangar



Resource No. 8012, Real Property No. 104
Equipment Research Laboratory



Resource No. 8013, Real Property No. 120
Headquarters



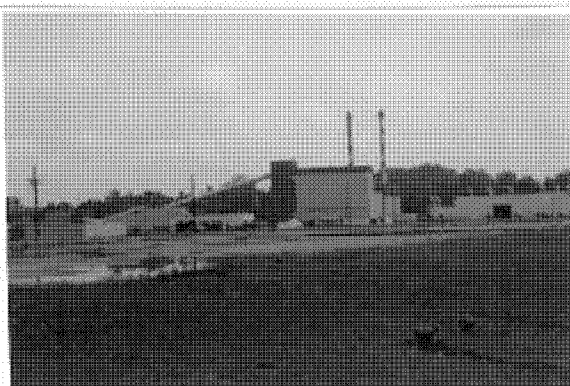
Resource No. 8014, Real Property No. 119
Security Police Operations and Central Control



Resource No. 8015, Real Property No. 102
Northeast Air Defense Sector (NEADS)
Headquarters



Resource No. 8016, Real Property No. 303
Electronic Research Lab



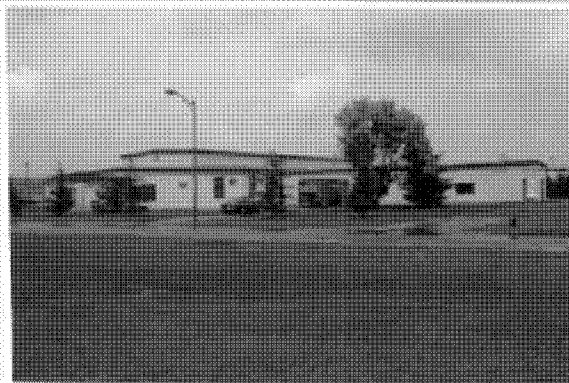
Resource No. 8017, Real Property No. 29
Power Generating Plant



Resource No. 8018, Real Property No. 112
Equipment Research Laboratory



Resource No. 8019, Real Property No. 100
Base Operations and Maintenance Hangar



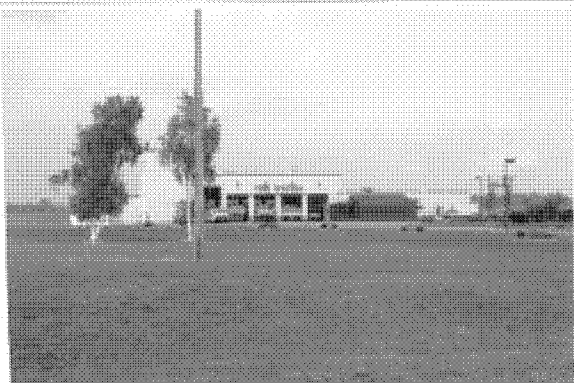
Resource No. 8020, Real Property No. 123
Precision Measurement Equipment Lab



Resource No. 8021, Real Property No. 6259
Static Display Aircraft (F-106 *Delta Dart*)



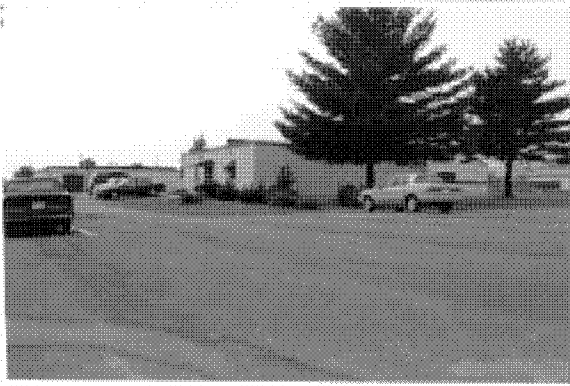
Resource No. 8022, Real Property No. 9
Vehicle Operations Heated Parking



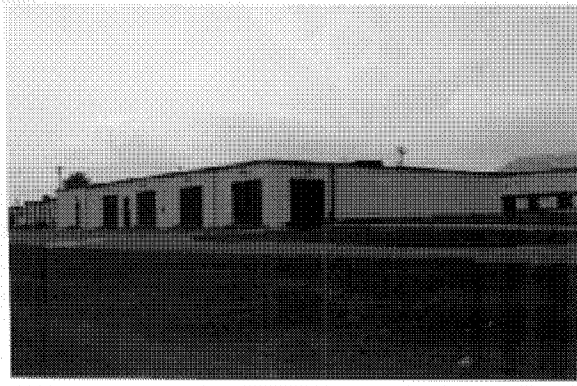
Resource No. 8023, Real Property No. 45
Fire Station



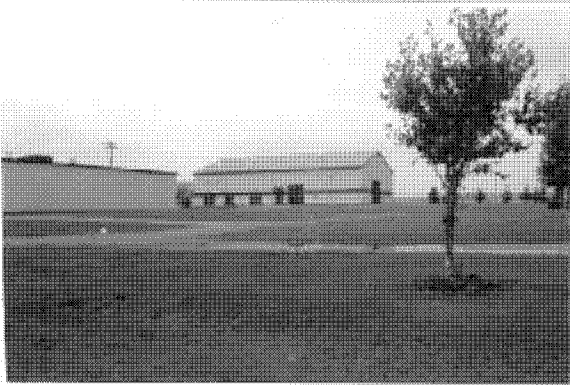
Resource No. 8024, Real Property No. 150
Maintenance Hangar



Resource No. 8025, Real Property No. 145
Administration Office



Resource No. 8026, Real Property No. 144
Base Hazardous Storage



Resource No. 8027, Real Property No. 133
Flight Simulator Training



Resource No. 8028, Real Property No. 143
Exchange Sales Store



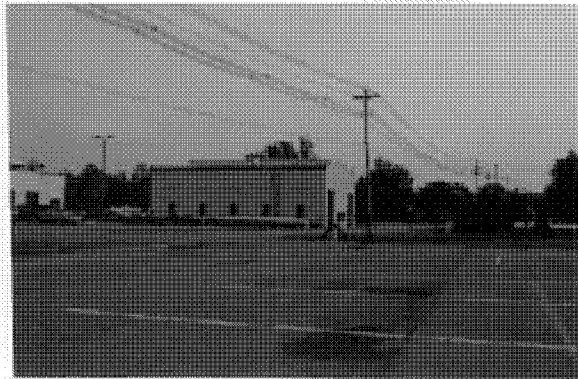
Resource No. 8029, Real Property No. 700
Combat Center Facility



Resource No. 8030, Real Property No. 43
Fueling Station



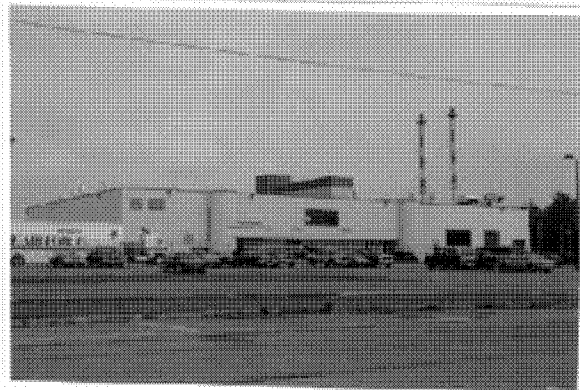
Resource No. 8031, Real Property No. 42
Petroleum Operations Building



Resource No. 8032, Real Property No. 20
Locomotive Shop and Shelter



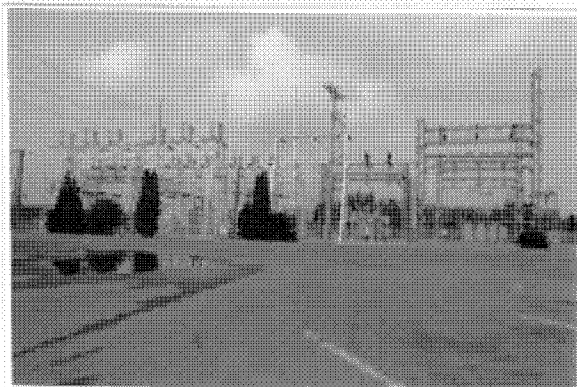
Resource No. 8033, Real Property No. 14
Base Personnel



Resource No. 8034, Real Property No. 11
Vehicle Maintenance Shop



Resource No. 8035, Real Property No. 346
Commissary



Resource No. 8036, Real Property No. 27
Electrical Switch Station



Resource No. 8037, Real Property No. 434
Security Police Operations



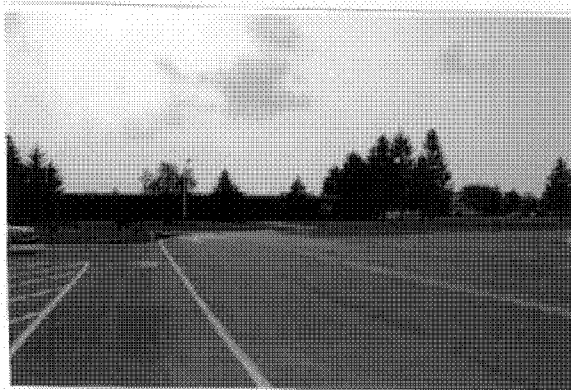
Resource No. 8038, Real Property No. 428
Central Plant



Resource No. 8039, Real Property No. 324
Base Cold Storage



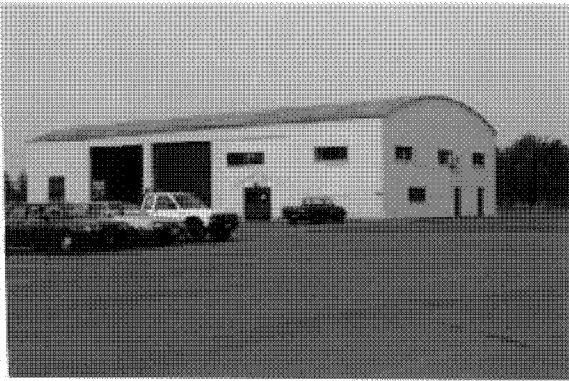
Resource No. 8040, Real Property No. 308
Administration Office



Resource No. 8041, Real Property No. 311
Data Processing Installation



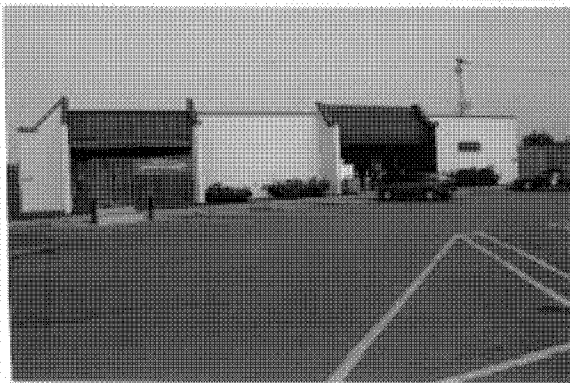
Resource No. 8042, Real Property No. 300
Federal Credit Union



Resource No. 8043, Real Property No. 321
Base Engineering Pavement and Grounds
Facility



Resource No. 8044, Real Property No. 143
Base Exchange



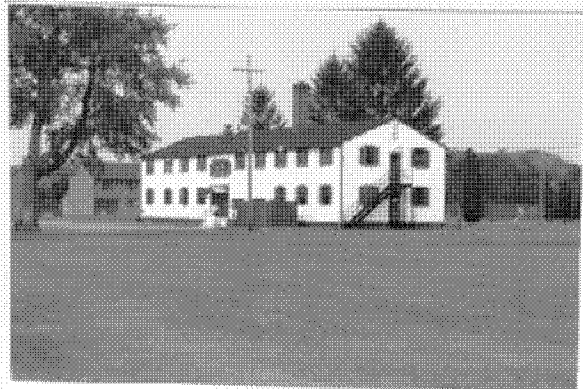
Resource No. 8045, Real Property No. 329
Branch Exchange



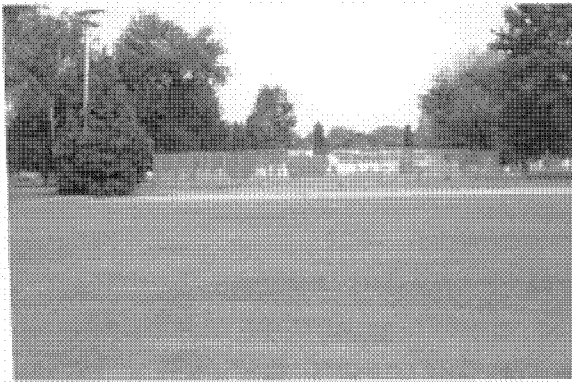
Resource No. 8046, Real Property No. 337
Exchange Service Station



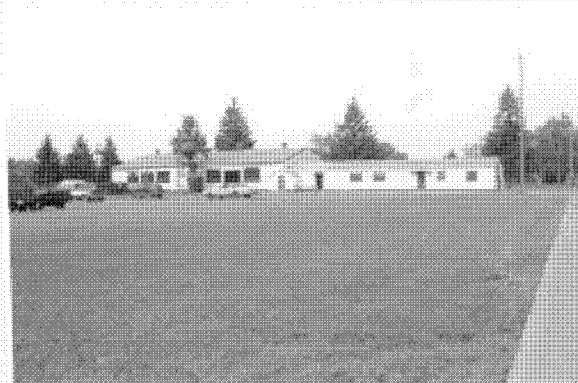
Resource No. 8047, Real Property No. (none)
Base Railroad Engine



Resource No. 8048, Real Property No. 923
Group Headquarters



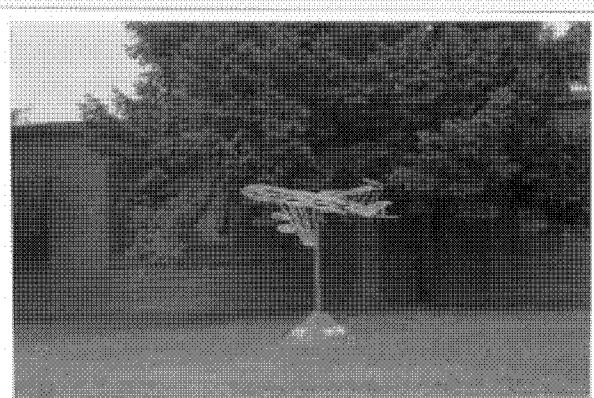
Resource No. 8049, Real Property No. 6099
Tennis Courts



Resource No. 8050, Real Property No. 334
Base Engineer Covered Storage



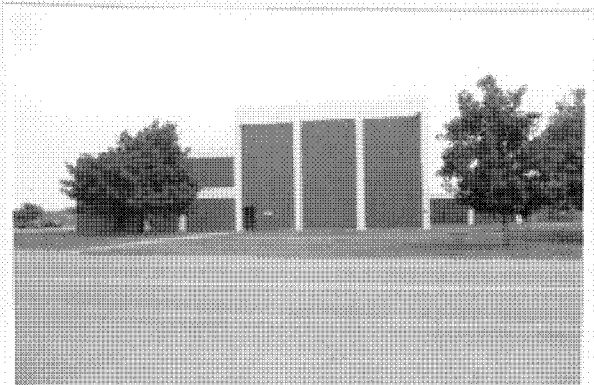
Resource No. 8051, Real Property No. 750
Air Force Office of Special Investigation



Resource No. 8052, Real Property No. (none)
Static Display (Metal Frame Aircraft Model)



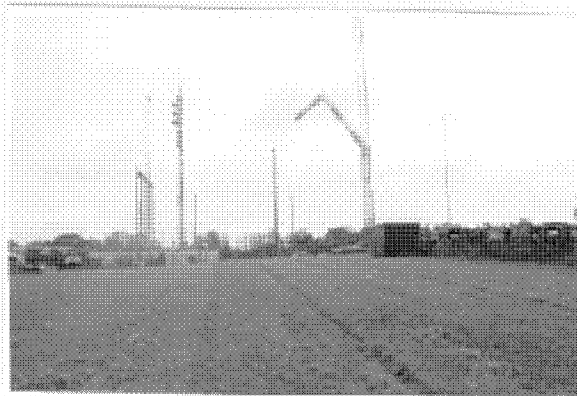
Resource No. 8053, Real Property No. 773
Hydrant Fueling Building



Resource No. 8054, Real Property No. 796
Flight Simulator Training



Resource No. 8055, Real Property No. 776
Weapons System Management Facility



Resource No. 8056, Real Property No. 1477
Electronic Research Test Facility (Stockbridge
Annex, Rome Labs)



Resource No. 8057, Real Property No. 778
Wing Headquarters



Resource No. 8058, Real Property No. 780
Wing Headquarters and Squadron Operations



Resource No. 8059, Real Property No. 1245
Electronic Research Test Facility (Verona
Annex, Rome Labs)



Resource No. 8060, Real Property No. 1250
Equipment Research Test Facility (Verona
Annex, Rome Labs)



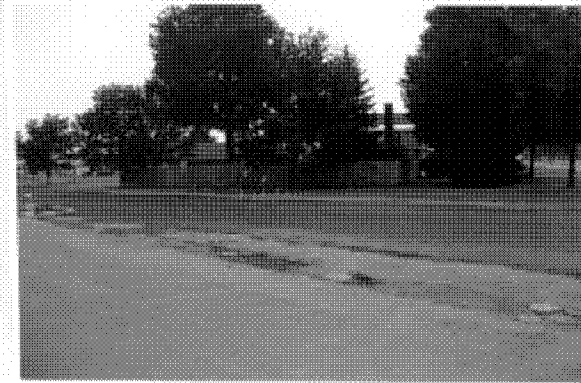
Resource No. 8061, Real Property No. 232
Appropriated Family Housing



Resource No. 8062, Real Property No. 274
Traffic Check House (Floyd Gate)



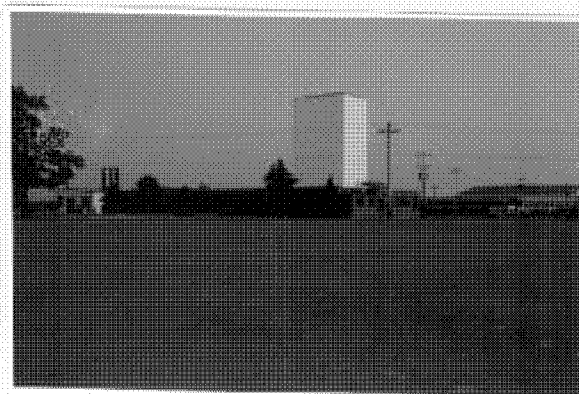
Resource No. 8063, Real Property No. 240
Electronic Research Lab



Resource No. 8064, Real Property No. 231
Appropriated Family Housing



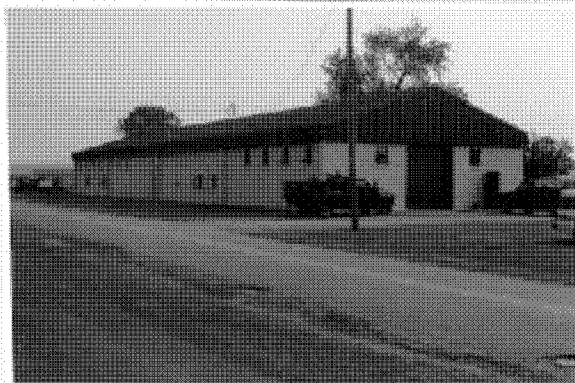
Resource No. 8065, Real Property No. 209
Water Tank Storage



Resource No. 8066, Real Property No. 212
Survey Equipment Shop



Resource No. 8067, Real Property Nos. 210 and 211, Water Pump Station and Building Water Supply



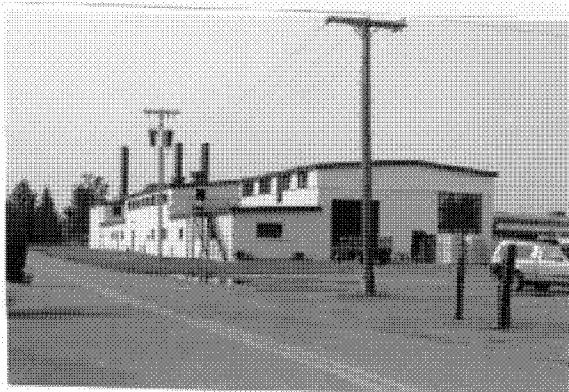
Resource No. 8068, Real Property No. 216 Base Maintenance Shop



Resource No. 8069, Real Property No. 220 Wing Headquarters



Resource No. 8070, Real Property No. 214 Base Maintenance Shop



Resource No. 8071, Real Property No. 255 Base Maintenance Shop



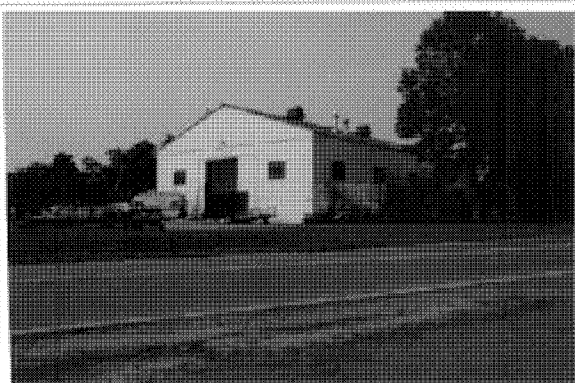
Resource No. 8072, Real Property No. (none) Pavillion Style Open Shed



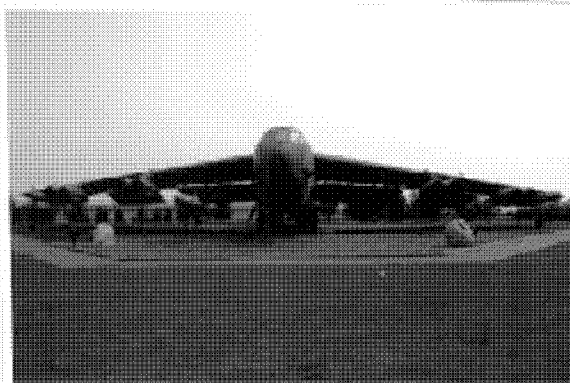
Resource No. 8073, Real Property No. 5460
Athletic Field Softball



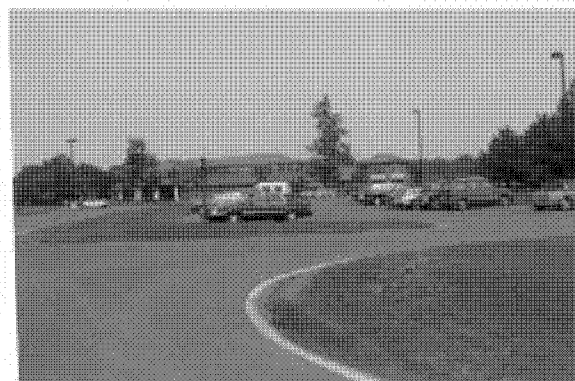
Resource No. 8074, Real Property No. (none)
RAPCON



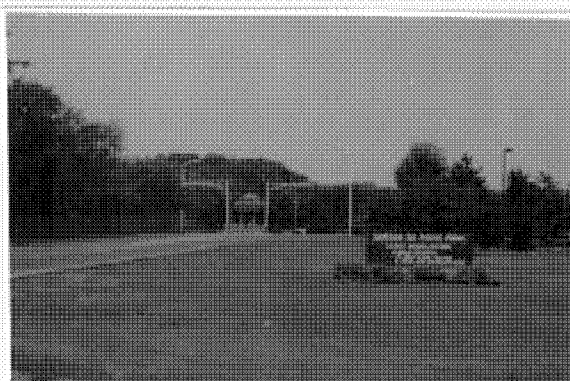
Resource No. 8075, Real Property No. 245
MWR Supply and NAF Central Storage



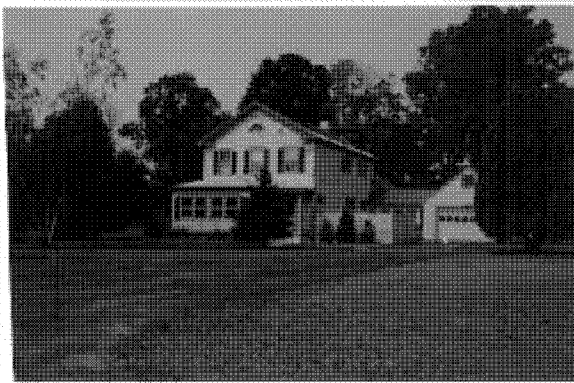
Resource No. 8076, Real Property No. (none)
B-52 & Air Launched Cruise Missile



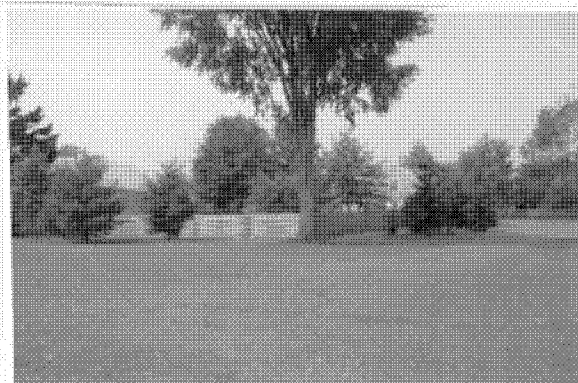
Resource No. 8077, Real Property No. 890
Open Mess and Golf Club House



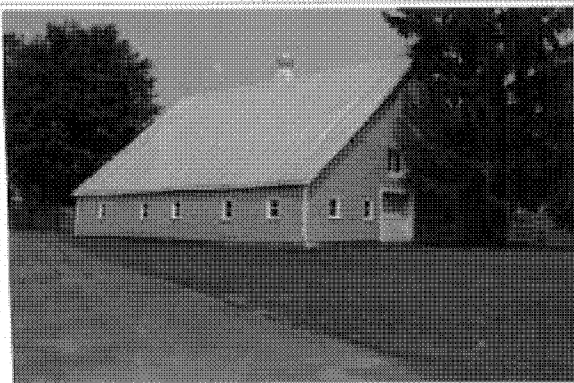
Resource No. 8078, Real Property No. 277
Security Police Entry Control Station (Mohawk
Entrance)



Resource No. 8079, Real Property No. 880
Appropriated Family Housing



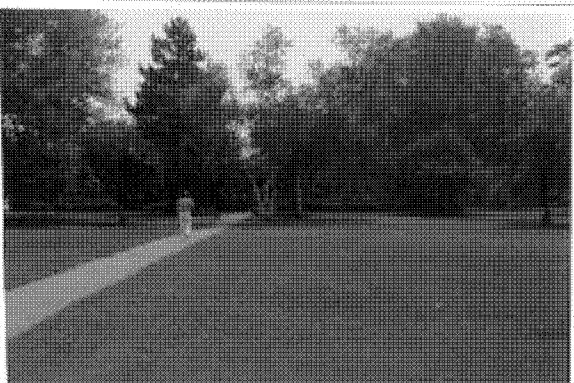
Resource No. 8080, Real Property No. 883
Appropriated Family Housing



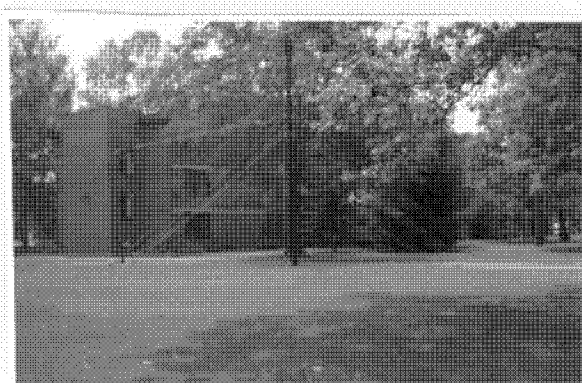
Resource No. 8081, Real Property No. 885
Family Housing Detached Garage



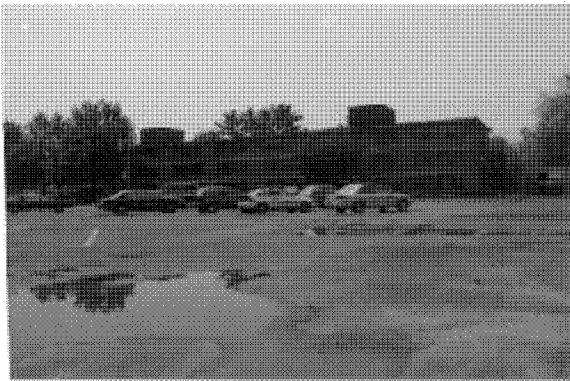
Resource No. 8082, Real Property No. 6310
Family Campgrounds



Resource No. 8083, Real Property No. 437
Library



Resource No. 8084, Real Property No. 448
Airman's Dormitory



Resource No. 8085, Real Property No. 442
Airman's Dormitory



Resource No. 8086, Real Property No. 443
Airman's Dining Hall



Resource No. 8087, Real Property No. 482
Child Care Center



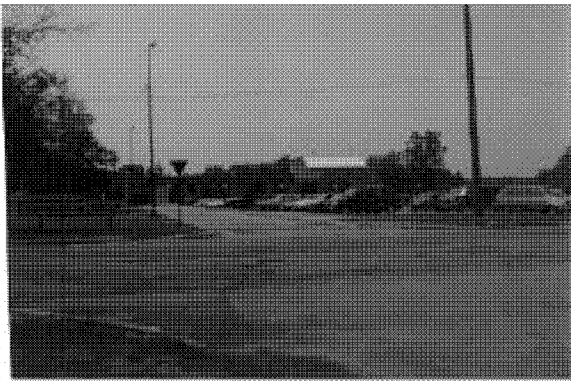
Resource No. 8088, Real Property No. 400
Bowling Center



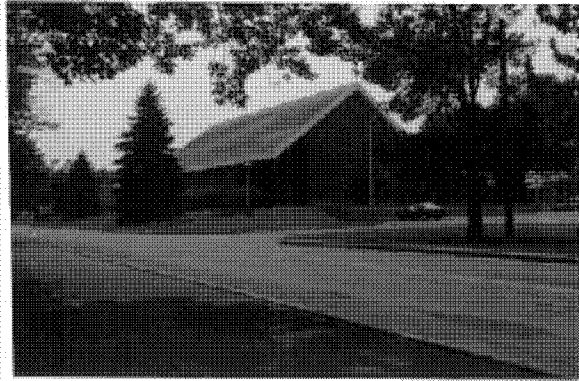
Resource No. 8089, Real Property No. 520
Recreation Center



Resource No. 8090, Real Property No. 774
Avionics Shop



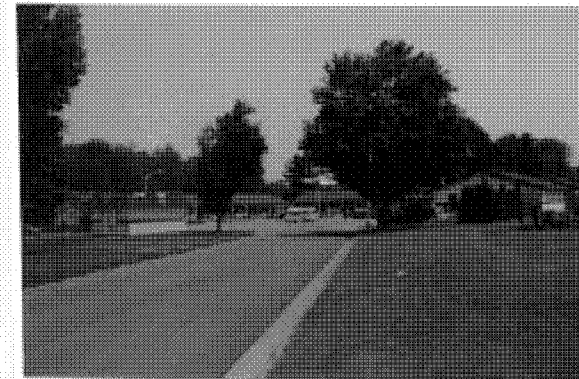
Resource No. 8091, Real Property No. 510
Composite Medical Center



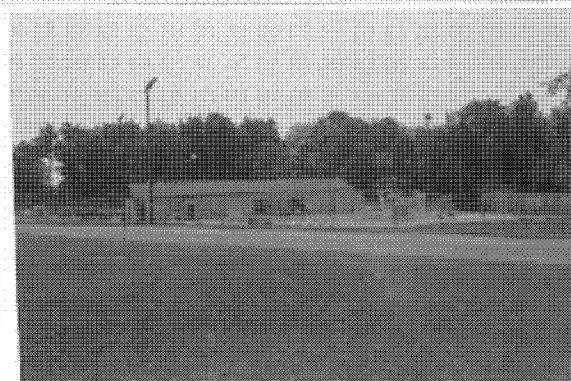
Resource No. 8092, Real Property No. 517
Chapel Center



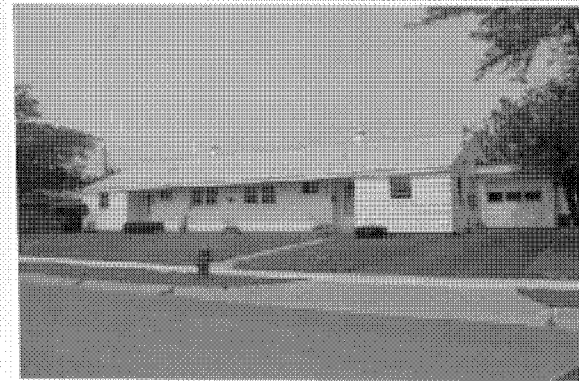
Resource No. 8093, Real Property No. 439
Base Theater



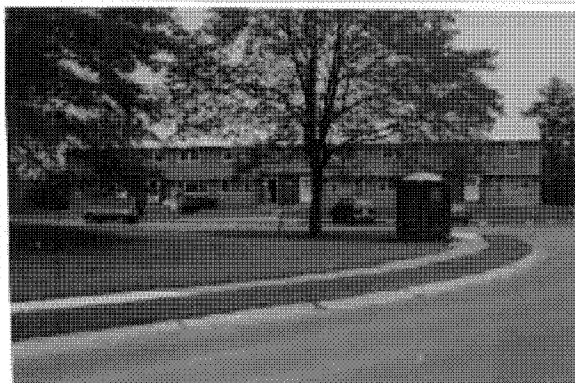
Resource No. 8094, Real Property Nos. 488,
490, 491, and 492, Transient Lodging Support
Facility, Transient Lodging Facility



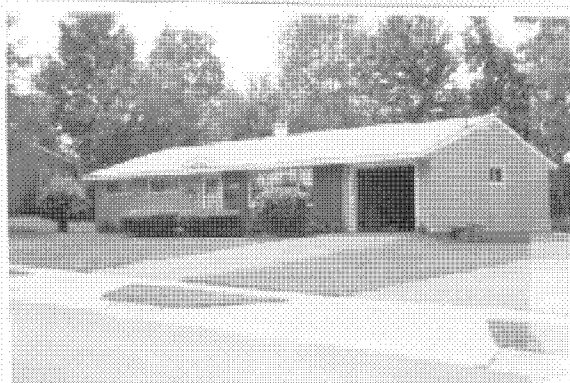
Resource No. 8095, Real Property No. 5315
Consolidated Swimming Pool



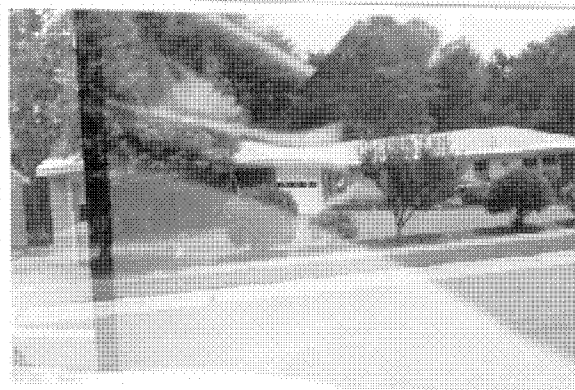
Resource No. 8096, Real Property No. 2401
Capehart Family Housing



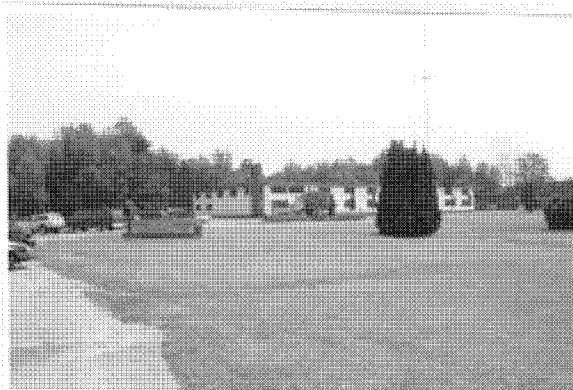
Resource No. 8097, Real Property No. 2704
Capehart Family Housing



Resource No. 8098, Real Property No. 2705
Capehart Family Housing



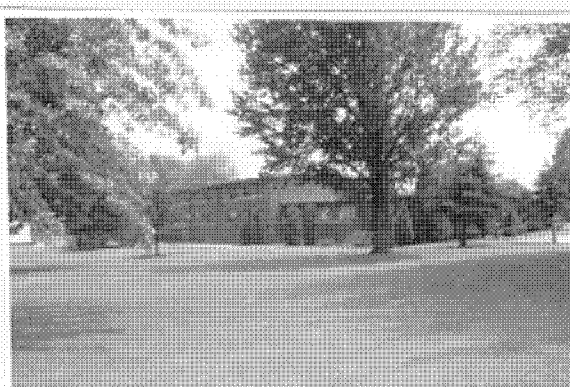
Resource No. 8099, Real Property No. 2714
Capehart Family Housing



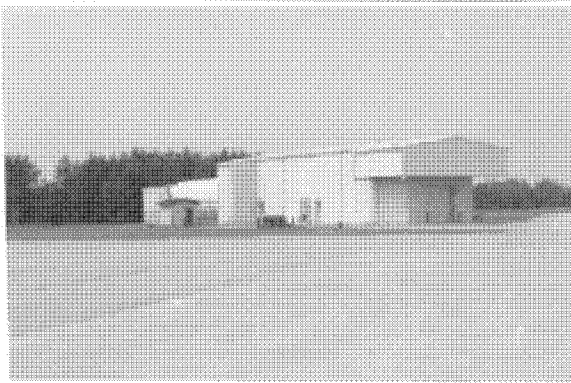
Resource No. 8100, Real Property No. 704
Visiting Officer's Quarters



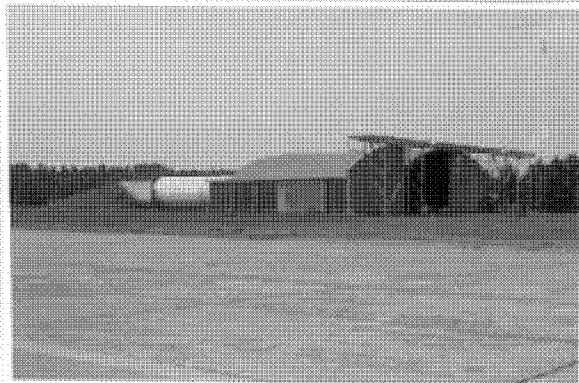
Resource No. 8101, Real Property No. 480
Appropriated Family Housing



Resource No. 8102, Real Property Nos. 520 and
712, Recreation Center and Officer's Quarters



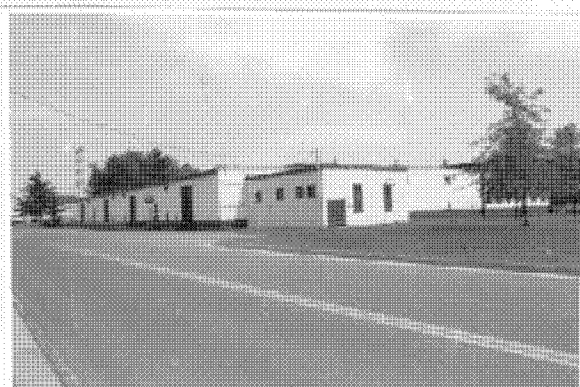
Resource No. 8103, Real Property No. 5773
Power Check Pad w/Suppressor



Resource No. 8104, Real Property No. 5774
Power Check Pad w/Suppressor



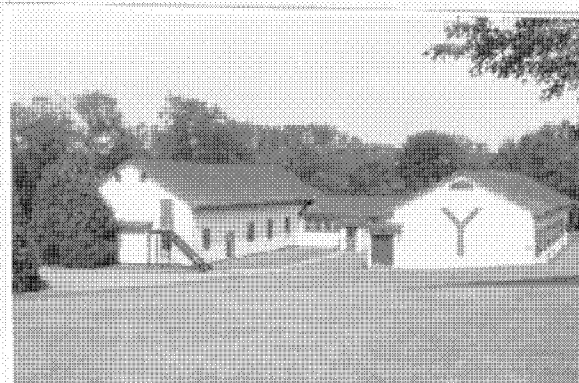
Resource No. 8106, Real Property No. 504
Control Tower



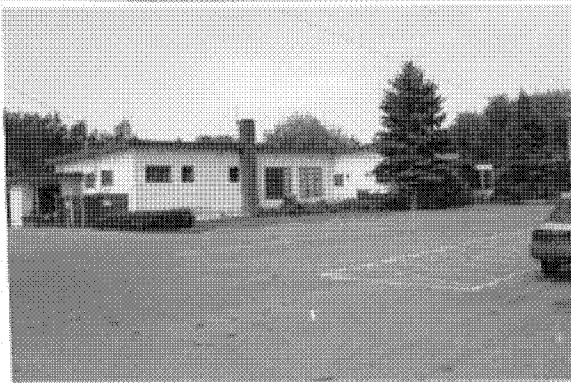
Resource No. 8107, Real Property No. 23
Base Warehouse Supply and Equipment



Resource No. 8108, Real Property No. 786
Maintenance Hangar



Resource No. 8109, Real Property No. 706
Youth Center



Resource No. 8110, Real Property No. 724
Recreation Center



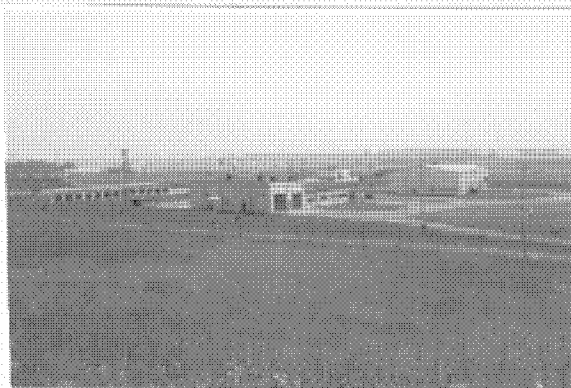
Resource No. 8111, Real Property No. (none)
Children's Playground



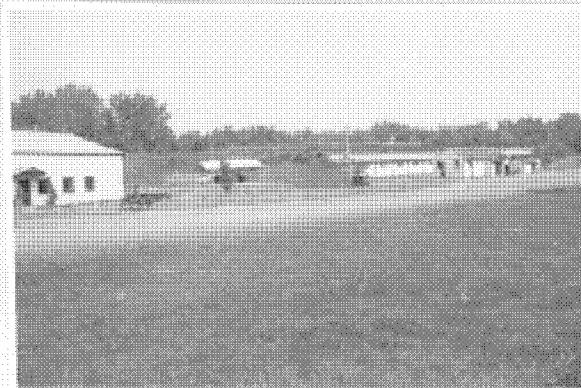
Resource No. 8112, Real Property No. 790
Missile Run-up Shop



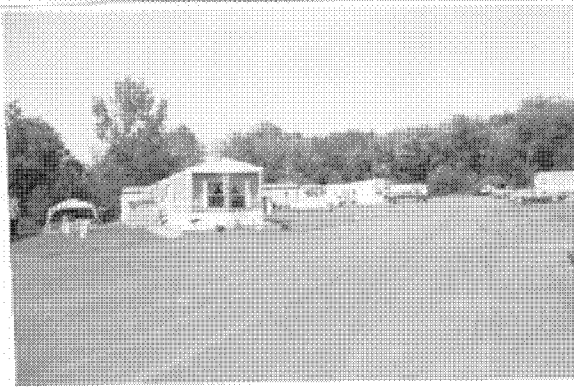
Resource No. 8113, Real Property No. 793
Crew Readiness Facility



Resource No. 8115, Real Property Nos. 900-907,
Storage Igloos



Resource No. 8117, Real Property No. 854, 6025
Combat Arms Training Maintenance Building
and Small Arms Range System



Resource No. 8119, Real Property No. 5030
Trailer Court Parking



Resource No. 8120, Real Property No. 440
Gymnasium



Resource No. 8121, Real Property No. 6100
Recreation Court



Resource No. 8122, Real Property No. (none)
Northeast Air Defense Sector Antennae



Resource No. 8123, Real Property No. 764
Crew Readiness Building



Resource No. 8131, Real Property No. (none)
Floyd Test Annex



Resource No. 8132, Real Property No. (none)
Newport Test Annex

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT GRIFFISS AFB

Resource Number: 8010

Property Description: Rome Lab Headquarters
Associated Property: 8016,8056,8059,8060,8063,8131,8132
Non-Inventoried Association: Ava, Forestport, Quaker Hill, Tummodts-Vienna Test Annexes
Sub-installation:
Address: 26 Electronic Parkway
Base Map Date: 9/30/93
Base Map Building Number: 106

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities: Research Laboratories
Intelligence:
Property Type: Rome Laboratory Headquarters

Statement of Significance: Rome Labs (Rome Air Development Center) has been at the forefront of ground electronics research and development since 1951. Numerous weapons and radar systems have been developed here: PAVEPAWS, BMEWS, DEW Line, OTH-B, Joint STARS and AWACS.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Exceptionally significant and NRHP eligible.

Importance: Exceptional
Eligibility: Eligible

Height: 30
Square Footage: 194840
Original Planned Duration: Permanent
Existing Use: Electronic Research Labs
Other Use/Dates:
Comments on Use: Designed and still used for electronic research
Primary Building Materials: Brick

Resource Number: 8029

Property Description: NEADS Command Center
Associated Property: 8024, 8015, 8122
Non-Inventoried Association: Bldg 131
Sub-installation:
Address: 362 Otis Street
Base Map Date: 9/30/93
Base Map Building Number: 700

Operational Support & Installations: Base and Command Centers
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Command Center

Statement of Significance: This Facility provides tactical warning and assesment against manned bomber and cruise missile threats ; therefore, it played an integral role in the detection of Soviet air and missile threats and protected the northeast sector of the United States during the Cold War. NEADS utilized important C3I research and development during the last phase of the study period.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 1
Level of Importance: 4
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 18

Comments on Threats: This facility will continue to be operated by the Air National Guard. Therefore, the threat to this resource is low.

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: NRHP eligible now.

Importance: Exceptional
Eligibility Eligible

Height: 30
Square Footage: 31500
Original Planned Duration: Permanent
Existing Use: Control Center NEADS
Primary Building Materials: Poured Concrete
Character Defining Features: The curved roof design is unique and has skylights, and an earthen berm surrounds the exterior of the building. The interior contains status boards, backup power units and multiple communication lines.

Resource Number: 8113

Property Description: Crew Readiness Facility
Associated Property: 8123
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 9/30/93
Base Map Building Number: 793

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Bomber Alert Facility

Statement of Significance: This building is representative of the Alert posture taken by SAC bomber forces to deter any Soviet attack with guaranteed survivability and retaliatory strike.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	Threat might be ranked higher considering impending base closure and realignment.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Potentially eligible due to unknown integrity.

Importance: Exceptional
Eligibility: Potential

Height: 20
Square Footage: 18318
Original Planned Duration: Permanent
Existing Use: Crew Readiness
Other Use/Dates: None
Comments on Use:
Primary Building Materials: Poured Concrete
Character Defining Features: Semisubterranean building with ramps for quick egress. Provides living quarters for bomber crews immediately adjacent to Alert apron and runway.

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Griffiss AFB, and to provide research materials for this study:

Mike Bamberger
Chief of Natural Resources
416 CES/CEV
153 Brooks Road
Griffiss AFB, New York 13441-4105
(315) 330-2098

Sgt Kevin Call
Facility Security Officer
416 BW/CCEA
Griffiss AFB, New York 13441
(315) 330-2943/7603

MSgt Jackson
Facility Security Officer
416 SPS/SPAI
592 Market Street Suite 108
Griffiss AFB, New York 13441-4614
(315) 330-2943/7603

Captain Mary Beth Jarvis
Public Affairs Officer
416 BW/PA
325 Brooks Road Suite 201
Griffiss AFB, New York 13441-4150
(315) 330-3057

Helen Makswmicz
416 CES/CEOL-2
Griffiss AFB, New York 13441
(315) 330-1348

SSgt Mark Manning
AutoCAD
416 CES/CEV
153 Brooks Road
Griffiss AFB, New York 13441-4105
(315) 330-4704

Bruce Mero
Chief of Environmental Management Flight
416 CES/CEV
153 Brooks Road
Griffiss AFB, New York 13441-4105
(315) 330-2098

SSgt Mark Stanley
Wing Historian
416 BW/HO
325 Brooks Road Suite 202
Griffiss AFB, New York 13441-4105
(315) 330-2931

Dr. Thomas Thompson
Rome Laboratory Historian
RL/HO Corridor A, Suite 107
26 Electronic Parkway
Griffiss AFB, New York 13441-4514
(315) 330-2757

Paul Vanderhoff
Real Property Officer
416 CES
153 Brooks Road
Griffiss AFB, New York 13441-4105
(315) 330-4014

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Griffiss AFB history and Cold War context.

Mike Bamberger, Chief of Natural Resources, July 6, 1994

Bruce Mero, Chief of Environmental Management Flight, July 6, 1994

Dr. Thomas Thompson, Rome Laboratory Historian, July 11, 1994

SSgt Mark Stanley, Wing Historian, July 12, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-10: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT HOLLOMAN AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Karen Lewis
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

October 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Holloman Air Force Base was inventoried by Karen Lewis and David P. Staley of Mariah Associates, Inc. between March 16 and March 21, 1994. This project to ascertain extant Cold War resources important to the base's Cold War context and to the Cold War national history was conducted as part of the Air Combat Command Cold War study under the ongoing Department of Defense Legacy Program. Information was gathered at the base from the Archaeologist, Community Planner, Engineering Flight, and Drawing Room staff; the Real Property Office; Public Affairs; and from on-site inspections. During this research and inventory, property types were identified and then photographed. Eleven properties were evaluated as important properties within the base Cold War context. The majority of these are related to research and development, and testing conducted between 1947 and 1968. For the most part, these correspond to Phase I (1945-1953) and Phase II (1953-1963) as described in the Air Combat Command Cold War Context and Methodology document. However, some properties are related to the two subsequent phases of the Cold War.

Few documents or objects were discovered during the reconnaissance visit. Architectural drawing files were noted as a resource in the inventory. Most of the important originals have been copied into an archival system by the base archaeologist. Several missiles were located and documented in a fenced storage area near the base stables. These missiles were originally on static display near the base entrance; however, when Tactical Air Command became the base host, these missiles were moved to their current location.

LIST OF ACRONYMS

ACC	-	Air Combat Command
ACHP	-	Advisory Council on Historic Preservation
AFB	-	Air Force Base
AFSC	-	Air Force Systems Command
AGE	-	Air Ground Equipment
AMC	-	Air Materiel Command
ARDC	-	Air Research and Development Command
CASF	-	Composite Air Strike Forces
CES	-	Civil Engineering Squadron
CIGTF	-	Central Inertial Guidance Test Facility
CRS	-	Component Repair Squadron
DoD	-	Department of Defense
EMS	-	Equipment Maintenance Squadron
FTD	-	Field Training Detachment
GAPA	-	Ground-to-Air Pilotless Aircraft
HABS	-	Historic American Buildings Survey
HPP	-	Historic Preservation Plan
HQ	-	Headquarters
ICBM	-	Intercontinental Ballistic Missile
LOX	-	Liquid Oxygen
MAC	-	Military Airlift Command
Mariah	-	Mariah Associates, Inc.
NCO	-	Noncommissioned Officer
NHPA	-	National Historic Preservation Act
NORAD	-	North American Aerospace Defense
NPS	-	National Park Service
NRHP	-	National Register of Historic Places
OCONUS	-	Off the Continental United States
POL	-	Petroleum, Oil and Lubricants
POW	-	Prisoner of War
RATSCAT	-	Radar Test Scatter Division
SAC	-	Strategic Air Command
SALT	-	Strategic Arms Limitation Treaty
SDI	-	Strategic Defense Initiative
SHPO	-	State Historic Preservation Officer
START	-	Strategic Arms Reduction Talks
TAC	-	Tactical Air Command
TACAN	-	Tactical Air Navigation Station
USAF	-	United States Air Force
WSK	-	War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Bare Base - 49th Bare Base Systems Group provides personnel for the deployment, setup, operation, maintenance, and tear down of equipment in support of contingencies, exercises, counter-drug operations, and headquarters directed requirements. Bare Base can provide a functional base in any area possessing a usable runway and water resources.

California Policy - Also known as dispersal policy. A policy passed by Congress that required military research and development to be dispersed and conducted away from the coasts.

Capehart Housing Act - passed in 1955 as an amendment to the National Housing Act. It authorized the use of quarters allowances to pay off Wherry housing mortgages. Construction of new houses was set at 46,500 units at 88 bases. Construction was begun on 9,000 units by 1957.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Flexible Response - Also known as symmetrical response. Allowed for multiple levels of response giving policy makers wider choices than those of aggressor escalation. The United States has never been able to support this policy over an extended period of time.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

GLOSSARY (Continued)

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

Manhigh - A project which used balloons to test human physiology at high altitudes.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

North American Aerospace Defense Command - a joint U.S.-Canadian installation, located inside a mountain in Colorado Springs, Colorado, that links a variety of radar and satellite monitoring systems and is alerted immediately of potential enemy attack. The facility then alerts the President and Secretary of Defense directly and coordinates efforts to determine an appropriate response.

Operation Paperclip - Post World War II direct recruiting of European military scientists.

Peenemunde - A World War II rocket facility in Germany. Many of the Operation Paperclip scientists were at Peenemunde, including Dr. Wernher von Braun.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Snark - A missile developed during Phases I and II. The missile was never capable of penetrating enemy defenses, and the program was cancelled early in the Kennedy administration.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	6
3.0 HISTORICAL OVERVIEW	11
3.1 BASE HISTORY	11
3.2 BASE COLD WAR CONTEXT	13
3.3 BASE DEVELOPMENT	15
4.0 METHODOLOGY	20
4.1 INVENTORY	20
4.2 EVALUATION OF IMPORTANT RESOURCES	21
4.2.1 Documentation	21
4.2.2 Evaluation of Importance	21
4.2.2.1 Cold War Context	21
4.2.2.2 NRHP Criteria	22
4.2.2.3 Exceptional Importance	23
4.2.3 Evaluation of Integrity	23
4.2.4 Priority Matrix	24
4.2.5 Resource Organization	25
5.0 RECONNAISSANCE INVENTORY RESULTS	26
6.0 EVALUATION RESULTS	27
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	27
6.1.1 Documentation	27
6.1.1.1 Architectural Drawing Files	27
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	30
6.2.1 Alert Facilities	30
6.2.1.1 Fighter Alert Facility	30

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.2 Ground Vehicles and Equipment.....	30
6.2.2.1 Bare Base Installation	30
6.3 MATERIEL DEVELOPMENT FACILITIES	31
6.3.1 Research Laboratories.....	31
6.3.1.1 Medical Science Laboratories.....	31
6.3.1.2 Weapons Guidance Laboratory	32
6.3.2 Test Sites	32
6.3.2.1 Tracking and Documentation	32
6.3.2.2 Launch Ramp	33
6.3.2.3 Blockhouses	34
6.3.2.4 Test Track and Blockhouse	35
6.4 TRAINING FACILITIES.....	36
6.5 INTELLIGENCE FACILITIES	37
6.5.1 Spy Satellites	37
6.5.1.1 Deployable Warning Complex	37
7.0 UNDOCUMENTED RESOURCES	38
8.0 FUTURE THREATS TO RESOURCES	40
9.0 PRELIMINARY RECOMMENDATIONS	41
9.1 NRHP ELIGIBILITY	41
9.1.1 Evaluation and Determination of NRHP Eligibility.....	41
9.1.2 Implications of NRHP Eligibility	43
9.2 EVALUATED RESOURCE RECOMMENDATIONS	44
9.2.1 Architectural Drawing Files	46
9.2.2 Fighter Alert Facility	46
9.2.3 Bare Base Installation	47
9.2.4 Medical Science Laboratories	47
9.2.5 Weapons Guidance Laboratory.....	47
9.2.6 Tracking and Documentation	48
9.2.7 Launch Ramp	48
9.2.8 Blockhouses	48
9.2.9 Test Track and Blockhouse	48
9.2.10 Deployable Warning Complex	49
10.0 REFERENCES CITED	50

TABLE OF CONTENTS (Continued)

	<u>Page</u>
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	
APPENDIX F: ADDITIONAL RESOURCES AND ASSOCIATED OBJECTS AND LITERARY MATERIAL	

LIST OF FIGURES

Figure 1.1	Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1	Location of Holloman Air Force Base	5
Figure 2.2	Standard Tactical Air Command Base Layout.....	7
Figure 2.3	Holloman Air Force Base Land Use Diagram	9
Figure 2.4	Standard Tactical Air Command Base Land Use Diagram	10
Figure 3.1	Holloman Air Force Base, 1943	16
Figure 3.2	Holloman Air Force Base, 1952	17
Figure 3.3	Holloman Air Force Base, 1967-1985	18
Figure 3.4	Holloman Air Force Base, 1994	19

LIST OF TABLES

	<u>Page</u>
Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	28
Table 6.2 Evaluated Resource Prioritization by Priority Rank	29
Table 9.1 Recommendations for Evaluated Resources	45

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all resources inventoried and will assess them for significance at the national level.

Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology to assess Cold War related material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating properties. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable coexistence, and a condition of detente was born.

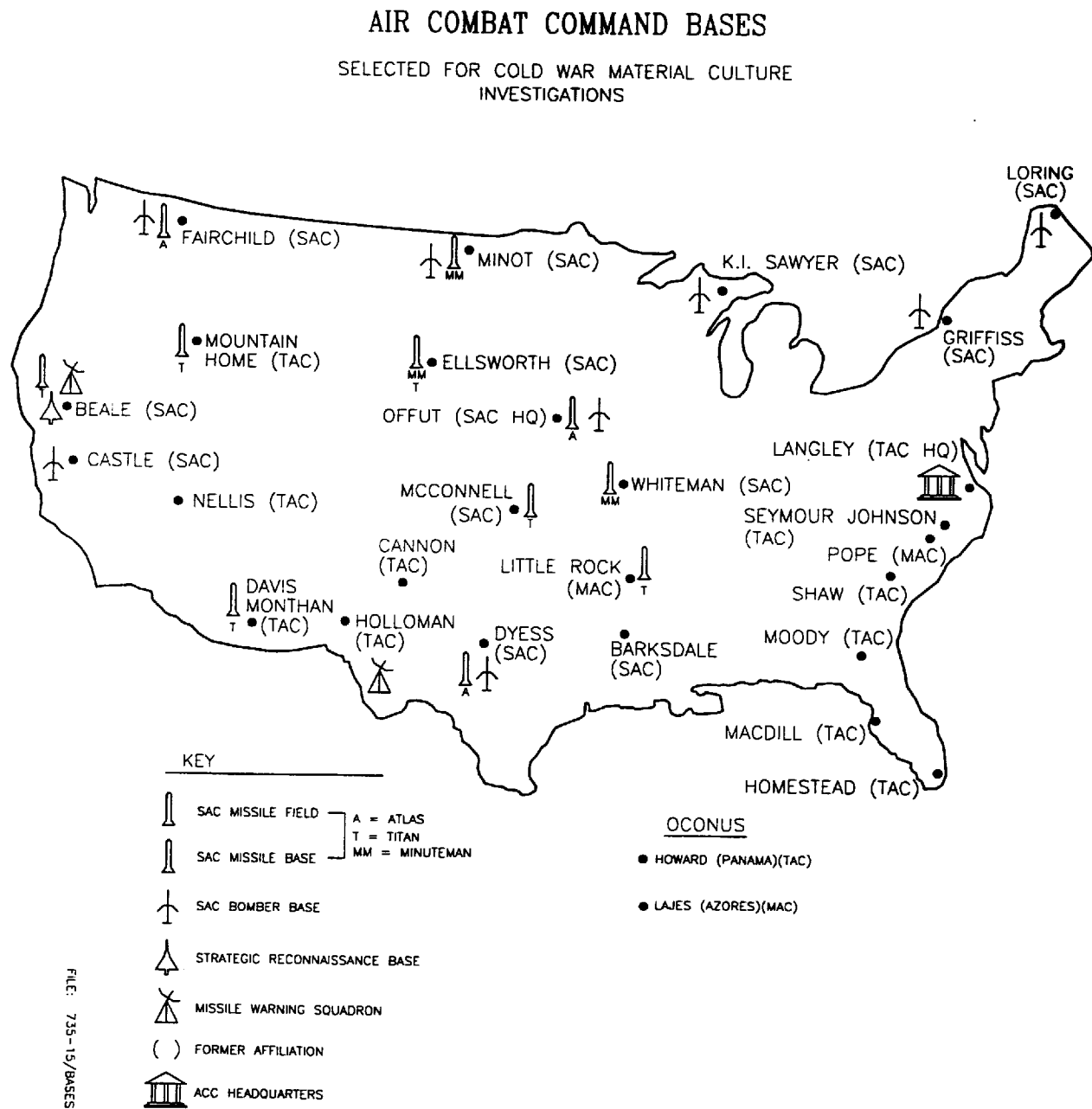


Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Holloman Air Force Base (AFB). Holloman AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of the ACC Cold War cultural resources nationwide. As mentioned earlier, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

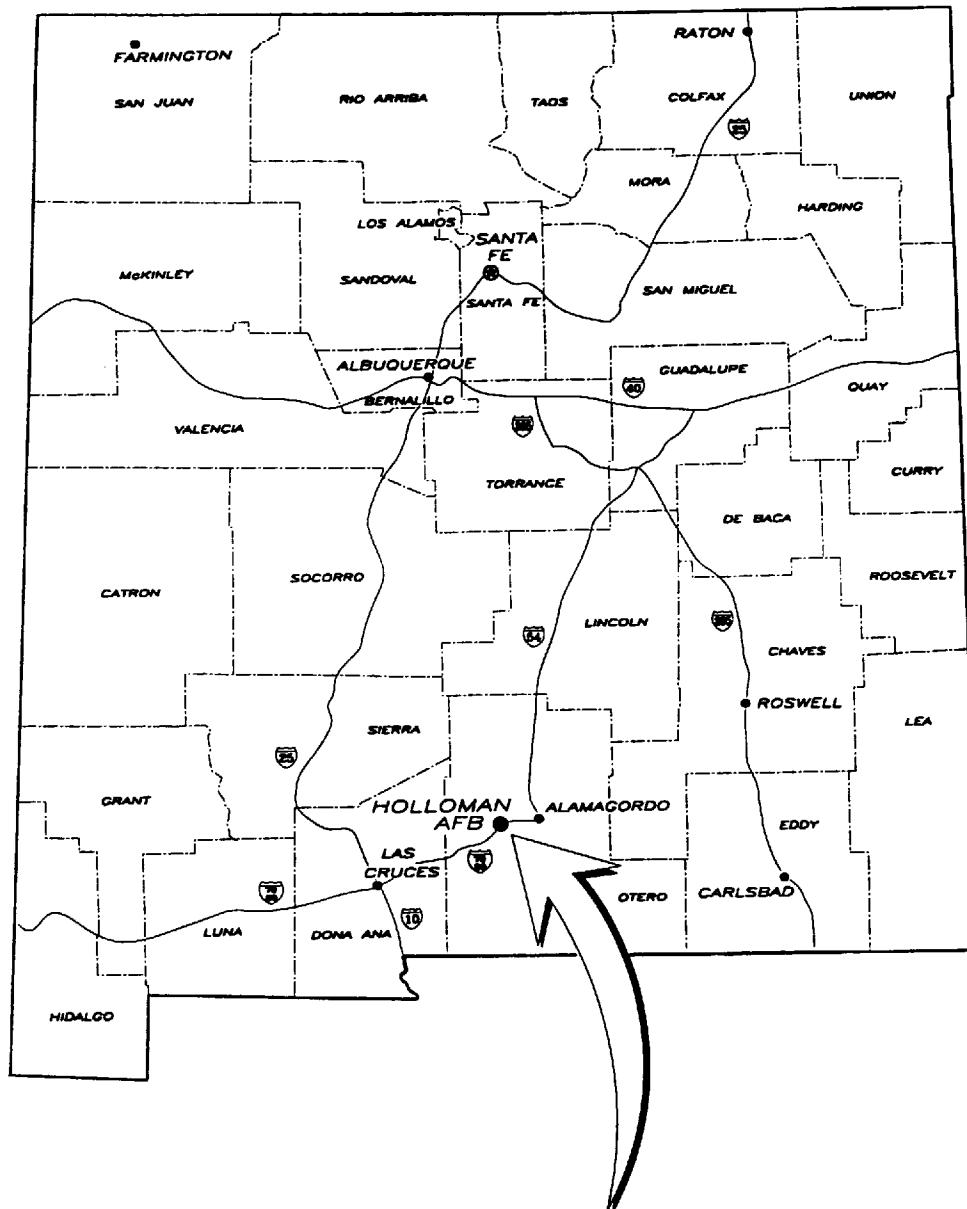
Holloman AFB is the home of the 49th Fighter Wing which supports national security objectives as directed by the Joint Chiefs of Staff. The wing can rapidly mobilize and deploy F-117 *Stealth* fighter aircraft and personnel worldwide to meet peacetime and wartime contingencies. The wing also trains German air crews with the F-4E *Phantom* and Taiwan air crews with the AT-38B *Talon*. The 49th Wing maintains over 6,000 assigned personnel.

Holloman AFB is also home to the 4th Space Warning Squadron whose mission is to provide immediate, worldwide missile, space launch, and nuclear detonation warning to the North American Aerospace Defense (NORAD) Command, unified and specified commands, in-theater commanders, the Joint Chiefs of Staff, and the National Command Authorities (United States Air Force [USAF] 1993a). Another tenant unit is the 46th Test Group out of Eglin AFB, Florida, which operates the High Speed Test Track at Holloman AFB.

2.2 GEOGRAPHIC DESCRIPTION

Holloman AFB is located in the Tularosa Basin of south-central New Mexico, approximately 7 mi (11 km) southwest of Alamogordo (Figure 2.1). The Tularosa Basin is a closed alluvial landform surrounded by the Sacramento Mountains on the east, the San Andreas and Organ Mountains on the west, and the Oscura Mountains and Chupadera Mesa on the north. No major streams or rivers exit the basin. The terrain of Holloman AFB is fairly flat with elevations ranging between 4,050 and 4,100 ft (1,234 and 1,250 m), with the exception of Tularosa Peak, which is 4,350 ft (1,326 m) above mean sea level (amsl). Tularosa Peak is at the northern end of the test track and east of the track terminus. The base shares borders with White Sands National Monument and White Sands Missile Range. White Sands Missile Range extends 100 mi (160 km) north-south and has a width of 40 mi (64 km).

NEW MEXICO



PROJECT LOCATION

Figure 2.1 Location of Holloman Air Force Base.

2.3 CURRENT BASE LAYOUT

Holloman AFB has a layout similar to a standard TAC base layout, including the airfield (Figure 2.2). Two major runways, constructed in 1943, run north-south and east-west and intersect at 90°, and a taxiway encircles the airfield. An additional 1955 runway, located northwest of the main base, runs northeast to southwest. The original taxiway, which connects with the southern portion of the original runways, also connects with the main portion of the base. The mission related buildings and aprons run along the southern side of the connecting taxiway, providing a buffer to the main base. The industrial area is east of the mission area. Unaccompanied housing is located south of the mission structures, and community buildings are along the eastern edge of the unaccompanied housing and are oriented south and east. Headquarters (HQ) is at the center of the main base and is surrounded by mission, industrial, and community buildings. The main housing area (accompanied) is located farthest from the runway and adjacent to the entrance gate. There are open recreation areas in both the housing and community areas, and a golf course is located to the west. The area around the runways and taxiways is considered open space, where development may not occur. Holloman AFB differs from a standard TAC layout, in that it has a three area plan. The main base area discussed above is similar to the standard TAC plan, while the other two are individual. The north area is currently used as tenant space, and the west area consists of Bare Base, Administration, and the Stealth Fighter Mission.

2.4 BASE LAND USE

The following is a list of the standard TAC land use categories:

Accompanied Housing - accommodations for married personnel and families, including temporary housing.

Administrative - facilities that house administrative functions.

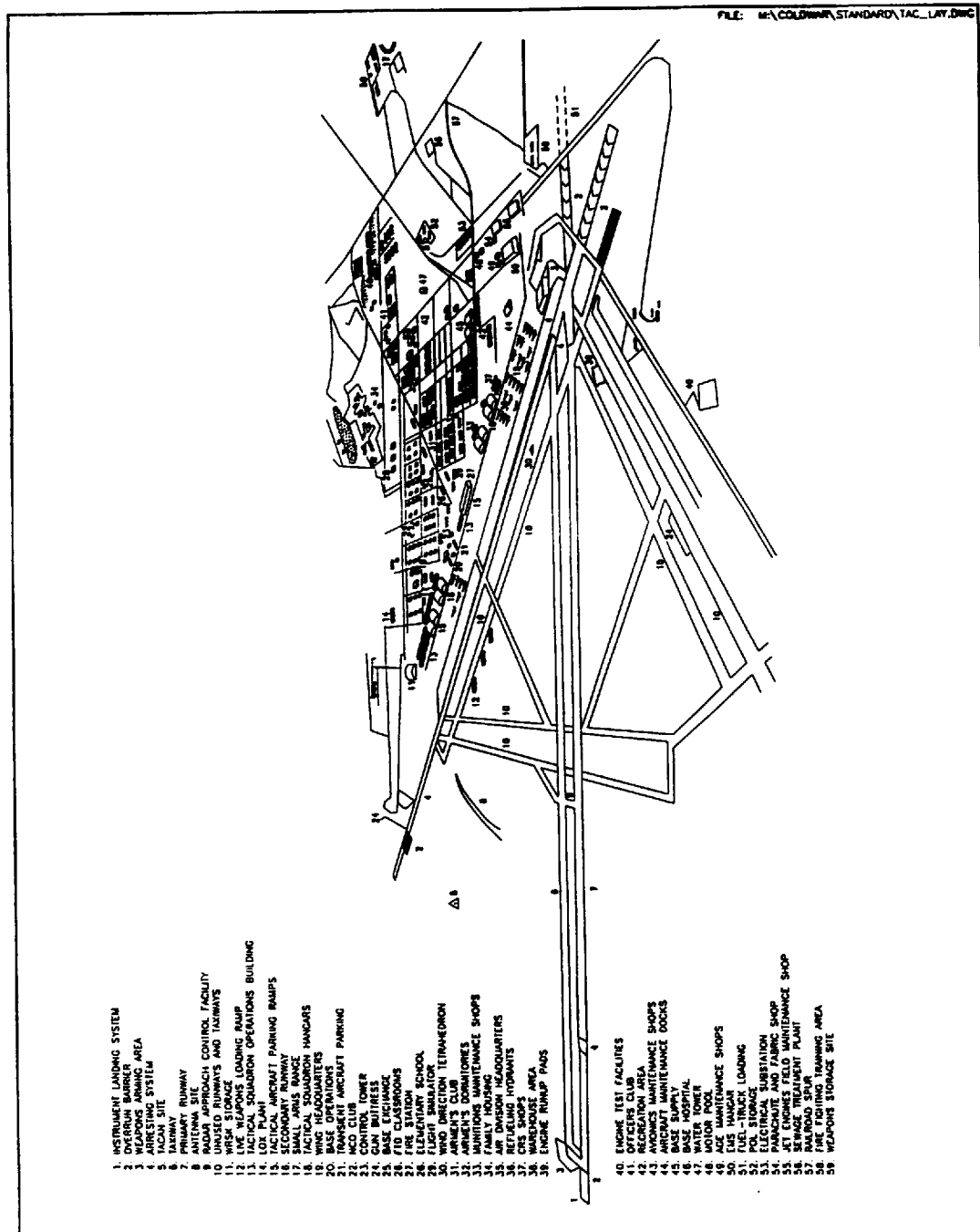


Figure 2.2 Standard Tactical Air Command Base Layout.

Community - facilities such as shopping areas, medical, and family support.

Headquarters - buildings that houses administration for base wing.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Open Space is another land use type that occurs throughout Air Force bases; however it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers between base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Base land use at Holloman AFB (Figure 2.3) generally resembles the standard TAC land use plan (Figure 2.4), but there are deviations. The most significant difference is the use of a three area layout. There is the main base and mission area, and then two remote mission areas along the taxiway. Currently the north area is occupied by tenants, and the west area is occupied by the F-117 hangars and operations, as well as Bare Base facilities. The main base area is similar to the typical TAC land use plan, with the mission, headquarters, and unaccompanied housing close to the airfield and aprons, and the recreational areas and housing on the entrance side of the base. The community area separates the housing from the mission activities, and the industrial area runs from the apron away from the main base, parallel with the main runway.

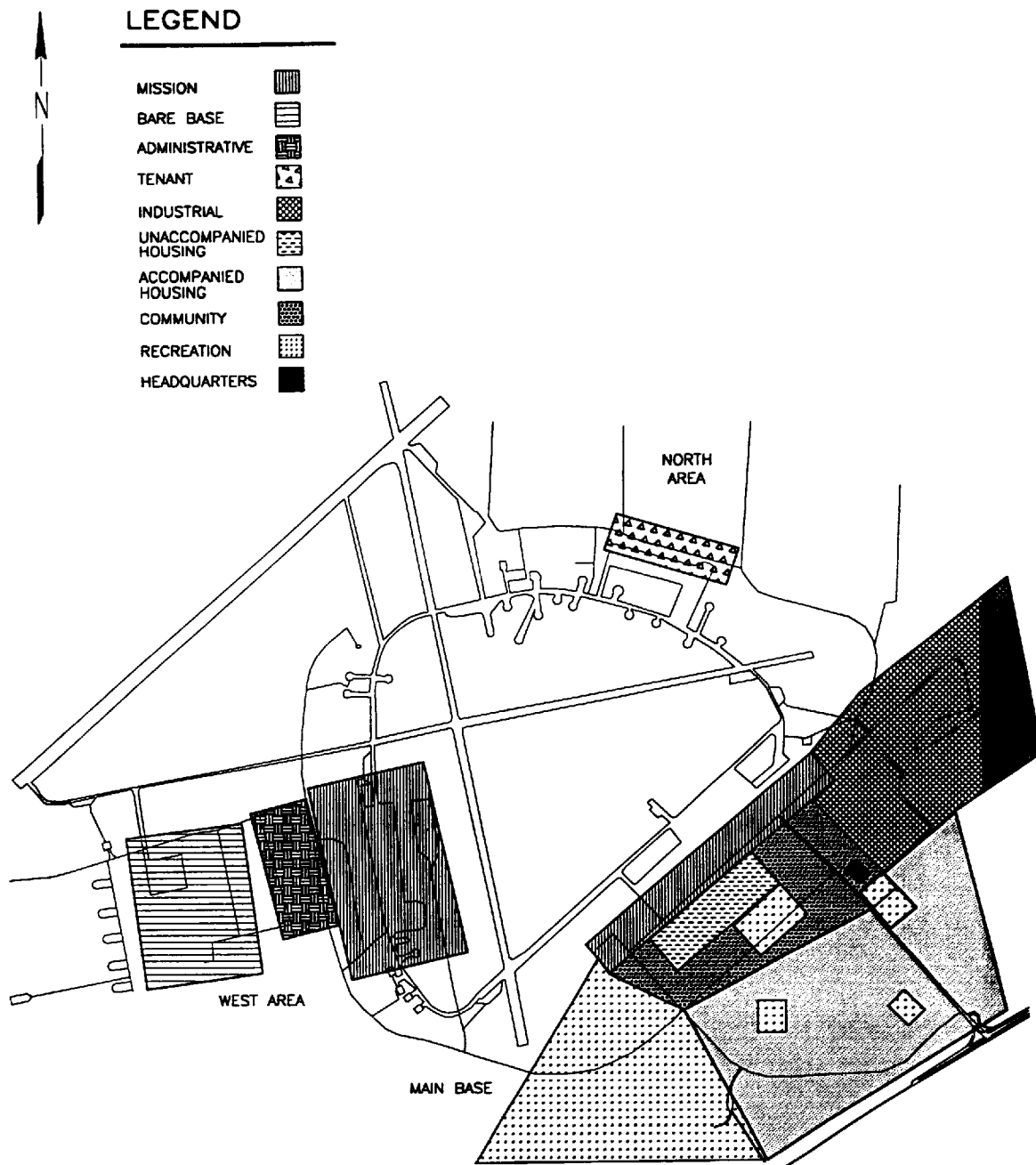


Figure 2.3 Holloman Air Force Base Land Use Diagram.

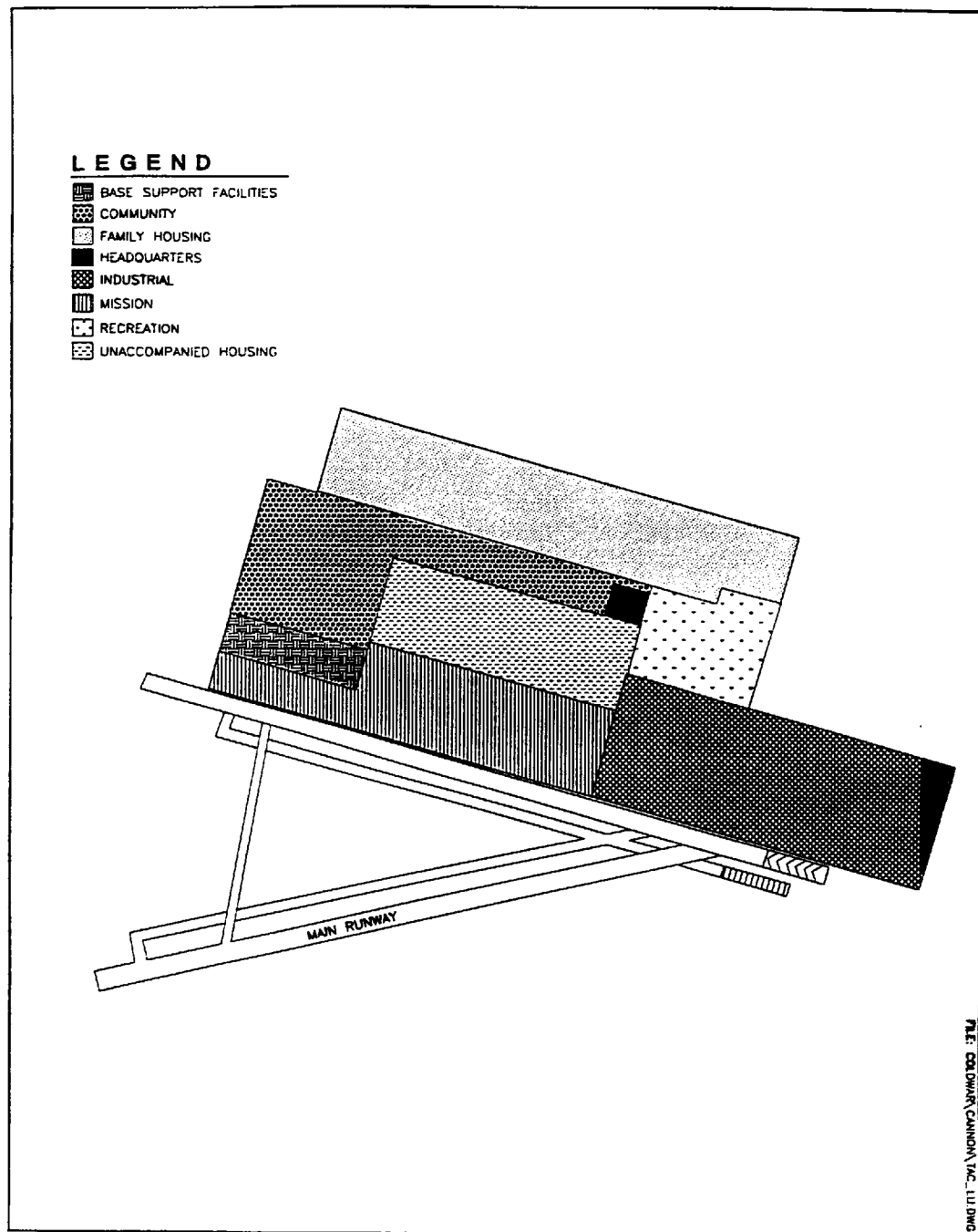


Figure 2.4 Standard Tactical Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY

The Alamogordo Bombing and Gunnery Range, a temporary wartime installation, was in use in 1941. Within months, the installation was elevated to Army Air Field status and was christened Alamogordo Army Air Field. The air field was originally planned as a British Overseas Training Program base. The base arrangement reflects the original three main areas (two separate hangar/mission areas on the circular taxiway and a main base with housing and administration) typical of Royal Air Force base design (Mattson n.d. b). However, the British never arrived to train at Alamogordo. Between 1942 and 1946, the base was primarily used as a training base for B-24, B-17 *Flying Fortress*, and later B-29 *Superfortress* aircraft. The unique facilities, environment, and isolated nature of the base drew attention for a possible missile development base in 1943; however, Alamogordo Army Air Field was passed over, and early missile development was begun at Wendover AFB, Utah. On February 28, 1946, the Alamogordo field was temporarily deactivated (Department of the Air Force 1986:3; Meeter 1967:185; USAF 1989).

The base was reopened in April of 1946 as an operational base for the Strategic Air Command (SAC). During 1946, the post was first commanded by the 15th Air Force followed by the 8th Air Force (Department of the Air Force 1986:3). The Air Force became a separate military branch in 1947, and the base was renamed Alamogordo AFB (Meeter 1967:186).

Air Materiel Command (AMC) (later Air Force Logistics Command) acquired the base from SAC in March 1947 for use as the Air Force's Guided Missile Test Range. The mission of the base was to support the AMC Research and Development Program by providing facilities to develop and test pilotless aircraft, guided missiles, and associated systems and equipment. Missile research began immediately upon AMC's assumption of command. Many of the facilities and personnel from Wendover, Utah were transferred to Alamogordo AFB. The first

missile, a Ground-to-Air Pilotless Aircraft (GAPA), was launched on July 23, 1947. The GAPA ultimately evolved into the Bomarc missile (Department of the Air Force 1986:3; Mattson n.d. b; Meeter 1967:185-186; Mueller 1989:248; USAF 1950).

The base was renamed Holloman AFB in honor of Colonel George Vernon Holloman in September 1948. Col. Holloman was an aviation instrument inventor and a pioneer in the development of guided missiles. In 1937, Holloman, Captain Carl Crane, and Raymond Stout developed the automatic landing system. He received the Distinguished Flying Cross for conducting the first instrument-only landing of aircraft. Holloman died in a B-17 crash on Formosa on March 19, 1946 (Holmes and Narver, Inc. 1965; Mueller 1989:245).

In April 1951, the base came under the jurisdiction of the newly formed Air Research and Development Command (ARDC) with the designation of 6540th Missile Test Wing. At first a satellite of the Air Force Missile Test Center at Patrick AFB, Florida, Holloman AFB became a separate center in September 1952. The missile facilities at Holloman AFB were renamed the Holloman Air Development Center in October 1952 under the command of the ARDC. The facilities were again renamed in September 1957 as the Air Force Missile Development Center. The ARDC was redesignated the Air Force Systems Command (AFSC) in 1961 (Department of the Air Force 1986:3; Meeter 1967:185-186). AFSC is currently an active tenant of the base.

After the dedication of Patrick AFB in 1950, many of the missile programs initially tested at Holloman AFB--Matador, Rascal, Snark, and Navajo--were transferred to that base (United States Army Construction Engineering Research Laboratory 1994). Holloman AFB programs were integrated into those of the White Sands Proving Ground in 1952 when the Proving Ground was redesignated the Integrated White Sands Missile Range (Eidenbach 1994:3).

The base mission did not change between 1957-1970 while under the command of AFSC. Other technical programs were added to the base mission including the inertial guidance laboratories and the aeromedical field laboratories. The high speed test track was extended and gained national

recognition. This track was instrumental in the advancement of missile flight technology (Department of the Air Force 1986:3).

Holloman AFB remained active in guided missile and space research and development until 1968, when the 49th Tactical Fighter Wing was assigned to the base. The Air Force Missile Development Center was deactivated in 1970, and the 49th Wing assumed host responsibilities for the base. In 1971, TAC assumed command of the base.

3.2 BASE COLD WAR CONTEXT

Holloman AFB has been significantly shaped by various political policies, military policies, defense strategies, and technological developments that are aspects of the ACC Cold War context. Several properties at the base represent aspects of these contextual themes. Perhaps the most obvious part Holloman AFB played in the history of the Cold War relates to technological developments that were driven by political and military policies. Holloman AFB contributed to the sense of national security by being at the forefront of developing ever greater technical expertise and "bigger and better" weapons systems.

Holloman's relationship to technological development is clearest during the earliest phases of the Cold War--Phase I (1945-1953) and Phase II (1953-1963). The base's use by SAC was primarily for research and development and the testing of missiles. Holloman AFB saw the advancement of missiles and rockets from the inclined launch to vertical launches. Numerous missiles were developed and tested at the base. These include the Snark, Matador, Mace, Falcon, Aerobee, JB-2 Loon, and Firebee. High altitude weather and research balloons were launched from Holloman AFB. The Manhigh project used balloons to test human physiology at high altitude. The Aeromedical Research Laboratory conducted a wide array of tests on the High Speed Test Track, the Daisy Track, and other shorter tracks. One of these experiments made Colonel John P. Stapp the "fastest man alive" and another tested Captain Eli J. Breeding, Jr. at a sustained force of 83 g's. The Primate Research Facility at the Aeromedical Research Laboratory trained HAM, the first

chimpanzee in suborbital flight, and Enos, the first chimpanzee in orbit. Other complexes supporting important research at the base included the Central Inertial Guidance Test Facility (CIGTF) and the Radar Target Scatter Test Facility (Department of the Air Force 1986:3; Mattson n.d. b; Meeter 1967:185-186; Mueller 1989:248).

Many of the researchers at Holloman AFB were scientists recruited from post-World War II Germany under Operation Paperclip. Operation Paperclip was an early Cold War political and military strategy to ensure scientific and military superiority. In one of the earliest manifestations in the Cold War arms race, the United States and the Soviet Union fiercely competed for the Peenemunde rocket scientists. The earliest missile tests and prototypes were based on the German V-2 rocket. Much of the early rocket testing and tracking equipment was of German make or design. Also, the architecture of some of the early rocket test facilities carries a German style.

Another political policy and military strategy with direct links to Holloman AFB is the Killian Report of 1954. This report strongly supported the development of Intercontinental Ballistic Missiles (ICBMs), particularly the development of the Atlas. In 1955, President Eisenhower gave his highest priority to the development of Atlas. Simultaneously, the Eisenhower administration was supporting the "dispersal" or "California" policy which required that research and development be conducted away from the seacoasts for defensive, and probably economic and political reasons. Much of the fiscal support of the Snark testing at Holloman AFB is a result of Eisenhower's support of ICBMs and the Atlas. The construction of several other test facilities at Holloman AFB is related to the rush to develop the Atlas at a noncoastal location.

In Phase III (1963-1981), Holloman AFB continued many aspects of missile research and became a tactical fighter base and later a TAC base. Many of the Bare Base (post 1972) and alert facilities (1976) were constructed during this phase. The concept of a TAC force rapidly deployable to locations throughout the world is an outgrowth of the Korean and Vietnam Wars and the Domino principle. The Soviet Union was not risking an all-out war with the United States, but draining resources through a series of smaller wars. In response to this, the United States developed TAC

Composite Air Strike Forces (CASF) designed to operate with minimal support at any distance from the United States. Since its development, the rapid deployment of CASF has been thought of as a deterrent to limited wars (USAF 1961:318-323).

The base remained a TAC base throughout Phase IV (1981-1989). During this phase, the base began support of the 4th Space Warning Squadron which continues to provide instantaneous worldwide missile warning and functions as a critical link in the command, control, communication, and intelligence system.

3.3 BASE DEVELOPMENT

In 1943, the base had a three area layout with the area named the "main base" the largest. This area included mission facilities and housing; two smaller areas (north and west) were solely mission related (Figure 3.1). By 1952, the base had spread to the south primarily with the development of housing (Figure 3.2). This expansion was likely related to the National Housing Act (Wherry-Spence Act) of 1949 and the chronic housing shortage suffered by the USAF after World War II. In 1967, the main base was expanded on the southwest and southeast, with more housing. Outer areas were also developed including expansion in the western area and the fuel area on the eastern side of the base (Figure 3.3). These construction projects were probably related to the military buildup during the Vietnam War and the adaptations by the Air Force to the political/military policy of Flexible Response. There was no physical expansion of the base up through 1985, but by 1994, the main base had been enlarged, the western area grew substantially and the northern area received pockets of development associated with the 4th Space Warning Squadron. The last surge of development is linked to the Carter and Reagan administrations requirements for command, control, communication, and intelligence improvements and the acquisition of the Stealth Fighter (Figure 3.4).

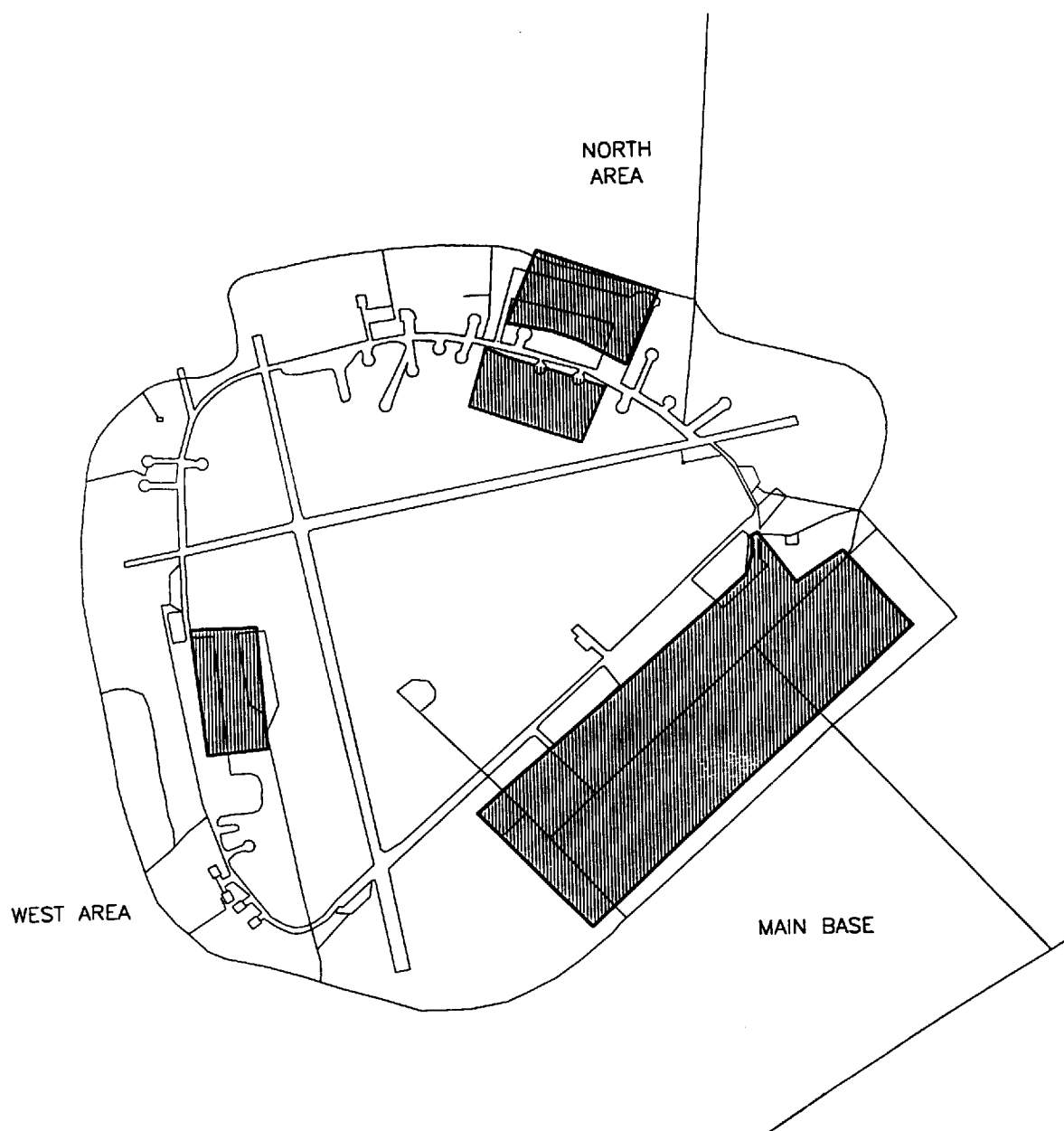


Figure 3.1 Holloman Air Force Base, 1943.

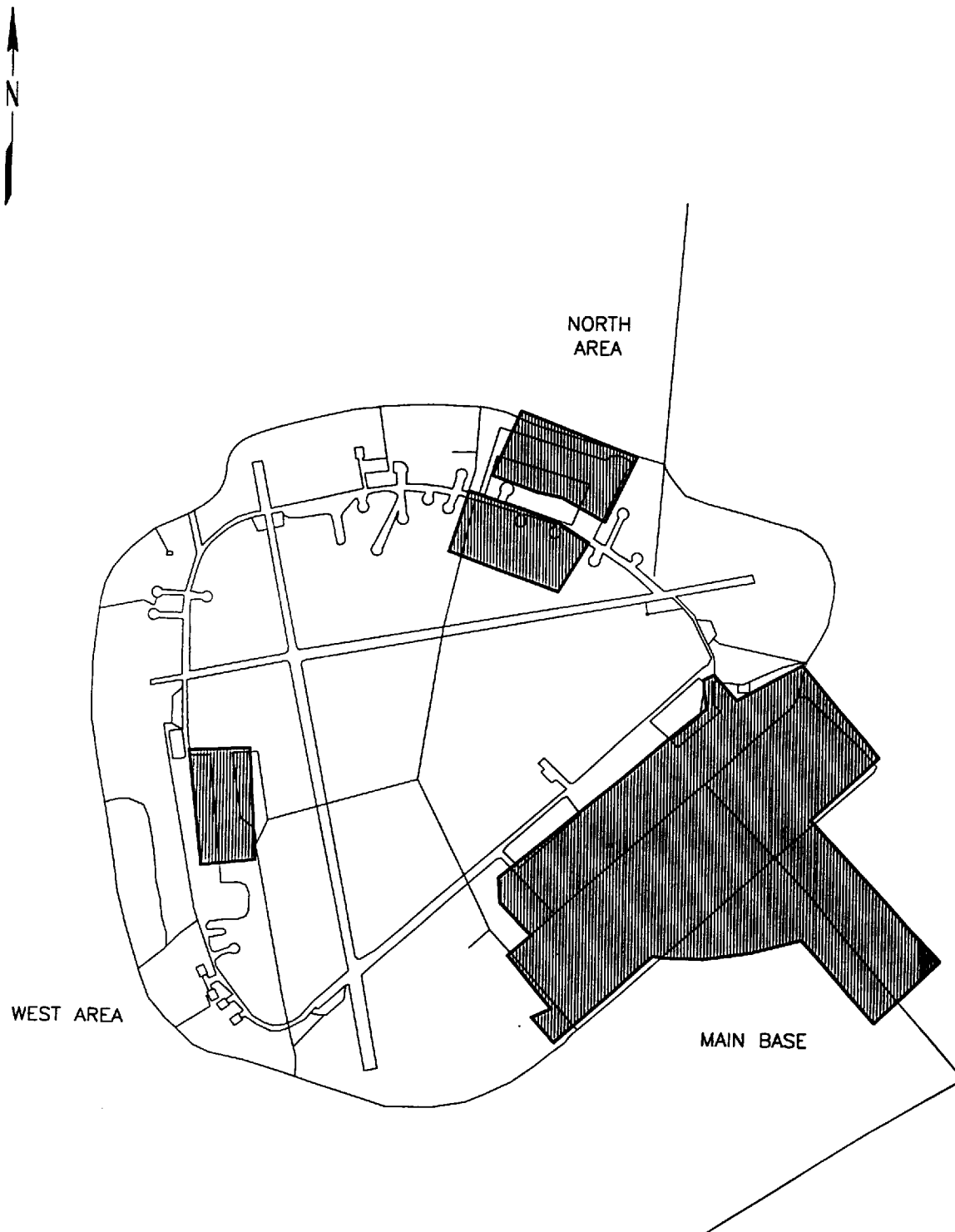


Figure 3.2 Holloman Air Force Base, 1952.

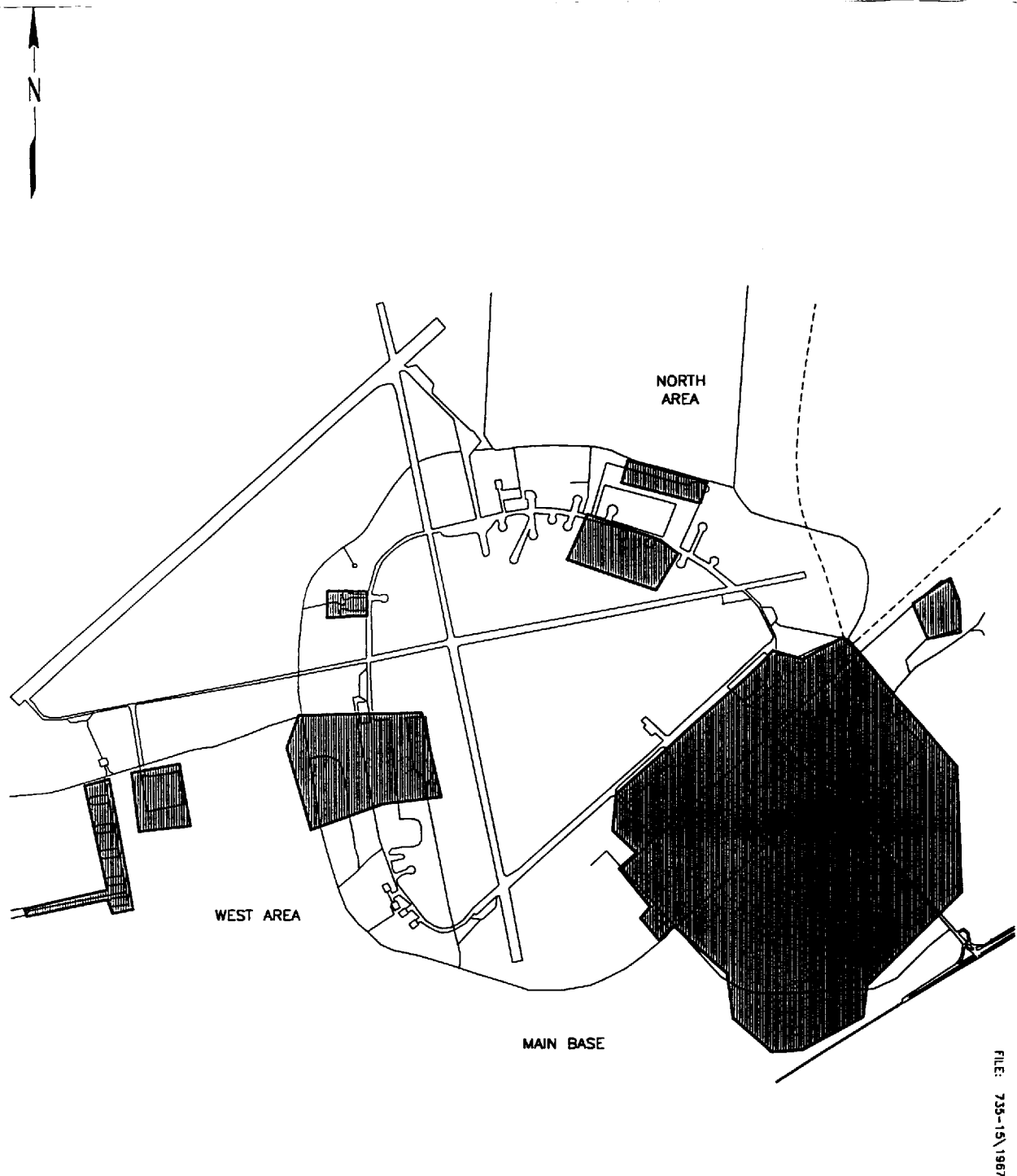


Figure 3.3 Holloman Air Force Base, 1967-1985.

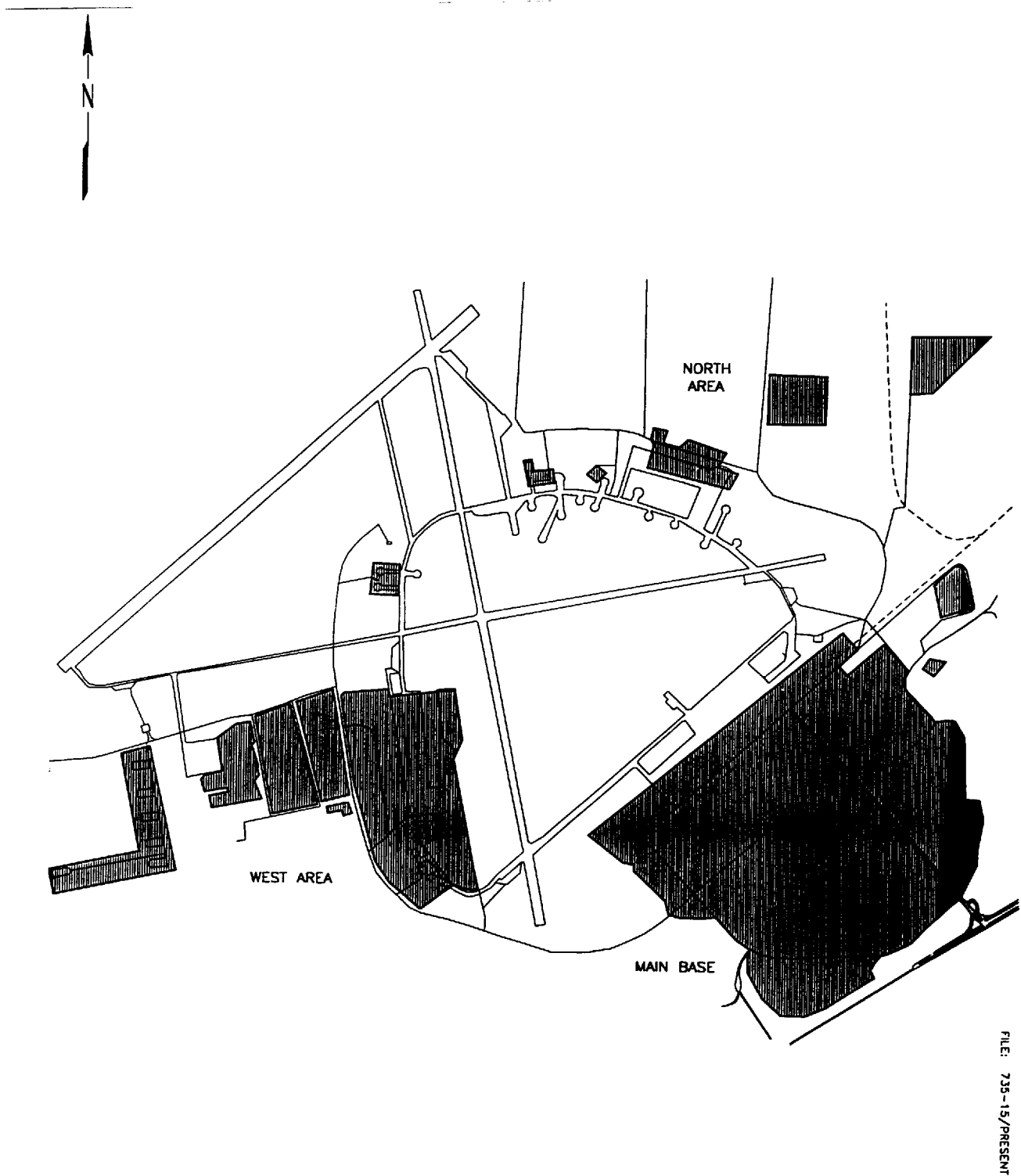


Figure 3.4 Holloman Air Force Base, 1994.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Holloman AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993b:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Holloman AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Holloman AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993b) to meet the needs of Cold War studies, are as follows:

- a) Portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) Portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) Embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) Have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993b) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Holloman AFB, 116 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Eleven resources were evaluated at Holloman AFB, 10 of them falling under the DoD category of real property and one under records/documents. Each resource is discussed below organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Architectural Drawing Files (Resource No. 1017, Located in Real Property No. 55)

The architectural drawing files are located in the 49th Civil Engineering Squadron's (CES) Engineering Flight drawing vault. There are six, floor to ceiling rows of flat files filled with mylar and linen originals, sepias, and blueprints of construction documents and as-builts. The files are arranged by building number for the most part, but some are arranged by property type, such as taxiways and runway lighting. Some of the more important historic originals have been pulled from the files by the CES Archaeologist. It is intended to develop a system to archivally store the historic drawing file documents. Also located in the drawing room are project files (8½ x 11) for construction projects on base.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup		Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Architectural Drawing Files	1017	In 55	Record/Object	15
Combat Weapons and Support Systems					
Alert Facilities	Fighter Alert Facility	1019	1090	Real/Bldg	17
Ground Vehicles and Equipment	Bare Base Installation	1012	901, 902	Real/Site	17
Materiel Development Facilities					
Research Laboratories	Medical Science Lab	1014	1200-1207	Real/Bldg	16
Research Laboratories	Weapons Guidance Laboratory	1018	1264	Real/Bldg	16
Test Sites	Tracking and Documentation	1001	900, 1133, 1249	Real/Bldg	19
Test Sites	Launch Ramp	1003	—	Real/Struct	18
Test Sites	Blockhouses	1004	1116, 1139, 1142	Real/Bldg	18
Test Sites	Test Track	1009	39710	Real/Struct	20
Test Sites	Blockhouse	1010	1175	Real/Bldg	18
Intelligence Facilities					
Spy Satellites	Deployable Warning Complex	1015	1062, 1065	Real/Bldg	16

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	1009	39710	Test Track
19	1001	900, 1133, 1249	Tracking and Documentation
18	1003	—	Launch Ramp
18	1004	1116, 1139, 1142	Blockhouses
18	1010	1175	Blockhouse
17	1012	901, 902	Bare Base Installation
17	1019	1090	Fighter Alert Facility
16	1014	1200-1207	Medical Science Lab
16	1015	1062, 1065	Deployable Warning Complex
16	1018	1264	Weapons Guidance Laboratory
15	1017	In 55	Architectural Drawing Files

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Fighter Alert Facility (Resource No. 1019, Real Property No. 1090)

The fighter alert complex, built in 1976, consists of a three-stall aircraft hangar, crew house, an administrative facility, vehicles, and ground equipment that supports the active air defense alert mission. The complex remains actively used, and crews are on 24-hour alert. This is an example of a TAC defensive alert or intercept complex with integrity of setting, location, and association. It is exceptionally significant for its role in deterrence during Phases III and IV and meets NRHP criteria (a) and (c).

6.2.2 Ground Vehicles and Equipment

6.2.2.1 Bare Base Installation (Resource Nos. 1012, Real Property Nos. 901 and 902)

The 449th Mobility Support squadron was formed at Holloman AFB in March 1972. This mission is now undertaken by the 49th Bare Base Systems Group. Bare Base is the only unit in the Air Force to maintain support equipment to establish a tactical base of operations at any remote location in the world (Department of the Air Force 1986:4). The Bare Base installation is located in Holloman's western area, occupies a large number of buildings including two warehouses (901, 902) built in 1959, and has a taxiway and aprons connecting to the installation for ease of loading and unloading materiel and equipment into the warehouses. There are stacks of equipment and canvas quonset huts around the compound which are ready to move out at a moment's notice.

The Bare Base Installation that occupies the western area of Holloman AFB, includes a large number of buildings, a taxiway, and aprons. Because the compound is operational, all elements of

its integrity are intact. The site is important for its relationship to the concept of Global Reach and mobility. The capability of tactical air power to rapidly deploy worldwide contributed to overall deterrence during the Cold War. The Bare Base Installation has been functional during Phases III and IV of the Cold War and meets NRHP criterion (a).

6.3 MATERIEL DEVELOPMENT FACILITIES

6.3.1 Research Laboratories

6.3.1.1 Medical Science Laboratories (Resource No. 1014, Real Property Nos. 1200-1207)

The historic aeromedical research facilities are located in the vicinity of buildings 1200-1207 which are named Medical Science Laboratories on the real property inventory. Construction in this area began as early as 1951. Improvements to these facilities were made in 1961 and 1963 with larger cages for the chimpanzees and larger offices for the humans (Cornett 1963). The modern aeromedical science labs are now run by the New Mexico State University and are located north of the old labs. The modern complex includes laboratories, a clean room, animal holding areas, and a chimpanzee consortium to support research.

The original laboratory was used for animal tests to determine the effects of space environments, both physiologically and psychologically, as well as to train the lab's two most famous chimpanzees, Enos and HAM, for the project Mercury space flight during the early 1960s (Cornett 1962). The lab also housed the Daisy Test Track, which was a pneumatically propelled deceleration test track, named after the Daisy compressed air BB gun. The track, first used in 1955, tested human tolerances, prototype restraint systems, and equipment and animal tolerances. There were six different sleds designed for different types of tests (Mattson n.d. a). The original buildings are concrete block, are painted a tan color, and have slightly curved parapets, similar to an adobe building. They retain their integrity. They are the only buildings on base with a southwestern

regional style. The buildings have functioned as medical science laboratories during all four Phases of the Cold War and meet NRHP criterion (a).

6.3.1.2 Weapons Guidance Laboratory (Resource No. 1018, Real Property No. 1264)

The Weapons Guidance Laboratory, more specifically the CIGTF, was established to consolidate manpower and equipment required to test precision inertial navigation and guidance systems. Subsequently, the CIGTF has also become the test agency for all aircraft inertial navigators prior to selection in the DoD inventory. The CIGTF tests and evaluates gyroscopes, accelerometers, aircraft navigation systems, and missile guidance systems (Department of the Air Force 1986:11).

The complex consists of two large span, two story buildings and a one story long, horizontal building. These buildings housed and continue to support research on guidance and navigation systems. These systems were integral to the evolution of ICBMs and other aeronautical weapons. The complex conveys its significance through its location, setting, and association. This laboratory was used for this function during Phases II through IV and meets NRHP criterion (a).

6.3.2 Test Sites

6.3.2.1 Tracking and Documentation (Resource No. 1001, Real Property Nos. 900, 1133, and 1249)

These installations, also known as "Askania" Towers, were once used to track and document the trajectory of test missiles with theodolites and cameras. Twelve of these towers were constructed in 1954, laid out in a staggered parallel array. Three of the towers are on Holloman AFB, while nine others are on the White Sands Missile Range. The theodolite towers are poured concrete structures with retracting metal roofs. The buildings are approximately 12 ft (3.7 m) wide by 2.5 stories tall. The metal roof panels retract along small metal I-beams to expose platforms that

once held theodolites and cameras. The cameras, made by the Askania Company of Germany (and thus the name Askania Towers), were revealed when the roof was retracted by a concrete counterweight. The buildings originally had associated outhouses and generator shelters, as well as the name of the site written with stones on the northern side of the buildings. It is believed that "Paperclip" scientists may have been involved in the tower design. By 1986, one of the theodolite towers was being used as a Defense Mapping Agency instrument station in support of the High Speed Test Track (Department of the Air Force 1986:14). The stone names are still on-site at three of the buildings and an Askania film reader is on display at the Space Center in Alamogordo.

The "Askania" Towers were used to track and document the trajectory of test missiles. Many of the associated structures and some elements of the towers, cooling systems, and gas tanks, are missing, but even without them the tower structures convey meaning through their design, materials, location, and association. The towers have both architectural and technological importance in that they are unique architectural entities that tracked and aided in the research and development of missiles. This resource was used for this function during Phases II and III of the Cold War and meets NRHP criteria (a) and (c).

6.3.2.2 Launch Ramp (Resource No. 1003)

This missile, the JB-2 Loon, was a variation of the German V-1, or buzz bomb. The JB portion of its name stands for jet bomb. The missile was employed during the late 1940s as a vehicle to test instrumentation equipment and also to refine methods of missile study. The 400 ft (122 m) long, two-railed, earthen inclined launching ramp for the JB-2 was completed at Holloman AFB in February 1948. The first inclined, metal rail test launches occurred during that year (Bushnell 1959:9; USAF 1948:35)

Many elements of the original launch facility are eroding and decomposing. The remaining earthen ramp, concrete cap, iron rails, crumbling concrete tanks, stairs and walkways, and wooden stairs

and platforms still possess integrity and convey the launch facility's meaning through the design, materials, location, and association. The launch site has both architectural and technological importance, in that the ramp is a unique representation of an earthen, inclined launch track associated with early research on guided missiles.

This same launch track was previously used at Wendover AFB, Utah. The track was moved from Utah and reassembled in New Mexico as the Air Force transferred its early guided missile program from Wendover to Holloman AFB. The track was never used for any other purpose than to test launch the JB-2. However, additions to the track, such as concrete stairs and pads, were added for use by the Falcon missile program. By 1959, the track was abandoned and overgrown with tumbleweeds (Bushnell 1959:9). This exceptionally important resource was used for this function during Phases I and II of the Cold War and meets NRHP criterion (a).

6.3.2.3 Blockhouses (Resource No. 1004, Real Property Nos. 1116, 1139, and 1142)

Near the JB-2 Loon launch ramp site are a group of poured concrete blockhouses and associated concrete launch pads that were used for Aerobee and NATIV research missiles, currently referred to as Non-Appropriated Fund Central Storage. Aerobee missiles were used as the "workhorses of high-altitude research" (USAF 1961:17). The Aerobee was unique in that it had no external guidance controls. The NATIV was a winged surface to surface missile. The three blockhouses were used to guide the launches and protect the scientists from heat and the potential for an explosive accident, and are similar in design. These exceptionally important resources were used as blockhouses during Phases II and III of the Cold War and meet NRHP criteria (a) and (c). The concrete is approximately 2 ft (0.6 m) thick, including the walls, hipped roof, and lean-to entry. Each building has a series of steel rod access steps, called "manhole steps," to the roof, with a kind of "widow's walk." Although each building's window details are slightly different, the basic design is the same. The windows are set back from the main facade by a series of 0.5 ft (0.2 m) recesses. The glazing is approximately two inches thick, constructed of four to five layers of bullet-proof glass, greenish in color due to the lead content. The exterior trim is ¼-inch steel

plate, angled in elevation, and set into the final concrete recess. A photograph of a Holloman AFB Aerobee launch, including the tower, can be seen in *Fundamentals of Aerospace Weapon Systems* (USAF 1961:18).

Although none of the electronic launch or monitoring equipment remains on the interior and the buildings are now used for the storage of sports equipment, the structures themselves visually convey their original use from the exterior. The launch sites or concrete firing aprons are contributing elements but do not individually convey their meaning. The NATIV launch site has some of the remains of the concrete slab that originally supported the tilted, 18° steel launch tower. The type of construction may have the potential to reveal some information about the launch site engineering.

6.3.2.4 Test Track and Blockhouse (Resource Nos. 1009 and 1010, Real Property Nos. 39710 and 1175)

The High Speed Test Track became operational in 1950 and has continued operation through all Phases of the Cold War. The track has evolved into the longest (9.8 mi [16 km]) most precisely surveyed, most accurately aligned, and best instrumented test facility of its kind in the United States. The track simulates various portions of flight trajectories under closely controlled and monitored conditions. Test vehicles are mounted on sleds propelled by liquid or solid rockets. Sled speeds often reach 7,000 ft (2,134 m) per second and speeds up to 8,200 ft (2,500 m) per second have been demonstrated (Department of the Air Force 1986:11; Mattson n.d. c). The current goal of the test track is to attain Mach 10 (approximately 11,000 ft (3,350 m) per second at sea level), as evidenced by the signs near the test track, "Think Mach 10!" This test track is a scientific property that has been in continual use since its inception and conveys its meaning through location, setting, design, materials, workmanship, feeling, and association.

The test track has been used for a wide variety of experiments involving rockets, engines, fuselage design, and aeromedical research. One of the earliest and most famous of rockets

launched from the track was the Snark, an intercontinental cruise missile, between 1950 and 1952. The Matador recovery system was tested between 1953 and 1956 (Bushnell 1959). Aeromedical research on ejection seats and human responses to wind blast was conducted at the track. The most famous experiment involved Lt. Col. John P. Stapp who rode a rocket-propelled sled at a record speed of 632 mi (1,017 km) per hour in December of 1954. The experiment proved a pilot could withstand the blast received by ejecting from a jet at 35,000 ft (10,668 m) and at twice the speed of sound. The experiment justified the continued use of an ejector seat (Goldberg 1957:206; Meeter 1967:1).

Support and technical facilities are located at the southeastern end of the track. Blockhouses, called test track buildings in the real property inventory, are positioned along the western side of the track at various positions along the length of the track. The Alpha Blockhouse is primarily underground with a periscope observation window facing the southern end of the track. A Central Control building is located at the midway point. Running parallel to the track are a series of instrumentation and camera stations. Across the street, to the southeast of Alpha Blockhouse, is a test sled "bone yard" (open storage of sled frames used on the test track) which contains a wide variety of sled frames used at the track. These exceptionally important resources meet NRHP criteria (a) and (c).

6.4 TRAINING FACILITIES

None were evaluated at Holloman AFB.

6.5 INTELLIGENCE FACILITIES

6.5.1 Spy Satellites

6.5.1.1 Deployable Warning Complex (Resource No. 1015, Real Property Nos. 1062 and 1065)

The mission of this tenant unit is to provide immediate, worldwide missile warning, space launch,

and nuclear detonation detection to NORAD, various commands, the Joint Chiefs of Staff, and National Command authorities. The 4th Satellite Communications Squadron arrived at Holloman AFB in 1983 as a tenant reporting to the Air Force Space Command and provided a critical link in the command, control, communication, and intelligence system that is part of the overall nuclear deterrent (USAF 1993a). The unit uses the only deployable satellite communications ground system in the continental United States. The deployable system guarantees survivability of the detection and communication system in case of attack. The unit was declassified in 1992 and renamed the 4th Space Warning Squadron (Romain 1993:6-7). The complex continues to be operational and its integrity is intact. It is exceptionally important for its relationship to the expansion of command, control, communications, and intelligence systems initiated during the Carter administration. The continued improvement by this system contributed to the nation's deterrent ability. This resource provided this deterrence during Phase IV of the Cold War and meets NRHP criterion (a).

7.0 UNDOCUMENTED RESOURCES

During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. One area that should be investigated further is the International Space Hall of Fame (Space Center). The Space Center in Alamogordo, New Mexico, has a wealth of information about Holloman AFB during the Cold War, as well as some of the material culture. Some of the properties on display or in curation, have been accessioned by the museum through Air Force channels and others are on loan. One important property that the museum has recently acquired is the Daisy Test Track and some of the original sleds. Examples of important properties on loan are the Sonic Wind I Rocket Sled, JB-2 Loon Rocket, X-8 Aerobee, and various LIFE magazines with covers and articles about Cold War related events. An International Space Hall of Fame property accession list and a listing of the oral histories conducted and on file at this institution are included in Appendix F.

Several missiles are located within a fenced storage area near the base stables. The missiles are dumped within the storage area and exact types and numbers could not be ascertained. These missiles were originally on static display near the base entrance. They were placed in storage subsequent to TAC becoming base host. These missiles are now in storage at the International Space Hall of Fame.

The Air Force Historical Research Agency at Maxwell AFB, Alabama is the repository for all Air Force Historical documents. A computerized search for materials related to Holloman AFB revealed over 1200 citations. Most of these are unit histories and special collections. More specific topics include the histories of aeromedical research, aerospace research, technical studies at the high speed sled track, and other highly technical scientific reports. The vast majority of these documents are available on microfilm. Any further and more comprehensive studies of Cold War history at Holloman should allot more time and energy to researching these documents. As of the writing of this report, researchers at Holloman are in the process of gathering several of these documents from Maxwell to be curated at Holloman for future research.

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Holloman AFB. As part of the process, various people at the base were contacted. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

The base is planning to reduce spatial and energy inefficiencies through consolidating uses and rehabilitating or demolishing pre-1951 structures. The base also has a Historic Preservation Plan (Eidenbach 1994) and a cultural resource manager to aid in the Section 106 process, with respect to structures, that may be eligible for the NRHP. The base planning office has also determined types of land use on base to aid in efforts to make the base more efficient. The list of capital improvement projects currently planned that may impact important historic properties and resources include the following:

- Addition to Test Track Mission Control-Alpha Blockhouse (noted as exceptionally important in the present inventory)
- Replace Small Aircraft Maintenance Dock, Real Property No. 500 (noted as important in inventory)
- Replace World War II Maintenance Aircraft Hangars (noted in inventory)
- Capehart and Wherry Housing Upgrade (ongoing)
- Dormitory Alterations (ongoing)

There are several ongoing Legacy funded studies at Holloman AFB that are related to the Cold War. One is a study of military architecture of the 1940s and 1950s, and the other is a documentation of early missile and rocket development sites. These studies will provide detailed, comprehensive investigations and preservation recommendations at both the local and national levels.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Holloman AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50-year threshold is waived. This is especially important for this study, because the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess

integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Holloman AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Holloman AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a predetermined eligibility. Therefore, it is necessary to reevaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective state, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Holloman AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Description	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
1001	900, 1133, 1249	Tracking and Documentation		*	*	*		NRHP eligible now.
1004	1116, 1139, 1142	Blockhouses		*	*	*		NRHP eligible now.
1010	1175	Blockhouse		*	*	*		NRHP eligible now.
1014	1200-1207	Medical Science Laboratories		*	*	*		NRHP eligible now.
1015	1062, 1065	Deployable Warning Complex		*	*	*		NRHP eligible now.
1018	1264	Weapons Guidance Laboratory		*	*	*		NRHP eligible now.
1019	1090	Fighter Alert Facility		*	*	*		NRHP eligible now.
Real Property - Sites								
1012	901, 902	Bare Base Installation		*		*		NRHP eligible in the future.
Real Property - Structures								
1003	-	Launch Ramp		*	*	*	*	NRHP eligible now.
1009	39710	Test Track		*	*	*		NRHP eligible now.
Record or Document - Objects								
1017	In 55	Architectural Drawing Files		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Architectural Drawing Files (Resource No. 1017, Located in Real Property No. 55)

The architectural drawing files include mylar and linen originals, sepias, and blueprints of Holloman AFB. Efforts are already underway by the base archaeologist to archivally store some of the historic documents. Stewardship of the files is recommended, along with continuance of the preservation and documentation efforts.

9.2.2 Fighter Alert Facility (Resource No. 1019, Real Property No. 1090)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criteria (a) and (c) based on its role to intercept any incursion into U.S. airspace by the enemy and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building remains intact. Therefore, this building is recommended as eligible to the NRHP.

Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.3 Bare Base Installation (Resource No. 1012, Real Property Nos. 901 and 902)

This installation is evaluated as important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role in global reach and mobility. The integrity of the installation is determined to be intact based upon its continued use as a Bare Base Installation. However, this facility does not meet the 50-year criterion for NRHP eligibility. Therefore, it is not recommended as eligible to the NRHP. Stewardship to retain its integrity and further documentation to reevaluate the facility when it reaches the 50-year criterion are recommended.

9.2.4 Medical Science Laboratories (Resource No. 1014, Real Property Nos. 1200-1207)

This complex is evaluated as exceptionally important within the base and national Cold War contexts during all four Phases. It meets NRHP criterion (a) based on its association with the space program and specifically the training of the chimpanzees used in the Mercury space flight. The integrity of the complex is determined to be intact. Therefore, these buildings are recommended as eligible to the NRHP. Recommendations include stewardship to retain the integrity of the complex and further documentation to nominate this resource to the NRHP.

9.2.5 Weapons Guidance Laboratory (Resource No. 1018, Real Property No. 1264)

This resource is determined to be exceptionally important to the base and national Cold War contexts during Phases II through IV. It meets NRHP criterion (a) and maintains its integrity. Therefore, this resource is recommended as eligible to the NRHP. Stewardship to maintain the integrity and further documentation to nominate the resource to the NRHP are also recommended.

9.2.6 Tracking and Documentation (Resource No. 1001, Real Property Nos. 900, 1133, and 1249)

This resource is determined to be exceptionally important to the base and national Cold War contexts during Phases II and III. It meets NRHP criteria (a) and (c) and maintains its integrity. Therefore, this resource is recommended as eligible to the NRHP. Stewardship to maintain its integrity and further documentation to nominate the resource to the NRHP are also recommended.

9.2.7 Launch Ramp (Resource No. 1003)

This launch ramp is determined to be exceptionally important to the base and national Cold War contexts during Phases I and II. It meets NRHP criterion (a) and maintains its integrity. Therefore, this launch ramp is recommended as eligible to the NRHP. Stewardship to maintain its integrity, conservation to prevent and repair any decomposition, and further documentation to nominate the resource to the NRHP are also recommended.

9.2.8 Blockhouses (Resource No. 1004, Real Property Nos. 1116, 1139, and 1142)

These blockhouses are determined to be exceptionally important to the base and national Cold War contexts during Phases II and III. They meet NRHP criteria (a) and (c) and maintain their integrity. Therefore, they are recommended as eligible to the NRHP. Stewardship to maintain their integrity and further documentation to nominate the resources to the NRHP are also recommended.

9.2.9 Test Track and Blockhouse (Resource Nos. 1009 and 1010, Real Property Nos. 39710 and 1175)

These resources are determined to be exceptionally important to the base and national Cold War contexts during all Phases, meet NRHP criteria (a) and (c), and maintain their integrity. Therefore, these resources are recommended as eligible to the NRHP. Stewardship to maintain their integrity and further documentation to nominate the resources to the NRHP are also recommended.

9.2.10 Deployable Warning Complex (Resource No. 1015, Real Property Nos. 1062, 1065)

This resource is exceptionally important to the base and national Cold War contexts during Phase IV. It meets NRHP criterion (a) and retains its integrity. Therefore, this resource is recommended as eligible to the NRHP. Stewardship to maintain the integrity and further documentation to nominate the resource to the NRHP are also recommended.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Bushnell, D.

- 1959 Origin and Operation of the First Holloman Track. Volume I. *History of Tracks and Track Testing at the Air Force Missile Development Center, Holloman Air Force Base, New Mexico 1949-1956*. Historical Branch, Office of Information, Air Force Missile Development Center, Air Research and Development Command, United States Air Force.

Cornett, L. H., Jr.

- 1962 *History of the 6571st Aeromedical Research Laboratory, AMD January 1962 - June 1962*. Historical Division, Office of Information, Air Force Missile Development Center, Holloman Air Force Base, New Mexico.
- 1963 *History of the 6571st Aeromedical Research Laboratory, AMD July 1962 - December 1963*. Historical Division, Office of Information, Air Force Missile Development Center, Holloman Air Force Base, New Mexico.

Department of the Air Force

- 1986 Installation Survey Report. Holloman Air Force Base. Alamogordo, New Mexico. GSA Control Number 5700-24422. Office, Assistant Secretary of the Air Force (Manpower, Reserve Affairs and Installations).

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Eidenbach, P. L.

- 1994 *Historic Preservation Plan, Final*. United States Air Force, Holloman Air Force Base, New Mexico. Prepared by Human Systems Research, Inc. for Holloman Air Force Base and the United States Army Corps of Engineers, Albuquerque District.

Goldberg, A. (editor)

- 1957 *A History of the United States Air Force 1907-1957*. D. Van Nostrand. Princeton, New Jersey.
-

Holmes and Narver, Inc.

- 1965 *Master Plan for Air Force Missile Development Center Phase II Report*. Prepared Under Contract AF 29(600)-5222 for Holloman Air Force Base, Air Force Systems Command, September 16, 1965.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mattson, Col. W.

- n.d. a Daisy Track. In *We Develop Missiles, Not Air*. Holloman AFB Cultural Resources Publication No. 2. Alamogordo, New Mexico.
- n.d. b Holloman Air Force Base. In *We Develop Missiles, Not Air*. Holloman AFB Cultural Resources Publication No. 2. Alamogordo, New Mexico.
- n.d. c Test Tracks. In *We Develop Missiles, Not Air*. Holloman AFB Cultural Resources Publication No. 2. Alamogordo, New Mexico.

Meeter, G. F.

- 1967 *The Holloman Story*. The University of New Mexico Press. Albuquerque, New Mexico.

Mueller, R.

- 1989 *Air Force Bases, Vol. I, Active Air Force Bases Within the United States of America on 17 September 1982*. Office of Air Force History: Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Neufeld, J.

- 1990 *The Development of Ballistic Missiles in the United States Air Force 1945-1960*. Office of Air Force History: Washington, D.C.
-

Romain, A., Sr.

1993 Mobile Eyes *Guardian*. November 1993. 21st Space Wing: Public Affairs.

United States Army Construction Engineering Research Laboratory

1994 *Draft Report - Historical and Architectural Documentation Reports of Patrick Air Force Base, Cocoa Beach, Florida*. Tri-Services Cultural Resources Research Center. Champaign, Illinois.

United States Air Force

1948 *Historical Study, United States Air Force Guided Missile Test Program, Holloman Air Force Base, 1 January 1948 - 30 June 1948*. Alamogordo, New Mexico.

1950 *GAPA Holloman's First Missile Program, 1947-1950*. Historical Branch Office of Information Services. Air Force Missile Development Center.

1961 *Fundamentals of Aerospace Weapon Systems*. Air Force ROTC. Air University. United States Government Printing Office. Washington, D.C.

1989 *Horizons 2000, Holloman Air Force Base Commander's Long-Range Facility Improvement Plan*. Headquarters 833D Air Division, Tactical Air Command. Holloman Air Force Base, New Mexico.

1993a *Welcome to . . . Holloman Air Force Base New Mexico*. Public Affairs Office, 49th Fighter Wing, Holloman Air Force Base. MARCOA Publishing Incorporated, 1993.

1993b *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	1001	900, 1133	Tracking and Documentation	1954
	1002	291	Maintenance Dock	1943
	1004	1116, 1139, 1142	Blockhouses	1951
	1005	1284	Tracking and Documentation	1948
	1006	1079	Maintenance Dock	1943
	1007	301	Maintenance Dock	1944
	1010	1175	Test Track Building	1949
	1013	500	Maintenance Dock	1953
	1014	1200-1207	Medical Science Labs	1969
	1015	1062-1065	Deployable Warning Complex	1983
	1018	1264, 1265	Weapons Guidance Laboratory	1957
	1019	1090	Fighter Alert Facility	1976
	1021	1102, 1103	Radar Monitoring Site	1948
	1024	75600, 75601, 75603	Riding Stables	1956
	1025	055	Base Engineering Administration	1971
	1027	035	Security Police Operations	1986
	1028	1196	Weather Rawinsonde	1956
	1029	1199	Security Police Canine Kennel	1957
	1030	2001	Family Housing APPR 50-69	1966
	1031	2186	Family Housing APPR 50-69	1950
	1032	2204	Wherry Family Housing	1953
	1033	2405	Wherry Family Housing	1956
	1034	2617	Capehart Family Housing	1959
	1035	2643	Capehart Family Housing	1959
	1036	2712	Family Housing Appr 50-69	1959
	1037	2714	Family Housing Capehart	1966
	1038	001	Visitor Control Center	1987
	1039	1155	Research Communications Station	--
	1040	None	Observation Building	--
	1041	057	Environmental Health	1954
	1042	222	Base Personnel Office	1990
	1043	198	Vehicle Maintenance Shop	1953
	1044	702	Petrol Operations Building	1955
	1045	770	Elementary School	--
	1046	786	Credit Union	--
	1047	761	Golf Clubhouse	1957
	1048	782	Youth Center	1978
	1049	783	Base Theater	1968
	1050	784	Chapel Center	1958
	1051	785	Post Office Central	1972
	1052	787	Enclosed Mall	1971
	1053	790	Child Care Center	1979
	1054	791	Child Care Center	1986
	1055	841	Non-Air Force Administrative Office	1952
	1057	1080	Small Aircraft Maintenance Dock	1956
	1058	1173	Test Track Buildings	1957
	1059	1174	Test Track Buildings	1960
	1060	1156	Research Communication Station	1962
	1064	280	Avionics Shop	1960

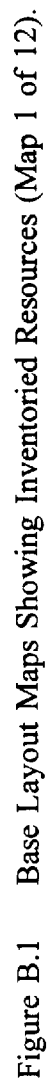
Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	1065	1162	Test Track Building	1957
	1069	223	Exchange Cafe Snack Bar- McDonalds	1991
	1070	583	Visitor Officer Quarters	1959
	1071	590	Transient Lodging Facility	1990
	1073	21810-21819	Small Aircraft Maintenance Dock	1992
	1074	1091	Control Tower	1969
	1075	811	Group Headquarters	1956
	1076	11648	Test Stand	1989
	1077	839	Precision Measurement Equipment Laboratory	1953
	1078	450	Gymnasium	1971
	1079	325	Recreation Center	1958
	1081	513	Technical Training Laboratory/Shop	1976
	1082	572	Rapcon Center	1969
	1083	520	Training Physiological	1986
	1084	578	Helicopter Rescue and Recovery Hangar	1993
	1085	273	Dental Clinic	1957
	1086	231, 232	Arts and Crafts Center Automotive Hobby Shop	1971
	1087	107	Social Action Facility	1972
	1088	282	Hangar	1971
	1089	89	Base Cold Storage	1957
	1090	133	Vehicle Maintenance Shop	1954
	1091	142	Warehouse Supply and Equipment Base	1980
	1092	4	Traffic Check House	1981
	1093	17	Aerospace Medicine	1956
	1094	40	Family Support Center	1943
	1095	71	Family Housing Management Office	1943
	1096	205	Base Library	1943
	1097	214	Non-Commissioned Officers Open Mess	1966
	1098	274	Airmen Dining Hall	1986
	1099	296	Weapons System Maintenance Management Facility	1968
	1100	304	Fire Station	1956
	1101	318	Squadron Operations	1965
	1102	338	Airmen Dormitory	1991
	1103	340, 341	Airmen Dormitory	1956
	1104	375	Warehouse Supply and Equipment Base	1952
	1105	468	Bowling Center	1964
	1106	531	Officer's Open Mess	1956
	1108	571	Base Operations	1955
	1109	586	Visiting Officers Quarters	1979
	1110	599	Combat Arms Training Maintenance Building	1943
	1111	649	Base Package Store	1956
	1112	015	Composite Medical Facility	1967
	1113	018	Exchange Service Station	1959
	1114	016	Exchange Service Station (Shopette)	1067
	1115	029	Wing Headquarters	1987
	1116	702	Petrol Operations Building	1955
Real Property/Landscape				
	1016	75400	Miscellaneous Outdoor Recreation Facility (Heritage Park)	—

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Site				
	1012	901, 902	Bare Base Installation	1972
	1020	None	Segregated Housing Area	1943
	1066	None	Ballistic Rain Field	—
	1072	75102	Softball Athletic Field	1949
	1080	None	Batting Cage	—
Real Property/Structure				
	1003	None	Launch Ramp	1948
	1008	1440, 1442	Launch Ramp	1959
	1009	39710	Test Track	1949
	1011	1160, 39600	Propulsion Engine Test Stand	1957
	1023	1168	Rocket Assembly Storage	1957
	1026	192	Vehicle Service Rack	1992
	1056	953	Warehouse Supplies and Equipment Depot	1991
	1061	1193	Research Equipment Storage and Test Stand	1952
	1062	1194	Research Equipment Storage and Test Stand	1952
	1063	1195	Research Communication Station	1952
	1067	84202	Water Storage Tank	1957
	1068	84216	Water Storage Tank	1969
	1107	533	Officers Swimming Pool	1959
Record or Document/Object				
	1017	In 55	Architectural Drawing Files	—
	1022	Near 87300	Missiles stored in fenced yard	—

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES



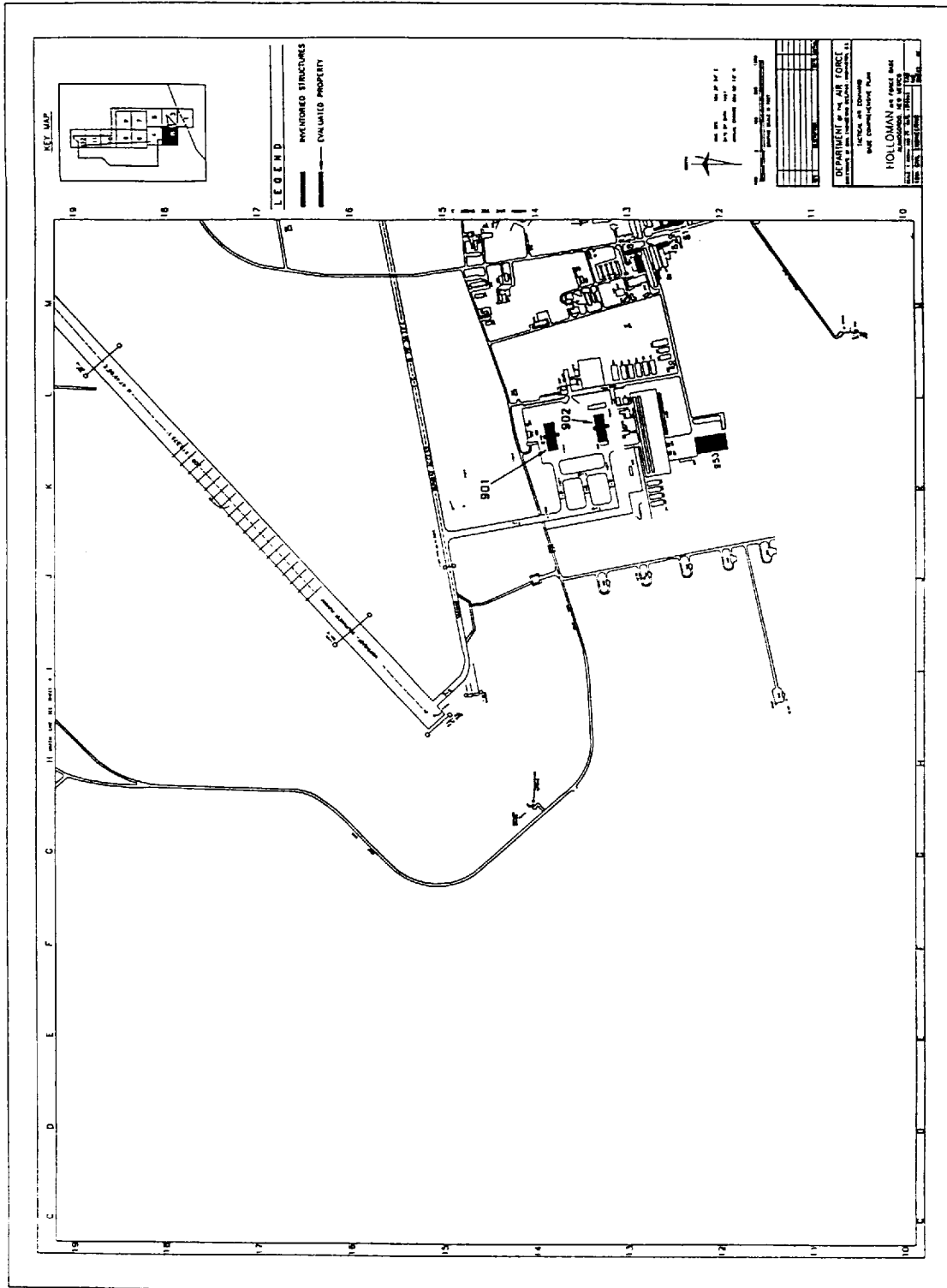


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 2 of 12).

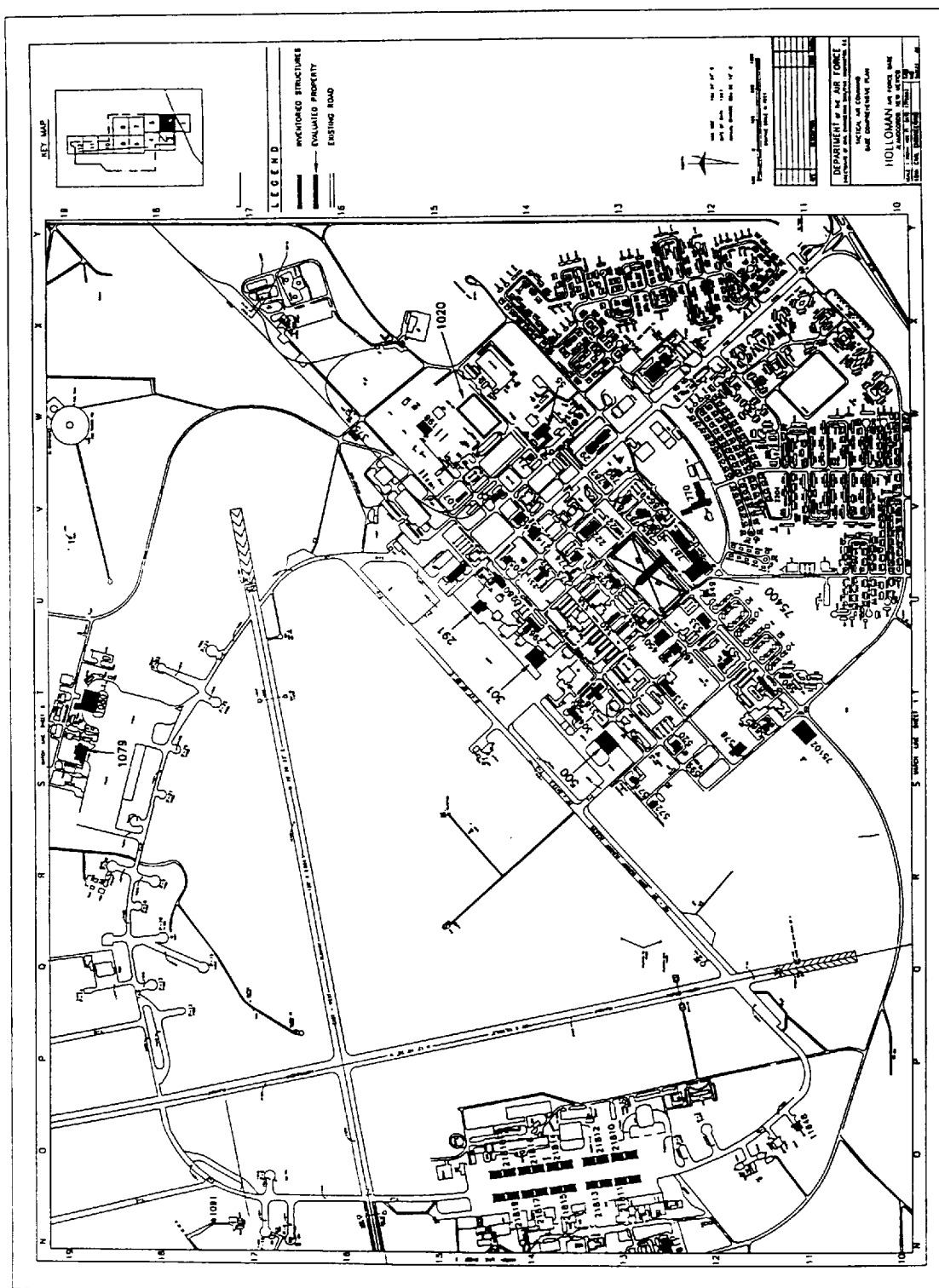


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 3 of 12).

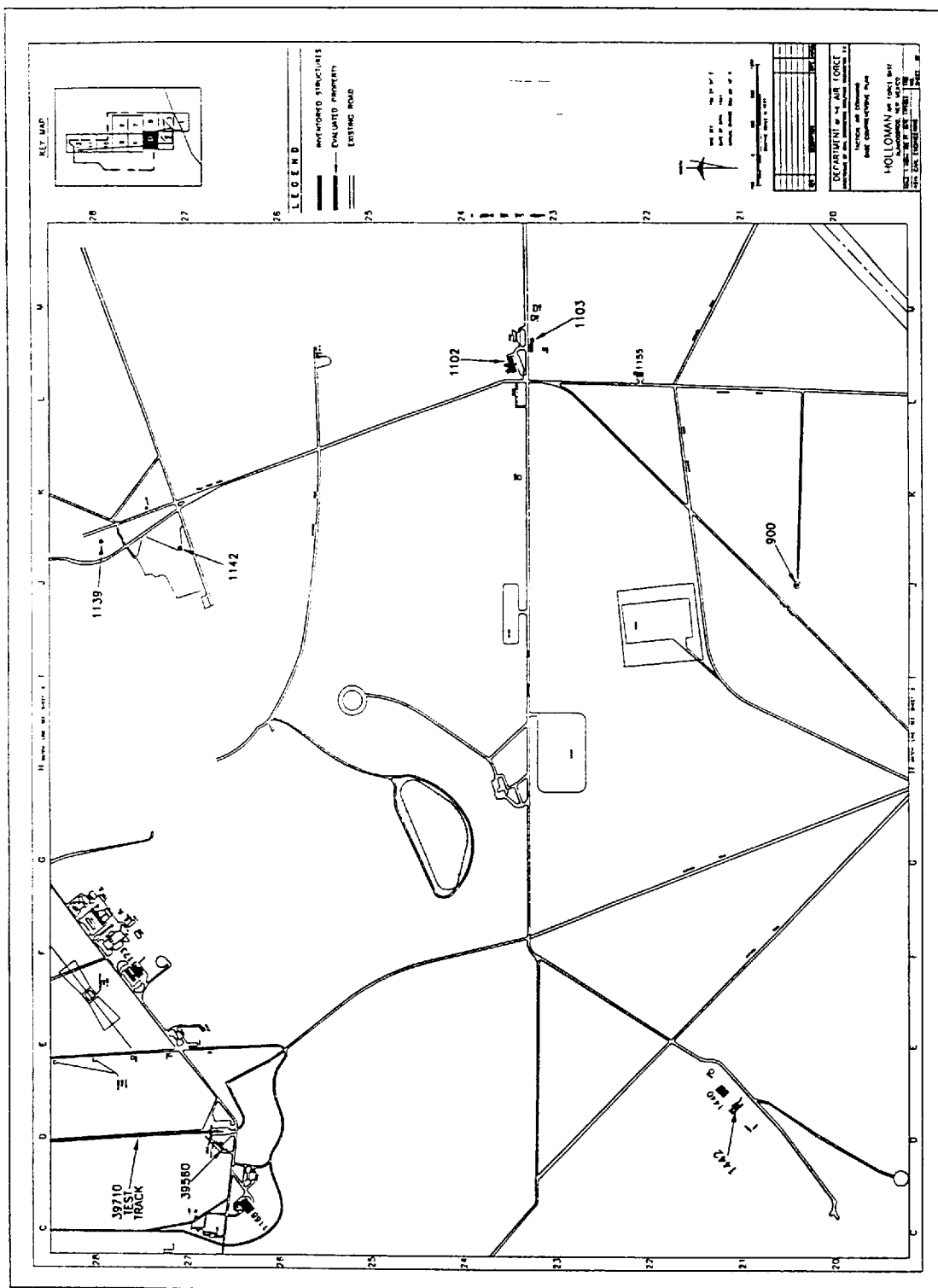


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 4 of 12).

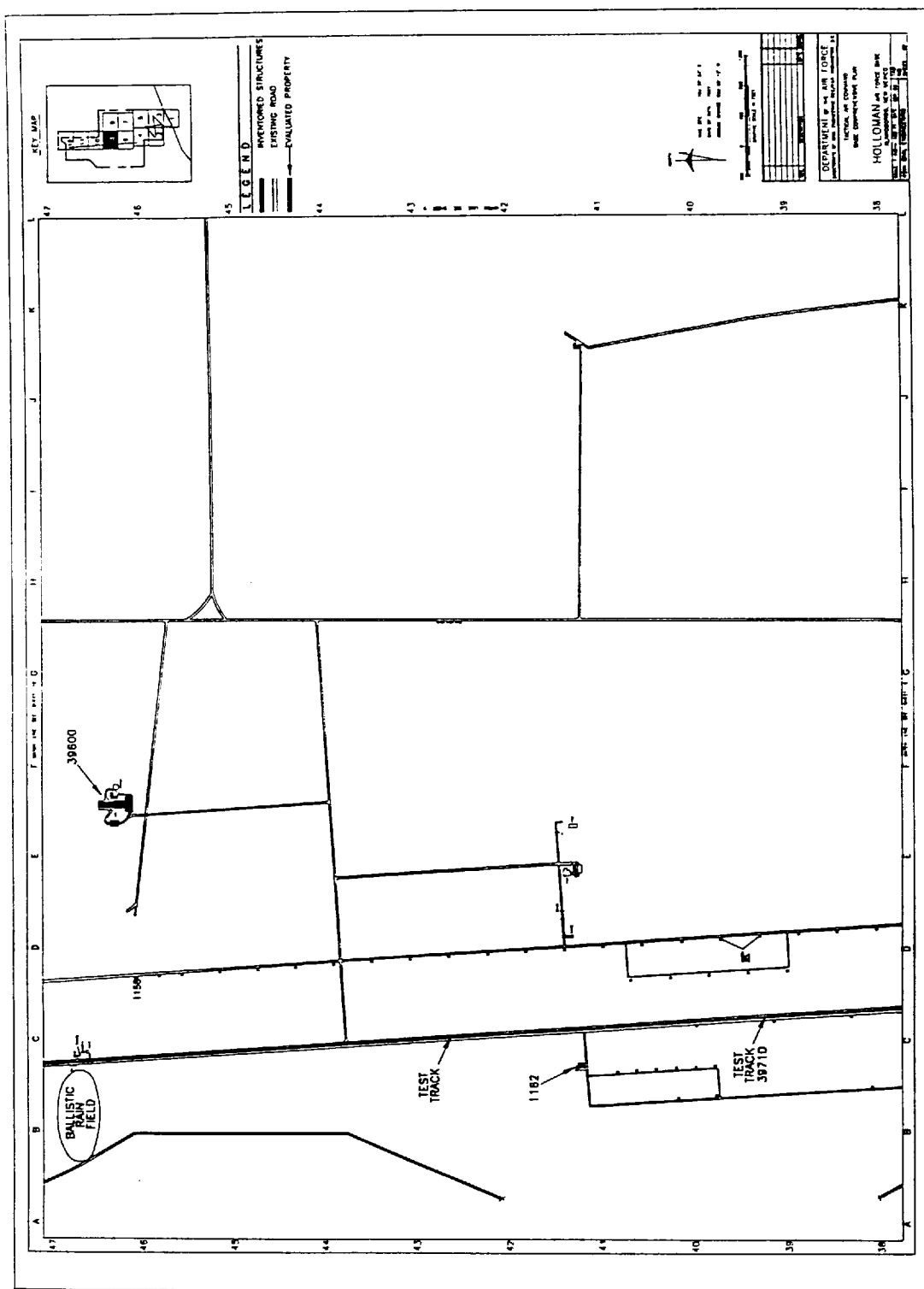


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 8 of 12).

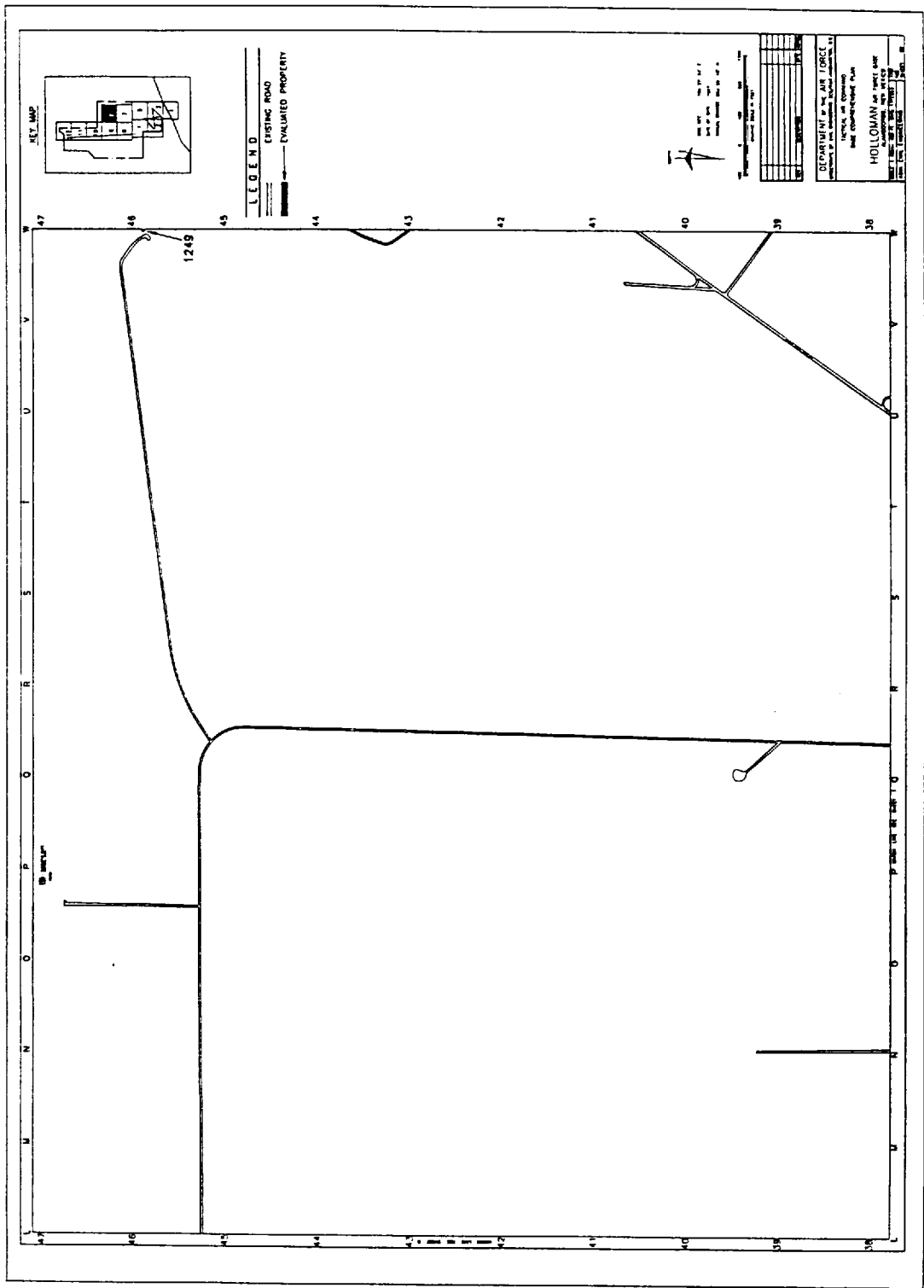


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 9 of 12).

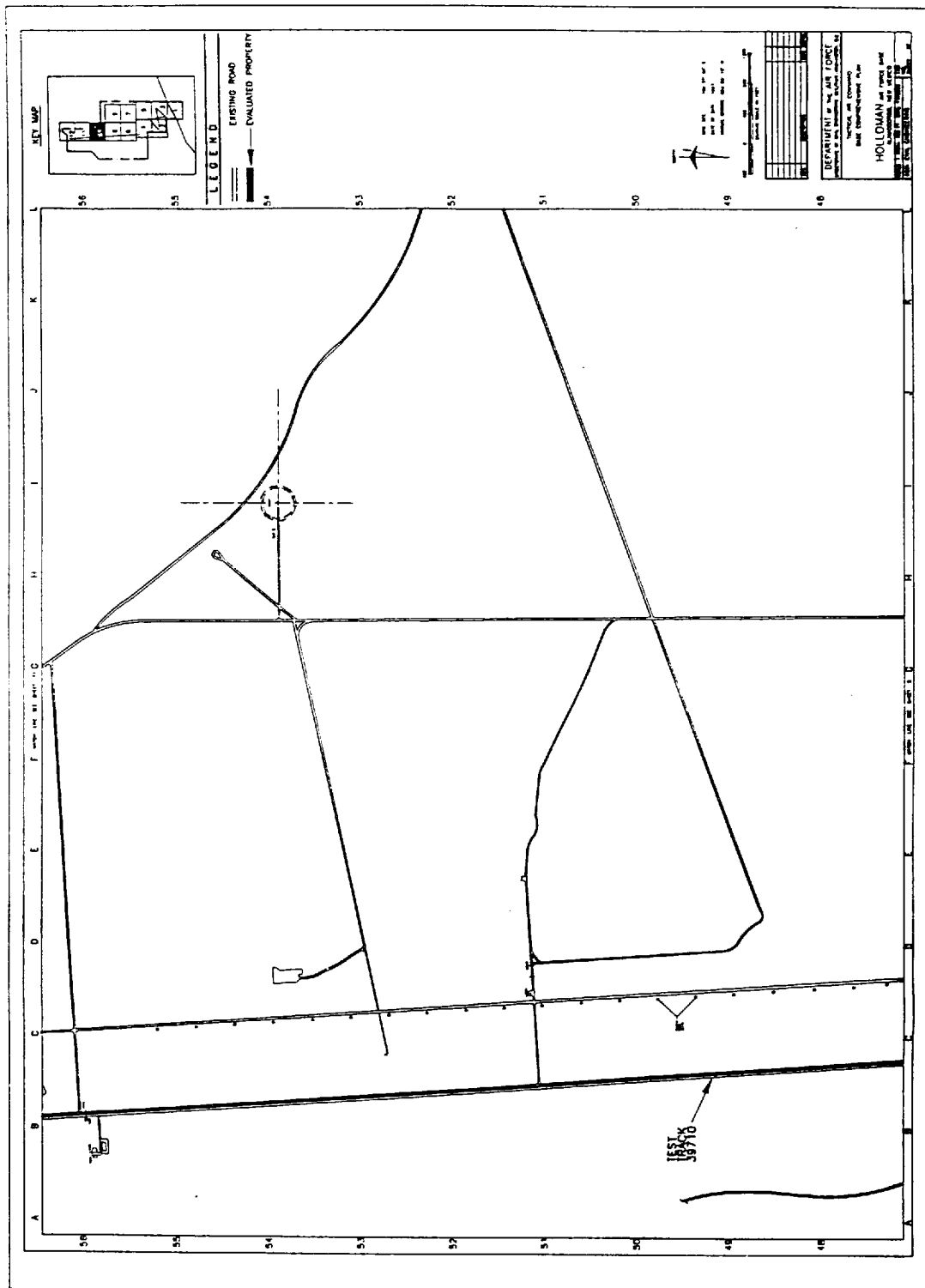
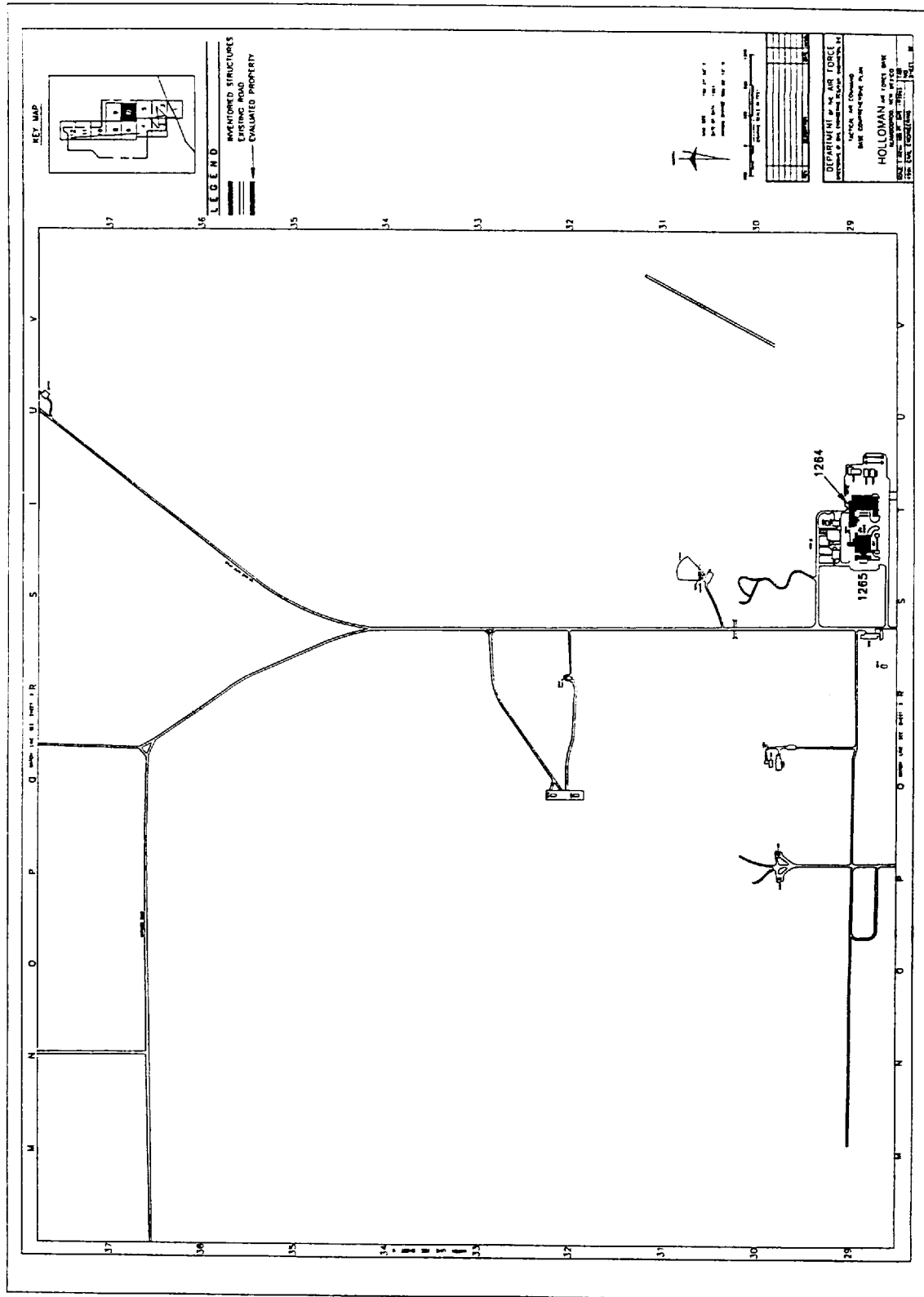


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 10 of 12).



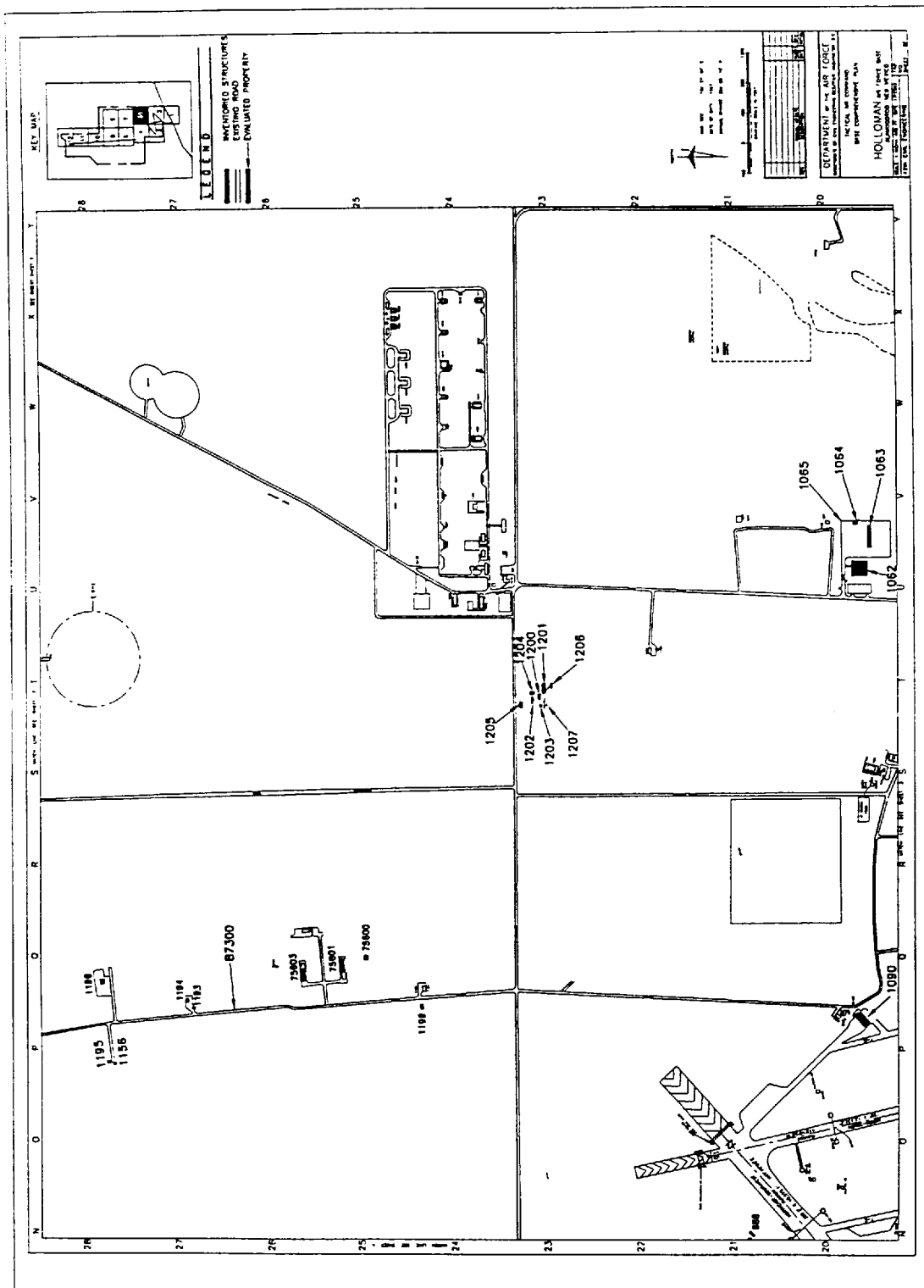


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 5 of 12).

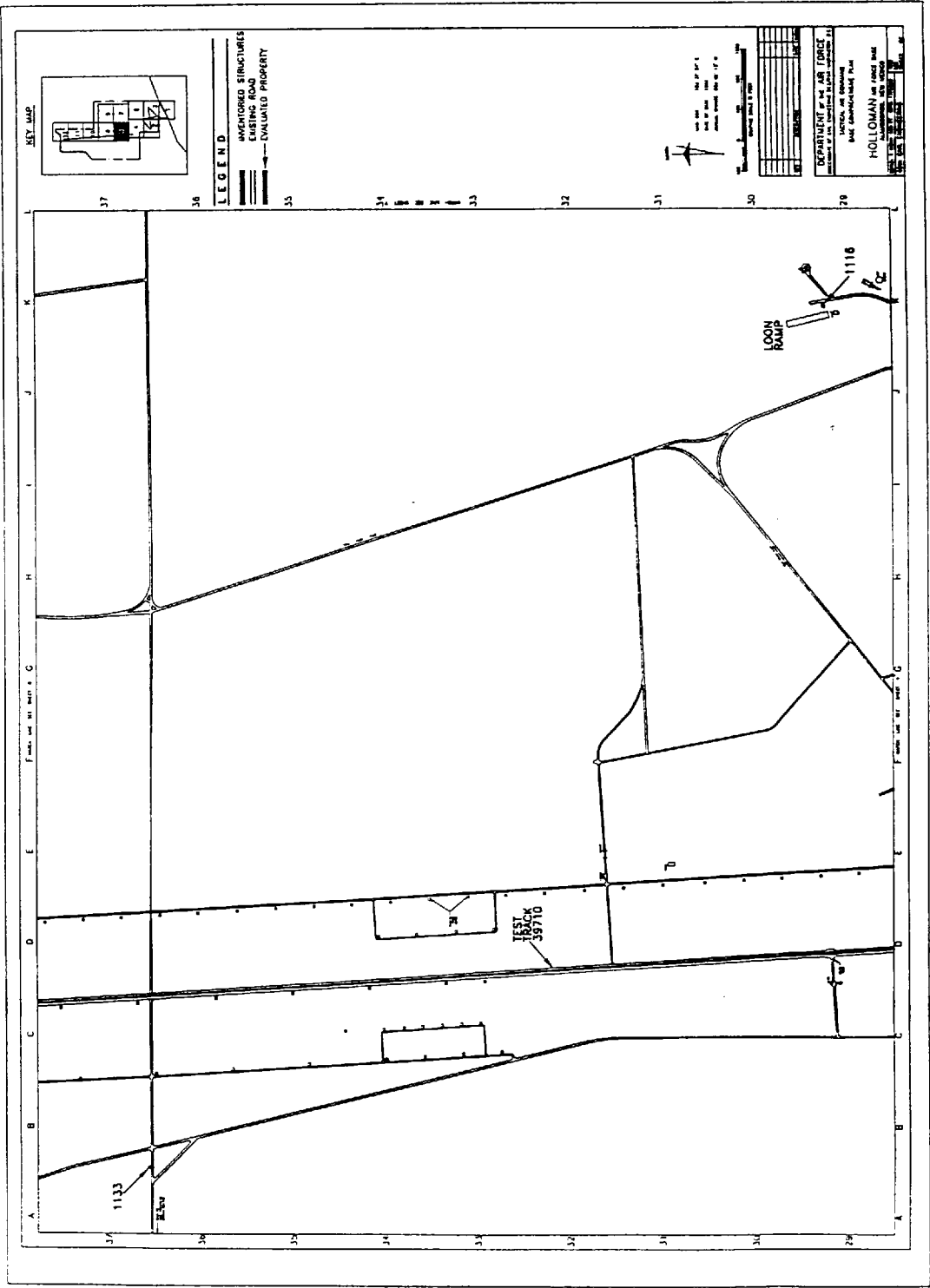


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 6 of 12).

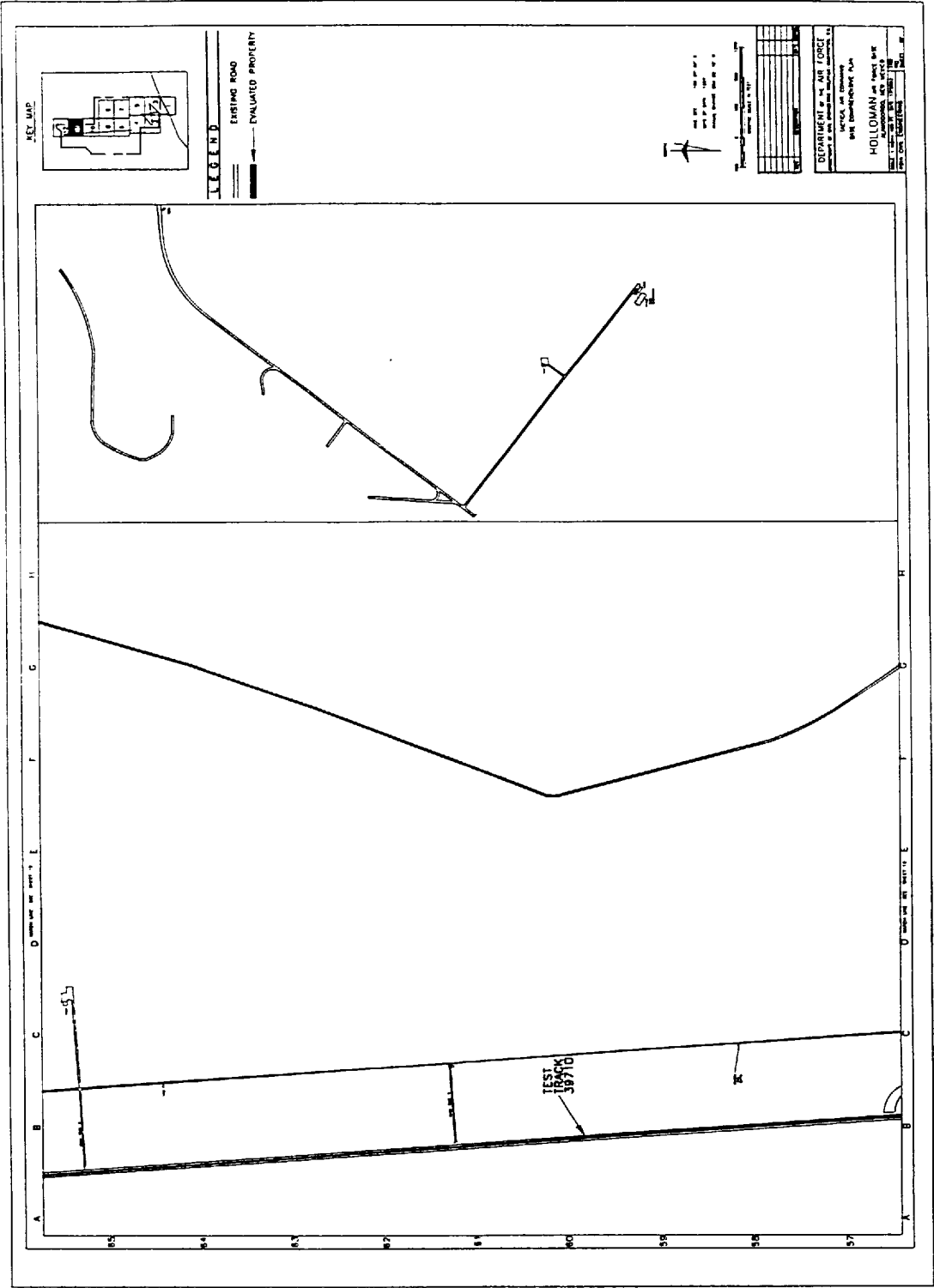


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 11 of 12).

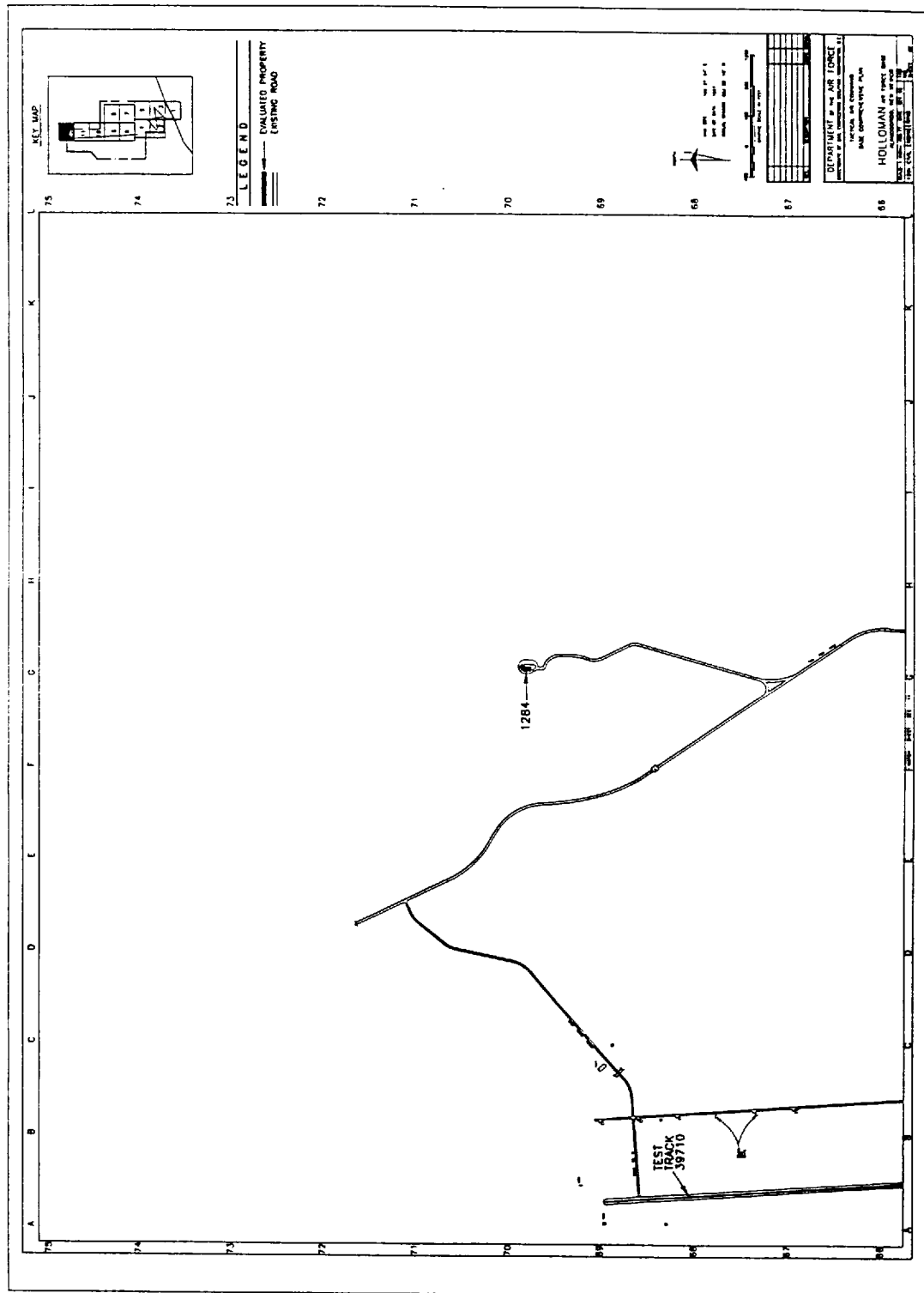
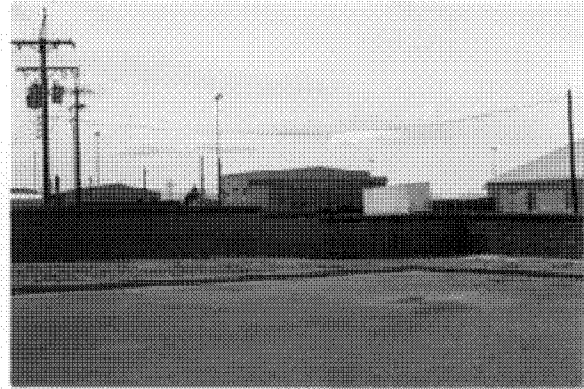


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 12 of 12).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 1001, Real Property No. 900
Missile Theodolite Station



Resource No. 1002, Real Property No. 291
Maintenance Dock



Resource No. 1004, Real Property No. 1116
NAF Central Storage (Blockhouse)



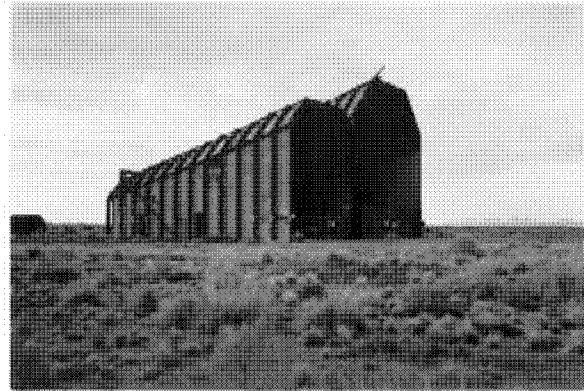
Resource No. 1005, Real Property No. 1284
Missile Instrumentation Station



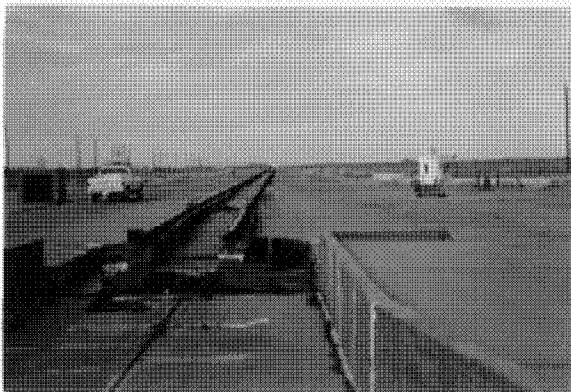
Resource No. 1006, Real Property No. 1079
Maintenance Dock



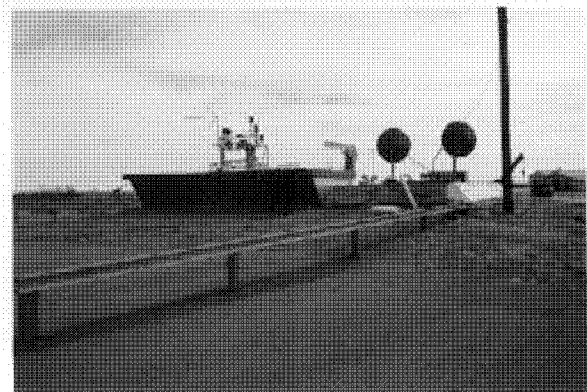
Resource No. 1007, Real Property No. 301
Maintenance Dock



Resource No. 1008, Real Property No. 1442
Missile Launch Facility (Able 51)



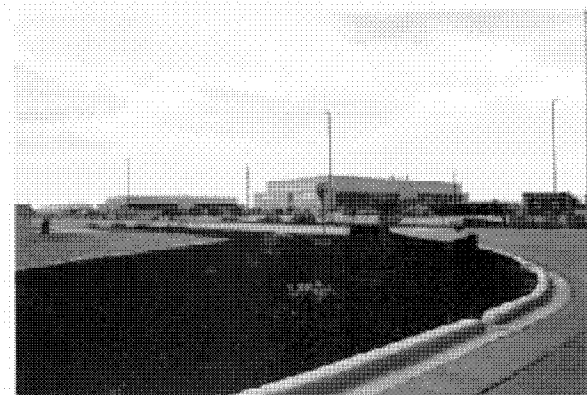
Resource No. 1009, Real Property No. 39710
Test Track



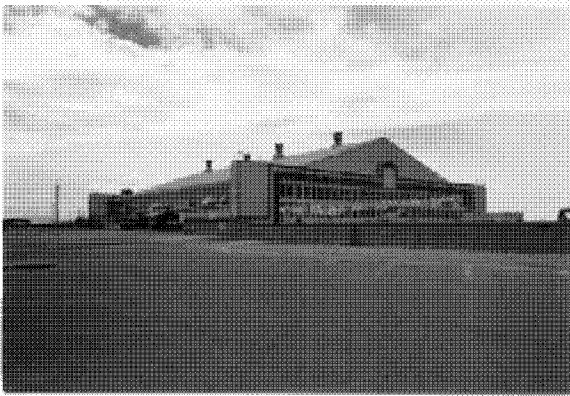
Resource No. 1010, Real Property No. 39560
Test Track Building



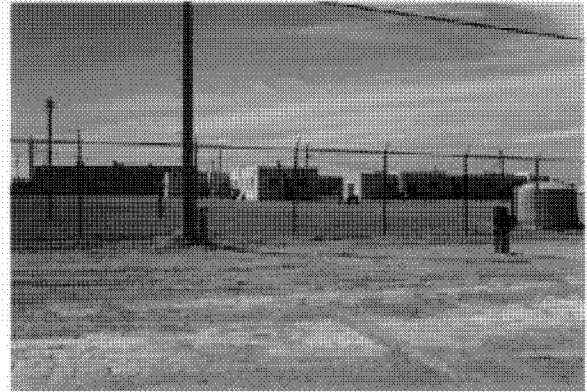
Resource No. 1011, Real Property No. 39600
Propulsion Engine Test Stand



Resource No. 1012, Real Property No. 901
Bare Base



Resource No. 1013, Real Property No. 500
Maintenance Dock



Resource No. 1014, Real Property Nos. 1200-1207, Medical Science Lab



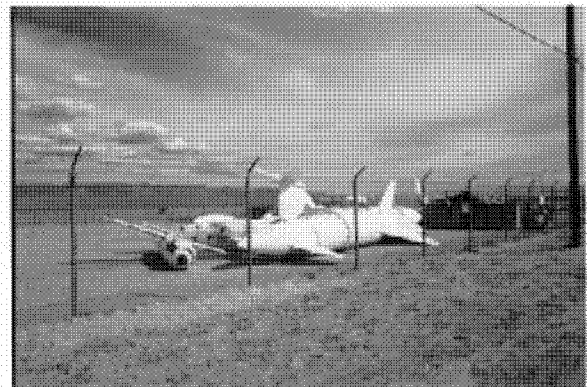
Resource No. 1016, Real Property No. 75400
Miscellaneous Outdoor Recreation Facility
(Heritage Park)



Resource No. 1018, Real Property No. 1265
Weapons Guidance Laboratory



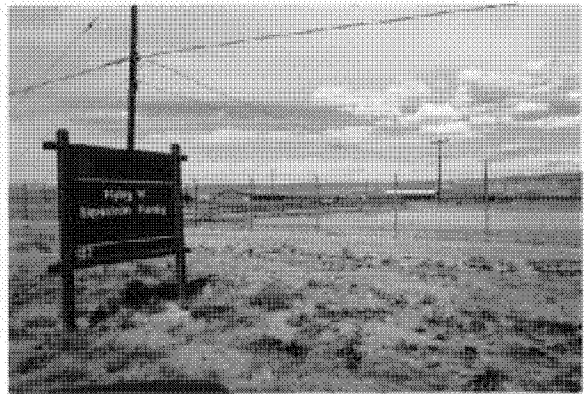
Resource No. 1019, Real Property No. 1090
Fighter Alert Hangar



Resource No. 1022, Real Property No. (none)
Missile Storage Area



Resource No. 1023, Real Property No. 1168
Rocket Assembly Storage



Resource No. 1024, Real Property No. 75601
Riding Stables



Resource No. 1025, Real Property No. 55
Base Engineering Administration



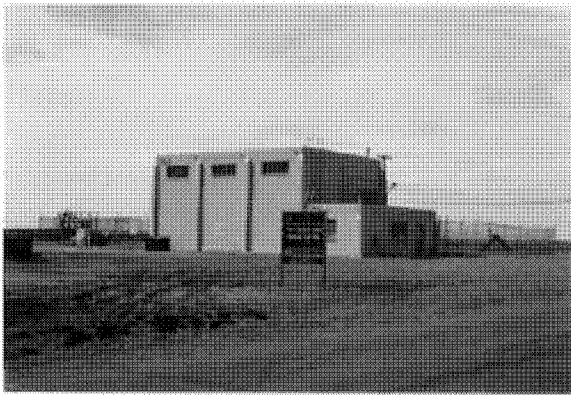
Resource No. 1026, Real Property No. 192
Vehicle Service Rack



Resource No. 1027, Real Property No. 35
Security Police Operations



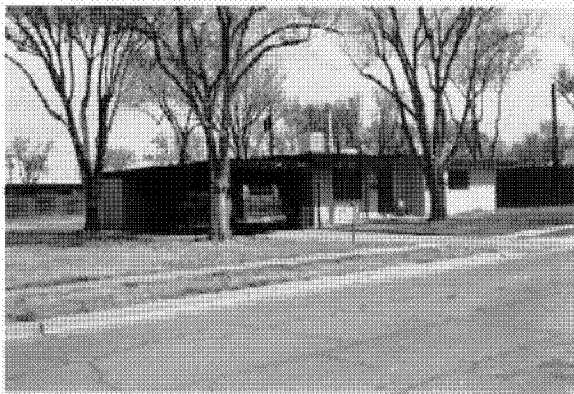
Resource No. 1028, Real Property No. 1196
Weather Rawinsonde



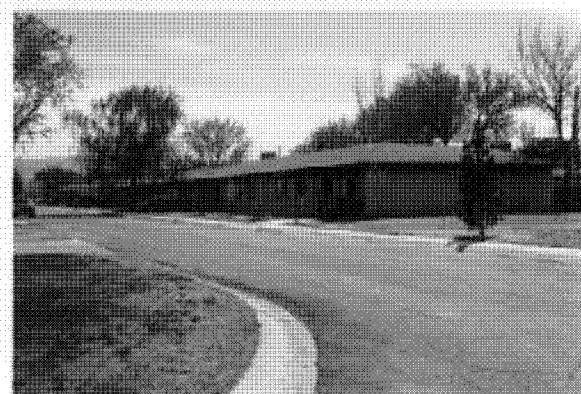
Resource No. 1029, Real Property No. 1199
Security Police Canine Kennel



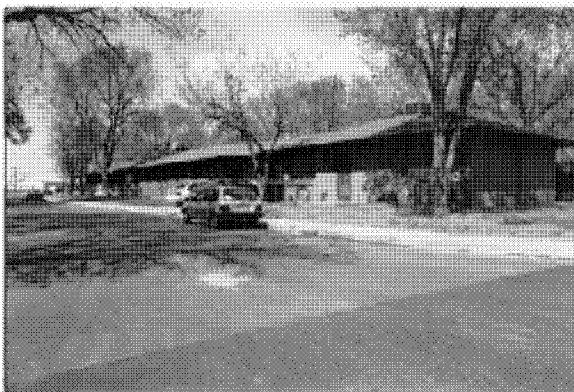
Resource No. 1030, Real Property No. 2001
Family Housing Appr. 1950-1969



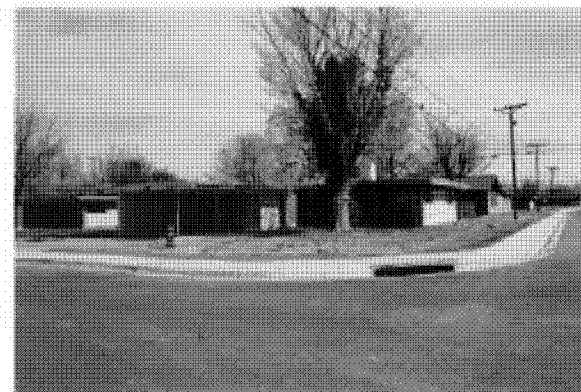
Resource No. 1031, Real Property No. 2186
Family Housing Appr. 1950-1969



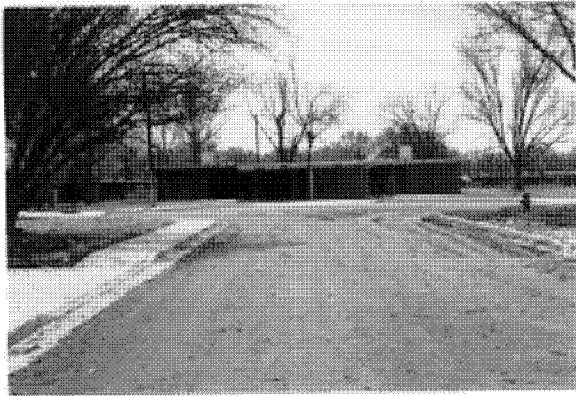
Resource No. 1032, Real Property No. 2204
Wherry Family Housing



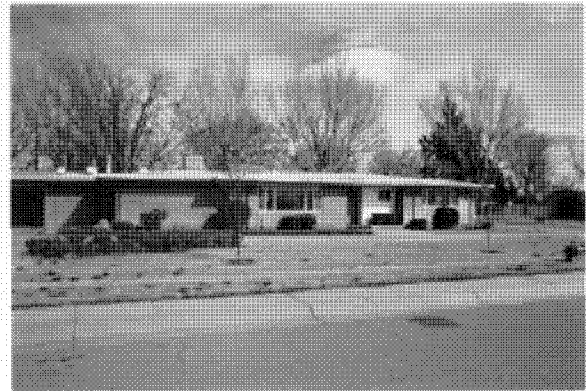
Resource No. 1033, Real Property No. 2405
Wherry Family Housing



Resource No. 1034, Real Property No. 2617
Capchart Family Housing



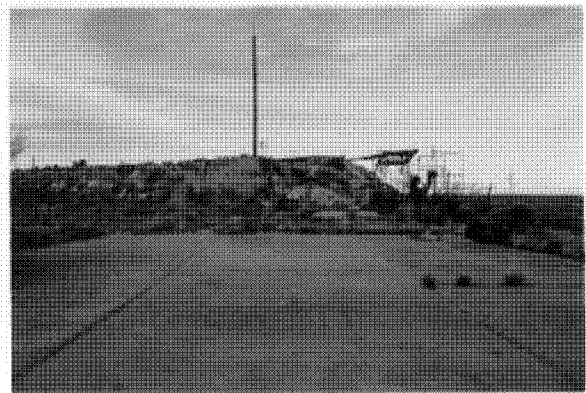
Resource No. 1035, Real Property No. 2643
Capehart Family Housing



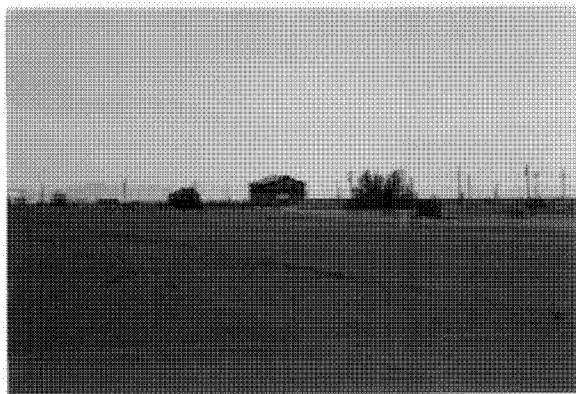
Resource No. 1036, Real Property No. 2712
Family Housing Appr. 1950-1969



Resource No. 1037, Real Property No. 2714
Capehart Family Housing



Resource No. 1039, Real Property No. 1155
Research Communications Station



Resource No. 1040, Real Property No. (none)
Observation Building



Resource No. 1041, Real Property No. 57
Environmental Health



Resource No. 1042, Real Property No. 222
Base Personnel Office



Resource No. 1043, Real Property No. 198
Vehicle Maintenance Shop



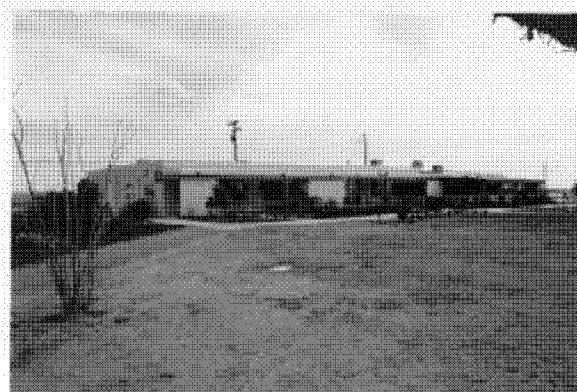
Resource No. 1044, Real Property No. 702
Petrol Refueling Unit



Resource No. 1045, Real Property No. 770
Elementary School



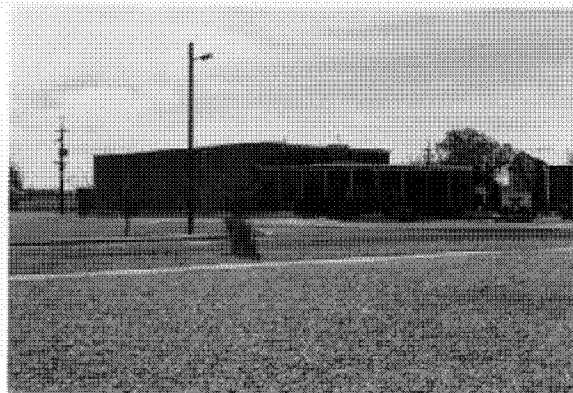
Resource No. 1046, Real Property No. 786
Credit Union



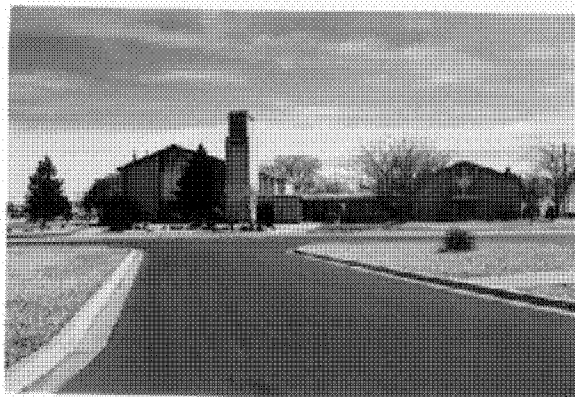
Resource No. 1047, Real Property No. 761
Golf Clubhouse



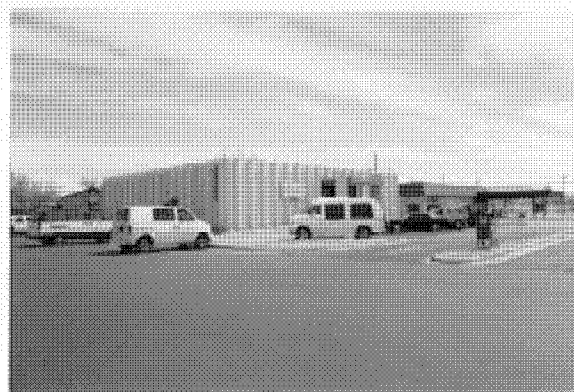
Resource No. 1048, Real Property No. 782
Youth Center



Resource No. 1049, Real Property No. 783
Base Theatre



Resource No. 1050, Real Property No. 784
Chapel Center



Resource No. 1051, Real Property No. 785
Central Post Office



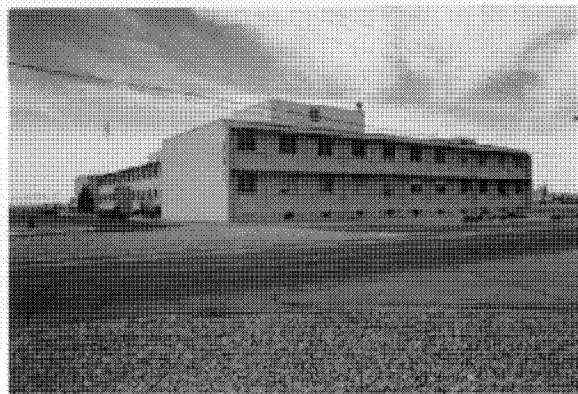
Resource No. 1052, Real Property No. 787
Enclosed Mall



Resource No. 1053, Real Property No. 790
Child Care Center



Resource No. 1054, Real Property No. 791
Child Care Center



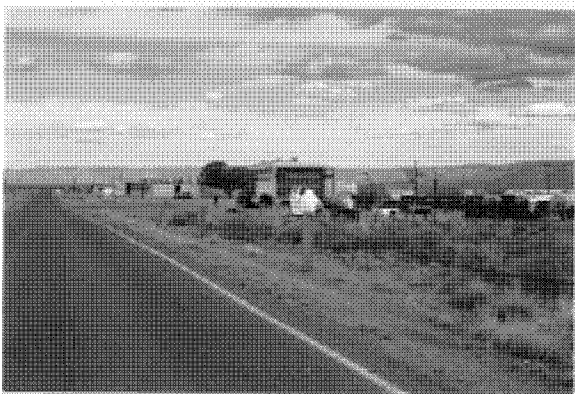
Resource No. 1055, Real Property No. 841
Non-Air Force Administrative Office



Resource No. 1056, Real Property No. 953
Warehouse Supplies and Equipment Depot



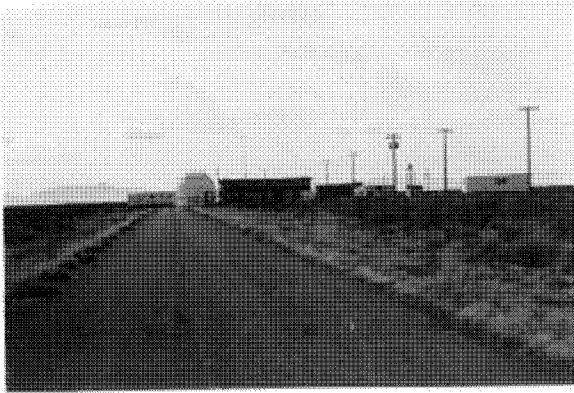
Resource No. 1057, Real Property No. 1080
Small Aircraft Maintenance Dock



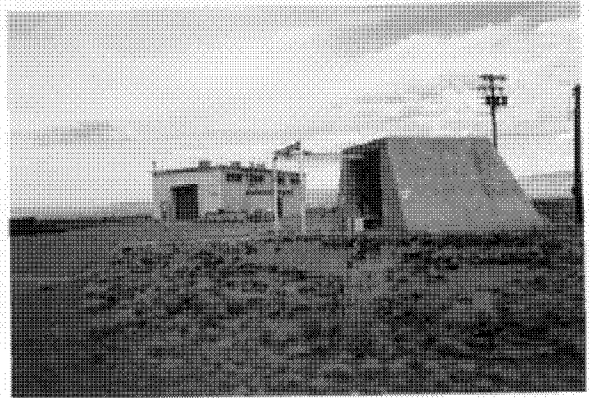
Resource No. 1058, Real Property No. 1173
Test Track Buildings



Resource No. 1059, Real Property No. 1174
Test Track Buildings



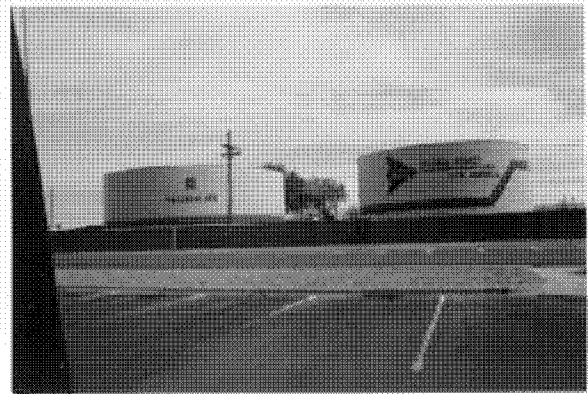
Resource Nos. 1060 and 1063, Real Property Nos. 1156 and 1195, Research Communication Stations



Resource Nos. 1061 and 1062, Real Property Nos. 1193 and 1194, Research Equipment Storage and Test Stand



Resource No. 1065, Real Property No. 1162 Test Track Building



Resource Nos. 1067 and 1068, Real Property Nos. 84202 and 84216, Water Storage Tanks



Resource No. 1069, Real Property No. 223 Exchange Cafe Snack Bar (McDonalds)



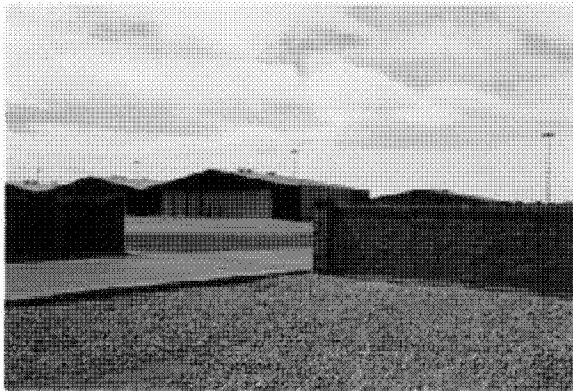
Resource No. 1070, Real Property No. 583 Visiting Officer's Quarters



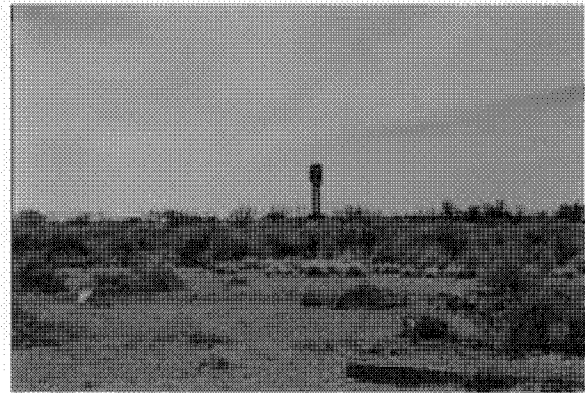
Resource No. 1071, Real Property No. 590
Transient Lodging Facility



Resource No. 1072, Real Property No. 75102
Softball Athletic Field



Resource No. 1073, Real Property No. 21810
Small Aircraft Maintenance Dock



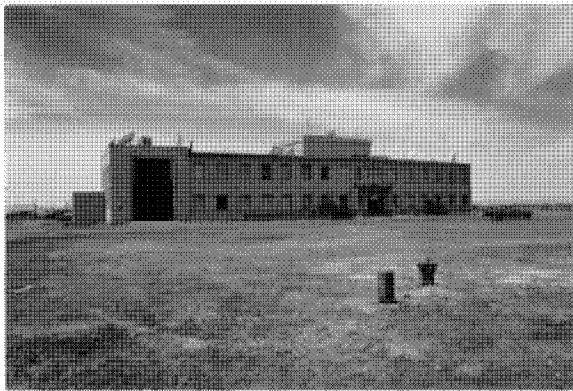
Resource No. 1074, Real Property No. 1091
Control Tower



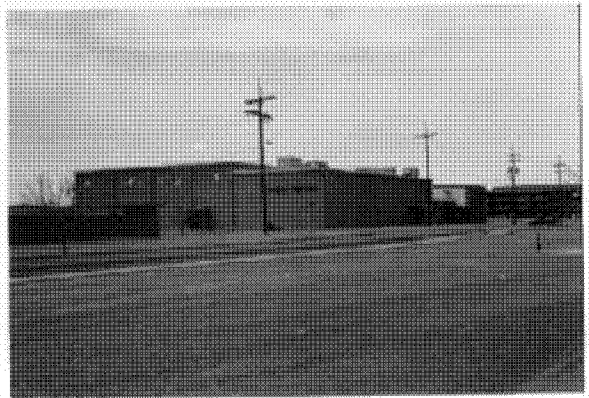
Resource No. 1075, Real Property No. 811
Group Headquarters



Resource No. 1076, Real Property No. 11648
Test Stand



Resource No. 1077, Real Property No. 839
Precision Measurement Equipment Laboratory



Resource No. 1078, Real Property No. 450
Gymnasium



Resource No. 1079, Real Property No. 325
Recreation Center



Resource No. 1080, Real Property No. (none)
Batting Cage



Resource No. 1081, Real Property No. 513
Technical Training Laboratory/Shop



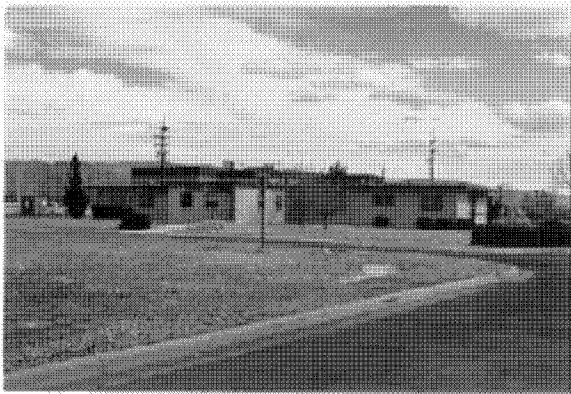
Resource No. 1082, Real Property No. 572
Rapcon Center



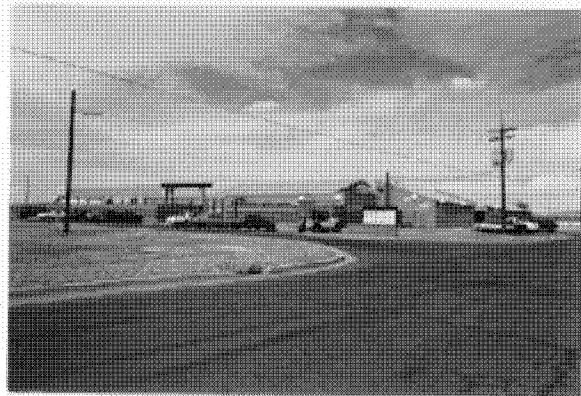
Resource No. 1083, Real Property No. 520
Training Physiological



Resource No. 1084, Real Property No. 578
Helicopter Rescue and Recovery Hangar



Resource No. 1085, Real Property No. 273
Dental Clinic



Resource No. 1086, Real Property Nos. 231 and
232, Arts and Crafts Center and Automotive
Hobby Shop



Resource No. 1087, Real Property No. 107
Social Action Facility



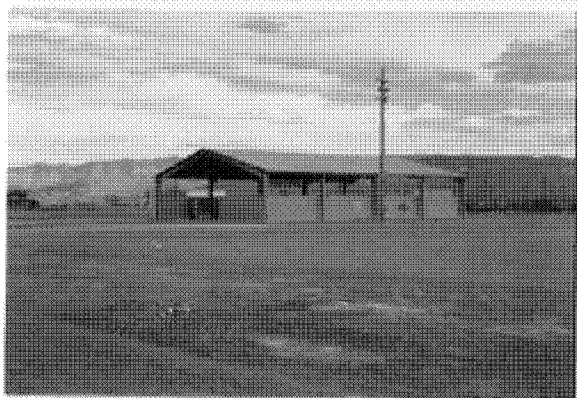
Resource No. 1088, Real Property No. 282
Hangar



Resource No. 1089, Real Property No. 89
Base Cold Storage



Resource No. 1090, Real Property No. 133
Vehicle Maintenance Shop



Resource No. 1091, Real Property No. 142
Base Supply and Equipment Warehouse



Resource No. 1092, Real Property No. 4
Traffic Check House



Resource No. 1093, Real Property No. 17
Acrospace Medicine



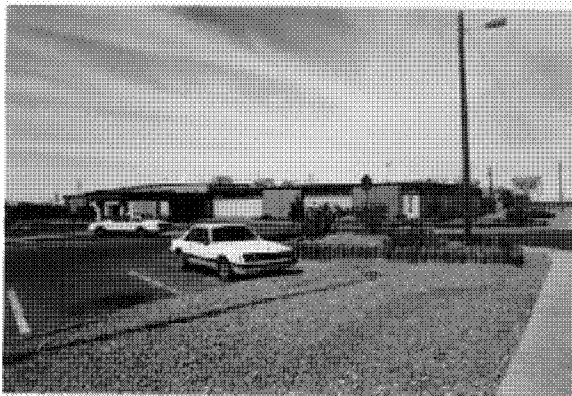
Resource No. 1094, Real Property No. 40
Family Support Center



Resource No. 1095, Real Property No. 71
Family Housing Management Office



Resource No. 1096, Real Property No. 205
Base Library



Resource No. 1097, Real Property No. 214
Non-Commissioned Officer's Open Mess



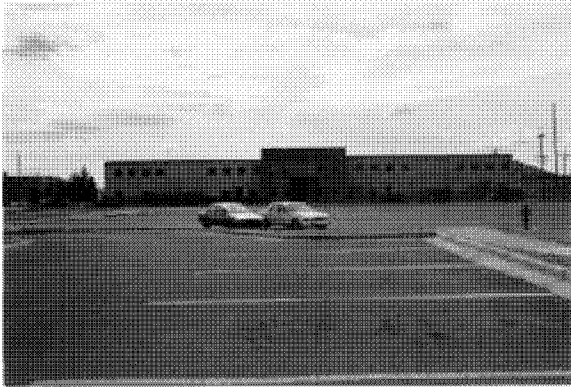
Resource No. 1098, Real Property No. 274
Airman's Dining Hall



Resource No. 1099, Real Property No. 296
Weapons System Maintenance Management
Facility



Resource No. 1100, Real Property No. 304
Fire Station



Resource No. 1101, Real Property No. 318
Squadron Operations



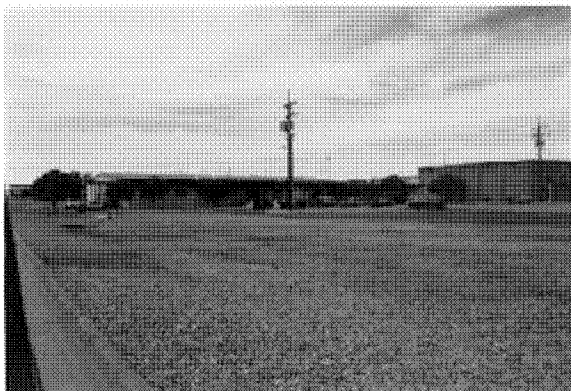
Resource No. 1102, Real Property No. 338
Airman's Dormitory



Resource No. 1103, Real Property No. 340
Airman's Dormitory



Resource No. 1104, Real Property No. 375
Base Supply and Equipment Warehouse



Resource No. 1105, Real Property No. 468
Bowling Center



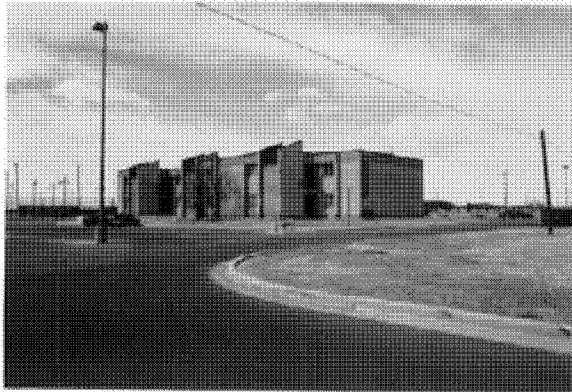
Resource No. 1106, Real Property No. 531
Officer's Open Mess



Resource No. 1107, Real Property No. 533
Officer's Swimming Pool



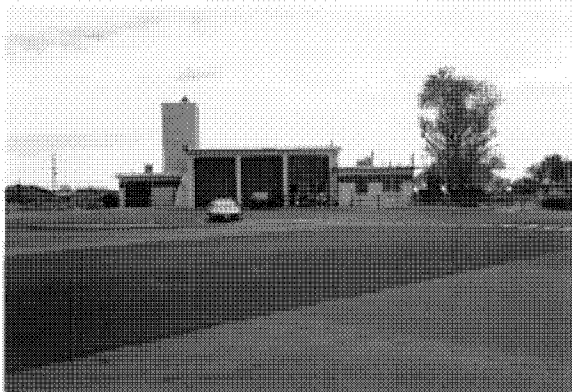
Resource No. 1108, Real Property No. 571
Base Operations



Resource No. 1109, Real Property No. 586
Visiting Officer's Quarters



Resource No. 1110, Real Property No. 599
Combat Arms Training Maintenance Building



Resource No. 1111, Real Property No. 649
Base Package Store



Resource No. 1112, Real Property No. 15
Composite Medical Facility



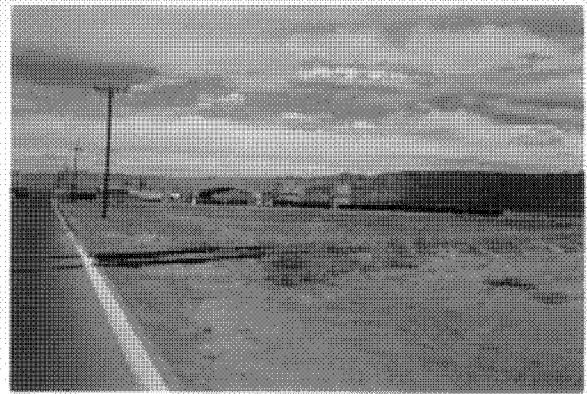
Resource No. 1113, Real Property No. 18
Exchange Service Station



Resource No. 1114, Real Property No. 16
Exchange Service Station (Shopette)



Resource No. 1115, Real Property No. 29
Wing Headquarters



Resource No. 1116, Real Property No. 702
Petrol Operations Building

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT HOLLOMAN AFB

Resource Number: 1001

Property Description: Mark Tower, NAVAID Tower, only building 900 is described

Associated Property: 1133, 1249

Non-Inventoried Association: 9 other theodolite stations on the White Sands Missile Range

Sub-installation:

Address: 50 m south of Kelly Road

Base Map Date: 2/17/93

Base Map Building Number: 900

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test sites

Intelligence:

Property Type: Tracking and Documentation

Statement of Significance: These site were important for the tracking of unknown missiles during early missiles development and testing; German scientists and equipment were used, first cold war missile instrument tracking site

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 25
Square Footage: 584
Original Planned Duration: Permanent
Existing Use: none
Other Use/Dates: Army storage, CE exterior electric shop
Comments on Use: Possible tie with German technology
Primary Building Materials: Poured concrete
Character Defining Features: Steel I-beam roof with counter balanced sections
Comments on Architecture: Possible tie with German technology

Resource Number: 1003

Property Description: Earthen ramp with concrete and steel pavement originally used to test early missile

Associated Property: 1139, 1142

Non-Inventoried Association: Eglin AFB, static displays?, various concrete pads

Sub-installation:

Address:

Base Map Date: 2/17/93

Base Map Building Number: None

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test Sites

Intelligence:

Property Type: Launch Ramp

Statement of Significance: The only earthen inclined missile test ramp

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 4

Percent Historic Fabric: 3

Severity of Threats: 2

Total Score for Priority Matrix: 20

Comments on Threats: Threat is from natural erosion and deterioration

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Original Planned Duration: Temporary

Comments on Use: Probably many changes over time, we do not have data on these modifications

Primary Building Materials: Earthen ramp, concrete, wood

Character Defining Features: Earthen ramp

Comments on Architecture: See above

Physical Remains/Features:

Resource Number: 1004

Property Description: Concrete observation and test control buildings
Associated Property: Loon launch ramp
Non-Inventoried Association: Various concrete slabs, static displays, Space Museum
Sub-installation:
Address: 1602, 1591, 1616 Tula Peak Road
Base Map Date: 2/17/93
Base Map Building Number: 1139, 1142, 1116

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities: Test Sites
Intelligence:
Property Type: Blockhouse

Statement of Significance: Associated with the testing of important missile technology ultimately incorporated into ICBM and NASA rockets. Architecture designed to defend against accidental explosion; design elements incorporate construction materials and design for nuclear blast protection, windows are similar to defensive bunkers re: field of view enhanced

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	

Importance: Exceptional
Eligibility: Eligible

Height: 10
Square Footage: 660
Original Planned Duration: Temporary
Existing Use: MWR - sports storage
Primary Building Materials: Poured concrete
Character Defining Features: Massing, window set back, shape, and thickness, concrete thickness
Comments on Architecture: Original electronic instrumentation is gone. Associated with concrete pads and probably launch framework now missing.

Resource Number: 1009

Property Description: 9.8 mi long railed test track with numerous associated buildings

Associated Property: 1175

Non-Inventoried Association: Numerous buildings, targets, sled bone yard, support buildings, assembly bunker

Sub-installation:

Address: 1656 Test Track Road

Base Map Date: 2/17/93

Base Map Building Number: 39710

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test Sites

Intelligence:

Property Type: Test Track

Statement of Significance: This structure was the original 3500 ft track, expanded to 35,000 feet and now is nearly 10 mi long, the longest rocket test track in the world?, used to test many generations of rockets, missiles, seat belts, associated with aeromedical research and associated with Colonel Stapp: human guinea pig

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 20

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 0

Square Footage: 50855

Original Planned Duration: unknown

Other Use/Dates: none

Primary Building Materials: Concrete and steel

Character Defining Features: Precise construction with tight tolerances for rail grade; length

Resource Number: 1010

Property Description: Control Blockhouse located at the South end of the test track

Associated Property: 39710

Non-Inventoried Association: Various photostands, instrument stands, blockhouses, sled bone yard, control and administration buildings, and rocket assembly bunker

Sub-installation:

Address: 1656 Test Track Road

Base Map Date: 2/17/93

Base Map Building Number: 1175

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Test Sites

Intelligence:

Property Type: Blockhouse

Statement of Significance: Site is related to the test track, is probably not eligible individually but as part of a district; windows are periscoped, people protected underground

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 20

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 10

Square Footage: 2529

Original Planned Duration: Permanent

Primary Building Materials: Concrete

Character Defining Features: Primarily underground concrete buildings with periscope viewing windows

Resource Number: 1012

Property Description: Complex of buildings equipment lots, taxiways, etc. associated with the 4449th Mobility Support Station

Associated Property:

Non-Inventoried Association: Various lots, sheds, taxiways, and aprons, quanset huts

Sub-installation:

Address: 1273 Bear Path

Base Map Date: 9/1/92

Base Map Building Number: 901

Operational Support & Installations:

Combat Weapons and Support Systems: Ground Vehicles and Equipment

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Bare Base Installation

Statement of Significance: This complex supports the only unit in the AF capable of establishing TAC fighter ops anywhere in the world

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 3

Severity of Threats: 1

Total Score for Priority Matrix: 17

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Important

Eligibility: Future

Site Function: TAC Bare Base Operations

Present Site Function: TAC Bare Base Operations

Year of Association: 1972-1994

Physical Remains/Features: Hangars, warehouses, quansets, storage lots

Changes to the Resource: Unknown

Resource Number: 1014

Property Description: Aeromedical lab and primate center

Associated Property:

Non-Inventoried Association: Modern facilities to the north

Sub-installation:

Address: 821 Douglass Road

Base Map Date: 2/17/93

Base Map Building Number: 1200-1207

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities: Research Laboratories

Intelligence:

Property Type: Medical Science Laboratory

Statement of Significance: Facilities used in support of Aeromedical research on g forces, biophysical research, drugs, toxins, etc.
Support facilities for HAM and ENOS, famous test chimps

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 3

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 17

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 10

Square Footage: 2500

Original Planned Duration: Permanent

Primary Building Materials: Concrete masonry unit

Character Defining Features: Cages and runs around buildings, rounded parapits on concrete walls

Resource Number: 1015

Property Description: Various support buildings within high security fenced area

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 1416 Sabre Road

Base Map Date: 8/1/93

Base Map Building Number: 1062

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence: Spy Satellites

Property Type: Deployable Warning Complex

Statement of Significance: High tech and classified satellite intelligence and commun system home base

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 1

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 17

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Eligible

Height: 0

Square Footage: 0

Original Planned Duration: Permanent

Primary Building Materials: Concrete support buildings; mobile units in truck

Character Defining Features: High tech instrumentation, survivability, mobility

Resource Number: 1017

Property Description: Four stacks of vertical files filled with construction documents, bluelines, originals, sailcloth, sepia

Associated Property: All buildings on base

Non-Inventoried Association:

Sub-installation:

Address: 550 Tabosa Avenue, Civil Engineering, Engineeri

Base Map Date:

Base Map Building Number: inside 55

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Architectural Drawing Files

Statement of Significance: Supply of potentially significant drawings, many may be unique one of a kind documents

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 3

Severity of Threats: 1

Total Score for Priority Matrix: 15

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Object Condition: Being Preserved

Record/Document Category: Architectural Drawing

Year of Document:

Period of Association: documents date to various dates

Resource Number: 1018

Property Description: Complex of research and lab buildings
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 1644 Vandergrift Road
Base Map Date: 2/17/93
Base Map Building Number: 1265

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities: Test Sites
Intelligence:
Property Type: Weapons Guidance Laboratory

Statement of Significance: The development of interial guidance systems was integral to the development of aircraft and missile systems

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	2
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	

Importance: Exceptional
Eligibility: Eligible

Height: 30
Square Footage: 79066
Primary Building Materials: Concrete and steel frame
Character Defining Features: Multiple windows and height of the building

Resource Number: 1019

Property Description: Three Alert Hangars and alert pilot lodging
Associated Property:
Non-Inventoried Association: 1048, 1049, 1052, 105
Sub-installation:
Address: 1411 Dezonias Road
Base Map Date: 2/17/93
Base Map Building Number: 1090

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Fighter Alert Facility

Statement of Significance: Alert Facilities are pervasive throughout Cold War Bases, this is an example of a TAC Defensive Alert Facility

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 2
Level of Importance: 3
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 18
Comments on Threats:

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management:

Importance: Exceptional
Eligibility: Eligible

Height: 30
Square Footage: 17080
Original Planned Duration: Permanent
Primary Building Materials: Steel frame
Character Defining Features: Three open Alert Hangars and associated pilot living quarters

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE/COMMUNITY CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Holloman AFB and to provide research materials for this study:

Martyn Tagg, Archaeologist
Environmental Flight
49CES/CEV
Holloman AFB, NM 88330-8458
(505) 475-3931

Sgt. Person, Drafting Room
Environmental Flight
49 CES/CEV
Holloman AFB, NM 88330-8458
(505) 475-7869

Sam Sandoval, Community Planner
Environmental Flight
49 CES/CEV
Holloman AFB, NM 88330-8458
(505) 475-3497

Diana Moya, Real Property Manager
Facility Office
Holloman AFB, NM 88330-8458
(505) 475-3498

MSgt. Albert Mack, Wing Historian
(on leave during inventory)
49th FW Headquarters
490 First Street, Ste. 1300
Holloman AFB, NM 88330-8458
(505) 475-7908

J.R. Gomalack
4th Space Command
Holloman AFB, NM 88330-8458
(505) 475-1517

Peter L. Eidenbach
Box 174
High Rolls, NM 88325-0174
(505) 682-2010

George M. House, Curator
Space Center
P.O. Box 533
Alamogordo, NM 88311-0533
(505) 437-2840

Col. Wayne Mattson, USAF (Ret.) Volunteer, Space Center
P.O. Box 533
Alamogordo, NM 88311-0533
(505) 437-2840

KNOWLEDGEABLE INDIVIDUALS

The following individuals were identified during our investigations as people with some knowledge of base history during the Cold War. They were either unavailable during the investigation or possess much more information than could be documented during this preliminary survey.

Mr. Ron Shotter
Anderson AFB
Guam
DSN 88-366-5087
(671) 632-3271

Col. John P. Stapp
1413 Rockwood Drive
Alamogordo, NM 88311-0533
(505) 437-3645

Mr. Dee Gragg
Sr. Analyst
High Speed Test Track
Holloman AFB, NM 88330-8458
(505) 679-2502

Mr. Gragg is reported to possess large inventory of documentary materials and film footage.

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Holloman AFB history and Cold War context.

George House, Director, Space Center, March 21, 1994

Diana Moya, Real Property, March 17, 18, and 21, 1994

Sam Sandoval, Community Planner, March 18 and 21, 1994

J.R. Gomalak, 4th Space Warning Squadron, Environmental Scientist, March 18 and 21, 1994

Mike Galifano, High Speed Test Track Manager, March 18, 1994

APPENDIX F:

ADDITIONAL RESOURCES

AND ASSOCIATED OBJECTS AND LITERARY MATERIAL

ADDITIONAL RESOURCES

RADAR TEST SCATTER DIVISION

The Radar Test Scatter Division (RATSCAT) is designed to measure the radar cross sections and antenna patterns of aircraft and other systems. Although associated with other test facilities located on the base, this system is located on White Sands Missile Range and was not documented during this inventory. These test facilities may be significant in the development of radar and radar evasion technologies. The test site continues to be used.

ASSOCIATED OBJECTS AND LITERARY MATERIAL

The Space Center and International Space Hall of Fame in Alamogordo have vast holdings of objects and documents within their study files. Finding guides have been developed to assist research. Additionally, the facility holds over 5,000 uncatalogued and unidentified photographs, various films and videotapes of experiments, and a collection of oral history tapes and transcripts. Table F.1 provides a list of oral history transcripts and Table F.2 presents a list of the museums holdings.

Additional historic photographs are reported to be in the possession of several individuals. Base aerial photographs dating to the 1960s and 1970s may be available from a Mr. Robert Schaeffer, an employee of Base Operations. Sam Sandoval, of Community Planning, has June 14, 1990 aerials by Thomas Mann & Associates, Inc. (DACA47-89-D-0015).

Table F.1 Space Center Oral History Interviews.

Last Name	First Name	Rank or Title	General Subject Index	Editorial Restrictions	Media Available
Curatolo	Lou	Mr.	NASA, WSSH	Open	Audiotape/ Transcript
Dittmer	Ed	SMSgt. USAF (Ret.)	Manhigh, HAM	Public	Audiotape/ Transcript
Douglas	William K.	Col., MC, USAF (Ret.) Dr.	Project Mercury M.D.	Open	Audiotape/ Transcript
Fulwyler	Niles J.	Maj. Gen Us Army (Ret.)	Former WSMR Commander	Public	Video/Audio/Tra nscript
Haney	Paul	Mr.	NASA's "voice of mission control"	Public	Interview being transcribed
Hess	Ulysses W.	Lt. Col., USAF (Ret.)	HAFB History	Open	Audiotape/ Transcript
Hessburg	Rufus	Dr.	Aeromed Pioneer	Public	Audiotape/ Transcript
Jaenke	Martin G.	Dr.	Former Head CIGTF	Perm. to Quote/ Site/ Reproduce	Video/Audio/Tra nscript
Mattson	Wayne O.	Lt. Col., USAF (Ret.)	Sounding Rockets	Open	Audiotape/ Transcript
McClure	Clifton M.	Mr.	Project Manhigh	Public	Audiotape/ Transcript
Mullane	Richard (Mike)	USAF (Ret.)	Shuttle Astronaut	Public	Audiotape/ Transcript
Orbison	James J.	SMSgt. USAF (Ret.)	Space Probes, Shuttle	Perm. to Quote/ Site/ Reproduce	Audiotape/ Transcript
Poitra	Albert	MSgt. USAF (Ret.)	Early History Holloman AFB	Open	Audiotape/ Transcript
Reiners	Art	Major USAF (Ret.)	Aerospace Technology	Open	Audiotape/ Transcript
Simon	George W.	Dr.	Sunspot, Spacelab	Public	Audiotape/ Transcript
Simmons	David G.	Col., USAF (Ret.) Dr.	Project Manhigh	Public	Audiotape/ Transcript
Snow	Louis L.	Mr.	Minitrack Engineer	Public	Audiotape/ Transcript
Sommers	Cynthia	Mrs.	Payload Recovery, WSMR	Permission required to access	Audiotape/ Transcript

Last Name	First Name	Rank or Title	General Subject Index	Editorial Restrictions	Media Available
Stapp	John Paul	Col., MC USAF (Ret.) MD	Aeromed Pioneer	Public	Video/Audio/Transcript
Strang	William C.	Mr.	NATIV Project	Public	Interview being transcribed
Tombaugh	Clyde	Dr.	Discoverer of Pluto	Open	Video/Audio/Transcript

Table F.2 Space Center Artifact Loans.

Loan No.	Category	Object
L.002.001	Ground Support Equipment	Lunar Rover Trainer
L.003.001	Models	Mercury Capsule, _ Scale
L.003.002	Rockets	XLR-11 Engine
L.003.003	Rockets	Fuel Injector Head
L.003.004	Ground Support Equipment	Sonic Wind I Rocket Sled
L.003.006	Manned Spacecraft	Mercury Primate Capsule
L.003.007	Models	Tiros Satellite Model
L.003.009	Rockets	Little Joe Rocket
L.003.010	Rockets	Fin Assembly
L.003.011	Rockets	Fin Assembly
L.003.012	Rockets	Fin Assembly
L.003.013	Rockets	Fin Assembly
L.003.014	Rockets	Engine, RL-10
L.003.015	Rockets	Turbopump, Vanguard
L.003.016	Unmanned Earth-Orbiting Spacecraft	Satellite, Explorer I
L.003.018	Personal Equipment	Skylab Spacesuit
L.003.019	Unmanned Earth-Orbiting Spacecraft	Satellite, Meteorite Technological
L.003.020	Models	Model, Spacecraft, Vostok I
L.017.001	Memorabilia	Lunar Sample
L.018.001	Models	Astronaut/Manned Maneuvering Unit
L.019.001	Manned Spacecraft	Skylab Toilet Mockup
L.021.001	Models	Surveyor Spacecraft, 1:5 Scale
L.025.001	Models	Space Shuttle Stack, 1:50 Scale
L.026.001	Personal Equipment	Lunar Visor Assembly
L.026.002	Personal Equipment	Portable Life Support System
L.026.003	Personal Equipment	Remote Control Unit, PLSS
L.026.004	Personal Equipment	Covering for PLSS, Apollo
L.026.005	Personal Equipment	Air Bag Component, PLSS
L.026.006	Personal Equipment	Spacesuit, Mercury

Table F.2 Space Center Artifact Loans.

Loan No.	Category	Object
L.026.007	Personal Equipment	Boot, Mercury Spacesuit
L.026.008	Personal Equipment	Boot, Mercury Spacesuit
L.026.009	Personal Equipment	Glove, Mercury Spacesuit
L.026.010	Personal Equipment	Glove, Mercury Spacesuit
L.026.011	Personal Equipment	Helmet, Mercury
L.026.012	Personal Equipment	Glove, LEVA, Apollo
L.026.014	Personal Equipment	Inflight Coveralls, Apollo
L.026.015	Rockets	V-2 Guidance Platform
L.026.016	Rockets	F-1 Rocket Engine
L.026.017	Rockets	J-2 Rocket Engine
L.026.018	Ground Support Equipment	Rocket Sled with Rails and Ejection Seat
L.028.001	Rockets	Nike Cajun Rocket
L.030.001	Memorabilia	Association of Space Exploration Poster
L.031.001	Rockets	Apollo SPS Engine
L.035.001	Rockets	Orion Rocket Motor
L.035.002	Rockets	Arcas Rocket Motor
L.035.003	Rockets	Arcas Rocket Motor (Cut-a-way)
L.035.004	Rockets	Loki Rocket
L.035.005	Models	Mercury Capsule, Full-Size Mockup
L.035.006	Models	Viking Spacecraft Model, 1:20 Scale
L.035.007	Models	Mariner II Spacecraft Model
L.035.008	Rockets	Syncom Apogee Kick Motor
L.035.009	Rockets	Javelin Nose Cone
L.035.010	Memorabilia	Salescasters
L.035.011	Memorabilia	Hot Lines Exhibit
L.035.012	Models	Apollo Command Module Instrument Panel (Mockup)
L.035.013	Rockets	Castor Fins (4 ct.)
L.035.014	Rockets	Nike Fins (9 ct.)

Table F.2 Space Center Artifact Loans.

Loan No.	Category	Object
L.037.001	Astronomy	Meteorite (Nickel-Iron)
L.038.001	Memorabilia	Stone Tool-Native American Artifact
L.039.001	Manned Spacecraft	Thermal Protection Tiles (11 ct.)
L.040.001	Unmanned Earth-Orbiting Spacecraft	Explorer 50 Satellite
L.040.002	Unmanned Earth-Orbiting Spacecraft	Alouette I Satellite
L.040.003	Unmanned Earth-Orbiting Spacecraft	Landsat 4 Satellite Model
L.040.004	Unmanned Earth-Orbiting Spacecraft	Syncom I Satellite Model
L.040.005	Unmanned Earth-Orbiting Spacecraft	Vanguard II Instruments
L.040.006	Unmanned Earth-Orbiting Spacecraft	Prototype Vanguard Satellite
L.040.007	Unmanned Earth-Orbiting Spacecraft	Vanguard II Satellite
L.040.008	Unmanned Earth-Orbiting Spacecraft	San Marco I Satellite Model
L.040.009	Unmanned Earth-Orbiting Spacecraft	Explorer 10 Satellite
L.040.010	Unmanned Earth-Orbiting Spacecraft	Echo II and Data Capsule
L.040.011	Unmanned Earth-Orbiting Spacecraft	UK II/ARIEL II Satellite
L.041.001	Memorabilia	Hot Line Accessories
L.041.003	Unmanned Earth-Orbiting Spacecraft	UK-2 Solar Panels
L.043.001	Rockets	Lunar Module Ascent Engine
L.046.001	Rockets	Delta Engine (Cut-a-way)
L.046.002	Models	Scout Model and Launcher
L.049.001	Unmanned Earth-Orbiting Spacecraft	TIROS Spacecraft Model
L.049.002	Unmanned Earth-Orbiting Spacecraft	Syncom Spacecraft
L.050.001	Rockets	Aerobee Pointing Control System
L.050.002	Unmanned Earth-Orbiting Spacecraft	TIROS Full-Scale Mockup
L.050.003	Rockets	Apache/Cajun Motors (3)
L.050.004	Rockets	Nike-Smoke Nose Cones (3)
L.050.006	Rockets	Nike-Smoke Adapter Rings (4)
L.050.007	Rockets	Arcas Boosters (4)
L.050.008	Rockets	Apache/Cajun Fin Assembly (4)
L.050.009	Rockets	Scout Filament Wound Motors (2)

Table F.2 Space Center Artifact Loans.

Loan No.	Category	Object
L.050.010	Rockets	Astrobee D Fins (2)
L.050.011	Rockets	Standard Arcas (4)
L.050.012	Rockets	Cajun Motor with Fins and Adapter
L.051.001	Models	Titan II, 1/144 Scale
L.052.001	Models	Soyuz SL-4, 1/144 Scale
L.053.001	Models	Saturn V, 1/144 Scale
L.055.001	Personal Equipment	Cheese Spread
L.055.002	Personal Equipment	Pecan Cookies
L.055.003	Personal Equipment	Tea with Lemon and Sugar
L.055.004	Personal Equipment	Cream of Mushroom Soup
L.055.005	Manned Spacecraft	Shuttle Thermal Tile
L.055.006	Models	Apollo L.E.M., _ Scale
L.055.007	Models	Apollo C.M., _ Scale
L.055.008	Models	Gemini Spacecraft, ¼ Scale
L.055.009	Models	Saturn IB Rocket, 1/48 Scale
L.055.010	Manned Spacecraft	Lunar Sample Return Container
L.055.011	Personal Equipment	Tea with Lemon and Sugar
L.055.012	Personal Equipment	Spaghetti with Meat Sauce
L.055.013	Personal Equipment	Rye Bread
L.055.014	Personal Equipment	Butterscotch Pudding
L.055.015	Personal Equipment	Black Coffee
L.055.016	Personal Equipment	Cheddar Cheese Crackers
L.055.017	Personal Equipment	Vanilla Ice Cream
L.055.018	Personal Equipment	Creamed Peas
L.055.019	Personal Equipment	Sleep Kit-Eyecovers
L.055.020	Personal Equipment	Sleep Kit-Earplugs (8 ct.)
L.055.021	Personal Equipment	Sleep Kit-Eyecovers
L.055.022	Personal Equipment	Sleep Kit-Earplugs (8 ct.)
L.055.023	Personal Equipment	Personal Hygiene Kit-Soap

Table F.2 Space Center Artifact Loans.

Loan No.	Category	Object
L.055.024	Personal Equipment	Covered Soap Dish
L.055.025	Personal Equipment	Keri Cream
L.055.026	Personal Equipment	Crest Toothpaste
L.055.027	Personal Equipment	Nail Clippers
L.055.028	Personal Equipment	Shaving Gel
L.055.029	Personal Equipment	Shaving Razor
L.055.030	Personal Equipment	Styptic Stick
L.055.031	Personal Equipment	Razor Blade Packet
L.055.032	Personal Equipment	Dental Floss
L.055.033	Personal Equipment	Tooth Brush
L.055.034	Personal Equipment	Hair Brush
L.055.035	Personal Equipment	Plastic Gloves (2 ct.)
L.055.036	Personal Equipment	Dial Solid Antiperspirant
L.055.037	Personal Equipment	Chapstick
L.055.038	Personal Equipment	Dial Solid Antiperspirant
L.055.039	Personal Equipment	Keri Cream
L.055.040	Personal Equipment	Dental Floss
L.055.041	Personal Equipment	Plastic Gloves (2 ct.)
L.055.042	Personal Equipment	Toothbrush
L.055.043	Personal Equipment	Chapstick
L.055.044	Personal Equipment	Toothpaste
L.055.045	Personal Equipment	Nail Clippers
L.055.046	Personal Equipment	Styptic Pencil
L.055.047	Personal Equipment	Soap Dish
L.055.048	Personal Equipment	Soap Bar
L.055.049	Models	Space Station Model
L.055.050	Models	Skylab Model, 1/48 Scale
L.055.051	Personal Equipment	PGA-ITMG-Spacesuit (Pogue)
L.055.052	Personal Equipment	Egress Breathing Apparatus

Table F.2 Space Center Artifact Loans.

Loan No.	Category	Object
L.055.053	Personal Equipment	Stowage Cabinet
L.055.054	Manned Spacecraft	Optics Shroud Assembly
L.056.001	Unmanned Planetary Spacecraft	Viking Lander Camera
L.057.001	Models	TDRSS No. 2 Ground Station Model
L.059.001	Models	TDRS Satellite Model
L.061.001	Rockets	Hawk Missile
L.061.002	Rockets	Nike Ajax Missile
L.062.001	Rockets	JB-2 Loon
L.062.002	Rockets	X-8 Aerobee
L.062.003	Rockets	X-7 Missile
L.063.001	Memorabilia	Newspaper Clipping/Letter
L.064.001	Astronomy	Solar X-ray Spectroheliograph
L.064.002	Astronomy	EUV and Soft X-ray Spectroheliograph
L.065.001	Memorabilia	Test Track Films (19 ct.)
L.065.002	Memorabilia	Test Track Photos (59 ct.)
L.066.001	Ground Support Equipment	Cockpit Trainer
L.067.001	Rockets	Delta Rocket Engine
L.068.001	Models	All-American Alpha
L.069.001	Art	Painting-Defense Support Program Satellite
L.071.001	Rockets	Ion Engine
L.072.001	Memorabilia	Watercolor
L.072.002	Memorabilia	LIFE Magazine
L.072.003	Memorabilia	LIFE Magazine
L.072.004	Memorabilia	LIFE Magazine
L.072.005	Memorabilia	Apollo-Soyuz Patch
L.072.006	Memorabilia	Lithograph
L.072.007	Memorabilia	Lithograph

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-11: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT HOMESTEAD AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Patience Elizabeth Patterson
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

June 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Homestead Air Force Base was inventoried by David P. Staley and Patience Elizabeth Patterson, of Mariah Associates, Inc., between May 23 and 30, 1994, as part of the Air Combat Command Cold War study for the ongoing Department of Defense Legacy Program. Information was gathered on site from the files of the Real Property Office, the Drawing Office, the Base Conversion Agency, the acting Historian, and the Public Affairs Office.

An initial reconnaissance of the base was accomplished with Major Francis "Fuzzy" Zeller, who is a remaining member of the 31st Tactical Fighter Wing and a coordinating member of the Base Conversion Agency. This initial orientation enabled the team to become familiar with the base and determine what resources were extant on base. Homestead Air Force Base is unique in that many resources on the base were destroyed by Hurricane Andrew in 1992. The eye of the hurricane, which sustained winds of 150 miles per hour, passed directly over the base, leaving a large number of base facilities dysfunctional. The base was determine unable to support its mission (United States Air Force 1993a). Cleanup and recovery still continue on the base during its transition and "draw down" from Air Force Base to Air Reserve Station. As of April 1, 1994, Homestead Air Force Base was officially designated Homestead Air Reserve Station.

The reconnaissance inventory documented specific resources and property types which would likely be relevant to the Cold War study. These resources are representative of the different types and styles of facilities on the base.

From the inventory, on-site inspection, and research, three resources were determined to be important to the base's Cold War history. Two of the resources are buildings, and one is a set of architectural diagrams. Temporal Phases II through IV, as described in the historic context and methodology document written for this project (Lewis et al. 1995), are represented. Recommendations for the resources include stewardship, further documentation, and National Register of Historic Places eligibility for the United States Air Force Conference Center; further

documentation for the Bomber Alert Facility; and stewardship, further documentation, and conservation of the Documentary Collection.

LIST OF ACRONYMS

AAF	- Army Air Field
ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AFRES	- Air Force Reserves
AGE	- Air Ground Equipment
amsl	- above mean sea level
ANG	- Air National Guard
ARS	- Air Reserve Station
BMW	- Bombardment Wing
BRAC	- Base Realignment and Closure
CES	- Civil Engineering Squadron
CRS	- Component Repair Squadron
DEW	- Distant Early Warning
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
IAAFA	- Inter-American Air Force Academy
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TFW	- Tactical Fighter Wing
TTW	- Tactical Training Wing
USAF	- United States Air Force
WSK	- War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Corona South - a planning and strategy meeting held every February at the USAF Conference Center for four-star Generals and their Chiefs of Staff. This meeting is now held at Eglin AFB at the new USAF Conference Center.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Distant Early Warning Line - developed in response to the Killian Report, this early warning detection system was designed to track enemy bombers and missiles travelling over the Arctic Circle towards the United States. This line consists of over 50 radar stations stretching across the Arctic Circle from the Aleutian Islands of Alaska to Iceland.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	iii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	16
4.0 METHODOLOGY	22
4.1 INVENTORY	22
4.2 EVALUATION OF IMPORTANT RESOURCES	23
4.2.1 Documentation	23
4.2.2 Evaluation of Importance	23
4.2.2.1 Cold War Context	23
4.2.2.2 NRHP Criteria	24
4.2.2.3 Exceptional Importance	25
4.2.3 Evaluation of Integrity	25
4.2.4 Priority Matrix	26
4.2.5 Resource Organization	27
4.3 BASE SPECIFIC METHODS	27
5.0 RECONNAISSANCE INVENTORY RESULTS	29
6.0 EVALUATION RESULTS	30
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	30
6.1.1 Base and Command Centers	30
6.1.1.1 USAF Conference Center	30
6.1.2 Documentation	33
6.1.2.1 Documentary Collection	33
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	33

TABLE OF CONTENTS (CONTINUED)

	<u>Page</u>
6.2.1 Alert Facilities	33
6.2.1.1 Bomber Alert Facility	33
6.3 MATERIEL DEVELOPMENT FACILITIES	34
6.4 TRAINING FACILITIES	34
6.5 INTELLIGENCE FACILITIES	34
7.0 UNDOCUMENTED RESOURCES	35
8.0 FUTURE THREATS TO RESOURCES	37
9.0 PRELIMINARY RECOMMENDATIONS	39
9.1 NRHP ELIGIBILITY	39
9.1.1 Evaluation and Determination of NRHP Eligibility	39
9.1.2 Implications of NRHP Eligibility	41
9.2 EVALUATED RESOURCE RECOMMENDATIONS	42
9.2.1 USAF Conference Center	44
9.2.2 Documentary Collection	45
9.2.3 Bomber Alert Facility	45
10.0 REFERENCES CITED	46
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Homestead Air Force Base	5
Figure 2.2 Homestead Air Force Base Layout	7
Figure 2.3 Standard Tactical Air Command Base Layout	8
Figure 2.4 Homestead Air Force Base Land Use Diagram (prehurricane)	10
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	11
Figure 3.1 Homestead Army Air Field in 1943	17
Figure 3.2 Homestead Air Force Base 1960s	19
Figure 3.3 Homestead Air Force Base 1990	20
Figure 3.4 Homestead Air Force Base Land Use Diagram (posthurricane)	21

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	31
Table 6.2 Evaluated Resource Prioritization by Priority Rank	31
Table 9.1 Recommendations for Evaluated Resources	43

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

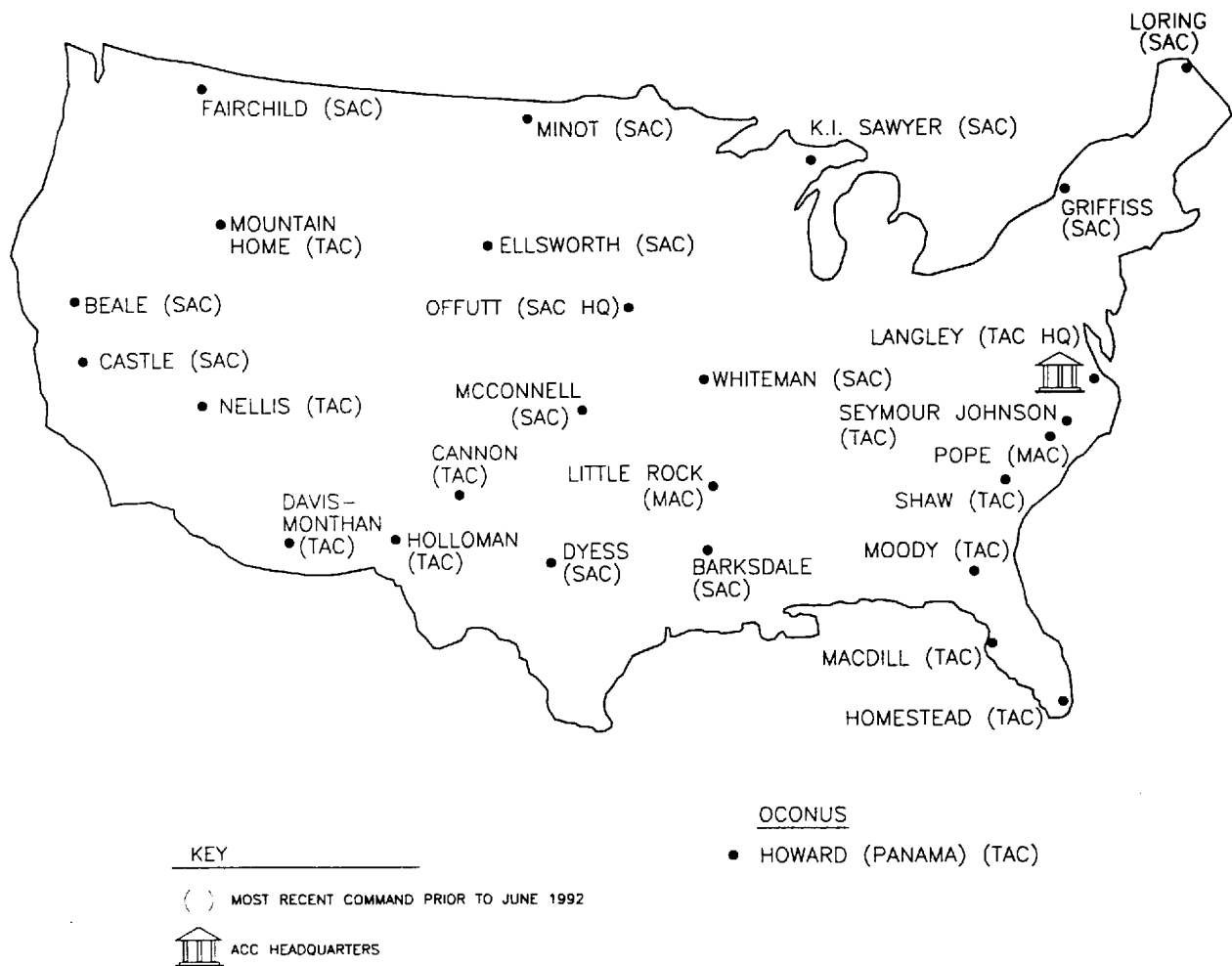
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\HOMESTEAD\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to the Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Homestead Air Force Base (AFB). Homestead AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

After Hurricane Andrew on August 24, 1992, Homestead AFB was unable to support its mission. The host unit, the 31st Tactical Fighter Wing (TFW), was reassigned to Aviano, Italy, and other tenant units were reassigned and deployed to other bases.

Currently the recommendations of the Base Realignment and Closure (BRAC) Commission are being carried through, and Homestead AFB is in transition. The base was realigned to an Air Reserve Station (ARS) in 1994, supporting the flying missions of the 482nd Fighter Wing and the 301st Air Rescue Squadron. The Florida Air National Guard (ANG) and the U.S. Customs Service are to be supported within the ARS cantonment. Because this study is concerned with the role the installation served as an air force base, it will be referred to as Homestead AFB throughout this report.

Metropolitan-Dade County is the reuse authority for the area of the base not within the cantonment. Portions of this area will be used for aviation and aviation-related industries, education, housing, parks, and recreation. The runway, taxiways, etc. will be dual-use components for both the ARS and Metropolitan-Dade County.

2.2 GEOGRAPHIC DESCRIPTION

Homestead AFB is located in southern Dade County, Florida, approximately 5 mi (8 km) north-northeast of Homestead and Florida City, 30 mi (48 km) northeast of Key Largo, and about 20 mi (32 km) south of Miami in an urban area known as South Dade (Figure 2.1). The base is situated on the coastal plain. The climate of the area is considered to be tropical and humid, but with defined wet and dry seasons. The base is located on 2,940 acres (1,190 ha) of relatively flat topography, with the old control tower on the runway at an elevation of 7 ft (2 m) above mean

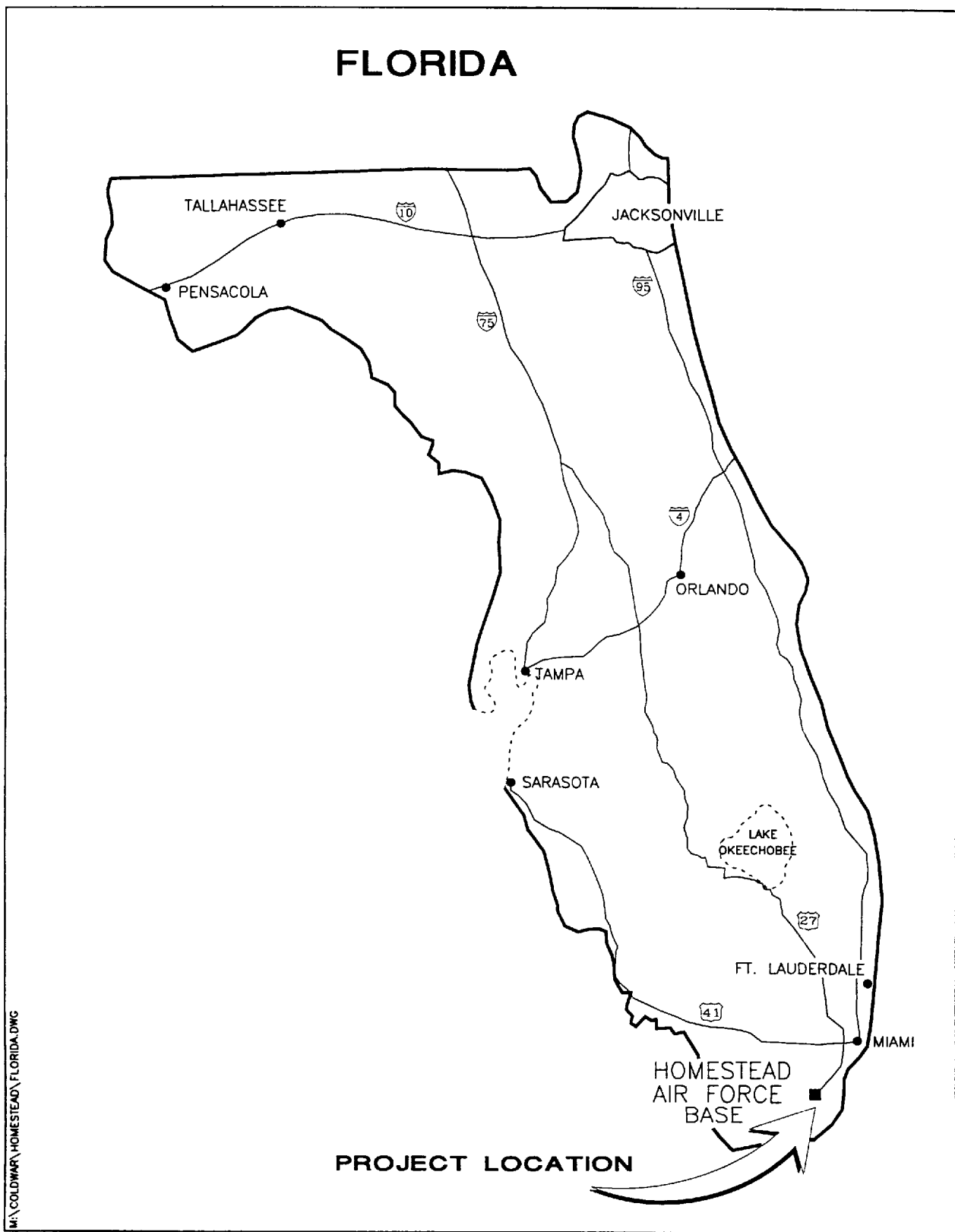


Figure 2.1 Location of Homestead Air Force Base.

sea level (amsl). The installation is approximately 2 mi (3.2 km) from the Biscayne Bay Seashore within the South Dade Wildlife Conservation Area. Homestead AFB is the southernmost Air Force installation in the continental United States.

2.3 CURRENT BASE LAYOUT

Homestead AFB's present runway configuration is on a northeast/southwest axis and is situated along the southeastern boundary of the installation (Figure 2.2). The base layout is similar to other TAC base layouts (Figure 2.3), with individual characteristics created through the exigencies of geography and topography. The flight apron and mission-related buildings run along the northwestern side of the main runway. A taxiway intersects the south end of the runway at 90 degrees and lies between maintenance hangars and mission-related buildings on the northeastern side and the Ordnance Storage Igloos on the southwestern side. A tenant unit, U.S. Customs, lies at the northern end of the northwest/southeast axis of the taxiway. At the southern end of the taxiway lie the maintenance test cells or hush houses.

Remnants of the older Homestead Army Air Field (AAF) runways and taxiways can be detected at the southern end of the base. The northwest/southeast runway can be seen between the U.S. Customs installation on the northwest and the test cells or hush houses on the southeast. The northeast/southwest runway lies under the apron in front of the old alert facility and buildings to the northeast and the southern portion of the Ordnance Depot and the storage igloos. The remnants of an east/west runway are present on the western end of the base within the storage igloos in the Ordnance Depot.

The hospital and family housing areas are located at the northern end of the base away from the runway and munitions storage areas. Support groups, headquarters, tenant organizations, and unaccompanied housing are located at the center of the base.

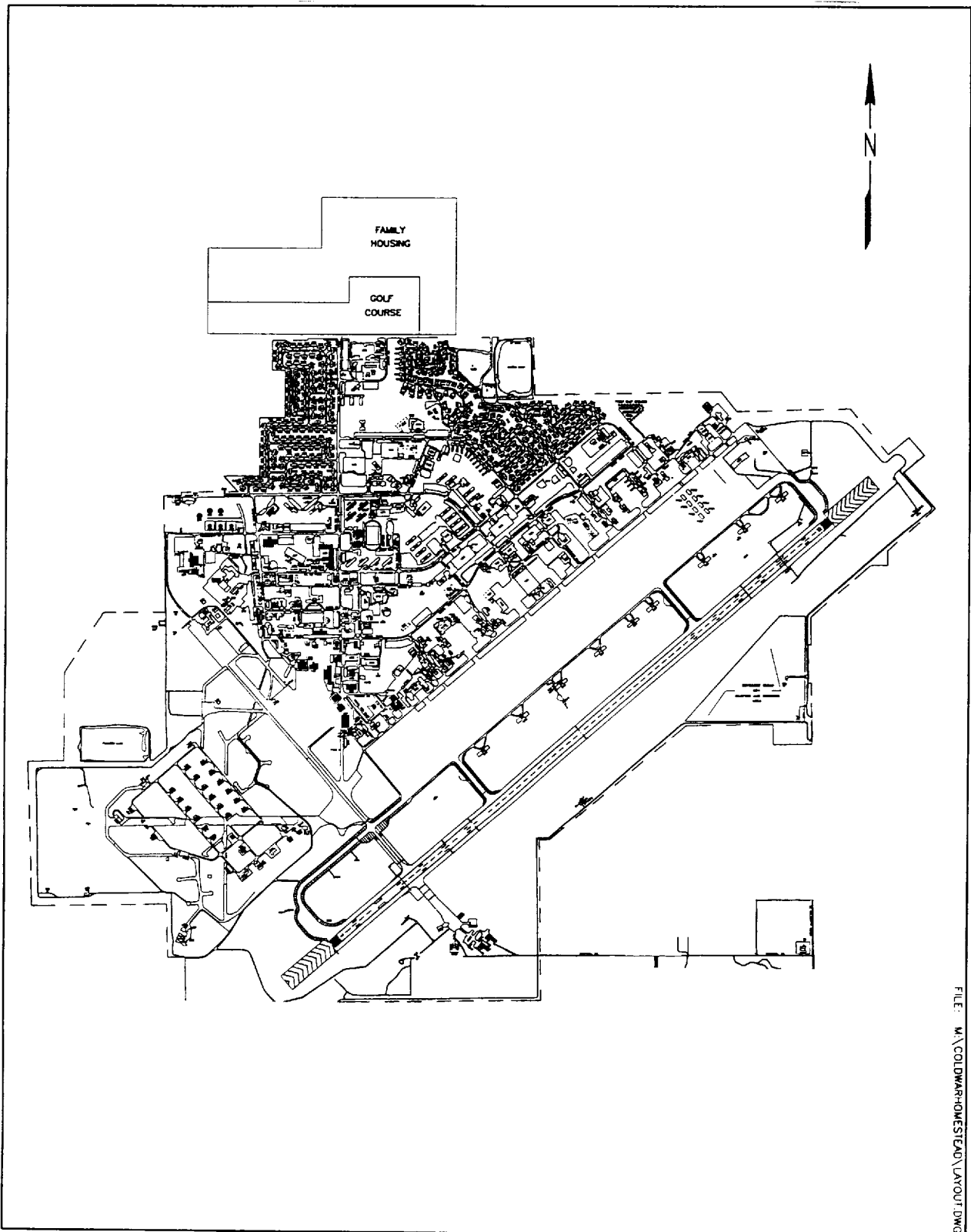


Figure 2.2 Homestead Air Force Base Layout.

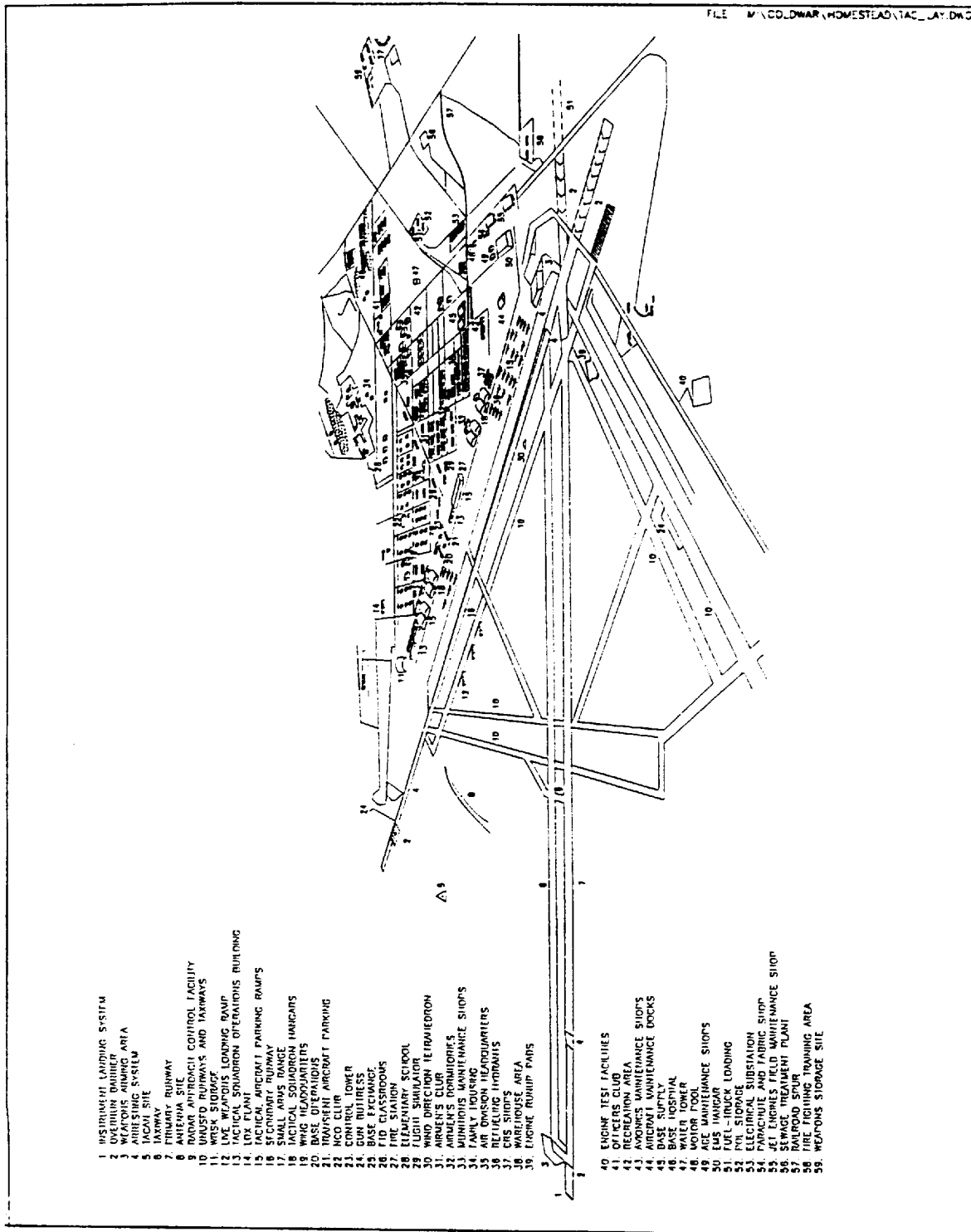


Figure 2.3 Standard Tactical Air Command Base Layout.

The boundaries for the base, especially along the southern edges, are demarcated by canals that are cut into the bedrock. These are for drainage and also serve as an effective boundary in those areas. Ditches and drainage canals are dug out of the rock along the roadways on the base. These can be seen easily and serve as effective drainage for the street system.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - facilities for base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan of Homestead AFB prior to Hurricane Andrew and Figure 2.5 is a diagrammatic land use plan of a standard TAC base. In comparison, the two are very similar in that the mission areas are along the flight line, the family housing is farthest from

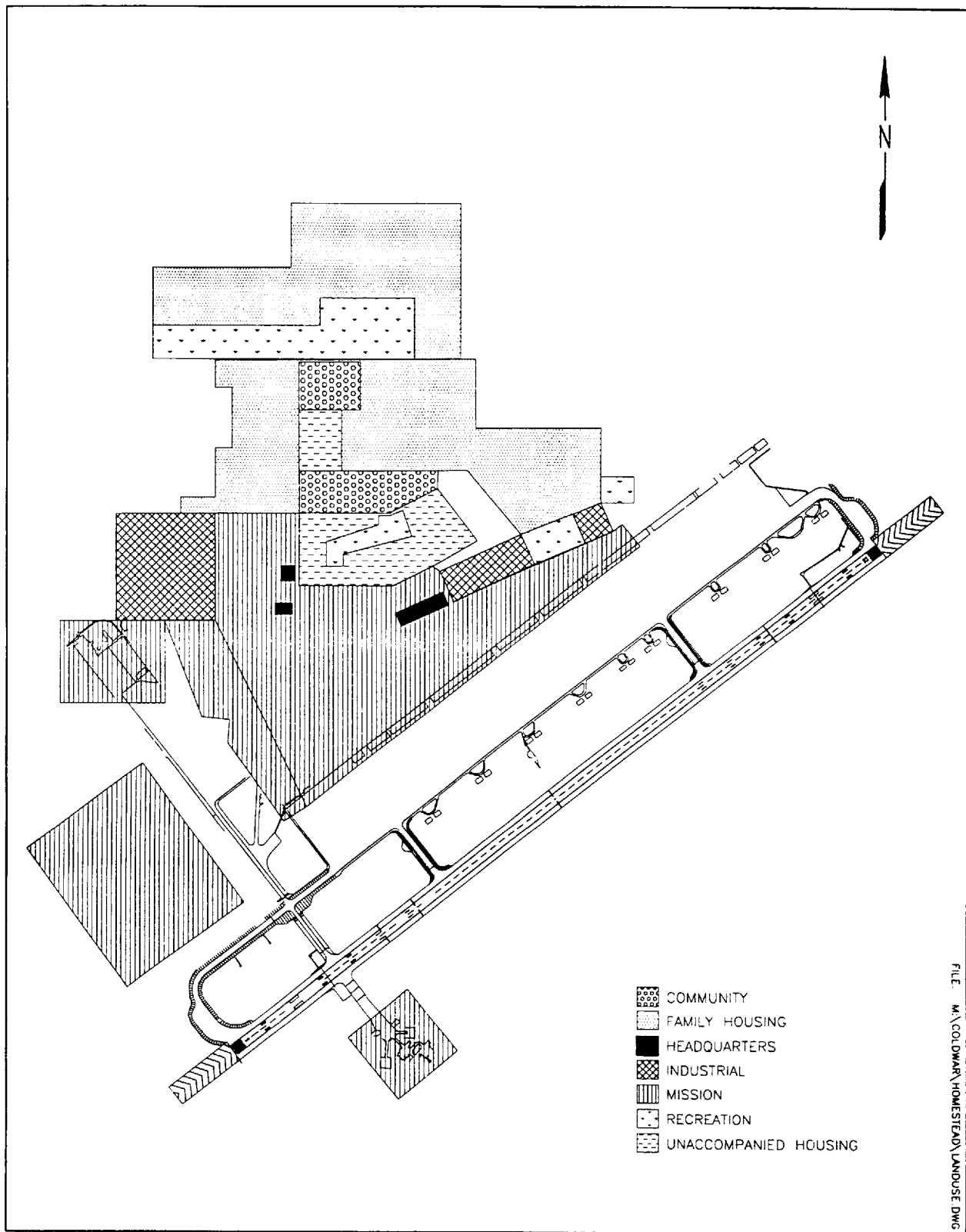


Figure 2.4 Homestead Air Force Base Land Use Diagram (prehurricane).

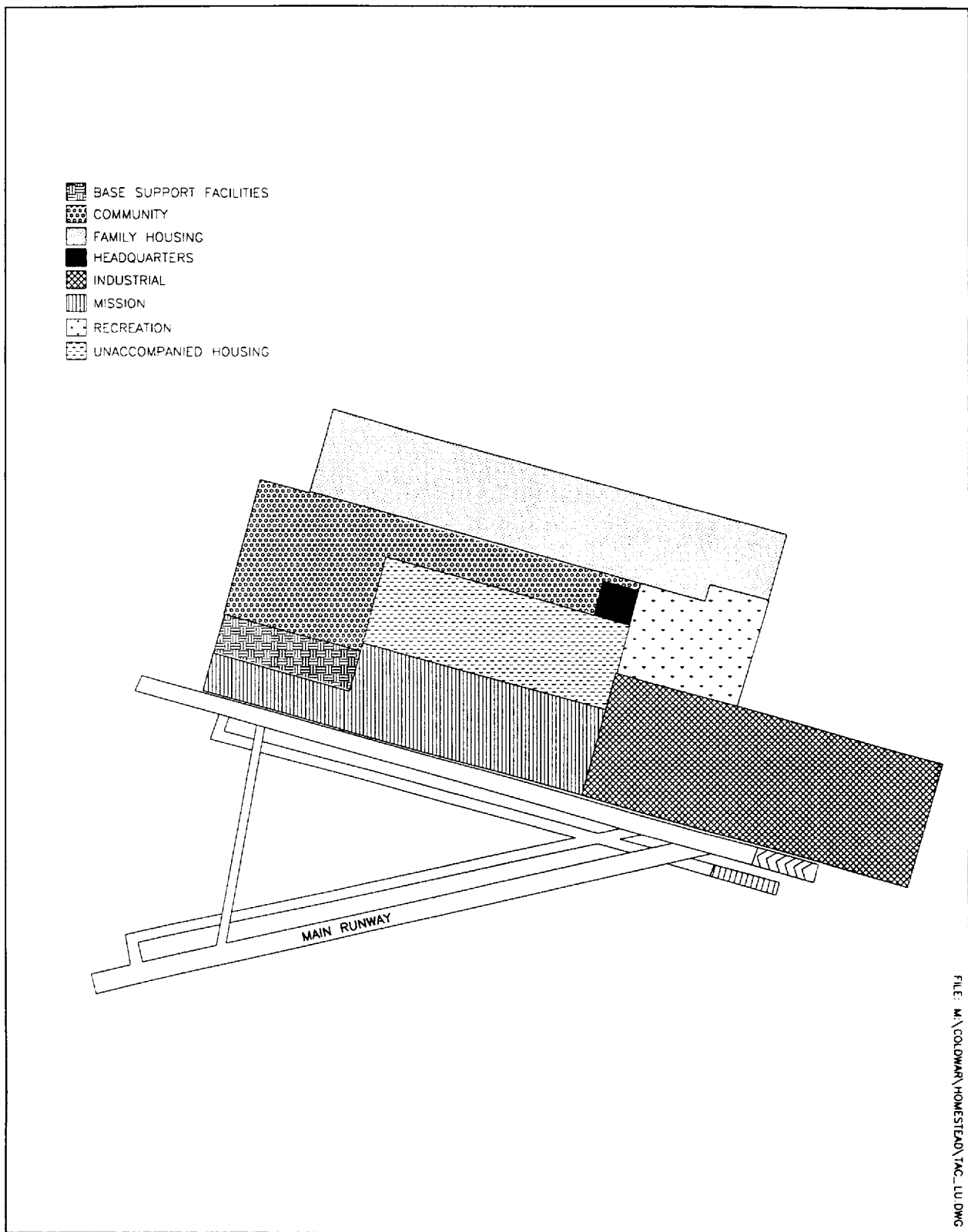


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

the flight line, and in between are the industrial, community, administrative, and unaccompanied housing areas. Homestead AFB differs only slightly from the standard plan in that some mission areas are south and west of the runway and taxiway and well away from the other mission areas on the base. Also, the administrative and industrial areas at Homestead AFB are more fragmented.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

In September 1942, the Army Air Corps took control of an isolated air strip on 600 acres (243 ha) of land previously owned by Pan American Ferries, Inc. An additional 648 acres (262 ha) was acquired bringing the total acreage to a little more than 1,248 acres (505 ha). During its first six months in operation, Homestead AAF served as a scheduled stop on a well-traveled air route from the northeastern United States to the Caribbean and Africa (Weed, Russell, Johnson Associates 1957).

The mission of the airfield changed in a vital way when the 2nd Operational Training Unit of the War Department's Air Transport Command was activated in 1942 and began providing advanced training for air crew members. In 1943, the single mission at Homestead AAF was to prepare C-54 *Skymaster* air crews to fly the famous route from Burma to China (United States Air Force [USAF] 1993b:3-1).

In 1945, Homestead AAF represented the largest four-engine transport training operation in the entire Air Transport Command. On September 15, 1945, three years after its founding, a hurricane hit Homestead AAF and severely damaged the installation. Officials announced the complete closure of the air field by December 1945. By the time the USAF was created in 1947, Homestead AAF lay in ruins.

The National Security Council in 1950 identified a severe threat from the Soviet Union and recommended that the United States embark on a massive program to rebuild its conventional military capabilities. The following summer saw South Korea invaded by North Korea, thereby confirming the Soviet threat in the minds of Americans. This released many budget constraints and defense spending tripled. The USAF entered a time of expansion, with growth planned from

48 to 143 wings. The construction of new bases and the expansion and modernization of existing bases became a major priority (Lewis et al. 1995).

In early 1954, the Killian Panel recommended that the SAC bomber force be dispersed to more bases across the country, making the weapons system more survivable in the event of a first-strike (Knaack 1988:252). It was determined that this dispersal strategy required more bases than were in existence.

These policies and military strategies resulted in the redesignation of Homestead AAF as an air force base. In 1954, Homestead AAF was assigned to Strategic Air Command (SAC) for use in the bomber dispersal plan. Clean-up crews arrived to ready the installation for reactivation as Homestead AFB, and an additional 1,295 acres (524 ha) were acquired for the construction of a new northeast-southwest primary runway.

Homestead AFB was significantly shaped by events, defense strategies, and political as well as military policies of the Cold War. As a SAC base, the mission of Homestead AFB was to provide operational and maintenance facilities for multiple components of SAC. The components consisted of two medium bomber wings, the 379th and 19th Bombardment Wings (BMW), jet tankers, one air base group, air division headquarters, a USAF hospital, an air and airways communications squadron, a weather squadron, and other smaller units. Construction of a 1,255 unit Capehart Housing area for the increased number of personnel was begun in 1958. The principal aircraft first assigned was the B-47 *Stratojet* medium bomber, supported by KC-97 *Stratofreighter* aerial refueling tankers. The mission of the two BMWs was to supplement the alert force in Africa and train new crews. The mission was named "Reflex." Each of the two wings would dispatch a combat-ready aircraft weekly on a rotational basis (Mills 1993).

By 1960, there were 6,000 permanently assigned personnel at Homestead AFB. The 379th BMW was transferred to another base, leaving the 19th BMW as the host, and, in June of 1960, the B-52 *Stratofortress* and KC-135 *Stratotanker* replaced the B-47 and KC-97 aircraft at the base. A

Bomber Alert Facility was added in 1959 and was the most obvious physical aspect of the effect of Cold War policy and strategy on the base. During the 1950s, the 19th BMW was assigned duty to fly the Distant Early Warning (DEW) Line in northern Canada and Alaska. The bomber crews were assigned alert status for seven days and the B-52s were to be airborne within 15 minutes. Two combat-ready aircraft launched every day to fly a 24-hour mission without landing. They did not land until their replacement aircraft had departed and were in the air (Mills 1993).

The next significant event in the Cold War which shaped Homestead AFB's mission occurred in the Fall of 1962, when it was discovered that the Soviet Union was deploying missiles in Cuba. Homestead AFB's Bomber Alert Facility was continuing its mission of strategic deterrence and was most certainly in a high level defense posture. In direct response to the growing threat, the 31st TFW, with its F-100 *Super Sabre* fighter aircraft, was assigned and deployed to Homestead AFB from George AFB, California. Troops and aircraft were rushed to Homestead AFB. The base's population exploded from 6,000 to more than 10,000. Army troops were bivouacked in tents throughout the base. Two other wings were also deployed to Homestead AFB. Cuban targets were identified, and the United States was prepared to strike at a moment's notice. Its geographical location placed the base at the very center of the Cuban Missile Crisis, supporting F-100 and B-52 operations.

After several weeks the crisis was over, but the changes at the base spawned by the Soviet threat remained. Although Homestead AFB was a SAC base, it now had a two-fold mission: through SAC, it was to stand ready and alert to project a global defense power; through TAC, it was to maintain a fighter force in operational readiness (Mills 1993).

During the period between 1963 and 1969-70, the Army Air Defense Command maintained numerous Nike, Hercules, and Hawk missile launch sites in the vicinity. The 31st Civil Engineering Squadron (CES) had the responsibility of constructing and maintaining these facilities.

TAC's role at Homestead AFB was solidified through the permanent assignment of the 31st TFW. In late 1966, the 31st TFW was deployed to Vietnam and the 4531st Tactical Wing was activated on the base in their absence. Homestead AFB was reassigned to TAC in July of 1968. In 1970, the 31st TFW returned from Southeast Asia and became the host unit.

In March of 1981, the 31st TFW became the 31st Tactical Training Wing (TTW) and began their new mission of training F-4 *Phantom* air crews. Training remained the primary mission of the base until the arrival of the F-16 *Fighting Falcon* in 1985. At that time, the 31st TTW again became the 31st TFW, maintaining an operationally ready fighter force.

In June 1992, Homestead AFB was reassigned to ACC. The following August, the base was hit by Hurricane Andrew. It was determined that the base could no longer fulfill its mission, and the 31st TFW and the other tenant units were reassigned and deployed to other bases. The base was officially designated an ARS in April 1994, supporting the flying missions of the 482nd Fighter Wing and the 301st Air Rescue Squadron. The Florida ANG and the U.S. Customs Service are also supported within the ARS.

3.2 BASE DEVELOPMENT

In 1943, Homestead AAF had a vital training role with the Air Transport Command. At its deactivation in 1945, Homestead AAF had 1,248 acres (505 ha) which reverted to Dade County Port Authority control. Most mission and other buildings were on the northern side of the runways. Some facilities were located southwest of the runway and taxiways (Figure 3.1).

Homestead was reactivated in 1955, and 1957 data indicate the presence of two runways. The northeast/southwest instrument runway was 200 ft (61 m) wide by 11,200 ft (3,414 m) long, not including overruns. The northwest/southeast crosswind taxiway was 150 ft (46 m) wide by 6,000 ft (1,829 m) long. A primary taxiway serviced the entire instrument runway with holding pads at each end (Weed, Russell, Johnson Associates 1957).

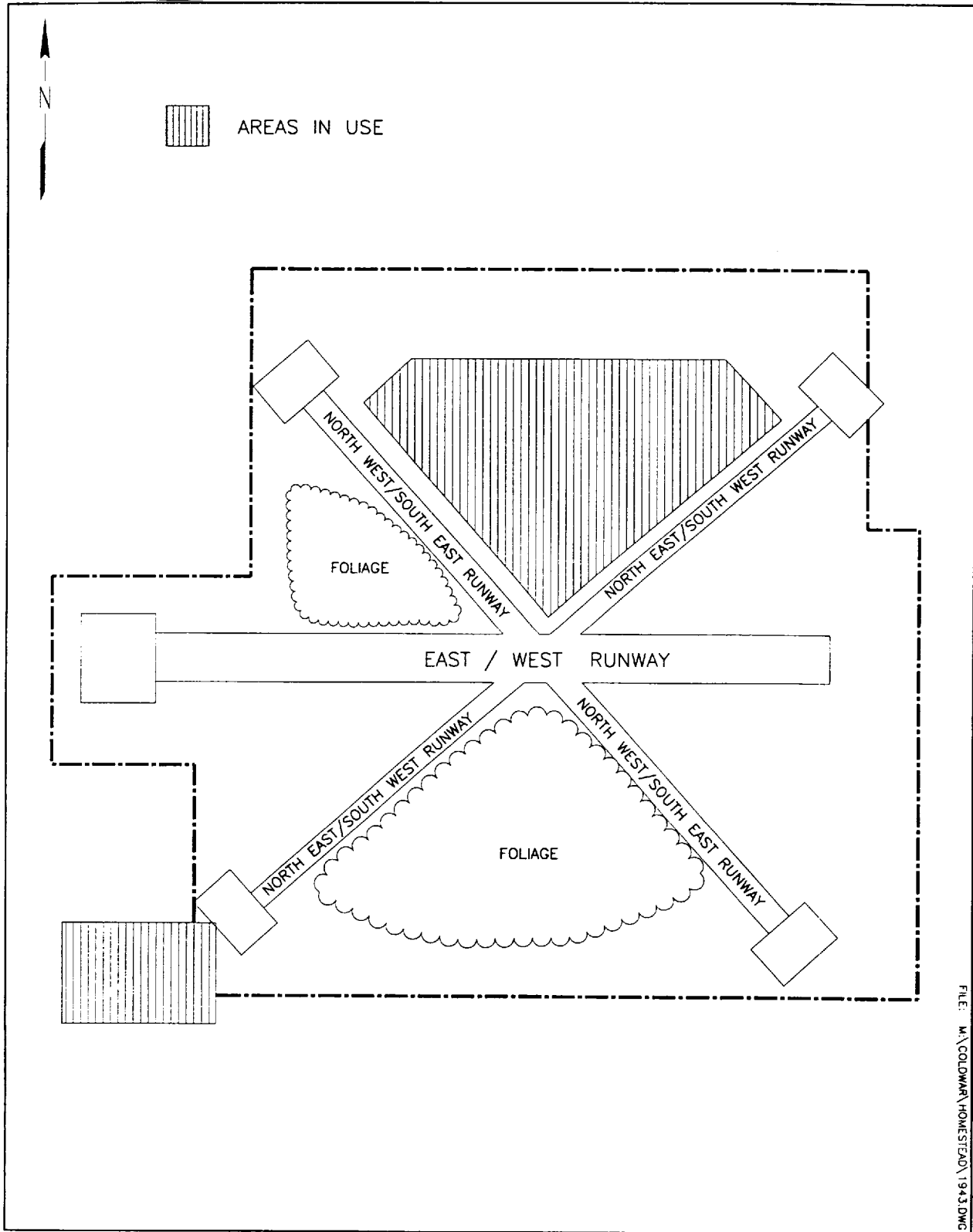


Figure 3.1 Homestead Army Air Field in 1943.

Many of the mission-related buildings were constructed during the late 1950s and early 1960s (Figure 3.2). Capehart Housing units were completed in 1958. An additional 360 housing units, including family housing and dormitories, were completed in 1972. In 1973, the USAF Conference Center at Ramey AFB, Puerto Rico, was closed, and Homestead AFB was chosen as the new conference site due to its favorable and consistent weather and the ancillary facilities. In 1974, the new USAF Conference Center at Homestead AFB was completed. It was used by the highest ranking generals in the Air Force for meetings on military policy and strategy. Rehabilitation projects of the runway and enlisted men's quarters were completed in 1979 and 1980.

Additional tenant organizations were established on the base. The U.S. Navy began its tenancy in 1969, the USAF Conference Center in 1974, and U.S. Customs in 1977. In 1986, there were 39 assigned and tenant units with designated missions at Homestead AFB. Fifteen were Host Tenant agreements and 24 were Inter-Service Support agreements (Homestead AFB 1986). In 1989-1990, the Inter-American Air Force Academy (IAAFA) was moved from Howard AFB, Panama, to Homestead AFB and became one of the last new organizations on the base (Figure 3.3) (Homestead AFB 1991; USAF 1993b).

Personnel at Homestead AFB have been involved in hurricane recovery since September 1992. The Air Force has identified and converted a portion of the base into a dedicated ARS cantonment area to "bed down" the Air Force Reserve units and the Florida ANG (Air Force Center for Environmental Excellence 1993) (Figure 3.4). Property not dedicated to the cantonment has been turned over to the Air Force Base Conversion Agency. Metropolitan-Dade County will become the re-use authority for this property. The County's re-use strategy includes plans for aviation and aviation-related industry, education, housing, parks, and recreation on the former base site.

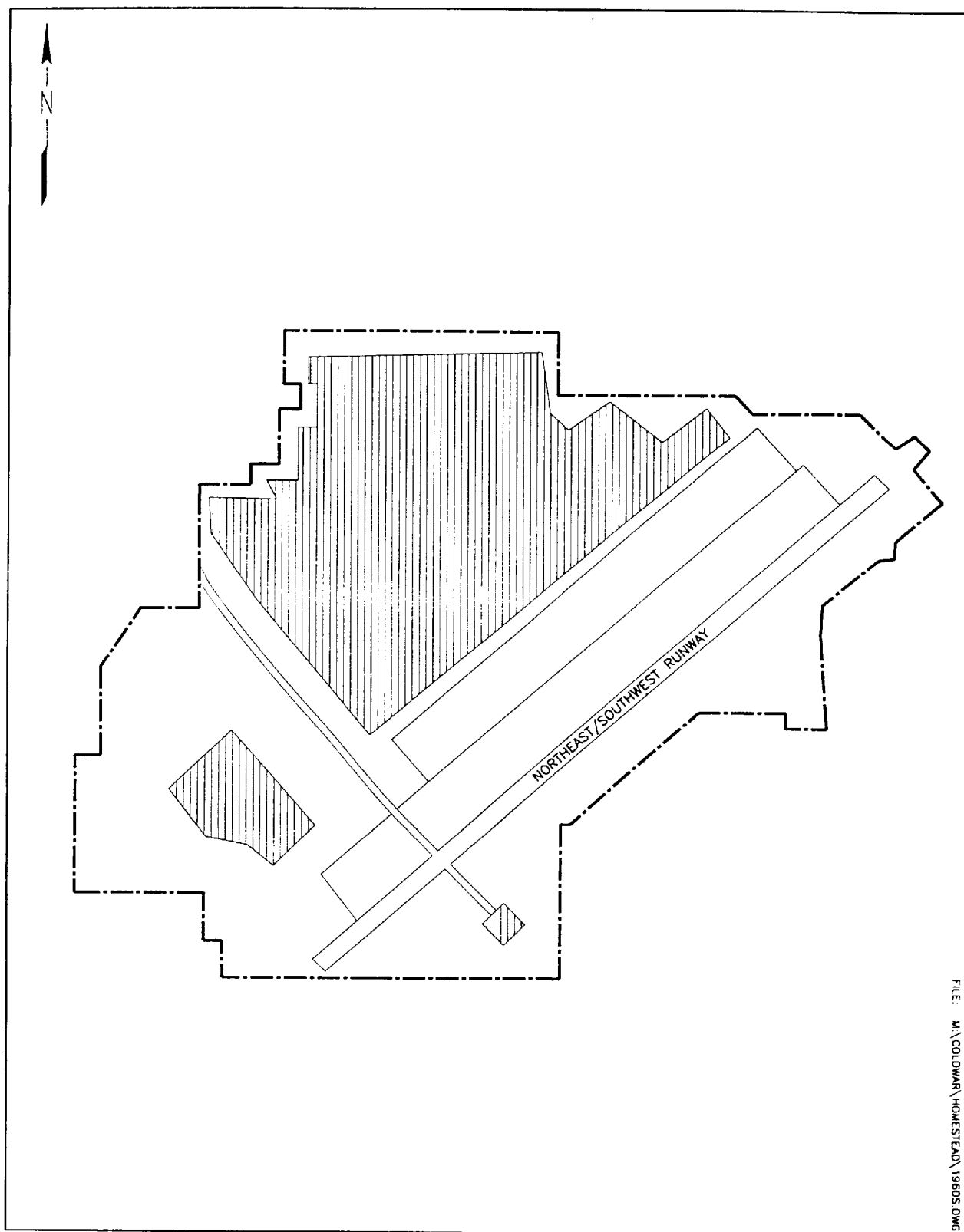


Figure 3.2 Homestead Air Force Base 1960s.

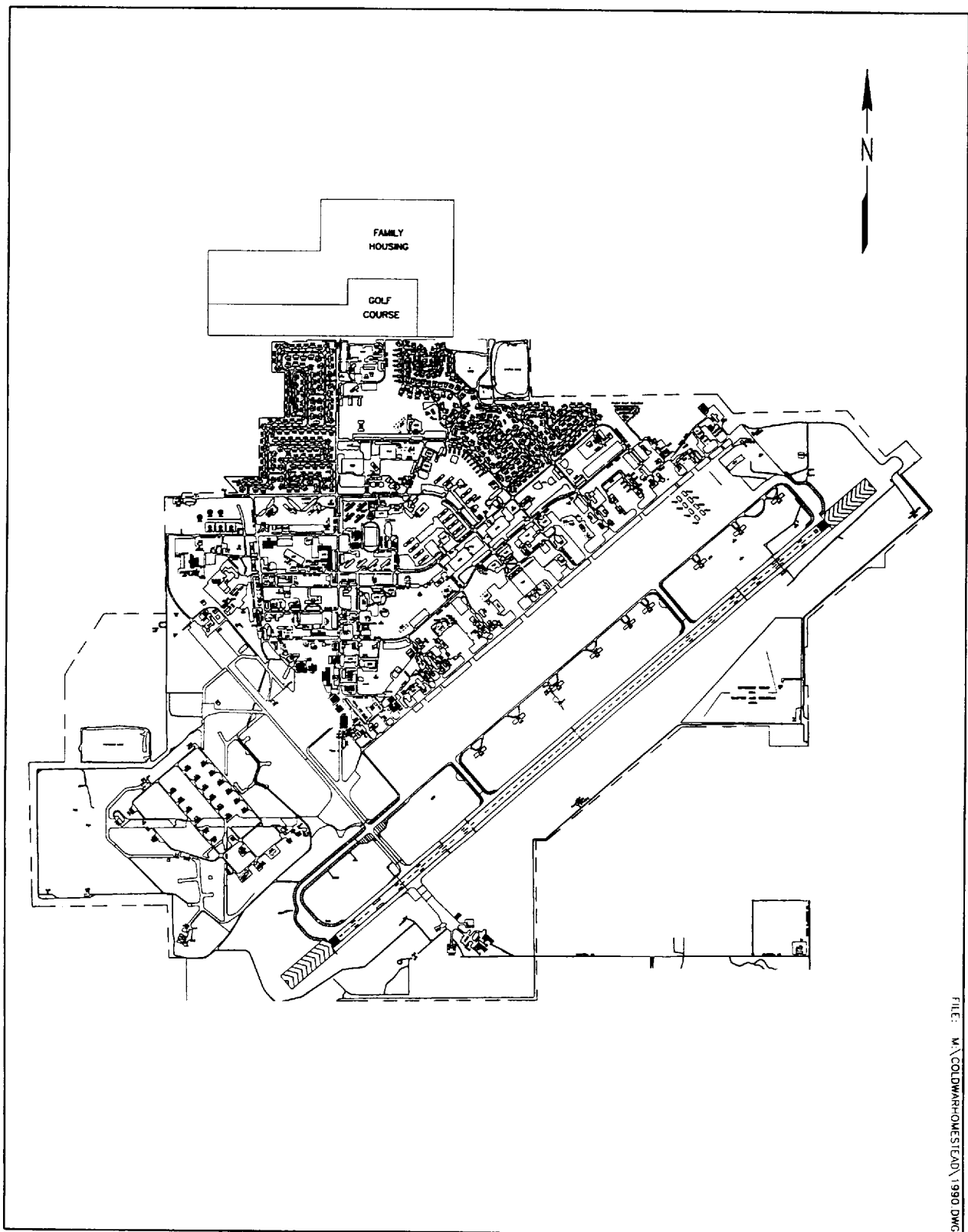


Figure 3.3 Homestead Air Force Base 1990.

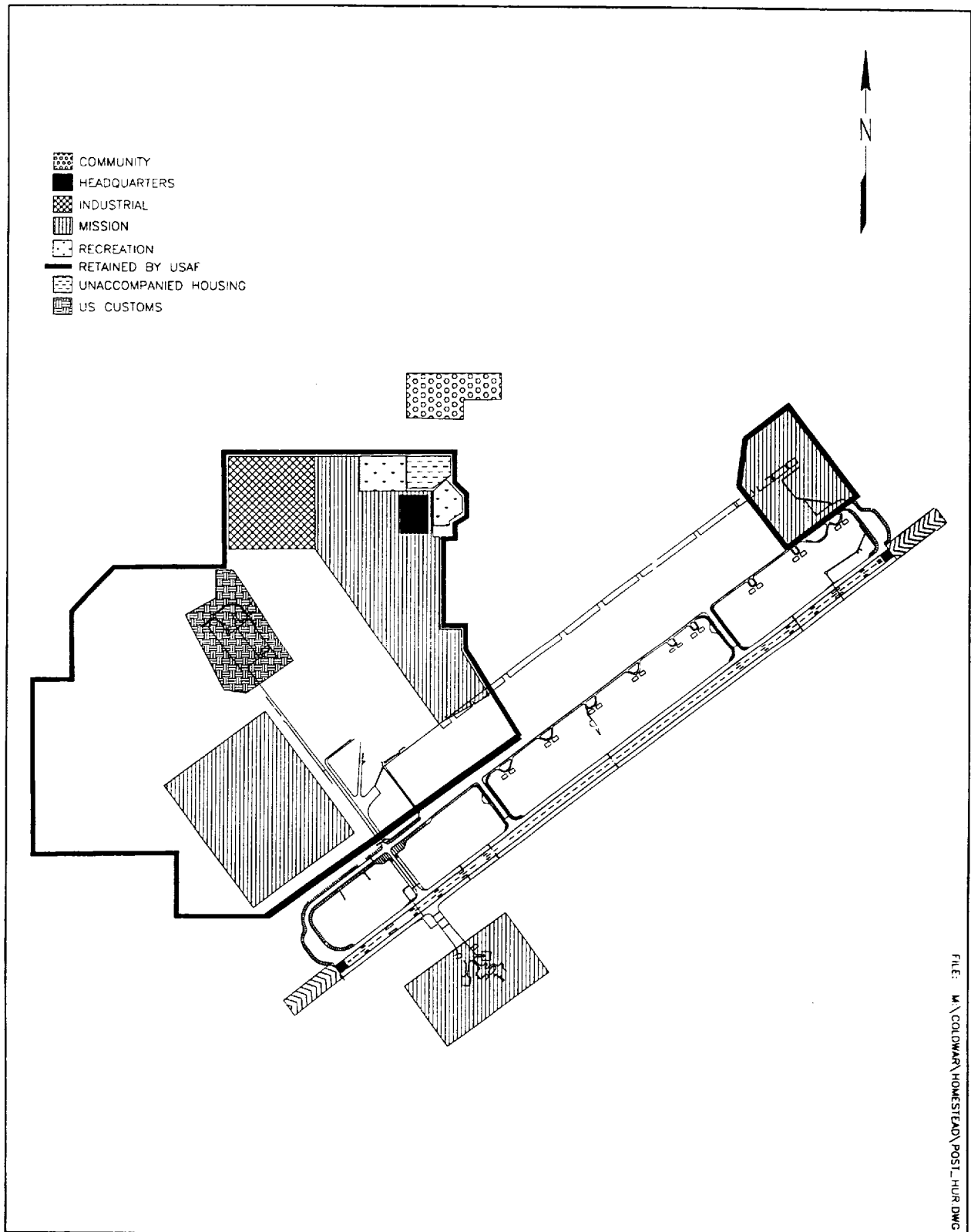


Figure 3.4 Homestead Air Force Base Land Use Diagram (posthurricane).

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Homestead AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993c:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Homestead AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Homestead AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF Interim Guidance (1993c) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF Interim Guidance (1993c) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Homestead AFB, the field team met their point of contact, Mr. Bill Kwalick of the Real Property Office. They discussed the objectives and needs for accomplishing the base inventory. Mr. Kwalick introduced the team to Major Francis "Fuzzy" Zeller, the former Operations Commander of the 31st TFW and member of the Transition Coordination Team of the Base Conversion Agency. He accompanied them on a thorough tour of the base, and the team began to familiarize themselves with the base layout and the types of facilities present. They established themselves in an office in order to have a contact point and working space. Mr. Kwalick then introduced them to other points of contact within Civil Engineering, such as the Drafting Section personnel. The field team presented their needs to these personnel in regard to computerized and earlier Property Change lists and cards, planning documents and maps, and base layout plans, maps, and drawings from each decade of the base.

A review of the property change list, base maps, and the first reconnaissance with Major Zeller was used to assemble a "first priority" list of resources to be inventoried and evaluated. Visits with the interim Base Historian and the Public Affairs Officer were undertaken and needs were

established with those offices. Conducted concurrently with other tasks, the photographic inventory of resources on the base was a continuous undertaking after the first day. The field team notified the appropriate personnel of the time frame needed for photography in areas where clearance might be necessary. The last task was to inquire if a debriefing session was necessary or requested by the Base Commander or Base Engineer. It was not, and the team left with both the team and the base committing to continued, follow-up contact.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Homestead AFB, 70 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at Homestead AFB, two of them falling under the DoD category of real property and one under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D.

An important caveat should be noted for Homestead AFB. Hurricane Andrew on August 24, 1992, had devastating impacts on most of the structures at Homestead AFB. For months, many structures were open to the elements and subjected to further destructive actions, until they were, in some cases, beyond prudent economic rehabilitation. For the purposes of this study, resources were selected for evaluation based on their importance to base Cold War history, regardless of their condition.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Base and Command Centers

6.1.1.1 USAF Conference Center (Resource No. 4006, Real Property No. 931)

The USAF Conference Center, referred to as Air Force Headquarters on the base's real property list, was a major tenant on Homestead AFB. This permanent, one-story, flat-roofed facility of concrete masonry construction is located in the north-central part of the base, outside the current ARS cantonment area. Built in 1974, the 9,234 ft² Center is of relatively low elevation, has few windows, and has landscaped berms sloping up against its walls. All of these characteristics suggest a concern for the safety and security of the occupants, and were evidently an attempt to provide protection in case of attack.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Base and Command Centers	USAF Conference Center	4006	931	Real/Bldg	20
Documentation	Documentary Collection	4007	None	RecDoc/Obj	18
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	4001	701	Real/Bldg	19

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	4006	931	USAF Conference Center
19	4001	701	Bomber Alert Facility
18	4007	None	Documentary Collection

This facility has played host to political and military leaders attending high-level national and international conferences. Participants at these conferences included the Secretary of the Air Force, Chief of Staff, Vice Chief of Staff, Major Command commanders, Deputy Chiefs of Staff, Secretary of Defense, Secretary of State, and Latin American ambassadors (USAF 1974). Each year during the Corona South meeting, every high-ranking General in the USAF visited this facility. It is more than likely that numerous important Cold War-related policy and strategy decisions were developed and announced in this building. The main conference room is a large, well-appointed room with state-of-the-art multi-media equipment. The acoustics are designed to be perfect. The furniture is plush and speaks to the ranks of its occupants.

The Center was one of the few buildings that suffered little damage during Hurricane Andrew and it has retained its integrity. As a result, it was utilized as a base headquarters and "sleeping quarters" for those at the base immediately after the hurricane. The only operational telephone line at Homestead AFB was in this building. It is presently being used as the offices for the Base Conversion Agency. Since it is outside the ARS cantonment area, it is scheduled to be transferred out of Air Force control and taken over by Metropolitan-Dade County, and its future use is not known at this time.

The exceptional importance of the USAF Conference Center lies in the conferences themselves and the Cold War policy and strategy decisions made during these conferences. These decisions went on to affect the Air Force, and ramifications were probably felt across the country as well as in Washington, D.C. These decisions were certainly partially the result of events of the Cold War; however, they may also have influenced the path of later Cold War events. The importance of the conferences and their participants is illustrated by the Center's protective architecture. This building was used as the USAF Conference Center during Phases III and IV of the Cold War, and meets NRHP criterion (a).

6.1.2 Documentation

6.1.2.1 Documentary Collection (Resource No. 4007, Located in Real Property No. 160)

This Documentary Collection survived Hurricane Andrew and was located in the files of the Drawing Room of the 482nd CES. Over 100 drawings of various construction projects regarding the Nike, Hercules, and Hawk missile installations and their attendant support systems around the Homestead AFB area were noted in the collection. The missiles were the property of the Army Air Defense Command, but Civil Engineering on Homestead AFB had the responsibility for the construction and maintenance of the launch installations. These mylar documents date from 1963 to 1969. They are located in flat files filled with other mylar, linen, and blueprint drawings and photographs of other construction projects on the base. These files provide valuable documentation of base development throughout the Cold War era, illustrating the effect of the Cold War on base expansion.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 4001, Real Property No. 701)

This Bomber Alert Facility was built in 1959 when Homestead AFB was under SAC. This permanent, two-story, concrete masonry structure is meant to be semi-subterranean. However, the rock stratum underlying the area is known as Miami Oolite, and there is little soil mantle which actually covers the area (in some places it is only 4 inches deep) (Weed, Russell, Johnson Associates 1957). Due to this, the facility is actually built above ground and the bottom floor is covered with sloping berms on all sides. The ramped entry/exits for rapid egress are part of this facility's functional characteristics. The building was for bomber alert crews who were in continuous ready-to-go status.

The facility is situated immediately to the southwest of Base Operations within the ARS cantonment area. It sits at the apex of the once active runway and taxiway. Since the facility ended its alert function in 1968, the cordoned off flight apron and security fences and systems are no longer extant. After 1968, it was designated a Special Operations Facility and used by President Richard Nixon as a waiting area while in transit to and from his Key Biscayne residence. The last function this facility served was as an office for Safety Education.

Although this facility has all the architectural elements of an alert facility, it has lost its integrity through natural disaster. Hurricane Andrew left it structurally unsound and dangerous. Now it is abandoned and scheduled for demolition during Phase III of Homestead AFB's Rebuilding Plan.

As an alert facility, this building allowed for maximum readiness and rapid deployment of air crews and aircraft in response to enemy aggression, and thereby embodied SAC's strategy of deterrence. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the concept of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). This exceptionally important facility was used for this purpose during Phases II and III, and meets NRHP criterion (a).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Homestead AFB.

6.4 TRAINING FACILITIES

None were evaluated at Homestead AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Homestead AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Homestead AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, many resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Homestead AFB. These resources should be investigated further for more comprehensive analyses.

With the destruction of Homestead AFB by Hurricane Andrew, the 31st TFW was deployed to Aviano, Italy, taking the wing history with them. During the clean-up after the storm, the only secure area available to the base was the vault in the USAF Conference Center. A cardboard carton containing 80 rolls of microfilm was salvaged from the Wing Historian's Office and placed in this vault. The various rolls are mixed, some marked SECRET and some UNCLASSIFIED. The rolls range in date from 1966 to the 1980s, with most dating to the 1970s, indicating their relevancy to the Cold War era. It appears that they are wing histories. A spot check of four labelled rolls against the document list from the USAF Historical Research Agency at Maxwell AFB strongly suggests that the contents of this collection may be unique. Only one roll out of the four checked was on the Agency's list. Unfortunately, no microfilm viewer was available to study the microfilm or assess its condition. The outside labels and cartridges appear water damaged. It is recommended that these documents undergo stewardship, further documentation, and curation into a permanent repository.

Photographs, dating from 1940 to after Hurricane Andrew, of every building are in the possession of Connie Farrow, former Real Property Officer at Homestead AFB. She is now the Real Property Officer at MacDill AFB, Florida. These photographs should be studied for their relationship to Homestead AFB's Cold War context.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Homestead AFB revealed over 600 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Homestead AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of potential future contacts, is presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

Current improvements at Homestead AFB tend to focus on the dramatic events of August 24, 1992, when the base was virtually destroyed by Hurricane Andrew. The base was recommended for closure by the Air Force to the BRAC Commission, due to the significant cost of reconstruction. The BRAC Commission, however, recommended that the base be realigned for use as an ARS. Since the hurricane, the base has not had a flying mission and has operated with a very reduced personnel contingent.

It has been calculated that when Hurricane Andrew hit Homestead AFB, over 35% of the structures at the base were more than 50% destroyed. After two years, recovery initiatives still continue. Structures on base were categorized by the BRAC Commission as requiring one of four actions: demolish, clean and leave, weatherproof, or repair. Clean and leave entails removing debris and leaving the structure in a condition from which it will not deteriorate further. Weatherproofing involves roofing, repair, boarding windows and doors, and removal of loose or damaged components such as awnings or air conditioners. Repair involves the full restoration of the structure and interior systems to original condition for functional operation (Metropolitan-Dade County 1994).

Demolition of damaged facilities on the base is continuing where necessary, and some shells and remnants of buildings are being cleaned and left for the next tenant. Real Property Nos. 360, 346, 402, and 434, all of which were inventoried in this study, are scheduled to be renovated and reused within the ARS cantonment. Real Property No. 360 will be used as 482nd Wing Headquarters, No. 346 will become a training facility, No. 402 will be a Support Group building, and No. 434 will be used for a medical clinic.

Real Property No. 701, the Bomber Alert Facility, was documented and evaluated during this study as important to Homestead AFB's Cold War history. It was damaged beyond repair and is scheduled for demolition during Phase III of the Rebuilding Plan.

It is interesting to note that past environmental assessments and surveys which have been conducted show that the Florida State Historic Preservation Officer (SHPO) has concluded that there are no properties on Homestead AFB which are eligible for the NRHP (USAF 1993b). However, the methodology of those projects may not have considered the Cold War significance of the buildings inventoried.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Homestead AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the SHPO. If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Homestead AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Homestead AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Homestead AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Building								
4001	701	Bomber Alert Facility				*		Ineligible.
4006	931	USAF Conference Center		*	*	*		NRHP eligible now.
Record/Document - Object								
4007	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 USAF Conference Center (Resource No. 4006, Real Property No. 931)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV, and meets NRHP criterion (a) based on its role in the development of national military policy and strategy. The integrity of the building and its features is intact. Therefore, this building is recommended as eligible to the NRHP.

Since this building is located outside the ARS cantonment, it is scheduled to be turned over to Metropolitan-Dade County. It is recommended that Homestead ARS retain control of this building and maintain the integrity of it and its features, while further documentation is conducted to nominate the resource to the NRHP.

9.2.2 Documentary Collection (Resource No. 4007, Located in Real Property No. 160)

This collection of drawings and photographs of base construction projects is currently in good condition. It is recommended that this collection be inventoried and duplicated. It is further recommended that the ARS retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Bomber Alert Facility (Resource No. 4001, Real Property No. 701)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III, and meets NRHP criterion (a) based on its role in sustaining a survivable force to meet the needs of deterrence. However, the integrity of the building has been adversely affected. Therefore, this building is recommended as ineligible to the NRHP. Further documentation is recommended to assemble documents, photographs, and other information concerning the building to record its significant Cold War function.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities.* Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Air Force Center for Environmental Excellence

- 1993 *Installation Comprehensive Development Plan. Homestead Air Reserve Station Homestead, Florida.* Air Force Design Group, Air Force Center for Environmental Excellence, Brooks Air Force Base, Texas.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War.* Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Homestead Air Force Base

- 1986 *Real Property Survey.* Executive Order 12512.
- 1991 *Commander's Long Range Facility Improvement Plan.* Homestead Air Force Base, Florida.

Knaack, M. S.

- 1988 *Encyclopedia of U.S. Air Force Aircraft and Missile Systems, Volume II: Post World War II Bombers 1945-1973.* Office of Air Force History, Washington, D.C.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide.* MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment.* Prepared for Headquarters, Air Combat Command, Langley Air Force Base, Virginia. Mariah Associates, Inc., Albuquerque.

Metropolitan-Dade County

- 1994 *Homestead Air force Base Re-Use and Economic Redevelopment Implementation Plan.* Prepared by The Beacon Council, in association with Arthur Andersen & Co., Miami.
-

Mills, H. A.

- 1993 *History of Homestead Air Force Base (draft)*. On file, Base Conversion Agency, Homestead Air Reserve Station, Florida.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

United States Air Force

- 1974 *Air Force Regulation 11-22: Use of USAF Conference Center at Homestead AFB, Florida*. Headquarters, U.S. Air Force, Washington, D.C.
- 1993a *Draft Basewide Environmental Baseline Survey*. Homestead Air Force Base, Florida.
- 1993b *Environmental Assessment in Support of the Realignment of the 482nd Fighter Wing. Homestead Air Reserve Station*. Headquarters, Air Force Reserve, Robbins Air Force Base, Georgia.
- 1993c *Interim Guidance: Treatment of Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

Weed, Russell, Johnson Associates

- 1957 *Master Plan Homestead Air Force Base, Homestead, Florida*. Prepared under Contract No. AF25(600)-313 for Assistant Chief of Staff/Installations. Washington D.C.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property-Building				
	4001	701	Bomber Alert Facility	1959
	4002	921	Base Theatre	1956
	4003	346	Naval Security Group Activity	1968
	4004	702	Base Operations	1955
	4005	402	Administrative Office, Non-Air Force	1956
	4006	931	USAF Conference Center	1974
	4008	706	Fire Station	1954
	4009	707	Base Operations	1978
	4010	717, 732	Maintenance Organizational Aircraft Shop	1956
	4011	740	Weapons and Release Systems Shop	1960
	4012	741	Maintenance Hangar	1956
	4013	755	Non-destructive Inspection Shop	1962
	4014	765, 770	Weapons System Management Facility	1956
	4015	779	Small Aircraft Maintenance Dock	1964
	4016	782	Small Aircraft Maintenance Dock	1959
	4017	776	Helicopter Rescue and Recovery Hangar	1959
	4018	784	Precision Measurement Equipment Lab	1974
	4020	877	Aircraft Shelter	1990
	4021	797	Explosive Ordinance Disposal	1965
	4022	759	Medical Storage, War Readiness Materiel	1988
	4023	778	Specified Headquarters	1990
	4024	756	Specified Headquarters	1985
	4025	775	Flight Simulator Training	1956
	4026	619	Base Supply and Equipment Warehouse	1956
	4027	750	Jet Engine Inspection/Maintenance Shop	1956
	4028	360	Technical Training Classrooms	1956
	4029	745	General Purpose Aircraft Shop	1957
	4031	624	Base Supply and Equipment Warehouse	1956
	4032	531	Base Supply and Equipment Warehouse	1956
	4033	718	Combat Center Facility	1989
	4034	721	Special Operations	1956
	4035	195	Vehicle Fuel Station	1956
	4037	184	Air Force Office of Special Investigations Office	1957
	4039	446	Permanent Party Airmans Dormitory	1956
	4040	434	Visiting Officers Quarters Dormitory	1956
	4041	160	Base Engineering Administration	1965
	4042	121	Base Engineering Maintenance Shop	1942
	4043	116	Regular Indoor Small Arms Firing Range	1956
	4045	343	Service Station Exchange	1958
	4046	359	Gymnasium	1974
	4050	476	Permanent Party Airman's Dormitory	1956
	4051	920	Commissary	1986
	4052	917	Child Care Center	1979
	4053	902	Youth Center	1956
	4054	903	Credit Union	

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	4055	914	Base Exchange	1976
	4056	923	Bowling Center	1973
	4057	935	Officers Club and Open Mess	1958
	4058	951	Visiting Officers Quarters	1988
	4059	1546	Capehart Family Housing	1959
	4060	1545	Capehart Family Housing	1959
	4061	2367	Family Housing APPR 70	1975
	4062	1843	Recreation Pavillion	1974
	4064	990	Composite Medical Facility	1956
	4065	999	Traffic Check House	1959
	4066	1446	Capehart Family Housing	1958
	4067	473	Cafe, Snack Bar Exchange	1987
	4068	665	Recreation Center	1959
	4069	194	Small Aircraft Maintenance Dock	1972
	4070	653	Swimming Pool	1974
Real Property-Landscape				
	4063	None	Playground	
Real Property-Object				
	4036	None	Damaged Street Signs	
	4049	6353	F-4 Static Display	
Real Property-Site				
	4019	None	Aircraft Wreckage and Salvage Yard	1992
	4038	512	Former location of NCO Club	1968
Real Property-Structure				
	4030	738	Water Tank Storage	1955
	4044	314, 328, 330-334, 338	Jet Fuel Storage	1956
	4047	260-281	Munitions Storage Igloos	1956
	4048	4064	Power Check with Suppression Pad	1965
Record/Document-Object				
	4007	None	Documentary Collection	1970

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

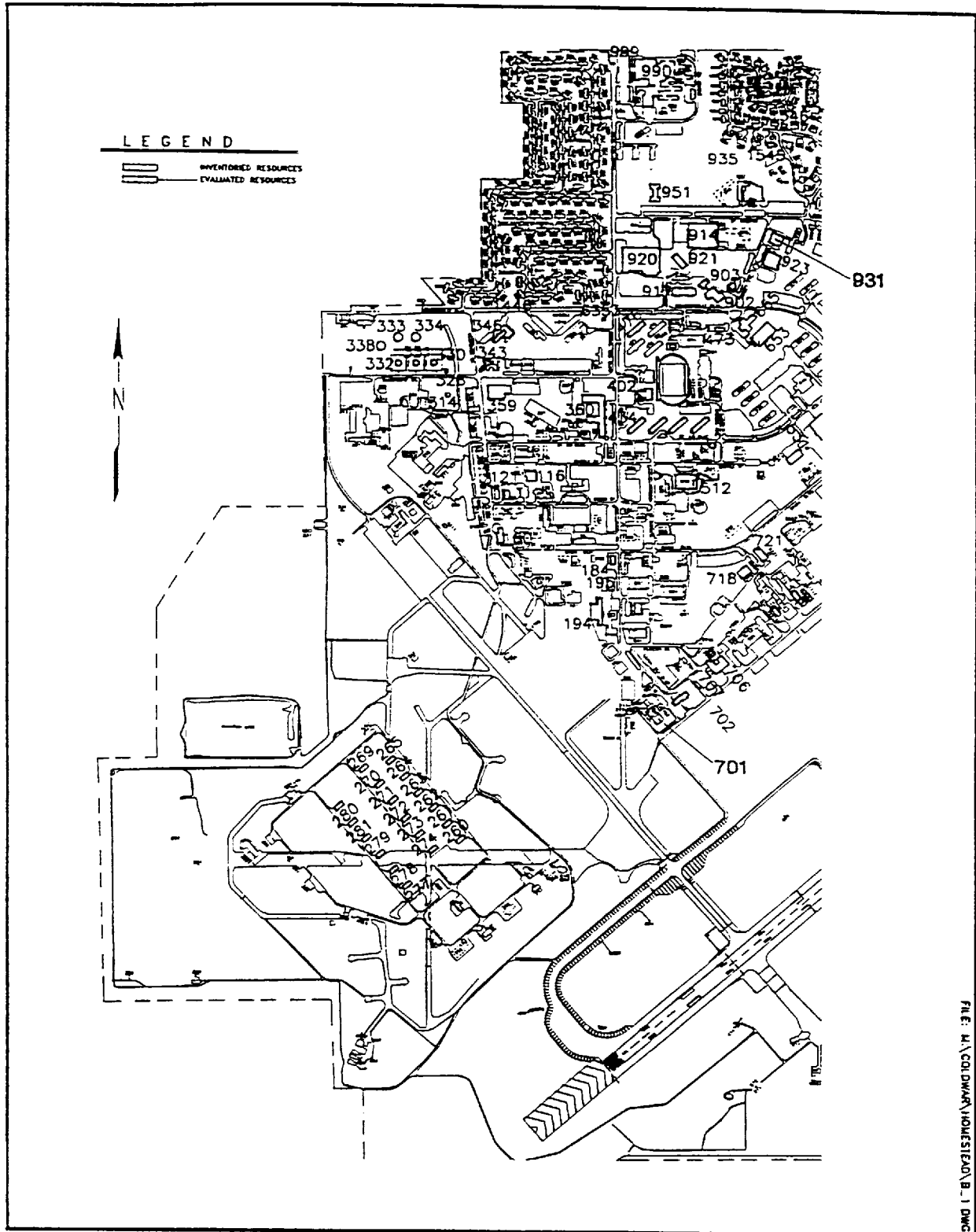
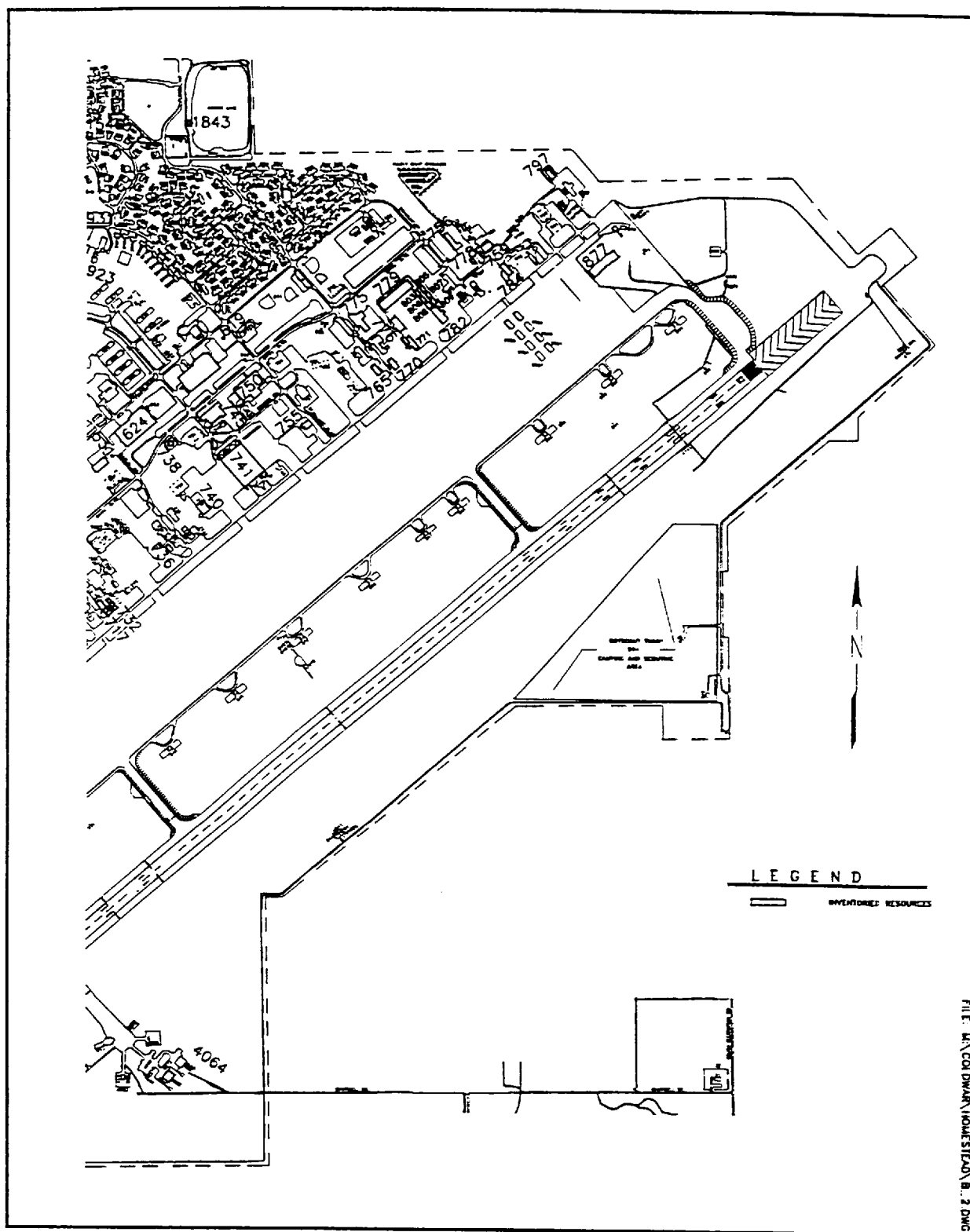


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 2).



APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 4001, Real Property No. 701
Crew Readiness Facility



Resource No. 4002, Real Property No. 921
Base Theatre



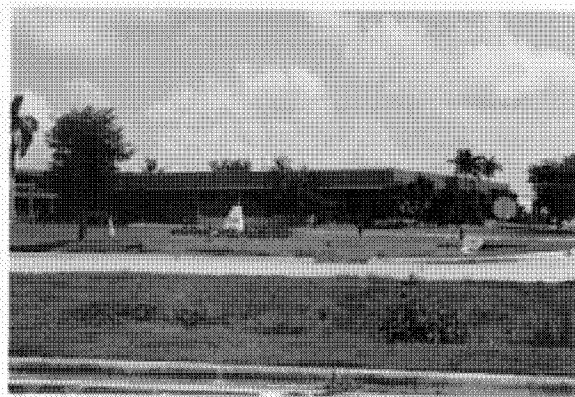
Resource No. 4003, Real Property No. 346
Naval Security Group Activity



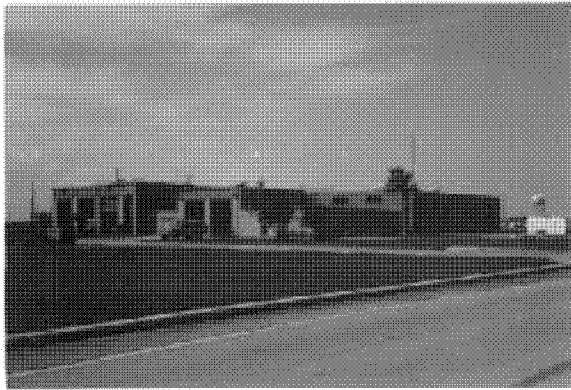
Resource No. 4004, Real Property No. 702
Base Operations



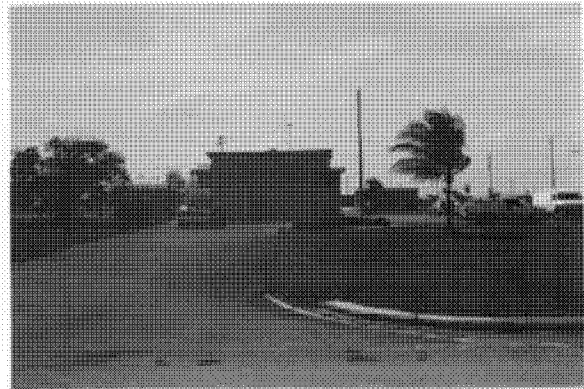
Resource No. 4005, Real Property No. 402
Non-Air Force Administrative Office



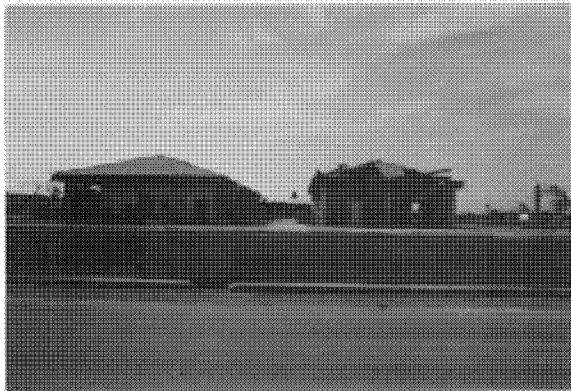
Resource No. 4006, Real Property No. 931
Air Force Headquarters



Resource No. 4008, Real Property No. 706
Fire Station



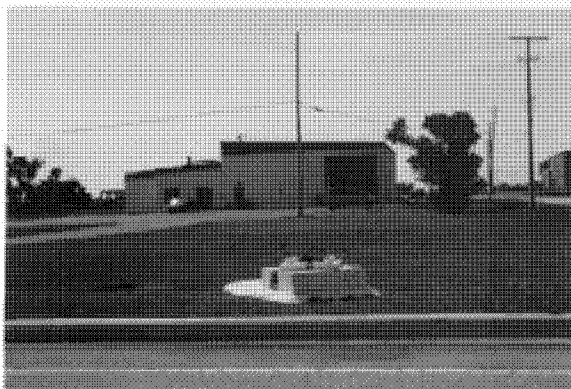
Resource No. 4009, Real Property No. 707
Base Operations



Resource No. 4010, Real Property Nos. 717 and
732, Aircraft Maintenance Organizational Shop



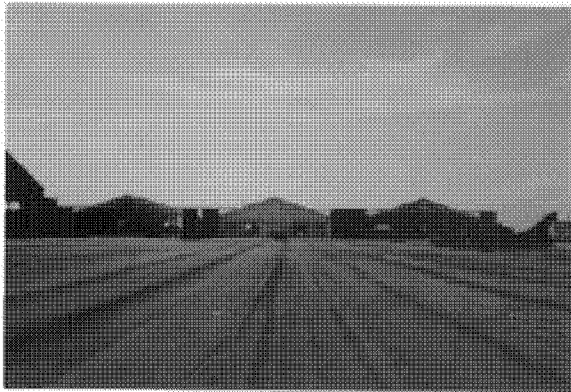
Resource No. 4011, Real Property No. 740
Weapons and Release Systems Shop



Resource No. 4013, Real Property No. 755
Non-destructive Inspection Shop



Resource No. 4014, Real Property Nos. 765 and
770, Weapons System Management Facility



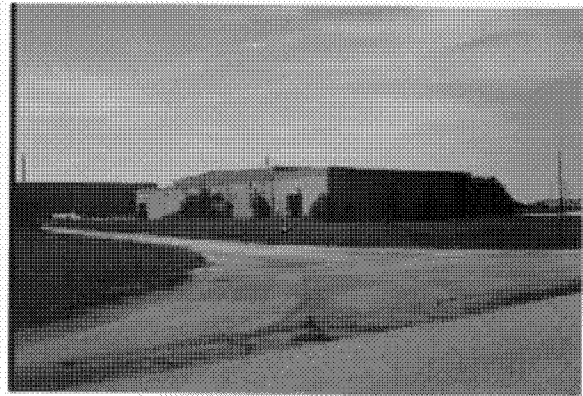
Resource No. 4015, Real Property No. 779
Small Aircraft Maintenance Dock



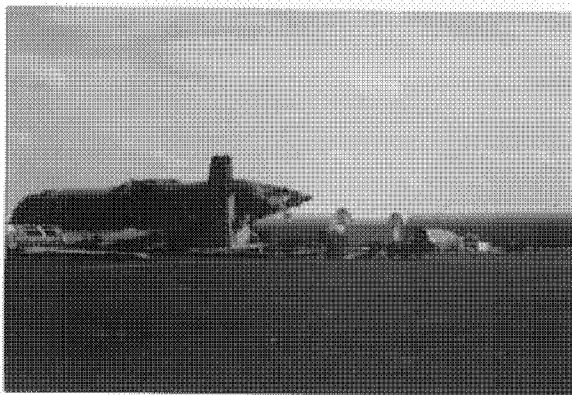
Resource No. 4016, Real Property No. 782
Small Aircraft Maintenance Dock



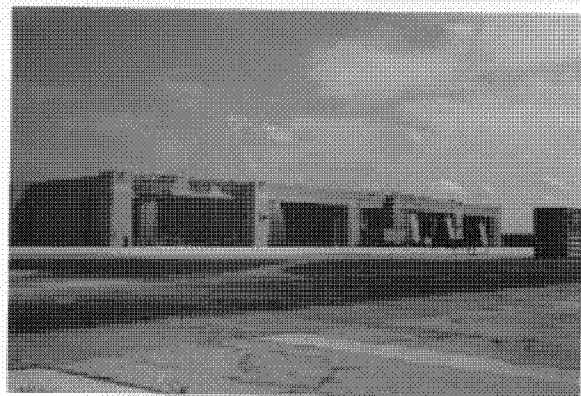
Resource No. 4017, Real Property No. 776
Helicopter Rescue and Recovery Hangar



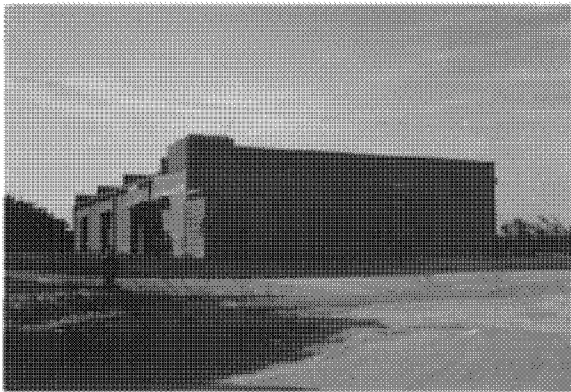
Resource No. 4018, Real Property No. 784
Precision Measurement Equipment Lab



Resource No. 4019, Real Property No. (none)
Aircraft Wreckage and Salvage Yard



Resource No. 4020, Real Property No. 877
Aircraft Shelter



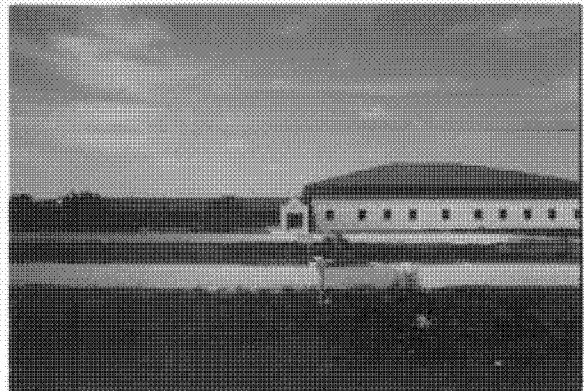
Resource No. 4021, Real Property No. 797
Explosive Ordnance Disposal



Resource No. 4022, Real Property No. 759
Medical Storage, War Readiness Materiel



Resource No. 4023, Real Property No. 778
Specified Headquarters



Resource No. 4024, Real Property No. 756
Specified Headquarters



Resource No. 4025, Real Property No. 775
Flight Simulator Training



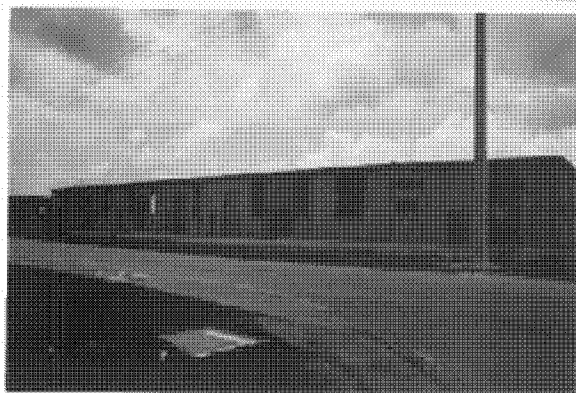
Resource No. 4026, Real Property No. 619
Base Supply and Equipment Warehouse



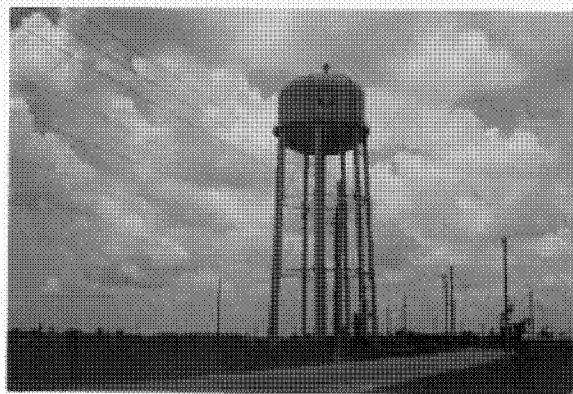
Resource No. 4027, Real Property No. 750
Jet Engine Inspection/Maintenance Shop



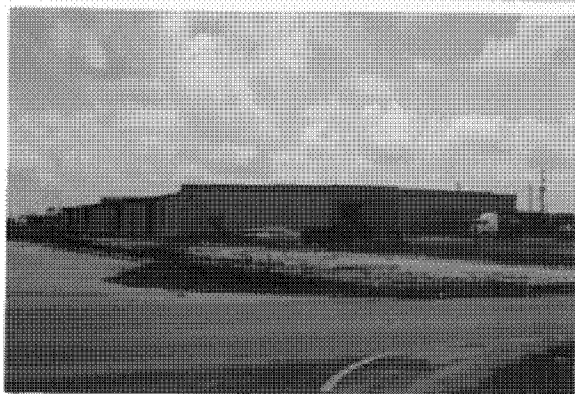
Resource No. 4028, Real Property No. 360
Technical Training Classrooms



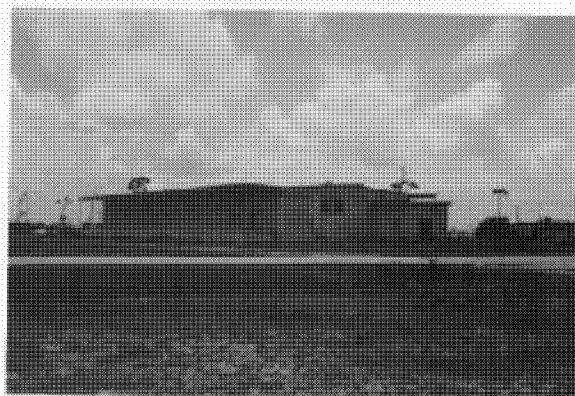
Resource No. 4029, Real Property No. 745
General Purpose Aircraft Shop



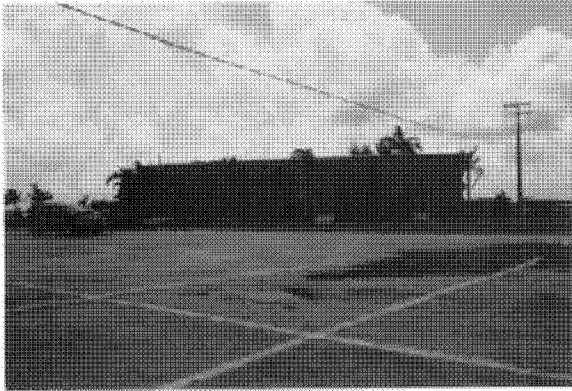
Resource No. 4030, Real Property No. 738
Water Tank Storage



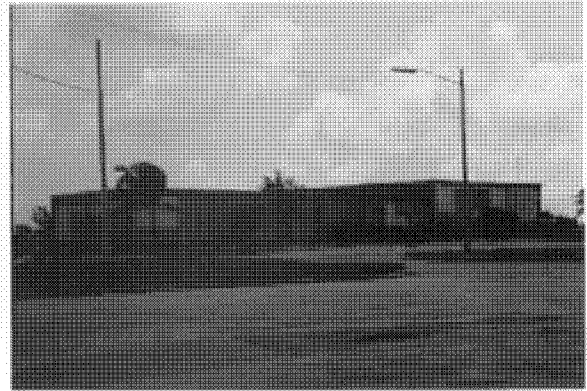
Resource No. 4031, Real Property No. 624
Base Supply and Equipment Warehouse



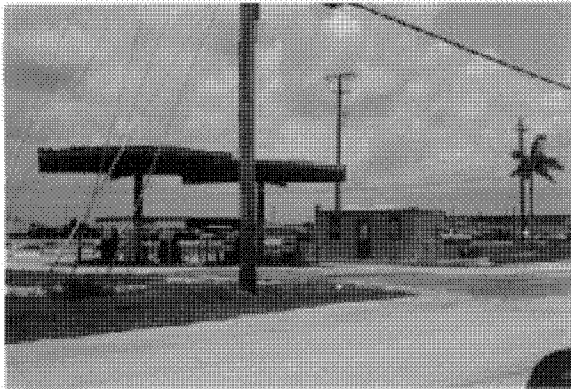
Resource No. 4032, Real Property No. 531
Base Supply and Equipment Warehouse



Resource No. 4033, Real Property No. 718
Combat Center Facility



Resource No. 4034, Real Property No. 721
Special Operations



Resource No. 4035, Real Property No. 195
Vehicle Fuel Station



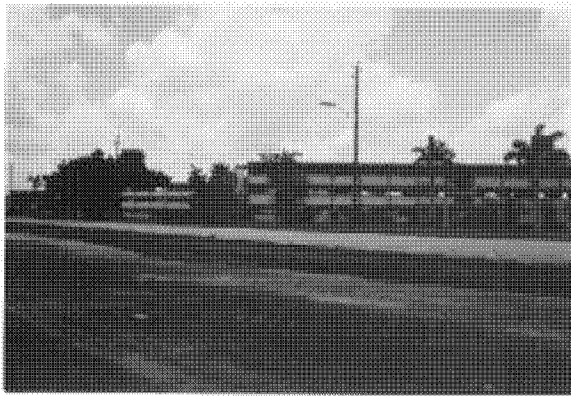
Resource No. 4036, Real Property No. (none)
Damaged Street Signs



Resource No. 4037, Real Property No. 184
Air Force Office of Special Investigations



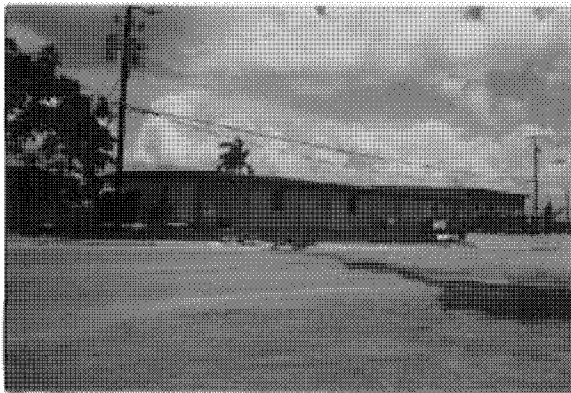
Resource No. 4038, Real Property No. 512
Former Location of NCO Club



Resource No. 4039, Real Property No. 446
Permanent Party Airman's Dormitory



Resource No. 4040, Real Property No. 434
Visiting Officer's Quarters Dormitory



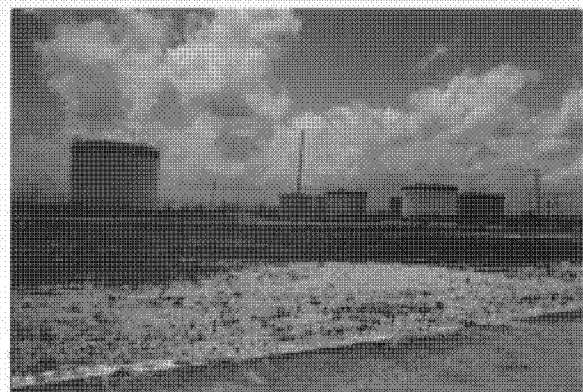
Resource No. 4041, Real Property No. 160
Base Engineering Administration



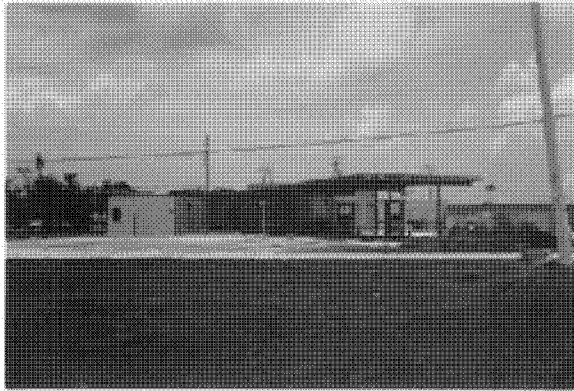
Resource No. 4042, Real Property No. 121
Base Engineering Maintenance Shop



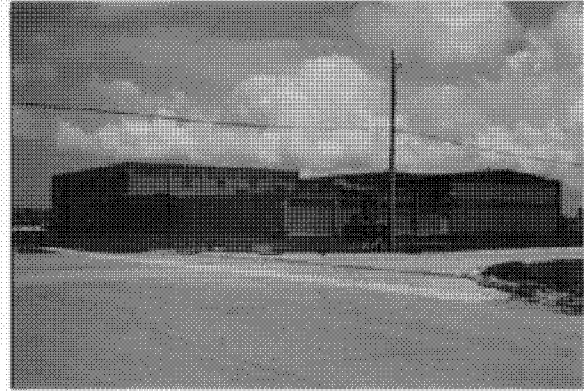
Resource No. 4043, Real Property No. 116
Regular Indoor Small Arms Firing Range



Resource No. 4044, Real Property Nos. 314,
328, 330-334, and 338, Jet Fuel Storage



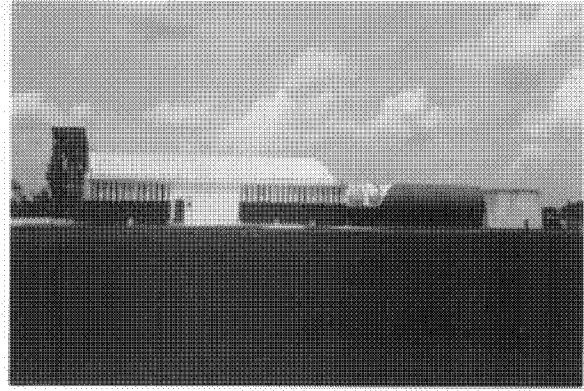
Resource No. 4045, Real Property No. 343
Service Station Exchange



Resource No. 4046, Real Property No. 359
Gymnasium



Resource No. 4047, Real Property Nos. 260-281
Munitions Storage Igloos



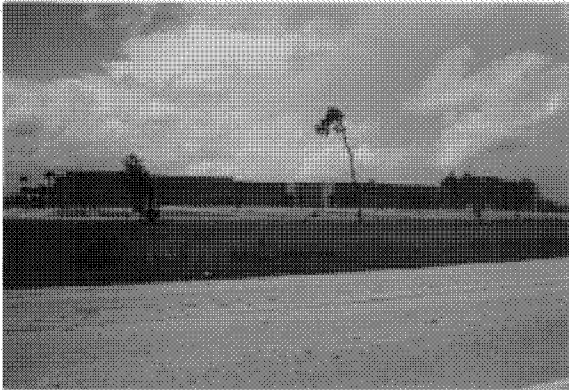
Resource No. 4048, Real Property No. 4064
Power Check with Suppression Pad



Resource No. 4049, Real Property No. 6353
F-4 Static Display



Resource No. 4050, Real Property No. 476
Permanent Party Airman's Dormitory



Resource No. 4051, Real Property No. 920
Commissary



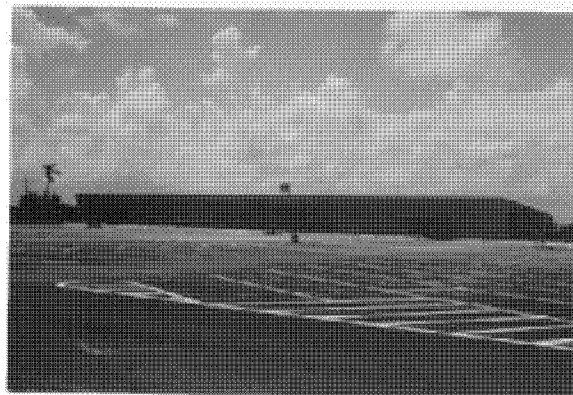
Resource No. 4052, Real Property No. 917
Child Care Center



Resource No. 4053, Real Property No. 902
Youth Center



Resource No. 4054, Real Property No. 903
Credit Union



Resource No. 4055, Real Property No. 914
Base Exchange



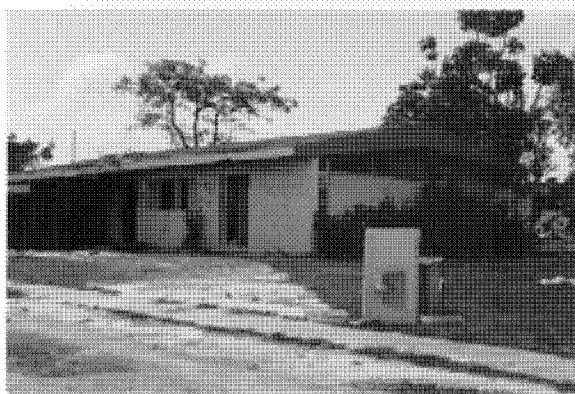
Resource No. 4056, Real Property No. 923
Bowling Center



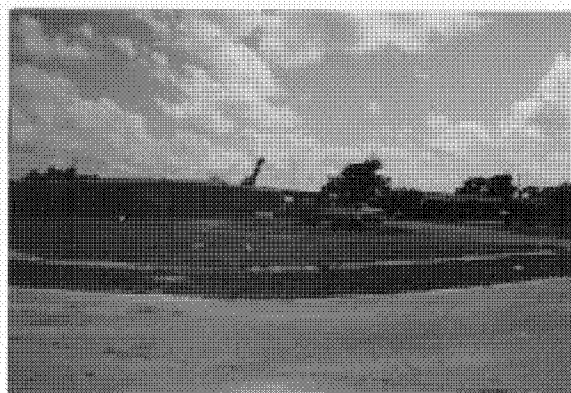
Resource No. 4057, Real Property No. 935
Officer's Club and Open Mess



Resource No. 4058, Real Property No. 951
Visiting Officer's Quarters



Resource No. 4059, Real Property No. 1546
Capehart Family Housing



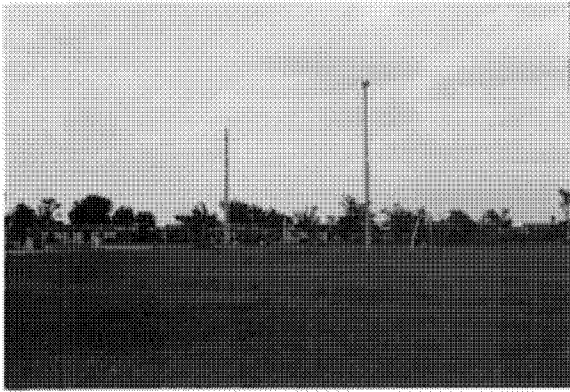
Resource No. 4060, Real Property No. 1545
Capehart Family Housing



Resource No. 4061, Real Property No. 2367
Family Housing Appr. 1970



Resource No. 4062, Real Property No. 1843
Recreation Pavilion



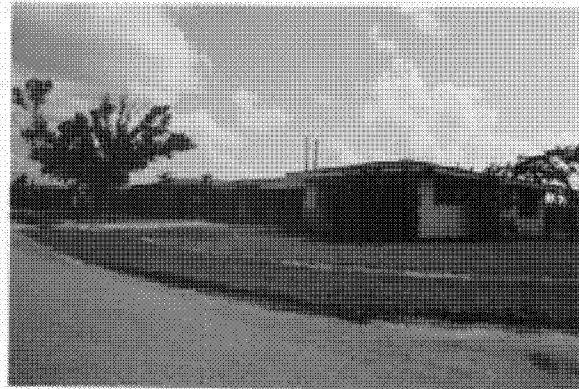
Resource No. 4063, Real Property No. (none)
Playground



Resource No. 4064, Real Property No. 990
Composite Medical Facility



Resource No. 4065, Real Property No. 999
Traffic Check House



Resource No. 4066, Real Property No. 1446
Capehart Family Housing



Resource No. 4067, Real Property No. 473
Cafe Snack Bar Exchange

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT HOMESTEAD AFB

Resource Number: 4001

Property Description: This facility is for Alert Crews and aircraft that are in direct support of the National Emergency War Order and are in continuous read-to-go status.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 6/9/93

Base Map Building Number: 701

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Bomber Alert Facility

Statement of Significance: This facility ended its "Alert" function in 1968. The architectural elements of semi-subterranean structure and ramped entry/exits are still evident, embodying Cold War strategy and policy of "ready-to-go status".

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 1

Severity of Threats: 4

Total Score for Priority Matrix: 19

Comments on Threats: Although this facility has all the architectural elements for an Alert Facility, it has lost its integrity through natural disaster.

No Further Work: No

Stewardship: No

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: This property is scheduled to be demolished during Phase III of Homestead's rebuilding plan. It is structurally unsound and dangerous. Documentation of the building prior to its demolition is recommended.

Importance: Exceptional

Eligibility: Ineligible

Height: 20
Square Footage: 24247
Original Planned Duration: Permanent
Existing Use: It is now abandoned and due to be demolished during Phase III of Homestead's Rebuilding Plan.
Other Use/Dates: After 1968 it was used as a Special Operations Facility and most recently as the Safety Education Facility.
Comments on Use: The Special Operations function may have been attributed to a time when President Nixon used the facility as a "waiting area" while he was in transit to and from his Biscayne, Florida residence.
Primary Building Materials: Concrete Masonry Unit
Character Defining Features: This facility is a semi-subterranean structure with ramped entry/exits for quick egress. This structure was designed to "survive" in any eventuality.

Resource Number: 4006

Property Description: USAF Conference Center
Associated Property: 434, Visiting Officers Quarters
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 6/9/93
Base Map Building Number: 931

Operational Support & Installations: Base and Command Centers
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: USAF Conference Center

Statement of Significance: The Conference Center has been the site of many top level Air Force meetings and work groups. It is likely that numerous policy decisions have been developed and announced in this building. This site has supported the annual CORONA SOUTH meeting of Air Force Generals.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 2
Level of Importance: 3
Percent Historic Fabric: 4
Severity of Threats: 3
Total Score for Priority Matrix: 20

Comments on Threats: The Conference Center is outside of the proposed cantonment area of the ARS. The building will fall ultimately out of Air Force hands and its future function is uncertain. The building survived Hurricane Andrew in good enough shape to be reused for offices of the Base Conversion Agency.

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: Currently eligible to the NRHP.

Importance: Exceptional
Eligibility: Eligible

Height: 10
Square Footage: 9234
Original Planned Duration: Permanent
Existing Use: Office space for Base Conversion Agency.
Other Use/Dates: Headquarters of the 31st Tactical Fighter Wing

Comments on Use: The size and padding of the chairs positioned around the hollow oval table positioned in the center of the conference room suggests the high stature of the officers who sat there.

Primary Building Materials: Concrete Masonry Unit

Character Defining Features: Very few windows and landscaping includes earthen berms up the sides of the building.

Resource Number: 4007

Property Description: Drawing details for Nike Hercules and Hawk Missiles and Missile Sites.

Associated Property:

Non-Inventoried Association: Base Engineering (Bldg. 160)

Sub-installation:

Address:

Base Map Date: 6/9/93

Base Map Building Number: inside 160

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: These drawings of Nike and Hawk missile sites and their attendant systems were part of the Army Air Defense Command. The responsibility for these sites and their construction and maintenance were the responsibility of the Homestead AFB Civil Engineering Section. They were a vital aspect of the Cold War stance of defense and deterrence.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 18

Comments on Threats: Threats to these documents are possible. Word of the importance of these documents needs to be filtered down through the system to the person responsible for these records on Homestead ARS.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Inventory collection, duplicate, and store at a curatorial facility.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Architectural Drawing

Year of Document:

Period of Association: 1963 through 1969 or plus.

Comments on Condition: These drawings have weathered Hurricane Andrew in 1992. They are being kept in drawing file cabinets along with other drawings on mylar and linen as well.

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following individuals were identified during the investigations at Homestead AFB and informally interviewed about base history:

Bill Kwalick, Real Property Office
482nd SPTG Civil Engineering
Homestead ARS, FL 33039-1299

Richard Meeks, Drafting Section
482nd SPTG Civil Engineering
Homestead ARS, FL 33039-1299

Sharon Keifer, Interim Historian
482nd Wing Headquarters, Bldg. 360
Homestead ARS, FL 33039

Major Bobby D'Angelo, Public Affairs Officer
482nd Tactical Fighter Wing, Bldg. 360
Homestead ARS, FL 33039

Major Francis "Fuzzy" Zeller
Base Transition Coordination Team, Bldg. 931
Homestead ARS, FL 33039

Michael Richardson, Base Transition Coordinator
Base Conversion Agency, Bldg. 931
Homestead ARS, FL 33039

Michael Reardon, Site Manager
Base Conversion Agency, Bldg. 931
Homestead ARS, FL 33039

KNOWLEDGEABLE INDIVIDUALS

The following contacts were identified as possessing knowledge about base Cold War history. They were either unavailable for interview during the investigation or possess much more information than could be documented during this preliminary survey.

Connie Farrow, Real Property Officer
6 CES/CERR
7615 Hillsborough Loop Drive
MacDill AFB, FL 33621-5207

Mike Adams, LTC (Ret)
31st Fighter Group Officers Association
3929 Venetian Drive
Tampa, FL 33634

Ernie Davis, MAJ (Ret)

Char Gardner (was Commander's
Secretary)

Bill Comber, Air Field Manager
Bldg. 718
Homestead ARS, FL 33039

Fred E. Bamberger, Jr.
Gold Coast Chapter #351
Air Force Association
7331 Fairfax Drive
Tamarac, FL 33321

Robert M. Rawls
Aviation Historian
P.O. Drawer 24885
Fort Lauderdale, FL 33307

Brig. Gen. Steve Plummer
Air Div. Wing Commander
Luke AFB, AZ

Col. Jack McDougal
Air National Guard
Homestead ARS, FL 33039

Mr. Suarez
Transient Maintenance
Homestead ARS, FL 33039

Maj. Gen. Dave Stanford (Ret)
Key Largo, FL

Mrs. Jeanette Belcher
31st TFW Historian (Ret)
7600 SW 21st Street

CWO Larry Carrier, (Ret)
Naval Security Activity Group
(Last Commander of NSG)
Local Director of USO

Joseph A. Martin
Div. 5 - 5th Trustee
Air Force Reserve Affairs, Air National Guard
29845 SW 168th CT
Homestead, FL 33030

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-12: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT HOWARD AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**David P. Staley
Patience Elizabeth Patterson
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. environmental scientists Patience E. Patterson and David P. Staley inventoried Howard Air Force Base and Albrook Air Force Station, Republic of Panama, from November 28 to December 6, 1994 as part of the Air Combat Command Cold War study for the ongoing Department of Defense Legacy Program. Information was gathered on site from the files of the Real Property Office, Drafting Office, Environmental Office, Community Planning Office, Public Affairs Office, and Wing History Office.

An initial reconnaissance of the base and station was accomplished with Mr. James Chavers, the Natural and Cultural Resources Officer. This initial orientation enabled the team to become familiar with the layout and determine what property types were extant. It also allowed for the determination of specific properties which would likely be relevant to the Cold War study. Photographs were taken of resources that were representative of the different types and styles of facilities on the base and station.

From the inventory, research, and on-site inspection, three resources were determined to be significant to the Cold War history of the base and station. Temporal phases I through IV, as described in the historic context and methodology document written for this project (Lewis et al. 1995), are represented. Recommendations for the Inter-American Air Force Academy Headquarters include potential NRHP eligibility, further documentation, and stewardship. Further documentation, stewardship, and conservation are recommended for two Documentary Collections.

LIST OF ACRONYMS

ACC	-	Air Combat Command
ACHP	-	Advisory Council on Historic Preservation
AFB	-	Air Force Base
AFRES	-	Air Force Reserves
AFS	-	Air Force Station
AGE	-	Air Ground Equipment
AMC	-	Air Mobility Command
AMSS	-	Air Mobility Support Squadron
ANG	-	Air National Guard
BX	-	Base Exchange
CAirC	-	Caribbean Air Command
CES	-	Civil Engineering Squadron
CINC	-	Commander in Chief
CRS	-	Component Repair Squadron
DoD	-	Department of Defense
EMS	-	Equipment Maintenance Squadron
FTD	-	Field Training Detachment
HABS	-	Historic American Buildings Survey
IAAFA	-	Inter-American Air Force Academy
JCS	-	Joint Chiefs of Staff
LOX	-	Liquid Oxygen
MAC	-	Military Airlift Command
Mariah	-	Mariah Associates, Inc.
NCO	-	Noncommissioned Officer
NHPA	-	National Historic Preservation Act
NPS	-	National Park Service
NRHP	-	National Register of Historic Places
OCONUS	-	Off the Continental United States
POL	-	Petroleum, Oils, and Lubricants
SAC	-	Strategic Air Command
SALT	-	Strategic Arms Limitation Treaty
SDI	-	Strategic Defense Initiative
SHPO	-	State Historic Preservation Officer
START	-	Strategic Arms Reduction Talks
TAC	-	Tactical Air Command
TACAN	-	Tactical Air Navigation Station
USACOM	-	U.S. Atlantic Command
USAF	-	United States Air Force
USAFSO	-	United States Air Force Southern Command
USCINCSO	-	United States Commander in Chief of Southern Operations
USSOUTHAF	-	United States Southern Command Air Forces

LIST OF ACRONYMS (Continued)

USSOUTHCOM - United States Southern Command
WRSK - War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion to the National Register of Historic Places.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapon systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	6
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	12
3.0 HISTORICAL OVERVIEW	17
3.1 BASE HISTORY AND COLD WAR CONTEXT	17
3.2 BASE DEVELOPMENT	24
4.0 METHODOLOGY	26
4.1 INVENTORY	26
4.2 EVALUATION OF IMPORTANT RESOURCES	27
4.2.1 Documentation	27
4.2.2 Evaluation of Importance	27
4.2.2.1 Cold War Context	27
4.2.2.2 NRHP Criteria	28
4.2.2.3 Exceptional Importance	29
4.2.3 Evaluation of Integrity	29
4.2.4 Priority Matrix	30
4.2.5 Resource Organization	31
4.3 BASE SPECIFIC METHODS	31
5.0 RECONNAISSANCE INVENTORY RESULTS	33
6.0 EVALUATION RESULTS	34
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	34
6.1.1 Documentation	34
6.1.1.1 Documentary Collection	34
6.1.1.2 Documentary Collection	36
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	36
6.3 MATERIEL DEVELOPMENT FACILITIES	36

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.4 TRAINING FACILITIES	37
6.4.1 Combat Support Training.....	37
6.4.1.1 IAAFA Headquarters.....	37
6.5 INTELLIGENCE FACILITIES.....	38
7.0 UNDOCUMENTED RESOURCES	39
8.0 FUTURE THREATS TO RESOURCES	40
9.0 PRELIMINARY RECOMMENDATIONS	41
9.1 NRHP ELIGIBILITY	41
9.1.1 Evaluation and Determination of NRHP Eligibility.....	41
9.1.2 Implications of NRHP Eligibility.....	43
9.2 EVALUATED RESOURCE RECOMMENDATIONS	44
9.2.1 Documentary Collection.....	46
9.2.2 Documentary Collection.....	46
9.2.3 IAAFA Headquarters.....	47
10.0 REFERENCES CITED	48
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE AND STATION LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: ADDITIONAL DATA ON EVALUATED RESOURCES	
APPENDIX F: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Howard Air Force Base, Albrook Air Force Station, and Balboa West Bombing Range.....	7
Figure 2.2 Howard Air Force Base Layout	8
Figure 2.3 Standard Tactical Air Command Base Layout	10
Figure 2.4 Albrook Air Force Station Layout.....	11
Figure 2.5 Howard Air Force Base Land Use Diagram.....	14
Figure 2.6 Standard Tactical Air Command Base Land Use Diagram	15
Figure 2.7 Albrook Air Force Station Land Use Diagram.....	16

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.	35
Table 6.2 Evaluated Resource Prioritization by Priority Rank.	35
Table 9.1 Recommendations for Evaluated Resources.	45

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

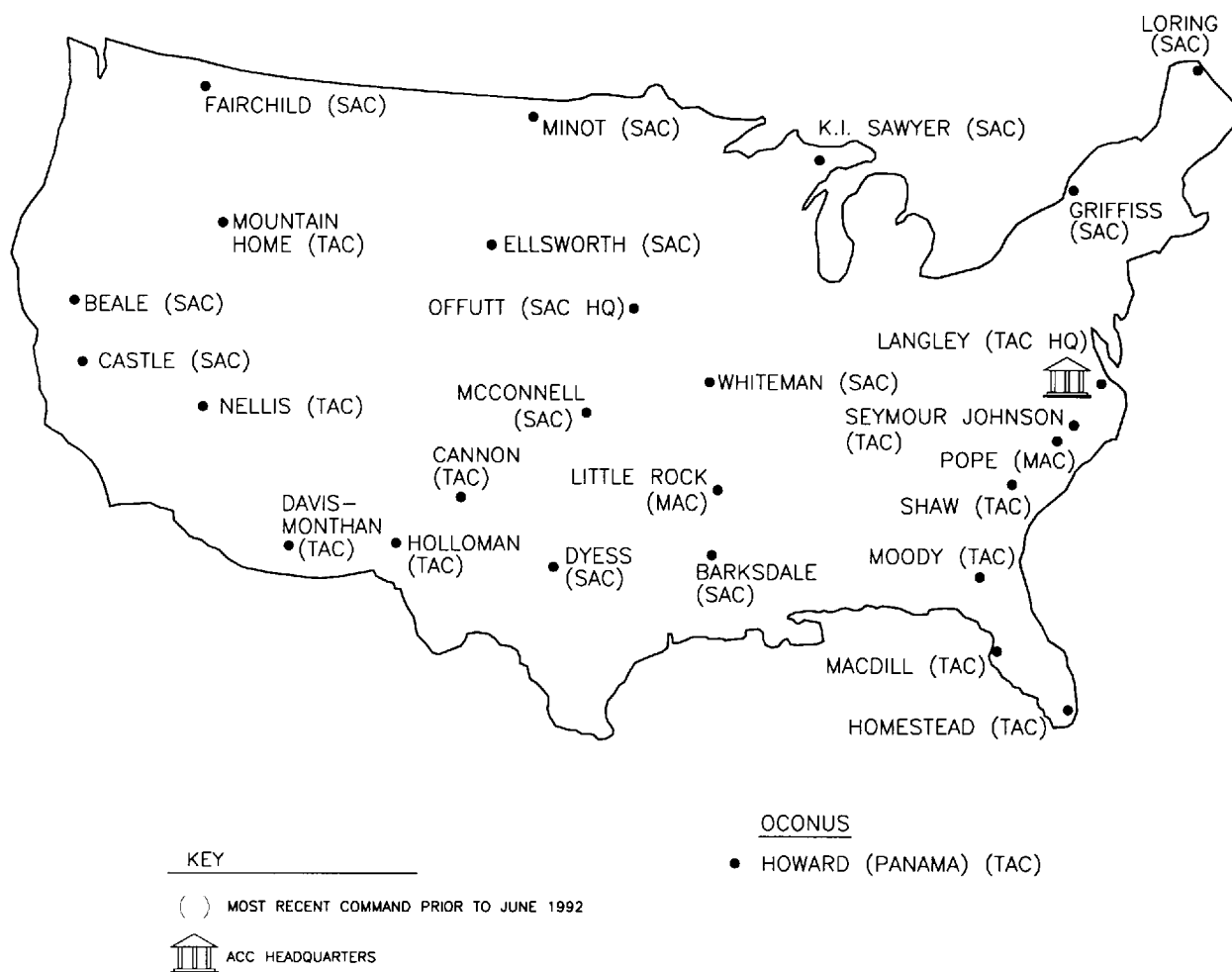
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: COLDWAR\HOWARD\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Howard Air Force Base (AFB), Albrook Air Force Station (AFS), and Balboa West Bombing Range. Howard AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. Albrook AFS and Balboa West Bombing Range are considered to be a part of Howard AFB, thus are included in this study. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The 24th Wing, "Los Profesionales", is the host unit at Howard AFB. The current mission for the 24th Wing has several facets, including counter-narcotics operations, air operations, intra-theater airlift, security assistance, and defense of the Panama Canal (Public Affairs Office, 24th Wing 1994:3-6). As the senior Air Force organization in Panama, the wing's overall mission is to promote U. S. interests in and around Latin America by providing, employing, and supporting air power.

The 24th Wing reports to Headquarters, Twelfth Air Force at Davis-Monthan AFB, Arizona. The wing is made up of four groups, the 24th Operations Group, 24th Logistics Group, 24th Support Group, and 24th Medical Group. The 24th Operations Group is composed of the following squadrons: Operations Support Squadron, Air Intelligence Squadron, Weather Squadron, Air Support Operations Squadron, and Detachment 1 Honduras. The 24th Logistics Group is composed of the Maintenance Squadron, Supply Squadron, Transportation Squadron, Contracting Squadron, and Logistic Support Flight. The 24th Support Group contains the Mission Support Squadron, Civil Engineering Squadron, Security Police Squadron, Communications Squadron, Services Squadron, and Air Postal Squadron. The 24th Medical Group has two squadrons, the Medical Operations Squadron and the Medical Support Squadron. All of these elements of the 24th Wing provide, control, and support multi-service units directed by U.S. Southern Command (USSOUTHCOM), a unified command, and U.S. Southern Command Air Forces (USSOUTHAF), the air assets of USSOUTHCOM.

Two rotational contingents of the Air National Guard (ANG) and Air Force Reserve (AFRES) operate out of Howard AFB as tenant units and are tasked with providing theater airlift for Central and South America. This operation is called Coronet Oak. It is a rotational mission with participating ANG and AFRES units providing their own aircraft (C-130 *Hercules*), equipment,

supplies, aircrews, maintenance, and support during an overlapping two week cycle. Coronet Oak provides transport of cargo and personnel throughout Central and South America, airdrop of cargo and personnel, joint operations and exercises, search and rescue, aeromedical evacuation, and disaster relief. Coronet Oak maintains aircraft on alert at all times, capable of taking off within three hours of notification (Public Affairs Office, 24th Wing 1994:5).

The ANG Bureau was tasked in 1990 to maintain a fighter detachment at Howard AFB in support of U.S. Atlantic Command (USACOM). This operation, known as Coronet Nighthawk, uses F-15 *Eagle* and F-16 *Falcon* units on a rotational basis. Coronet Nighthawk units deploy four to six aircraft, pilots, support personnel, and equipment to Howard AFB for four weeks, with personnel rotating every two weeks (Public Affairs Office, 24th Wing 1994:5).

Another tenant unit is the 640th Air Mobility Support Squadron (AMSS) of Air Mobility Command (AMC). The mission of the 640th AMSS includes a theater of operations which extends from Mexico to the tip of Chile, and encompasses seven million square miles of sea. The 640th AMSS provides maintenance support for AMC aircraft located at Howard AFB or at other airfields in the same theater as directed by the 21st Air Force Logistics Readiness Center. The 640th AMSS also provides elements in support of U.S. Commander in Chief of Southern Operations (USCINCSO) for the defense of the Panama Canal, evacuation of U.S. nationals, disaster relief, and search and rescue (Public Affairs Office, 24th Wing 1994:6).

All land within what was formerly the Canal Zone is controlled by the U. S. government through the agency now known as the Panama Canal Commission. Many areas of land within this zone were set apart and assigned to the Army, Navy, and Air Force by the original Canal Zone Orders. Howard AFB was authorized under Canal Zone Order No. 28, dated November 8, 1952.

2.2 GEOGRAPHIC DESCRIPTION

A geographic description of Howard AFB requires a close look at the geographic situation of the Republic of Panama (Figure 2.1). Panama, the "Crossroads of the Americas," is a small country of approximately 1.9 million people. The country is an isthmus, running in an S-shape about 385 mi (620 km) long and from 32 to 113 mi (51 to 182 km) wide. Its total area is 31,993 mi² (82,855 km²). Panama is bounded on the west by Costa Rica and by Columbia on the east. The Caribbean Sea is on the north, and the Pacific Ocean is located to the south.

The Panama Canal does not run east-west as might be expected. From its Atlantic side terminal, Cristobal, the canal runs southeast to its Pacific side terminal, Balboa (Sullivan 1994:57). Howard AFB is located on the western bank of the Pacific terminal of the Panama Canal. Across the canal and approximately 4 mi (6 km) northeast is Panama City, the capital of the Republic of Panama. Albrook AFS is adjacent to the western side of Panama City and on the eastern bank of the Panama Canal. Balboa West Bombing Range is located approximately 16 mi (26 km) northwest of Howard AFB on the western side of the Panama Canal (Hartrampf Engineering, Inc. 1988). It contains 8,814 unimproved acres (3,567 ha) with no facilities and provides a jungle combat training environment for aircrews.

The climate of the area is characteristic of low latitudes in the inner tropics, with moderately high temperatures and humidity throughout the year. Abundant rainfall in the area is typical, with an average of approximately 70 inches (178 cm) on the Pacific side and 130 inches (330 cm) on the Atlantic side. The wet months are from May through December (Howard AFB 1975:13-14; 1965:4-5).

2.3 CURRENT BASE LAYOUT

The central feature of Howard AFB, like all bases, is the airfield portion of the base (Figure 2.2). The two main runways are oriented north-south. The eastern-most runway is 7,000 ft long and

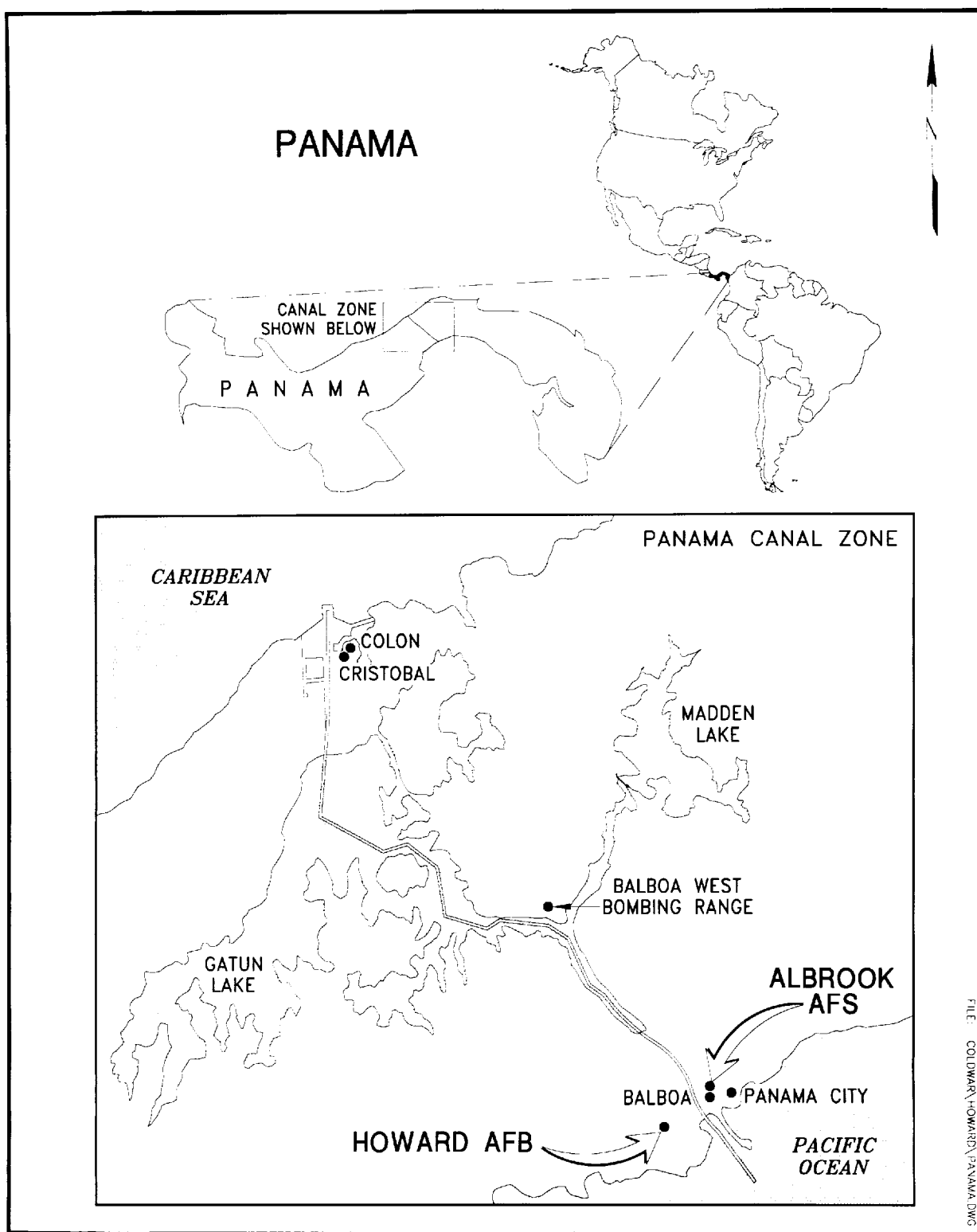


Figure 2.1 Location of Howard Air Force Base, Albbrook Air Force Station, and Balboa West Bombing Range.

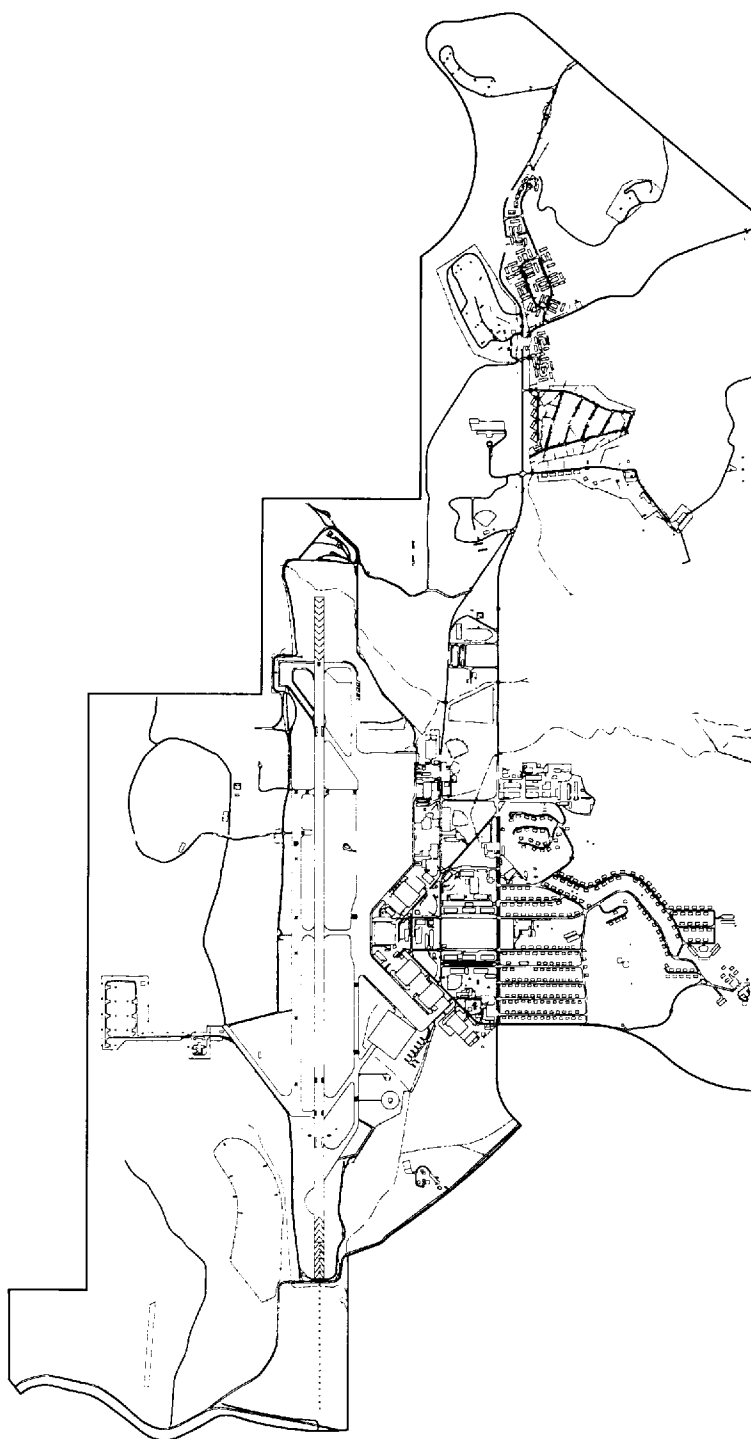


Figure 2.2 Howard Air Force Base Layout.

150 ft wide and the western runway is 5,000 ft long and 150 ft wide. Both of these runways have been operational since 1941, with major renovations occurring in the 1970s.

The majority of the base buildings are located east of the runways toward the southern end of the base. The overall plan or layout of flight line hangars and buildings is configured as a chevron pointing toward the west. Aprons and taxiways lie between base buildings and the runways. A central corridor of open space and community buildings extends eastward from the apex of the chevron. The majority of base buildings are located east of the chevron. However, weapons storage structures are located west of the flight line, and a group of buildings is located at the northern end of the base, away from the flight line and the main base development area.

The layout of Howard AFB generally resembles the standard TAC base layout (Figure 2.3). The major differences include the placement of structures at Howard AFB on the side of the flight line opposite of the main base development. Also unlike the standard layout, Howard AFB has an area of development located away from the flight line and main base development. Finally, the chevron layout of the flight line buildings is very different from the standard layout which has these buildings in a straight line.

The dramatic changes in function and ownership over the years have made the Albrook AFS layout (Figure 2.4) very dissimilar to the standard TAC base layout (Figure 2.3). Primarily, the transfer of the runway and all the facilities east of the runway out of USAF control has skewed any standard comparison. A small portion of the northeast-southwest apron is operated by the U.S. Army for helicopter support. The old north-south runway is now used by the Panamanians as an automotive racetrack. Also, the shift of USAF flight activities to Howard AFB has precluded the need for many of the standard buildings and structures.

Albrook AFS is bounded on the south and east by Republic of Panama property and shares northern and western boundaries with the U.S. Army's Fort Clayton. The two main gates into the station are located at the northern and southern ends of the station. The overall plan or design of

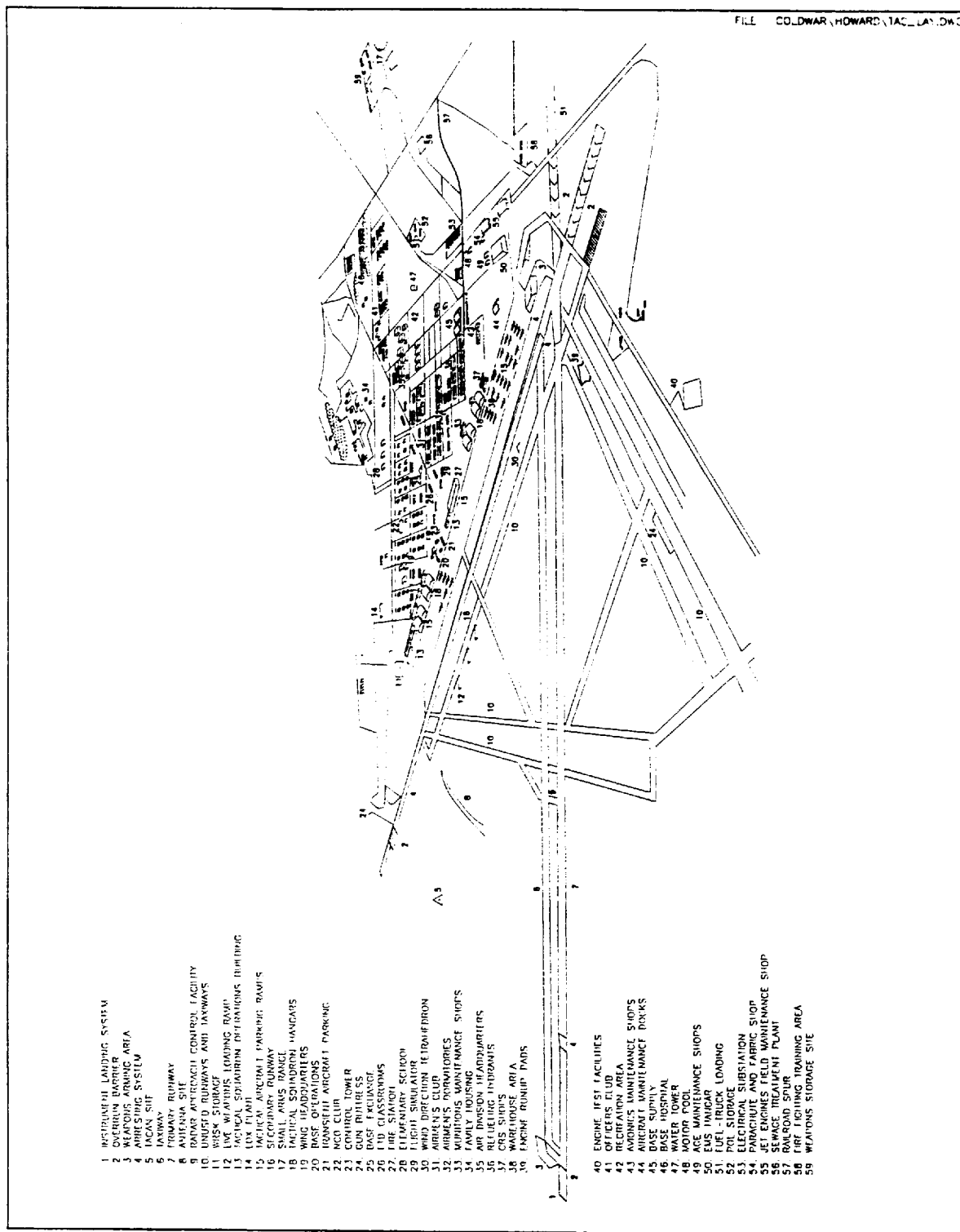


Figure 2.3 Standard Tactical Air Command Base Layout.

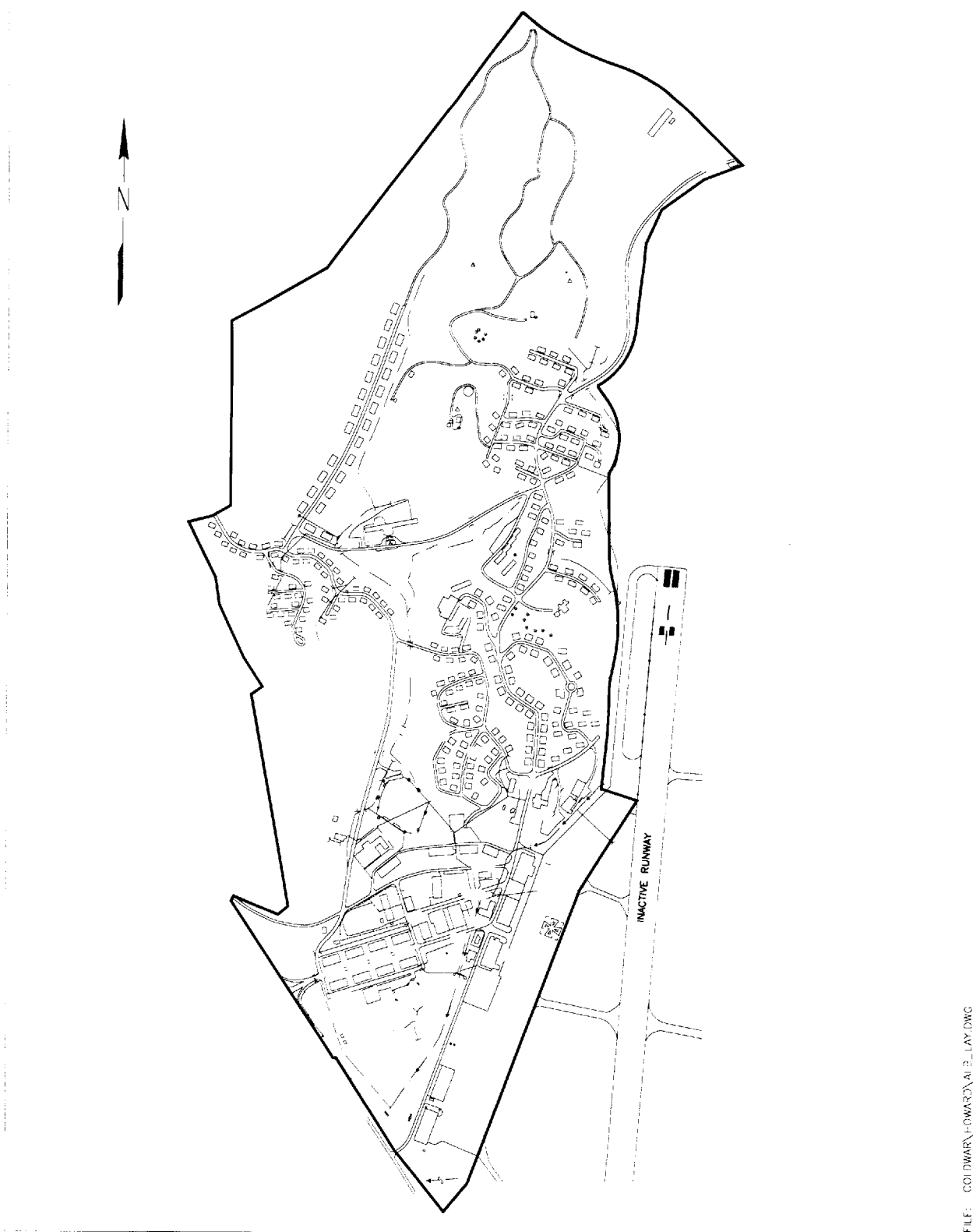


Figure 2.4 Albrook Air Force Station Layout.

the station appears to be unrelated to the runway configuration. As the major building type found on the station is housing, the majority of station development is spread out, resulting in a low density of buildings. The dispersed buildings and a layout that disregards the flight line make this layout very different from the standard one.

There are no permanent buildings, structures, or facilities at Balboa West Bombing Range. Currently, portions of the range are being used as a tent camp for Cuban refugees. The only edifice denoting the range's prior function is a pock-marked target of bermed concentric circles.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but

provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.5 is a diagrammatic land use plan for Howard AFB, and Figure 2.6 is a diagrammatic land use plan of a standard TAC base. Howard AFB is very similar to the standard TAC base. Like the standard land use plan, Howard AFB mission oriented facilities are located along the flight line, with a mixture of base support, unaccompanied housing, community, and headquarters facilities located immediately east. Industrial areas, such as the waste water treatment facility and the weapons storage area, are located on the outskirts of the base. Family housing is located farthest from the flight line and mission related areas. A large recreation area is found next to the main base development. Open spaces and recreational areas are found throughout the base. Differences between the two land use diagrams stem from the layout of Howard AFB, which has land use areas scattered over the entire base.

Figure 2.7 is a diagrammatic land use plan for Albrook AFS. Albrook AFS land use is very different from the standard TAC base land use pattern (Figure 2.6). Obviously, the transfer of the runway and much of the flying mission over the years changed the requirements for land use. At present, the vast majority of the buildings are oriented toward housing, base support, recreation, and community. This reflects the primary mission of Albrook AFS to support personnel and their families stationed at Howard AFB. Beyond this, Albrook AFS is different from the standard in that family housing areas abutted the old runway at the northern end rather than being separated from the flight line by other land use areas. Base support functions are found along the old flight line, with community, headquarters, recreation, and unaccompanied housing somewhat centralized. A second area of unaccompanied housing is found within the vast family housing area. The last remaining mission buildings along the southern end of the runway are actually leased to the Army for use in support of helicopters.

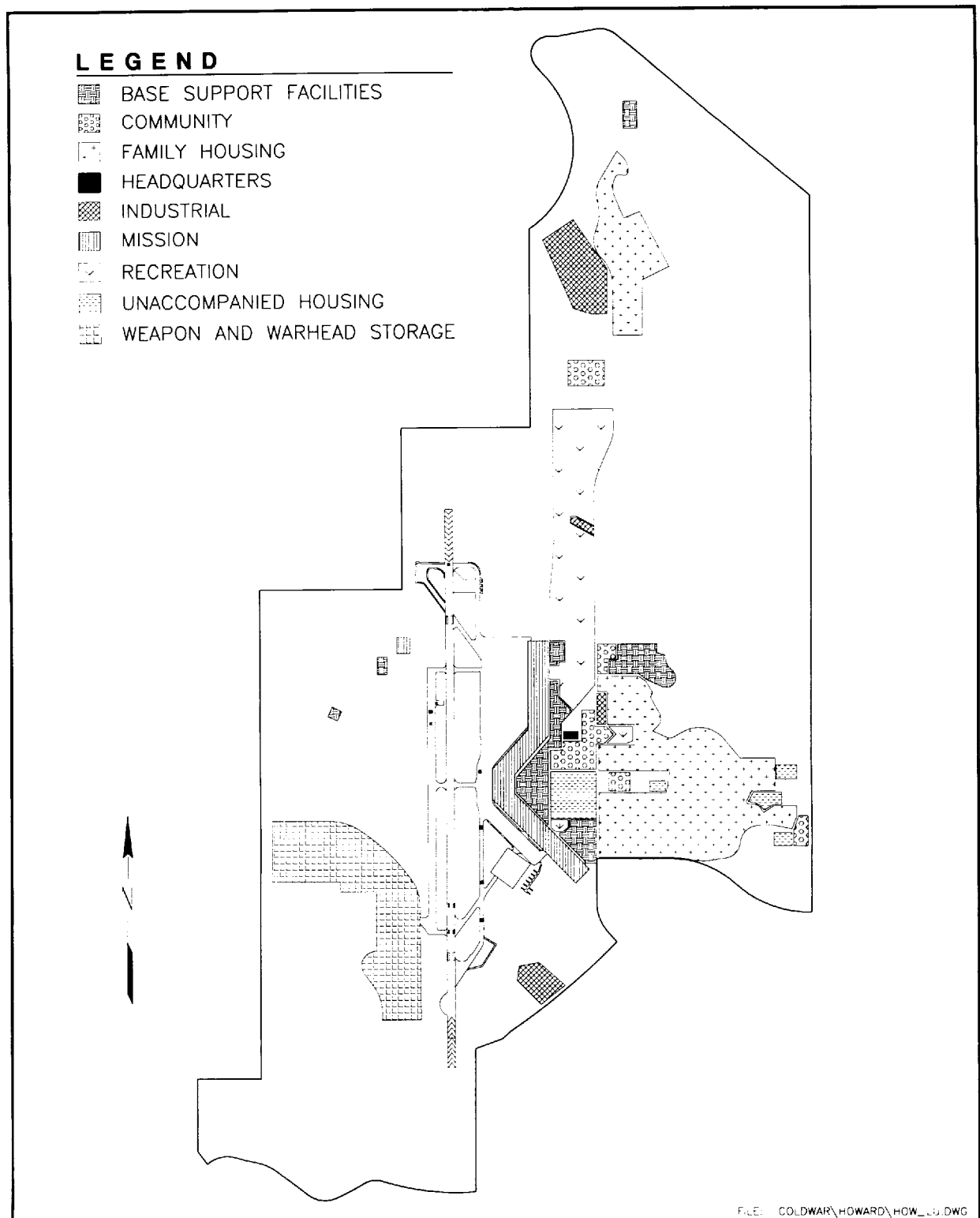


Figure 2.5 Howard Air Force Base Land Use Diagram.

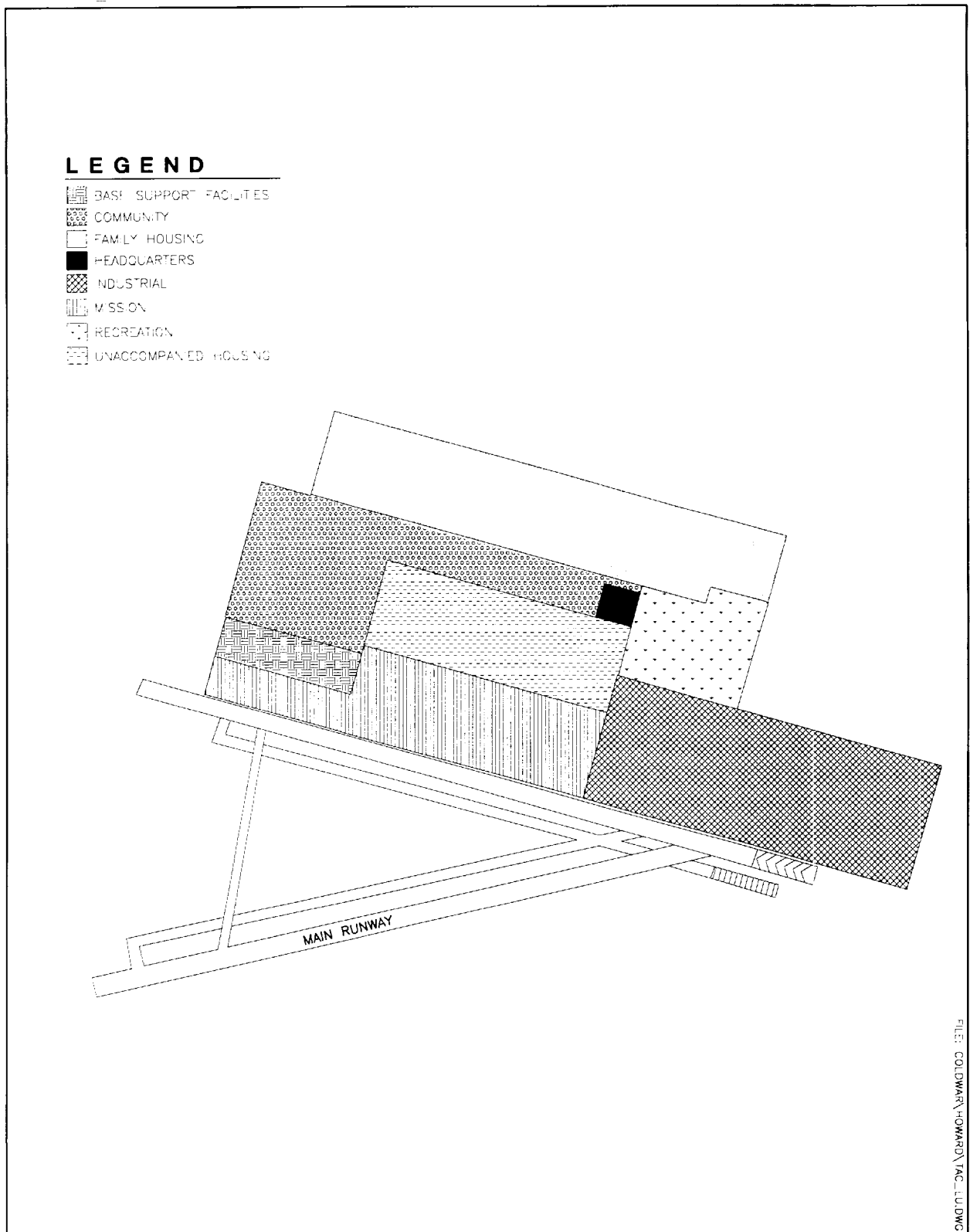


Figure 2.6 Standard Tactical Air Command Base Land Use Diagram.

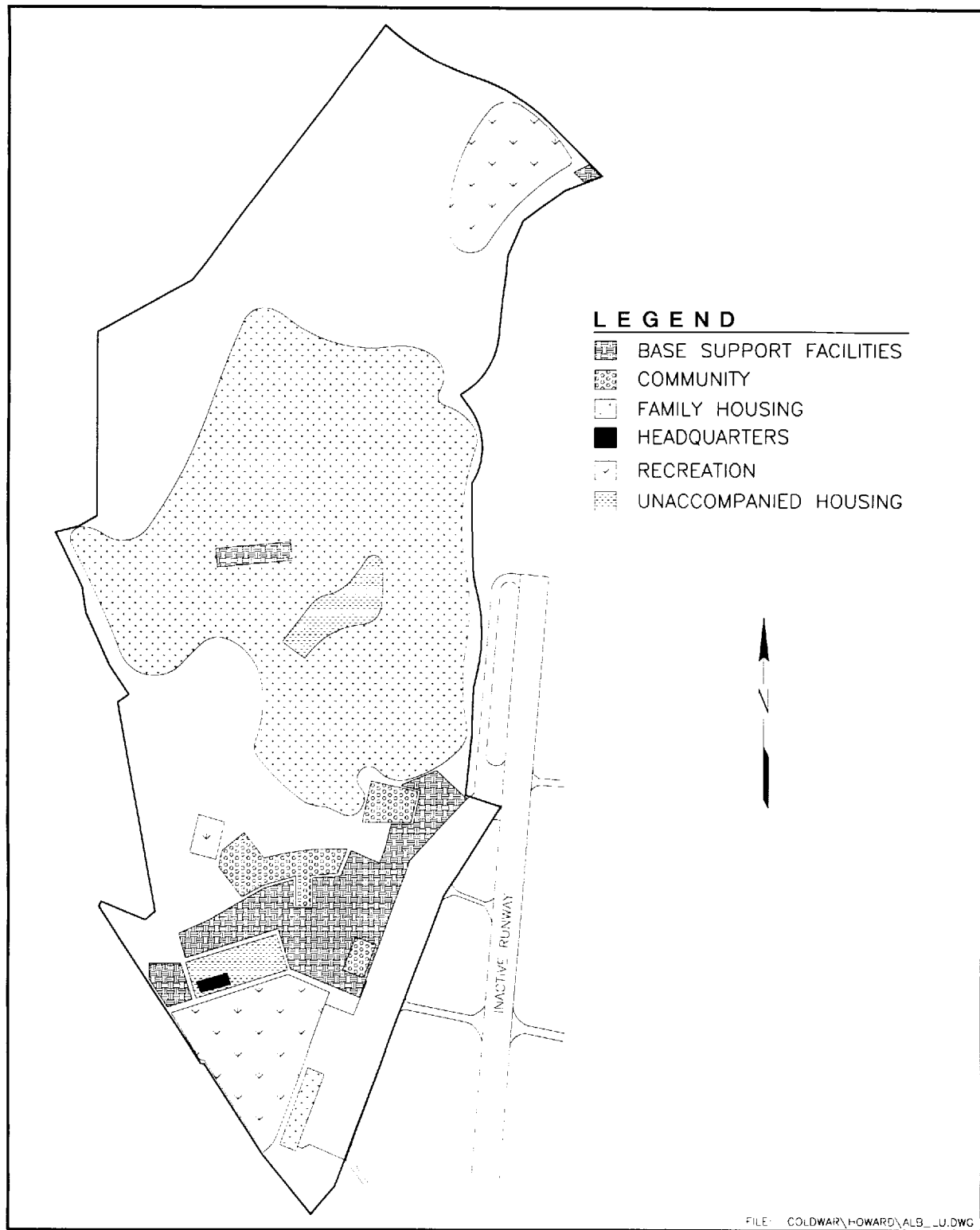


Figure 2.7 Albrook Air Force Station Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

The history of Howard AFB is inextricably linked with the history of the Panama Canal. In 1904, the United States, having signed a treaty with Panama, took over construction of the canal from the French. Ten years later, on August 15, 1914, the *SS Ancon* made the first official ocean-to-ocean transit through the Panama Canal (Public Affairs Office, Panama Canal Commission 1994). The area under U.S. jurisdiction, established as the Canal Zone, was 10 mi (16 km) wide and ran from Cristobal and Colon on the Atlantic side to Balboa and Fort Amador on the Pacific side. The Canal Zone was considered a government entity and had its own local Canal Zone Government which was considered an independent agency of the United States with a complete infrastructure (Canal Zone Government 1964; Howard AFB 1965:1).

U.S. military defense of the Panama Canal was originally considered from naval and ground force perspectives only. In 1913, a photographer flew the length of the Canal and photographed all the vital installations and locks (Public Affairs Office, 24th Wing 1994:1). In response to this, military strategists decided that air defense was vital to the overall defense of the canal. In 1917, Captain H. "Hap" Arnold commanded the first air contingent, 7th Aero Squadron, at France Field on the Atlantic side of the canal. This squadron patrolled the Atlantic coastal waters during the final days of World War I (Public Affairs Office, 24th Wing 1994:1).

After World War I, aviation activity shifted to the Pacific side of the canal. An airfield was built there as part of the Panama Canal defense system and as a facility for use by the nearby city of Balboa, the site of the Panama Canal administration (Sullivan 1994:53). Begun in 1922, the field was placed on a spoil dredge area and early on was called the Balboa Fill Landing Field. Lieutenant Frank P. Albroom was the first commander of the 8th Air Park and of the field. In May 1924, Lt. Albroom was reassigned to Chanute Field, Illinois. He was injured on August 12, 1924 in an air crash and died September 17, 1924. On November 11, 1924, Balboa Fill Landing

Field was officially renamed Albrook Field in honor of its first commander (United States Air Force [USAF] 1985a).

Work at the airfield continued for many years. Dry fill was placed on top of hydraulic fill taken from the canal. These series of hydraulic and dry fill episodes were completed along with a series of grated box culverts, drains, and junction boxes which were designed to deal with the heavy soaking rains so that airplanes could land within an hour after a heavy downpour (Mittag 1934:340-344). Albrook Field was not only a fighter base, but for many years it served also as the principal commercial airport for the Canal Zone. By 1940, the field was the primary station for Pan American Airways as well as other airlines (Sullivan 1994:53).

It had become apparent during the early days of planning for the defense of the Canal Zone that another air base on the Pacific side would be necessary. General Arnold, Chief of the Air Corps, visited the Canal Zone in May of 1939 to discuss and view the planned expansion. The site chosen was Bruja Point, which adjoined Fort Kobbe Military Reservation on the western side of the Pacific terminal of the canal. Official construction of Bruja Point Field started in July of 1939. Bruja Point Field presented none of the engineering problems that had made Albrook Field such a major undertaking. The impetus for finishing the new field was the outbreak of World War II in Europe (Historical Division, Headquarters, Caribbean Air Command [CAirC] 1961:1-2). On December 1, 1939, at the request of General Arnold, the official designation of Bruja Point Field was changed to Howard Field in honor of Major Charles H. Howard, a pilot who had seen service in the Canal Zone from 1926 to 1929. He had served with then Captain Arnold and the 7th and 25th Observations Squadrons. Major Howard had died in an aircraft accident near Bryan Mills, Texas on October 25, 1936 (USAF 1985b).

On November 20, 1940, the Panama Canal Air Force was activated at Albrook Field to increase U.S. air defense activity in the Caribbean area. It became the first major air command in U.S. military history (Sullivan 1994:8). By April 1941, the first troops were assigned to Howard Field (Historical Division, Headquarters, CAirC 1961:3). Administrative and manning problems were

present from the start because Howard Field was part of Fort Kobbe, which was itself a sub-post of Fort Amador (Historical Division, Headquarters, CAirC 1961:3-6). By December 8, 1941 a physical separation of headquarters was made. Howard Field was designated as an air base and established its own headquarters independent of Fort Kobbe, which was also deemed necessarily independent from Fort Amador, all in accordance with directives from the War Department and the U.S. Army Command in Balboa (Historical Division, Headquarters CAirC 1961:6,9). In March 1943, the Air Force School of the Military Training Center of the Panama Canal Department began training operations at Albrook Field with a class of Peruvian students (Sullivan 1994:9).

With the end of World War II, the Sixth Air Force was reorganized as the CAirC. CAirC, headquartered at Albrook Field, had a diversified mission. It operated from Guatemala to Cape Horn primarily lending assistance to the Latin American air forces through a system of air missions and the promotion of friendly relations with other American republics (Recruiting Publicity Center 1956a:2).

In 1947, the National Security Act created the Department of Defense and an independent USAF. Shortly after that time, Howard Field became officially known as Howard AFB and Albrook Field became Albrook AFB. Howard AFB served as a replacement control depot, and later, engineer troops trained at the base. By the end of 1948, Howard AFB had lost most of its tactical units (Sullivan 1994:55). Effective October 11, 1949, all operations and training were terminated at Howard AFB except for those operations incidental to the deactivation of the base. Howard AFB was deactivated on January 1, 1950, and its existing real estate was "loaned" to the U.S. Army as a result of an agreement between the Departments of the Army and the Air Force (Historical Division, Headquarters, CAirC 1961:7). At the time when the order to deactivate the base was received by CAirC, the Panama Canal Administration proposed that the order be revised to permit the deactivation of Albrook AFB instead, with transfer of all Air Force activities to Howard AFB. The administration further suggested that Albrook AFB be turned over to them to provide for badly needed housing and warehouse space. The proposal was turned

down and Albrook AFB remained the active base (Historical Division, Headquarters, CAirC 1961:8).

For many years the Armed Forces provided for military missions to countries in Latin America. Part of this mission program was training, through which persons from cooperating Central and South American nations received complete instruction by USAF personnel in a number of technical fields (Recruiting Publicity Center 1956b:7). The most unique segment of this program was the USAF School for Latin America. It was a technical school operated at Albrook AFB exclusively for the benefit of Latin American airmen. It was officially organized and named on October 31, 1948. All instruction was given in Spanish by bilingual USAF commissioned and enlisted airmen (Recruiting Publicity Center 1956b:6-9). On July 25, 1949, the Headquarters of the School for Latin America relocated to Real Property No. 812 at Albrook AFB. This training program was the precursor to the Inter-American Air Force Academy (IAAFA). IAAFA became the official name of the USAF School for Latin America on September 8, 1966. Until its reassignment in 1989 to Homestead AFB, Florida, IAAFA remained a fixture at Albrook AFB/AFS for 41 years (Hartrampf Engineering, Inc. 1988).

Relations between Albrook AFB and Balboa, Panama City, and the Panama Canal Administration were strained due to the approaching and departing aircraft over the Community Center, housing area, school, church, and Panama Canal Administration building in Balboa (Sullivan 1994:54). There had been a public movement to close the field as early as 1946, however, these initial pressures to close Albrook AFB were thwarted. In 1949, the Governor of the Canal Zone supported the base's closure. Pressure to close the base was again renewed in 1955. Meanwhile, Howard AFB was reestablished as an auxiliary airfield in October 1954. Regular flying operations resumed one year later under a joint agreement between the Army and Air Force (Sullivan 1994:55). Finally, in 1961, the Air Force moved its Albrook AFB flying activities to Howard AFB on the western side of the canal, although the U.S. Army continued to use the Albrook AFB runway for helicopters and light aircraft (as it does today).

In November 1959, the Joint Chiefs of Staff (JCS) published a special message on military activities during the Cold War. It had become apparent that the security of the Western Hemisphere was threatened not only by general war, but by a continued increase in subversive insurgency by the Communist Bloc of nations into Latin America (Young 1966:9-10; Young and Kirk 1960). The JCS message directed military commands to create a program of military actions to counteract the insurgency. The JCS set forth six objectives of the program as follows (Young and Kirk 1960:221-222): (1) To secure greater friendship, mutual respect, and a sense of interdependence among the governments and peoples of the American republics; (2) to promote greater Latin American understanding and support of U.S. world policies as well as greater recognition of the constructive U.S. interest in Latin American aspirations; (3) to develop sound and growing economies capable of providing rising living standards within the general framework of the free enterprise system; (4) to effect the maximum limitation on Communist and Soviet-Sino Bloc influence in Latin America and a greater awareness of the nature and threat of international Communism in the area; (5) to assist in the emergence of Latin America as a strong component part of the western community of nations; and (6) to gain acceptance of the concept that each of the republics was responsible for its own internal security and for providing a contribution to the defense of the hemisphere.

In February 1960, the Vice Chief of Staff, USAF, General Curtis E. LeMay, dispatched a letter on the same subject regarding Air Force participation in the program. On May 16, 1960, CAirC published its Cold War Operation Plan in accordance with requirements set forth in LeMay's letter. The initial message from the JCS listed 30 suggested actions for meeting the six program objectives (Young and Kirk 1960:222-227). Most of the suggestions offered followed a pattern long established by the CAirC in its efforts to develop friendly attitudes and mutual trust throughout Latin America and to improve community relations in the various countries where it operated (Young and Kirk 1960:227-228). The CAirC staff "interpreted its role in the cold war program as merely a placing of greater emphasis on its normal operations. The important change was that those extra military programs which the command had continued in order to facilitate the achievement of its missions now became important missions in themselves" (Young and Kirk

1960:268). These programs included indoctrination of U.S. personnel to the local culture; exposure of the local populace to U.S. culture; participation of the military in local events; utilization of locally produced products and services; employment of military facilities to support local authorities in emergency situations such as search and rescue, refugee evacuation, disaster relief, and other humane missions; and provision of instructional and training programs to indigenous military commanders.

In 1962, due to the Cuban Missile Crisis, Howard AFB was activated for contingency planning of U.S. policy in Latin America (Hartrampf Engineering, Inc., 1988). In April of 1962, the C-130 rotational concept was implemented with the arrival at Howard AFB of a TAC C-130 unit from Sewart AFB, Tennessee (Sullivan 1994:11). In April 1963, Headquarters USAF, under Special Order G-41, designated Howard AFB as a primary installation capable of supporting tactical fighter and reconnaissance operations (Howard AFB 1965:2).

In June 1963, the CAirC was redesignated United States Air Force Southern Command (USAFSO). Howard AFB undertook the principal flying operations, while Albrook AFB served as the command and wing headquarters and training base (Sullivan 1994:56). The 24th Composite Wing was activated at Albrook AFB at the end of October 1967, with flying operations conducted at Howard AFB, and served as the chief subordinate unit under USAFSO. The 24th Composite Wing moved its headquarters to Howard AFB in January 1968.

In 1975, Albrook AFB was redesignated AFS due to consolidation of installations and reductions in military resources. Since then, Albrook AFS has been used primarily for housing and support services (Sullivan 1994:54). USAFSO was inactivated on January 1, 1976, and the USAF Southern Air Division was activated, keeping the same acronym USAFSO. Early in 1978, USAFSO also moved its headquarters from Albrook AFS to Howard AFB. USAFSO continued to carry out the mission of air defense of the Panama Canal and to represent USAF policies in Latin America. IAAFA continued to operate at Albrook AFS (Sullivan 1994:56).

Two new treaties between Panama and the United States were established in 1977, and they were enacted in 1979. One deals with the operation and defense of the canal. The United States maintains operational control over all lands, waters, and installations, including military bases, necessary to manage, operate, and defend the canal until noon on December 31, 1999. The other treaty guarantees the canal permanent neutrality (Public Affairs Office, Panama Canal Commission n.d.:4). As a result of the treaties, the names of both Howard AFB and Albrook AFS, Canal Zone were redesignated as Howard AFB and Albrook AFS, Republic of Panama (Sullivan 1994:56).

During the 1980s, USAFSO and the 24th Composite Wing continued their varied missions of organizing, training, equipping, administering, and maintaining assigned or attached forces for the air defense of the Panama Canal area; conducting evacuation of U.S. nationals, theater search and rescue, civic action, and disaster relief; providing security for USAF installations; operating IAAFA; supporting the Deputy Commander in Chief (CINC) of USSOUTHCOM in his role as the designated representative of the Chief-of-Staff of the USAF to the Latin American Air Forces; and exercising operational control of rotational and deployed forces and supporting their assigned missions. Since the early 1980s, drug interdiction has continued to be a major part of the mission (Hartrampf Engineering, Inc. 1988). This mission serves not only to help stem the flow of drugs to the United States, but also to aid the Latin American countries with the problems of drug cartels.

Throughout the 1980s, political tensions within Panama mounted and came to a head in 1988 and 1989 when General Manuel Antonio Noriega was implicated in drug trafficking through unsealed indictments from U.S. federal grand juries in Miami and Tampa, Florida. In response, the United States imposed economic sanctions against Panama. The death of one U.S. serviceman, the wounding of another, and the torture of still another serviceman combined with harassment of his wife heightened tensions between Panama and the U.S. These incidents, combined with 240 other documented cases of harassment of U.S. personnel in Panama, prompted President Bush to order a large-scale invasion of Panama on December 16, 1989. Operation Just Cause was

directed to neutralize the Panamanian Defense Forces of General Noriega and protect U.S. personnel and treaty rights. Other objectives of the operation were to remove Noriega and his cohorts from power and reestablish a democratic government in Panama. General Noriega took sanctuary in the Vatican Embassy in Panama. By the end of the year, Just Cause objectives had been met and economic recovery became a top priority in Panama. On January 4, 1990, Noriega surrendered to U.S. forces. Operation Just Cause was supported by the USAF at Howard AFB and Albrook AFS (Sullivan 1994:14-22).

In February 1992, the 24th Composite Wing was redesignated the 24th Wing. In June 1992, the base and wing were transferred to the newly established ACC.

3.2 BASE DEVELOPMENT

Albrook AFS was originally constructed beginning in 1922 when a swampy area near Balboa was filled with spoil dredged from the Canal prism. Subsequent dry and hydraulic fill episodes created the Balboa Fill Landing Field. This eventually became Albrook AFB, then Albrook AFS.

Much of the station's layout and development were set early on in its history. The housing and community areas were constructed during the 1930s and 1940s. Recreation areas and more support facilities were built in the 1950s. Flying operations at Albrook AFB were moved to Howard AFB in 1961. Since then, training, base support, community services, and housing are the primary uses for Albrook AFS.

Initial construction of Howard AFB was accomplished from 1941 to 1943. In 1943, the eastern runway was improved and extended to 7,000 ft. The aircraft maintenance hangars were built in 1941, as was the base theater. Most all of the housing on base was built during the early 1940s. There are both dormitories for unaccompanied personnel and housing units for accompanied officers and enlisted personnel. The hospital was built in 1943. Community facilities such as the Base Exchange (BX), Post Office, Snack Bar and Non-commissioned Officer Service Club,

many administrative offices, and the 24th Wing Headquarters are located in refurbished 1941-era dormitories.

The decade of the 1950s at Howard AFB was spent in an inactive and standby status. The base chapel was completed in 1956. In 1963, the runway was again extended, this time to 8,500 ft. That same year the western runway was converted to a parking apron and taxiway. Renovations to many facilities on the base took place during the 1960s. A new base operations building was completed in 1965. A new weapons storage area was completed in 1966. An air freight terminal and gymnasium were completed in 1968. Additional family housing was built in 1969, along with a visiting airmen's dormitory.

The 1970s brought a spate of new community facilities, including a child care center, service station exchange, visiting officer's quarters, and a youth center. The waste treatment plant and sewage treatment and disposal plant were brought on-line in 1974. In contrast, base development during the 1980s was minor. Most projects were alterations and refurbishment to existing facilities, as many facilities were utilized to their fullest extent.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Howard AFB and Albrook AFS was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Howard AFB and Albrook AFS, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Howard AFB and Albrook AFS were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the

importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Between November 29 and December 5, 1994, Mariah field team investigators Patience E. Patterson and David P. Staley conducted a base inventory at Howard AFB, Albrook AFS, and Balboa West Bombing Range. Upon arrival, Mr. James Chavers, the Natural and Cultural Resources Officer within the 24th Civil Engineering Squadron (CES), organized an in-briefing meeting attended by himself, Mr. Maximo Abad, Real Property Officer, Mr. Robert Sullivan, 24th Wing Historian, Capt. Greg Long, Chief of the 24th CES, Mr. William Kludt, Deputy Base Engineer, and the field team. This meeting provided an opportunity to exchange information and advise Howard AFB personnel of the objectives and needs for accomplishing the base inventory.

Mr. Chavers provided tours of Howard AFB and Albrook AFS to familiarize the field team with the layouts and types of facilities present and provide a preliminary assessment of which facilities might be significant within the context of the Cold War. A visit to Semaphore Hill, a remote radar installation, was also conducted. Mr. James Scoggins, contract manager of the site for the Caribbean Basin Radar Network, provided the field team with a tour of this facility and allowed them to take photographs from the tower of the Balboa West Bombing Range.

Sgt Joseph Doyle of the CES Drafting Office provided the team with electronic and hard copies of base maps and made the map vault available for inventory. Files associated with buildings of interest and also historic reference drawings and aerial photographs associated with base history and development were noted. The field team also conducted a search of documents in the Real Property Office and received a copy of the Real Property Change List. A cursory inventory of the contents of the Wing History Office was made, and copies of the base history, historical documents, mission statements, and planning documents were provided to the field team by the 24th Wing Historian, Mr. Robert Sullivan. The Public Affairs Office was contacted and queries were made regarding the existence of any mission statements or historical documents in their files. The field team visited the Wing Quality Office and gathered additional mission statements. Throughout the visit, a photographic inventory of property types on the base was conducted between scheduled tours and appointments.

An out-briefing was conducted on December 5. In attendance were Mr. Chavers, Mr. Robert Sullivan, Capt. Greg Long, and Mr. William Kludt. The field team provided a brief synopsis of the findings of the inventory and a description of the reporting and review process for the study.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Howard AFB, 123 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at Howard AFB, one of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and station and their resources, and the missions associated with these resources, access to the evaluated building could not be secured. In this instance, documentation describing any changes to the building was consulted to provide insight into the integrity of the building's interior.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 27122, Located in Real Property No. 703)

This collection of the 24th Wing History Office provides a history of the base and the major contingents at the base. The office holdings include wing histories, reports, newsclippings, slides, and photographs. A cursory inventory is presented in Appendix E. Although generally not focused on buildings, the collection contains unique materials pertinent to people and events at the base throughout the Cold War era. It also contains a record of various orders and plans passed to both Howard AFB and Albrook AFS through the years. Some of the documents and photographs in the collection are likely rare and unique.

The wing histories, reports, and newsclippings are generally in good condition and are well organized. However, some of the documents have been negatively impacted by the humid

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	27122	None	RecDoc/Obj	18
Documentation	Documentary Collection	27123	None	RecDoc/Obj	16
Training Facilities					
Combat Support Training	IAAFA Headquarters	27081	812	Real/Bldg	20

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	27081	812	IAAFA Headquarters
18	27122	None	Documentary Collection
16	27123	None	Documentary Collection

climate. Portions of the photographic collection have been sorted and filed by topics or geography, although the vast majority remain uncatalogued and unorganized.

6.1.1.2 Documentary Collection (Resource No. 27123, Located in Real Property No. 1)

This documentary collection, located in the Drafting Office of the 24th CES, consists of flat files containing drawings, plans, maps, and photographs pertaining to construction, maintenance, and modifications to Howard AFB and Albrook AFS facilities. The files also contain records of various "off-base" installations belonging to the Panama Canal Commission, the Army, and the Navy. The drawings and plans are on linen, vellum, or mylar and pertain mostly to specific buildings and utility systems dating from the original base construction to the present. The photographs are aerial views of the base and station. A cursory inventory of the files is presented in Appendix E. The collection provides a perspective on the historical development of the base and is a source of detailed supporting information about particular facilities.

The collection is poorly organized and damaged from use and climatic conditions. The architectural drawings are an actively used resource, and as such, plans and drawings are pulled and refiled and are subject to continuous wear. The task of organizing these files has been initiated, and plans have been made to scan the documents and computerize the inventory.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

None were evaluated at Howard AFB.

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Howard AFB.

6.4 TRAINING FACILITIES

6.4.1 Combat Support Training

6.4.1.1 IAAFA Headquarters (Resource No. 27081, Real Property No. 812)

Real Property No. 812 on Albrook AFS was built in 1942 as a dormitory. Later, the building housed academic classrooms and the headquarters of the IAAFA between 1949 and 1989. Other buildings associated with IAAFA during this time include Real Property Nos. 808-811, which then functioned as dormitories and classrooms, and Real Property Nos. 449 and 450, which were training hangars.

Real Property No. 812 is a four story building with a stucco exterior and red tile roof. A distinguishing feature of this building as well as the associated buildings is their aquamedias. An aquamedia is a continuous permanent awning surrounding the building just above the windows on each floor. Real Property No. 812 also features an attached covered entrance walkway which distinguishes this building from the rest, and indicates the important headquarters function of the building.

The building is now used as an airmen's dormitory. The exterior has been slightly modified for safety and maintenance. For example, some of the wooden lintels for the aquamedias have been replaced by metal braces. The interior was not inspected; however, its current use as a dormitory may have required some renovation. Thus, the integrity of this building is questionable. However, the association of this building with the other buildings that were part of IAAFA remains intact.

The predecessor to IAAFA, the Air Force School of the Military Training Center of the Panama Canal Department, was initiated in 1943. This evolved into the USAF School for Latin America in 1948. This organization moved into Real Property No. 812 on July 25, 1949. On

September 6, 1966, IAAFA became the official name for the organization. Through the years, the school hosted numerous indigenous military students from all over Central and South America. In 1966, four Cuna Indians from the San Blas Islands of Panama were enrolled. Training operations focused on maintenance and support of aircraft with little emphasis on flying or strategy. IAAFA moved to Homestead AFB on September 30, 1989. Presently, IAAFA is located at Lackland AFB, Texas.

Real Property No. 812 is exceptionally important because it housed the headquarters of important training activities funded and conducted by the United States for all Latin American air forces. Through training programs and military support, the United States maintained positive relations with Latin American allies against communism, and met the goals and objectives set forth by the JCS to counteract insurgency attempts by the Communist Bloc countries. The IAAFA Headquarters is an exceptional example of the U.S. policy of maintaining good relations with third-world allies in the Western Hemisphere through fully supporting training programs. The importance of IAAFA to Albrook AFS is reflected by the large number of buildings associated with the school. This building was used for this purpose during all four phases of the Cold War, and meets NRHP criterion (a).

6.5 INTELLIGENCE FACILITIES

None were evaluated at Howard AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Howard AFB and Albrook AFS. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Howard AFB. These resources should be investigated further for a more comprehensive analysis of the base Cold War context.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Howard AFB revealed approximately 200 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Howard AFB and Albrook AFS should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts is presented in Appendix F.

8.0 FUTURE THREATS TO RESOURCES

During the base visit, no threats to the IAAFA Headquarters building were identified. The Documentary Collections evaluated are threatened by the humid climate. Measures should be taken to mitigate or remove this threat.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Howard AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Howard AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Howard AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Howard AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
27081	812	IAAFA Headquarters		*	*	*		Potentially NRHP eligible now.
Record or Document - Object								
27122	None	Documentary Collection		*		*	*	
27123	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 27122, Located in Real Property No. 703)

This collection of wing histories, reports, newspaper clippings, slides, and photographs is only partially organized and has been subject to damage due to climatic conditions. It is recommended that this collection be fully inventoried, organized, and copied. It is further recommended that the base retain the copies for its use, with the originals going to a permanent curatorial facility for stewardship and conservation.

9.2.2 Documentary Collection (Resource No. 27123, Located in Real Property No. 1)

This collection of architectural drawings and aerial photographs is poorly organized and damaged as a result of continual use by base engineers and exposure to the humid climatic conditions. It is recommended that the task of inventorying and organizing these files be continued. It is further recommended that the plans for scanning the drawings and computerizing the inventory be

recommended that the plans for scanning the drawings and computerizing the inventory be implemented. Once this is complete, it is recommended that the original drawings be sent to a permanent curatorial facility for stewardship and conservation. The photographs should be copied, with the copies going to the base for its use, and the originals going to a permanent curatorial facility for stewardship and conservation.

9.2.3 IAAFA Headquarters (Resource No. 27081, Real Property No. 812)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases I through IV, and meets NRHP criterion (a) based on its role in meeting the need for counter-insurgency in Latin America. However, the integrity of the building may have been compromised due to renovations while transforming the building into a dormitory. Therefore, this building is recommended as potentially eligible to the NRHP. Further documentation to determine the level of integrity and to explore NRHP eligibility is recommended. Stewardship of the building to retain its current level of integrity is recommended in the interim during this evaluation. Because the association of this building with the other buildings used by the IAAFA remains intact, it is further recommended that nomination of this complex of buildings to the NRHP, with Real Property No. 812 as the centerpiece, be explored.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Canal Zone Government

- 1964 License No. 1856. Canal Zone Code, Title 2, Section 333. (Military Sites) Licensee: Department of the Air Force. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Hartrampf Engineering, Inc.

- 1988 *Commander's Long Range Facility Improvement Plan, Howard AFB, Republic of Panama*. Prepared by Hartrampf Engineering, Inc., Atlanta, Georgia.

Historical Division, Headquarters, Caribbean Air Command

- 1961 *Howard Air Force Base*. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.

Howard Air Force Base

- 1965 Analysis of Facilities and Conditions, Howard Air Force Base, Canal Zone. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.
- 1975 TAB A-1 Environmental Narrative (Phase II), Howard Air Force Base, Canal Zone. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.
-

Mittag, A. A.

- 1934 Albrook Flying Field in the Canal Zone, Origin and Construction of the Government's Airport near Balboa. In *Civil Engineering*. Vol. 4, No. 7:340-344. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Public Affairs Office, 24th Wing

- 1994 *Assignment Panama An Unofficial Guide for Military Members Assigned to the 24th Wing and Panama*. 24th Wing Public Affairs Office, Howard Air Force Base, Republic of Panama.

Public Affairs Office, Panama Canal Commission

- 1994 *The Panama Canal*. Panama Canal Commission, Panama City, Panama.

n.d. *The Panama Canal Commission*, "Background Information on the Panama Canal." Panama Canal Office of Public Affairs, Balboa Heights, Republic of Panama.

Recruiting Publicity Center

- 1956a Crossroads of the World, The Role CAirC Airmen Play As Goodwill Ambassadors. In *Life of the AIRMAN*. Recruiting Publicity Center, Governors Island, New York.
- 1956b Training for Mutual Defense, The Contribution of CAirC's Tech Training and Air Mission Programs. In *Life of the AIRMAN*. Recruiting Publicity Center, Governor's Island, New York.

Sullivan, R.

- 1994 *History 24th Wing, Howard Air Force Base and Albrook Air Force Station*. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.

United States Air Force

- 1985a *Fact Sheet, First Lieutenant Frank P. Albrook*. Headquarters, United States Air Force, Southern Air Division, Office of Public Affairs. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.
- 1985b *Fact Sheet, Major Charles Harold Howard*. Headquarters, United States Air Force, Southern Air Division, Office of Public Affairs. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.
-

-
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

Young, L. F.

- 1966 *History of U.S. Air Forces Southern Command, 1 January - 30 June 1966*. Historical Division, Office of Information, Headquarters, United States Air Forces Southern Command. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.

Young, L. F. and K. M. Kirk

- 1960 Cold War Activities. In *History of the Caribbean Air Command, 1 January - 30 June 1960*. Prepared by Historical Division, Office of Information, Headquarters, Caribbean Air Command. On file, 24th Wing History Office, Howard Air Force Base, Republic of Panama.
-

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	27001	1111	Storage Igloo (Abandoned)	1941
	27002	1162	Spare Inert Storage	1966
	27003	1165	Storage Igloo	1966
	27004	1166	Storage Igloo	1966
	27005	1167	Storage Igloo	1966
	27007	1251	Security Police Canine Kennel	1975
	27008	1252	Security Police Canine Kennel	1991
	27012	1100	Radar Tower (Semaphor Hill)	1955
	27013	237	Medium Aircraft Maintenance Dock	1941
	27014	230	Base Hazardous Storage	1941
	27015	706	Non-Air Force Administrative Office	1941
	27016	236	Avionics Shop	1989
	27017	235	Base Operations	1965
	27018	221	General Purpose Aircraft Shop	1990
	27019	228	Air Passenger Terminal	1968
	27020	1250	Control Tower	1972
	27021	231	Air Freight Terminal	1966
	27022	227	Squadron Operations	1968
	27023	226	Vehicle Refueling Shop	1967
	27024	222	Petroleum Operations Building	1969
	27025	220	Demolition and Burn Facility	1969
	27026	1	Commissary Store	1941
	27027	2	Base Engineering Administration	1941
	27028	141	Base Engineering Shop	1941
	27029	145	Base Engineering Covered Storage Facility	1941
	27030	42	Child Care Center	1971
	27031	47	Military Affiliate Radio Systems Radio	1973
	27032	4	Base Engineering Maintenance Shop	1941
	27033	5	Vehicle Maintenance Shop	1941
	27034	17	Family Housing APPR PFY 50	1941
	27035	28	Family Housing APPR PFY 50	1941
	27036	40	Swimmers Bath House	1949
	27037	34	Base Theater	1941
	27038	696	Youth Center	1976
	27039	703	Group Headquarters	1941
	27040	214	Electric Power Station Building	1970
	27041	710	Non-Commissioned Officer Open Mess (Cuna Indian Quarters)	1941
	27042	700	Service Station Exchange	1972
	27044	519	Visiting Airmens Quarters Dormitory	1969
	27045	568	Family Housing APPR PFY 50	1941
	27046	500	Chapel Center	1956

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	27047	192	Air Force Clinic	1943
	27049	186	Visiting Airmans Quarters Dormitory	1941
	27050	113	Officers Open Mess	1941
	27051	119	Visiting Officers Quarters	1941
	27052	174	Visiting Officers Quarters	1973
	27053	714	Visiting Airmens Quarters Dormitory	1941
	27054	716	Permanent Party Airmans Dormitory	1941
	27055	249	Medium Aircraft Maintenance Dock	1941
	27056	723	Security Police Operations	1941
	27057	722	Automotive Hobby Shop	1968
	27058	255	Base Supply and Equipment Warehouse	1966
	27059	253	Medium Aircraft Maintenance Dock	1941
	27060	726	Reconnaissance Photo Laboratory (Fire Station)	1941
	27061	734	Explosive Ordinance Disposal	1988
	27062	248	Gymnasium	1968
	27063	238	Law Center	1941
	27064	241	Medium Aircraft Maintenance Dock	1943
	27065	256	Aircraft Support Equipment Storage Facility and Shop	1966
	27066	1559	Family Housing APPR 50-69	1969
	27067	1560	Family Housing APPR 50-69	1969
	27068	1553	Family Housing APPR 50-69	1969
	27069	1552	Family Housing APPR 50-69	1969
	27070	1000	Petroleum Operations Building	1965
	27071	1565	Bus Shelter	1988
	27072	962	Dependant Elementary School	1941
	27073	925	Oxygen Generation Plant	1963
	27077	892	Waste Treatment Plant	1974
	27079	898	Base Engineering Maintenance Shop (Entomology)	1988
	27080	36	Base Engineering Covered Storage Facility	1941
	27081	812	Visiting Airmens Quarters Dormitory (Albrook AFS)(Former IAAFA Headquarters)	1942
	27082	811	Visiting Airmens Quarters Dormitory (Albrook AFS)	1942
	27083	810	Permanent Party Airmans Dormitory (Albrook AFS)	1942
	27084	809	Permanent Party Airmans Dormitory (Albrook AFS)	1942
	27085	808	Education Center (Albrook AFS)	1942
	27086	885	Traffic Check House (Albrook AFS)	1944
	27087	449	Hangar (Albrook AFS - Leased to US Army)	1940s
	27088	450	Hangar (Albrook AFS - Leased to US Army)	1940s
	27089	453	Precision Measurement Equipment Laboratory (Albrook AFS)	1943
	27090	870	Non-Air Force Administrative Office (Albrook AFS)	1944
	27091	881	Miscellaneous Recreation Building (Albrook AFS)	1940
	27092	869	Maintenance Shop Exchange (Albrook AFS)	1944

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	27093	446	Post Office Center (Albrook AFS)	1941
	27094	868	Central Exchange Administration	1935
	27095	405	Security Police Operations (Albrook AFS)	1934
	27096	403	Gymnasium (Albrook AFS)	1934
	27097	407	Housing Supply and Storage Facility (Albrook AFS)	1935
	27098	802	Service Outlet Exchange (Albrook AFS)	1932
	27099	800	Non-Air Force Administration Office (Albrook AFS)	1932
	27100	850	Youth Center (Albrook AFS - Class Six Liquor, Exchange)	1954
	27101	849	Swimmers Bath House (Albrook AFS)	1949
	27102	245	Family Housing APPR PFY 50 (Albrook AFS)	1942
	27103	246	Family Housing APPR PFY 50 (Albrook AFS)	1942
	27104	217	Family Housing APPR PFY 50 (Albrook AFS)	1932
	27105	208	Family Housing APPR PFY 50 (Albrook AFS)	1932
	27106	860	Chapel Center (Albrook AFS)	1943
	27107	865	Non-Air Force Administrative Office (Albrook AFS)	1935
	27108	24	Family Housing APPR PFY 50 (Albrook AFS)	1932
	27109	4	Family Housing APPR PFY 50 (Albrook AFS)	1932
	27110	2	Family Housing APPR PFY 50 (Albrook AFS)	1932
	27111	13	Officers Open Mess (Albrook AFS)	1932
	27112	16	Visiting Officers Quarters (01-010) (Albrook AFS)	1932
	27113	14	Visiting Officers Quarters (01-010) (Albrook AFS)	1941
	27114	1	Family Housing APPR PFY 50 (Albrook AFS)	1942
	27115	19	Permanent Party Airmans Dormitory (Albrook AFS)	1949
	27116	861	Non-Air Force Administration Office	1943
	27117	313	Family Housing APPR PFY 50 (Albrook AFS)	1948
	27118	None	Bohio/Picnic Area (Albrook AFS)	Unknown
	27120	958	Traffic Check House (Albrook AFS)	1955
	27121	1694	Traffic Check House	1990
Real Property - Landscape				
	27006	None	Small Arms Firing Range	Unknown
	27076	942	Athletic Field Softball	1989
Real Property - Structure				
	27009	693	Water Storage Tank	1941
	27010	692	Water Storage Tank	1941
	27011	690	Set C-Band Meteorological Radar	1965
	27043	35	Electric Substation	1941
	27048	None	Tennis Courts	Unknown
	27074	914	Riding Stables	1939
	27075	940	Miscellaneous Outdoor Recreation Facility (Pavillion)	1989
	27078	889	Sewage Treatment and Disposal	1974
	27119	961	Riding Stables (Albrook AFS)	1963

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Record or Document - Object				
	27122	None	Documentary Collection	Various
	27123	None	Documentary Collection	Various

APPENDIX B:
BASE AND STATION LAYOUT MAPS SHOWING INVENTORIED RESOURCES

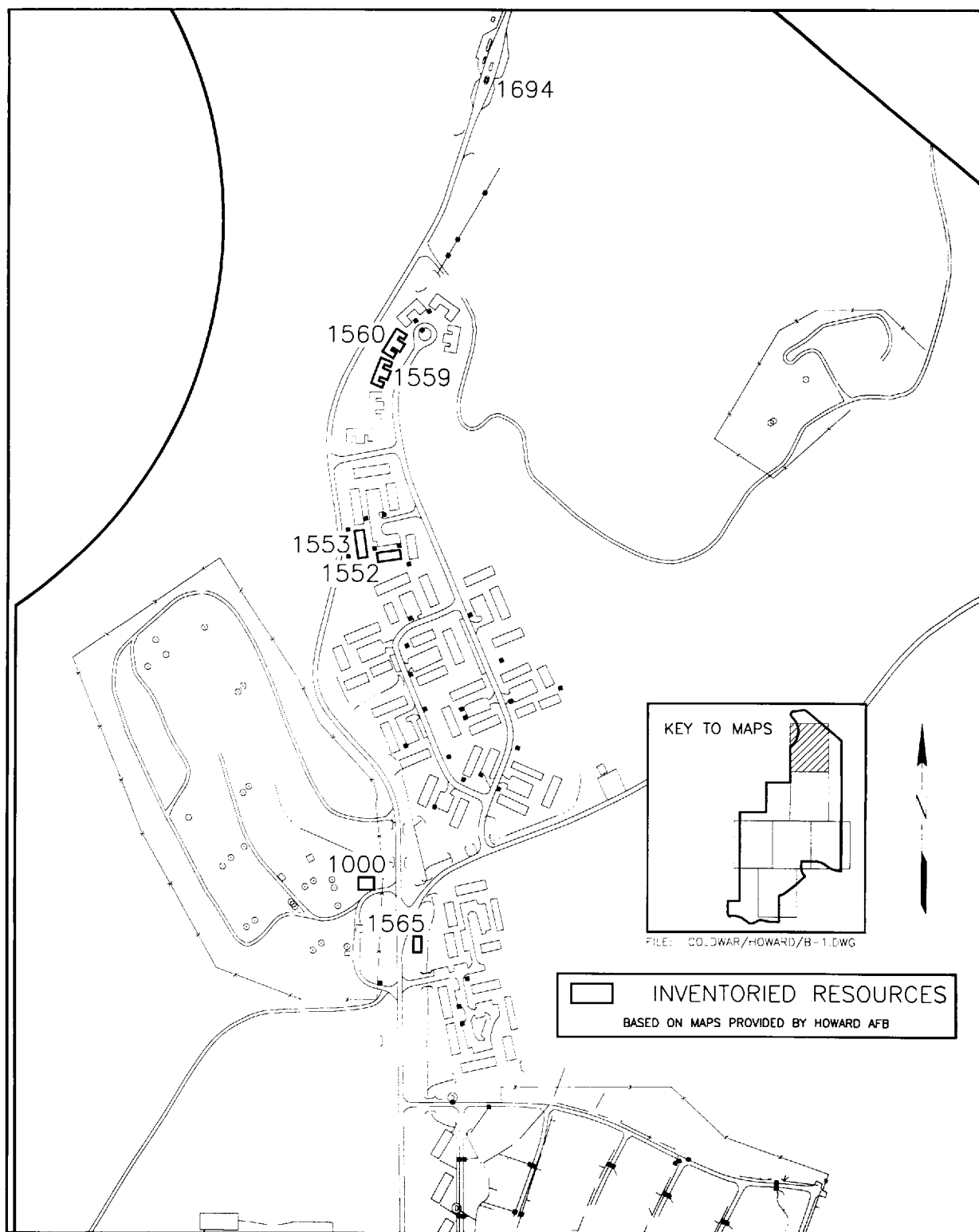


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 6).

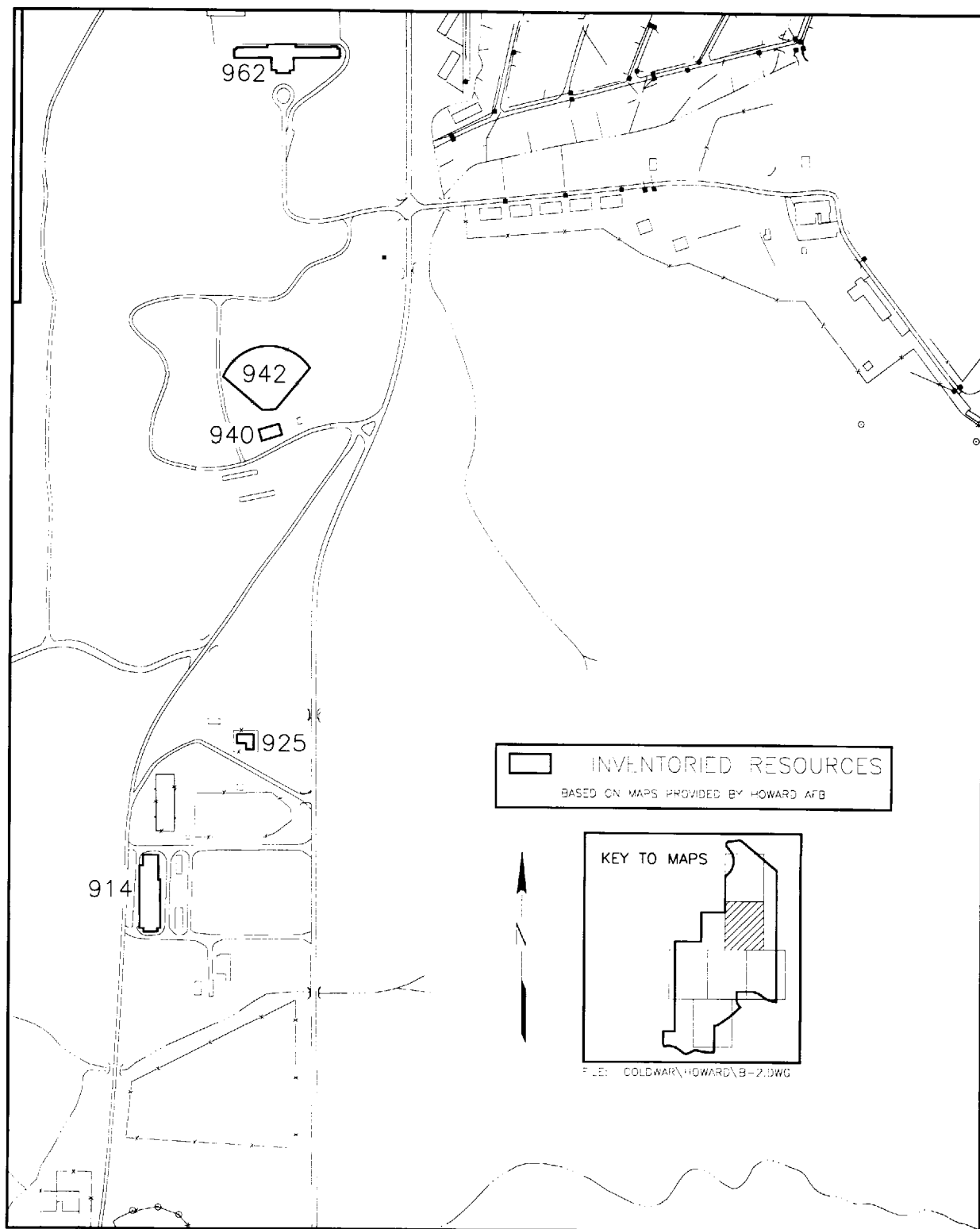


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 6).

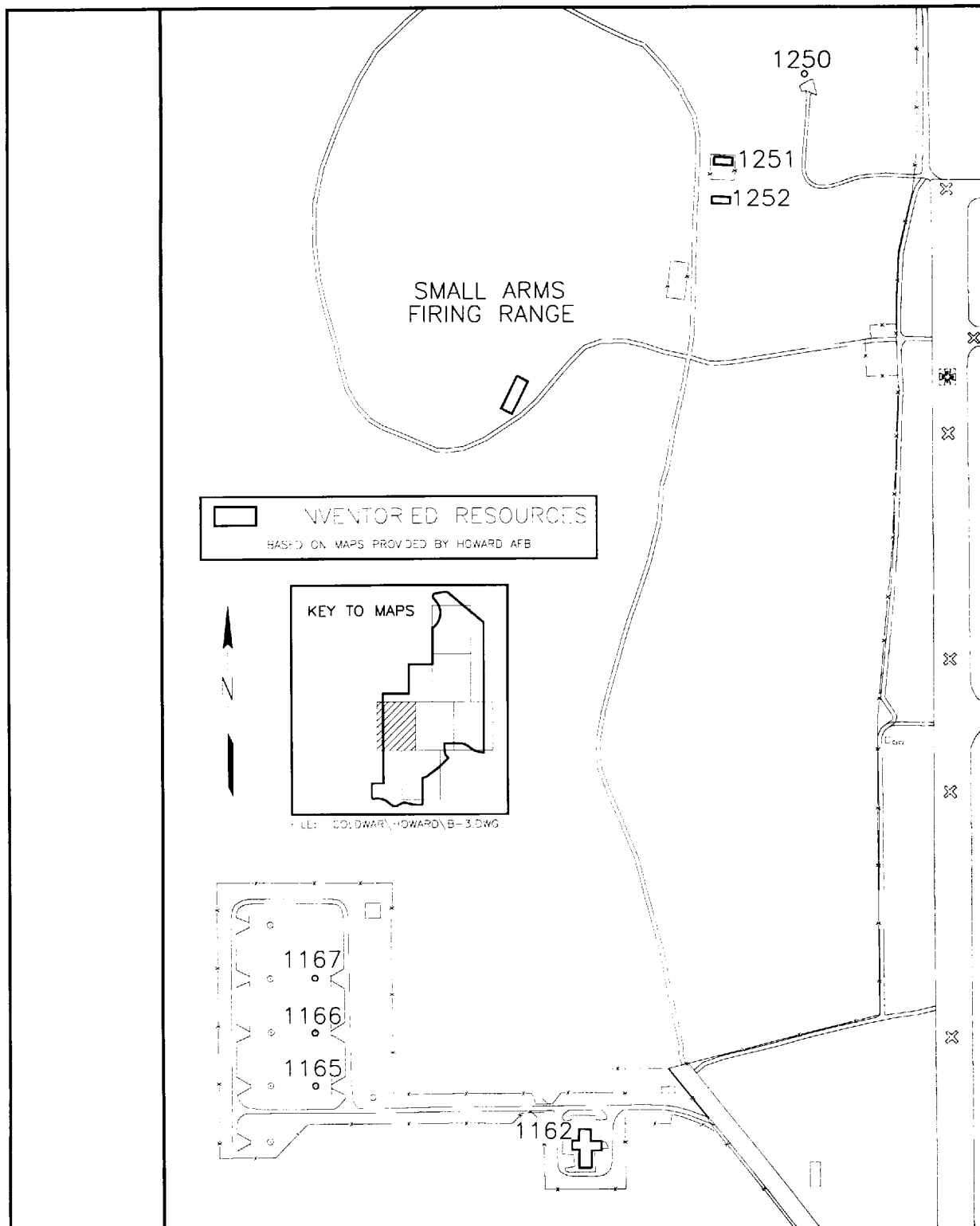


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 6).

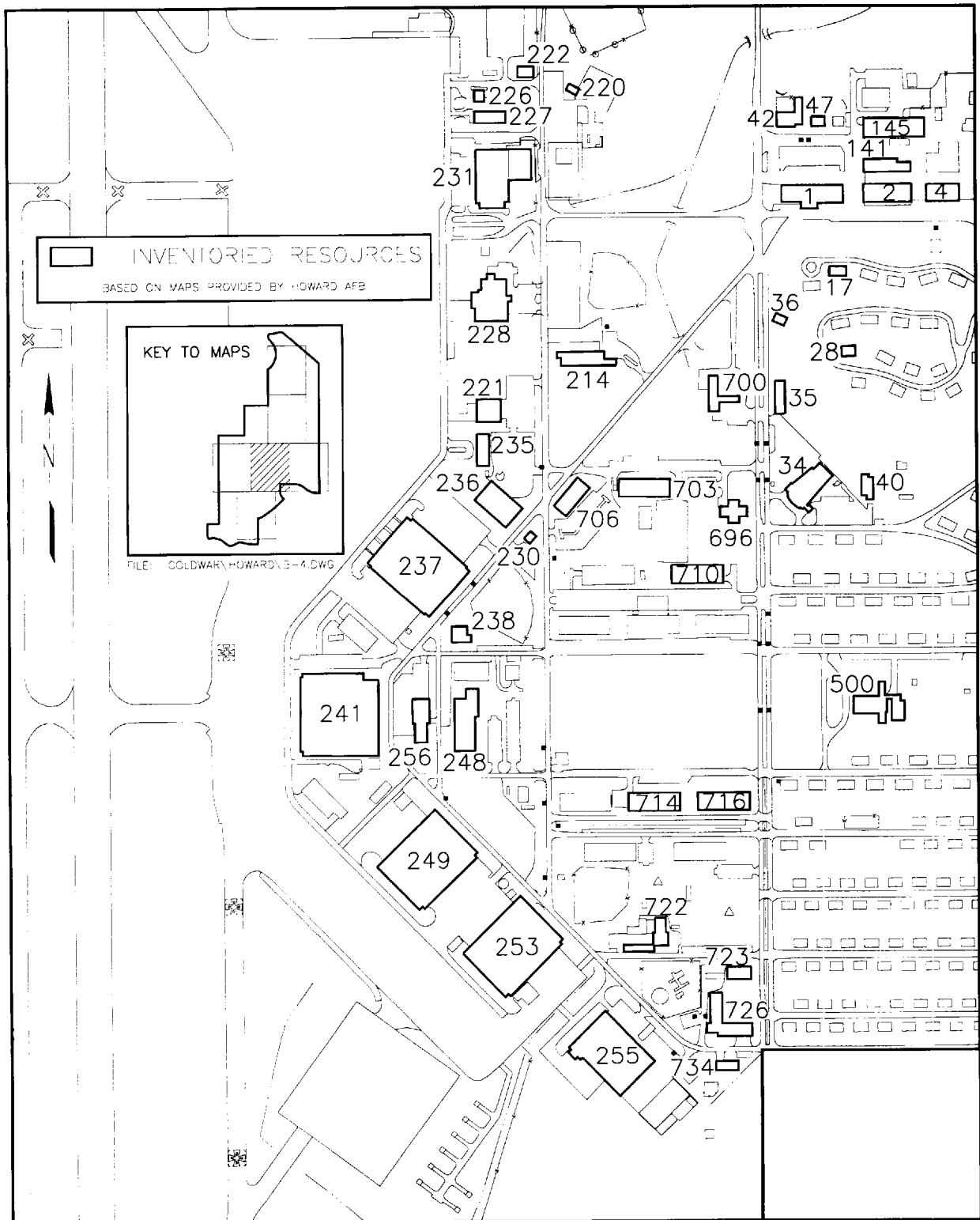


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 6).

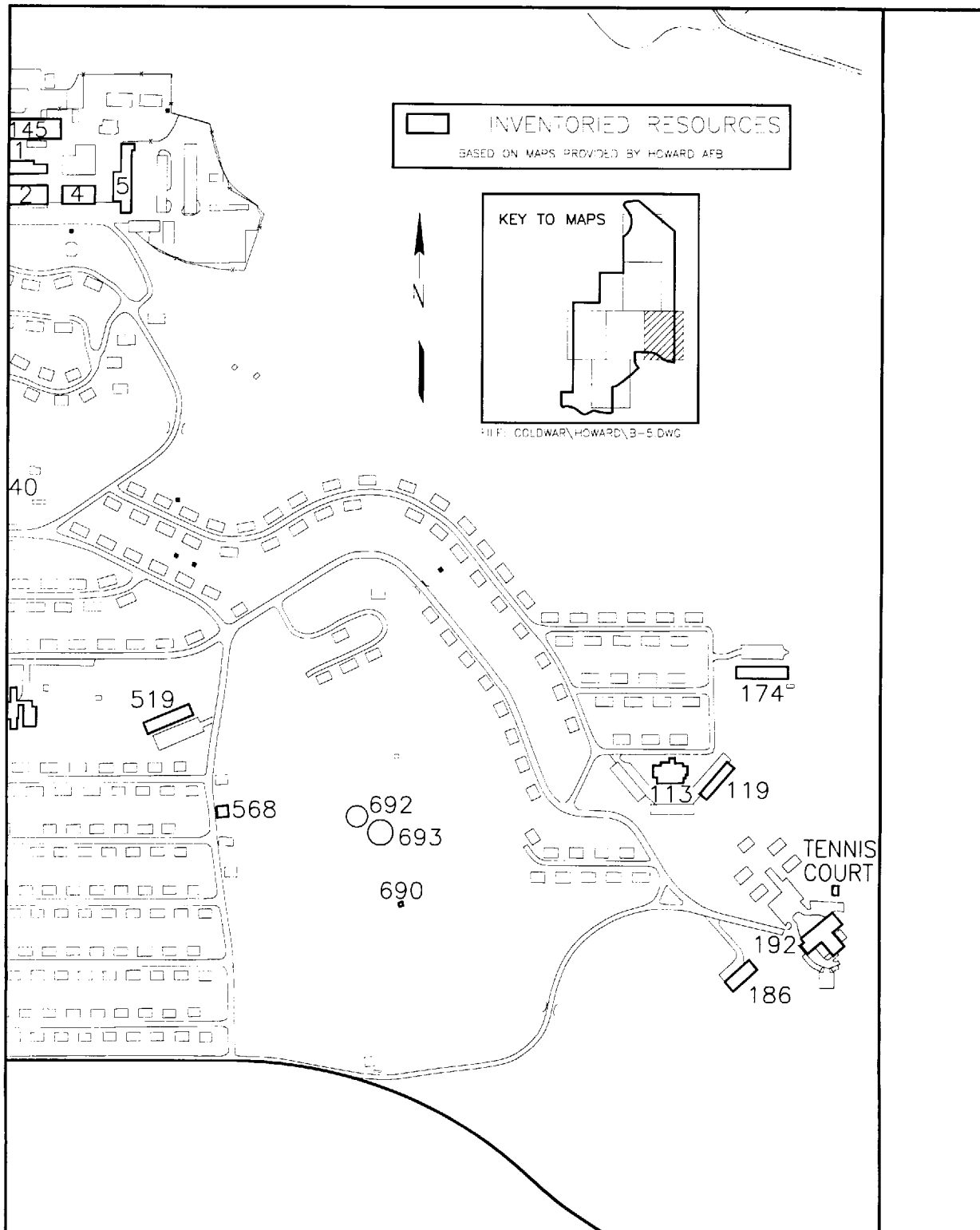


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 6).

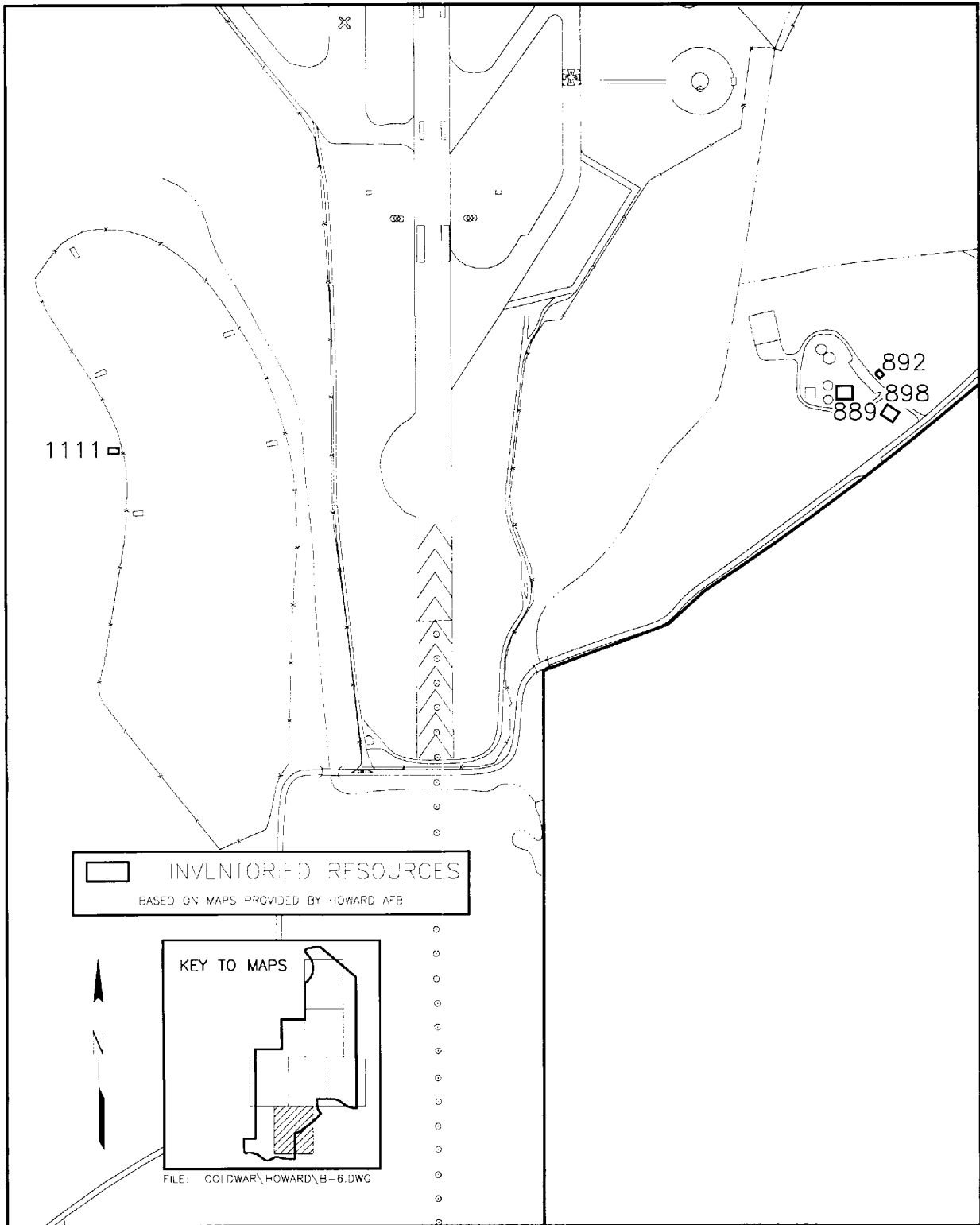


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 6).

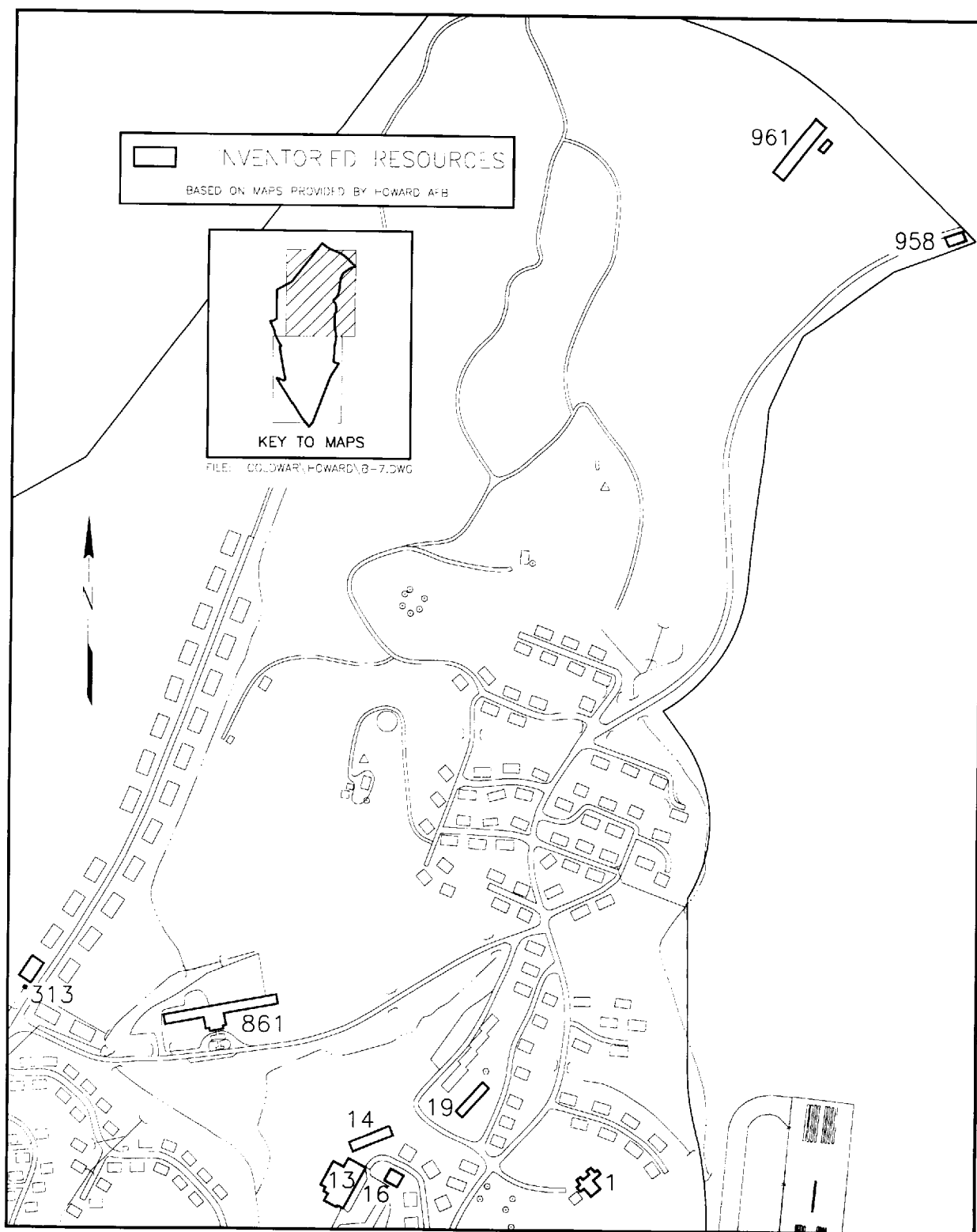


Figure B.2 Station Layout Map Showing Inventoried Resources (Map 1 of 2).

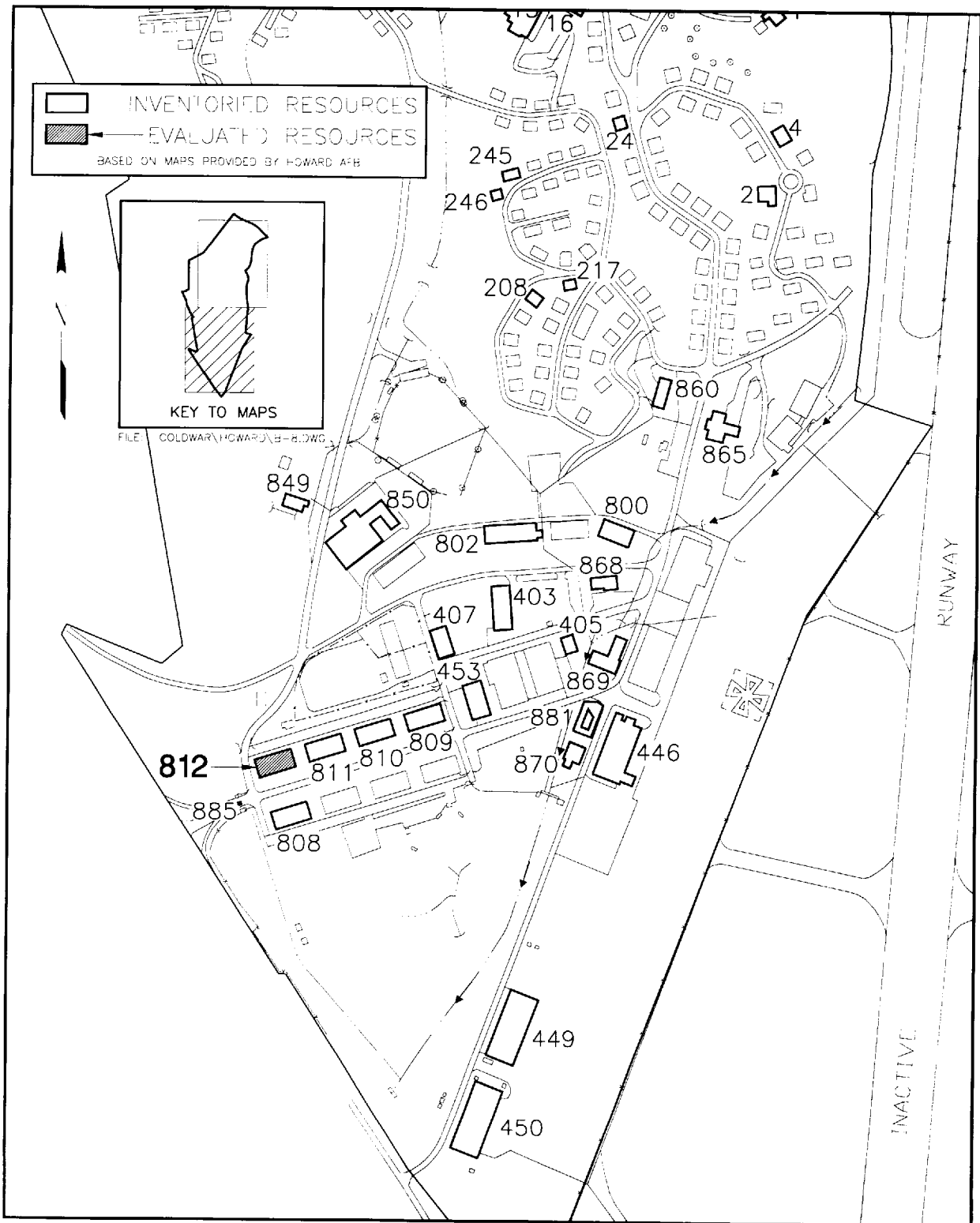


Figure B.2 Station Layout Map Showing Inventoried Resources (Map 2 of 2).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 27001, Real Property No. 1111
Storage Igloo (Abandoned)



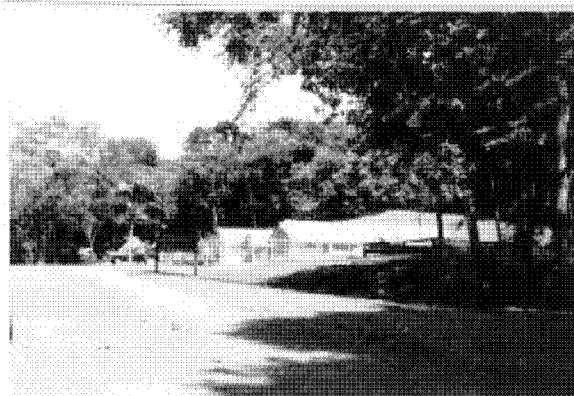
Resource No. 27002, Real Property No. 1162
Spare Inert Storage



Resource Nos. 27003-27005, Real Property Nos.
1165, 1166, and 1167, Storage Igloos



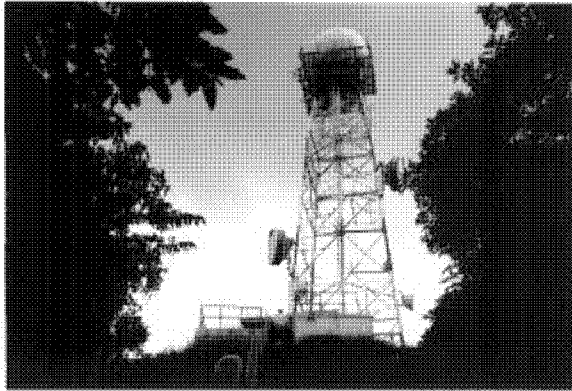
Resource No. 27006, Real Property No. (none)
Small Arms Firing Range



Resource Nos. 27007-27008, Real Property Nos.
1251 and 1252, Security Police Canine Kennels



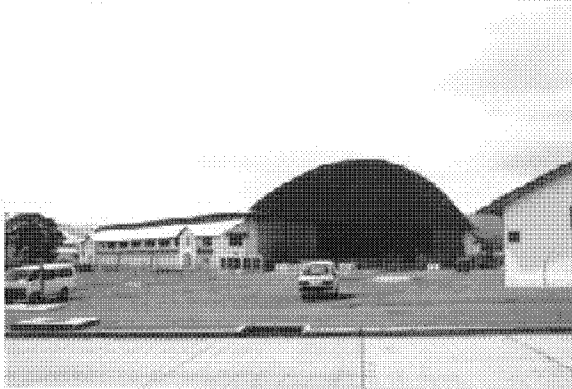
Resource Nos. 27009-27010, Real Property Nos.
693 and 692, Water Tank Storages



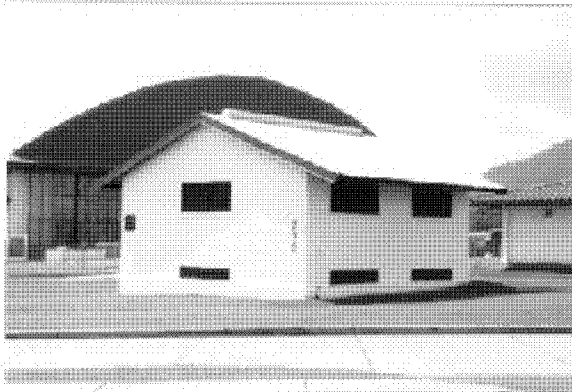
Resource No. 27011, Real Property No. 690
Set C-Band Meteorological Radar



Resource No. 27012, Real Property No. 1100
Radar Tower (Semaphor Hill)



Resource No. 27013, Real Property No. 237
Medium Aircraft Maintenance Dock



Resource No. 27014, Real Property No. 230
Base Hazardous Storage



Resource No. 27015, Real Property No. 706
NAF Administrative Office



Resource No. 27016, Real Property No. 236
Avionics Shop



Resource No. 27017, Real Property No. 235
Base Operations



Resource No. 27018, Real Property No. 221
General Purpose Aircraft Shop



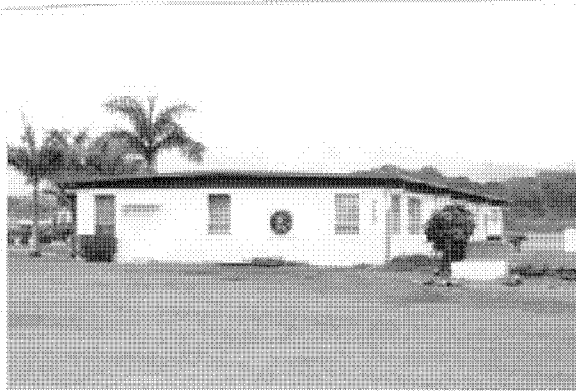
Resource No. 27019, Real Property No. 228
Air Passenger Terminal



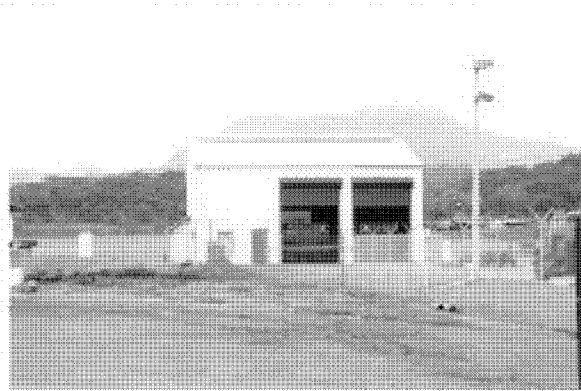
Resource No. 27020, Real Property No. 1250
Control Tower



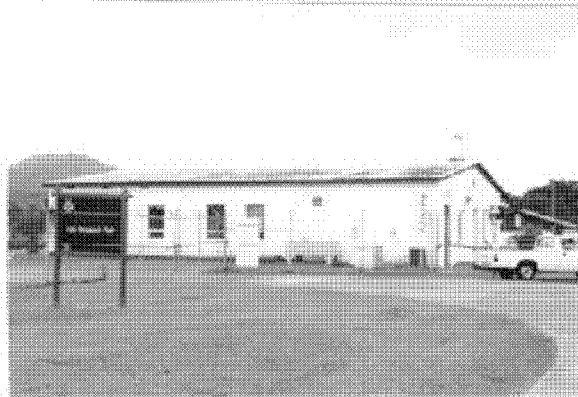
Resource No. 27021, Real Property No. 231
Air Freight Terminal



Resource No. 27022, Real Property No. 227
Squadron Operations



Resource No. 27023, Real Property No. 226
Vehicle Refueling Shop



Resource No. 27024, Real Property No. 222
Petroleum Operations Building



Resource No. 27025, Real Property No. 220
Demolition and Burn Facility



Resource No. 27026, Real Property No. 1
Commissary Store



Resource No. 27027, Real Property No. 2
Base Engineering Administration



Resource No. 27028, Real Property No. 141
Base Engineering Shop



Resource No. 27029, Real Property No. 145
Base Engineering Covered Storage Facility



Resource Nos. 27030-27031, Real Property Nos.
42 and 47, Child Care Center and Military
Affiliate Radio Systems Radio



Resource No. 27032, Real Property No. 4
Base Engineering Maintenance Shop



Resource No. 27033, Real Property No. 5
Vehicle Maintenance Shop



Resource No. 27034, Real Property No. 17
Family Housing (Appr. 1950)



Resource No. 27035, Real Property No. 28
Family Housing (Appr. 1950)



Resource No. 27036, Real Property No. 40
Swimmer's Bath House



Resource No. 27037, Real Property No. 34
Base Theater



Resource No. 27038, Real Property No. 696
Youth Center



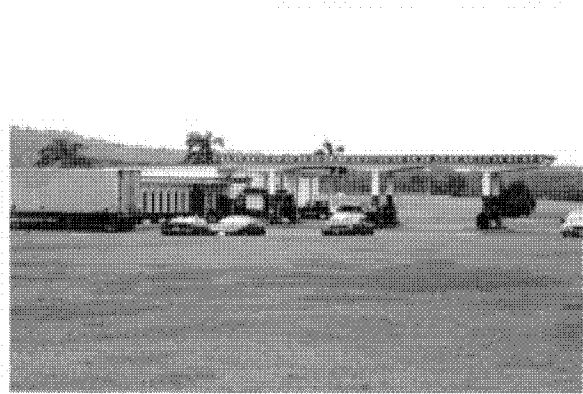
Resource No. 27039, Real Property No. 703
Group Headquarters



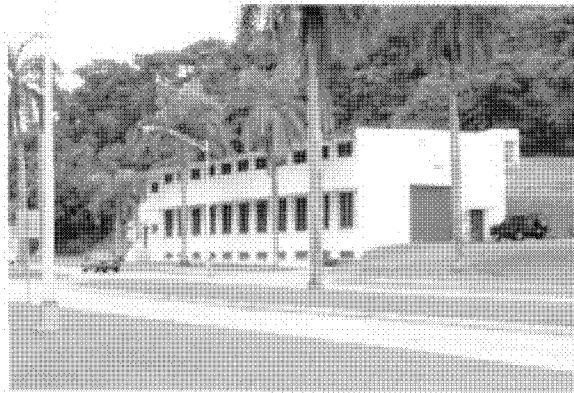
Resource No. 27040, Real Property No. 214
Electric Power Station Building



Resource No. 27041, Real Property No. 710
Non-Commissioned Officer Open Mess (Cuna
Indian Quarters)



Resource No. 27042 Real Property No. 700
Service Station Exchange



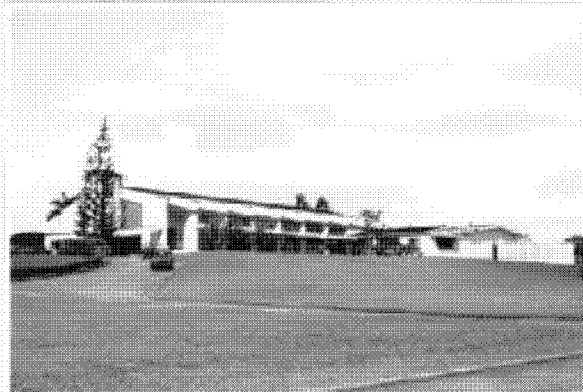
Resource No. 27043, Real Property No. 35
Electric Substation



Resource No. 27044, Real Property No. 519
Visiting Airmen's Quarters Dormitory



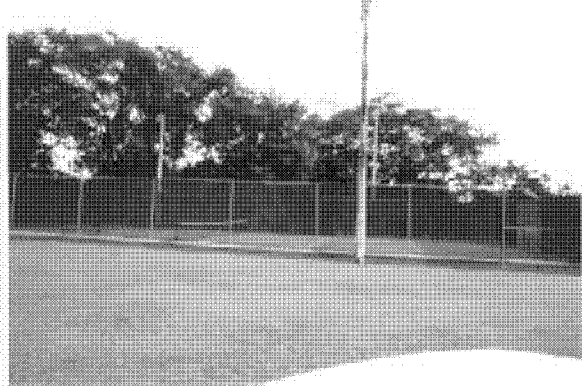
Resource No. 27045, Real Property No. 568
Family Housing (Appr. 1950)



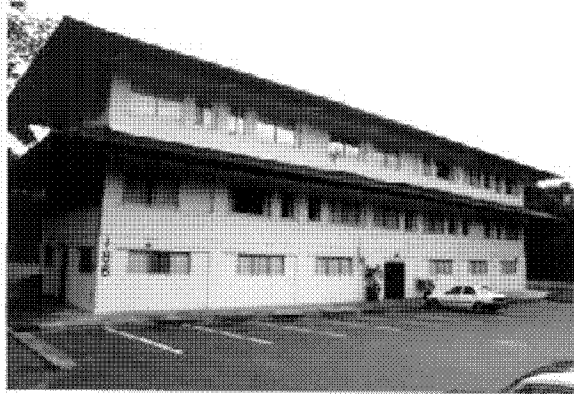
Resource No. 27046, Real Property No. 500
Chapel Center



Resource No. 27047, Real Property No. 192
Air Force Clinic



Resource No. 27048, Real Property No. (none)
Tennis Courts



Resource No. 27049, Real Property No. 186
Visiting Airman's Quarters Dormitory



Resource No. 27050, Real Property No. 113
Officer's Open Mess



Resource No. 27051, Real Property No. 119
Visiting Officer's Quarters



Resource No. 27052, Real Property No. 174
Visiting Officer's Quarters



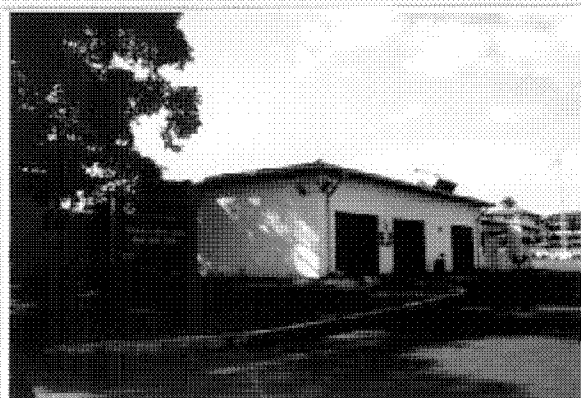
Resource Nos. 27053-27054, Real Property Nos. 714 and 716, Visiting Airman's Quarters Dormitory and Permanent Party Airman's Dormitory



Resource No. 27055, Real Property No. 249
Medium Aircraft Maintenance Dock



Resource No. 27056, Real Property No. 723
Security Police Operations



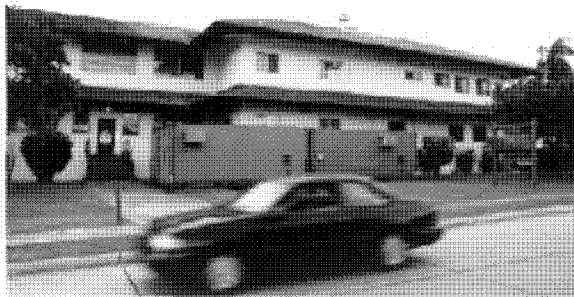
Resource No. 27057, Real Property No. 722
Automotive Hobby Shop



Resource No. 27058, Real Property No. 255
Base Supply and Equipment Warehouse



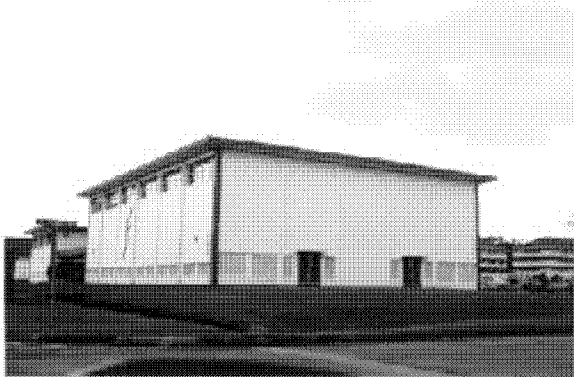
Resource No. 27059, Real Property No. 253
Medium Aircraft Maintenance Dock



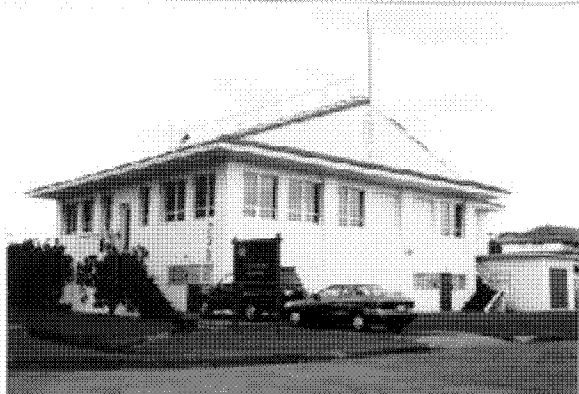
Resource No. 27060, Real Property No. 726
Reconnaissance Photo Laboratory (Fire Station)



Resource No. 27061, Real Property No. 734
Explosive Ordnance Disposal



Resource No. 27062, Real Property No. 248
Gymnasium



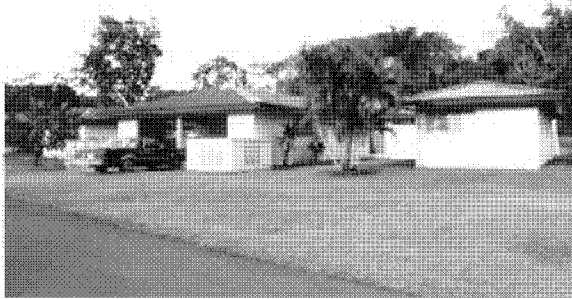
Resource No. 27063, Real Property No. 238
Law Center



Resource No. 27064, Real Property No. 241
Medium Aircraft Maintenance Dock



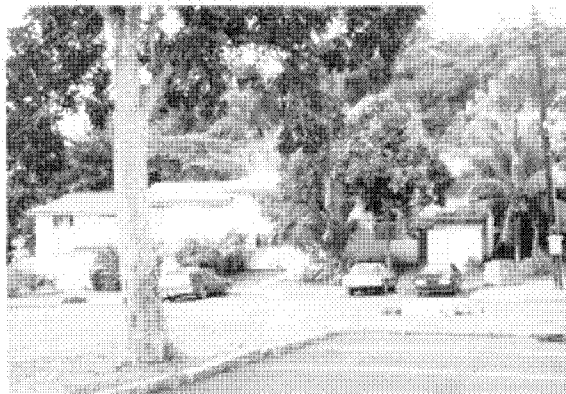
Resource No. 27065, Real Property No. 256
Aircraft Support Equipment Storage Facility and
Shop



Resource No. 27066, Real Property No. 1559
Family Housing (Appr. 1950-1969)



Resource No. 27067, Real Property No. 1560
Family Housing (Appr. 1950-1969)



Resource No. 27068, Real Property No. 1553
Family Housing (Appr. 1950-1969)



Resource No. 27069, Real Property No. 1552
Family Housing (Appr. 1950-1969)



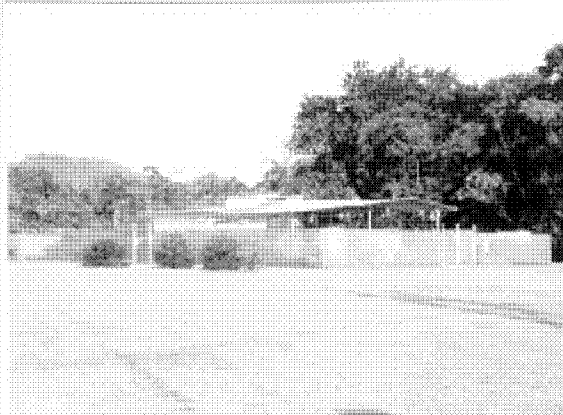
Resource No. 27070, Real Property No. 1000
Petroleum Operations Building



Resource No. 27071, Real Property No. 1565
Bus Shelter



Resource No. 27072, Real Property No. 962
Dependant Elementary School



Resource No. 27073, Real Property No. 925
Oxygen Generation Plant



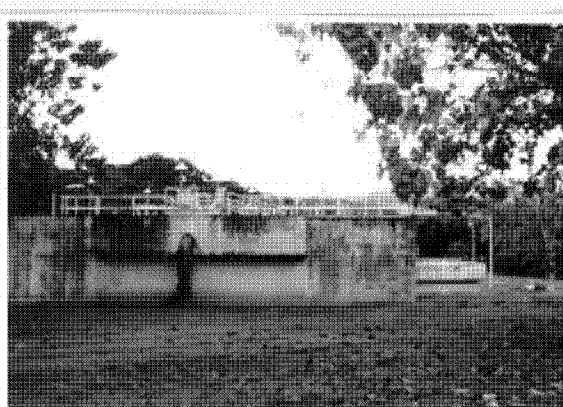
Resource No. 27074, Real Property No. 914
Riding Stables



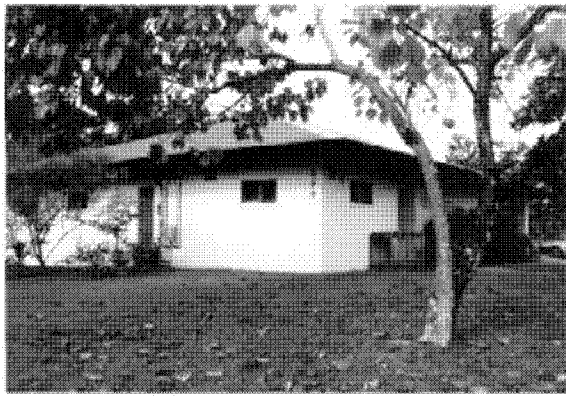
Resource Nos. 27075-27076, Real Property Nos.
940 and 942, Miscellaneous Outdoor Recreation
Facility (Pavilion) and Athletic Field Softball



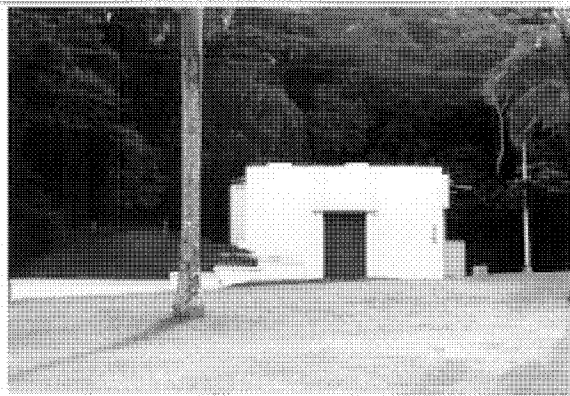
Resource No. 27077, Real Property No. 892
Waste Treatment Plant



Resource No. 27078, Real Property No. 889
Sewage Treatment and Disposal



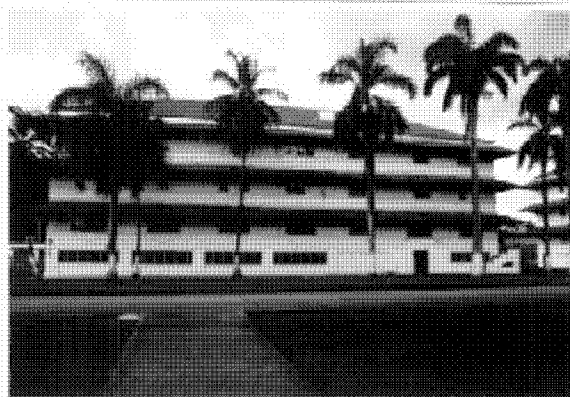
Resource No. 27079, Real Property No. 898
Base Engineering Maintenance Shop
(Entomology)



Resource No. 27080, Real Property No. 36
Base Engineering Covered Storage Facility



Resource No. 27081, Real Property No. 812
Visiting Airman's Quarters Dormitory (Albrook
AFS)



Resource No. 27082, Real Property No. 811
Visiting Airman's Quarters Dormitory (Albrook
AFS)



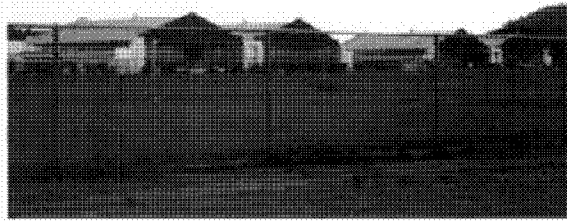
Resource Nos. 27083-27084, Real Property Nos.
810 and 809, Permanent Party Airman's
Dormitories (Albrook AFS)



Resource No. 27085, Real Property No. 808
Education Center (Albrook AFS)



Resource No. 27086, Real Property No. 885
Traffic Check House (Albrook AFS)



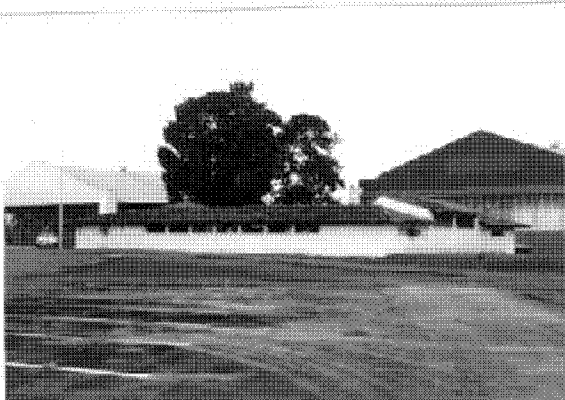
Resource Nos. 27087-27088, Real Property Nos.
449 and 450, Hangars (Albrook AFS-Leased to
U.S. Army)



Resource No. 27089, Real Property No. 453
Precision Measurement Equipment Laboratory
(Albrook AFS)



Resource No. 27090, Real Property No. 870
NAF Administrative Office (Albrook AFS)



Resource No. 27091, Real Property No. 881
Miscellaneous Recreation Building (Albrook
AFS)



Resource No. 27092, Real Property No. 869
Maintenance Shop Exchange (Albrook AFS)



Resource No. 27093, Real Property No. 446
Post Office Center (Albrook AFS)



Resource No. 27094, Real Property No. 868
Central Exchange Administration



Resource No. 27095, Real Property No. 405
Security Police Operations (Albrook AFS)



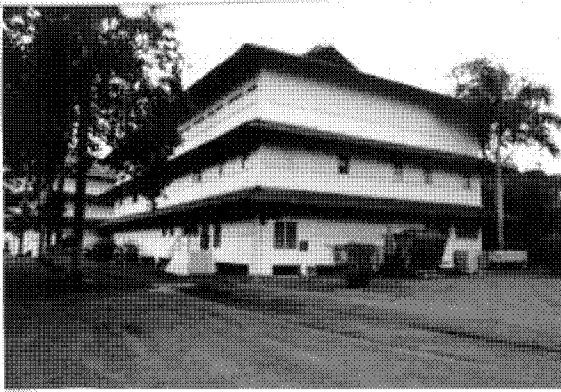
Resource No. 27096, Real Property No. 403
Gymnasium (Albrook AFS)



Resource No. 27097, Real Property No. 407
Housing Supply and Storage Facility (Albrook AFS)



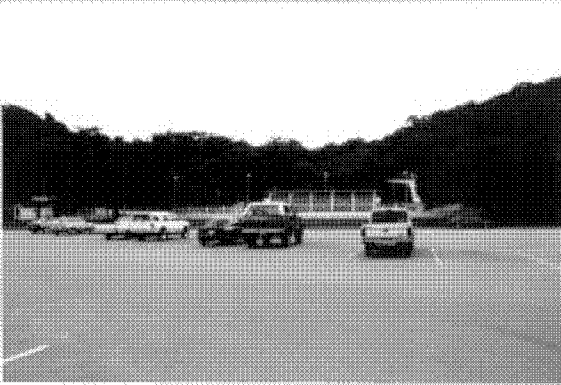
Resource No. 27098, Real Property No. 802
Service Outlet Exchange (Albrook AFS)



Resource No. 27099, Real Property No. 800
NAF Administration Office (Albrook AFS)



Resource No. 27100, Real Property No. 850
Youth Center (Albrook AFS-Class Six Liquor,
Exchange)



Resource No. 27101, Real Property No. 849
Swimmer's Bath House (Albrook AFS)



Resource No. 27102, Real Property No. 245
Family Housing (Appr.1950)(Albrook AFS)



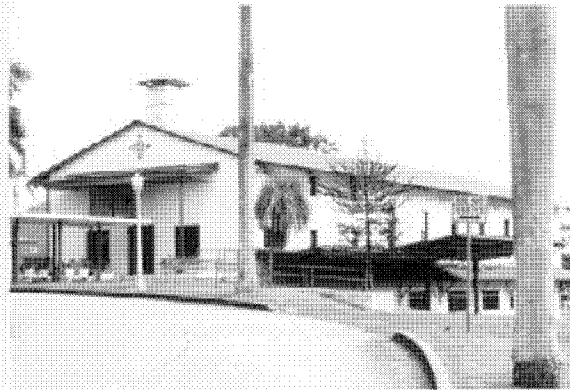
Resource No. 27103, Real Property No. 246
Family Housing (Appr. 1950)(Albrook AFS)



Resource No. 27104, Real Property No. 217
Family Housing (Appr. 1950)(Albrook AFS)



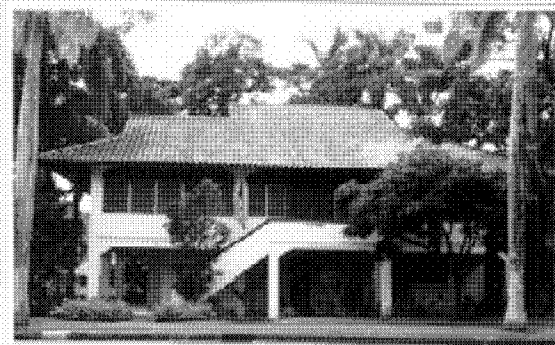
Resource No. 27105, Real Property No. 208
Family Housing (Appr. 1950)(Albrook AFS)



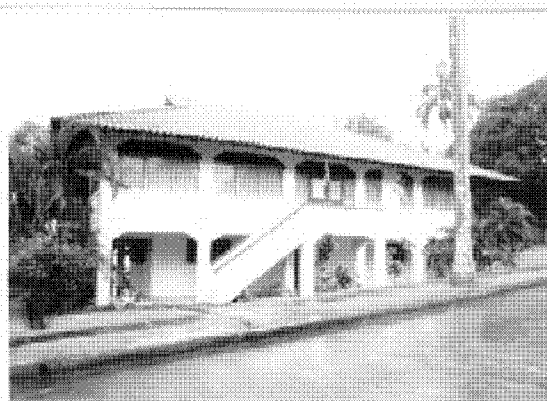
Resource No. 27106, Real Property No. 860
Chapel Center (Albrook AFS)



Resource No. 27107, Real Property No. 865
NAF Administrative Office (Albrook AFS)



Resource No. 27108, Real Property No. 24
Family Housing (Appr. 1950)(Albrook AFS)



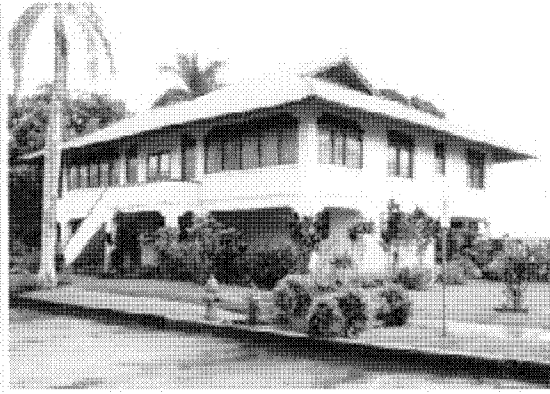
Resource No. 27109, Real Property No. 4
Family Housing (Appr. 1950)(Albrook AFS)



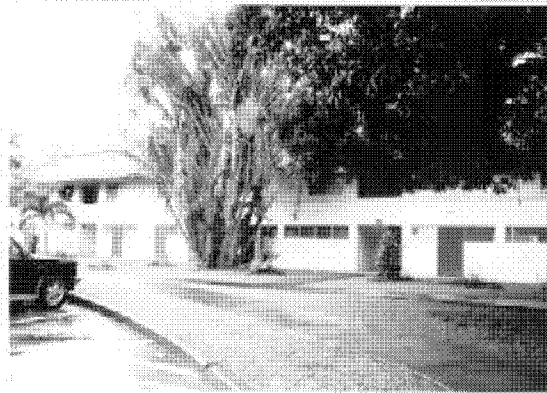
Resource No. 27110, Real Property No. 2
Family Housing (Appr. 1950)(Albrook AFS)



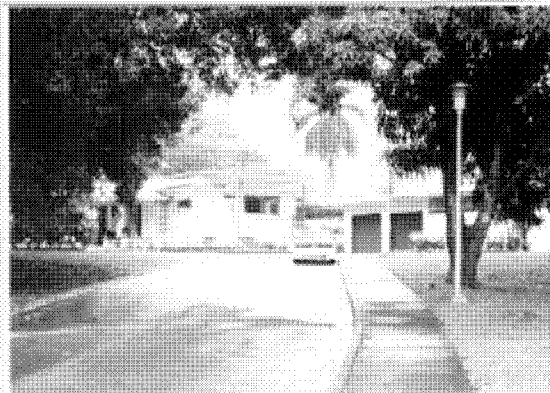
Resource No. 27111, Real Property No. 13
Officer's Open Mess (Albrook AFS)



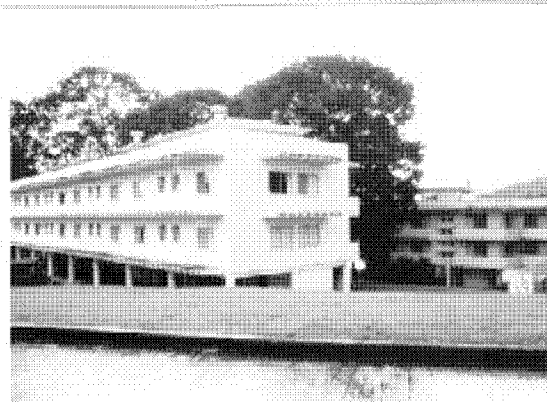
Resource No. 27112, Real Property No. 16
Visiting Officer's Quarters (Albrook AFS)



Resource No. 27113, Real Property No. 14
Visiting Officer's Quarters (Albrook AFS)



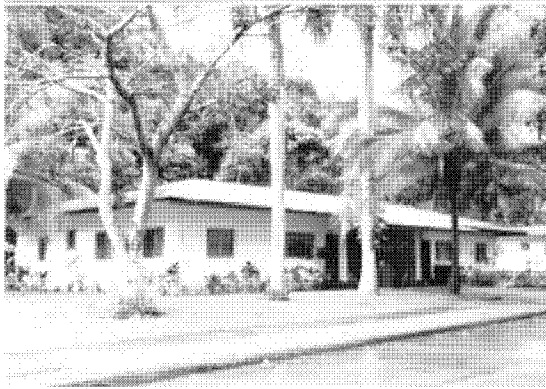
Resource No. 27114, Real Property No. 1
Family Housing (Appr. 1950)(Albrook AFS)



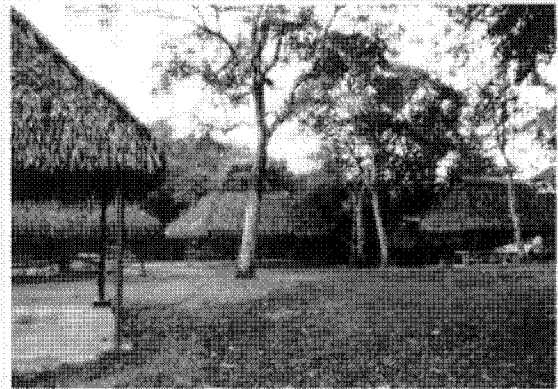
Resource No. 27115, Real Property No. 19
Permanent Party Airman's Dormitory (Albrook
AFS)



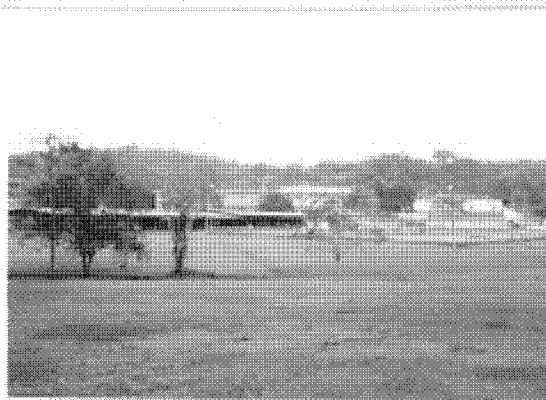
Resource No. 27116, Real Property No. 861
NAF Administration Office



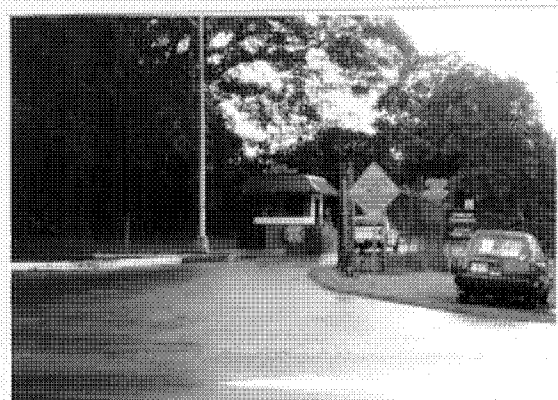
Resource No. 27117, Real Property No. 313
Family Housing (Appr. 1950)(Albrook AFS)



Resource No. 27118, Real Property No. (none)
Bohio/Picnic Area (Albrook AFS)



Resource No. 27119, Real Property No. 961
Riding Stables (Albrook AFS)



Resource No. 27120, Real Property No. 958
Traffic Check House (Albrook AFS)



Resource No. 27121, Real Property No. 1694
Traffic Check House

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT HOWARD AFB

Resource Number: 27081

Property Description: Airmans Dormitory formerly the location of the headquarters of the Inter American Air Forces Academy
Associated Property: 27082, 27083, 27084, 27085, 27087, 27088, 27122, 2712
Non-Inventoried Association:
Sub-installation: Albrook Air Force Station
Address:
Base Map Date: 10/1/91
Base Map Building Number: 812

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities: Combat Support Training
Material Development Facilities:
Intelligence
Property Type: IAAFA Headquarters

Statement of Significance: This building was the headquarters of the Inter-American Air Forces Academy for 40 years. This building and the other associated academic and support buildings housed important training activities funded and conducted by the U.S. for all Latin American Air Forces. Through training programs and military support the U.S. maintained positive relations with Latin American allies against communism. IAAFA buildings are exceptional examples of the U.S. policy of maintaining good relations with third-world allies through fully supported training programs.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 4
Level of Importance: 4
Percent Historic Fabric: 3
Severity of Threats: 1
Total Score for Priority Matrix: 20

Comments on Threats: The buildings are now used for a variety of purposes and the exteriors have been slightly remodeled for safety and maintenance. The interiors were not inspected, but it is assumed they too have been remodeled. The IAAFA function was important to the base for over 40 years and the facilities constitute a relatively significant percentage of the total number of facilities at the air station.

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: Potentially NRHP eligible now. Air Force histories of IAAFA have the potential to contribute details of these facilities. Further research could identify some of the stated rationale for the Academy's inception. The buildings are representative of an exceptionally significant element of Latin American Cold War policy.

Importance: Exceptional
Eligibility: Potential

Height: 40
Square Footage: 38722
Original Planned Duration: Permanent
Existing Use: Visiting Airmans's Quarters Dormitory
Other Use/Dates: Dormitory 1942- 1949; Academic facility and Specified Headquarters 1949-1989; Dormitory 1989-present
Comments on Use:
Primary Building Materials: Concrete with stucco
Character Defining Features: Red tile roof, awning of a covered grand entryway to the street.

Resource Number: 27122

Property Description: History Office collection including various histories, photograph collection, slide collection, newspapers, video, and miscellaneous documents.

Associated Property: 27081- 27085, 27087-27088

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 10/1/91

Base Map Building Number: inside 703

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: The office contains unique documents and photographic records pertaining to Howard AFB and Albrook AFS development and history.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 4

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 18

Comments on Threats: The collection contains documents pertaining to all aspects of base history including policy and strategy through all periods. The collection of histories is not complete, but not too many are missing.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: The collection is in good condition. The photographic and slide collections are in need of organization and cataloging to make them of use.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Histories, photographs, slides, newspapers, etc.

Year of Document: Various

Period of Association: All

Comments on Condition: Documents are in good condition and are well organized. Photographs and slides are not organized or inventoried and they need work to be useful.

Resource Number: 27123

Property Description: Architectural files containing original drawings on cloth, paper, and mylar; as-builts; and modifications dating from base construction to present.
Photographs of aerial views also.

Associated Property: 27081-27085, 27087-27088

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 10/1/91

Base Map Building Number: inside 1

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: These files contain rare and unique original drawings and as-builts of buildings and facilities dating from original construction to the present. The documents contain important information about base development in general, various utilities, and specific buildings.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 3

Percent Historic Fabric: 3

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats: This estimate for percentage of historic fabric is based on our difficulties in locating various decade maps for the installation. We assume from this difficulty that some of the collection has been disposed.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: This important collection is subjected to the hot and humid climate of the tropics and it is subjected to regular use by engineers and maintenance personnel. There are plans to inventory, electronically scan, and develop a data base to better manage this resource. This strategy would eliminate much of the wear on these documents and would create a more accessible data resource.

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: Various
Period of Association: All
Comments on Condition: Drawings are in slow process of being inventoried,
plans are laid to electronically scan the documents.
However, currently being used and handled, vast
numbers of unknown records stored on top of cabinets,
and needs to be climate controlled in this hot and
wet environment.

APPENDIX E:
ADDITIONAL DATA ON EVALUATED RESOURCES

Documentary Collection (Resource No. 27122, Located in Real Property No. 703)

File Cabinets: (2 four-drawer and 1 five-drawer)

- Historical research and reference
- Aircraft and dignitary photos
- Albrook Field and AFB photos, 1909-1960
- France Field photos, 1918 - 1961
- Howard Field and AFB photos, 1963 - 1969
- Commanders and Staff Officers photos, 1942 - 1946
- USAF mission photos, 1951 - 1974
- Miscellaneous photos, 1900 - 1966
- USAFSO reorganization documents
- Personnel data, 1934 - 1972
- Albrook AFB, 1924 -1975
- Balboa Fill Landing Field, 1928 - 1955
- Howard AFB, 1961 - 1964
- France Field, 1921 - 1975
- Air Warning Stations at Howard AFB, 1947 - 1948
- Howard - Albrook Controversy, 1949 - 1955
- Operations and maneuvers, 1960 - 1969
- Working papers
- Historical background/photos
- Orders and airfield
- Latin American pilot training
- Operation Just Cause
- Agreements, leases, and treaties

File Safes: (3 four-drawer and 1 two-drawer)

- History files, 1966-present
- Miscellaneous - Treaty Implementation
- Research and References
- Special and General Orders, 1932 - 1970
- Files regarding 17 off-base defense installations

Slide File:

Collection of slides portraying activities, awards, personnel, aircraft, exercises, etc.

Assorted Holdings on Shelves:

- Box of unsorted slides of events, people, IAAFA, and buildings
- Box of videos
- Box of unsorted prints and slides
- Bound histories
 - France AFB, 1917-1949

-
- Albrook AFB, 1931-1938, 1951, 1956
 - Caribbean Air Force
 - 19th Wing
 - Sixth Air Force
 - Sixth Air Force Weather Squadron
 - 24th Composite Wing
 - 776th Air Force Band
 - Caribbean Air Command
 - 5700th Air Base Group
 - USAFSO/USAFS Air Division, 1963-1989

Assorted Reports

- Paitilla Point
- Airfields: Authority for Abandonment, 1943-1944
- Land acquisition in Panama, chronological history
- IAAFA history, 1984
- Agreements
- Treaties
- Mission Data
- Construction

Ring Bound Reports

- Biographies
- Chronologies
- Operations
- Facilities (includes old photos and chronology)

Ring Bound Slide Sets

The Runway newspaper, 1944-1946

Set of USAF publications on history

Back issues of *Airman* magazine

Assorted Holdings on Floor:

2 boxes unsorted miscellaneous photos, scrapbooks, slides, awards, mission statements

Box of videos

1 painted concrete, WWII vintage, Air Corps emblem reportedly recovered from the floor of a hangar

Documentary Collection (Resource No. 27123, Located in Real Property No. 1)

Approximately 200 flat file drawers containing:

60 files of individual building drawings

Files include original vellum, cloth, and blueprint plans and as-builts of individual buildings, as well as subsequent modifications. Notable examples include original drawings and modifications of building Nos. 808-812 (Drawer 88) and those of the 1940's tropical family housing units (Drawer 105).

80 files of general utilities and systems

Files include base parking, roads, sewer, water, power, and fuel systems, aprons, and taxiways. Contains plans and as-built drawings on mylar, vellum, and sailcloth. Drawings span base construction to the present.

20 files of miscellaneous subjects

Topics or items present in these drawings include layout maps, Treaty Related, Panama Canal, Army, Navy, and Rodman drawings, and standard drawings of barracks. Aerial photographs in these files span the 1960s and 1970s, and others are undated.

20 files associated with current design projects

20 empty files

The tops of 5 file cabinets are filled with map tubes, rolls of maps, boxes, etc. of unknown items.

APPENDIX F:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Howard AFB, and to provide research materials for this study:

Mr. James Chavers
Natural and Cultural Resource Manager
24th CES/CEEV
APO AA 34001
Howard AFB, Panama
(507) 845165

Capt Gregory Long
Chief Environmental Flight
24th CES/CEEV
APO AA 34001
Howard AFB, Panama
(507) 845165

Mr. Maximo Abad
Real Property Officer
24th CES
Unit 0850
APO AA 34001
Howard AFB, Panama

Mr. Robert Sullivan
Wing Historian
24th W/HO
Unit 0509
APO AA 34001-5000
Howard AFB, Panama

MSgt Joseph Doyle
CE Drafting Office
24th CES
APO AA 34001
Howard AFB, Panama

Mr. William Kludt
Deputy Base Engineer
24th CES
APO AA 34001
Howard AFB, Panama

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-13: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT K. I. SAWYER AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**R. Blake Roxlau
Karen Lewis
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

K. I. Sawyer Air Force Base was inventoried for Cold War resources by Karen Lewis and R. Blake Roxlau of Mariah Associates, Inc., between October 17 and 22, 1994 as part of the Air Combat Command Cold War Study under the ongoing Department of Defense Legacy Program. Information was gathered at the base from the Wing Historian, Drawing Room staff, and Civil Engineering, Real Property, and Public Affairs Offices. On-site inspections of extant Cold War properties were also conducted. During this research, 130 resources were inventoried and photographed.

Based on the inspections and the information gathered, five resources were selected for further documentation and evaluation as important to the base's Cold War context. These resources include the Bomber Alert Facility, Tanker Alert Facility, Fighter Alert Facility, Semi-Automatic Ground Environment Facility, and a Documentary Collection. The majority of properties evaluated correspond to Phase II of the Cold War as described in the historic context and methodology document written for this project (Lewis et al. 1995). To differing degrees, these five resources reflect the role that K. I. Sawyer Air Force Base played in the Cold War.

All three alert facilities are recommended as eligible to the National Register of Historic Places, with further documentation and stewardship also recommended. The Semi-Automatic Ground Environment Facility, which has compromised integrity, is recommended as ineligible to the National Register, with further documentation recommended to record the historic use of the building. Finally, further documentation, stewardship, and conservation are recommended for the Documentary Collection.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
AFB	- Air Force Base
AGE	- Air Ground Equipment
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
AREFS	- Air Refueling Squadron
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
BRACC	- Base Re-Alignment and Closure Commission
BS	- Bomb Squadron
BW	- Bomb Wing
DoD	- Department of Defense
FG	- Fighter Group
FIS	- Fighter Interceptor Squadron
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
NSC	- National Security Council
OCNUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center
SAC	- Strategic Air Command
SAGE	- Semi-Automatic Ground Environment
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
SW	- Strategic Wing
TAC	- Tactical Air Command
USAF	- United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Gaither Report - a report concerning the development of the Cold War produced by the Gaither Committee in 1957. It predicted an increase in the arms race and continued escalation of the Cold War. It recommended a drastic increase in military spending and initiation of a multibillion-dollar civil defense system. It also echoed the Killian Report in recommending the dispersal of the bomber force to increase survivability.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

GLOSSARY (Continued)

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	4
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	16
4.0 METHODOLOGY	22
4.1 INVENTORY	22
4.2 EVALUATION OF IMPORTANT RESOURCES	23
4.2.1 Documentation	23
4.2.2 Evaluation of Importance	23
4.2.2.1 Cold War Context	23
4.2.2.2 NRHP Criteria	24
4.2.2.3 Exceptional Importance	25
4.2.3 Evaluation of Integrity	25
4.2.4 Priority Matrix	26
4.2.5 Resource Organization	27
4.3 BASE SPECIFIC METHODS	27
5.0 RECONNAISSANCE INVENTORY RESULTS	28
6.0 EVALUATION RESULTS	29
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	29
6.1.1 Documentation	29
6.1.1.1 Documentary Collection	29
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	31
6.2.1 Alert Facilities	31
6.2.1.1 Fighter Alert Facility	31

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1.2 Bomber Alert Facility	32
6.2.1.3 Tanker Alert Facility	33
6.2.2 Communications	33
6.2.2.1 SAGE Facility	33
6.3 MATERIEL DEVELOPMENT FACILITIES	34
6.4 TRAINING FACILITIES	34
6.5 INTELLIGENCE FACILITIES	35
7.0 UNDOCUMENTED RESOURCES	36
8.0 FUTURE THREATS TO RESOURCES	37
9.0 PRELIMINARY RECOMMENDATIONS	38
9.1 NRHP ELIGIBILITY	38
9.1.1 Evaluation and Determination of NRHP Eligibility	38
9.1.2 Implications of NRHP Eligibility	40
9.2 EVALUATED RESOURCE RECOMMENDATIONS	41
9.2.1 Documentary Collection	43
9.2.2 Fighter Alert Facility	43
9.2.3 Bomber Alert Facility	44
9.2.4 Tanker Alert Facility	44
9.2.5 SAGE Facility	45
9.3 PENDING BASE CLOSURE	45
10.0 REFERENCES CITED	46
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of K. I. Sawyer Air Force Base	5
Figure 2.2 K. I. Sawyer Air Force Base Layout	6
Figure 2.3 Standard Strategic Air Command Base Layout	7
Figure 2.4 K. I. Sawyer Air Force Base Land Use Diagram	10
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	11
Figure 3.1 K. I. Sawyer Air Force Base, 1950-1960	18
Figure 3.2 K. I. Sawyer Air Force Base, 1960-1970	19
Figure 3.3 K. I. Sawyer Air Force Base, 1970-1990	20
Figure 3.4 K. I. Sawyer Air Force Base, 1990-Present	21

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.	30
Table 6.2 Evaluated Resource Prioritization by Priority Rank.	30
Table 9.1 Recommendations for Evaluated Resources.	42

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

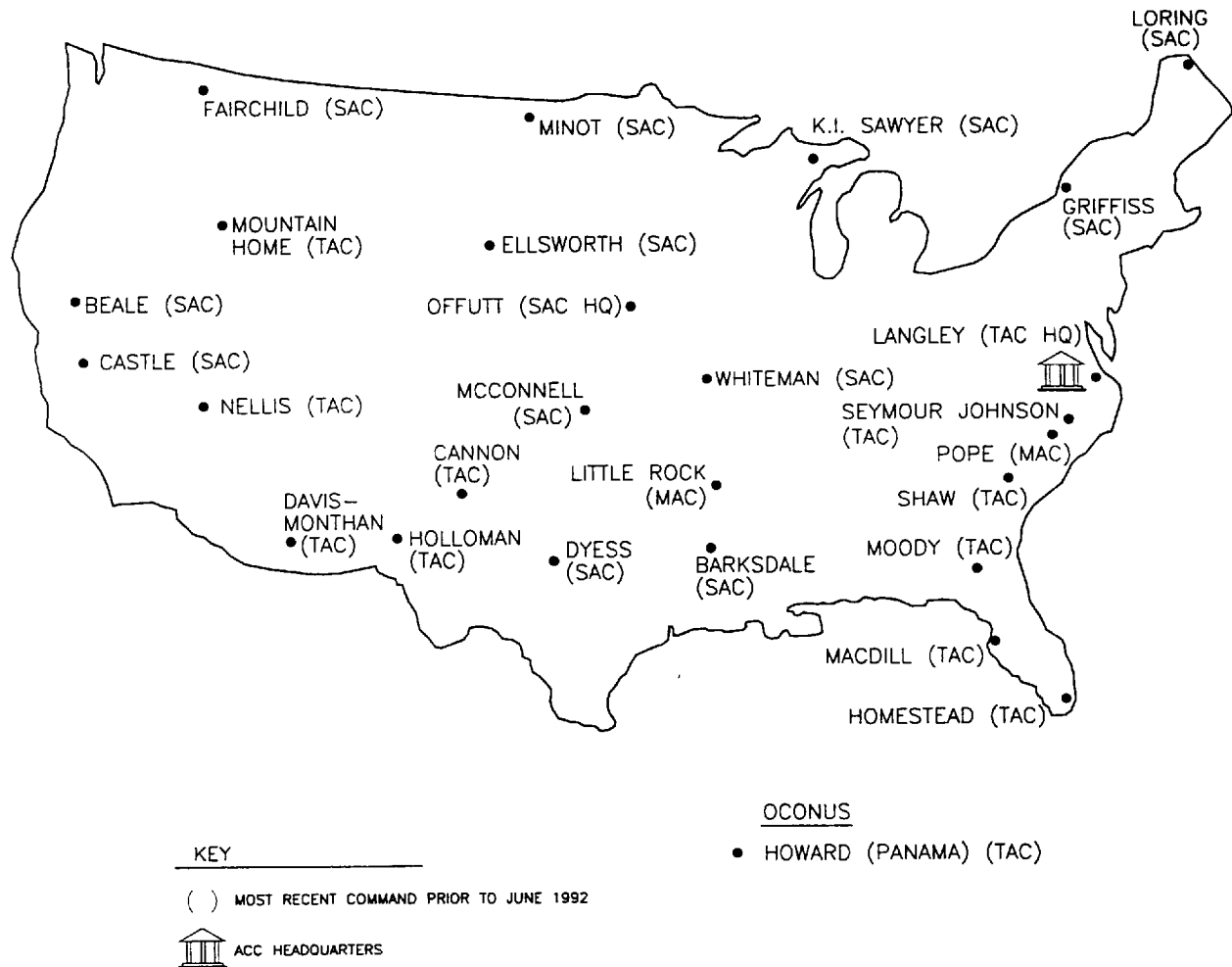
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: SAWYER/US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on K. I. Sawyer Air Force Base (AFB). K. I. Sawyer AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

K. I. Sawyer AFB currently consists of the 410th Bomb Wing (BW), which is the base host and directs the 410th Operations Group, 410th Logistics Group, 410th Support Group, and the 410th Medical Group. The 410th BW employed the B-52H *Stratofortress* bomber and KC-135A *Stratotanker* in support of its mission to "deter attacks against the United States and its allies by providing war fighting commanders-in-chief with combat forces ready to fight in-place or forward-deployed" (United States Air Force [USAF] 1994). K. I. Sawyer AFB is scheduled to close in September 1995. In anticipation of the closure, the KC-135A tankers and squadron were reassigned in October of 1993, and the B-52H bombers and squadron were reassigned in November of 1994. [Editor's Note: This report is written based upon existing conditions and findings made during the field reconnaissance. Since that time, K. I. Sawyer AFB has been closed by the Base Re-Alignment and Closure Commission (BRACC).]

2.2 GEOGRAPHIC DESCRIPTION

K. I. Sawyer AFB is located on the Upper Peninsula of Michigan approximately 21 mi (34 km) south of Marquette, Michigan and approximately 7 mi (11 km) northeast of the small community of Gwinn (Figure 2.1). The base is located in heavily forested, relatively flat terrain surrounded by gently rolling hills. The climate of the area is dominated by cold winters and cool summers, with heavy precipitation year round. The local economy is dependent on the base, iron ore, and timber industries.

2.3 CURRENT BASE LAYOUT

The layout of the buildings and facilities at K. I. Sawyer AFB (Figure 2.2) is very similar to that of the standard SAC layout (Figure 2.3). The base runway and aprons are oriented north/south.

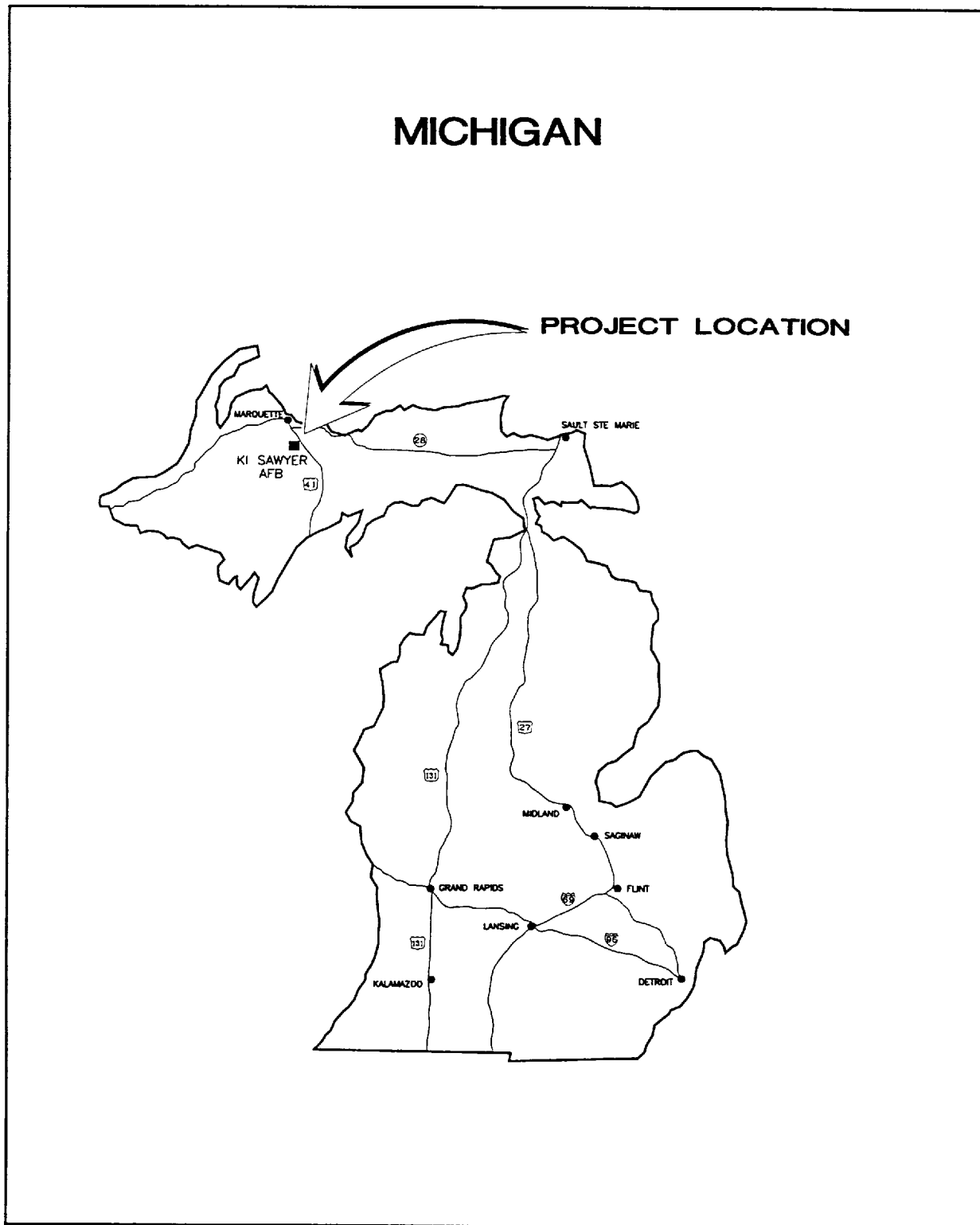


Figure 2.1 Location of K. I. Sawyer Air Force Base.

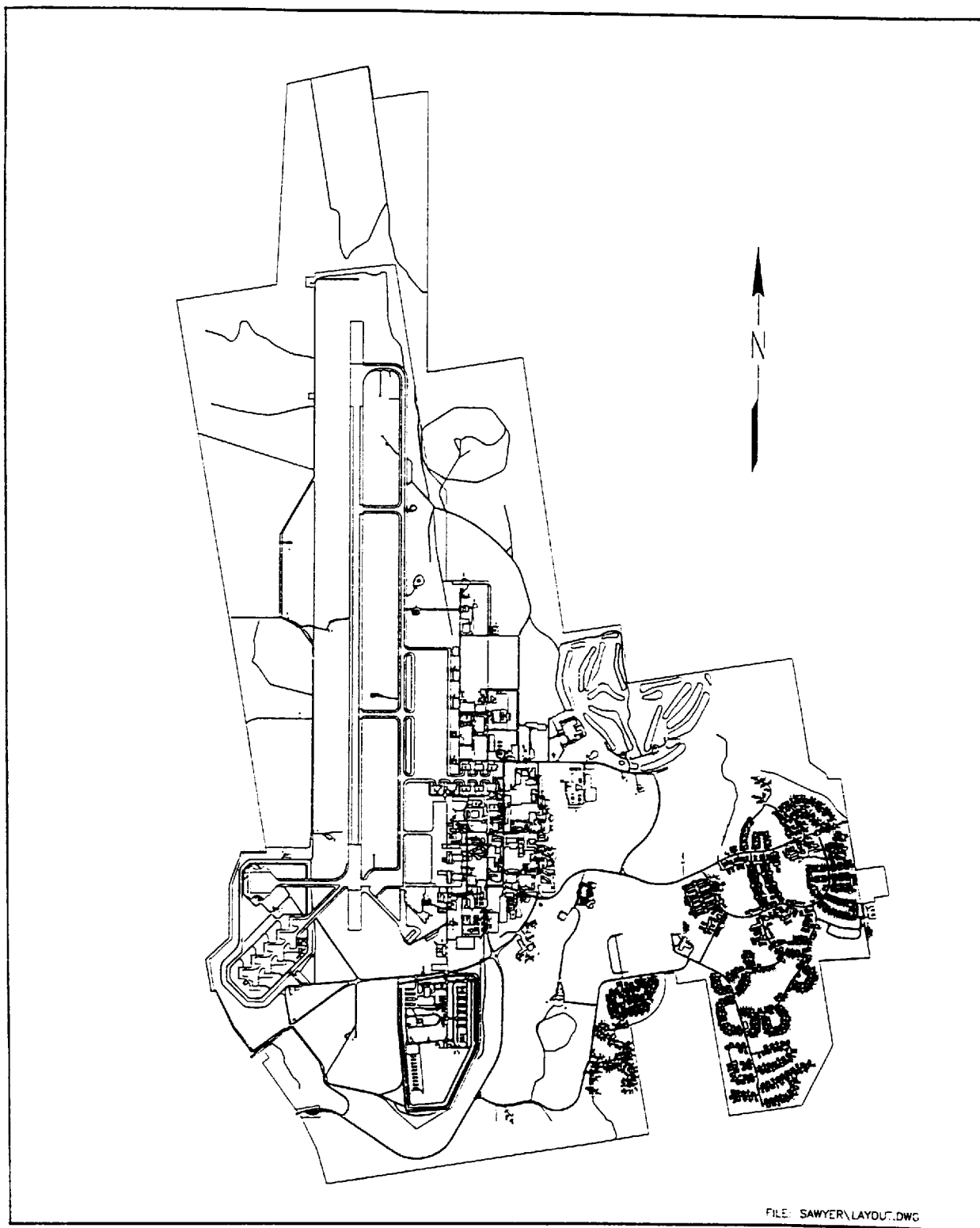
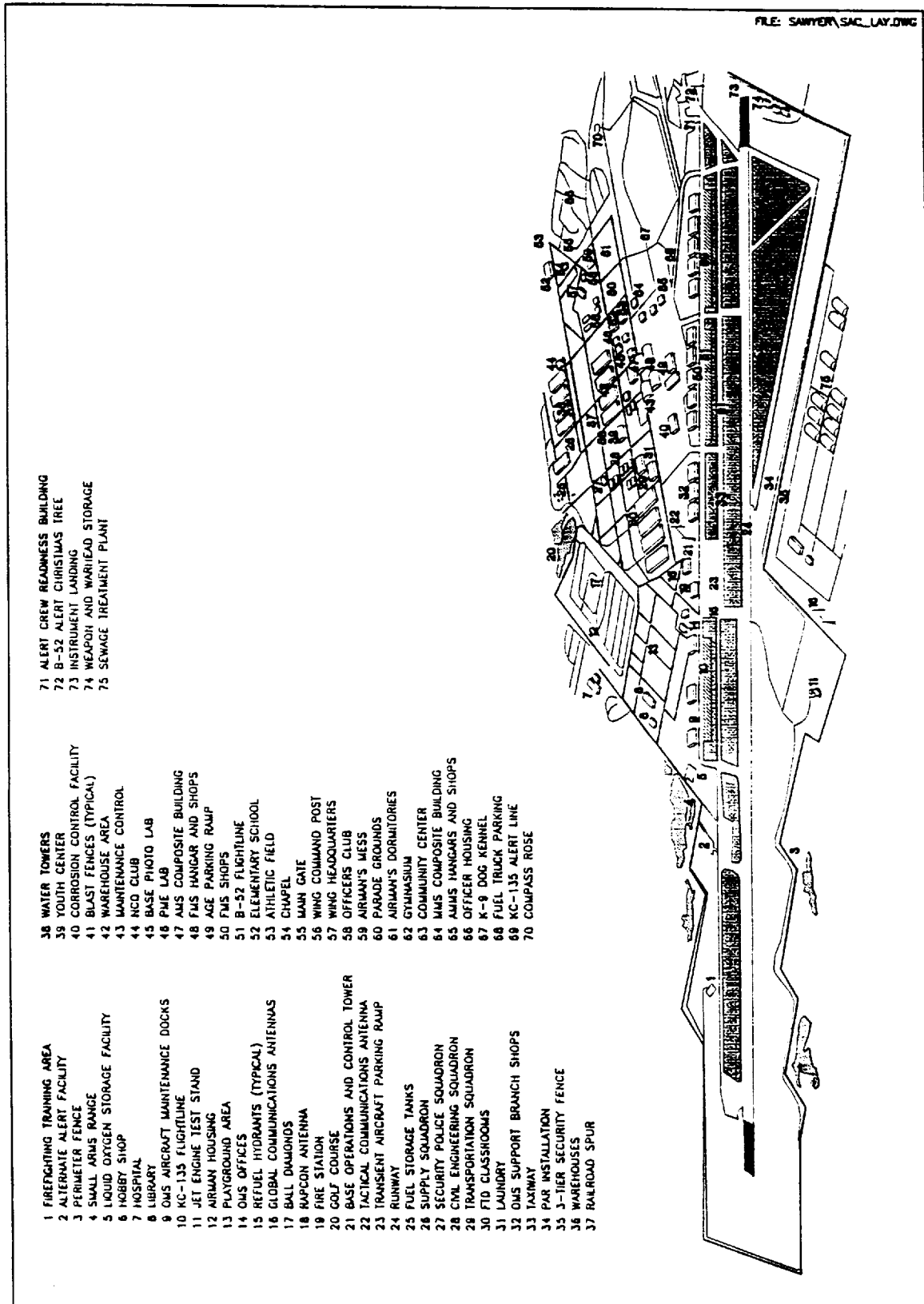


Figure 2.2 K. I. Sawyer Air Force Base Layout.



The flight line forms the western edge of the base, with almost all buildings and facilities located to the east of the flight line at its southern half. The buildings closest to the flight line are mission-related facilities. Static displays of aircraft important to base history are located throughout the mission and mission support area. The displays include a T-33 jet trainer, B-52 bomber, and F-101 *Voodoo* interceptor. Community, headquarters, industrial, base support, and unaccompanied housing are centrally located next to and east of the mission area. The family housing area is located farthest from the flight line, at the southeastern corner of the base. Located within the housing area are the elementary school, day care center, chapel, and temporary lodging facilities. There is a large open area between the housing and the rest of the base development. This area is heavily forested and contains the base golf course. The main gate is located at the southwestern corner of the base, and the entrance road, which is lined with flagpoles, passes through an open space around the southern end of the runway.

The bomber, tanker, and fighter alert areas are located at the southern end of the runway. The weapon storage area is found just south of the fighter alert facility. The bomber and tanker alert facilities and aprons are the only buildings on the western side of the flight line.

The differences between the layout of K. I. Sawyer AFB and the standard SAC base layout are few. In the standard, the control tower is in the middle of the mission area rather than at one end of the runway, and the main gate is next to family housing rather than in an empty part of the base at one end of the runway. Finally, the standard layout has a different specific configuration for the tanker and bomber alert aprons and has no fighter alert area. However, the location of these three at K. I. Sawyer AFB does generally approximate the layout of the standard SAC base.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan of K. I. Sawyer AFB, and Figure 2.5 is a diagrammatic land use plan of a standard SAC base. K. I. Sawyer AFB's land use pattern is similar to that of a standard SAC base; however, there are some land use differences, the most evident of which is the addition of a fighter alert facility to K. I. Sawyer AFB. Also, the tanker alert area on the standard is along the regular runway, whereas the K. I. Sawyer AFB has a separate tanker alert facility and apron. The weapon storage area in the standard is away from the main base development, but at K. I. Sawyer AFB the storage area is immediately adjacent to the main base. Another difference is the placement of K. I. Sawyer AFB's headquarters buildings within the mission area, whereas the standard land use diagram places them farther

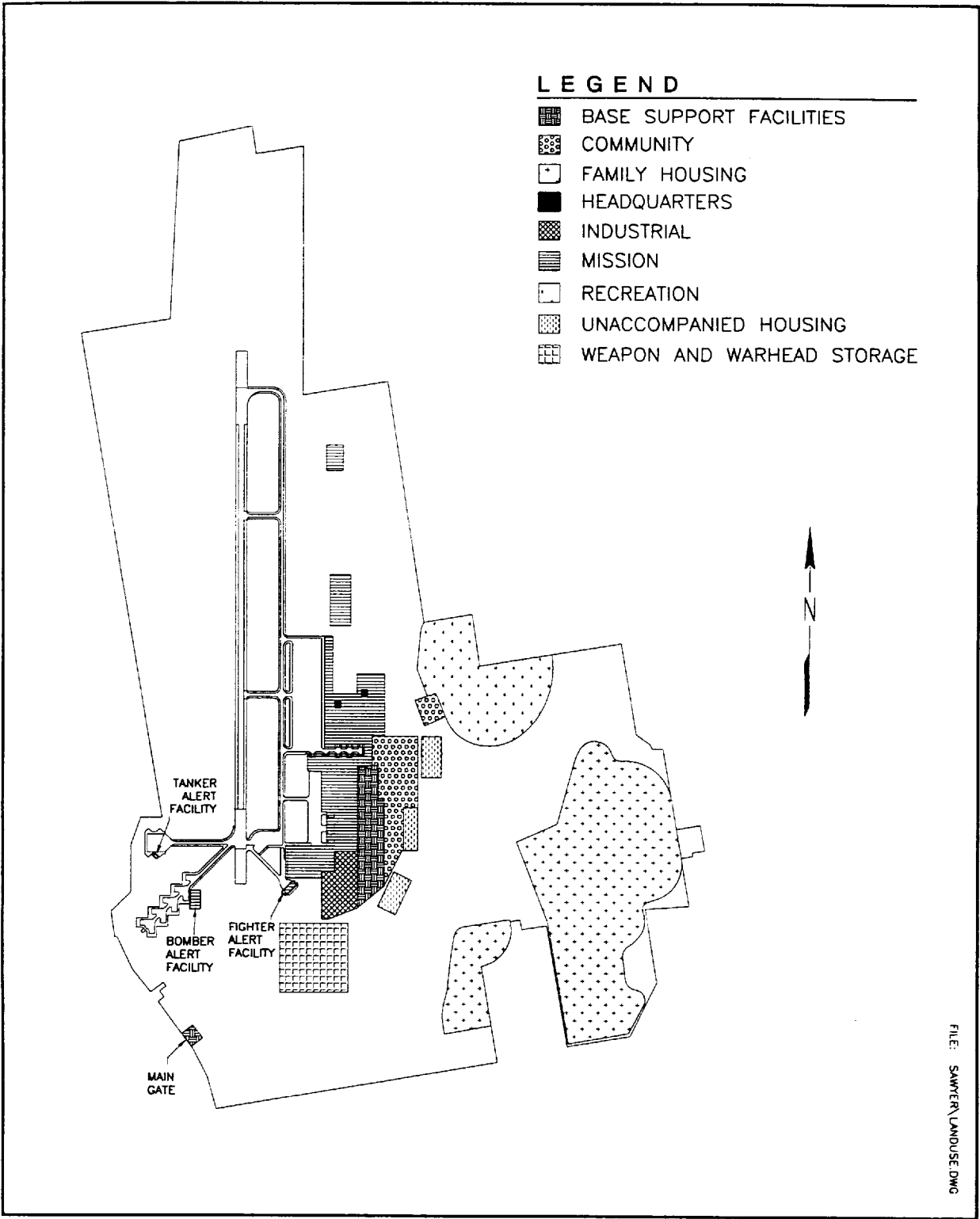


Figure 2.4 K. I. Sawyer Air Force Base Land Use Diagram.

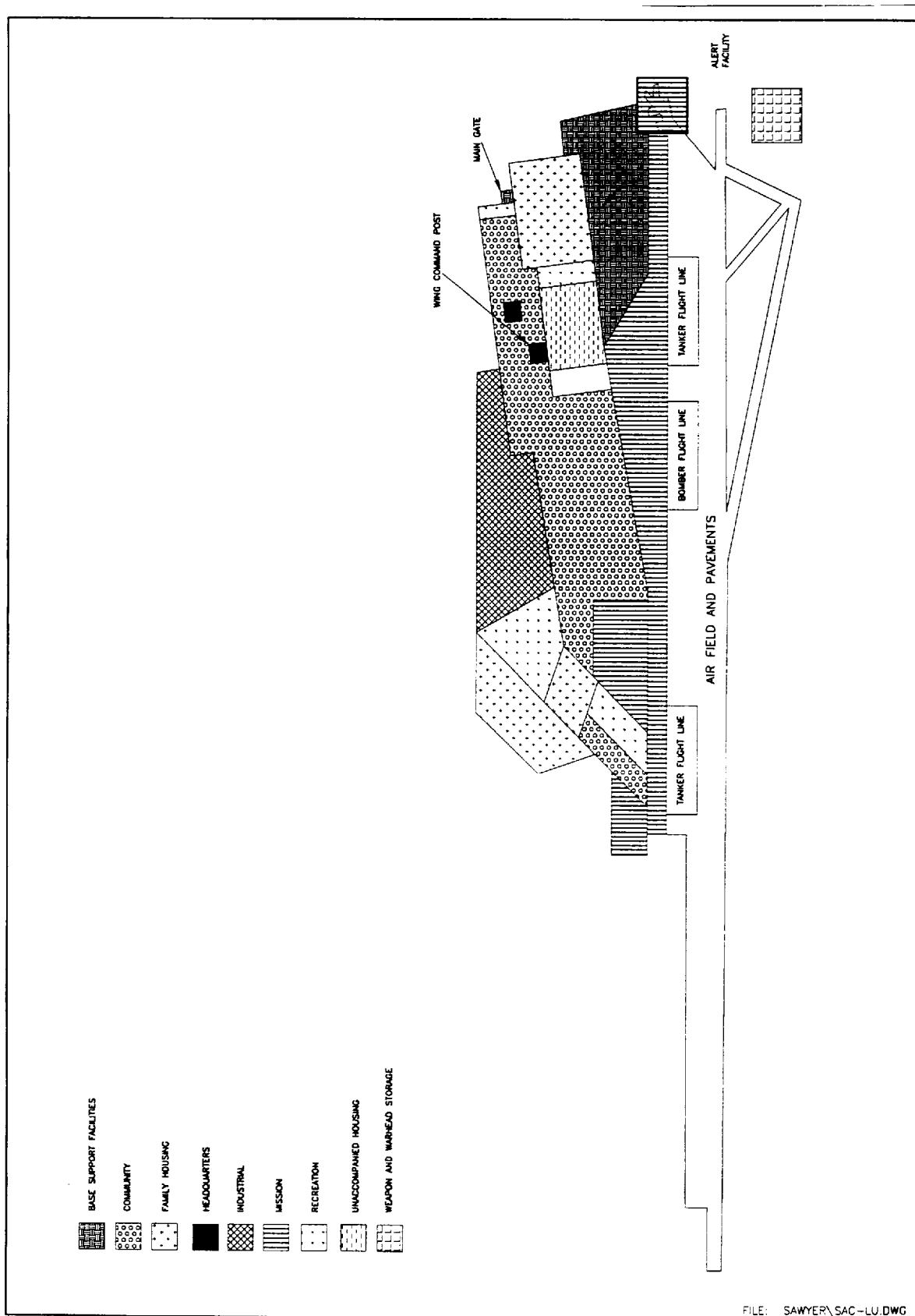


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

from the runway within the middle of the base. Finally, the standard land use diagram shows two distinct family housing areas. In contrast, K. I. Sawyer AFB has one large area for family housing.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

K. I. Sawyer AFB was established in 1956 on the site of the K. I. Sawyer Municipal Airport. Kenneth Ingalls Sawyer, the base's namesake, was a local official and the original proponent for the construction of the airport. The name was retained after the Air Force obtained the property.

The base was conceived as an interceptor base to counter the threat of Soviet trans-polar bomber attack and to improve the United States capability to detect incoming attack and defend the nation. The original realization of a potential bomber threat was in response to the 1953 detonation of a Soviet hydrogen device, and was described in the Killian Report presented to the National Security Council in March of 1954 (Lewis et al. 1995). The report noted that, in spite of the United States advantage in nuclear strike capability, the nation was vulnerable to surprise attack as a result of poor air defense, lack of early warning systems, and an increasing Soviet long-range bomber force.

To remedy the situation, a defense network including early warning devices and interceptor aircraft was planned for the northern United States. Several cities along the northern frontier were considered as interceptor bases. In January of 1955, Air Force and local officials negotiated a 99-year lease of the property for use as K. I. Sawyer AFB (USAF 1993a). Presumably the decision was based on the site's northern location, inexpensive land, flat terrain, relatively few surrounding residents, and existing runway system.

Construction of the base began soon after acquisition, and K. I. Sawyer AFB was activated in January of 1956 as part of the Eastern Air Defense Force of Air Defense Command (ADC) (USAF 1993a). The 473rd Fighter Group (FG) was activated under this command on January 8th, 1956 (Finanger 1994), and 25 F-102 *Delta Dagger* aircraft were placed on duty in 1958.

The 473rd FG was redesignated the 56th FG in 1959. The 62nd Fighter Interceptor Squadron (FIS), under the 56th FG, was equipped in October of 1959 with F-101 *Voodoo* supersonic interceptors. The 62nd FIS was responsible for patrol and defense of the Sault Ste. Marie Defense Sector, one of several north-south corridors along the United States-Canadian border.

The defense of Sault Ste. Marie's sector was facilitated by the Semi-Automatic Ground Environment (SAGE) system, which was assigned as another tenant of the base in 1959 (Lewis et al. 1995; Schaffel 1991; USAF 1994). The SAGE system was spread across the northern United States at various air force installations. Each SAGE location included a blast-resistant, windowless SAGE building that housed two large IBM computers and an array of radar and communications equipment. The computers cycled information received from early warning devices in Canada, calculating the elevation, speed, and distance of incoming targets, then figured the most efficient intercept route, and relayed that information to fighters in its sector (Finanger 1994).

K. I. Sawyer AFB's role as solely a fighter interceptor base was to be short-lived. The Soviet Union's development of the *Bear* and *Bison* bombers led to fear of a "bomber gap" between the United States and the Soviet Union (Goldberg 1957), resulting in a call for the production and deployment of more United States long-range bombers. In 1957, the Gaither Report claimed the Soviet Union could possess a first-strike capability against the United States as early as 1959 (Lewis et al. 1995). The report recommended that strategic aircraft be dispersed to numerous bases to help ensure that a substantial portion of the bomber and tanker force would survive a Soviet first strike. K. I. Sawyer AFB was one of the bases chosen to carry out this military strategy of dispersal (Lewis et al. 1995; USAF 1994). The fact that K. I. Sawyer AFB was located in the northern United States and provided a relatively short attack route to the Soviet Union probably contributed to the decision.

The 4042nd Strategic Wing (SW) was activated in 1958 as a SAC tenant on K. I. Sawyer AFB. The wing's mission was to include the operation of KC-135 tankers of the 923rd Air Refueling

Squadron (AREFS) and B-52H bombers of the 644th Bombardment Squadron (BMS) (Finanger 1994). The 923rd AREFS was redesignated the 46th AREFS in 1961. In 1963, the 4042nd SW was redesignated the 410th Bombardment Wing (BMW), and the 644th BMS was redesignated the 526th BMS.

In September 1963, the SAGE facility at K. I. Sawyer AFB was deactivated. In January of 1964, K. I. Sawyer AFB was reassigned from ADC to SAC, and the 410th BMW became the base host (USAF 1994). The SAC mission was to maintain "a capability of conducting long-range bombardment operations . . . and to sustain the capability to engage in effective air refueling operations" (USAF 1994). A number of the base's tankers and bombers were on constant alert in order to respond to any war order or threat situation. With the change in command, the 56th FG was deactivated; however, the 62nd FIS remained on the base as a tenant of SAC.

Over the years, bombers and tankers of the 410th BMW participated in a number of high profile operations. KC-135 crews and aircraft from K. I. Sawyer AFB took part in 1961 in Project Quick Step, a record-setting flight from New York to Paris by a B-58 bomber with in-flight refueling. In 1963, K. I. Sawyer AFB tankers participated in Operation Greased Lightning, a B-58 speed record flight from Tokyo to London. Beginning in 1965, the KC-135s from the base participated in Operation Young Tiger, air refueling operations over Southeast Asia. The 410th BMW aircraft and crews participated in Operation Arc Light, a bombing campaign over Vietnam in 1968 (Finanger 1994; USAF 1994).

In the early 1970s, FB-111 medium bombers were briefly assigned to K. I. Sawyer AFB as part of a satellite basing program. The nuclear bombers' mission was to maintain the capability of global deployment and to conduct bombardment operations with minimal notification. The satellite basing, like the earlier bomber dispersals, was designed to insure a higher survival rate for aircraft in the event of attack.

The fighter interceptors of the 62nd FIS continued in service at K. I. Sawyer through 1971. In May 1971, the 62nd FIS was reassigned, and the 87th FIS, equipped with F-106 *Delta Darts*, was transferred to K. I. Sawyer AFB. Control of the 87th FIS shifted from ADC to Tactical Air Command (TAC) in 1979, but the aircraft continued the same interceptor mission. In October of 1985, the 87th FIS and its F-106 fighter interceptors were removed from K. I. Sawyer AFB (Department of Defense [DoD] 1986), leaving the base with no fighter interceptor mission for the first time.

Several changes have taken place at K. I. Sawyer AFB within the last few years. The 526th BMS and its B-52 bombers were removed from alert in 1991, although they continued to support worldwide United States military operations such as Desert Storm. As part of an Air Force-wide reorganization that same year, the wing was renamed the 410th Wing. K. I. Sawyer AFB and the 410th BW were reassigned from SAC to ACC in June 1992, and the wing, now named the 410th BW under ACC, continued base host responsibilities (USAF 1994). At this same time, the 46th AREFS was transferred to Air Mobility Command. The 46th AREFS was deactivated at K. I. Sawyer AFB in October of 1993, and its KC-135s were reassigned. The 526th Bomb Squadron (BS) and its B-52s were reassigned in November 1994. The base is currently scheduled to close in September of 1995. [Editor's Note: K. I. Sawyer AFB was closed September 30, 1995. It is currently still under USAF control and is managed by the Air Force Base Conversion Agency.]

3.2 BASE DEVELOPMENT

K. I. Sawyer AFB was built to carry out operations directly related to the Cold War. The installation was initially designed as a fighter interceptor base, but evolved into a bomber and tanker base within SAC and ACC.

The base was constructed on the site of the K. I. Sawyer Municipal Airport. Land for K. I. Sawyer AFB was acquired in 1956 through negotiations between the Air Force and local

officials, which resulted in a 99-year lease for one dollar a year. Other land was added through lease in later years (DoD 1973). Construction began immediately on the runway and family housing.

The base was activated on April 8, 1956, and the first few mission-related buildings were officially accepted by the Air Force that same year (Figure 3.1). The runway and the first housing units were finished in 1959 (Mueller 1989). The construction of the SAGE facility to house early warning and command and control systems for interceptors was completed in 1959. This three-story, windowless building was constructed of heavy reinforced concrete and was designed to withstand a nuclear blast. A large fallout shelter was located in the basement of the building (Finanger 1994; USAF 1994).

The majority of mission, mission support, and family housing facilities were completed in the 1960s (Figure 3.2). A "christmas-tree" alert apron and bomber alert facility were built during this decade for bomber operations, and the weapons storage area was expanded. In the 1970s and 1980s, a tanker alert facility and separate apron were constructed (Figure 3.3), as well as a new regional hospital, a flight simulator facility, and a missile assembly shop. In 1993, a new control tower was built at the northern end of the runway (Figure 3.4).

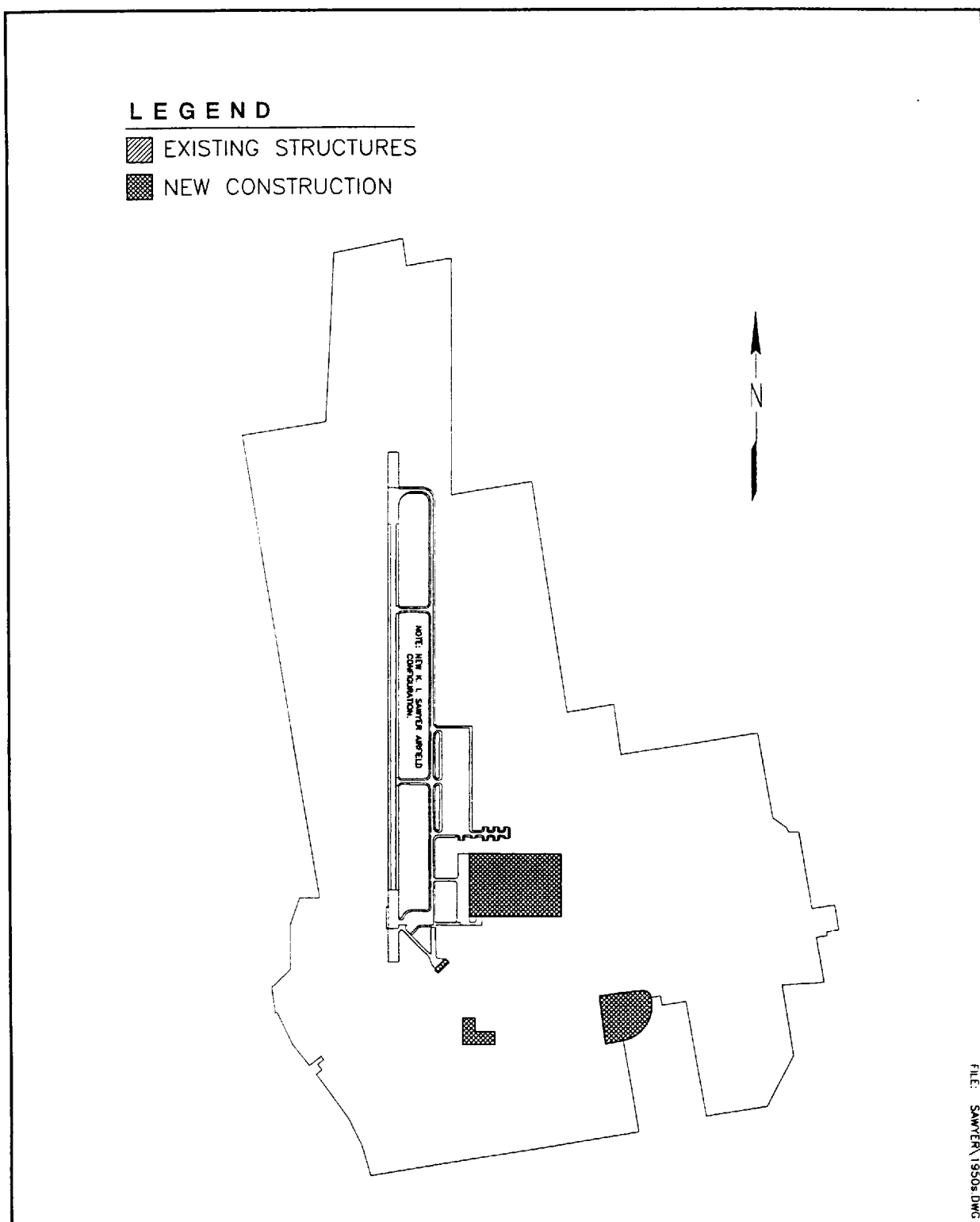


Figure 3.1 K. I. Sawyer Air Force Base, 1950-1960.

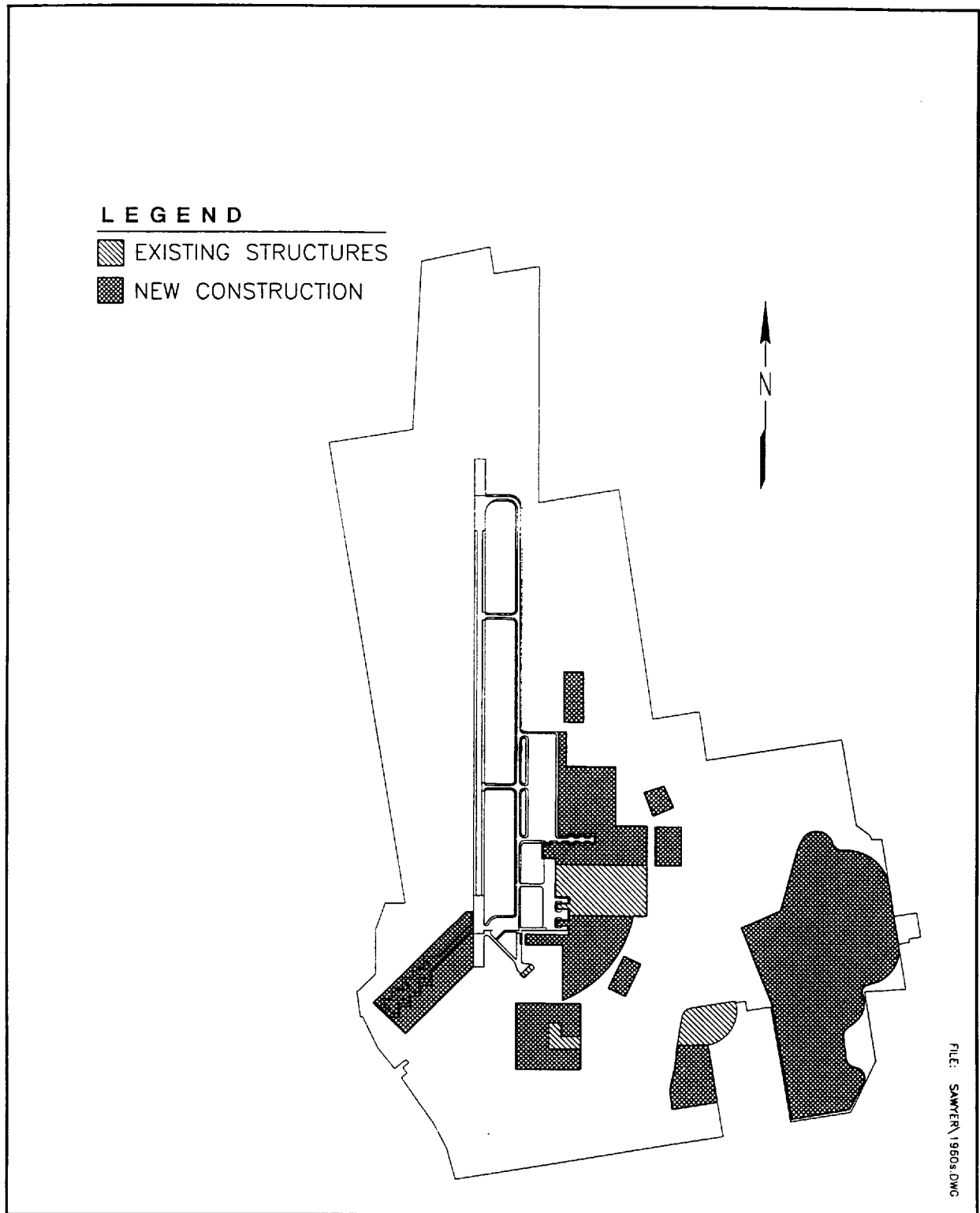


Figure 3.2 K. I. Sawyer Air Force Base, 1960-1970.

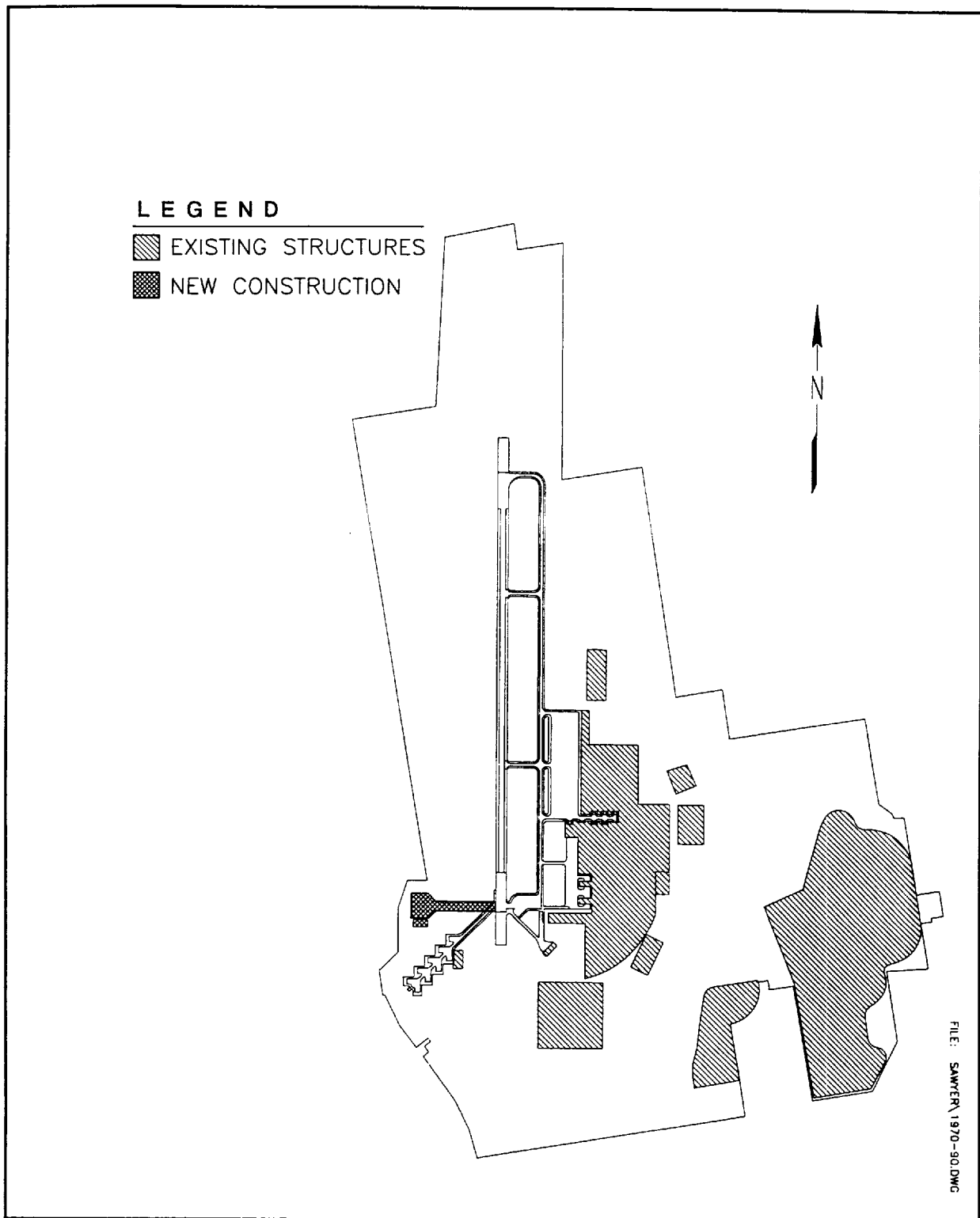


Figure 3.3 K. I. Sawyer Air Force Base, 1970-1990.

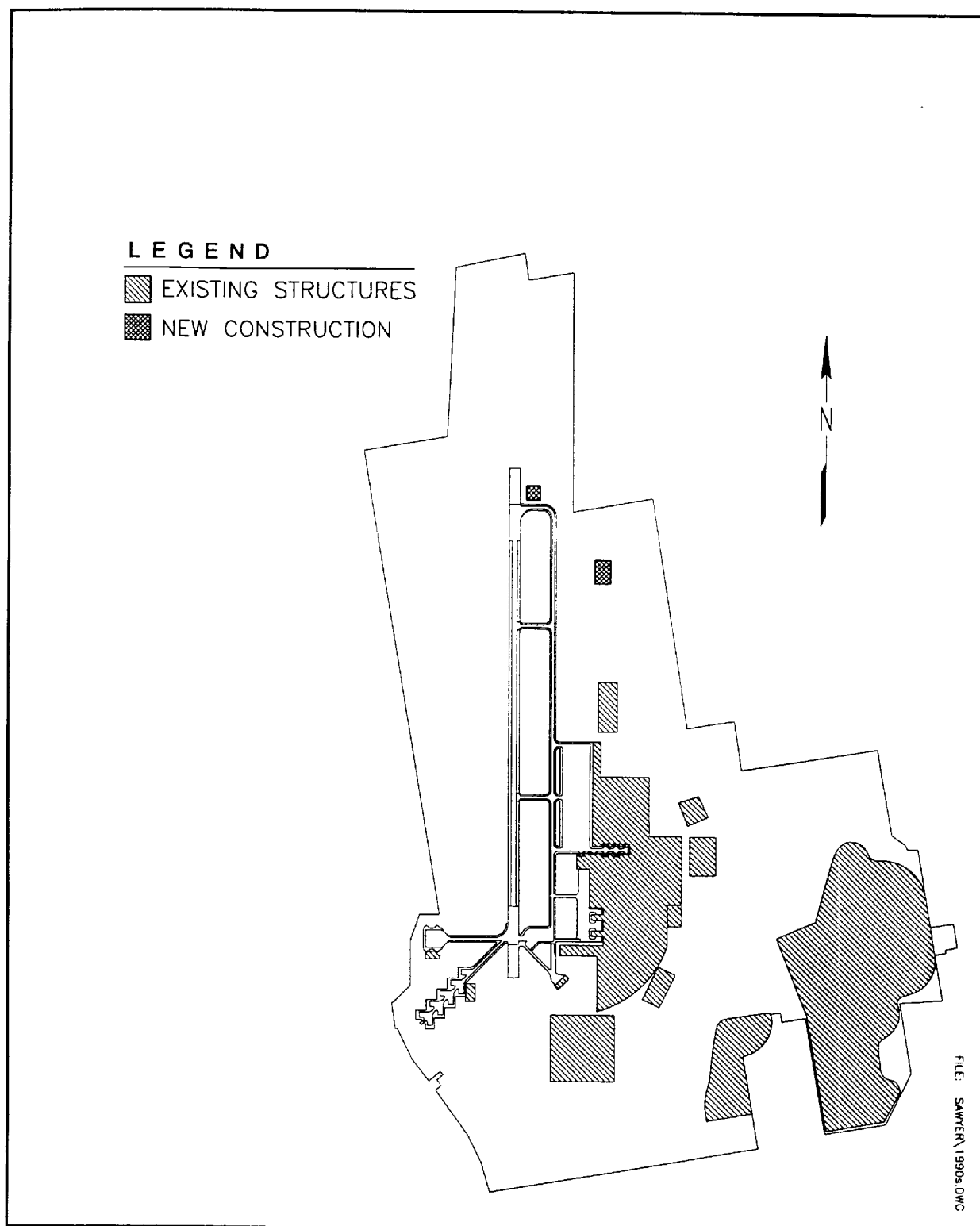


Figure 3.4 K. I. Sawyer Air Force Base, 1990-Present.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of K. I. Sawyer AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993b:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of K. I. Sawyer AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at K. I. Sawyer AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993b) to meet the needs of Cold War studies, are as follows:

- a) Portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) Portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) Embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War; or
-

-
- d) Have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995).

The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993b) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Staff Sergeant Tami Miller, the 410th BW historian, met with the Mariah field team upon their arrival at K. I. Sawyer AFB and introduced the team to individuals who would provide them with information required to complete the study. These people included Drawing Room staff, Real Property personnel, individuals knowledgeable of base history, and personnel who could provide easy access to facilities. SSgt Miller gave the team a tour of the base, discussed histories, and provided historical photographs. The team was in contact with SSgt Miller on a daily basis.

Fieldwork began by obtaining available background literature on the base and its various Cold War missions. Arrangements were made for personnel to escort the field team on tours of areas with high security, such as the weapons storage area and along the flight line. All other areas were accessible without escort. During these tours, Cold War properties and examples of typical base property types were photographed and inventoried.

Based on the background information gathered and the properties inventoried, resources were selected for further documentation and evaluation for their Cold War importance.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of K. I. Sawyer AFB, 130 resources were inventoried. Appendix A lists the inventoried resources, and Appendix B shows their locations on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Five resources were evaluated at K. I. Sawyer AFB, four of them falling under the DoD category of real property and one under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 23130, Located in Real Property No. 531)

The K. I. Sawyer AFB architectural files, located in the base engineering building, are housed in four rows of 6 ft tall flat file cabinets. The files contain numerous historical maps, original base master layouts, and construction and utility project drawings of K. I. Sawyer AFB and related facilities. The maps and drawings, which are stored flat, include paper, linen, mylar, vellum, and blue line reproductions. The majority of them are in good condition, but are threatened by frequent or occasional handling and removal from drawers. This collection contains important information about historic structures on base, and illustrates the development of the installation throughout the Cold War era. All of the evaluated buildings at the base have associated drawings in these files.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
23	23005	104	Bomber Alert Facility
22	23129	108	Tanker Alert Facility
21	23001	400	Fighter Alert Facility
18	23036	708	SAGE Facility
18	23130	None	Documentary Collection

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
23	23005	104	Bomber Alert Facility
22	23129	108	Tanker Alert Facility
21	23001	400	Fighter Alert Facility
18	23036	708	SAGE Facility
18	23130	None	Documentary Collection

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Fighter Alert Facility (Resource No. 23001, Real Property No. 400)

This building was originally the Fighter Alert Facility, and exemplifies the earliest mission of K. I. Sawyer AFB as an interceptor base. Completed in 1956, the Fighter Alert Facility is constructed of a steel frame and contains four aircraft bays along with a day room, bedrooms, and utility area. Fighter interceptor pilots stayed at the facility while on alert, having only minutes to be airborne in response to an incoming bomber attack. The building was used as a Fighter Alert Facility from 1956 through 1985. The building has since been converted to a maintenance shop and is currently used for weapon and release system maintenance.

Two of the four bays have been altered on the interior, and the former bedrooms have been converted into office space. The building appears to be generally in poor condition. Based on these observations, the exterior integrity is intact while the integrity of the interior is questionable.

This building is exceptionally important not only to K. I. Sawyer AFB's Cold War context, but also to Cold War history at the national level. The importance of this facility lies in its sole mission to thwart any surprise attack by the Soviet Union on the United States. It conveys the United States fear of a Soviet bomber attack from the north and the measures taken to ensure that any such attack would be successfully intercepted. It is a direct result of Congressional approval in the 1950s for the construction of interceptor bases and the National Security Council (NSC) 68 recommendations for a massive military build-up to "counteract the increasing threat posed by the Soviet Union" (Lewis et al. 1995). The layout of the facility, with aircrew living quarters within the hangar, speaks to the strategy of rapid deployment, a strategy that was part of the United States deterrent capability. Though this facility was used for this purpose during Phases II

through IV, its importance is especially characteristic of the Cold War during Phase II. This facility meets NRHP criteria (a) and (c).

6.2.1.2 Bomber Alert Facility (Resource No. 23005, Real Property No. 104)

The Bomber Alert Facility, constructed in 1960 of reinforced concrete, was a self-contained community for B-52 bomber crews who were required to live at the facility for seven-day periods and respond to any drill or war situation at a moment's notice. Bedrooms, dining rooms, a recreation room, and a briefing room are all located in the building. Distinctive external features include several ramp tunnels that lead out to the bomber apron. The alert building is a secure facility surrounded by extant chainlink and barbed wire fence with a security control entry building. A security police tower is located on the adjacent bomber alert apron. An associated building still located outside the alert security perimeter was previously used for marital and family activities.

While major additions doubling the square footage for crew quarters were completed in the past, both the original portion and newer sections maintain the appearance related to their original function. Thus, the integrity of the building is intact.

The Bomber Alert Facility is extremely important to K. I. Sawyer AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of the defense triad and was relied upon as the United States' primary manned nuclear bomber force for over 30 years. Though this facility was used for this purpose during Phases II through IV, it especially characterizes the policy and strategy enacted during Phase II of the Cold War. This facility meets NRHP criteria (a) and (c).

6.2.1.3 Tanker Alert Facility (Resource No. 23129, Real Property No. 108)

This concrete building served solely as a Tanker Alert Facility, housing operational support and recreational functions since 1973. The building is located adjacent to the southern end of the tanker alert apron. Due to the pending base closure, this facility is closed and has been vacant for some time. The building contained crew quarters and other accommodations, allowing aircrews to stay close to their planes and have the capability to be airborne in a short span of time to support bomber activity.

Exterior integrity of the building is intact. Access to the interior of the facility was not available during the field visit. However, based on the singular use of the building for tanker alert crews and the lack of documented major renovations, interior integrity is determined to be intact.

The Tanker Alert Facility is extremely important to the Cold War mission of K. I. Sawyer AFB and to national Cold War history. The facility was constructed in response to NSC-68 and the Killian Report, which recommended the dispersion of bombers across the country (Lewis et al. 1995). The dispersion of bombers requires the dispersion of tankers to support them, thus the facility meets the needs of deterrence through a survivable force. Although this facility was not built until 1973, and was used for this purpose during Phases III and IV, its importance stems from policy and strategy enacted during Phase II. This facility meets NRHP criterion (a).

6.2.2 Communications

6.2.2.1 SAGE Facility (Resource No. 23036, Real Property No. 708)

This communications facility was originally built for the SAGE system, an early warning system that detected incoming enemy aircraft, alerted SAC, and dispatched interceptor fighter aircraft stationed in the base's sector. Built in 1958, the building was used for the SAGE system until 1963. It now houses a variety of offices and communications functions.

This building was evaluated because of its exceptionally important Cold War early warning function. The building's remaining Cold War features are its lack of windows and the reinforced concrete construction. However, the exterior has been irreversibly altered by a thick coating of stucco. If this were removed, the system with which it is attached would leave holes throughout the facade. The basement of the building originally housed two large computers, mechanical equipment, and a large, well-stocked, fallout shelter. The computers and equipment have since been removed. Only portions of the fallout shelter remain, including some furniture and a civil engineer post. The upper floors contained offices, weapons control system rooms, and support facilities. Since 1963, these rooms have been completely renovated. Thus, the integrity of this building has been adversely affected.

This building is extremely important in illustrating the early Cold War mission of K. I. Sawyer AFB and the base's history. It epitomizes the role of K. I. Sawyer AFB as a first line of defense against a surprise nuclear attack. It is also highly significant to the Cold War era nationally, as it was constructed as part of the early warning detection system called for by the Killian Report (Lewis et al. 1995). The building's design conveys the United States' fear of a surprise first strike by the Soviet Union, and the desire to have early warning and successful interception of such an attack. This facility was developed and used during Phase II, and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at K. I. Sawyer AFB.

6.4 TRAINING FACILITIES

None were evaluated at K. I. Sawyer AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at K. I. Sawyer AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on K. I. Sawyer AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at K. I. Sawyer AFB. These resources should be investigated further for a more comprehensive analysis.

The Wing Historian has a collection of memorabilia which, due to the base closure, has been prepared for shipment to the Air Force Museum at Wright-Patterson AFB, Ohio. This material will be properly curated by the Air Force at this facility.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to K. I. Sawyer AFB revealed approximately 50 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the B-52 bomber and the KC-135 tanker. The vast majority of these documents are available on microfilm. Future studies of Cold War history at K. I. Sawyer AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

K. I. Sawyer AFB is scheduled to close in 1995. Base personnel are currently in the process of closing buildings, and attempts are underway to dispose of properties to private entities. With this study, and others being conducted on the base, it appears that efforts are being made to identify properties of historic significance before their disposal. Hopefully this will ensure that any significant properties are properly documented and evaluated for NRHP eligibility prior to transfer out of Air Force control.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at K. I. Sawyer AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at K. I. Sawyer AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on K. I. Sawyer AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at K. I. Sawyer AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
23001	400	Fighter Alert Facility		*	*	*		Potentially NRHP eligible now.
23005	104	Bomber Alert Facility		*	*	*		NRHP eligible now.
23036	708	SAGE Facility				*		
23129	108	Tanker Alert Facility		*	*	*		NRHP eligible now.
Record or Document - Object								
23130	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 23130, Located in Real Property No. 531)

The majority of the architectural drawings and layout maps are in good condition; however, they are threatened by frequent or occasional handling or removal from drawers. It is recommended that the files be inventoried, with the originals going to a permanent curatorial facility for stewardship and conservation.

9.2.2 Fighter Alert Facility (Resource No. 23001, Real Property No. 400)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based upon its role of rapid deployment and interception of enemy attack, a strategy that was part of the United States deterrent capability, and on its structural components which are unique to this building type and

identify it as an example of Cold War military architecture. However, the integrity of the building may have been compromised due to its conversion to a weapon and release system maintenance shop. Therefore, the building is recommended as potentially eligible to the NRHP. Further documentation to determine the level of integrity and to explore NRHP eligibility is recommended. Stewardship of the building to retain its current level of integrity is recommended in the interim during this evaluation.

9.2.3 Bomber Alert Facility (Resource No. 23005, Real Property No. 104)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based upon its role in sustaining a survivable force to meet the needs of deterrence, and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its features is intact. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain integrity of the building and features, and further documentation for nomination of this resource to the NRHP.

9.2.4 Tanker Alert Facility (Resource No. 23129, Real Property No. 108)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV, and meets NRHP criterion (a) based upon its role in sustaining a survivable force to meet the needs of deterrence. The integrity of the building is intact based on its continuous and singular use as a tanker alert facility. Therefore, this building is recommended as eligible to the NRHP. Further documentation is recommended to nominate the resource to the NRHP. Stewardship is also recommended to retain the building's current level of integrity.

9.2.5 SAGE Facility (Resource No. 23036, Real Property No. 708)

This building is evaluated as exceptionally important to the base and national Cold War contexts during Phase II. It meets NRHP criteria (a) and (c) based upon its role as a first line of defense against surprise attack and on its structural components, which are unique to this building type and identify it as an example of Cold War military architecture. However, the integrity of the building has been adversely affected. Therefore, this building is recommended as ineligible to the NRHP. Further documentation is recommended to assemble documents, photographs, and other information to record the building's significant Cold War function.

9.3 PENDING BASE CLOSURE

There is no immediate threat to any of the four evaluated facilities on K. I. Sawyer AFB. However, the base is scheduled for closure in 1995, with the subsequent transfer of buildings and properties out of Air Force control. These actions constitute a federal undertaking that may have an effect on potentially NRHP-eligible properties. It is therefore recommended, per Section 106 of the NHPA, that the eligibility of the four properties be determined prior to transfer of the buildings out of USAF control. [Editor's Note: As of this publication, the properties at K. I. Sawyer AFB remain under the control of the USAF and are managed by the Air Force Base Conversion Agency.]

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Department of Defense

- 1973 Executive Order 11508 Installation Survey Report. On file, Real Property Office, K. I. Sawyer Air Force Base, Michigan.
- 1986 *Real Property Survey Report, July 1986*. On file, Real Property Office, K. I. Sawyer Air Force Base, Michigan.
- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Finanger, S. A.

- 1994 Guardians of the North (Part I). In *The Aero Historian*, 28(10):3-5. Twin City Aero Historians, Inc., Brooklyn Park, Minnesota.

Goldberg, A., editor

- 1957 *A History of the United States Air Force, 1907-1957*. D. Van Nostrand, Princeton, New Jersey.

Lewis, K., and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Air Force Bases, Volume I, Active Air Force Bases within the United States of America on September 1982*. Office of Air Force History, United States Air Force, Washington, D.C.
-

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Schaffel, K.

- 1991 *The Emerging Shield: The Air Force and the Evolution of Continental Air Defense 1945-1960*. Office of Air Force History, Washington, D.C.

United States Air Force

- 1993a *Fact Sheet, 410th Bomb Wing*. On file, Office of Public Affairs, K. I. Sawyer Air Force Base, Michigan.
- 1993b *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
- 1994 *K. I. Sawyer Air Force Base Guide*. Marcoa Publishing, San Diego.
-

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	23001	400	Fighter Alert Facility (Weapon and Release System Shop)	1956
	23003	427	Base Operations	1956
	23005	104	Bomber Alert Facility	1960
	23006	118	Non-Air Force Administrative Office	1988
	23007	1250	Base Chapel	1963
	23008	311	Surveillance Inspection Shop	1960
	23009	318	Electric Power Station Building	1980
	23010	333	Liquid Propulsion Ammunition Storage	1987
	23011	331	Missile Assembly Shop	1987
	23012	334	Vehicle Operations Parking Shed	1988
	23013	319	Munitions Maintenance Administration	1960
	23014	314	Multi-Cubicle Magazine Storage	1960
	23017	323	Missile Assembly Shop	1987
	23021	304	Surveillance Inspection Shop	1987
	23022	316	Vehicle Operations Heated Parking	1987
	23023	317	Response Force Team Facility	1979
	23025	310	Security Police Entry Control Building	1980
	23026	668	Fuel System Maintenance Dock	1962
	23027	667	Aircraft Corrosion Control	1962
	23028	664	Maintenance Hangar	1987
	23029	631	Commissary Store	1958
	23030	531	Base Engineering Administration	1961
	23032	646	National Bank	Unknown
	23033	648	Credit Union	Unknown
	23035	701	Flight Simulator Training	1983
	23036	708	SAGE Facility (Communications Facility)	1958
	23037	710	Squadron Operations	1959
	23038	730	Squadron Operations	1962
	23039	727	Warehouse Supply and Equipment Base	1960
	23040	726	Wing Headquarters	1960
	23041	725	General Purpose Aircraft Shop	1960
	23042	721	Hydraulic Fuel Building	1959
	23043	731	Wing Headquarters	1986
	23044	740	Jet Engine Integrated Maintenance Shop	1962
	23045	741	Flight Simulator Training	1962
	23046	742	Test Cell	1991
	23047	744	Base Engineer Covered Storage	1961
	23048	662	Large Aircraft Maintenance Dock	1959
	23049	627	Aircraft Maintenance Shop	1984
	23050	610	Aircraft Support Equipment Storage	1961
	23051	425	Aircraft Maintenance Shop	1958

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	23052	600	Fire Station	1956
	23053	601	Base Photo Lab	1958
	23054	608	Vehicle Maintenance Shop	1961
	23055	607	Vehicle Operations Administration	1961
	23056	604	Vehicle Operations Heated Parking	1960
	23058	428	Survival Equipment Shop	1958
	23059	430	Survival Equipment Shop	1956
	23060	422	Vehicle Operations Heated Parking	1956
	23061	431	Aircraft Support Equipment Storage	1959
	23062	421	Base Engineer Covered Storage	1956
	23063	423	Aircraft Support Equipment Storage	1987
	23064	404	PME Lab	1961
	23065	403	Munitions Maintenance Administration	1986
	23066	420	Explosive Ordnance Disposal	1976
	23067	414	Base Engineering Maintenance Shop	1958
	23068	530	Vehicle Maintenance Shop	1956
	23069	533	Base Engineering Pavement Ground Facility	1973
	23070	522	Warehouse Supply and Equipment Base	1956
	23072	417	Warehouse Supply and Equipment Base	1961
	23073	521	Heating Facility Building	1956
	23074	512	Base Personnel Office	1963
	23075	511	Security Police Operations	1957
	23076	800	Officers' Open Mess	1962
	23077	801	Visiting Airmens' Quarters Dormitory	1956
	23078	808	Visiting Officers' Quarters	1962
	23080	810	Airmens' Dormitory	1956
	23081	500	Wing Headquarters	1956
	23082	501	Communications Facility	1956
	23083	812	Non-commissioned Officers' Open Mess	1959
	23084	816	Animal Clinic	1960
	23085	503	Chapel Center	1956
	23086	813	Post Office Center	1956
	23087	513	Miscellaneous Recreation Building	1976
	23088	504	Recreation Center	1959
	23089	826	Exchange Service Station	1973
	23090	819	Base Theater	1958
	23091	817	Group Headquarters	1958
	23092	633	Clothing Store	1959
	23093	823	Library Recreation	1959
	23094	822	Base Package Store	1958
	23095	824	Automotive Hobby Shop	1965
	23096	640	Non-Commissioned Officers' Open Mess	1959
	23097	634	Commissary Store	1958

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	23098	643	Exchange Sales Store	1973
	23099	825	Arts and Crafts Center	1981
	23100	641	Recreation Facility	1959
	23101	642	Bowling Center	1961
	23103	850	Composite Medical Facility	1980
	23104	832	Airmens' Dormitory	1960
	23105	833	Airmens' Dining Hall	1960
	23106	4006	Sewage Treatment and Disposal	1986
	23107	875	Golf Clubhouse	1978
	23108	None	KI Sawyer Elementary School	Unknown
	23109	1246	Base Engineering Maintenance Shop	1961
	23110	1247	Branch Exchange	1979
	23111	947	Youth Center	1966
	23112	None	ATM Kiosk	Unknown
	23113	949	Child Care Center	1991
	23114	945	Day Care Center	Unknown
	23115	1249	Thrift Shop	1961
	23116	1200	Temporary Lodging Facility	1980
	23117	1202	Temporary Lodging Facility	1980
	23119	747	Control Tower	1993
	23120	641	Recreation Facility (Pool)	1994
	23121	106	Visitors' Center	1987
	23122	102	Traffic Checkhouse	1987
	23123	1208	Capehart Family Housing	1960
	23124	1722	Capehart Family Housing	1962
	23125	1818	Manufactured Family Housing	1964
	23127	1037	Capehart Family Housing	1957
	23128	1024	Capehart Family Housing	1959
	23129	108	Tanker Alert Facility	1973
Real Property - Landscape				
	23126	None	Trailer Park	Unknown
Real Property - Object				
	23002	None	Target Drone (Static Display)	Unknown
	23024	None	"Partners in Peace" Sign	Unknown
	23034	None	B-52 (Static Display)	Unknown
	23079	None	F-101 Voodoo (Static Display)	Unknown
	23102	5112	F-80 (Static Display)	1989
	23118	None	Main Gate Sign	
Real Property - Structure				
	23004	7076	Support Structure (Weather Tower)	1981
	23015	5018	Igloo Storage	1983
	23016	350	Igloo Storage	1986

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	23018	5012	Igloo Storage	1955
	23019	5014	Igloo Storage	1971
	23020	305	Multi-Cubicle Magazine Storage	1987
	23031	7058	Water Tank Storage	1967
	23057	None	Squadron Fuel Supply	None
	23071	None	Fuel Storage Area	Unknown
Record or Document - Object				
	23130	None	Documentary Collection	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

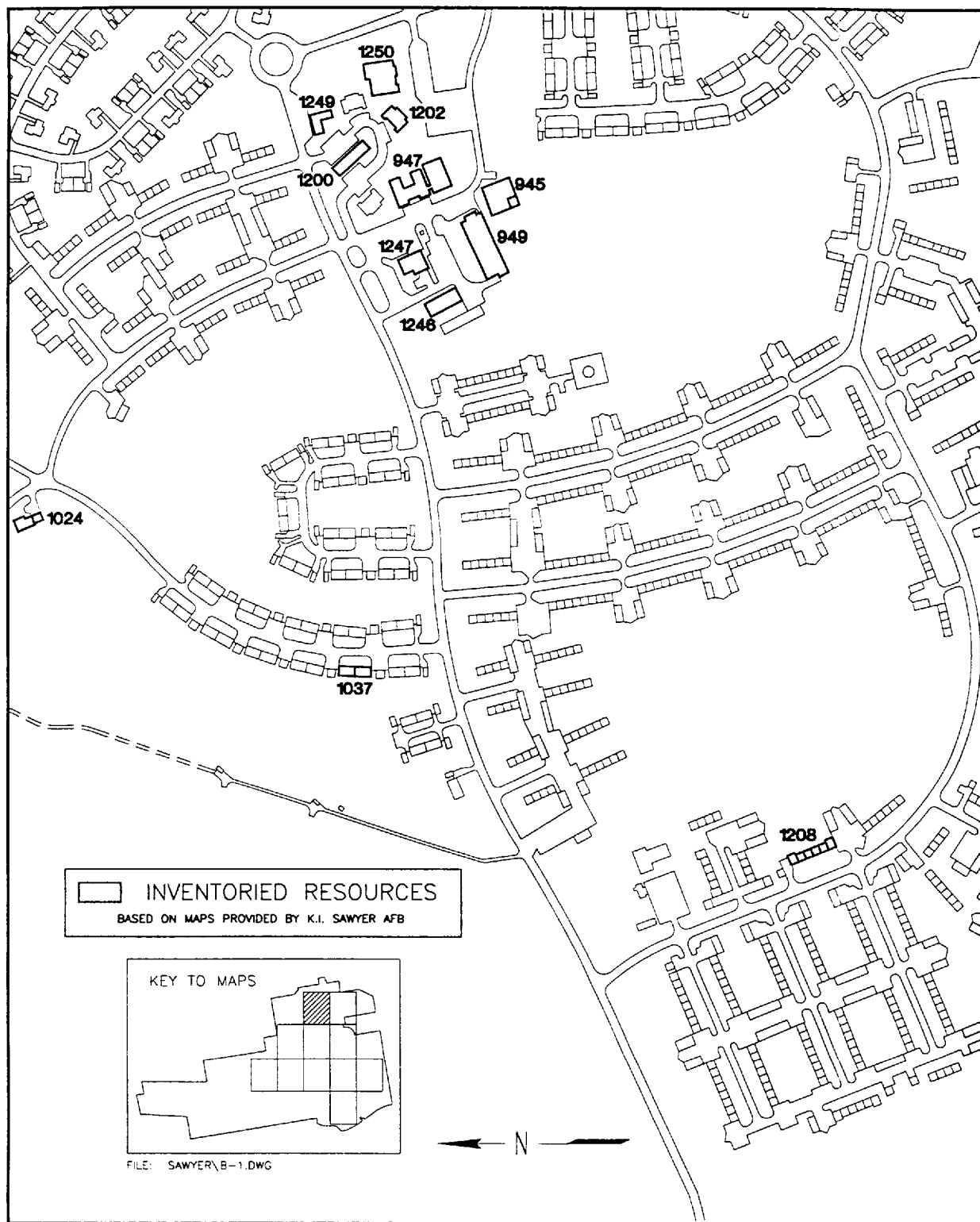


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 1 of 11).

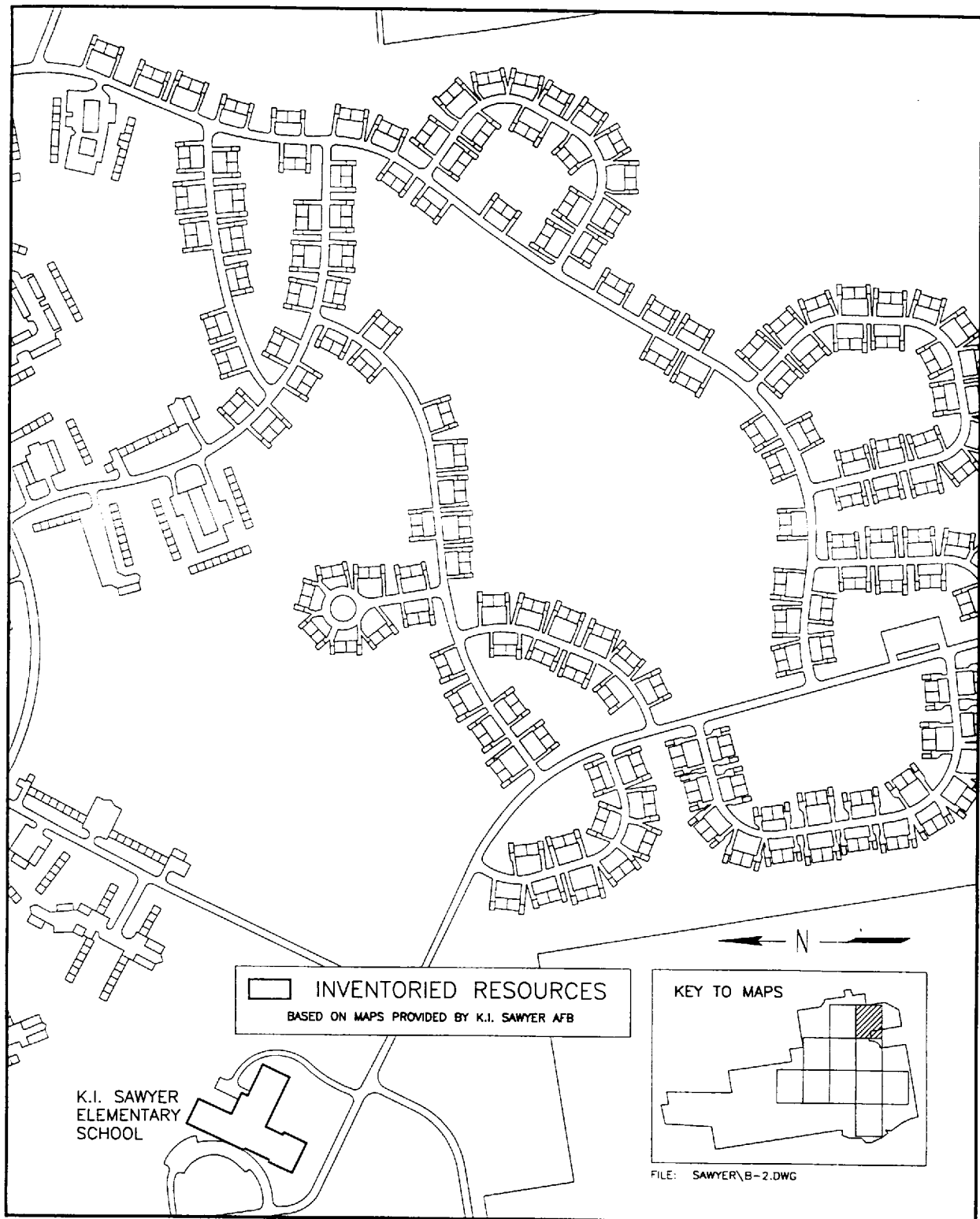


Figure B.2 Base Layout Maps Showing Inventoried Resources (Map 2 of 11).

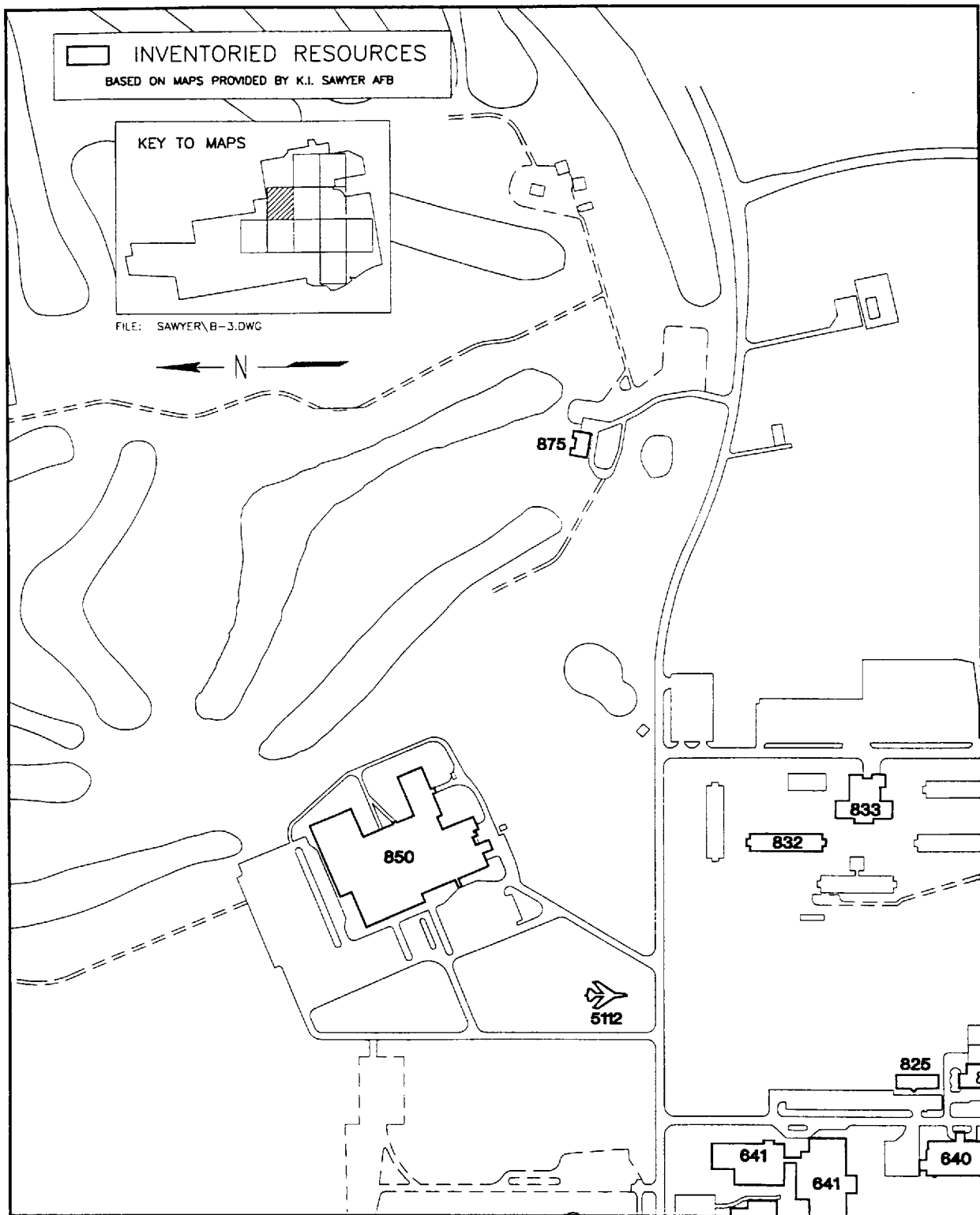


Figure B.3 Base Layout Maps Showing Inventoried Resources (Map 3 of 11).

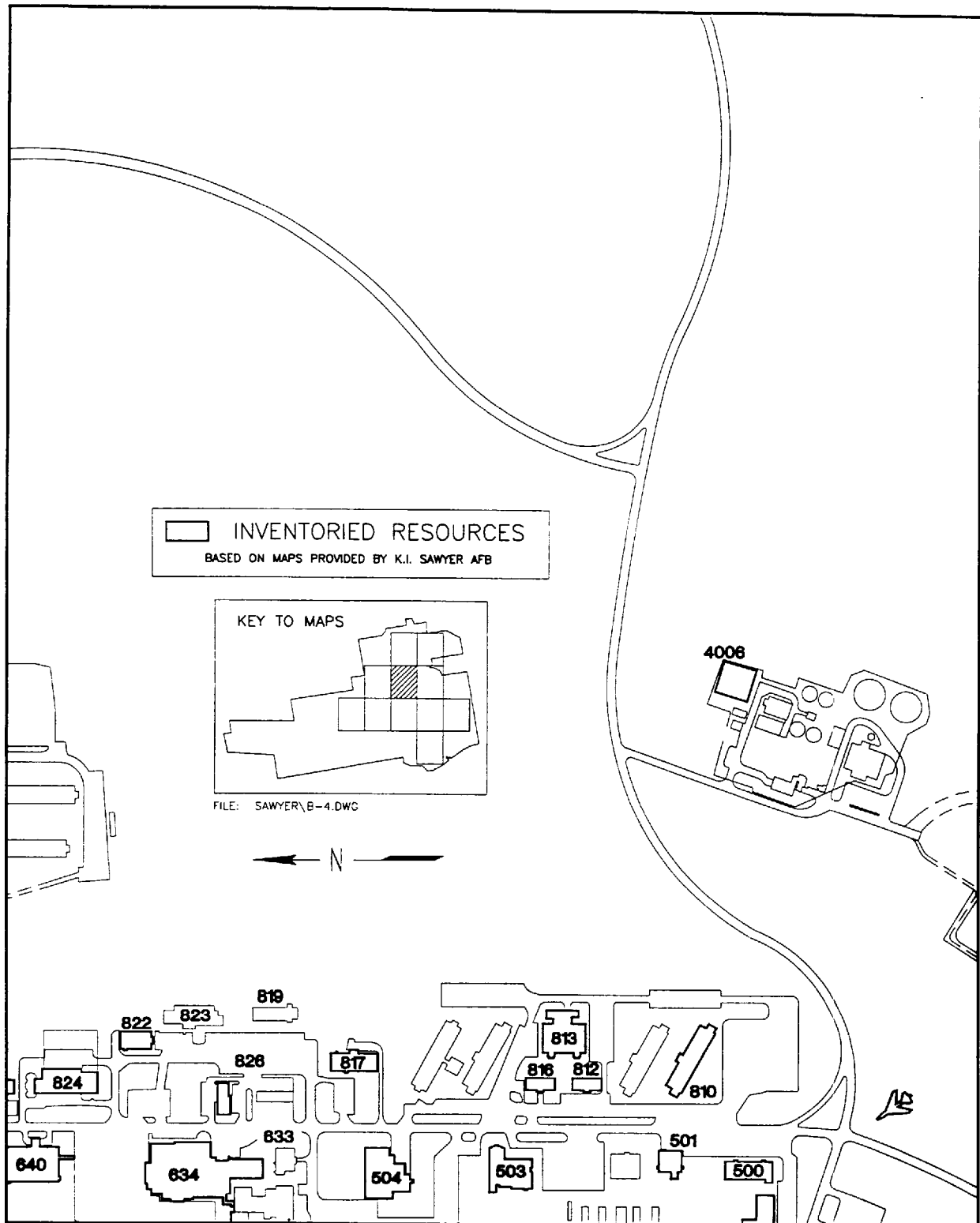


Figure B.4 Base Layout Maps Showing Inventoried Resources (Map 4 of 11).

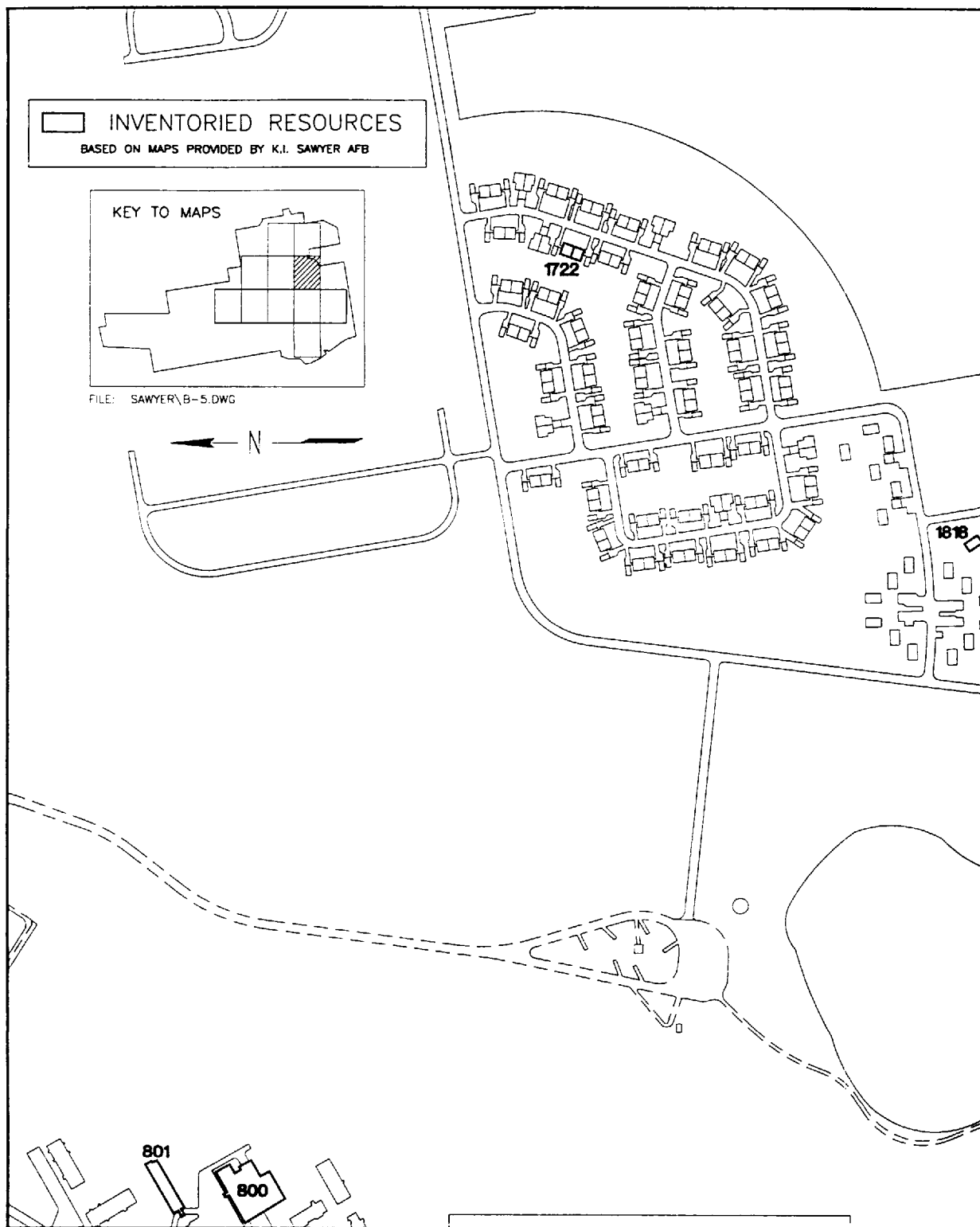


Figure B.5 Base Layout Maps Showing Inventoried Resources (Map 5 of 11).

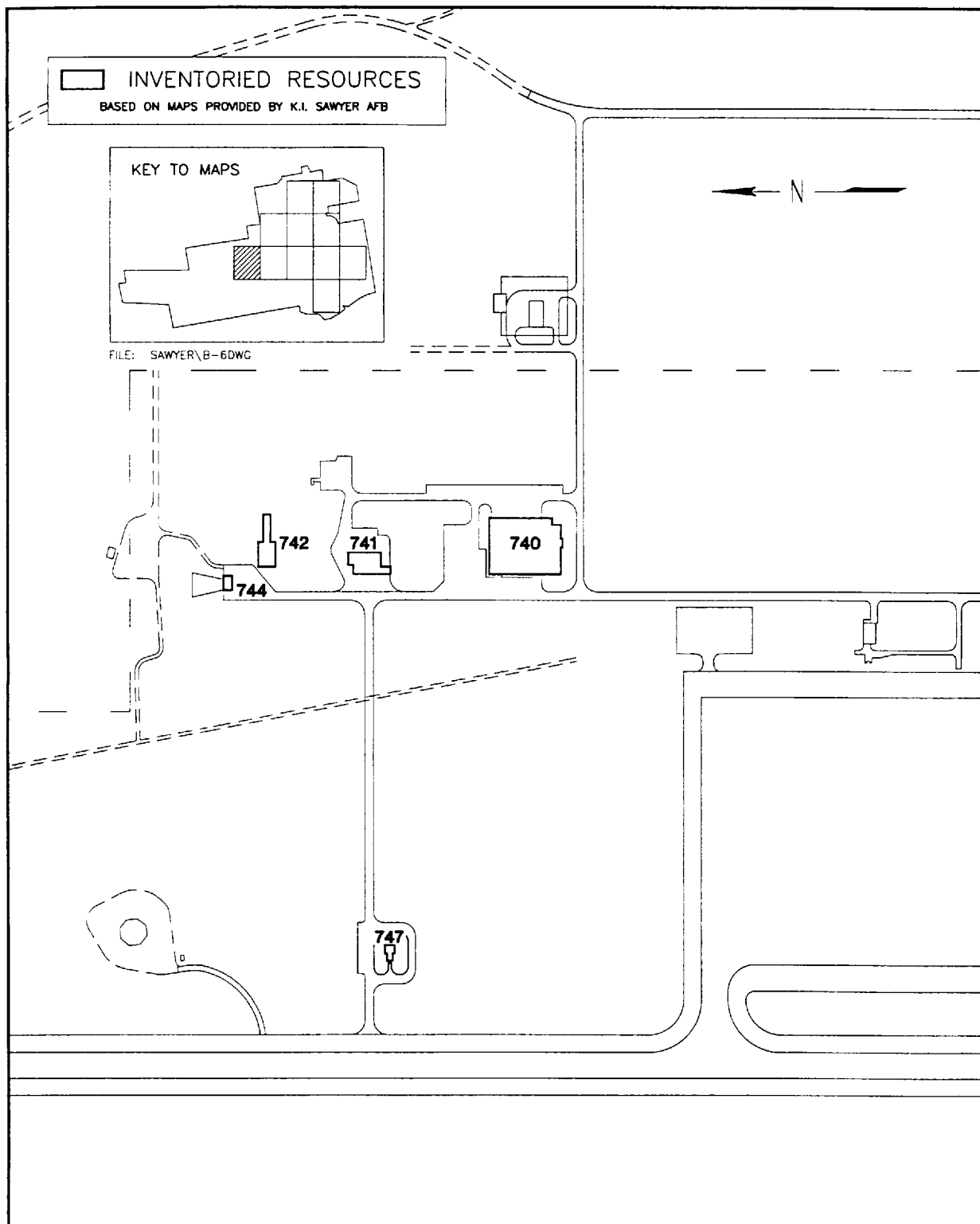


Figure B.6 Base Layout Maps Showing Inventoried Resources (Map 6 of 11).

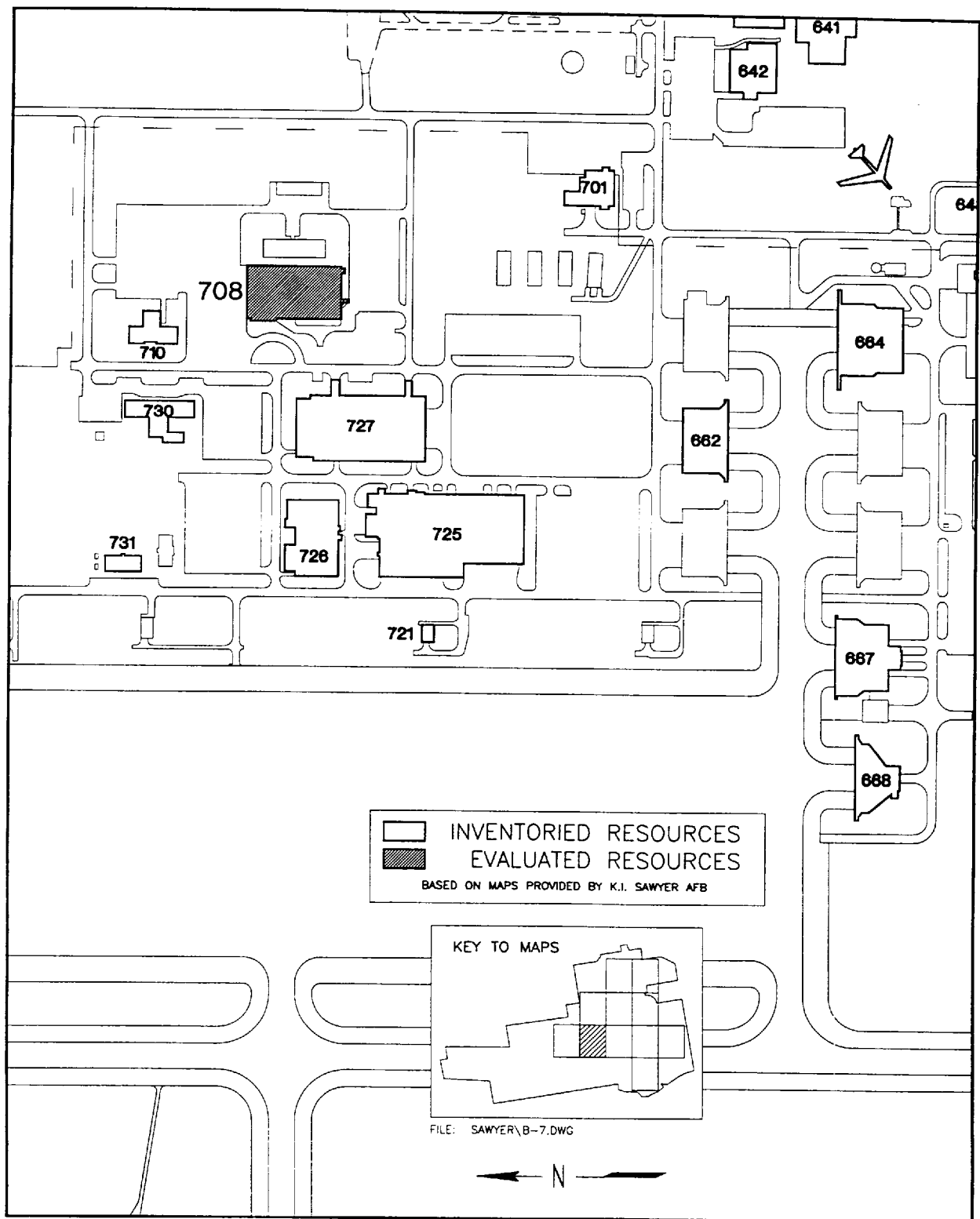


Figure B.7 Base Layout Maps Showing Inventoried Resources (Map 7 of 11).

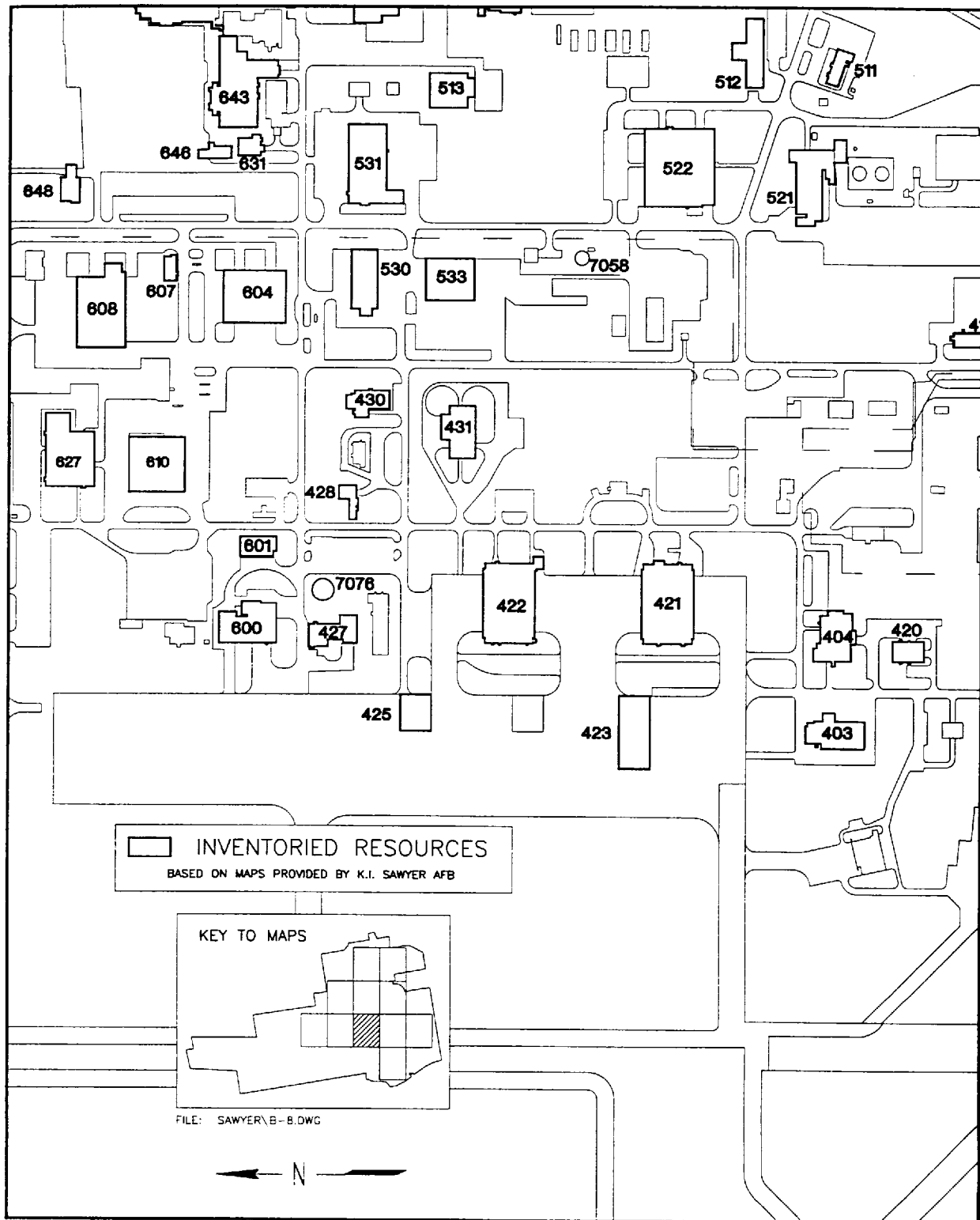


Figure B.8 Base Layout Maps Showing Inventoried Resources (Map 8 of 11).

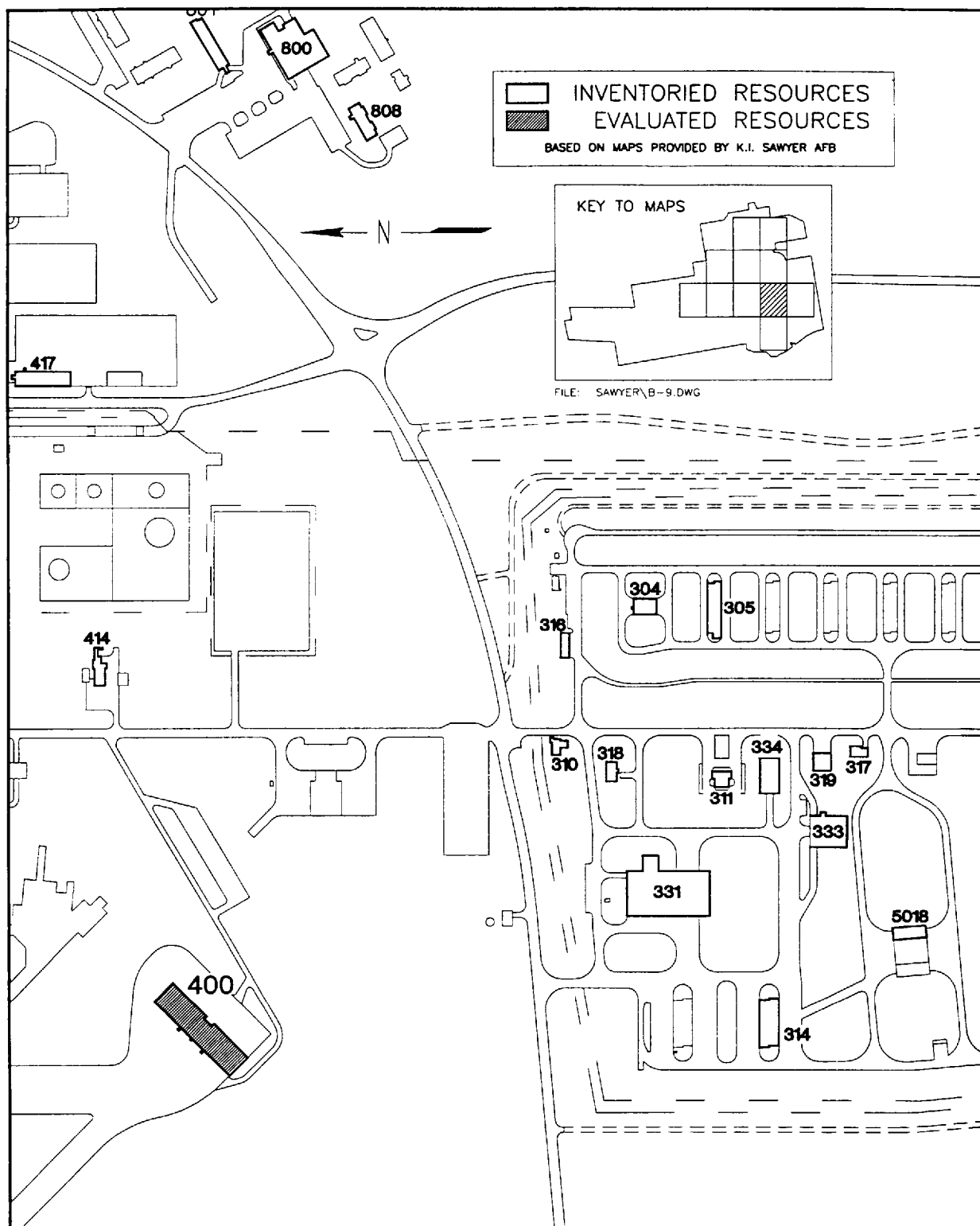


Figure B.9 Base Layout Maps Showing Inventoried Resources (Map 9 of 11).

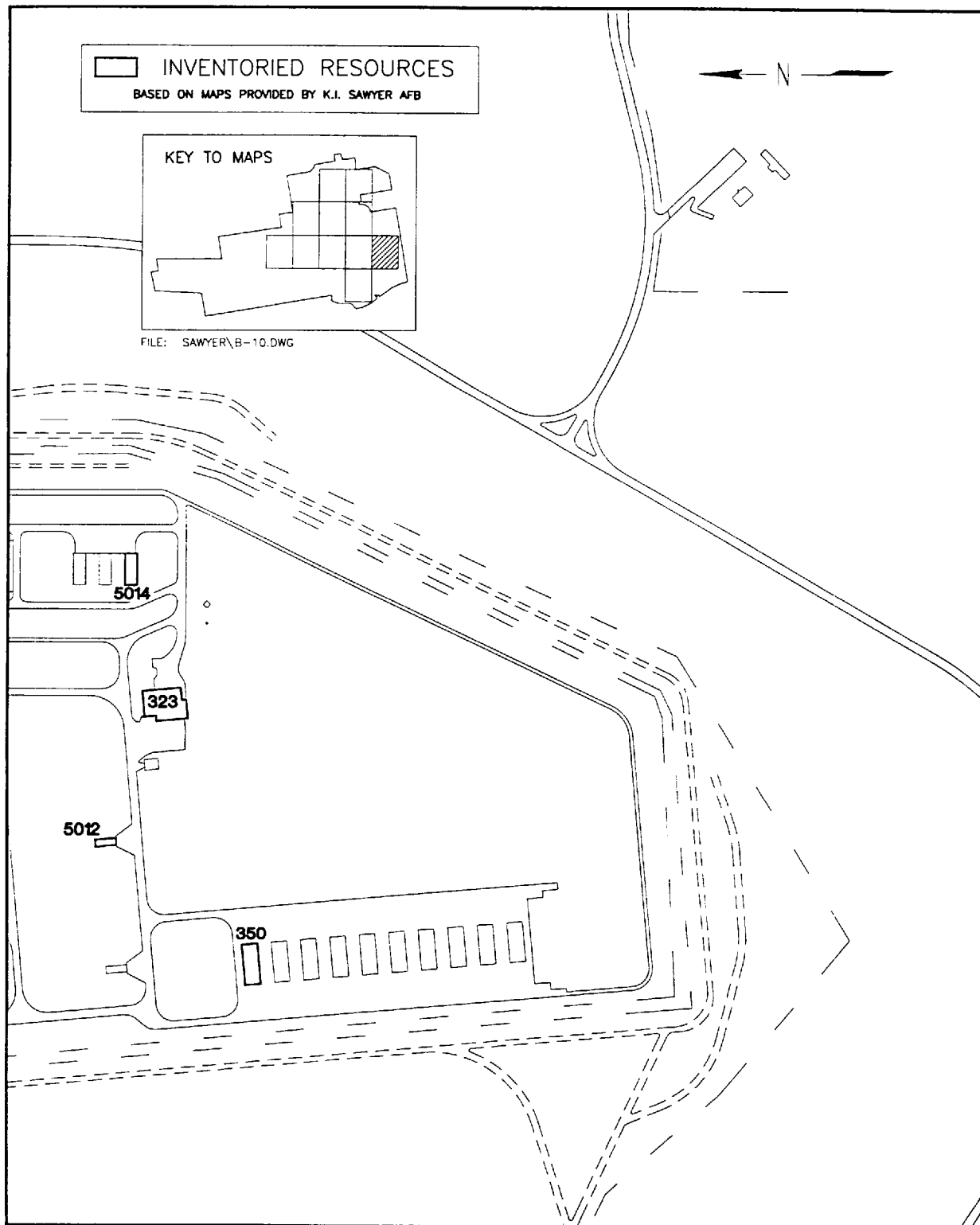


Figure B.10 Base Layout Maps Showing Inventoried Resources (Map 10 of 11).

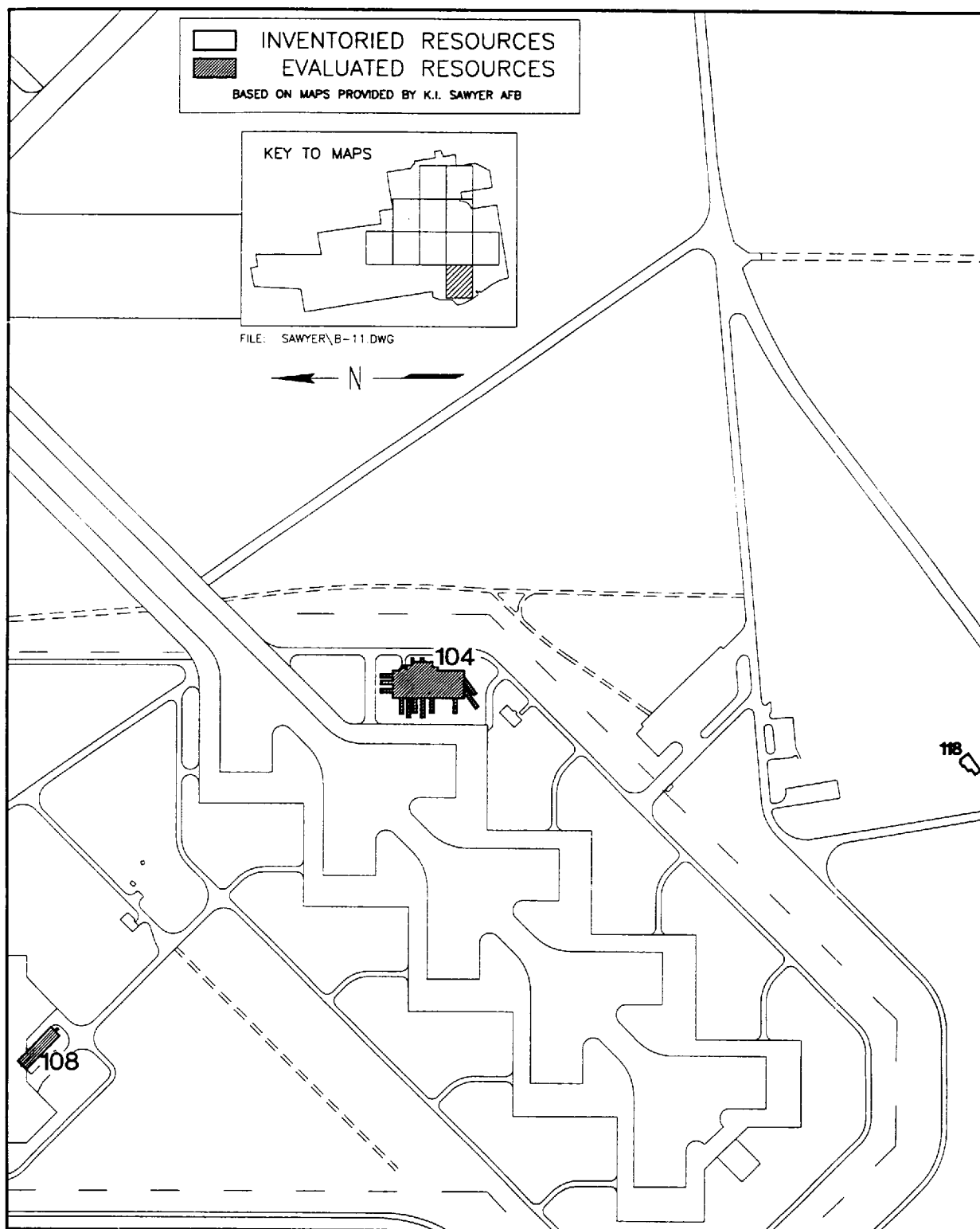
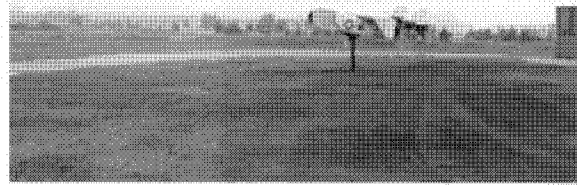


Figure B.11 Base Layout Maps Showing Inventoried Resources (Map 11 of 11).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



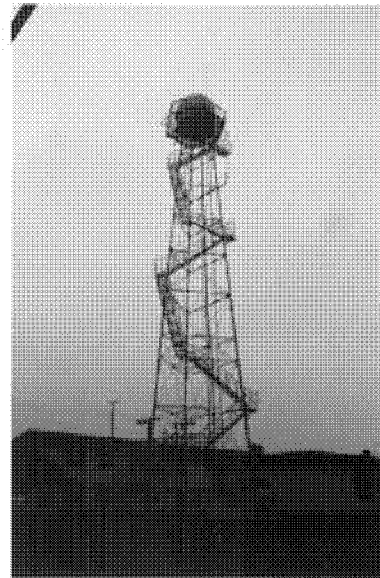
Resource No. 23001, Real Property No. 400
Weapons and Release System Shop



Resource No. 23002, Real Property No. (none)
Target Drone (Static Display)



Resource No. 23003, Real Property No. 427
Base Operations



Resource No. 23004, Real Property No. 7076
Support Structure (Weather Tower)



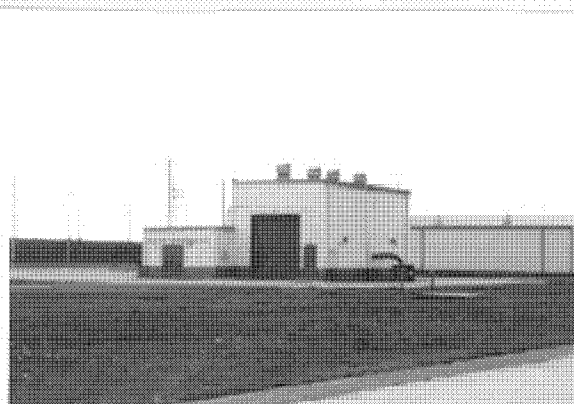
Resource No. 23005, Real Property No. 104
Crew Readiness



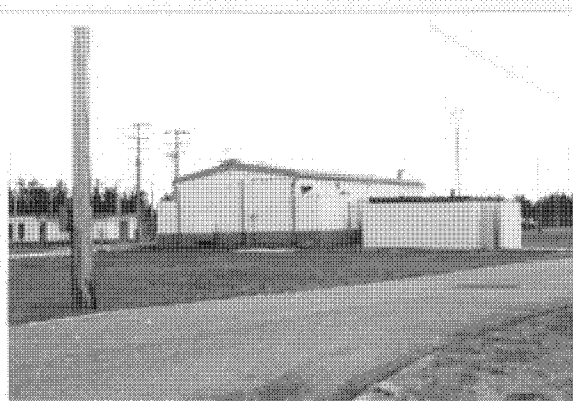
Resource No. 23006, Real Property No. 118
Administrative Office, NAF



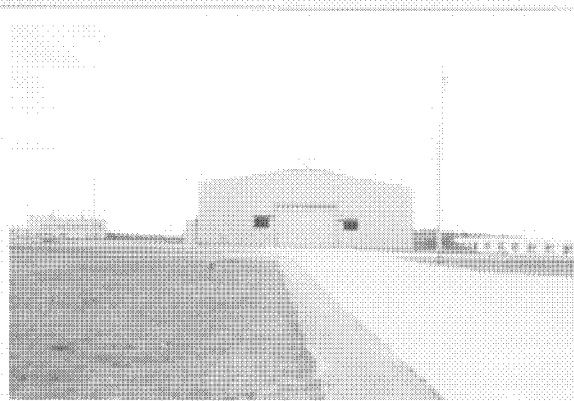
Resource No. 23007, Real Property No. 1250
Base Chapel



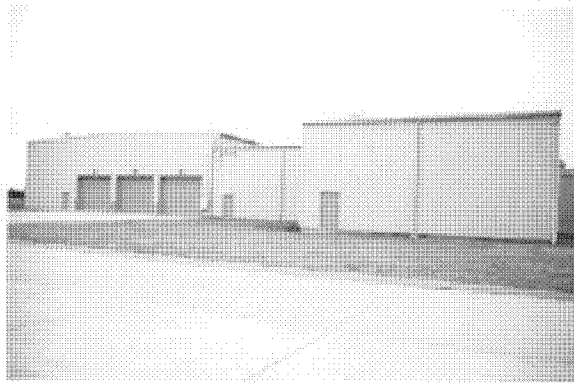
Resource No. 23008, Real Property No. 311
Surveillance Inspection Shop



Resource No. 23009, Real Property No. 318
Electric Power Station Building



Resource No. 23010, Real Property No. 333
Liquid Propulsion Ammunition Storage



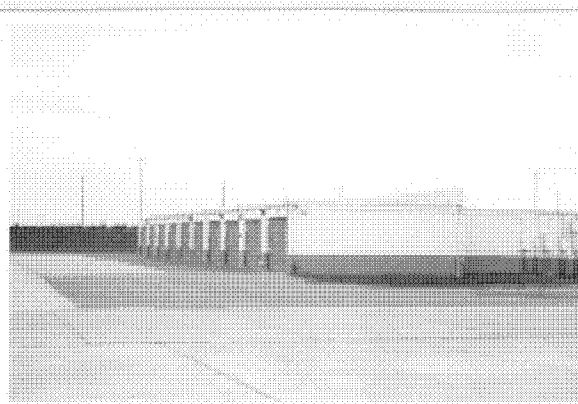
Resource No. 23011, Real Property No. 331
Missile Assembly Shop



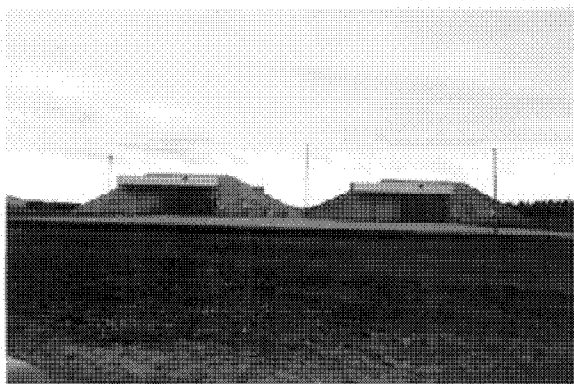
Resource No. 23012, Real Property No. 334
Vehicle Operations Parking Shed



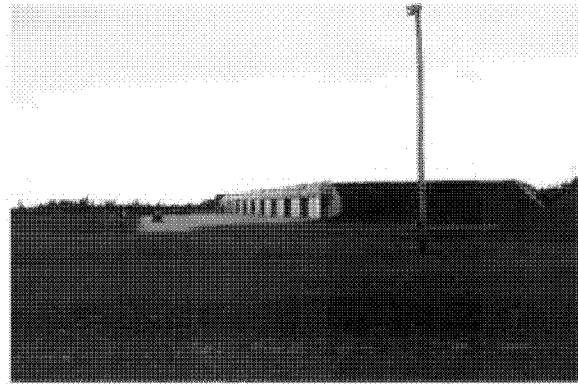
Resource No. 23013, Real Property No. 319
Munitions Maintenance Administration



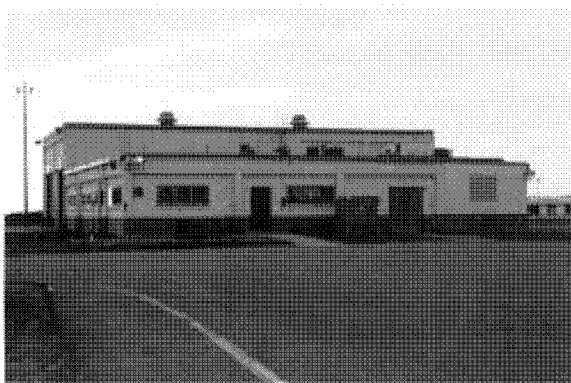
Resource No. 23014, Real Property No. 314
Multi-Cubicle Magazine Storage



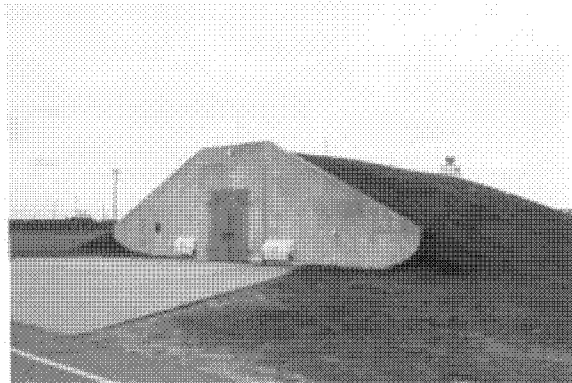
Resource No. 23015, Real Property No. 5018
Igloo Storage



Resource No. 23016, Real Property No. 350
Igloo Storage



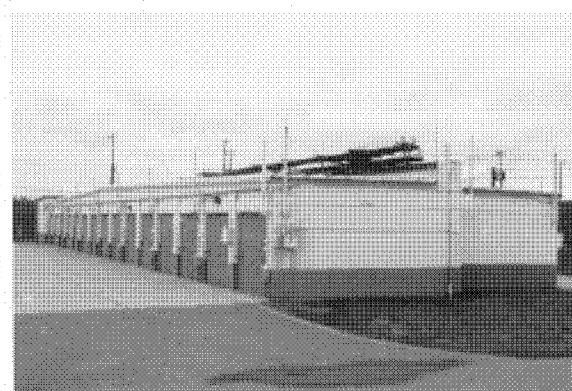
Resource No. 23017, Real Property No. 323
Missile Assembly Shop



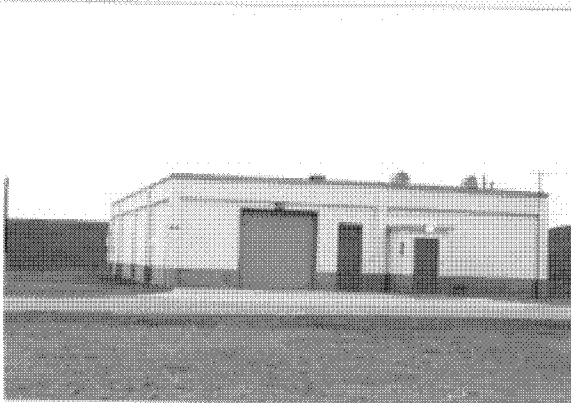
Resource No. 23018, Real Property No. 5012
Igloo Storage



Resource No. 23019, Real Property No. 5014
Igloo Storage



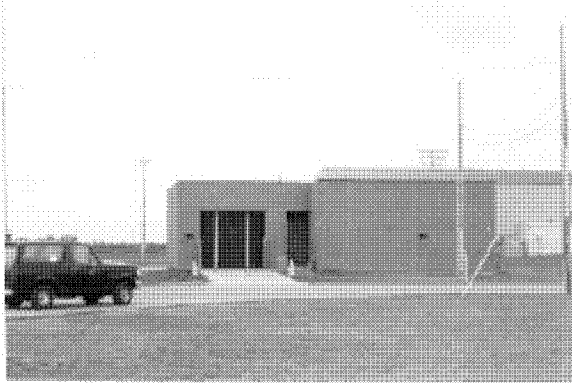
Resource No. 23020, Real Property No. 305
Multi-Cubicle Magazine Storage



Resource No. 23021, Real Property No. 304
Surveillance Inspection Shop



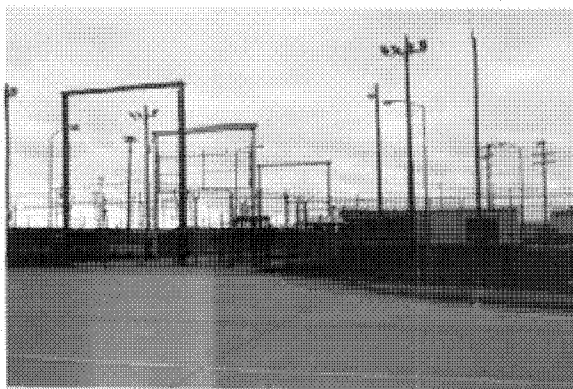
Resource No. 23022, Real Property No. 316
Vehicle Operations Heated Parking



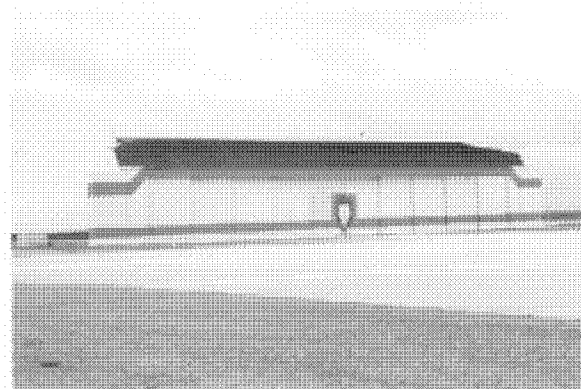
Resource No. 23023, Real Property No. 317
Response Force Team Facility



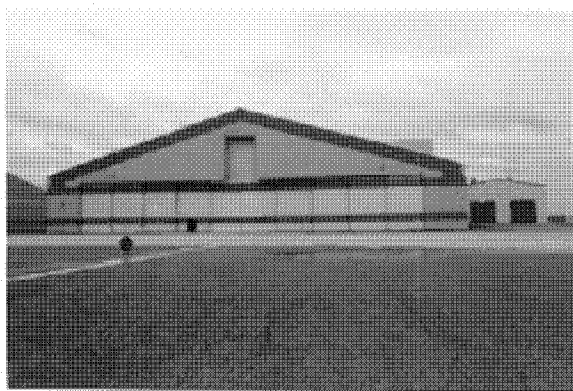
Resource No. 23024, Real Property No. (none)
"Partners in Peace" Sign



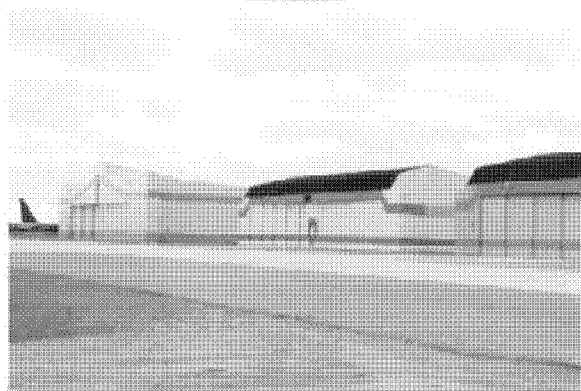
Resource No. 23025, Real Property No. 310
Security Police Entry Control Building



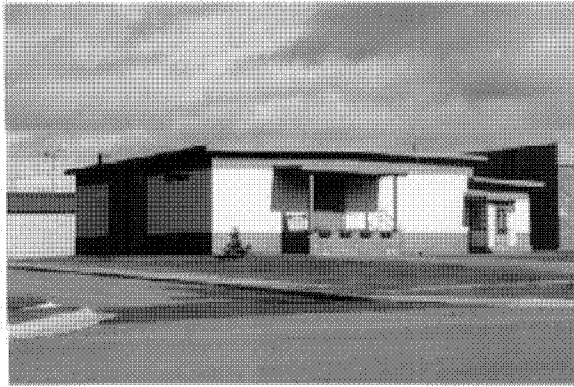
Resource No. 23026, Real Property No. 668
Fuel System Maintenance Dock



Resource No. 23027, Real Property No. 667
Aircraft Corrosion Control



Resource No. 23028, Real Property No. 664
Maintenance Hangar



Resource No. 23029, Real Property No. 631
Commissary Store



Resource No. 23030, Real Property No. 531
Base Engineering Administration



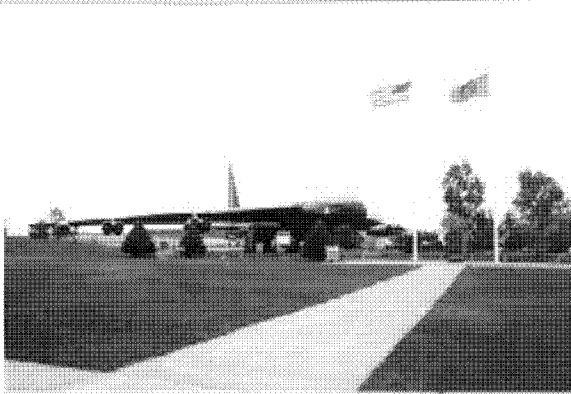
Resource No. 23031, Real Property No. 7058
Water Tank Storage



Resource No. 23032, Real Property No. 646
National Bank



Resource No. 23033, Real Property No. 648
Credit Union



Resource No. 23034, Real Property No. (none)
B-52 Static Display



Resource No. 23035, Real Property No. 701
Flight Simulator Training



Resource No. 23036, Real Property No. 708
Communications Facility



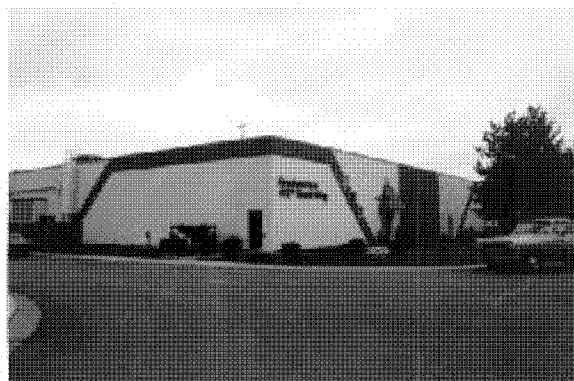
Resource No. 23037, Real Property No. 710
Squadron Operations



Resource No. 23038, Real Property No. 730
Squadron Operations



Resource No. 23039, Real Property No. 727
Warehouse Supply and Equipment



Resource No. 23040, Real Property No. 726
Wing Headquarters



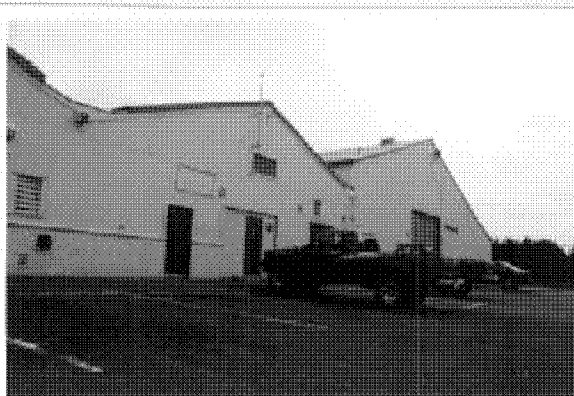
Resource No. 23041, Real Property No. 725
General Purpose Aircraft Shop



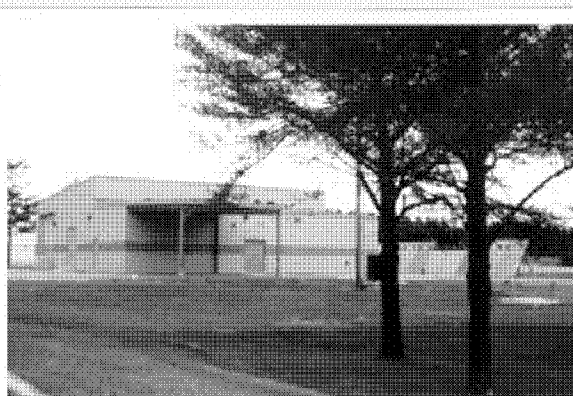
Resource No. 23042, Real Property No. 721
Hydraulic Fuel Building



Resource No. 23043, Real Property No. 731
Wing Headquarters



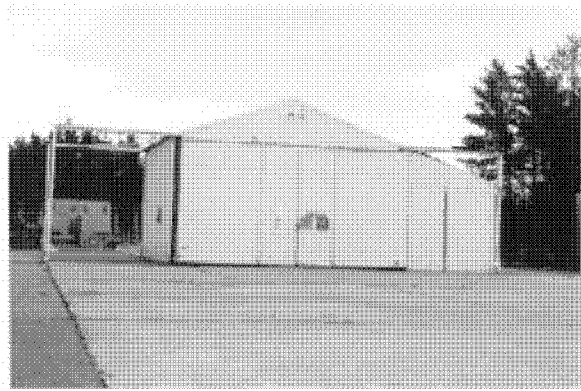
Resource No. 23044, Real Property No. 740
Jet Engine Integrated Maintenance Shop



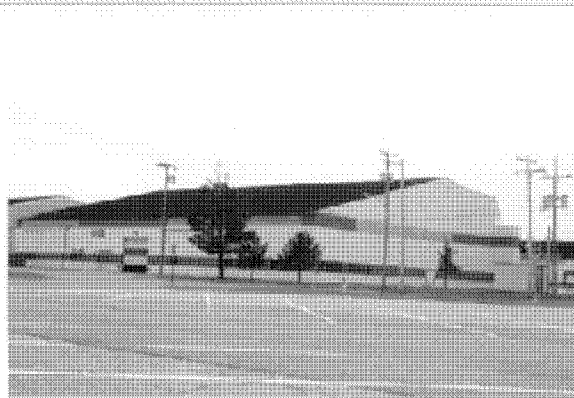
Resource No. 23045, Real Property No. 741
Flight Simulator Training



Resource No. 23046, Real Property No. 742
Test Cell



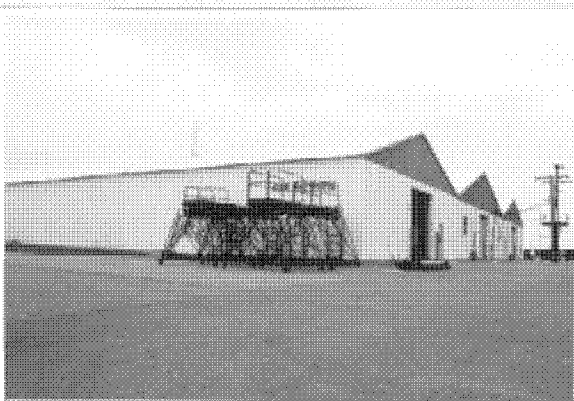
Resource No. 23047, Real Property No. 744
Base Engineer Covered Storage



Resource No. 23048, Real Property 662
Large Aircraft Maintenance Dock



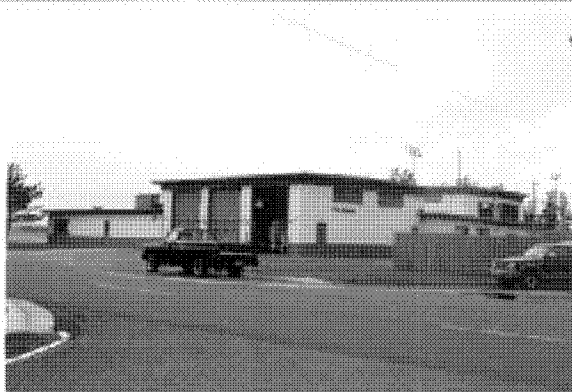
Resource No. 23049, Real Property No. 627
Aircraft Maintenance Shop



Resource No. 23050, Real Property No. 610
Aircraft Support Equipment Storage



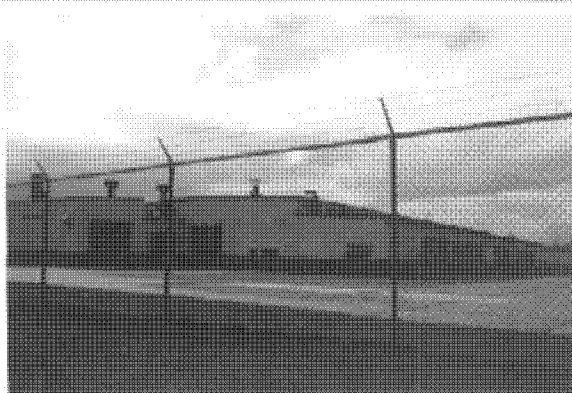
Resource No. 23051, Real Property No. 425
Aircraft Maintenance Shop



Resource No. 23052, Real Property No. 600
Fire Station



Resource No. 23053, Real Property No. 601
Base Photo Lab



Resource No. 23054, Real Property No. 608
Vehicle Maintenance Shop



Resource No. 23055, Real Property No. 607
Vehicle Operations Administration



Resource No. 23056, Real Property No. 604
Vehicle Operations Heated Parking



Resource No. 23057, Real Property No. (none)
Squadron Fuel Supply



Resource No. 23058, Real Property No. 428
Survival Equipment Shop



Resource No. 23059, Real Property No. 430
Survival Equipment Shop



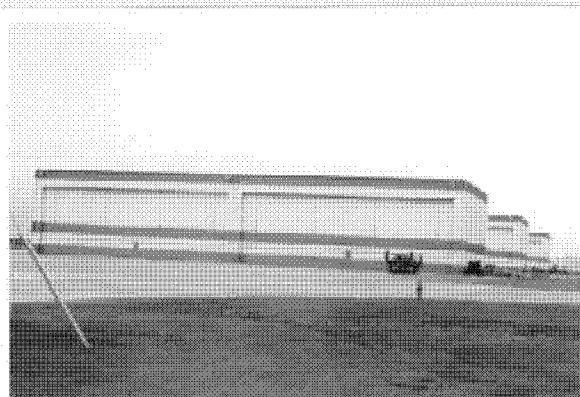
Resource No. 23060, Real Property No. 422
Vehicle Operations Heated Parking



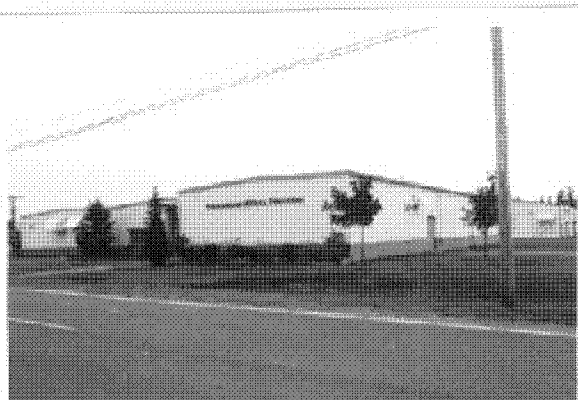
Resource No. 23061, Real Property No. 431
Aircraft Support Equipment Storage



Resource No. 23062, Real Property No. 421
Base Engineer Covered Storage



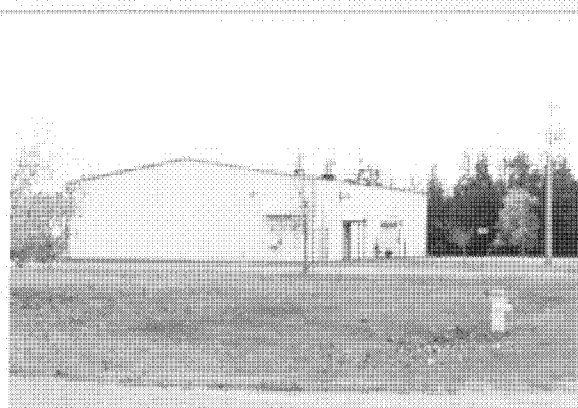
Resource No. 23063, Real Property No. 423
Aircraft Support Equipment Storage



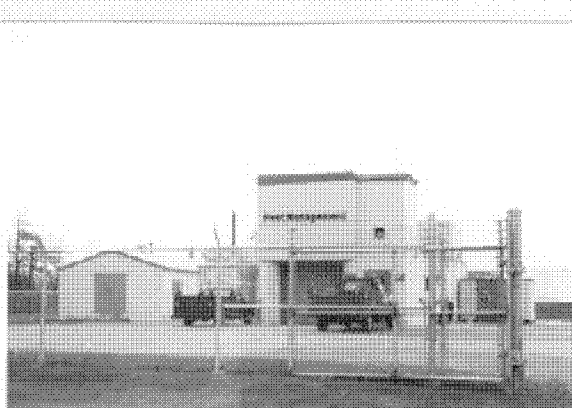
Resource No. 23064, Real Property No. 404
PME Lab



Resource No. 23065, Real Property No. 403
Munitions Maintenance Administration



Resource No. 23066, Real Property No. 420
Explosive Ordnance Disposal



Resource No. 23067, Real Property No. 414
Base Engineering Maintenance Shop



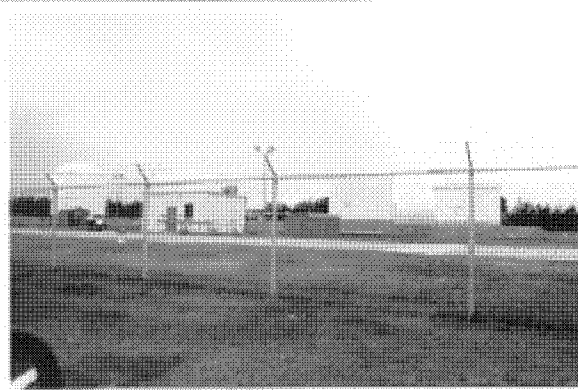
Resource No. 23068, Real Property No. 530
Vehicle Maintenance Shop



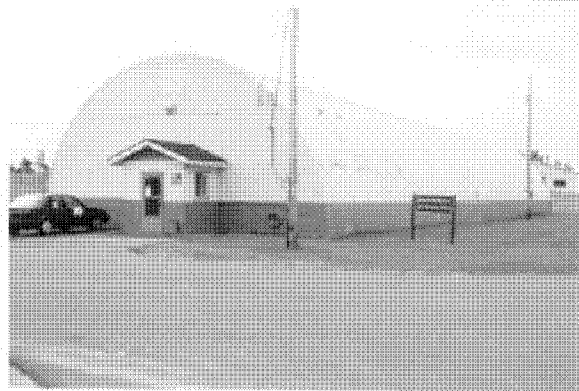
Resource No. 23069, Real Property No. 533
Base Engineering Pavement Ground Facility



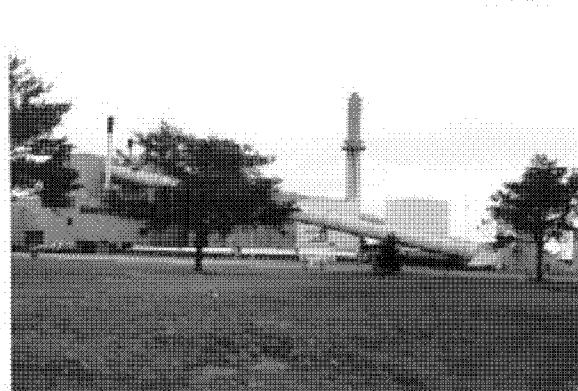
Resource No. 23070, Real Property No. 522
Warehouse Supply and Equipment



Resource No. 23071, Real Property No. (none)
Fuel Storage Area



Resource No. 23072, Real Property No. 417
Warehouse Supply and Equipment



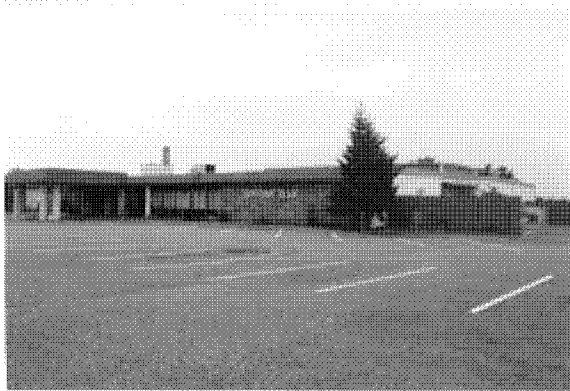
Resource No. 23073, Real Property No. 521
Heating Facility Building



Resource No. 23074, Real Property No. 512
Base Personnel Office



Resource No. 23075, Real Property No. 511
Security Police Operations



Resource No. 23076, Real Property No. 800
Officers' Open Mess



Resource No. 23077, Real Property No. 801
Visiting Airmens' Quarters Dormitory



Resource No. 23078, Real Property No. 808
Visiting Officers' Quarters



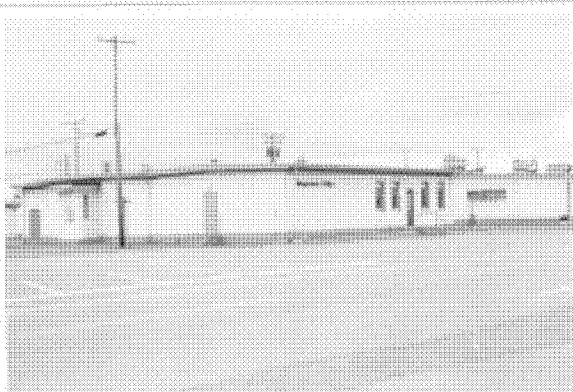
Resource No. 23079, Real Property No. (none)
F-101 Voodoo (Static Display)



Resource No. 23080, Real Property No. 810
Airmens' Dormitory



Resource No. 23081, Real Property No. 500
Wing Headquarters



Resource No. 23082, Real Property No. 501
Communications Facility



Resource No. 23083, Real Property No. 812
Non-Commissioned Officers' Open Mess



Resource No. 23084, Real Property No. 816
Animal Clinic



Resource No. 23085, Real Property No. 503
Chapel Center



Resource No. 23086, Real Property No. 813
Post Office Center



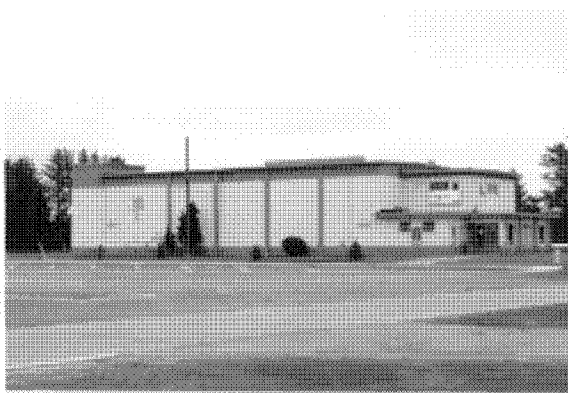
Resource No. 23087, Real Property No. 513
Miscellaneous Recreation Building



Resource No. 23088, Real Property No. 504
Recreation Center



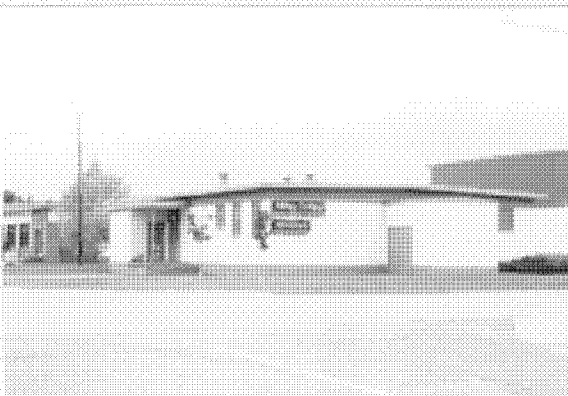
Resource No. 23089, Real Property No. 826
Exchange Service Station



Resource No. 23090, Real Property No. 819
Base Theater



Resource No. 23091, Real Property No. 817
Group Headquarters



Resource No. 23092, Real Property No. 633
Clothing Store



Resource No. 23093, Real Property No. 823
Library Recreation



Resource No. 23094, Real Property No. 822
Base Package Store



Resource No. 23095, Real Property No. 824
Automotive Hobby Shop



Resource No. 23096, Real Property No. 640
Non-Commissioned Officers' Open Mess



Resource No. 23097, Real Property No. 634
Commissary Store



Resource No. 23098, Real Property No. 643
Exchange Sales Store



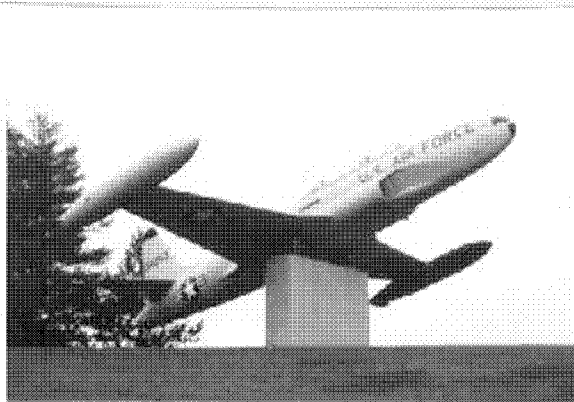
Resource No. 23099, Real Property No. 825
Arts and Crafts Center



Resource No. 23100, Real Property No. 641
Recreation Facility



Resource No. 23101, Real Property No. 642
Bowling Center



Resource No. 23102, Real Property No. 5112
Monument/Memorial (F-80)



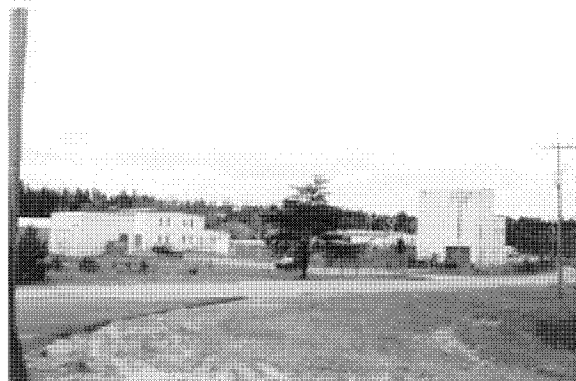
Resource No. 23103, Real Property No. 850
Composite Medical Facility



Resource No. 23104, Real Property No. 832
Airmens' Dormitory



Resource No. 23105, Real Property No. 833
Airmens' Dining Hall



Resource No. 23106, Real Property No. 4006
Sewage Treatment and Disposal



Resource No. 23107, Real Property No. 875
Golf Clubhouse



Resource No. 23108, Real Property No. (none)
K.I. Sawyer Elementary School



Resource No. 23109, Real Property No. 1246
Base Engineering Maintenance Shop



Resource No. 23110, Real Property No. 1247
Branch Exchange



Resource No. 23111, Real Property No. 947
Youth Center



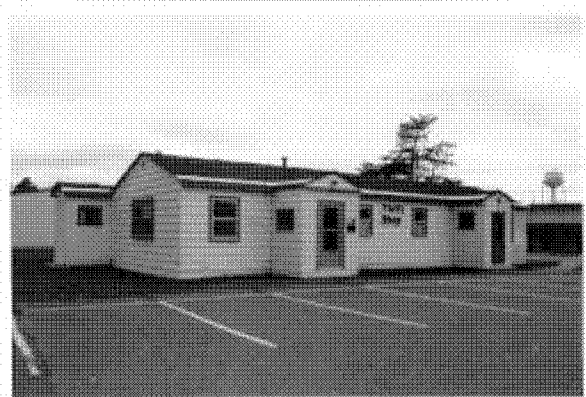
Resource No. 23112, Real Property No. (none)
ATM Kiosk



Resource No. 23113, Real Property No. 949
Child Care Center



Resource No. 23114, Real Property No. 945
Day Care Center



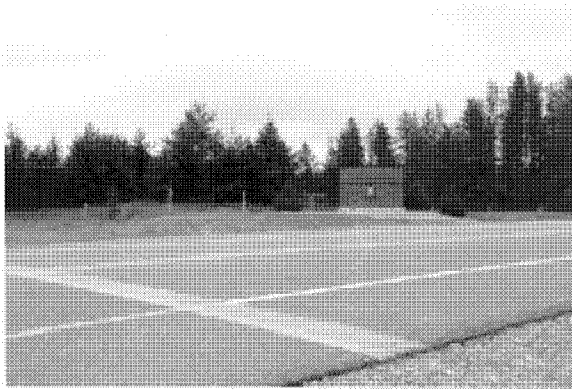
Resource No. 23115, Real Property No. 1249
Thrift Shop



Resource No. 23116, Real Property No. 1200
Temporary Lodging Facility



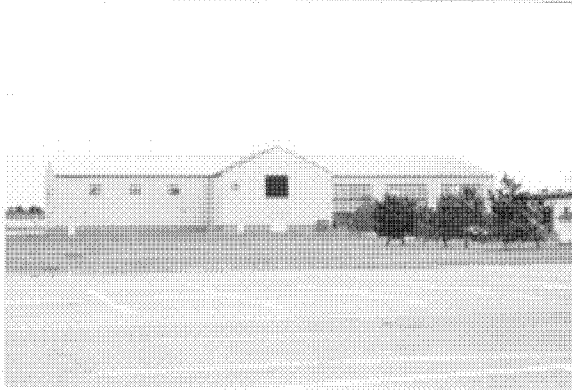
Resource No. 23117, Real Property No. 1202
Temporary Lodging Facility



Resource No. 23118, Real Property No. 1202
Main Gate Sign



Resource No. 23119, Real Property No. 747
Control Tower



Resource No. 23120, Real Property No. 641
Recreation Facility (Pool)



Resource Nos. 23121-23122, Real Property Nos.
106 and 102, Visitors' Center and Traffic
Checkhouse



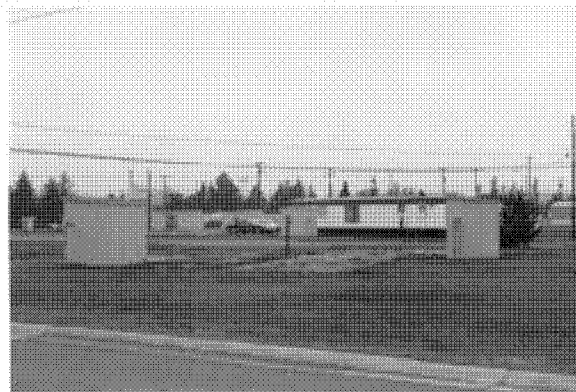
Resource No. 23123, Real Property No. 1208
Capehart Family Housing



Resource No. 23124, Real Property No. 1722
Capehart Family Housing



Resource No. 23125, Real Property No. 1818
Manufactured Family Housing



Resource No. 23126, Real Property No. (none)
Trailer Park



Resource No. 23127, Real Property No. 1037
Capehart Family Housing



Resource No. 23128, Real Property No. 1024
Capehart Family Housing



Resource No. 23129, Real Property No. 108
Crew Readiness

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT K. I. SAWYER AFB

Resource Number: 23001

Property Description: Originally Fighter Alert Facility which included four aircraft bays and crew quarters and dining and lavatory accommodations.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 527 H Avenue

Base Map Date: 8/1/89

Base Map Building Number: 400

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Fighter Alert Facility

Statement of Significance: The building was designed and used to house fighter interceptors and their crews. The building represents the first mission of KI Sawyer AFB; the mission of intercepting incoming enemy bomber attack.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	2
Severity of Threats:	4
Total Score for Priority Matrix:	21
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: The integrity of this building is questionable, thus it is evaluated as potentially eligible.

Importance: Exceptional

Eligibility: Eligible

Height: 30
Square Footage: 28175
Original Planned Duration: Permanent
Existing Use: Maintenance Shop
Other Use/Dates: Fighter Alert
Comments on Use:
Primary Building Materials: Steel Frame
Character Defining Features: Aircraft bays, crew quarters and accomodations

Resource Number: 23005

Property Description: Crew Readiness Facility, (Bomber): Contained sleeping quarters, dining and lounge facilities for bomber crews as well as access tubes to apron.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: none

Base Map Date: 8/1/89

Base Map Building Number: 104

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Bomber Alert Facility

Statement of Significance: The building was designed and used to support bomber crews and facilitate their rapid response to their planes in the event of a war situation.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	4
Total Score for Priority Matrix:	23
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptional importance and intact integrity.

Importance: Exceptional

Eligibility: Eligible

Height: 20

Square Footage: 52629

Original Planned Duration: Permanent

Existing Use: vacant

Other Use/Dates: Crew Readiness

Comments on Use:

Primary Building Materials: Poured Concrete

Character Defining Features: Personnel access tunnels, crew quarters and accommodations, massing

Resource Number: 23036

Property Description: SAGE building: originally used by ADC as a communications center for coordination of interceptors in the event of Soviet bomber attack.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 240 D. Avenue

Base Map Date: 8/1/89

Base Map Building Number: 708

Operational Support & Installations:

Combat Weapons and Support Systems: Communications

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: SAGE Facility

Statement of Significance: This building was designed and used to provide interceptor fighters locations of attacking bombers and compute the best possible intercept vector. It exemplifies the fear of Soviet transpolar bomber attack

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	4
Percent Historic Fabric:	1
Severity of Threats:	3
Total Score for Priority Matrix:	18
Comments on Threats:	

No Further Work: No

Stewardship: No

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Very little integrity remains; interior space has been extensively renovated and exterior treatments have altered the original appearance.

Importance: Exceptional

Eligibility: Ineligible

Height: 60

Square Footage: 120819

Original Planned Duration: Permanent

Existing Use: Communication Center, Various Offices

Other Use/Dates: SAGE

Comments on Use:

Primary Building Materials: Poured Concrete

Character Defining Features: Windowless exterior, bomb shelter basement

Resource Number: 23129

Property Description: Tanker alert facility which housed tanker alert crews and facilitated rapid deployment to their aircraft.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: none

Base Map Date: 8/1/89

Base Map Building Number: 108

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Tanker Alert Facility

Statement of Significance: The building was designed and used for tanker alert operations. It symbolizes the mission of rapid deployment of tanker forces in support of bombers in the event of an enemy nuclear threat

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 4

Total Score for Priority Matrix: 22

Comments on Threats: assume historic fabric is high but could not gain access to interior of building

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally important with surmised intact integrity.

Importance: Exceptional

Eligibility: Eligible

Height: 15

Square Footage: 4012

Original Planned Duration: Permanent

Existing Use: vacant

Other Use/Dates: Tanker Alert

Comments on Use:

Primary Building Materials: Poured Concrete

Resource Number: 23130

Property Description: Historical maps, master layouts, utility project drawings in paper, linen, mylar, vellum, and blue line reproductions.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 8/1/89

Base Map Building Number: inside 531

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Architectural Drawing Files

Statement of Significance: Illustrate the development of the base and document other evaluated resources.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	3
Total Score for Priority Matrix:	18
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Inventory and copy; copies go to base and originals go to a permanent curatorial facility.

Record/Document Category: Drawing Files

Year of Document: various

Period of Association: all four phases

Comments on Condition: being handled a lot; benign neglect

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on K. I. Sawyer AFB and to provide research materials for the study:

SSgt Tami Miller
Wing Historian
410th Bomb Wing
(906) 372-2470

SSgt Penny Baker
Incoming Wing Historian
410th Bomb Wing
(906) 372-2470

SrA Bryan Archer
Drafter
410th Civil Engineering Squadron
(906) 372-2865

Mr. Alan Wood
Real Property Officer
410th Civil Engineering Squadron
(906) 372-2316

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing knowledge of K. I. Sawyer AFB history and Cold War context.

SSgt Tami Miller, Wing Historian, 410th Bomb Wing, October 17-21, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-14: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT LANGLEY AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**R. Blake Roxlau
Karen Lewis
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Langley Air Force Base was inventoried for Cold War resources by R. Blake Roxlau and Karen Lewis of Mariah Associates, Inc. between November 1 and 10, 1994 as part of the Air Combat Command Cold War Study under the ongoing Department of Defense Legacy Program. Information was gathered at the base from the Wing History Office, Drawing Vault, Civil Engineering Office, Real Property Office, Public Affairs Office, and the Base Cultural Resources Manager. On-site inspection of the base was also conducted. During this inspection, 191 resources that represent the various property types on the base were inventoried and photographed.

Of the 191 resources, three resources were further documented and evaluated during the course of the survey as important to the Cold War. These include the Fighter Alert Facility, a Major Command Headquarters, and a Documentary Collection. These evaluated resources correspond to Phases I through IV of the Cold War, as described in the historic context and methodology document written for this project (Lewis et al. 1995), and reflect the role that Langley Air Force Base played in the Cold War.

Recommendations for these resources are as follows. The Fighter Alert Facility is recommended as eligible to the NRHP, with further documentation and stewardship also recommended. The Major Command Headquarters has already been determined eligible for NRHP listing for its pre-Cold War associations and is included in a proposed National Register district. This resource is recommended as eligible to the NRHP based on its Cold War associations and stewardship of the building is recommended. Inventory, conservation, and stewardship are recommended for the Documentary Collection of maps and architectural drawing files.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACCS	- Airborne Command and Control Squadron
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
ADMS	- Air Defense Missile Squadron
AFB	- Air Force Base
AGE	- Air Ground Equipment
AREFS	- Air Refueling Squadron
AREFW	- Air Refueling Wing
BMG	- Bombardment Group
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
CRS	- Component Repair Squadron
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
FBG	- Fighter Bomber Group
FBS	- Fighter Bomber Squadron
FBW	- Fighter Bomber Wing
FIS	- Fighter Interceptor Squadron
FTD	- Field Training Detachment
FW	- Fighter Wing
GHQ	- General Headquarters
HABS	- Historic American Buildings Survey
HQ	- Headquarters
HTA	- Heavier-Than-Air
LOX	- Liquid Oxygen
LTA	- Lighter-Than-Air
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NACA	- National Advisory Committee for Aeronautics
NASA	- National Aeronautics and Space Administration
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
NSC	- National Security Council
OCNUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants
SAC	- Strategic Air Command
SAGE	- Semi-Automatic Ground Environment
SALT	- Strategic Arms Limitation Treaty

LIST OF ACRONYMS (Continued)

SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TAS	- Tactical Airlift Squadron
TAW	- Tactical Airlift Wing
TCS	- Troop Carrier Squadron
TCW	- Troop Carrier Wing
TFS	- Tactical Fighter Squadron
TFW	- Tactical Fighter Wing
TRS	- Tactical Reconnaissance Squadron
TRW	- Tactical Reconnaissance Wing
USAF	- United States Air Force
WRSK	- War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

GLOSSARY (Continued)

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	4
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 NASA	20
3.3 BASE DEVELOPMENT	21
4.0 METHODOLOGY	28
4.1 INVENTORY	28
4.2 EVALUATION OF IMPORTANT RESOURCES	29
4.2.1 Documentation	29
4.2.2 Evaluation of Importance	29
4.2.2.1 Cold War Context	29
4.2.2.2 NRHP Criteria	30
4.2.2.3 Exceptional Importance	31
4.2.3 Evaluation of Integrity	31
4.2.4 Priority Matrix	32
4.2.5 Resource Organization	33
4.3 BASE SPECIFIC METHODS	33
5.0 RECONNAISSANCE INVENTORY RESULTS	34
6.0 EVALUATION RESULTS	35
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	35
6.1.1 Base and Command Centers	35
6.1.1.1 Major Command Headquarters	35
6.1.2 Documentation	37
6.1.2.1 Documentary Collection	37

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	38
6.2.1 Alert Facilities	38
6.2.1.1 Fighter Alert Facility	38
6.3 MATERIEL DEVELOPMENT FACILITIES	39
6.4 TRAINING FACILITIES	39
6.5 INTELLIGENCE FACILITIES	39
7.0 UNDOCUMENTED RESOURCES	40
8.0 FUTURE THREATS TO RESOURCES	42
9.0 PRELIMINARY RECOMMENDATIONS	43
9.1 NRHP ELIGIBILITY	43
9.1.1 Evaluation and Determination of NRHP Eligibility	43
9.1.2 Implications of NRHP Eligibility	45
9.2 EVALUATED RESOURCE RECOMMENDATIONS	46
9.2.1 Major Command Headquarters	48
9.2.2 Documentary Collection	49
9.2.3 Fighter Alert Facility	49
10.0 REFERENCES CITED	50
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Langley Air Force Base.....	5
Figure 2.2 Langley Air Force Base Layout	6
Figure 2.3 Standard Tactical Air Command Base Layout.....	7
Figure 2.4 Langley Air Force Base Land Use Diagram	11
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	12
Figure 3.1 Langley Air Force Base, pre-1941.....	22
Figure 3.2 Langley Air Force Base, 1941-1960.....	24
Figure 3.3 Langley Air Force Base, 1960-1970.....	25
Figure 3.4 Langley Air Force Base, 1970-1980.....	26
Figure 3.5 Langley Air Force Base, 1980-1990.....	27

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	36
Table 6.2 Evaluated Resource Prioritization by Priority Rank	36
Table 9.1 Recommendations for Evaluated Resources.....	47

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

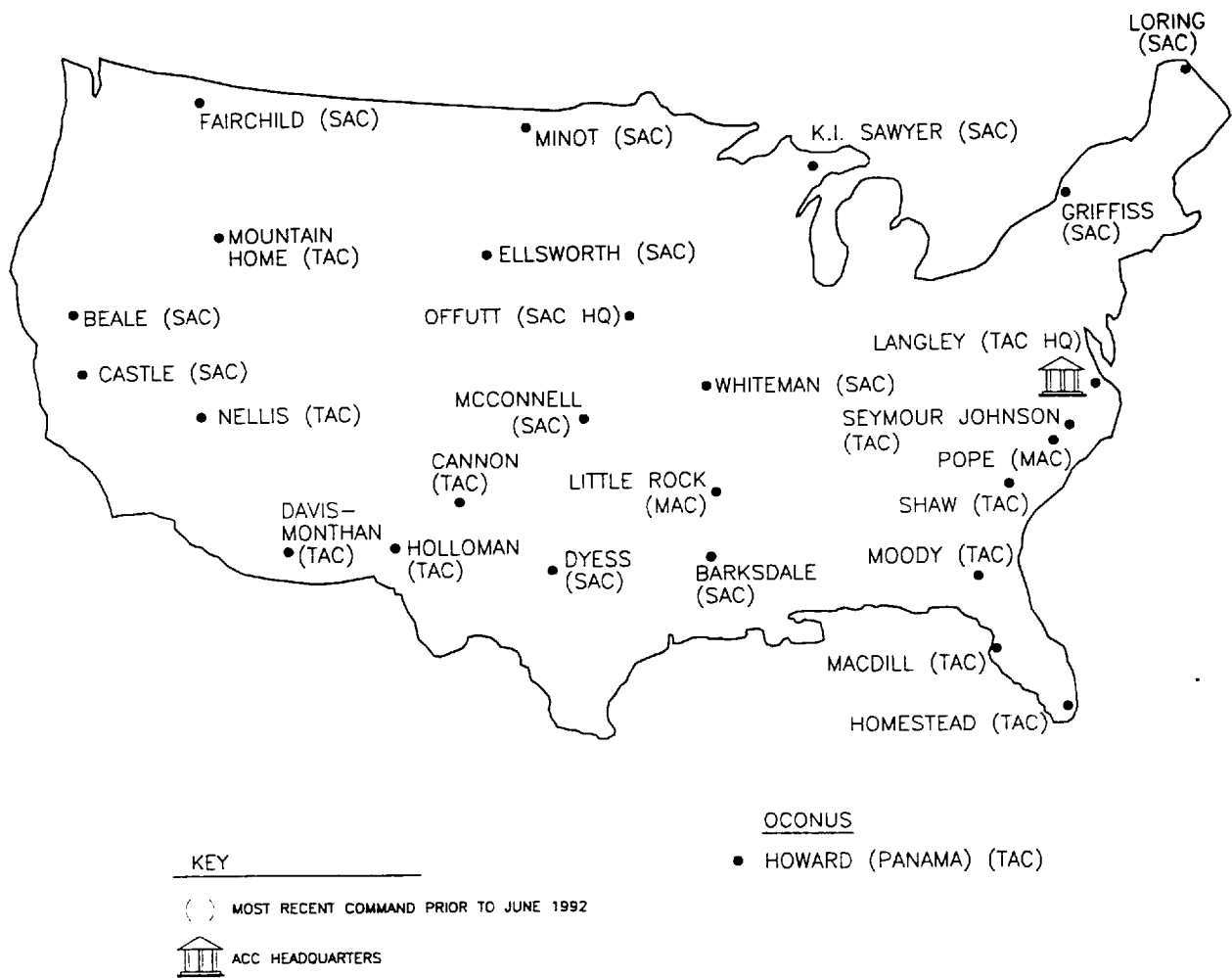
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: LANGLEY\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Langley Air Force Base (AFB). Langley AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Langley AFB currently consists of the ACC Headquarters and the 1st Fighter Wing (FW). The 1st FW is the base host and directs the 1st Operations Group, 1st Logistics Group, 1st Support Group, and the 1st Medical Group. The 1st Operations Group directs the wing's flying squadrons, the 27th, 71st, and 94th Fighter Squadrons. These squadrons employ the F-15C and F-15D Eagle fighter aircraft to achieve their mission, which is to provide combat air forces capable of delivering rapid, decisive air power anytime, worldwide. The wing's mission statement is "America's First Team setting the standard in air supremacy" (United States Air Force [USAF] 1994a).

2.2 GEOGRAPHIC DESCRIPTION

Langley AFB is located along the Atlantic coast on the Virginia Peninsula in the southeastern part of Virginia (Figure 2.1). Langley AFB is located approximately 3.0 mi (4.8 km) north of downtown Hampton, Virginia, and is part of the major metropolitan area that also includes Norfolk and Newport News. The base is located on relatively flat terrain in an area originally dominated by coastal wetlands. Although most of the surrounding area is urban, some wetland environments remain on the base. The climate of the area is dominated by mild winters and warm, humid summers. The local economy is dependent upon the area's large military and government installations, shipbuilding, and tourism.

2.3 CURRENT BASE LAYOUT

The layout of Langley AFB (Figure 2.2) varies considerably from the standard TAC base layout (Figure 2.3). This variation is probably due to a variety of circumstances, among them the

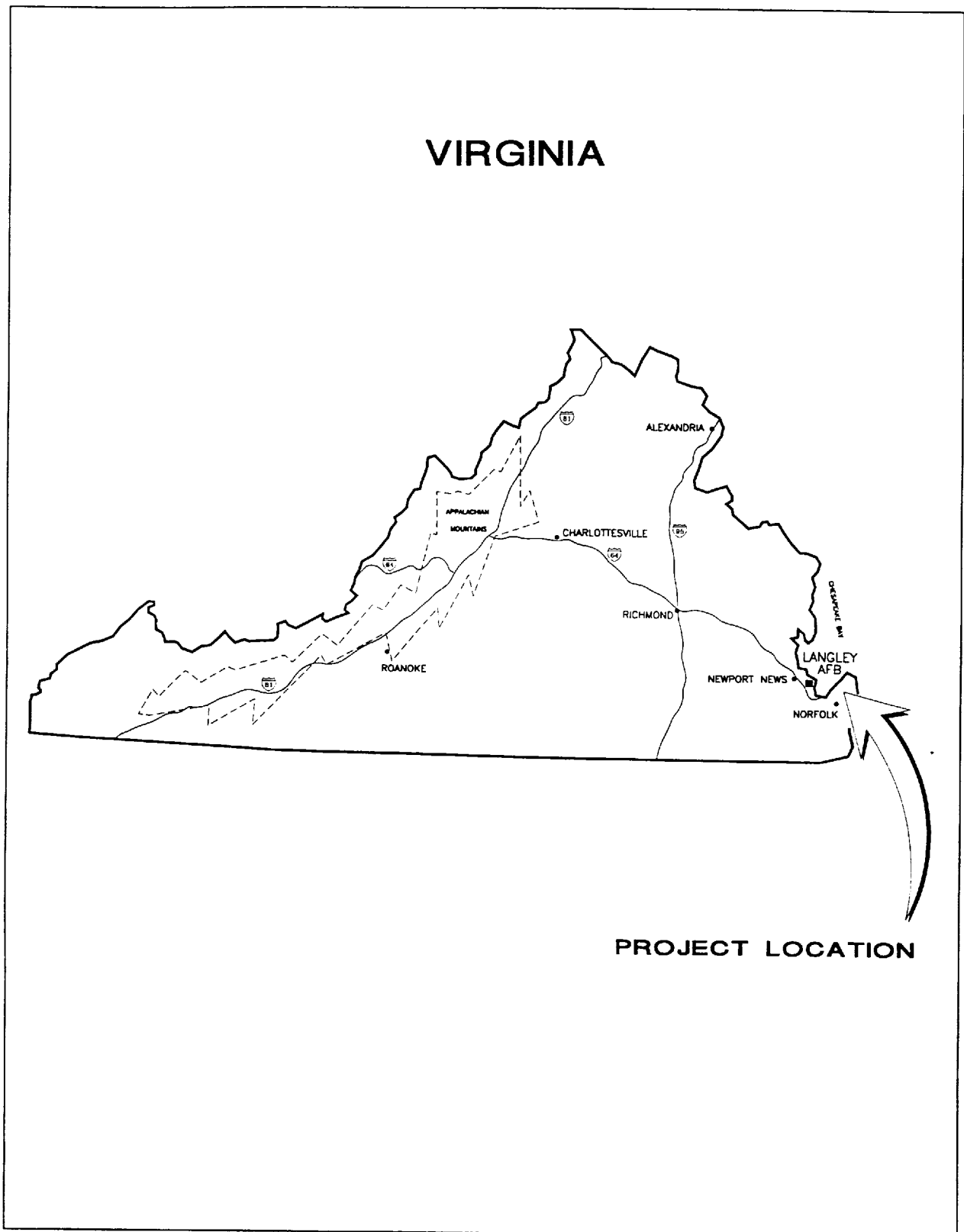


Figure 2.1 Location of Langley Air Force Base.

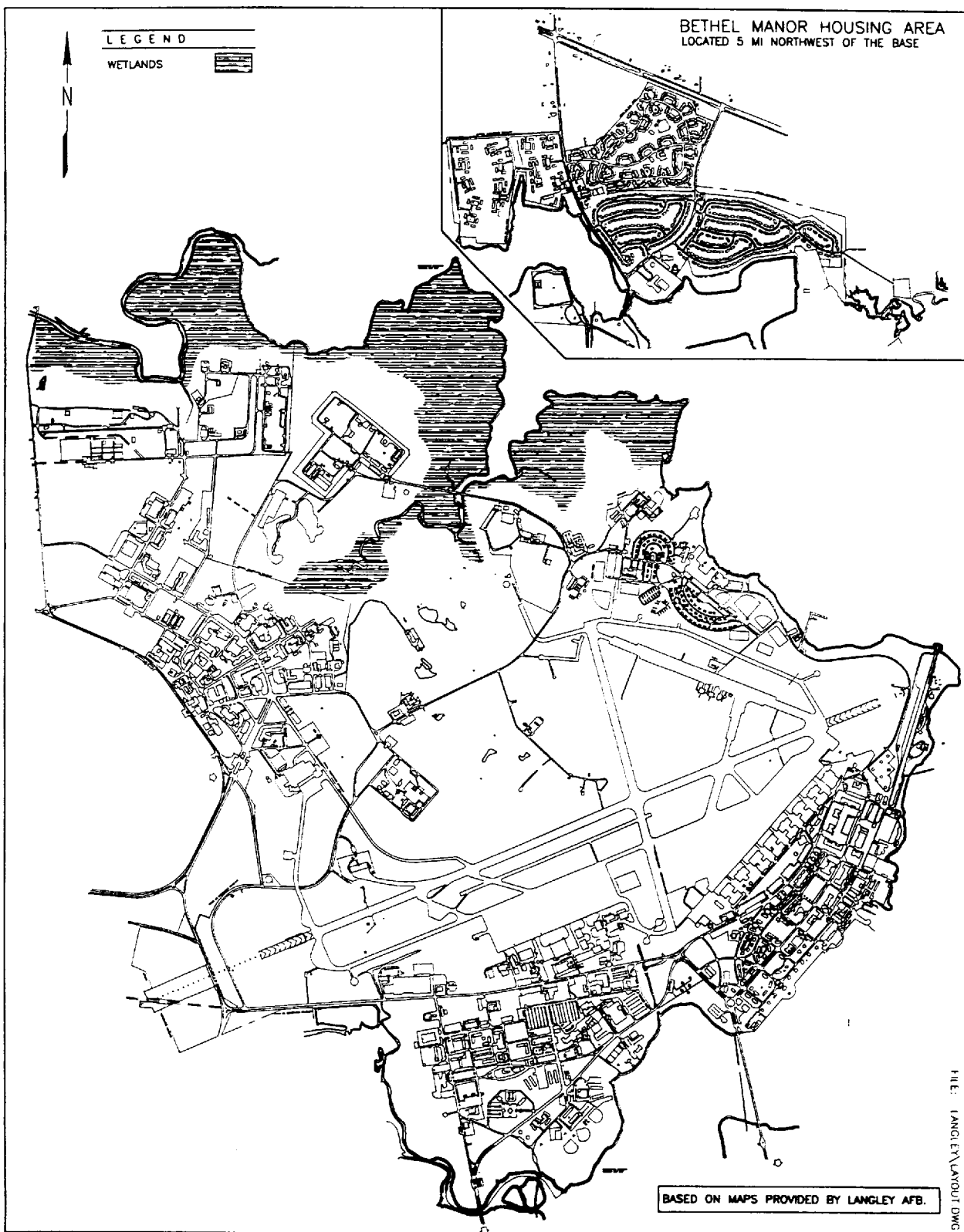


Figure 2.2 Langley Air Force Base Layout.

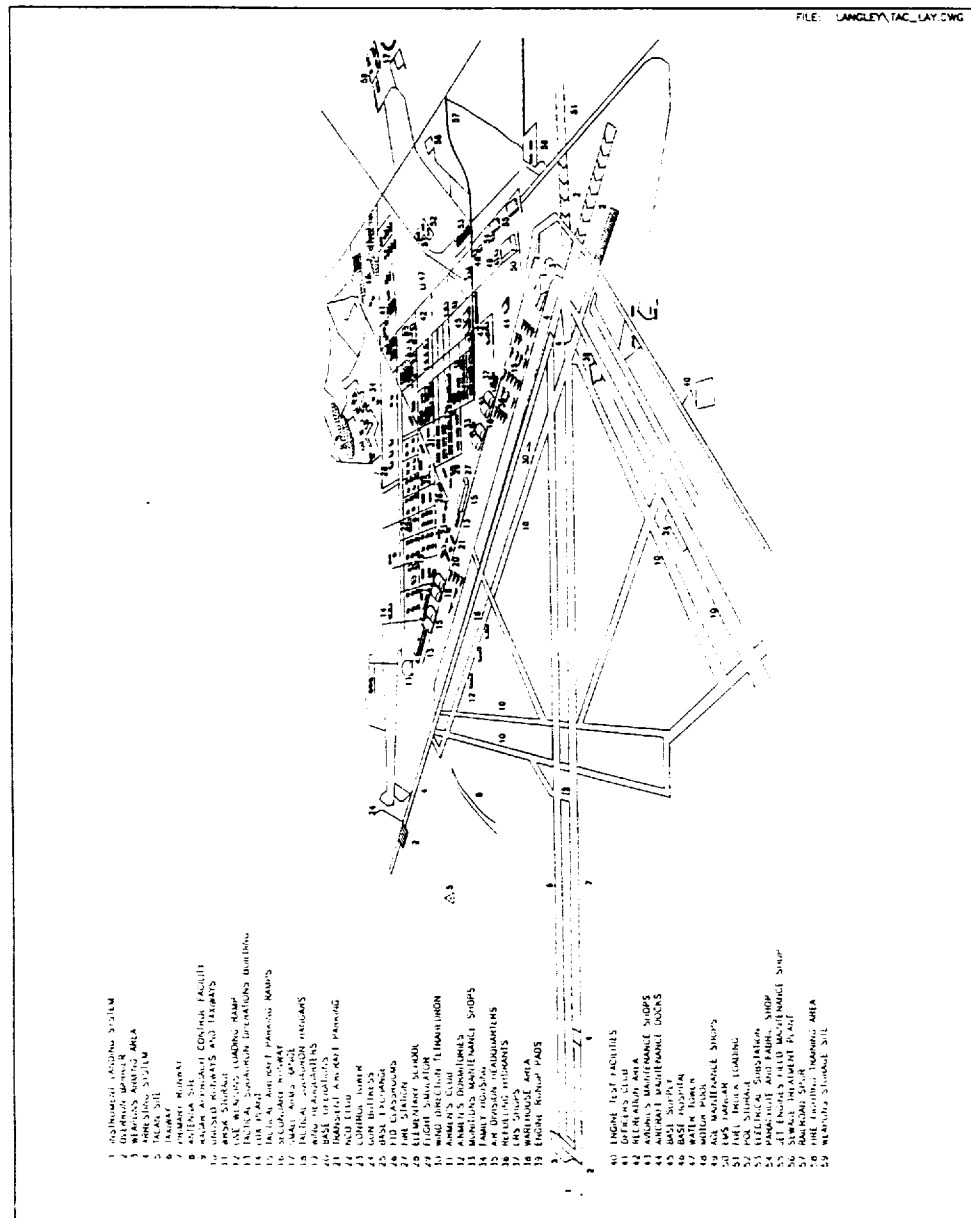


Figure 2.3 Standard Tactical Air Command Base Layout.

geography of the area, Langley AFB's long history, and the location of the National Aeronautics and Space Administration's (NASA's) Langley Research Center adjacent to the base.

The base is positioned on a piece of land that juts out into the Back River, splitting the river into the Northwest Branch and the Southwest Branch. The base is surrounded by water on three-quarters of its boundaries, and this geographic occurrence influenced base expansion.

With the exception of the river's irregular shorelines, the base is circular in shape. The main runway extends east-northeast to west-southwest, and is located in the southern half of the base. It extends from one side of the base to the other and separates the base into southern and northern parts. At the northeastern end of the runway are the remnants of three World War II runways. These are laid out in a triangular shape and are now used as parking aprons. By acting as boundaries to expansion, these runways have significantly influenced the development of the base.

There are four main areas of development on the base, two in the northern part and two in the southern part. The southern part contains the Heavier-Than-Air (HTA) area, named for its historic use for winged aircraft, and the Shellbank area, named after the plantation it replaced. The HTA area, located at the eastern end of the runway, is bounded by the river on three sides and a World War II runway on the fourth. It is elongated in shape and oriented north-northeast to south-southwest. The gate access to this area of the base is across the river to the south. Upon entering the gate, vehicles cross a bridge and then enter into the development. The Shellbank area is found southwest of the HTA area at the southwestern end of the main runway. This area is globular in shape and is bounded by the river on the eastern, western, and southern sides and the runway on the northern side. This area is accessed through the main gate at the southern tip of the base. The HTA and Shellbank areas are separated by a parade ground and memorial park with fighter aircraft displays.

The northern part of the base, which comprises approximately two-thirds of the base land area, contains two development areas and some scattered facilities. One of the two development areas is

the Lighter-Than-Air (LTA) area, named after the dirigible development that occurred there. This development, located at the northeastern end of the runway, is found between the Back River and one of the World War II runways. The other development is the NASA area, which is actually located off the base, adjacent to its western side. Between these two developments are recreation facilities, open areas, a creek, and wetland areas.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Alert Facility - provides for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Langley AFB layout does not conform to the standard TAC layout, and the land use plan for Langley AFB (Figure 2.4) differs extensively from the standard TAC base land use diagram (Figure 2.5).

In the HTA area, the mission and base support areas extend along the flight line and consist of hangars, squadron operations buildings, various support facilities, and wing headquarters. Directly to the east of this area and extending to the south is the officer's family housing, which consists of single family and duplex buildings constructed in a Tudor revival style. East of the mission and base support areas in the northern section of the HTA area are the ACC headquarters and offices, NASA test facilities, and more base support facilities. The base support facilities, NASA facilities, and officer's housing are on or near the river. The Shellbank area consists of mission facilities along the flight line, and a mix of community, base support, unaccompanied housing, and recreation facilities between the mission area and the river.

The LTA area consists of a mix of family housing, recreation, community, and base support areas. The space between the LTA and the NASA areas is mainly open space and recreation areas. However, the base weapon storage area is found in the northern-most part of this open space, and the alert facility is located south of the NASA area and west of the recreation area. The main family housing area is located off-base, adjacent to the Big Bethel Reservoir.

In and of themselves, the HTA and Shellbank areas are similar to the standard TAC diagram. The mission areas are beside the flight line. Base support, unaccompanied housing, and community areas are mixed together next to the mission areas. The wing and ACC headquarters facilities are located within this mix. Finally, the family housing and recreational areas are on the edge of the development, farthest from the flight line. The layout of the LTA area contradicts the standard, with the family housing and recreation areas located closest to the flight line, and base support and community areas farthest away.

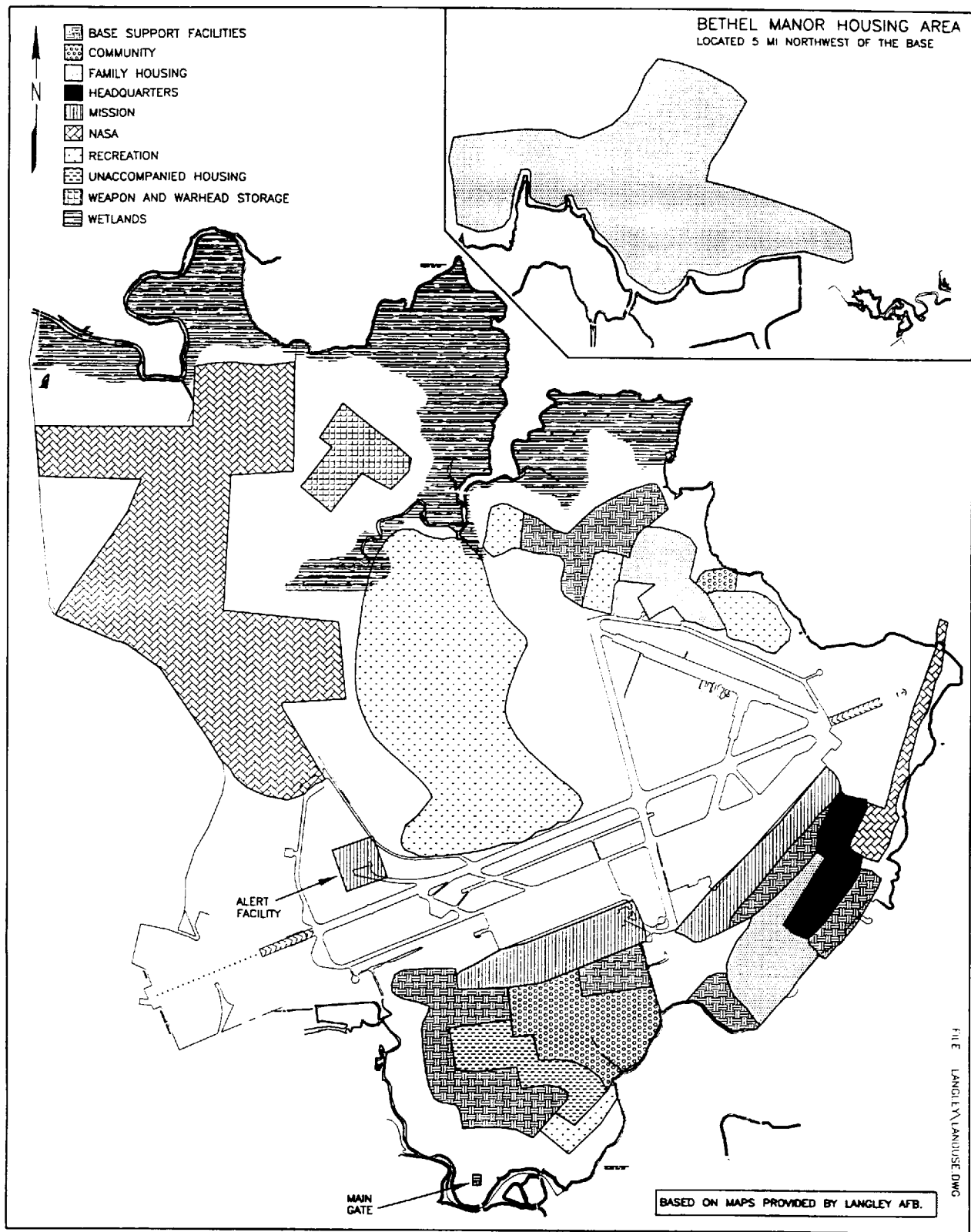


Figure 2.4 Langley Air Force Base Land Use Diagram.

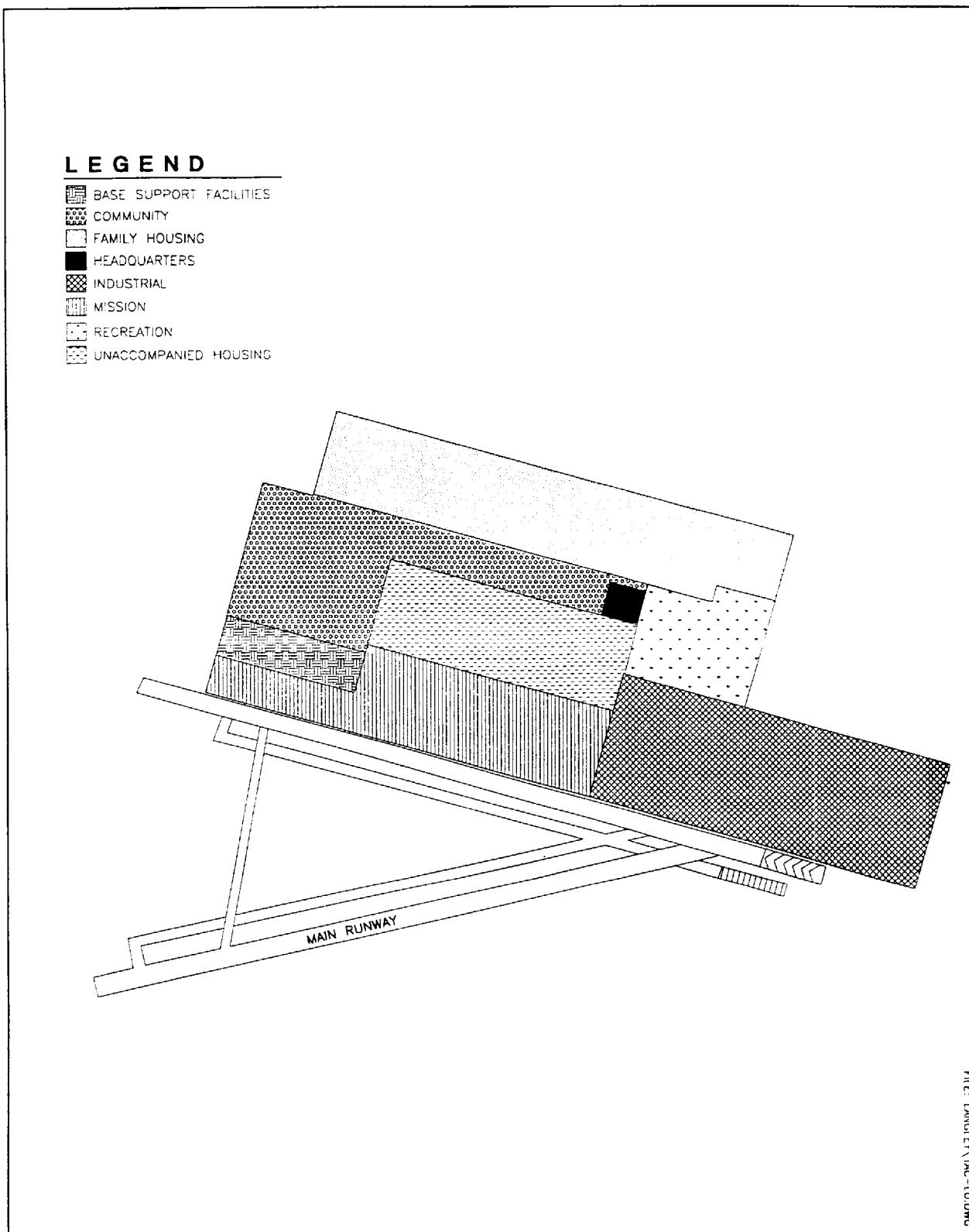


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Langley AFB is one of the oldest continuously active AFBs in the nation and has hosted a number of major commands. The base was named for Samuel Pierpoint Langley (1834-1906), an aviation pioneer who made two unsuccessful attempts at flying an aircraft in 1903 (USAF 1966). Despite his failure to fly, Langley's ideas and designs were considered sound, and he inspired other aviators, including the Wright brothers.

Langley Field was established to support the National Advisory Committee for Aeronautics (NACA), which was founded in 1915. The committee, which evolved into NASA in later years, was responsible for aeronautical research and experimentation (Curtis et al. 1977). The aviation section of the Army Signal Corps accepted the responsibility of securing the land for the installation. The present location of Langley AFB was chosen due to several factors including: "accessibility; location near an established Army installation (Fort Monroe); a convenient area for over-water flying; a location suitable for the landing and taking off of land-based aircraft; a proximity to industry; and a temperate climate" (Curtis et al. 1977:11).

The Army acquired the property in December of 1916 for the sum of \$290,000, and work on the air field began almost immediately. Albert Kahn & Associates, a prominent Detroit architectural firm, was selected to design the field. Kahn's services were obtained for half his normal fee. It is unclear why Kahn was chosen to design the air field; however, his low fee and his dedication to this and similar projects may have been a contribution to the war effort (Cook 1992). Construction work in 1917 included clearing the area, installing a drainage system, dredging the Back River, and constructing temporary facilities.

With the United States' entry into World War I in 1917, the desire to initiate aircraft development and operation at Langley Field was urgent (Cook 1992). However, due to numerous contractor

delays, a temporary experimental center was established instead at McCook Field in Dayton, Ohio (Curtis et al. 1977). With this move, most of the Army aviation shifted away from Langley Field, greatly reducing the air field's role in World War I. The main activity at the air field during World War I was the operation of the Army School of Aerial Photography, which trained men in the practice of aerial photography, photographic interpretation, and map making (Curtis et al. 1977). Other activities included bombing experiments, radio and telegraph development, and foreign aircraft testing.

In addition to fixed-wing aircraft, balloon companies were stationed at Langley Field between 1917 and 1935. In order to facilitate the balloons' operation, an airship station was constructed at the air field in 1919 (Cook 1992). A hydrogen plant had previously been constructed in the vicinity in 1917. This area became known as the LTA area.

In 1920, the Army Air Service was established as a combat arm. The Air Service was composed of two wings, including the 2nd Wing which was located at Langley Field. The 2nd Wing was composed of the 2nd Bombardment Group, 58th Service Squadron, 50th Observation Squadron, and 19th Airship Company (Curtis et al. 1977). Despite a general decline in personnel and equipment in the Armed Services following World War I and the incomplete construction of the field, Langley Field was the largest air field in the United States in the early 1920s (Curtis et al. 1977).

Another significant event at Langley Field was the establishment of the Army Air Service Field Officers School in 1920. This pilot school taught tactics, technical aviation, and administrative subjects (Curtis et al. 1977). The following year, the school and its pilots took part in the bombing experiments carried out by the First Provisional Air Brigade commanded by General William "Billy" Mitchell.

Mitchell's bombing tests, conducted in June 1921, were designed to prove that airplanes could successfully attack and destroy surface ships (Curtis et al. 1977). Mitchell was an outspoken

proponent of aircraft and believed, contrary to many in the military establishment, that airpower was the wave of the future. Captured German warships and obsolete U.S. ships were used as targets. The tests included several components, including locating the ships by aircraft, strafing the ships' decks, and bombing and sinking the ships. Although the tests were successful, many more trials were needed to convince traditional military leaders that surface warships were vulnerable to air attack.

Airship activity continued at Langley Field throughout the 1920s. Numerous types and varieties of balloons were operated, including rigid and non-rigid designs. The airship *Roma* is the best known of the LTA craft used at Langley Field. The *Roma* was purchased from Italy and flown for the first time in the United States in November of 1921. The airship was plagued with engine troubles throughout its short lifetime. American motors were installed to replace the faltering Italian engines, and the ship was flown with the new engines in February 1922. Approximately one hour after lift off, the hydrogen-filled ship crashed, and 34 of 45 passengers and crew were lost (Curtis et al. 1977). In spite of this tragedy, airship activity continued at Langley Field until 1935.

The 1930s were a major period of growth at Langley Field. The principal units at the air field were the 2nd Bombardment Wing (BMW), which commanded the 2nd Bombardment Group (BMG), the 8th Pursuit Group, and the 19th Airship Squadron. The 8th Pursuit Group was composed of the 3rd, 35th, 36th, and 37th Pursuit Squadrons. When the Army Air Corps was reorganized in March of 1935, Langley Field was also assigned the role of General Headquarters (GHQ) Air Force (Curtis et al. 1977).

Langley Field's role in World War II was decided in early 1941 when GHQ Air Force was reassigned to Bolling Field near Washington D.C. The headquarters moved in March of 1941, and the air field lost its place as the premier air field in the United States (Curtis et al. 1977). Langley Field's mission between the outbreak of war in 1941 and 1943 was coastal patrol and anti-submarine operations. The main combat unit assigned was the 2nd BMG composed of the 20th and

96th Bombardment Squadrons (BMS), and the 3rd Observation Squadron (Curtis et al. 1977). The 2nd BMG operated a number of aircraft, mainly the long-range B-17 bomber and shorter range B-25 and B-18 bombers.

In 1943, anti-submarine operations were reassigned to the Navy. With the end of anti-submarine activity, the 2nd BMG ended its stay at Langley Field, bringing to a close over 20 years at the air field (Curtis et al. 1977). Between 1943 and 1945, activity at the air field was centered around the development and testing of radar equipment for use in bombers. Aircraft crews were also trained here in the operation of this equipment.

At the end of World War II, the vast majority of units at the air field were deactivated and the base fell into a short period of relative abandonment. The inactivity did not last long, and several new units arrived in late 1945 and 1946. These included the Army Airways Communication System, the Army Air Forces Weather Service, and the 363rd Tactical Reconnaissance Wing (TRW) (Curtis et al. 1977).

The most significant organization to be assigned to Langley Field in the post-war years was TAC. It was assigned to the air field in May 1946 after being established two months earlier. Langley Field was chosen to host the new command due to its location near Headquarters, Continental Army Command at Fort Monroe, Virginia and Headquarters, U.S. Atlantic Fleet in Norfolk, Virginia, in order to coordinate activities of both major commands (Department of Defense (DoD) 1972). Throughout its tenure at Langley AFB, TAC's mission was to train and maintain tactical air forces in order to facilitate their deployment to war-fighting commands whenever needed. The USAF was created as an autonomous service in 1947, and Langley Field was officially named Langley AFB in January 1948 (Curtis et al. 1977).

The late 1940s and early 1950s witnessed a variety of missions and numerous units assigned to and removed from Langley AFB. The first flying squadrons to serve under the new TAC command were the 161st Tactical Reconnaissance Squadron (TRS), which arrived in November of 1946, and

the 162nd TRS, which arrived the following month. These two squadrons were under the command of the 363rd TRW. The wing employed the FP-80 *Shooting Star* and A-26 aircraft in reconnaissance operations. The F-80 was the first jet aircraft to be assigned to Langley AFB (Curtis et al. 1977).

Headquarters Ninth Air Force was assigned to Langley AFB in 1949, and the 4th Tactical Fighter Wing (TFW) equipped with F-80 and F-86 *Sabre* fighters replaced the 363rd TRW (Headquarters [HQ] ACC History Office 1994; DoD 1972). The following year the Ninth Air Force was reassigned, and the 4th TFW was deployed to Korea to participate in the conflict in that country. In 1950, the 363rd TRW was reactivated at Langley AFB and assigned B-26 *Marauder* aircraft for reconnaissance operations. The wing was also tasked with the training of the 84th and 85th BMS (HQ ACC History Office 1994). In response to the need in Korea for conventional support aircraft, a B-26 combat crew training school was opened on base.

In 1951, the 49th Air Division began operation at Langley AFB, bringing with it the 47th BMW and the 20th Fighter Bomber Wing (FBW). The 363rd TRW was reassigned to Shaw AFB, and the 84th and 85th BMS were reassigned under the 47th BMW. These squadrons operated the B-45 *Tornado*, the Air Force's first jet bomber. The 20th FBW was equipped with F-84 *Thunderjet* fighters (HQ ACC History Office 1994).

The 48th Fighter Interceptor Squadron (FIS) was assigned to Langley AFB in 1952. The squadron was tasked with the defense of the eastern seaboard from airborne attack (DoD 1972). Aircraft were maintained on 24-hour alert and could be airborne in less than five minutes (USAF 1994b). The squadron operated F-84 fighters in 1953, flew the F-94 *Starfire* in the mid-1950s, and switched to the F-102 *Delta Dagger* in 1957. The first operational F-106 *Delta Dart* began operation with the 48th FIS in 1960 (HQ ACC History Office 1994).

The 405th FBW, flying F-84s, was assigned to Langley AFB in 1953 (Wing History Office 1993; Van Dame 1994; HQ ACC History Office 1994). The 345th Fighter Bomber Group (FBG), with

the 498th, 499th, and 500th Fighter Bomber Squadrons (FBS) began operations in 1954 under the 405th FBW (DoD 1972). The 429th Air Refueling Squadron (AREFS) was activated at Langley AFB in 1954, assigned to the 345th FBG, with its main purpose to extend the range of aircraft-delivered nuclear weapons (HQ ACC History Office 1994). In 1955, the 509th and 510th FBS were assigned to the 405th FBW. In 1956, the 405th FBW was reassigned; however, the 345th FBG and its squadrons remained at Langley AFB. In 1957, the 345th FBG was redesignated a BMW. That same year, the 836th Air Division replaced the 49th Air Division, and 836th Air Base Group was activated, and the 345 BMW was moved under the 836th Air Division. In 1958, the 4440th Air Delivery Group was also assigned to the 836th Air Division.

In 1958, Langley's air refueling mission increased with the assignment of the 4505th Air Refueling Wing (AREFW) flying KB-50 tankers (DoD 1972). This wing brought with it the 427th AREFS, and the 429th AREFS was reassigned from the 345th BMW to the 4505th AREFW. In 1959, the 345th BMW and its squadrons were deactivated, leaving Langley AFB as primarily a tactical air refueling base (HQ ACC History Office 1994). Langley AFB's tanker force took part in a number of flights with fighters that demonstrated to the world that the USAF could be rapidly deployed to any location.

A notable tenant unit at Langley AFB during the 1960s and early 1970s was the 22nd Air Defense Missile Squadron (ADMS) operating Bomarc F-99 missiles under the command of Air Defense Command (ADC). The Bomarc missile, a surface-to-air missile, was designed to intercept and destroy enemy bombers, thus its designation as an unmanned interceptor. The Bomarc was fired from concrete shelters and controlled by the Washington Air Defense Sector's Semi-Automatic Ground Environment (SAGE) system once the missile was airborne (HQ ACC History Office 1994). Bomarc's first arrived in 1960 and were stationed at a site in the city of Newport News approximately 12 mi west of the base (DoD 1972).

The 48th FIS replaced the F-100 *Super Sabre* with the F-106 *Delta Dart* in 1960. To relieve the 836th Air Division of the responsibilities of running the base, so that it could concentrate on its

flying mission, the 836th Air Base Group was redesignated as the 4500th Air Base Wing and given the responsibilities. In 1961, the 836th Air Division was deactivated, and the 4440th Air Delivery Group was reassigned to the 4505th AREFW.

Due to the large amount of time spent by TAC in moving forces across the oceans, headquarters opened a Deep Sea Survival School at Langley AFB in 1962. It was realized that even a minimum amount of training in survival techniques would result in an increased survival rate for troops stranded at sea. This school was moved to Homestead AFB, Florida in 1966 to allow year-round training.

The 463rd Troop Carrier Wing (TCW), with the 772nd, 773rd, and 774th Troop Carrier Squadrons (TCS), was assigned to Langley AFB in 1963. The wing operated C-130 *Hercules* aircraft and participated in a number of civil and humanitarian missions. Its military mission was to fly in support of the United States Army's airborne units. This same year, the 4505th AREFW was reassigned, taking with it the 4440th Air Delivery Group and the 427th and 429th AREFS. In 1965, the 463rd TCW was reassigned to the Philippines, and the 316th TCW was reactivated in its place, bringing with it the 37th TCS (Wing History Office 1993; Van Dame 1994). In 1967, all troop carrier units were redesignated as tactical airlift. In 1968, the 36th and 38th Tactical Airlift Squadrons (TAS) were reassigned to the 316th Tactical Airlift Wing (TAW) at Langley AFB (HQ ACC History Office 1994).

The 6th Airborne Command and Control Squadron (ACCS) was activated at Langley AFB in January 1973 under the 4500th Air Base Wing (HQ ACC History Office 1994). The squadron operated EC-135 aircraft which were specially equipped with radios and satellite communications equipment. The squadron's mission was to provide communications between the Atlantic Command and the national command authorities in times of crisis or war (HQ ACC History Office 1994).

In 1975, Langley AFB's role shifted from tactical airlift to tactical fighter operation. The 316th TAW was deactivated, taking with it the three squadrons, and the 1st TFW, composed of the 27th, 71st, and 94th Tactical Fighter Squadrons (TFS), was activated at the base (Wing History Office 1993; Van Dame 1994). The 1st TFW also consisted of the 12th Airlift Flight, using Learjet 35s for airlifting of high ranking civilian and military personnel, and the 72nd Helicopter Squadron, using the UH-1H helicopter (USAF 1994a). All three of the fighter squadrons were operational by 1977. In 1976, the 6th ACCS was transferred from the 4500th Air Base Wing to the 1st TFW, and, in 1977, the 4500th Air Base Wing was deactivated and its assets moved to the 1st TFW. The wing became the new base host.

The 48th FIS began converting from the F-106 to the F-15 *Eagle* in 1981. While the squadron was training for the conversion, the 1st TFW assumed the 48th FIS's alert responsibilities. The 94th TFS received its first F-15 also in 1981, and the 71st TFS received its new aircraft in 1982 (HQ ACC History Office 1994).

The 1st TFW remained as base host and as the main base wing for the remainder of the Cold War. In 1991, during the broad-scale reorganization of Air Force assets, the 1st TFW was redesignated the 1st FW. In 1992, TAC was deactivated and its assets transferred to ACC, including Langley AFB and the 1st FW.

3.2 NASA

Formerly NACA, NASA has played a significant role throughout the history of Langley AFB. Several of the historic buildings in the HTA area are owned by NASA and therefore fall outside the scope of this Air Force ACC sponsored project. However, the close association between the Air Force and NASA in numerous interrelated missions warrants brief mention of NASA in this report. In addition to the buildings within the confines of Langley AFB, NASA maintains a large facility adjacent to the LTA area of the base.

The NASA-owned buildings located within the base consist of wind tunnels and administrative offices. All were constructed prior to the Cold War. Numerous aircraft designs, both pre-Cold War and Cold War era, have been tested in these facilities. Perhaps the most notable Cold War era NASA development at Langley was Project Mercury, the manned space program, in 1958. The original seven astronauts of this program were stationed briefly at Langley AFB. The 48th FIS provided pilot proficiency training to these astronauts (HQ ACC History Office 1994).

3.3 BASE DEVELOPMENT

Several distinct periods of development can be identified at Langley AFB. These include the period during and shortly after World War I, the 1930s, the period during and shortly after World War II, and the 1960s.

Although construction was generally slow during the initial construction period, 16 of the Tudor Revival family housing units had been completed before the end of World War I. A number of other Albert Kahn designed buildings in the HTA area were completed soon after the Armistice. These included the remaining 10 family housing units, the Army Aeronautical Laboratory, Dodd Hall (a Noncommissioned Officers' [NCO] dormitory), Lawson Hall (an officer dormitory), a machine shop, and two ornate brick hangars (Figure 3.1).

Development also took place in the LTA area northeast of the HTA area which had been designated as an airship operating area. Construction of a hydrogen plant was completed in 1917, a large airship hangar was begun in 1919, a helium plant was built in 1922, and a number of NCO and officer housing units were constructed in the early 1920s (Figure 3.1).

Almost 75% percent of the historic housing still present on the base was built during the 1930s (Cook 1992). Funding for these building projects was provided by a number of federal programs including the Army Housing Program, Emergency Relief and Construction Act and the National Industrial Recovery Act's Public Works Administration. Construction included quarters for both

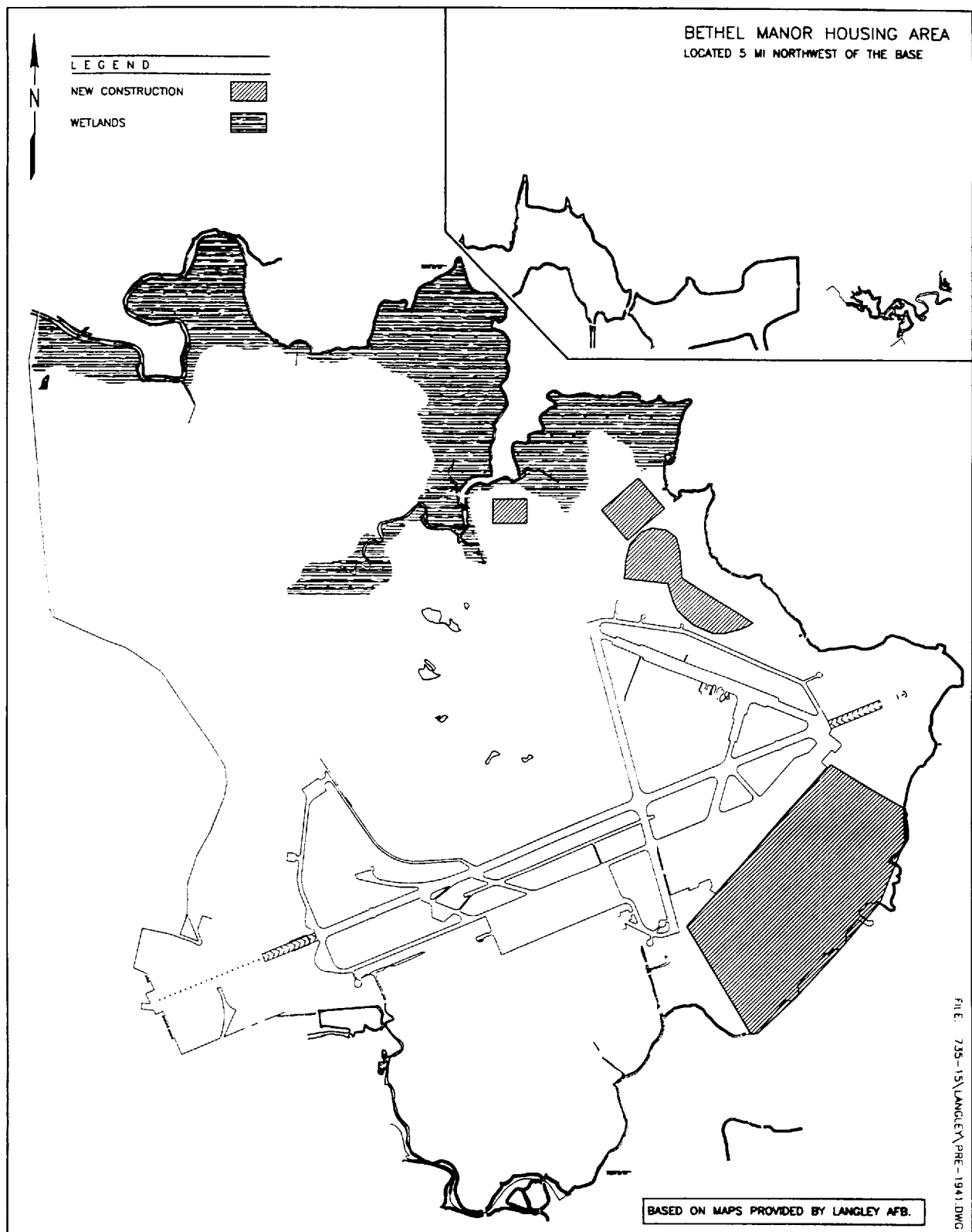


Figure 3.1 Langley Air Force Base, pre-1941.

officers and enlisted men, a new street, a hospital, 11 new hangars, an officers' club, and a bridge across the Back River (Figure 3.1). The Tudor-style housing used in the HTA area earlier was designed by Albert Kahn, and was later maintained as the style of the newer buildings, as well as in the Gothic Tudor Chapel completed in 1935. Langley AFB's dirt runways were paved with asphalt in 1939 in preparation for the U.S. participation in World War II.

The United States' entrance into World War II and the rapid increase in personnel and equipment, caused a great burden on the base. Construction of new facilities was begun almost immediately. The Army acquired what was known as the Shellbank area, directly to the west of the HTA area, in 1941 (Curtis et al. 1977). Ninety-six buildings along with utilities were completed in the new area by November of that year (Figure 3.2). Most of the 1940s construction in the Shellbank area was temporary, and only a few examples of buildings dating to this period remain. A weapons storage area was also built in the 1940s. In 1953, the Fighter Alert Facility was constructed. Facilities for the Corps of Engineers were built in an area northeast of the alert facility throughout the 1950s.

Construction during the 1960s included several new buildings in the Shellbank area. The Bayview Towers, a high rise housing facility, was completed in the LTA area, and Bethel Manor, the off-base housing area, was begun. The weapons storage area in the northern part of the base was expanded during this decade (Figure 3.3).

During the 1970s, the off-base housing area doubled in size. A golf course and associated clubhouse and facilities were also constructed in the open area of the base. Major construction activities were also begun in the Shellbank area, including the base theater, a new medical facility, a dental clinic, headquarters buildings, and other community facilities (Figure 3.4).

Construction during the 1980s was minor. It included temporary family housing in the LTA area and a child care center in the Bethel Manor housing area. The Shellbank area saw construction of a new control tower next to the runway and some recreational facilities between the development and the riverbank (Figure 3.5).

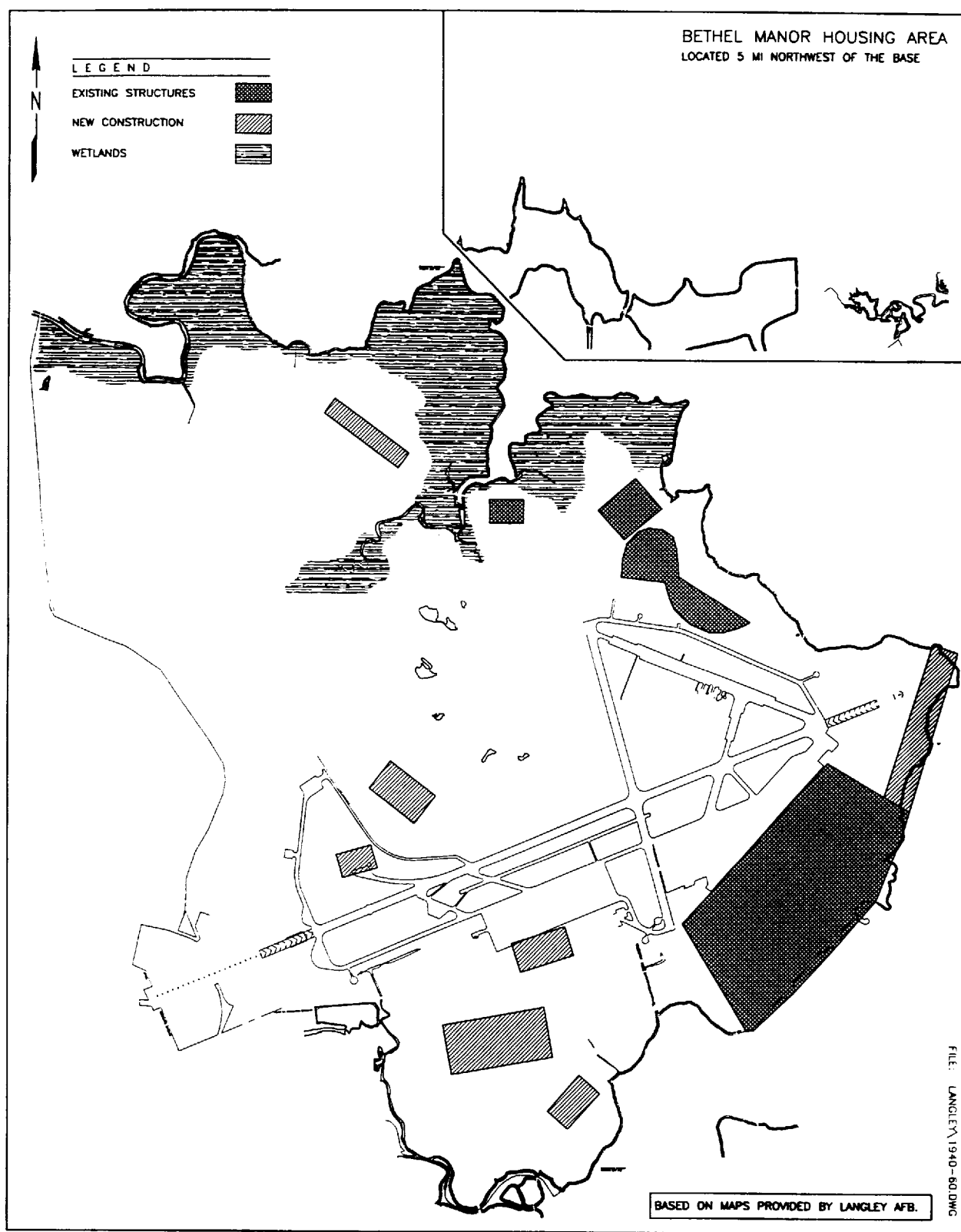


Figure 3.2 Langley Air Force Base, 1941-1960.

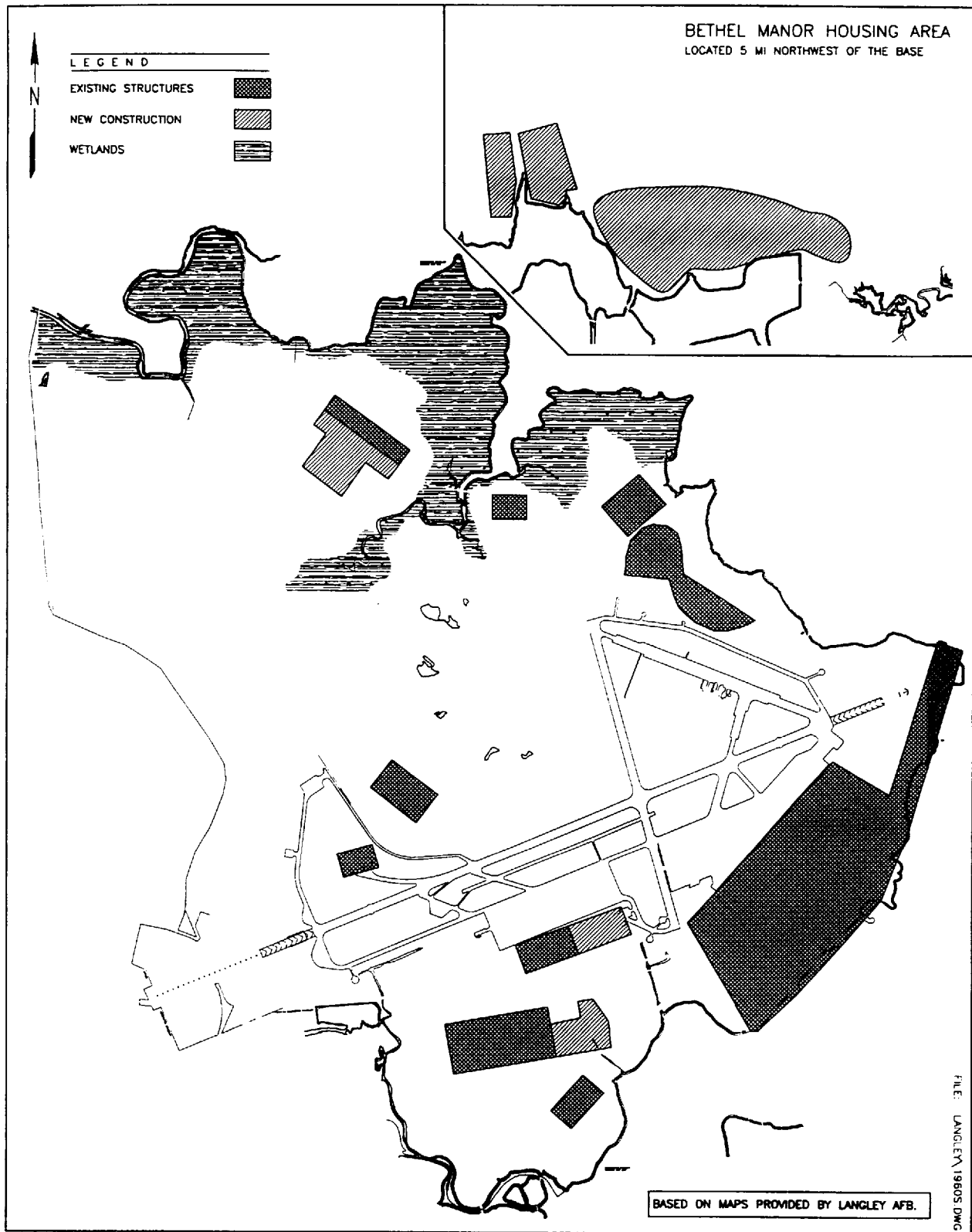


Figure 3.3 Langley Air Force Base, 1960-1970.

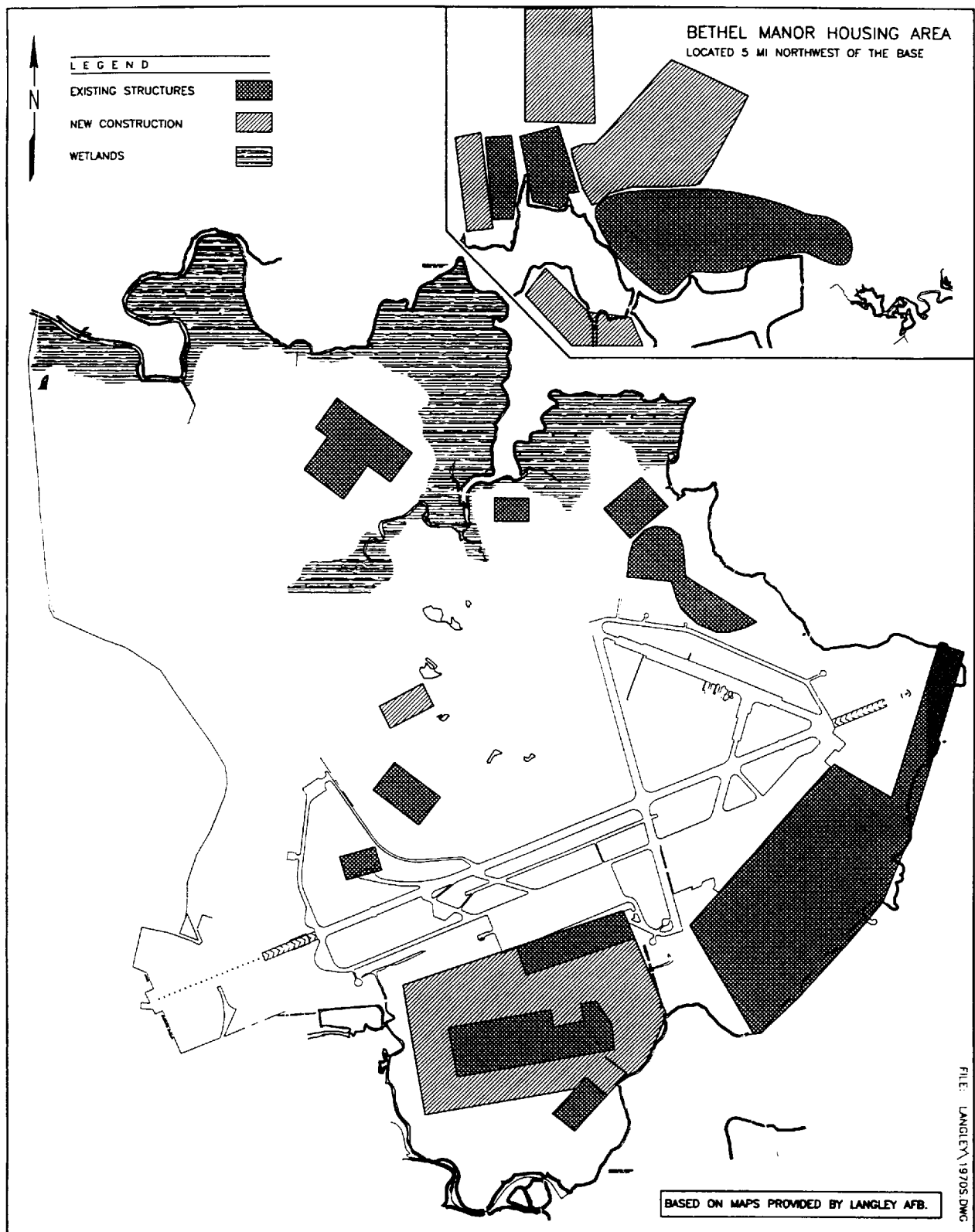


Figure 3.4 Langley Air Force Base, 1970-1980.

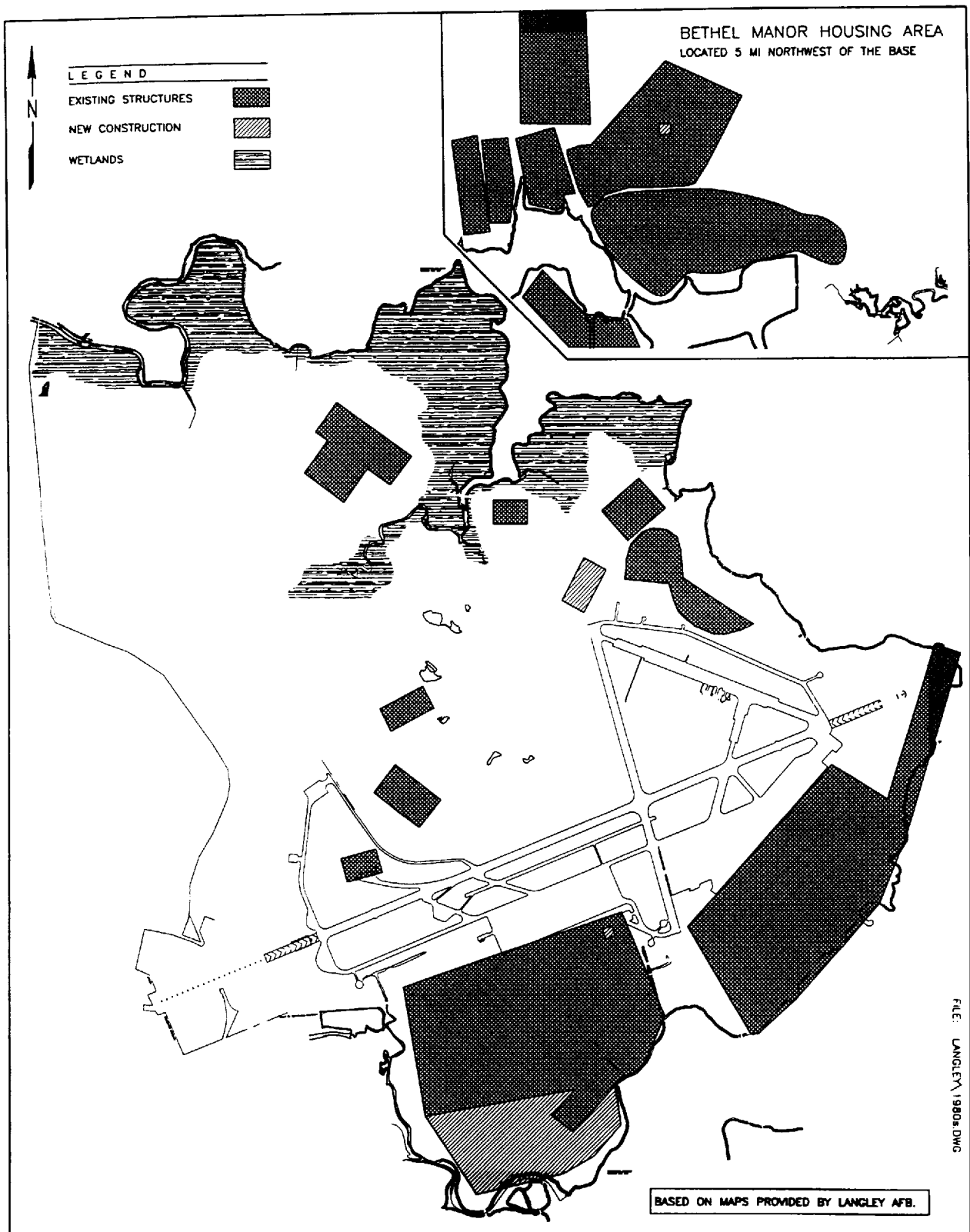


Figure 3.5 Langley Air Force Base, 1980-1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Langley AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Langley AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Langley AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Ms. Suzanne Allan of the Program Development Office met with the Mariah field team upon their arrival at Langley AFB and introduced the team members to individuals who would be able to provide them with the information and research materials required to complete their work. These people included HQ ACC History Office staff, Engineering and Design Drawing File Vault staff, Real Property personnel, and security personnel who could provide access to facilities. Ms. Allan gave the team a tour of the base, discussed its history, and provided historical photographs.

Fieldwork began by obtaining available background literature on the base and photographing inventoried resources. Resources that were selected for evaluation were then documented more fully, and this information was recorded in the project database.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Langley AFB, 191 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at Langley AFB, two of them falling under the DoD category of real property and one under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to one of the evaluated buildings could not be secured. In this instance, documentation was consulted to provide insight into the integrity of the building.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Base and Command Centers

6.1.1.1 Major Command Headquarters (Resource No. 22114, Real Property No. 693)

This building, which currently houses ACC Headquarters, was the central TAC Headquarters building throughout the Cold War. The structure, built in 1919, is comprised of a central entry area flanked by extending wings. The building is constructed of brick pilasters with concrete capitals, surmounted by a concrete coping and a slate hipped roof. The windows between the pilasters are divided by decorative spandrels at the second floor. The building became TAC Headquarters two months after the command was established in 1946 and remained with this function until 1992 when TAC was deactivated.

The building's interior and exterior integrity is determined to be intact. This is based on comparisons with photographs of the building from the Cold War era, the relatively short amount

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Base and Command Centers	Major Command Headquarters	22114	693	Real/Bldg	22
Documentation	Documentary Collection	22191	None	RecDoc/Obj	18
Combat Weapons and Support Systems					
Alert Facilities	Fighter Alert Facility	22001	1362	Real/Bldg	21

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
22	22114	693	Major Command Headquarters
21	22001	1362	Fighter Alert Facility
18	22191	None	Documentary Collection

of time that has passed since the building was the TAC Headquarters, and the building's continued use as a major command headquarters.

This building's exceptional Cold War importance lies in its function as TAC Headquarters. Although the structure is essentially an office building, it is symbolic of the decisions and strategies that were formulated and carried out by this major command throughout the Cold War. This headquarters building played a vital role in command and control during the entire Cold War era. In this building, global information was assembled that enabled the Commander in Chief of TAC to maintain both interceptor defensive forces and world-wide fighter forces. This building was used for this purpose during Phases I through IV and meets NRHP criterion (a).

6.1.2 Documentation

6.1.2.1 Documentary Collection (Resource No. 22191, Located in Real Property No. 621)

This documentary collection, located in the Engineering and Design Drawing File Vault of the Base Engineering Flight building, is contained in four rows of 7 ft tall flat file cabinets. The files contain numerous historical maps, original base master layouts, and architectural and utility project drawings of Langley AFB and related facilities. The drawings, which are stored flat, include paper, linen, mylar, vellum, and blue line reproductions. The collection contains important information about historic structures on base and illustrates the development of the installation throughout the Cold War era. All of the evaluated resources have associated drawings in this collection. The majority of the collection is in good condition, but it is threatened by frequent or occasional handling and removal from the flat files.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Fighter Alert Facility (Resource No. 22001, Real Property No. 1362)

This Fighter Alert Facility exemplifies one of the missions of Langley AFB as an interceptor base. Fighter interceptor pilots stayed at the facility while on alert, having only minutes to be airborne in response to any incoming bomber attack over the southeastern United States. The Fighter Alert Facility was constructed in 1953 for this mission, and used for such from then until 1994. The facility, constructed of a steel frame, contains four aircraft bays divided by an enclosure in the middle. This enclosure contains a day room, bedrooms, and a utility area. The layout of the facility, with aircrew living quarters within the hangar, speaks to the strategy of rapid deployment, a strategy that was part of the U.S. deterrent capability.

The building now serves as a maintenance hangar facility for National Guard and other transient aircraft. A tour of the facility was made during the field visit. The aircraft bays and crew accommodations are as they were when alert operations were suspended. The building is generally in good condition. Based on these factors, interior and exterior integrity are intact.

The exceptional importance of this facility lies in its sole mission to thwart any surprise attack by the Soviet Union on the United States. This building is important not only to Langley AFB's Cold War context, but also to Cold War history at the national level. This building conveys the U.S. fear of a Soviet bomber attack from the Atlantic Ocean and the measures taken to ensure that any such attack would be successfully intercepted. It is a direct result of Congressional approval in the 1950s for the construction of interceptor bases and the NSC-68 recommendations for a massive military build-up to "counteract the increasing threat posed by the Soviet Union" (Lewis et al. 1995). This facility held this importance throughout Phases II, III, and IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Langley AFB.

6.4 TRAINING FACILITIES

None were evaluated at Langley AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Langley AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Langley AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Langley AFB. These resources should be investigated further for a more comprehensive analysis of base Cold War context.

Large collections of photos and memorabilia, some relating to the Cold War, are present in the two squadron operations buildings (Real Property Nos. 760 and 763) and the wing headquarters (Real Property No. 764). Only a cursory inventory of these could be made due to the variety of locations (reception areas, meeting rooms, offices, etc.) in which the objects are housed. Further research on the base should inventory these resources for objects pertaining to Langley AFB's Cold War history.

The Virginia Air and Space Museum, operated by the City of Hampton, Virginia, was also visited during fieldwork. This institution may house records that contain information on the relationship between NASA and Langley AFB during the Cold War. Any in-depth research on Langley AFB should investigate this possibility.

One of the buildings in the ACC headquarters complex was the original NACA Laboratory (Real Property No. 587). The building is already included in a proposed National Register district for its pre-Cold War significance. Little could be determined during the base visit concerning the building's significance during the Cold War. Some of the Project Mercury research may possibly have taken place in this building, along with other possibly important Cold War research. It is recommended that further research of this building be undertaken to determine if it also retains Cold War era significance.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Langley AFB revealed approximately 1,550 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the bomber, air refueling, troop carrier, and fighter missions. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Langley AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

Several inventories of historic resources have been undertaken at Langley AFB, indicating that efforts are being made by the base to preserve historic buildings. In general, current or planned renovations that neglect the historic fabric of buildings are the only threats to Cold War era resources mentioned in this report.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Langley AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Langley AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Langley AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Langley AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
22001	1362	Fighter Alert Facility		*	*	*		NRHP eligible now.
22114	693	Major Command Headquarters		*	*			Already included in a proposed NRHP district.
Record or Document - Object								
22191	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Major Command Headquarters (Resource No. 22114, Real Property No. 693)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases I through IV, and meets NRHP criterion (a) based upon its use as central TAC Headquarters during the entire Cold War era. The integrity of the building and its features is intact based upon comparison with Cold War photographs and the continued use of the building as a major command headquarters. Therefore, this building is recommended as eligible to the NRHP.

This building has already been determined eligible to the NRHP for its pre-Cold War associations and is included in a proposed National Register District, thus stewardship is recommended to retain the building's current level of integrity.

9.2.2 Documentary Collection (Resource No. 22191, Located in Real Property No. 621)

The majority of this collection is in good condition. However, it is threatened by frequent or occasional handling and removal from the flat files. It is recommended that this collection be inventoried and copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Fighter Alert Facility (Resource No. 22001, Real Property No. 1362)

This facility is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV, and meets NRHP criteria (a) and (c) based upon its role of rapid deployment and interception of enemy attack, a strategy that was part of the U.S. deterrent capability, and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its features is intact based upon visual inspection and continued use of the facility for aircraft maintenance. Therefore, this facility is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation for nomination of this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Cook, J.

- 1992 Architectural and Historical Survey of Langley Air Force Base and Inventory of Historic Resources Langley Field, Virginia. Southeast Regional Office, National Park Service, Atlanta, Georgia.

Curtis, R. I., J. Mitchell, and M. Copp

- 1977 *Langley Field, The Early Years 1916-1946*. Office of History, 4500th Air Base Wing. Langley Air Force Base, Virginia.

Department of Defense

- 1972 Installation Survey Report. Langley Air Force Base, Virginia.
- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Headquarters Air Combat Command History Office

- 1994 Organizational Notes. Headquarters, Air Combat Command, History Office, Langley Air Force Base, Virginia.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service. Washington, D.C.
-

-
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

United States Air Force

- 1966 *The Virginia Peninsula Salutes Langley*. C.F. Boone Nationwide Publications, Inc.
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
- 1994a *Fact Sheet: 1st Fighter Wing*. On file, Office of Public Affairs, Langley Air Force Base, Virginia.
- 1994b *Fact Sheet: Langley Air Force Base*. On file, Office of Public Affairs, Langley Air Force Base, Virginia.

Van Dame, T. R., Sgt

- 1994 Langley Air Force Base. MARCOA Publishing Inc.: San Diego, California.

Wing History Office

- 1993 *America's First Team, History of the 1st FW and Langley Air Force Base*. Office of History, 1st Fighter Wing, Langley Air Force Base, Virginia.
-

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	22001	1362	Fighter Alert Facility	1953
	22002	None	Bethel Manor School	Unknown
	22003	1797	Miscellaneous Recreation Facility	1968
	22004	1793	Chapel Center	1966
	22005	1637	Capehart Family Housing	1960
	22006	1368	Capehart Family Housing	1960
	22007	1795	Composite Medical Facility	1987
	22008	2089	Family Housing (Appr 1970A)	1976
	22009	2090	Family Housing (Appr 1970A)	1976
	22010	1994	Child Care Center	1983
	22011	1867	Family Housing (Appr 1950-1969)	1966
	22012	1422	Branch Exchange	1979
	22015	1069	Munitions Maintenance Administration	1976
	22017	1053	Missile Assembly Shop	1976
	22021	1061	Conventional Munitions Shop	1976
	22023	1059	Load and Unload Center	1980
	22028	1075	Security Police Entry Control Building	1961
	22029	1077	Rocket Check Assembly Storage	1961
	22037	1036	Security Police Operations	1993
	22038	1027	Education Center	1993
	22040	1097	Temporary Lodging Facility	1985
	22042	Unknown	74th ACS	Unknown
	22043	1004	Security Police Operations	1917
	22045	750	Field Training Facility	1932
	22046	751	Small Aircraft Maintenance Dock	1932
	22047	788	Base Photo Lab	1932
	22048	784	Surveillance Equipment Shop	1931
	22049	782	PME Lab	1942
	22051	757	Shop A/SE Storage Facility	1929
	22052	760	Squadron Operations	1976
	22053	764	Wing Headquarters	1942
	22054	467	Credit Union	1982
	22055	763	Squadron Operations	1985
	22057	768	Data Processing Installation	1932
	22058	775	Traffic Management Facility	1932
	22059	507	Family Housing (Appr 1950)	1931
	22060	777	Housing Supply and Storage Facility	1919
	22061	754	Weapons and Release System Shop	1932
	22062	703	Major Command Headquarters	1932
	22063	700	Fire Station	1933
	22064	664	Major Command Headquarters	1932
	22065	671	Major Command Headquarters	1932
	22066	381	Control Tower	1985

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	22067	374	Aircraft Corrosion Control	1965
	22068	375	Fire Station	1955
	22069	366	Band Center	1973
	22070	368	Band Center	1956
	22071	373	Fuel Systems Maintenance Dock	1961
	22072	351	Maintenance Hangar	1957
	22073	355	Security Police Operations	1966
	22074	342	Aircraft Corrosion Control	1989
	22075	338	Security Police Operations	1954
	22076	339	Major Command Headquarters	1956
	22077	326	Security Police Operations	1957
	22078	329	Security Police Operations	1969
	22079	728	Base Engineer Covered Storage	1957
	22080	734	Test Cell	1974
	22081	735	Aircraft General Purpose Shop	1988
	22082	720	Wing Headquarters	1961
	22085	645	Unknown NASA	Unknown
	22086	644	Unknown NASA	Unknown
	22087	643	Unknown NASA	Unknown
	22088	648	Unknown NASA	Unknown
	22089	714	Air Force Headquarters	1932
	22090	647	Major Command Headquarters	1961
	22091	665	Utility Vault	1950
	22092	640	Unknown NASA	Unknown
	22093	633	Base Engineer Covered Storage	1921
	22094	617	Base Maintenance Shop	1933
	22095	623	Base Engineering Administration	1920
	22096	621	Base Maintenance Shop	1932
	22097	607	Miscellaneous Recreation Building	1931
	22098	606	Base Maintenance Shop	1920
	22100	584	Major Command Headquarters	1961
	22102	582	Unknown NASA	Unknown
	22103	570	Family Housing (Appr 1950)	1931
	22104	580	Major Command Headquarters	1963
	22105	566	Major Command Headquarters	1934
	22106	598	Unknown NASA	Unknown
	22107	558	Major Command Headquarters	1932
	22108	568	Major Command Headquarters	1956
	22109	520	Base Chapel	1935
	22110	591	Religious Education Facility	1939
	22111	390	Transmissometer AN/GMQ-10	1974
	22112	587	Major Command Headquarters	1917
	22113	586	Major Command Headquarters	1926
	22114	693	Major Command Headquarters	1919

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	22115	602	Major Command Headquarters	1969
	22116	625	Exchange Service Outlet	1933
	22117	635	Major Command Headquarters	1932
	22118	658	Gymnasium	1933
	22119	681	Major Command Headquarters	1932
	22120	649	Unknown NASA	Unknown
	22121	661	Form and Publishing Base Warehouse	1924
	22122	548	Family Housing (Appr 1950)	1934
	22123	426	Family Housing (Appr 1950)	1931
	22124	418	Family Housing (Appr 1950)	1934
	22125	414	Family Housing (Appr 1950)	1954
	22126	412	Officers' Open Mess	1935
	22128	546	Major Command Headquarters	1924
	22129	448	Visiting Officers' Quarters	1917
	22130	455	Family Housing (Appr 1950)	1920
	22131	456	Family Housing (Appr 1950)	1920
	22132	472	Visiting Officers' Quarters	1917
	22133	441	Red Cross Building	Unknown
	22134	442	Branch Exchange	1940
	22135	226	Gymnasium	1989
	22136	325	Flight Simulator Training	1976
	22137	331	Law Center	1973
	22138	330	Warehouse Supply and Equipment Base	1986
	22139	1316	Golf Clubhouse/Equipment	1977
	22140	1030	Security Police Canine Kennel	1984
	22141	1031	MWR Supply and Non-Appropriated Fund Central Storage	1934
	22142	801	Non Air Force Administrative Offices	1932
	22143	815	Family Housing (Appr 1950)	1931
	22144	945	Family Housing (Appr 1950-1969)	1966
	22145	949	Family Housing (Appr 1950)	1921
	22146	999	Base Chapel	1942
	22148	698	Unknown	Unknown
	22149	926	Non-Commissioned Officers' Open Mess	1932
	22150	365	Branch Exchange	1953
	22151	258	Exchange Service Station	1969
	22152	272	Medical Storage (Warm)	1983
	22153	257	Composite Medical Facility	1976
	22154	90	Group Headquarters	1917
	22155	85	Miscellaneous Outdoor Recreation Facility	1971
	22156	92	Dental Clinic	1975
	22157	252	Bowling Center	1961
	22158	253	Youth Center	1913
	22159	246	Base Theater	1970

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	22160	247	Recreation Center	1957
	22161	244	Arts and Crafts Center	1972
	22162	254	Child Care Center	1960
	22163	266	Air Force Clinic	1993
	22164	162	Visiting Airmens Quarters	1988
	22165	52	Thrift Shop	1941
	22166	51	Animal Clinic	1941
	22167	140	Airmen's Dining Hall	1990
	22168	132	Airmen's Dormitory	Unknown
	22169	123	Airmen's Dormitory	1969
	22170	142	Major Command Headquarters	1973
	22171	25	Data Processing Installation	1973
	22172	21	Major Command Headquarters	1943
	22173	18	AFOSI Office	1975
	22174	None	World War II Bunker	Unknown
	22175	15	Base Personnel Office	1984
	22176	30	Vehicle Maintenance Shop	1986
	22177	24	Electrical Substation	1966
	22178	11	Security Police Identification Control	1983
	22180	94	Temporary Lodging Facility	1975
	22182	67	Visiting Officers' Quarters	1971
	22183	68	Visiting Officers' Quarters	1971
	22184	77	NCO Professional Education Center	1941
	22185	76	Library Recreation	1954
	22186	75	Visiting Airmen's Quarters	1954
	22188	291	Commissary Store	1980
	22189	290	Exchange Sales Store	1976
	22190	271	Medical /Dental Education and Training	1953
Real Property - Landscape				
	22044	None	Langley Tree Farm	None
	22099	None	Marina	Unknown
	22147	813	Trailer Court Parking	1950
	22181	72	Athletic Field - Softball	1983
Real Property - Object				
	22034	None	Munitions Signs	None
	22035	None	"Munitions Make The Mission" Sign	None
	22050	None	Squadron Sign	None
	22056	None	Nieuport Fighter	Unknown
	22127	439	Monuments Memorial	1959
	22179	None	B-52 Static Display	None
	22187	475	Monuments Memorial	1983
Real Property - Site				
	22014	None	Civil War Cemetery	Unknown

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	22041	None	Pet Cemetery	Unknown
Real Property - Structure				
	22013	2510	Water Tank Storage	Unknown
	22016	1049	Spare Inert Storage	1987
	22018	1052	Spare Inert Storage	1943
	22019	1057	Igloo Storage	1978
	22020	1056	Above Ground Storage Magazine	1943
	22022	1062	Above Ground Storage Magazine	1978
	22024	1060	Above Ground Storage Magazine	1943
	22025	1065	Above Ground Storage Magazine	1990
	22026	1064	Above Ground Storage Magazine	1978
	22027	1066	Segregated Magazine Storage	1978
	22030	1076	Base Hazardous Storage	1962
	22031	1087	Above Ground Storage Magazine	1983
	22032	1079	Multi-cubicle Magazine Storage	1961
	22033	1080	Multi-cubicle Magazine Storage	1961
	22036	1044	Riding Stables	1981
	22039	1033	Security Police Operations	1934
	22083	724	Liquid Oxygen Storage	1943
	22084	732	Liquid Oxygen Storage	1985
	22101	620	Water Tank Storage	1921
Record or Document - Object				
	22191	In 621	Documentary Collection	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

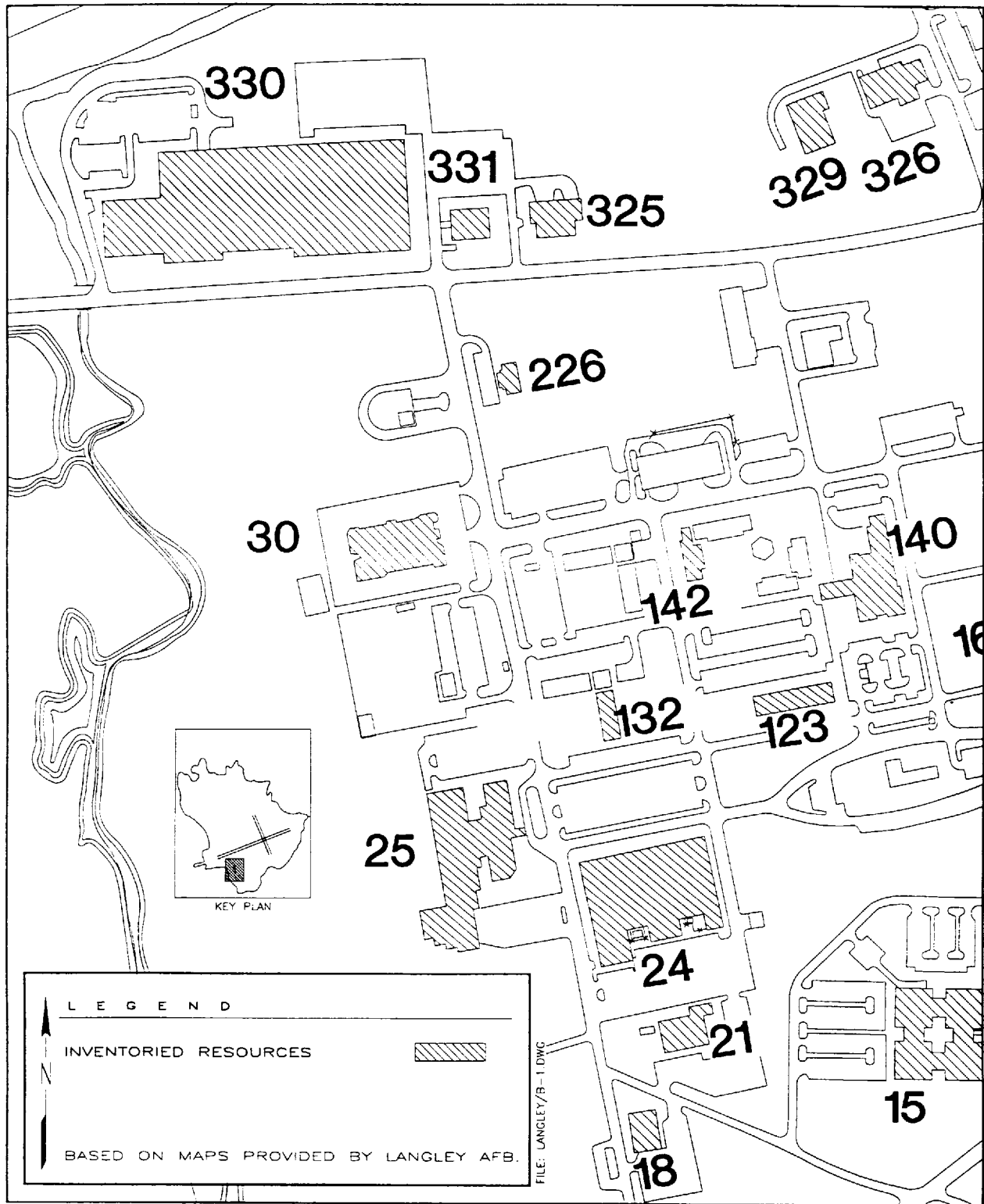


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 15).

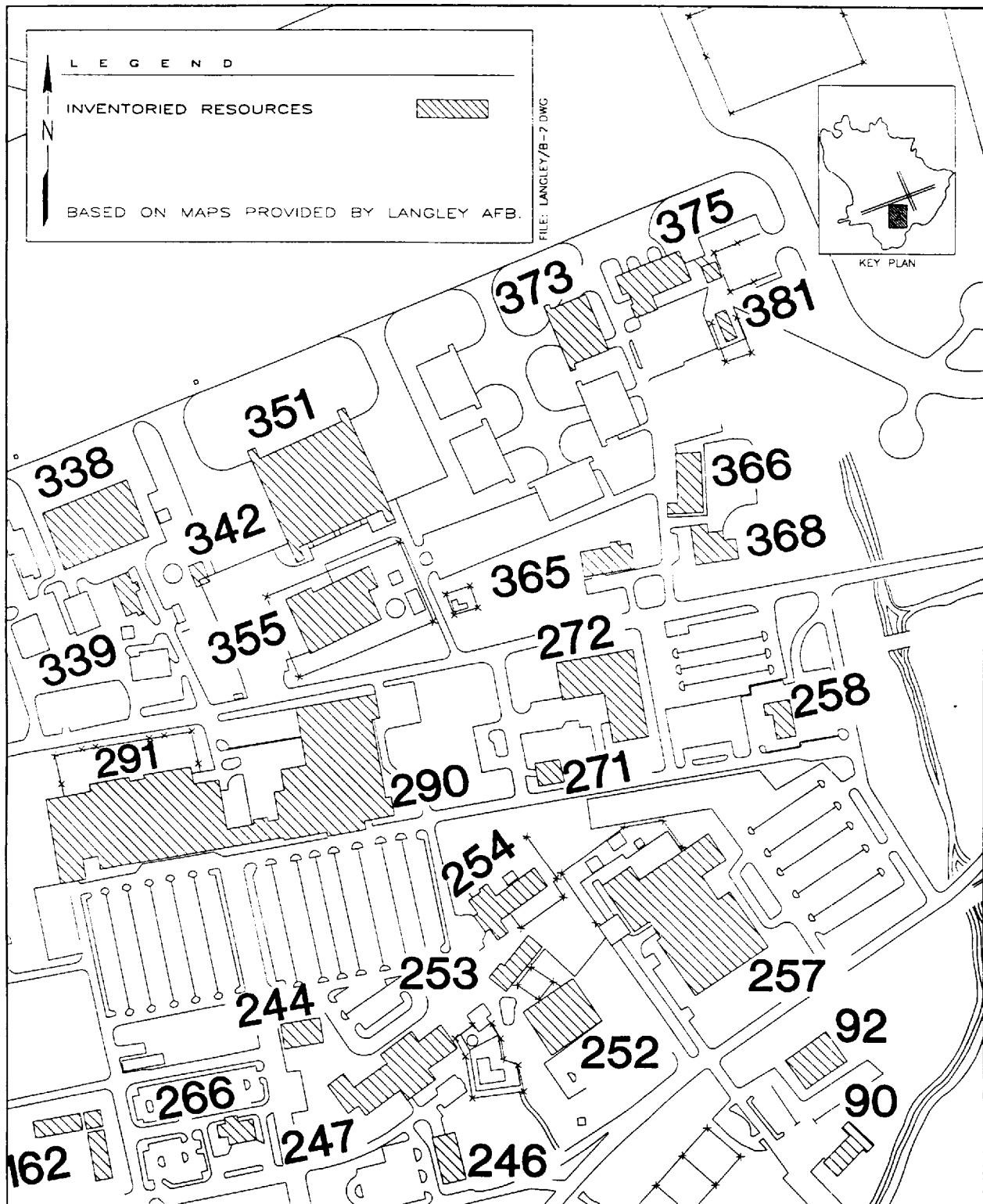


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 15).

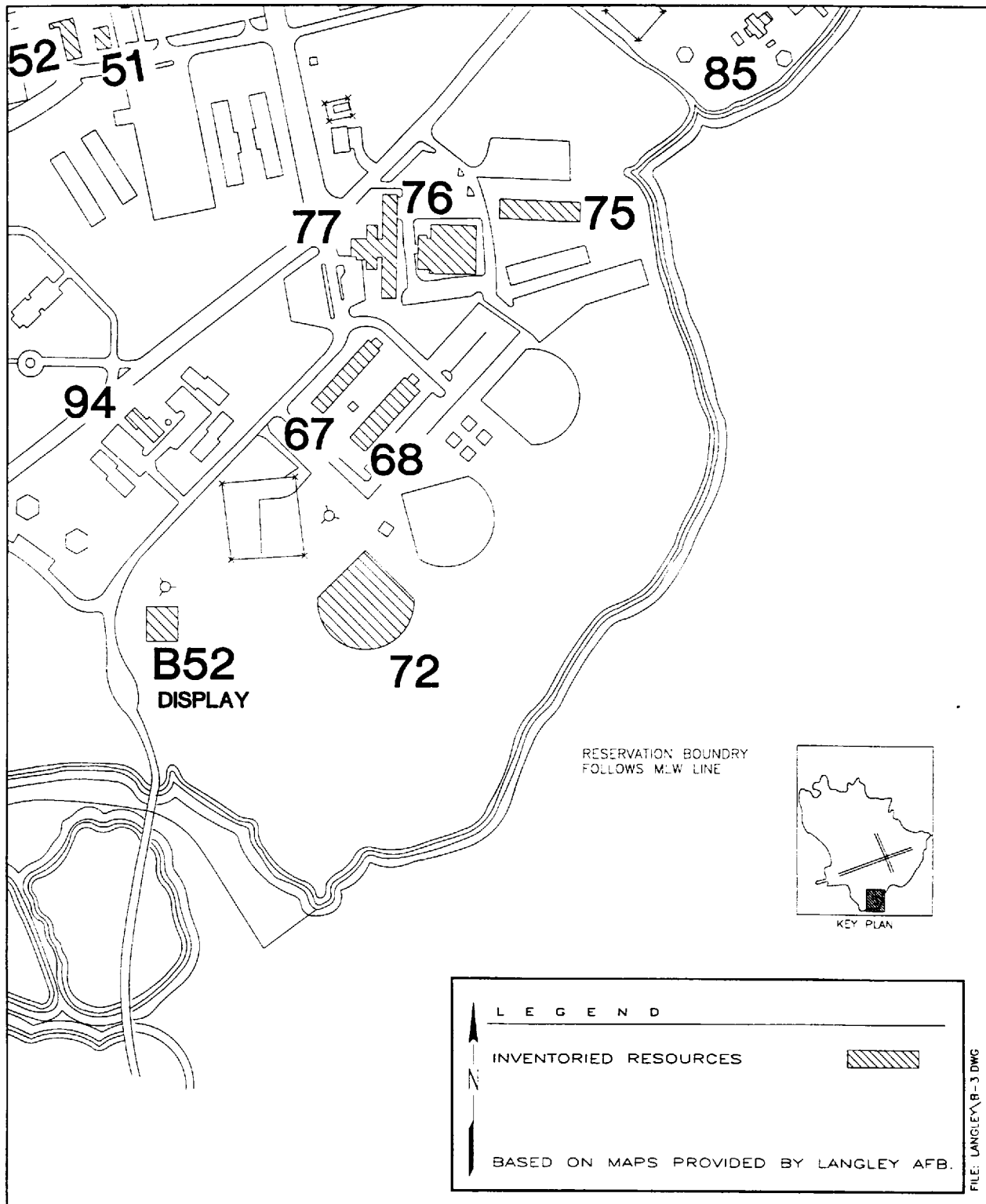


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 15).

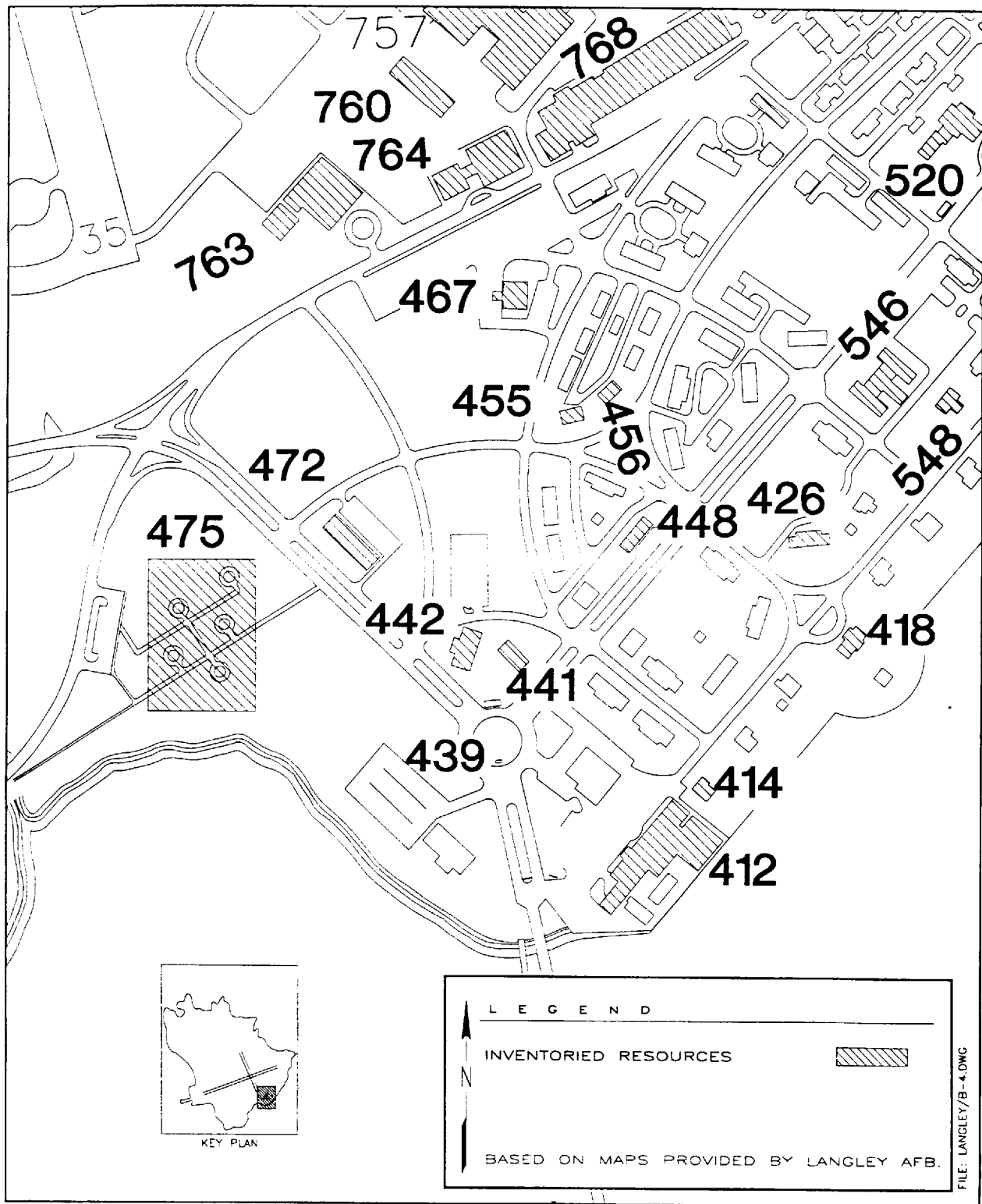


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 15).

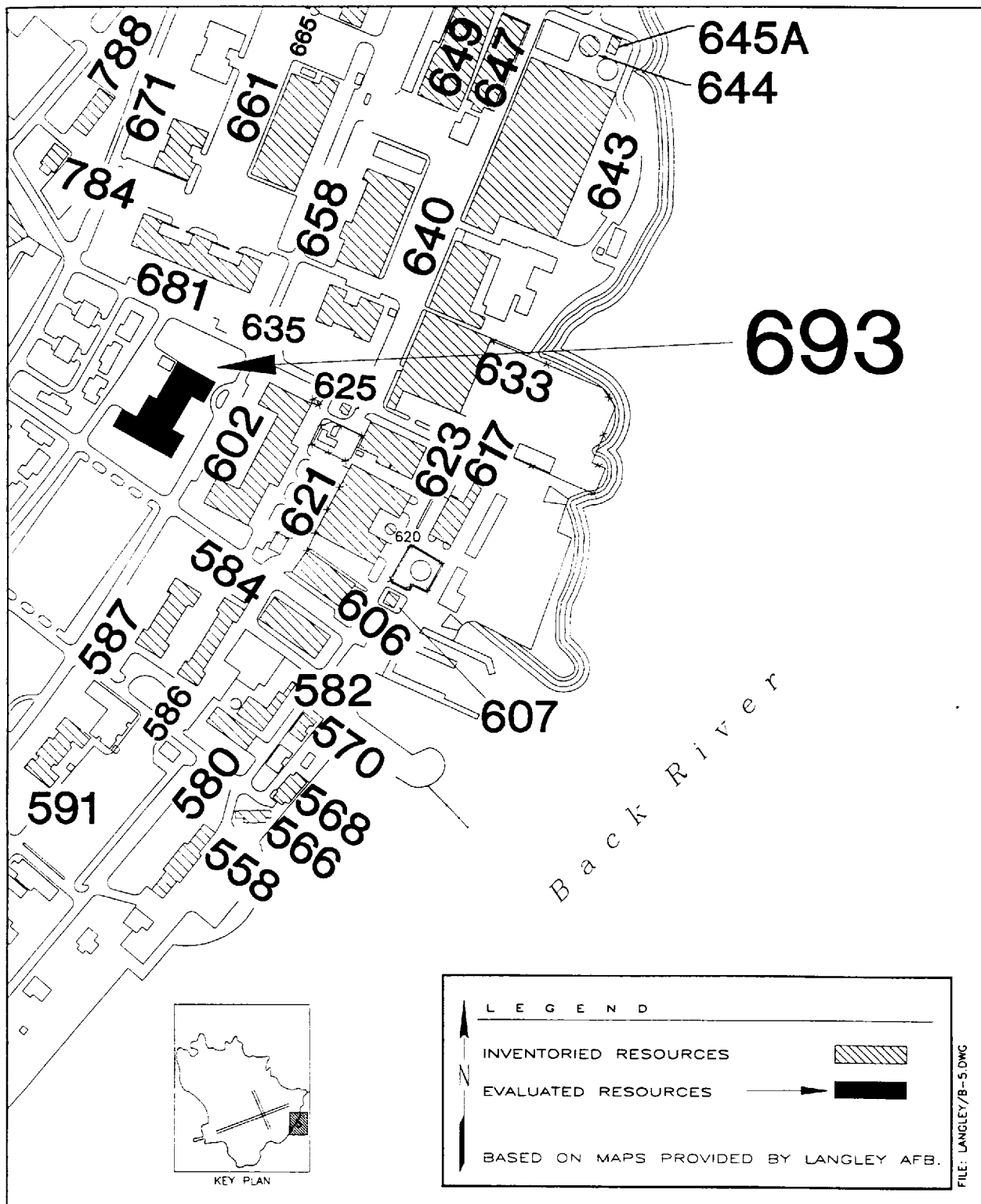


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 15).

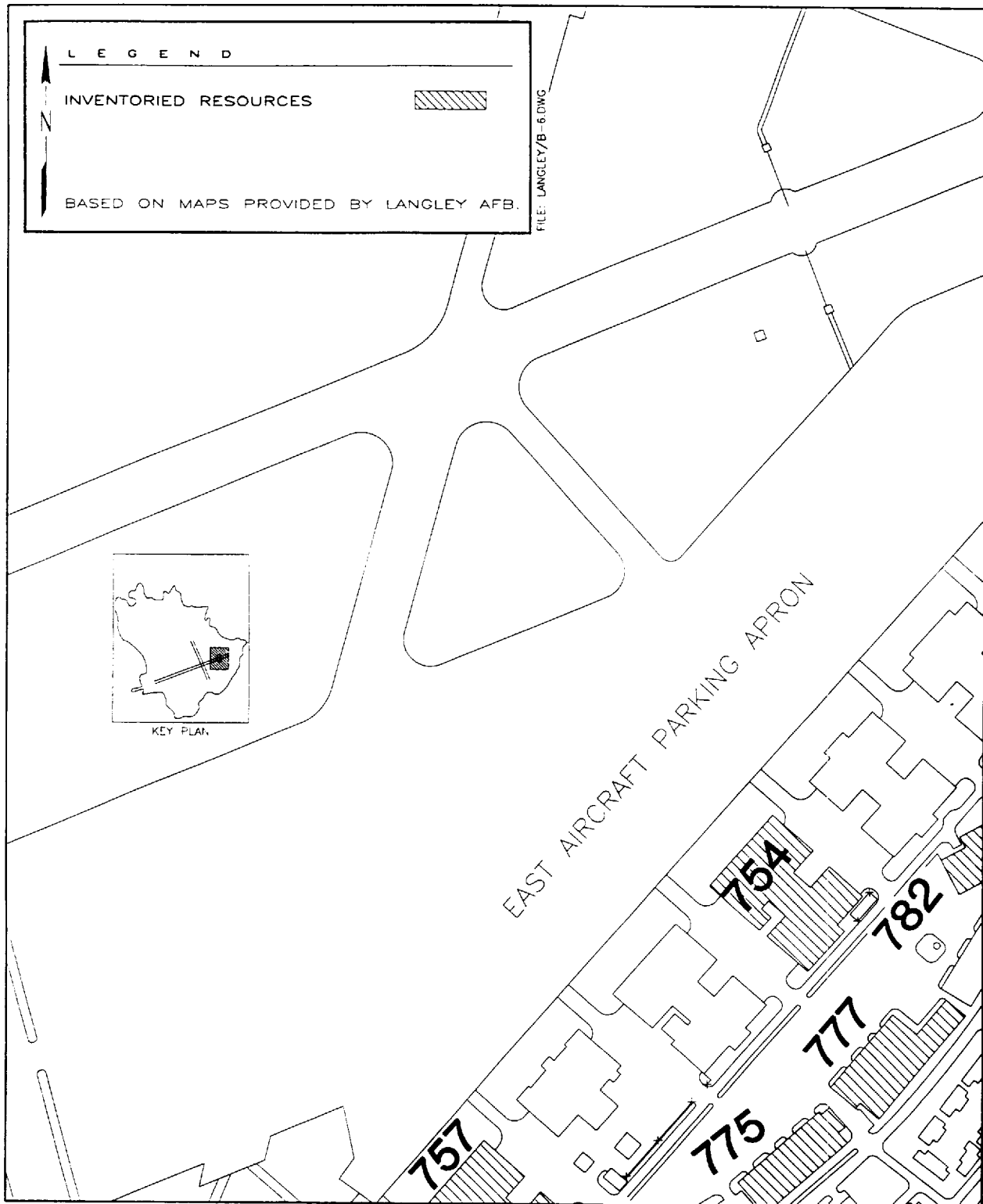


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 15).

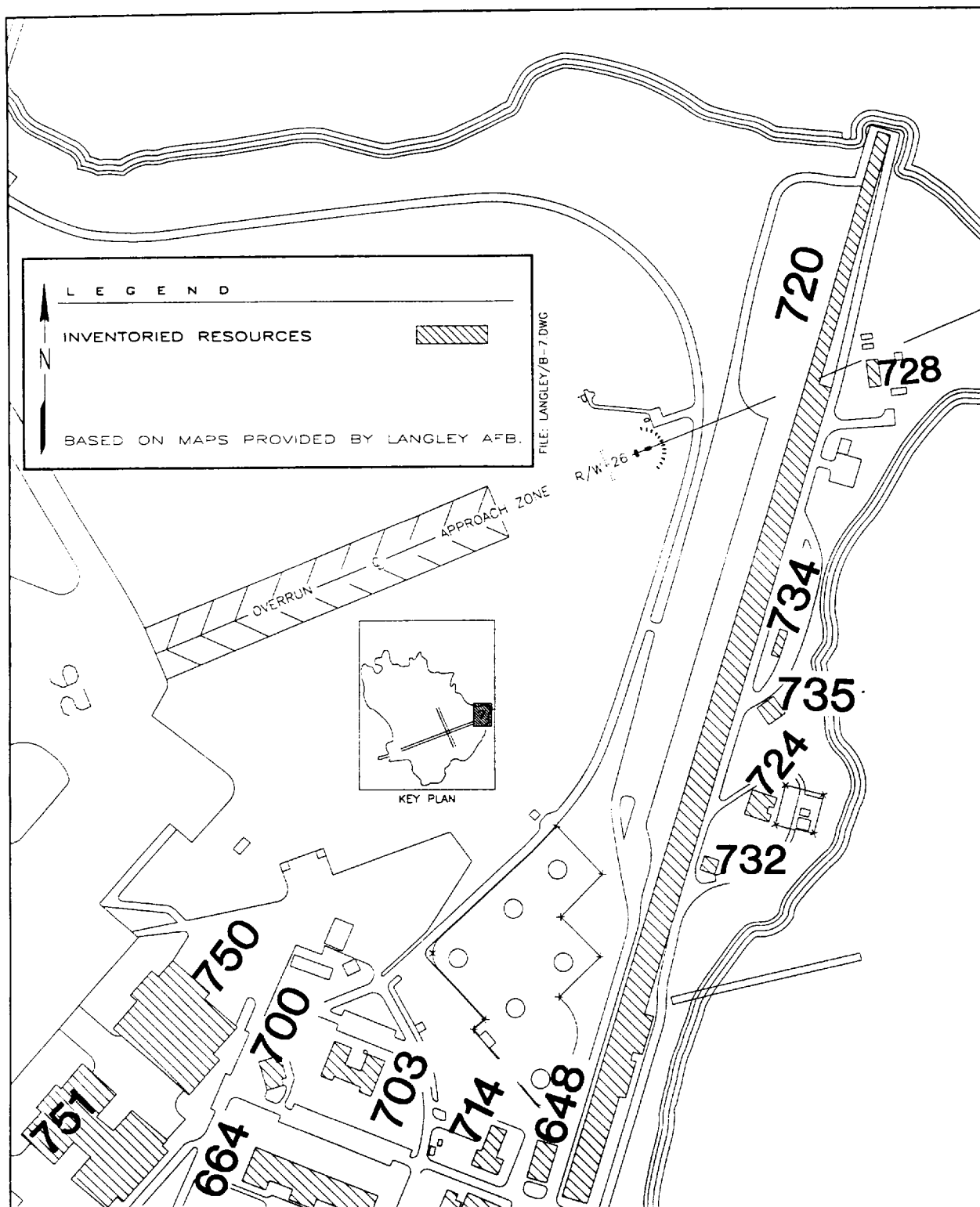


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 15).

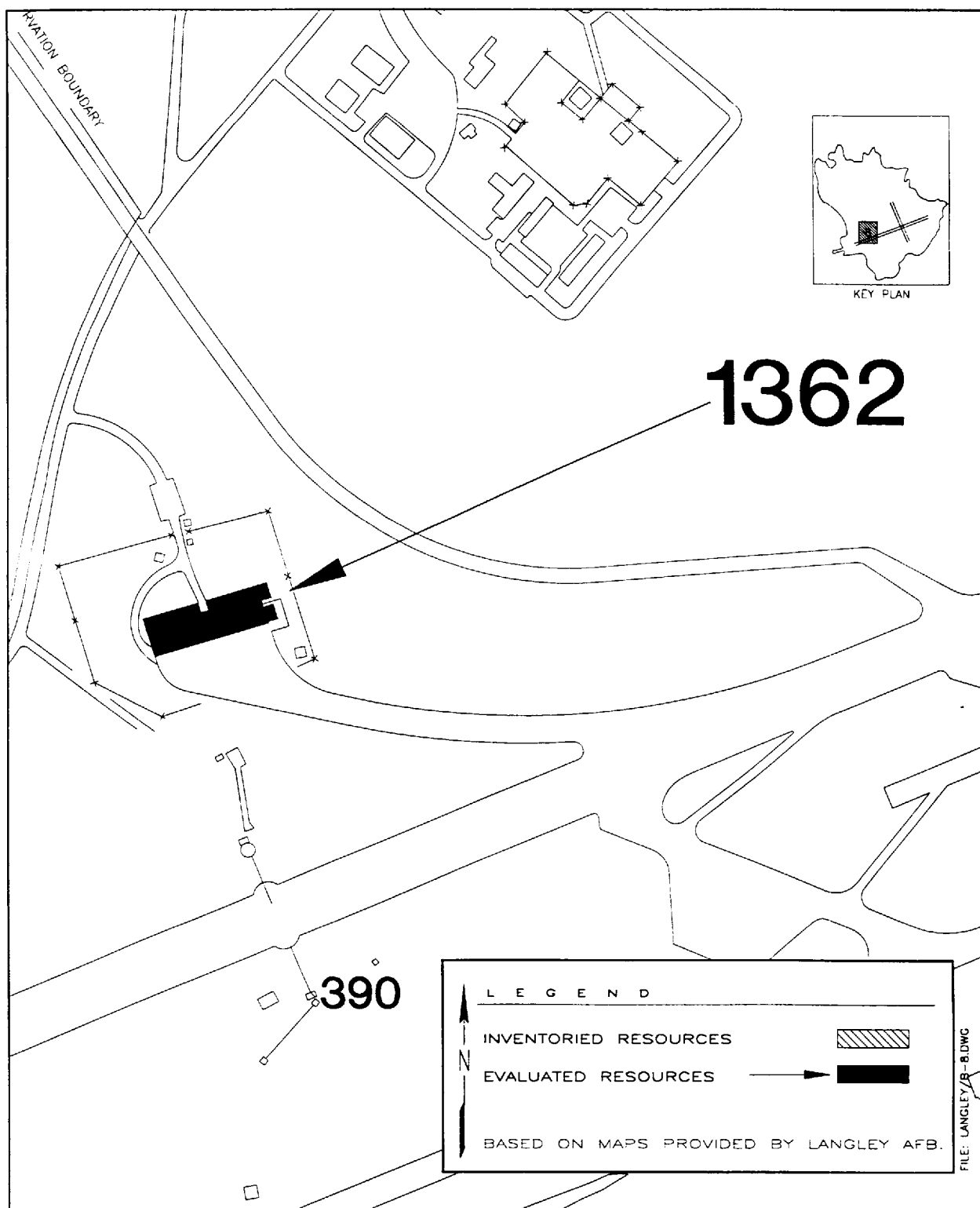


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 15).

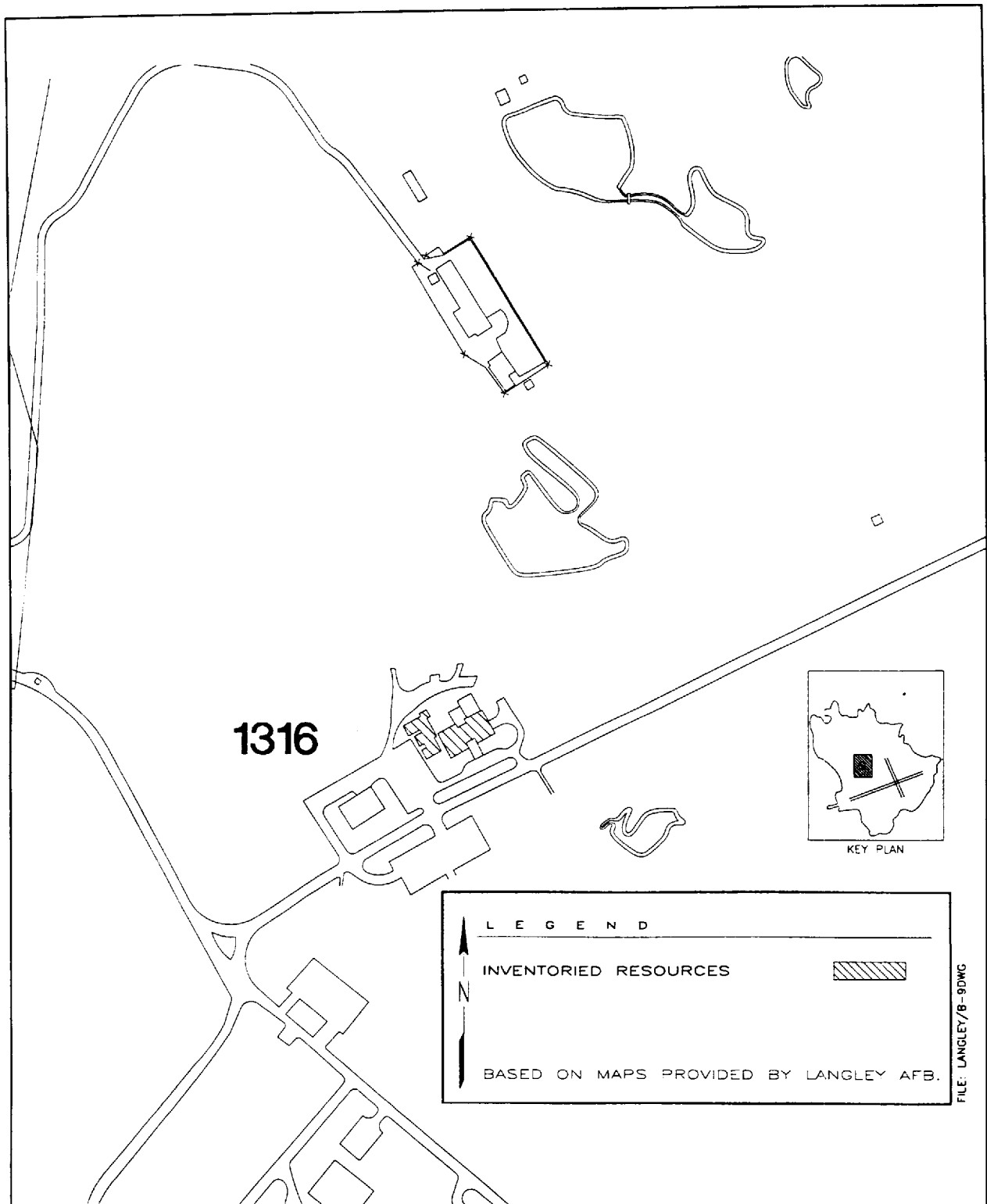


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 15).

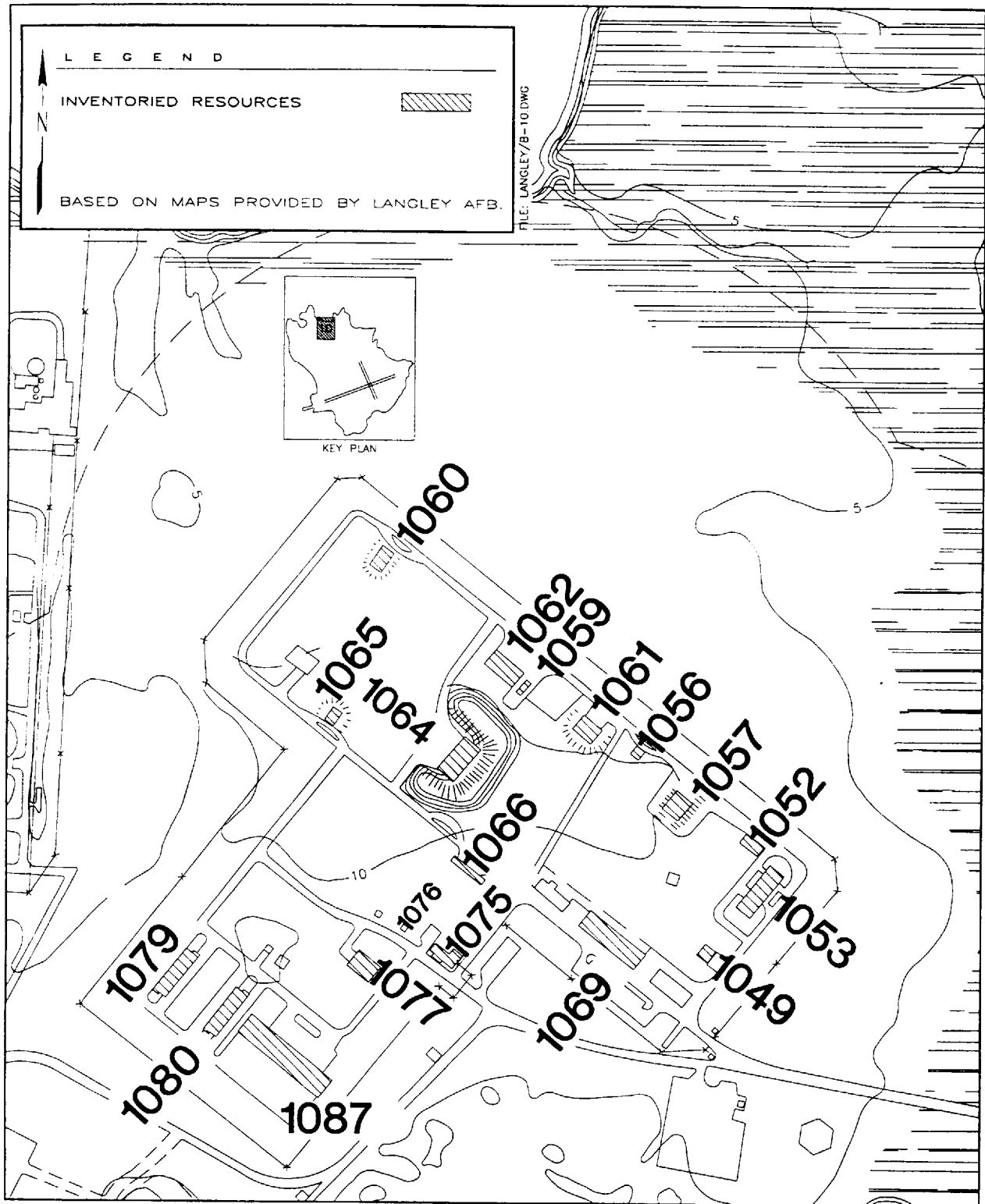


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 10 of 15).

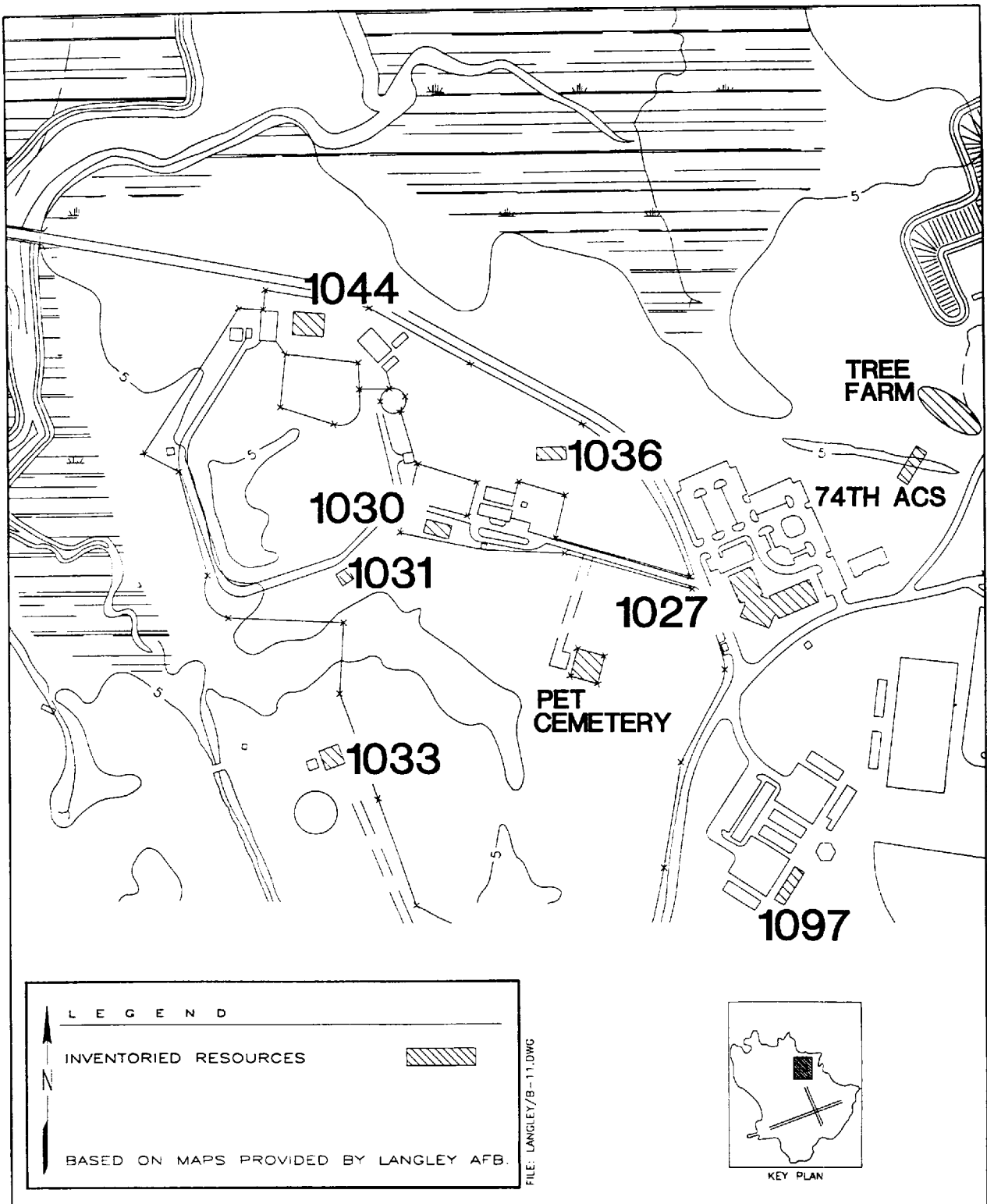


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 11 of 15).

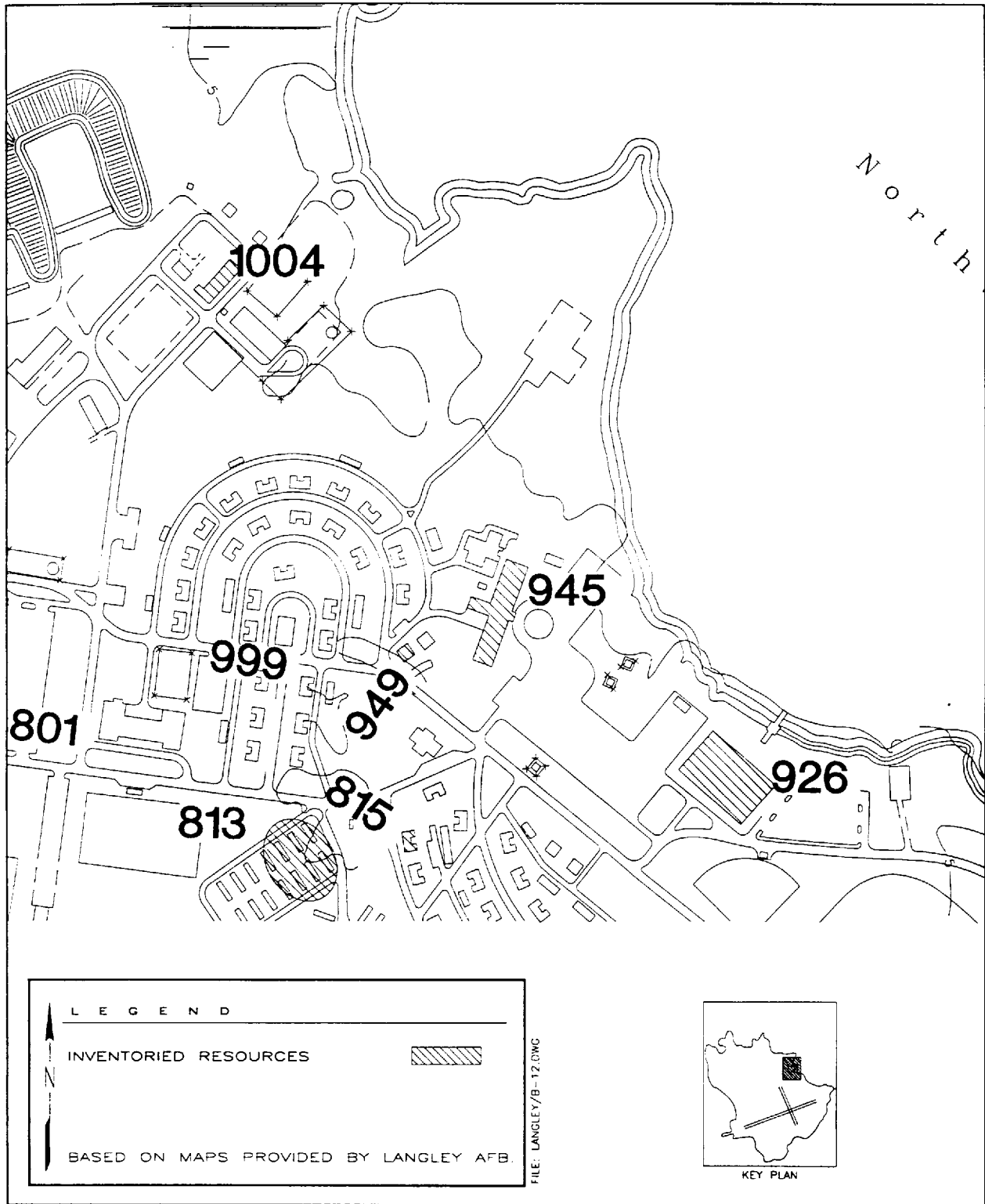


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 12 of 15).

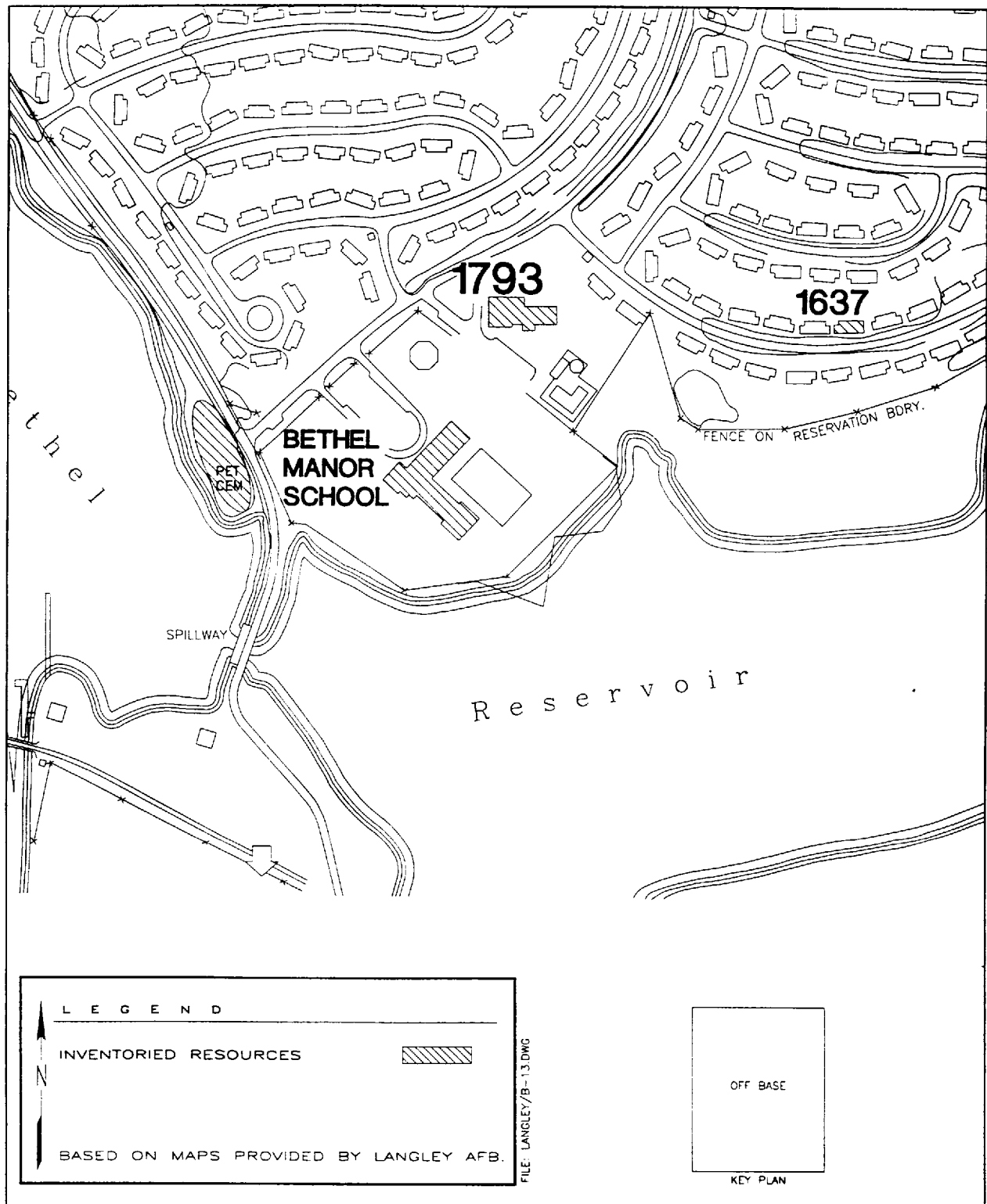


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 13 of 15).

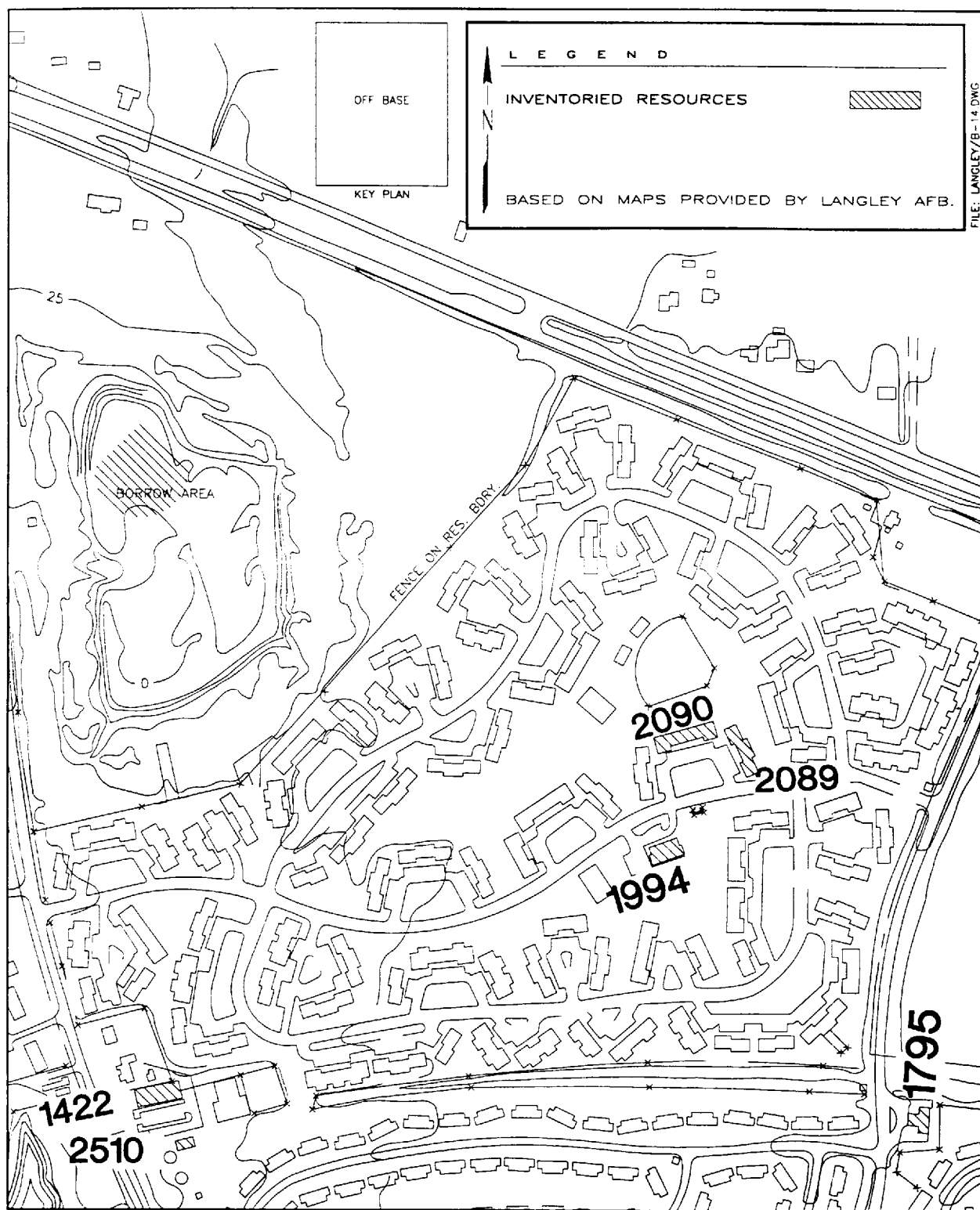


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 14 of 15).

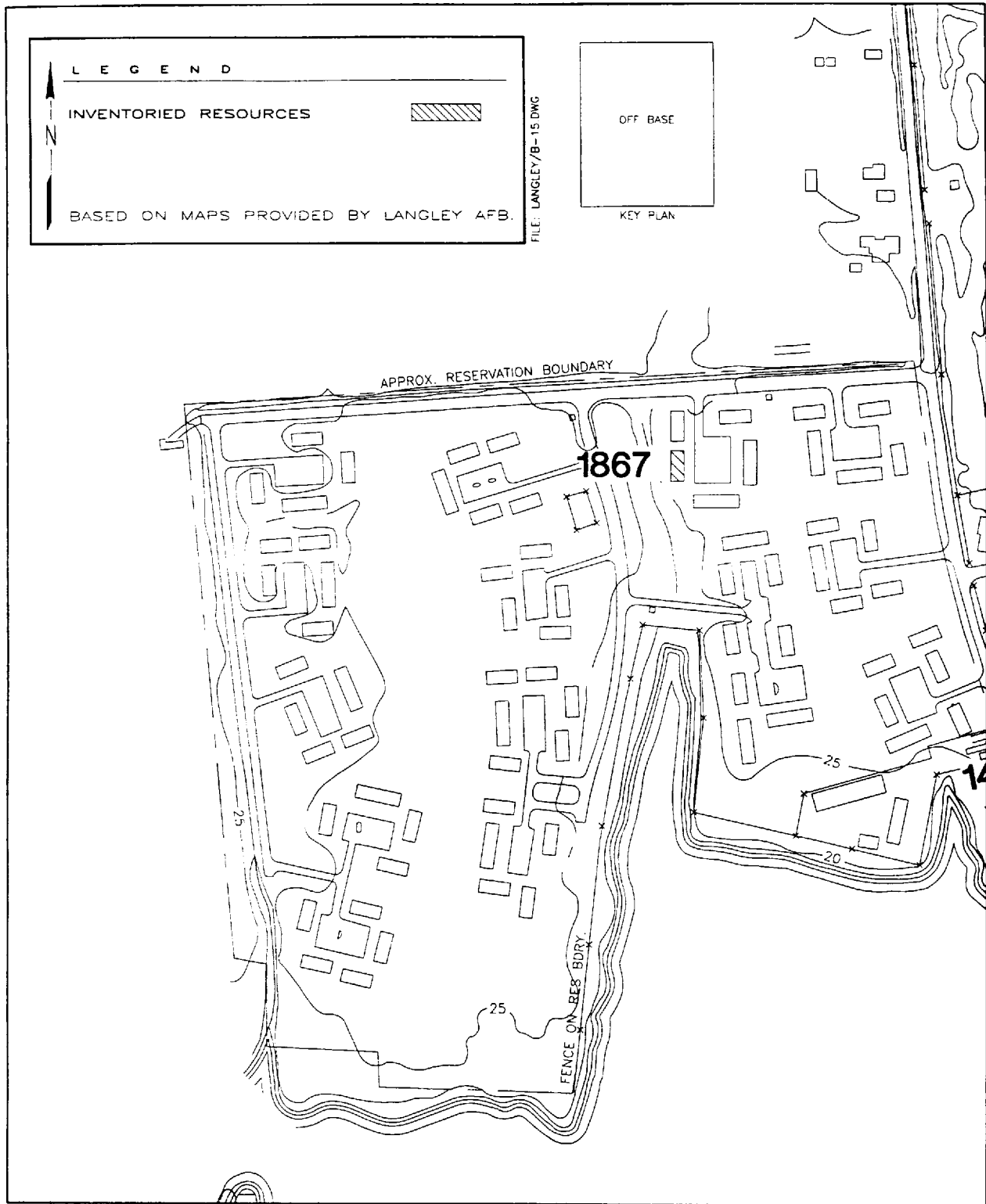
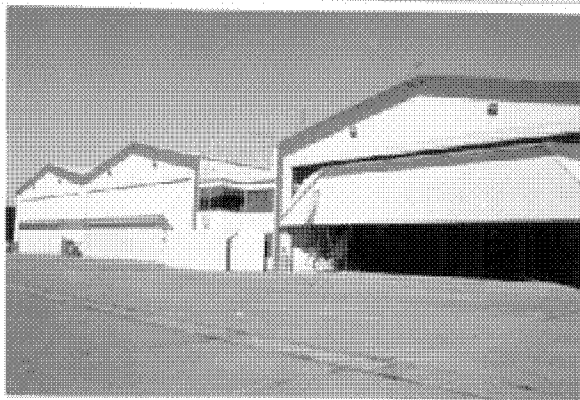
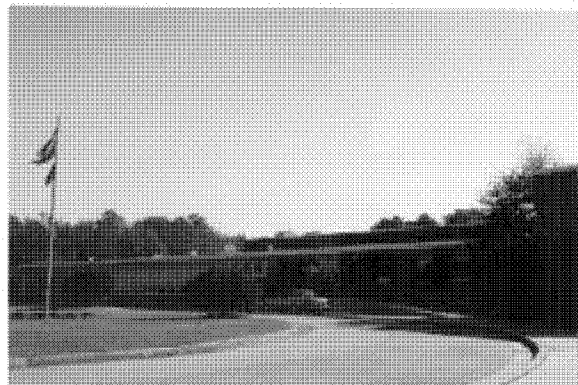


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 15 of 15).

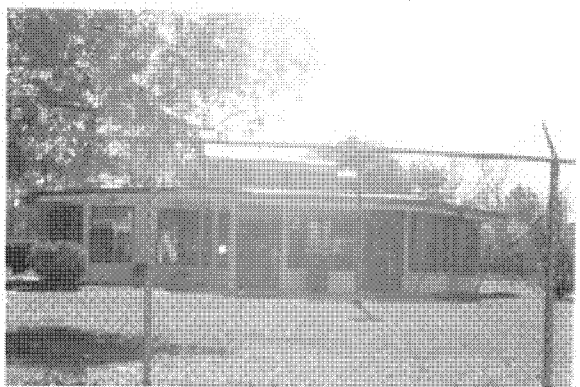
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



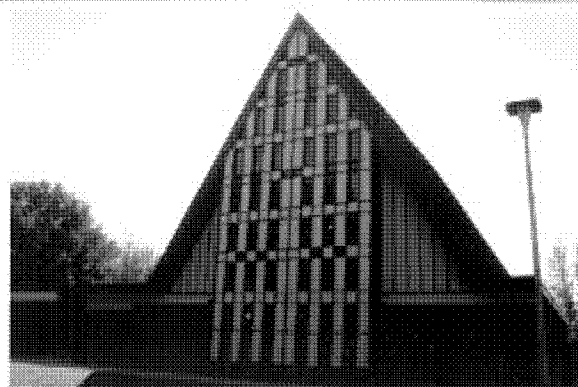
Resource No. 22001, Real Property No. 1362
Crew Readiness



Resource No. 22002, Real Property No. (none)
Bethel Manor School



Resource No. 22003, Real Property No. 1797
Miscellaneous Recreation Facility



Resource No. 22004, Real Property No. 1793
Chapel Center



Resource No. 22005, Real Property No. 1637
Capehart Family Housing



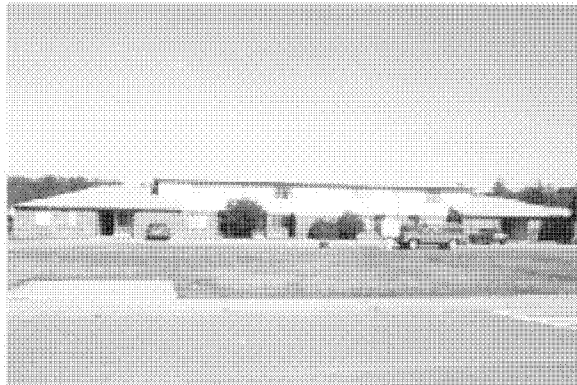
Resource No. 22006, Real Property No. 1368
Capehart Family Housing



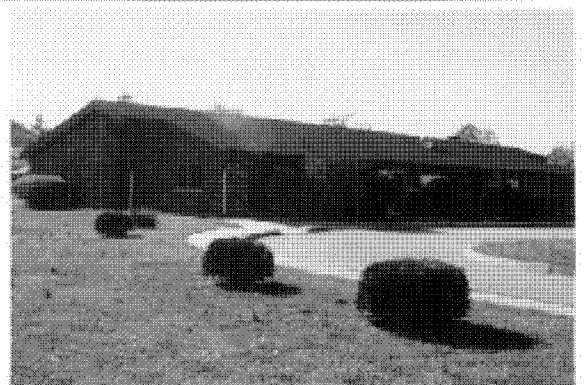
Resource No. 22007, Real Property No. 1795
Composite Medical Facility



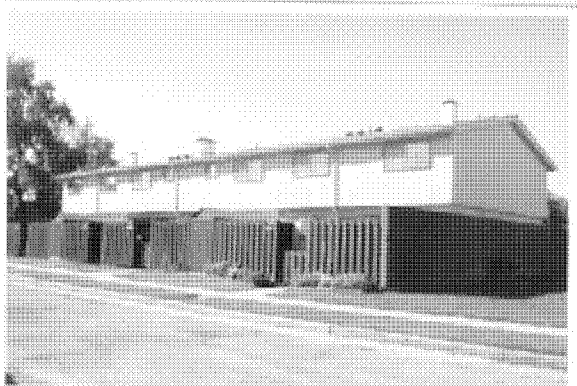
Resource No. 22008, Real Property No. 2089
Family Housing (Appr 1970A)



Resource No. 22009, Real Property No. 2090
Family Housing (Appr 1970A)



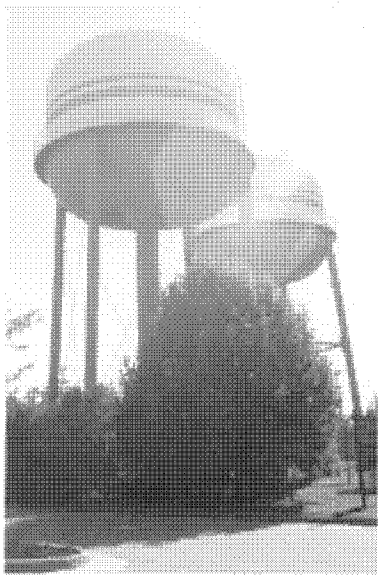
Resource No. 22010, Real Property No. 1994
Child Care Center



Resource No. 22011, Real Property No. 1867
Family Housing (Appr 1950-1969)



Resource No. 22012, Real Property No. 1422
Branch Exchange



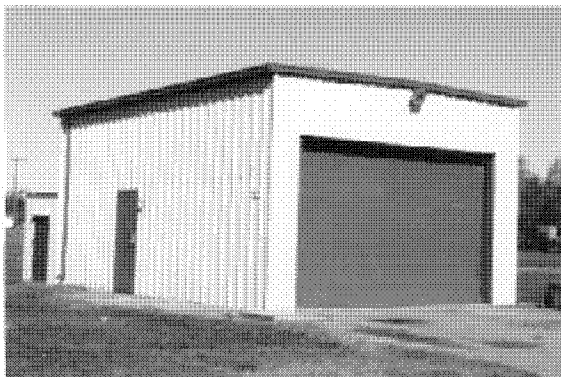
Resource No. 22013, Real Property No. 2510
Water Tank Storage



Resource No. 22014, Real Property No. (none)
Civil War Cemetery



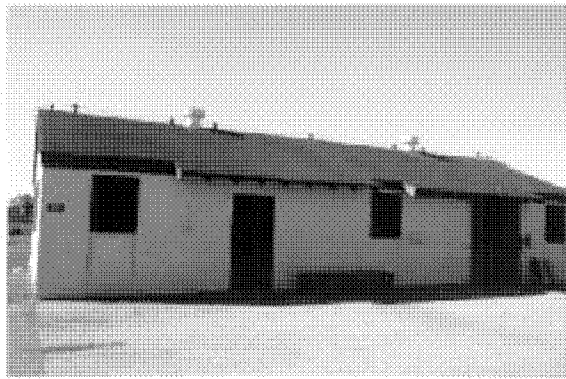
Resource No. 22015, Real Property No. 1069
Munitions Maintenance Administration



Resource No. 22016, Real Property No. 1049
Spare Inert Storage



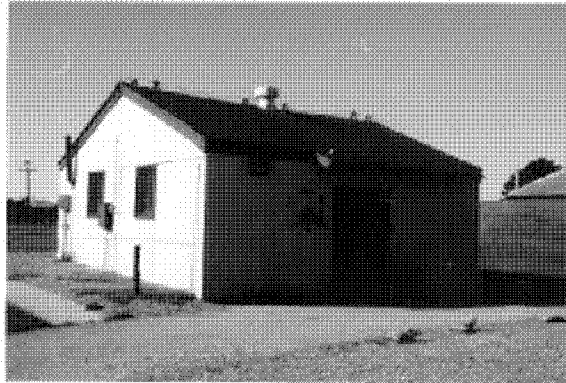
Resource No. 22017, Real Property No. 1053
Missile Assembly Shop



Resource No. 22018, Real Property No. 1052
Spare Inert Storage



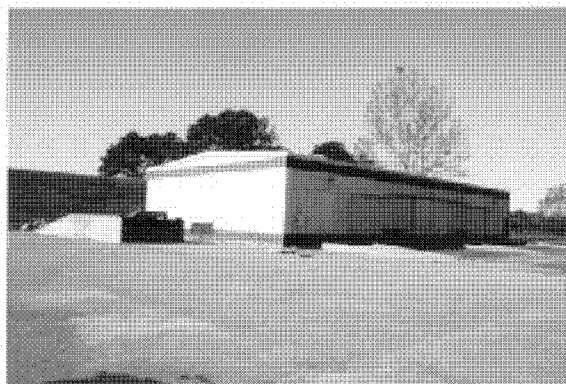
Resource No. 22019, Real Property No. 1057
Igloo Storage



Resource No. 22020, Real Property 1056
Above Ground Storage Magazine



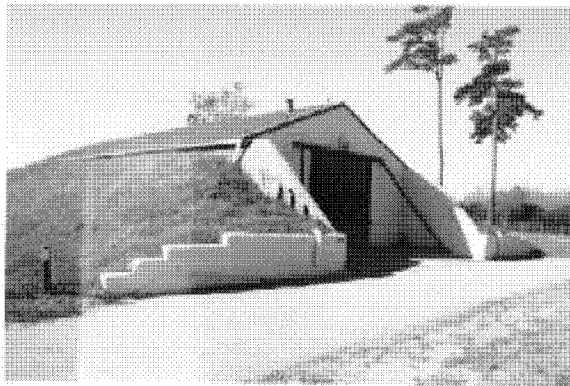
Resource No. 22021, Real Property No. 1061
Conventional Munitions Shop



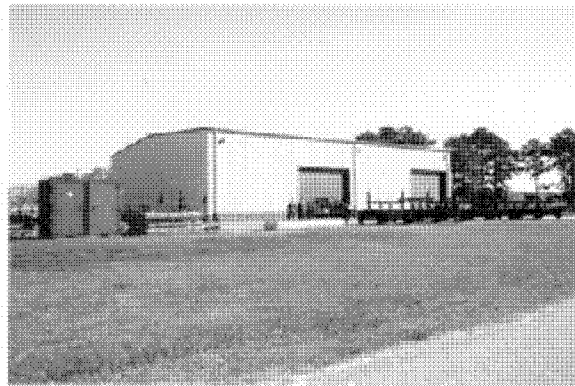
Resource No. 22022, Real Property No. 1062
Above Ground Storage Magazine



Resource No. 22023, Real Property No. 1059
Load and Unload Center



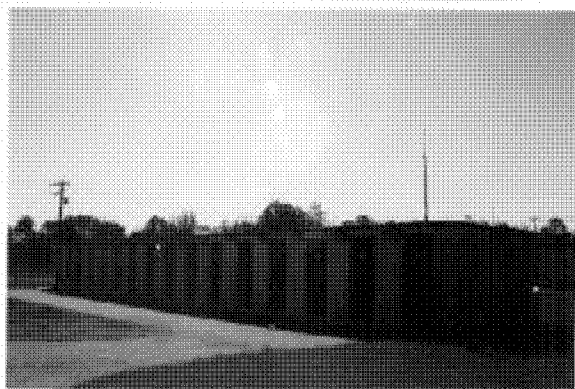
Resource No. 22024, Real Property No. 1060
Above Ground Storage Magazine



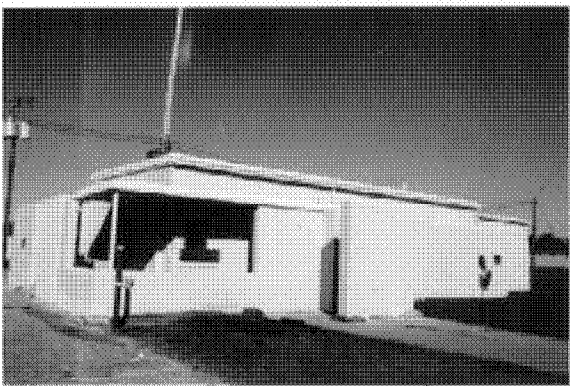
Resource No. 22025, Real Property No. 1065
Above Ground Storage Magazine



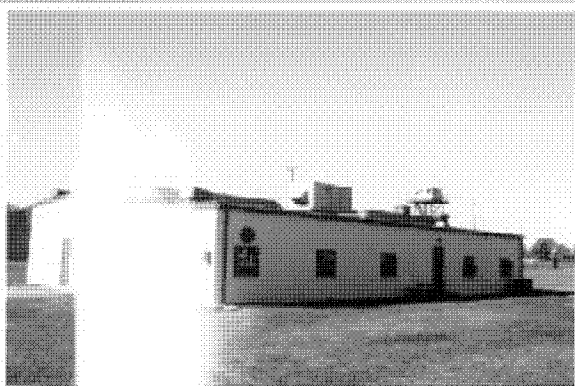
Resource No. 22026, Real Property No. 1064
Above Ground Storage Magazine



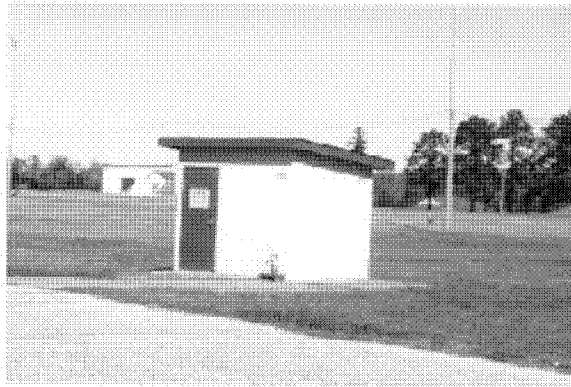
Resource No. 22027, Real Property No. 1066
Segregated Magazine Storage



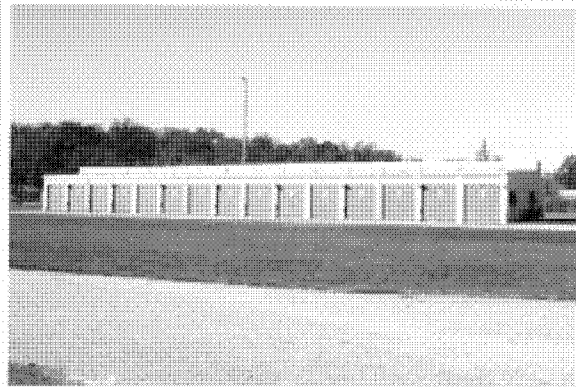
Resource No. 22028, Real Property No. 1075
Security Police Entry Control Building



Resource No. 22029, Real Property No. 1077
Rocket Check Assembly Storage



Resource No. 22030, Real Property No. 1076
Base Hazardous Storage



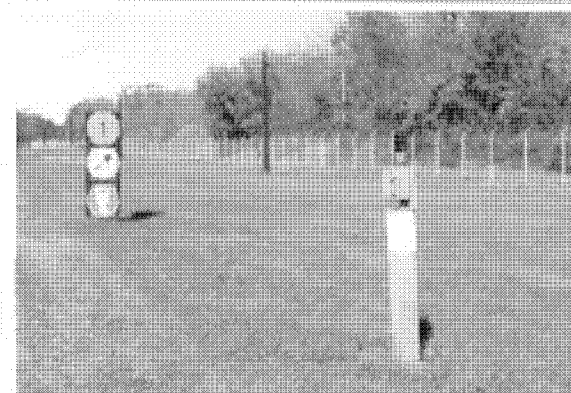
Resource No. 22031, Real Property No. 1087
Above Ground Storage Magazine



Resource No. 22032, Real Property No. 1079
Multi-Cubicle Magazine Storage



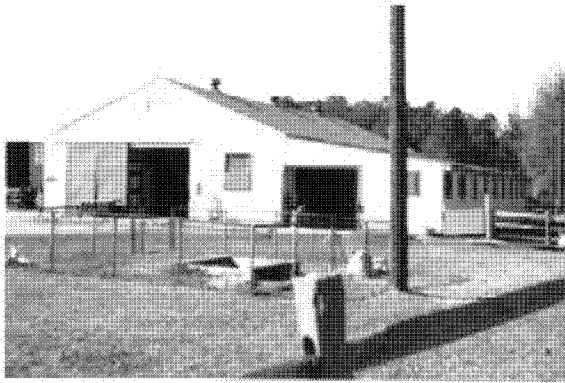
Resource No. 22033, Real Property No. 1080
Multi-Cubicle Magazine Storage



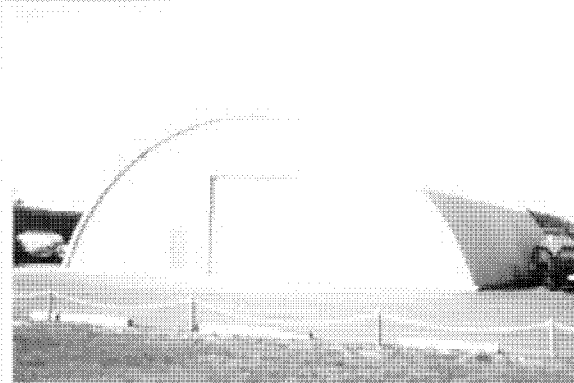
Resource No. 22034, Real Property No. (none)
Munitions Signs



Resource No. 22035, Real Property No. (none)
"Munitions Make The Mission" Sign



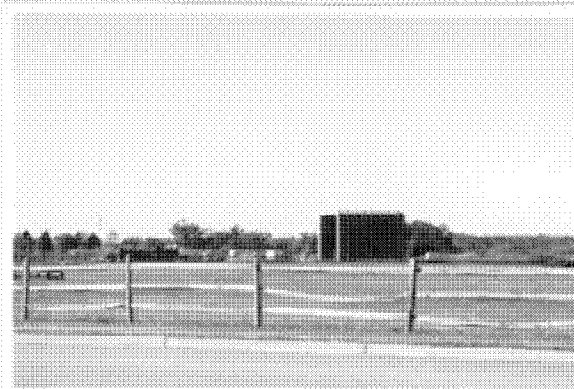
Resource No. 22036, Real Property No. 1044
Riding Stables



Resource No. 22037, Real Property No. 1036
Security Police Operations



Resource No. 22038, Real Property No. 1027
Education Center



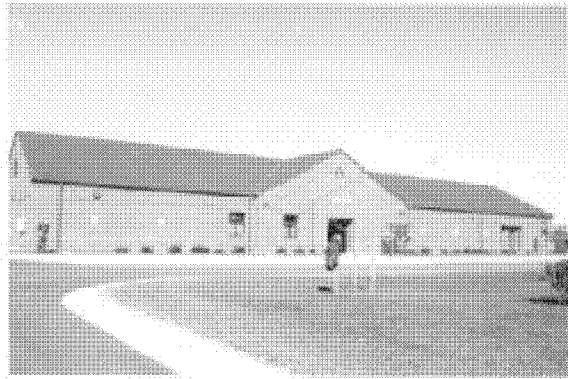
Resource No. 22039, Real Property No. 1033
Security Police Operations



Resource No. 22040, Real Property No. 1097
Temporary Lodging Facility



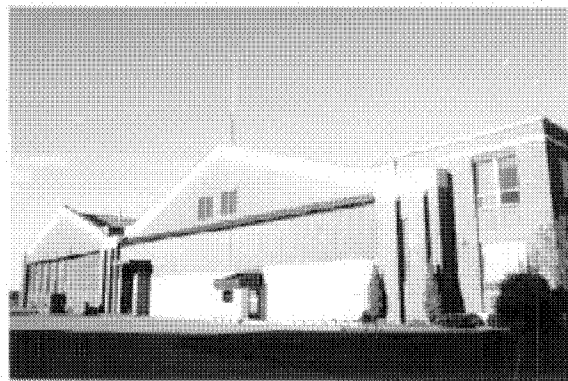
Resource No. 22041, Real Property No. (none)
Pet Cemetery



Resource No. 22042, Real Property No. (unknown), 74th ACS



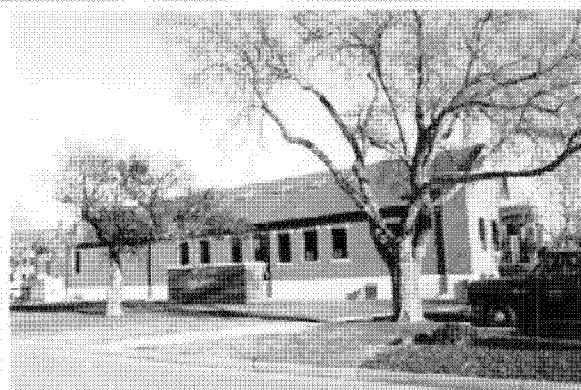
Resource No. 22044, Real Property No. (none)
Langley Tree Farm



Resource No. 22045, Real Property No. 750
Field Training Facility



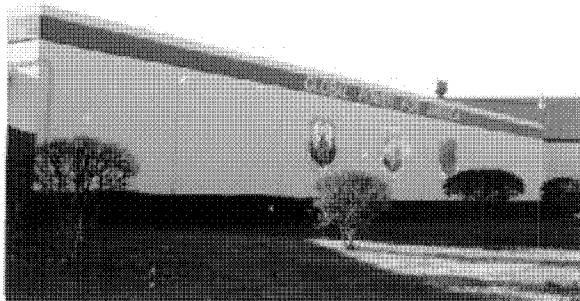
Resource No. 22046, Real Property No. 751
Small Aircraft Maintenance Dock



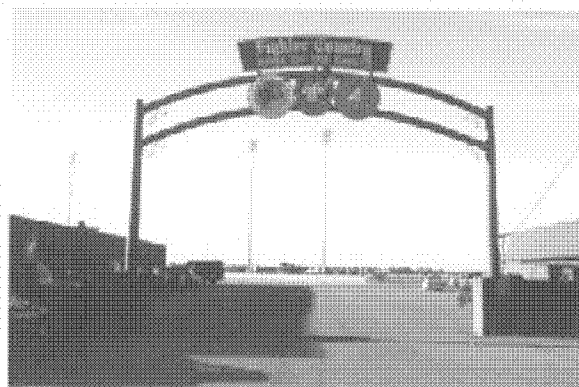
Resource No. 22047, Real Property No. 788
Base Photo Lab



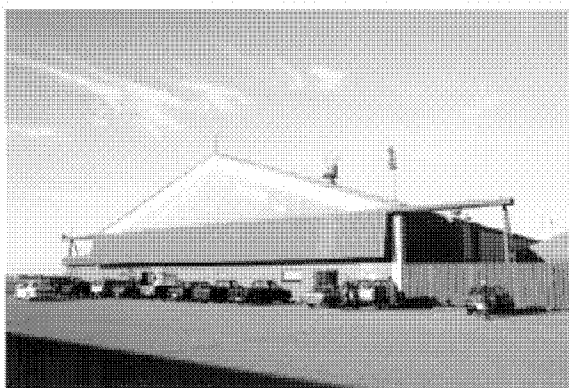
Resource No. 22048, Real Property No. 784
Surveillance Equipment Shop



Resource No. 22049, Real Property No. 782
PME Lab



Resource No. 22050, Real Property No. (none)
Squadron Sign



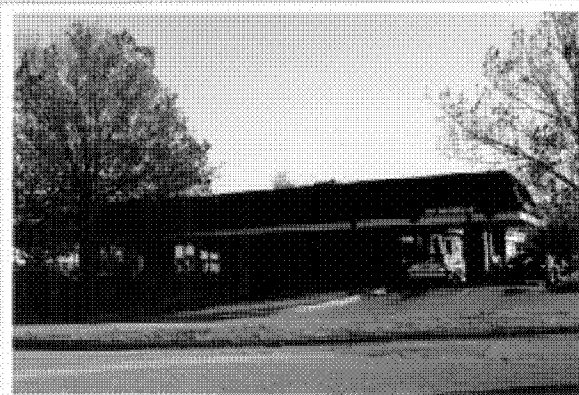
Resource No. 22051, Real Property No. 757
Shop A/SE Storage Facility



Resource No. 22052, Real Property No. 760
Squadron Operations



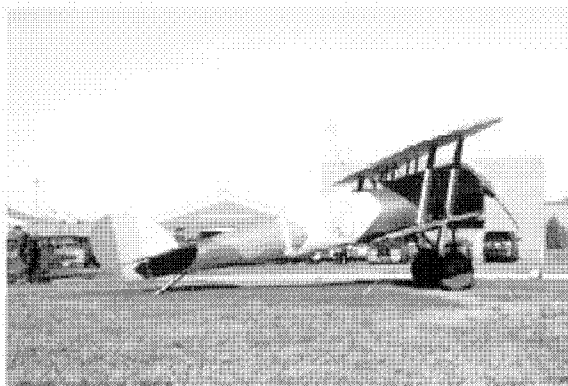
Resource No. 22053, Real Property No. 764
Wing Headquarters



Resource No. 22054, Real Property No. 467
Credit Union



Resource No. 22055, Real Property No. 763
Squadron Operations



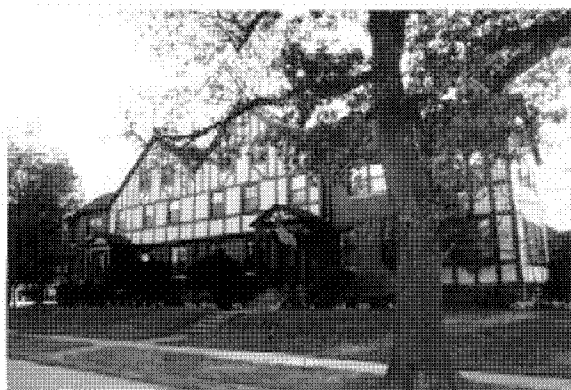
Resource No. 22056, Real Property No. (none)
Nieuport Fighter



Resource No. 22057, Real Property 768
Data Processing Installation



Resource No. 22058, Real Property No. 775
Traffic Management Facility



Resource No. 22059, Real Property 507
Family Housing (Appr 1950)



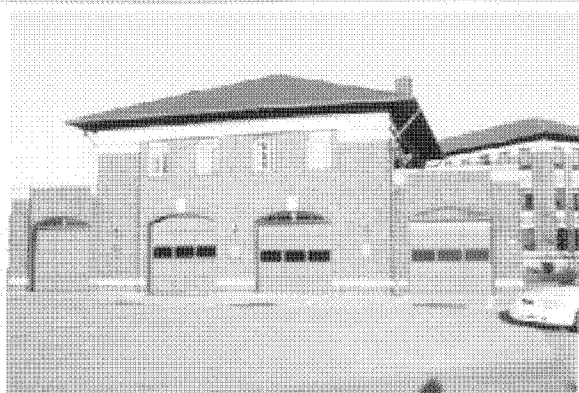
Resource No. 22060, Real Property No. 777
Housing Supply and Storage Facility



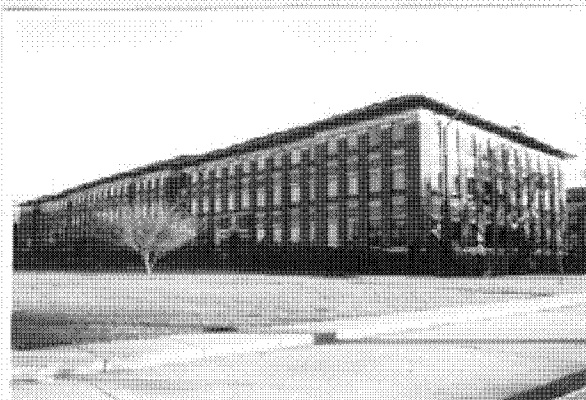
Resource No. 22061, Real Property No. 754
Weapons and Release System Shop



Resource No. 22062, Real Property No. 703
Major Command Headquarters



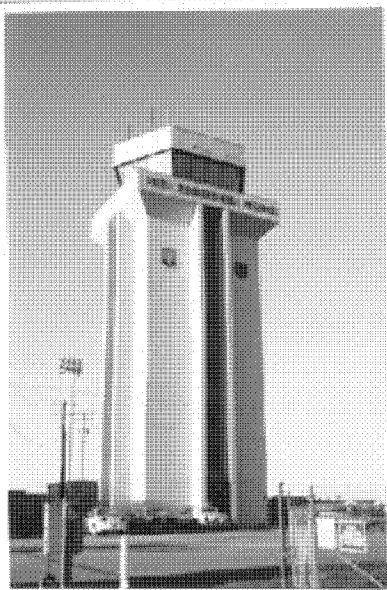
Resource No. 22063, Real Property No. 700
Fire Station



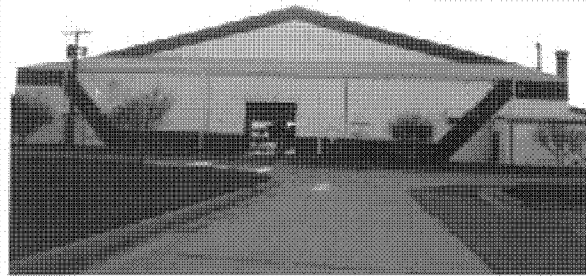
Resource No. 22064, Real Property No. 664
Major Command Headquarters



Resource No. 22065, Real Property No. 671
Major Command Headquarters



Resource No. 22066, Real Property No. 381
Control Tower



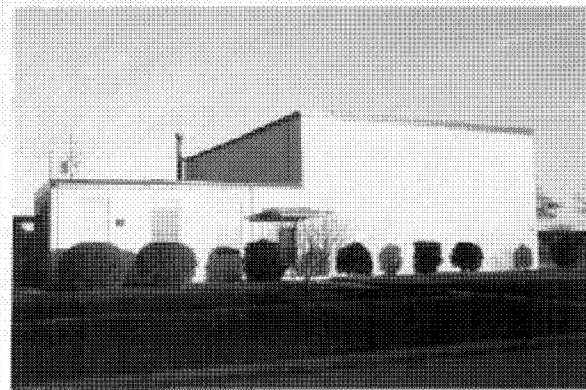
Resource No. 22067, Real Property No. 374
Aircraft Corrosion Control



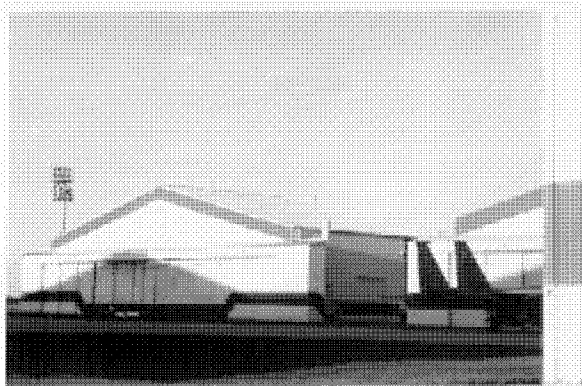
Resource No. 22068, Real Property No. 375
Fire Station



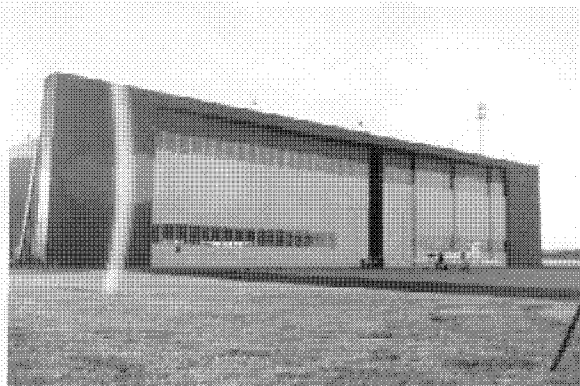
Resource No. 22069, Real Property No. 366
Band Center



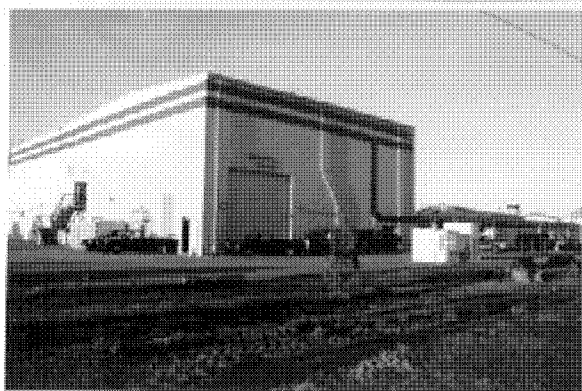
Resource No. 22070, Real Property No. 368
Band Center



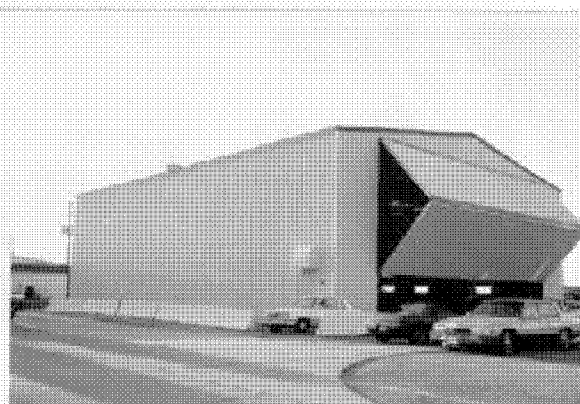
Resource No. 22071, Real Property No. 373
Fuel Systems Maintenance Dock



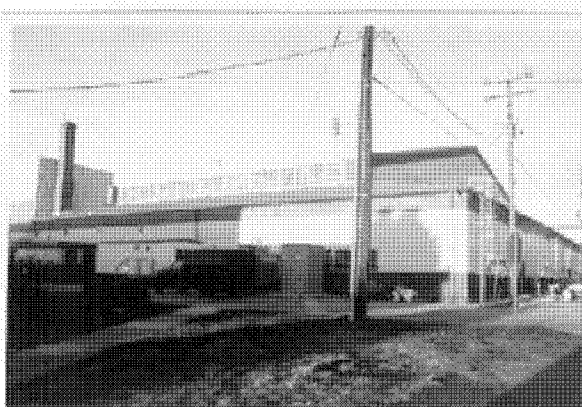
Resource No. 22072, Real Property No. 351
Maintenance Hangar



Resource No. 22073, Real Property 355
Security Police Operations



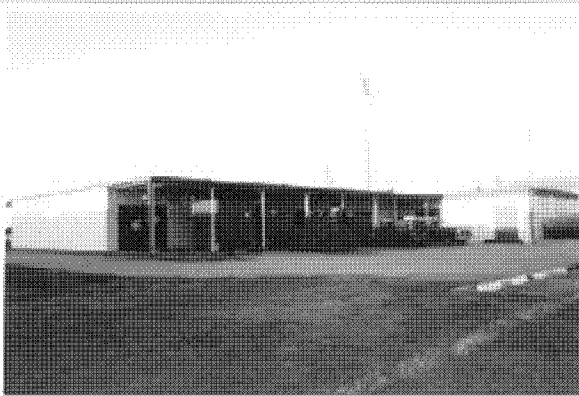
Resource No. 22074, Real Property No. 342
Aircraft Corrosion Control



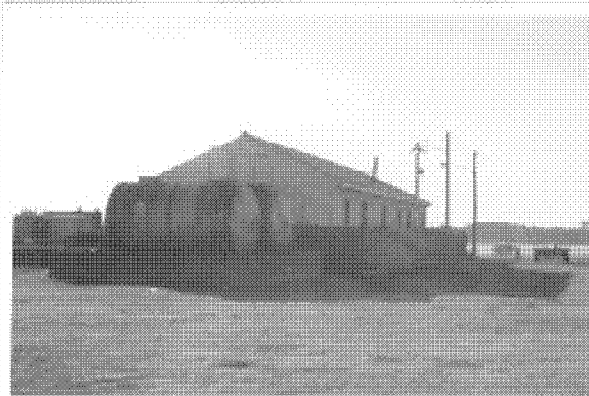
Resource No. 22075, Real Property 338
Security Police Operations



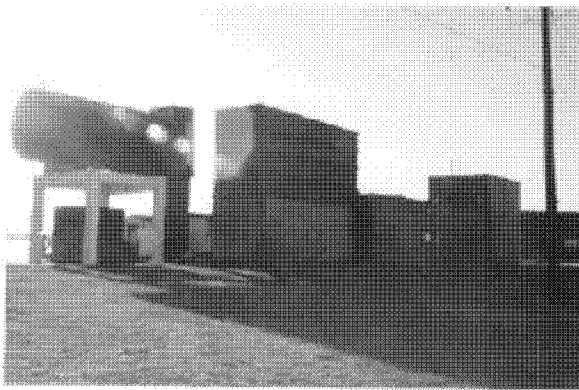
Resource No. 22076, Real Property No. 339
Major Command Headquarters



Resource No. 22077, Real Property No. 326
Security Police Operations



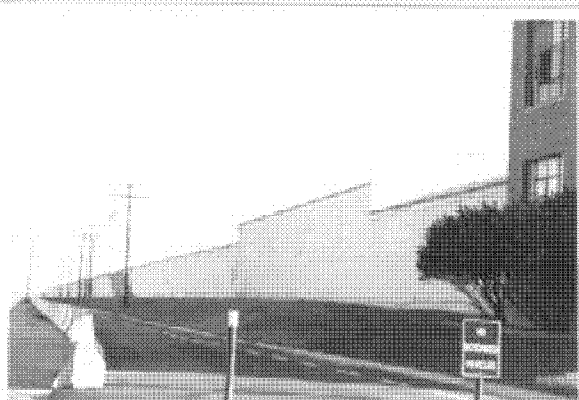
Resource No. 22079, Real Property No. 728
Base Engineer Covered Storage



Resource No. 22080, Real Property 734
Test Cell



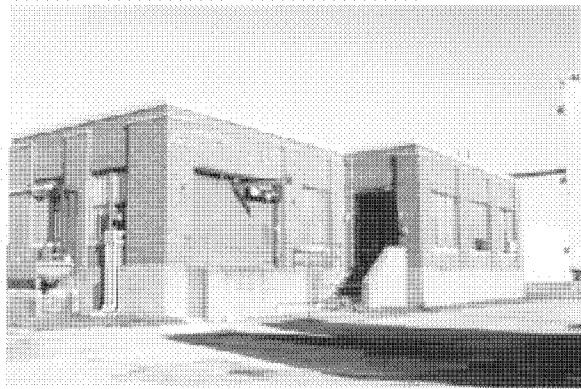
Resource No. 22081, Real Property No. 735
Aircraft General Purpose Shop



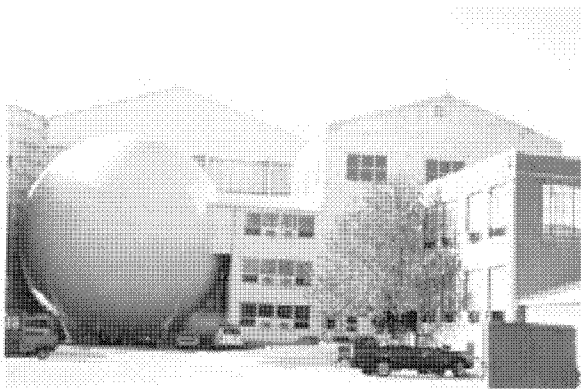
Resource No. 22082, Real Property 720
Wing Headquarters



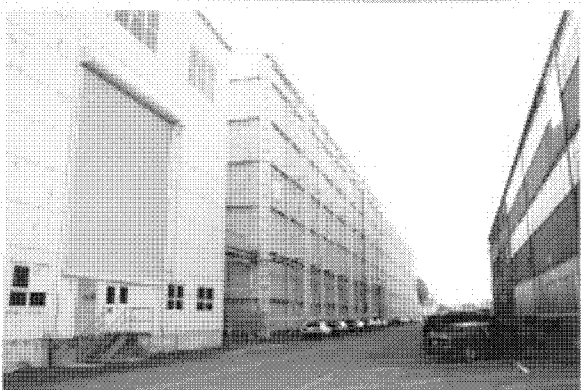
Resource No. 22083, Real Property No. 724
Liquid Oxygen Storage



Resource No. 22084, Real Property No. 732
Liquid Oxygen Storage



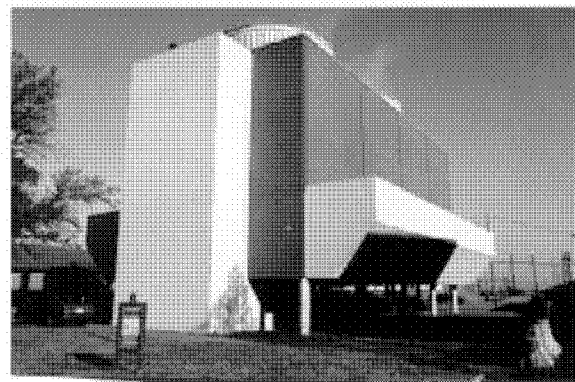
Resource No. 22086, Real Property No. 644
Unknown NASA



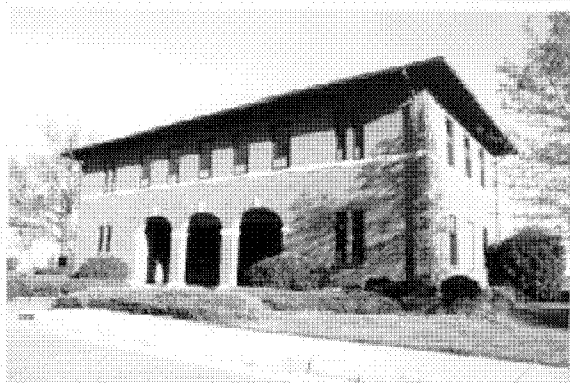
Resource No. 22087, Real Property No. 643
Unknown NASA



Resource No. 22085, Real Property No. 645
Unknown NASA



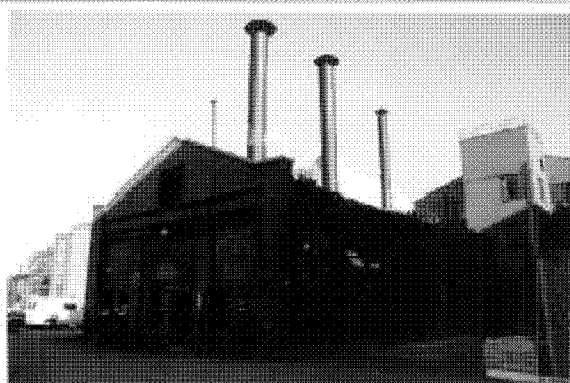
Resource No. 22088, Real Property No. 648
Unknown NASA



Resource No. 22089, Real Property No. 714
Air Force Headquarters



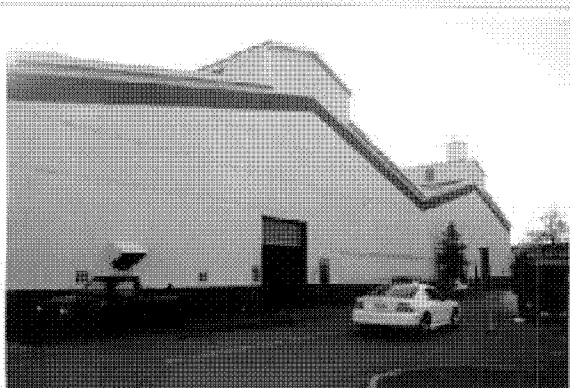
Resource No. 22090, Real Property No. 647
Major Command Headquarters



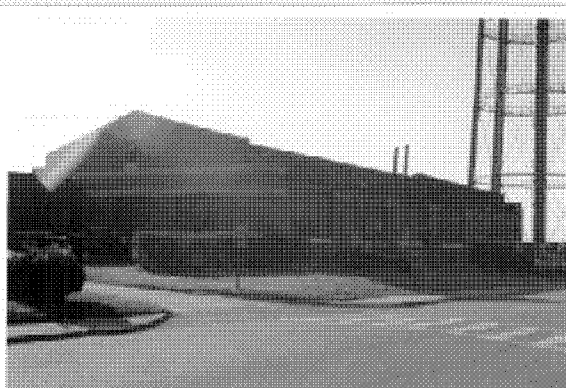
Resource No. 22091, Real Property No. 665
Utility Vault



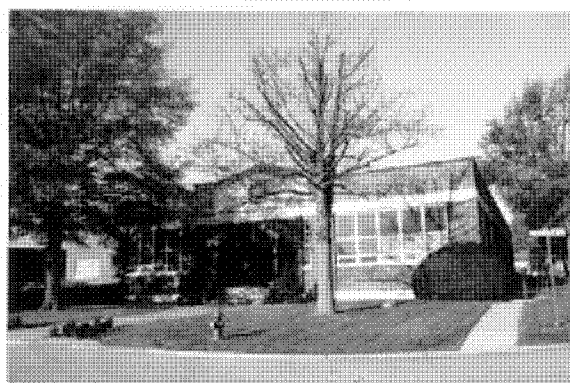
Resource No. 22092, Real Property No. 640
Unknown NASA



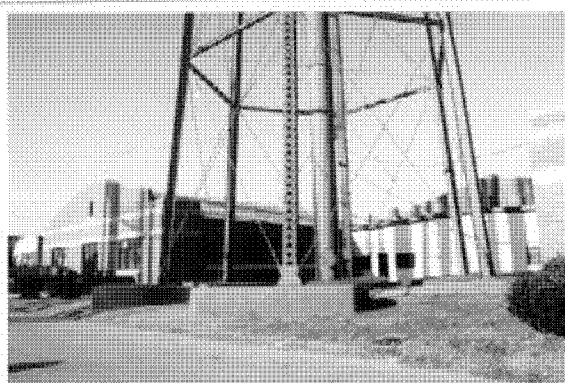
Resource No. 22093, Real Property No. 633
Base Engineer Covered Storage



Resource No. 22094, Real Property No. 617
Base Maintenance Shop



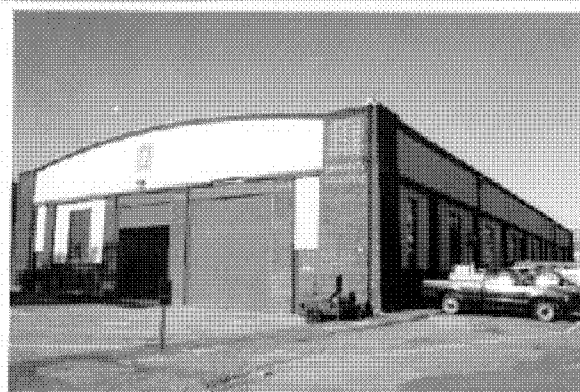
Resource No. 22095, Real Property No. 623
Base Engineering Administration



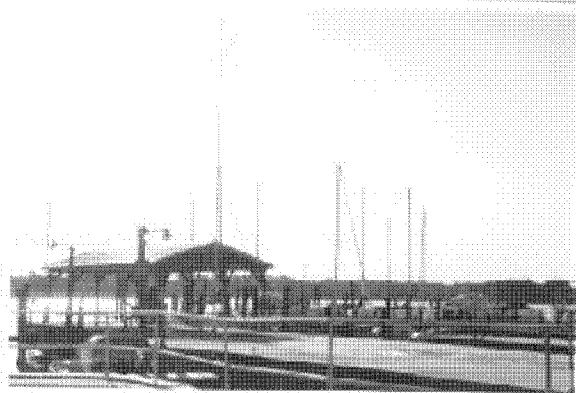
Resource No. 22096, Real Property No. 621
Base Maintenance Shop



Resource No. 22097, Real Property No. 607
Miscellaneous Recreation Building



Resource No. 22098, Real Property No. 606
Base Maintenance Shop



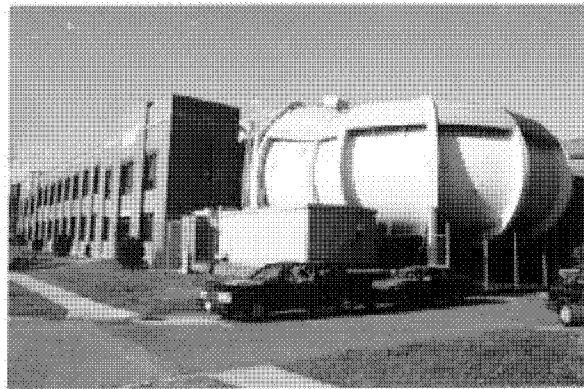
Resource No. 22099, Real Property No. (none)
Marina



Resource No. 22100, Real Property No. 584
Major Command Headquarters



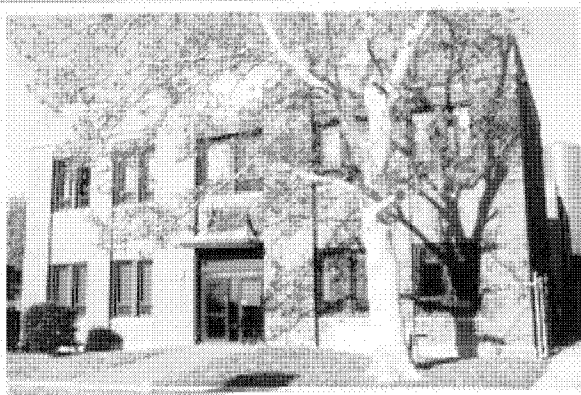
Resource No. 22101, Real Property No. 620
Water Tank Storage



Resource No. 22102, Real Property No. 582
Unknown NASA



Resource No. 22103, Real Property No. 570
Family Housing (Appr 1950)



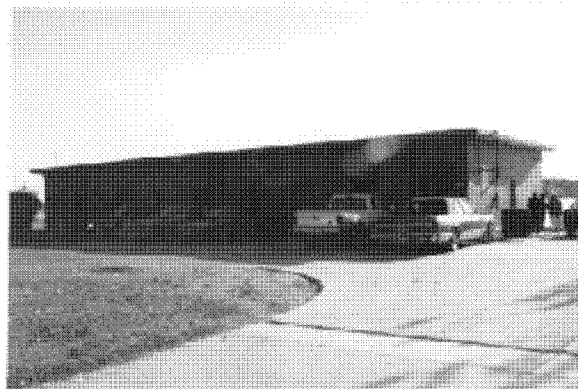
Resource No. 22104, Real Property No. 580
Major Command Headquarters



Resource No. 22105, Real Property No. 566
Major Command Headquarters



Resource No. 22106, Real Property No. 598
Unknown NASA



Resource No. 22107, Real Property No. 558
Major Command Headquarters



Resource No. 22108, Real Property No. 568
Major Command Headquarters



Resource No. 22109, Real Property No. 520
Base Chapel



Resource No. 22110, Real Property No. 591
Religious Education Facility



Resource No. 22111, Real Property No. 390
Transmissometer AN/GMQ-10



Resource No. 22112, Real Property No. 587
Major Command Headquarters



Resource No. 22113, Real Property No. 586
Major Command Headquarters



Resource No. 22114, Real Property No. 693
Major Command Headquarters



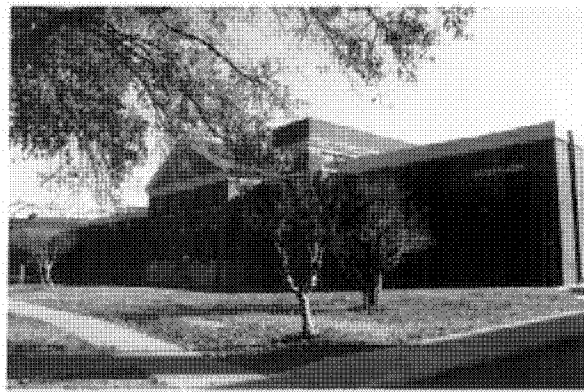
Resource No. 22115, Real Property No. 602
Major Command Headquarters



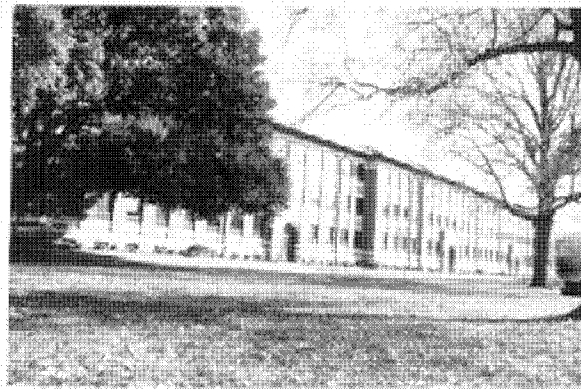
Resource No. 22116, Real Property No. 625
Exchange Service Outlet



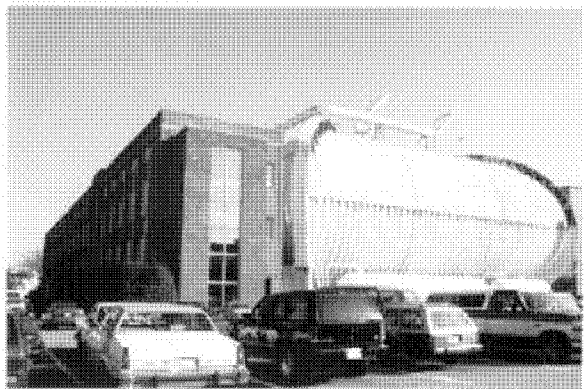
Resource No. 22117, Real Property No. 635
Major Command Headquarters



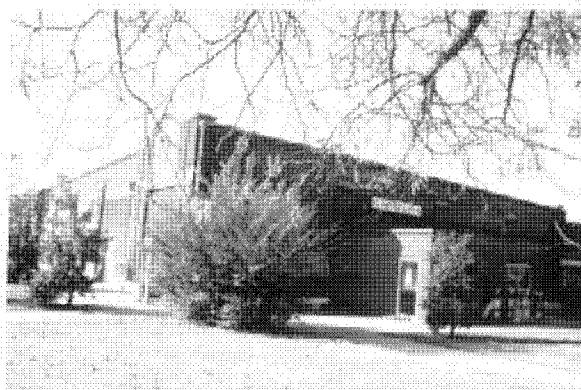
Resource No. 22118, Real Property No. 658
Gymnasium



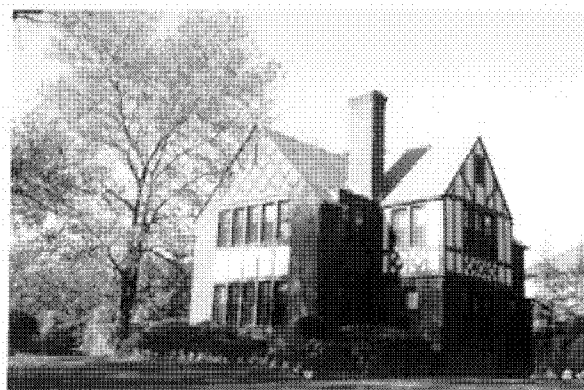
Resource No. 22119, Real Property No. 681
Major Command Headquarters



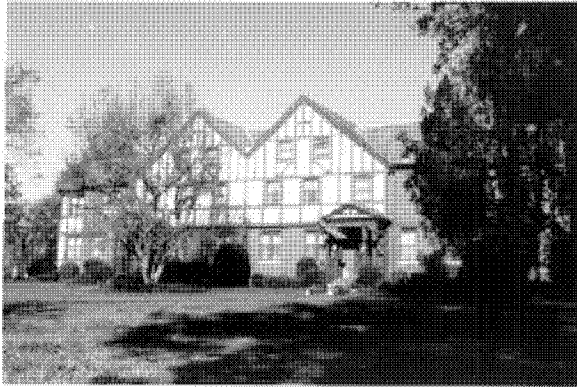
Resource No. 22120, Real Property No. 649
Unknown NASA



Resource No. 22121, Real Property No. 661
Form and Publishing Base Warehouse



Resource No. 22122, Real Property No. 548
Family Housing (Appr 1950)



Resource No. 22123, Real Property No. 426
Family Housing (Appr 1950)



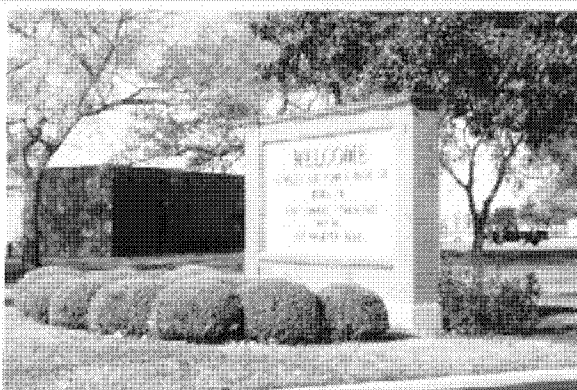
Resource No. 22124, Real Property No. 418
Family Housing (Appr 1950)



Resource No. 22125, Real Property No. 414
Family Housing (Appr 1950)



Resource No. 22126, Real Property No. 412
Officers' Open Mess



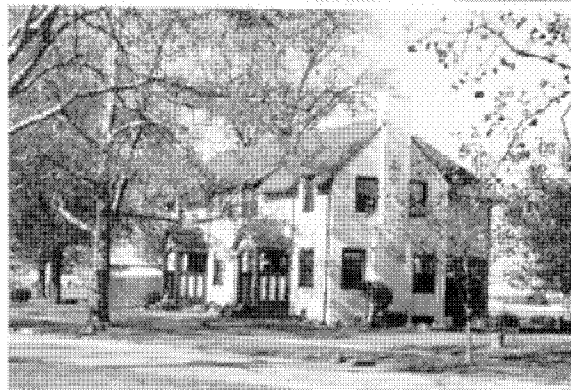
Resource No. 22127, Real Property No. 439
Monuments/Memorial



Resource No. 22128, Real Property No. 546
Major Command Headquarters



Resource No. 22129, Real Property No. 448
Visiting Officers' Quarters



Resource No. 22130, Real Property No. 455
Family Housing (Apr 1950)



Resource No. 22131, Real Property No. 456
Family Housing (Apr 1950)



Resource No. 22132, Real Property No. 472
Visiting Officers' Quarters



Resource No. 22133, Real Property 441
Red Cross Building



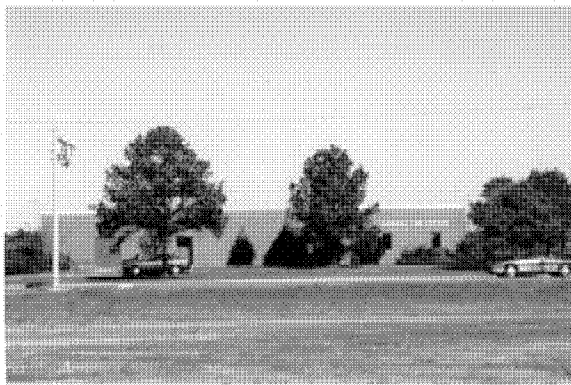
Resource No. 22134, Real Property No. 442
Branch Exchange



Resource No. 22135, Real Property No. 226
Gymnasium



Resource No. 22136, Real Property No. 325
Flight Simulator Training



Resource No. 22137, Real Property No. 331
Law Center



Resource No. 22138, Real Property No. 330
Warehouse Supply and Equipment



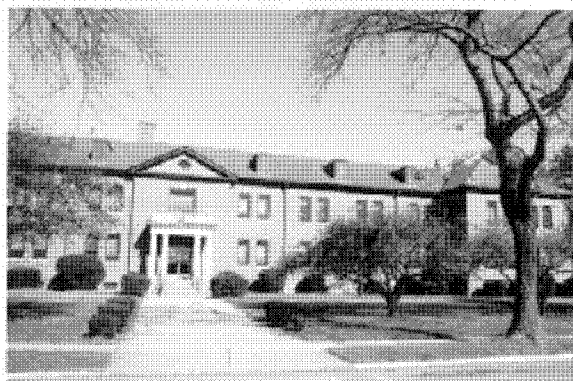
Resource No. 22139, Real Property No. 1316
Golf Clubhouse/Equipment



Resource No. 22140, Real Property No. 1030
Security Police Canine Kennel



Resource No. 22141, Real Property No. 1031
MWR Supply and NAF Central Storage



Resource No. 22142, Real Property No. 801
NAF Administration Offices



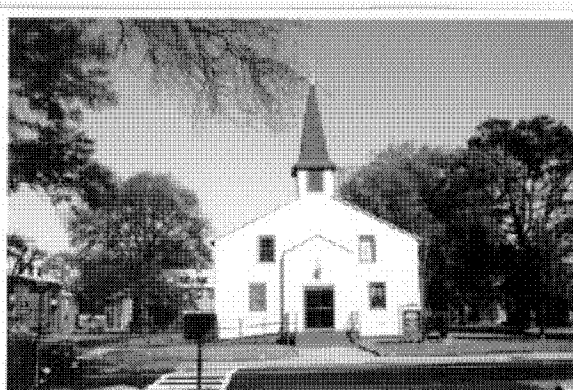
Resource No. 22143, Real Property No. 815
Family Housing (Appr 1950)



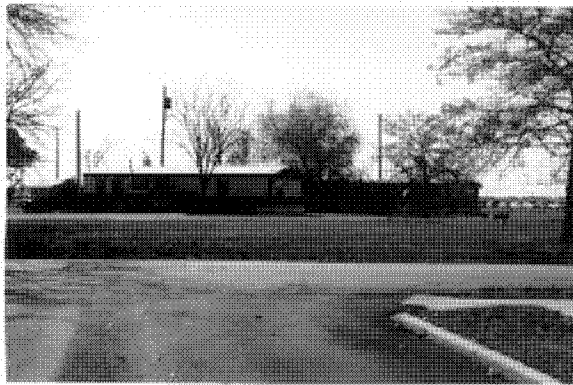
Resource No. 22144, Real Property No. 945
Family Housing (Appr 1950-1969)



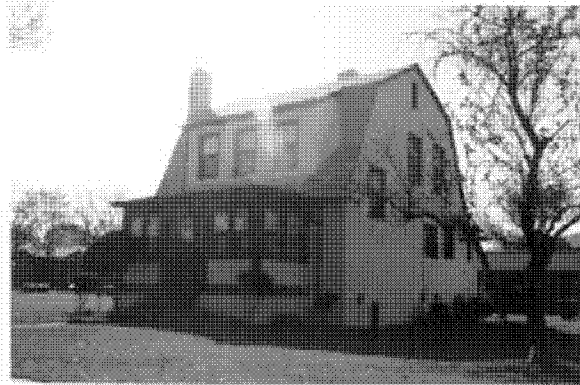
Resource No. 22145, Real Property No. 949
Family Housing (Appr 1950)



Resource No. 22146, Real Property No. 999
Base Chapel



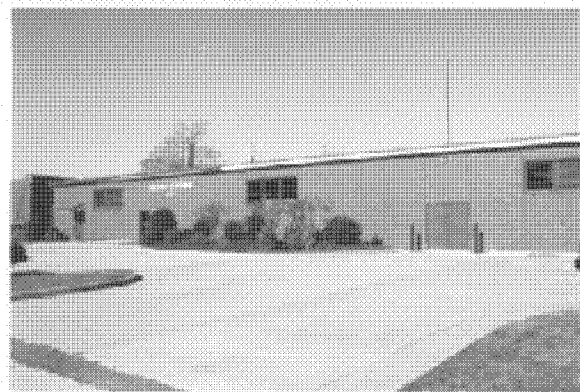
Resource No. 22147, Real Property No. 813
Trailer Court Parking



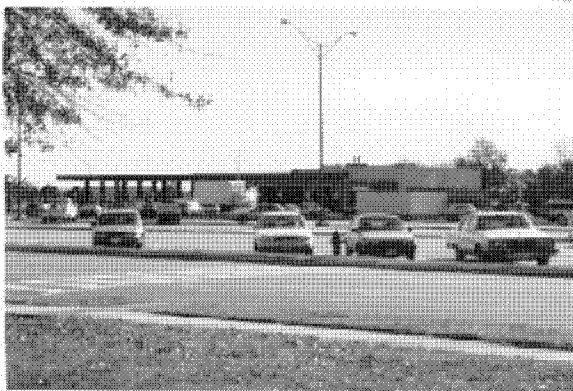
Resource No. 22148, Real Property No. 698
Unknown



Resource No. 22149, Real Property No. 926
NCO Open Mess



Resource No. 22150, Real Property No. 365
Branch Exchange



Resource No. 22151, Real Property No. 258
Exchange Service Station



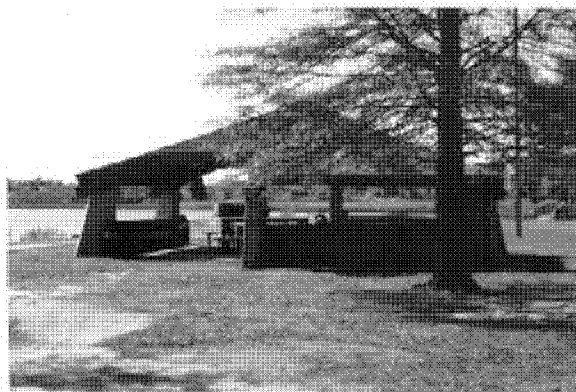
Resource No. 22152, Real Property No. 272
Medical Storage (Warm)



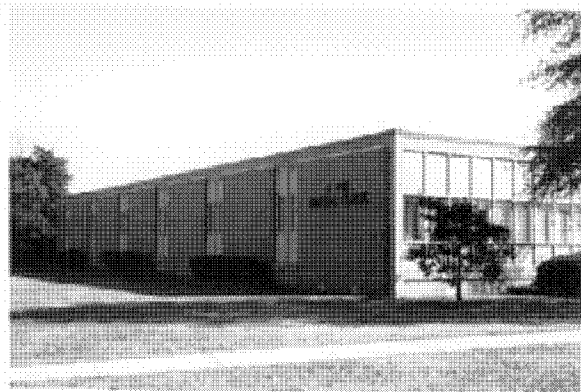
Resource No. 22153, Real Property No. 257
Composite Medical Facility



Resource No. 22154, Real Property No. 90
Group Headquarters



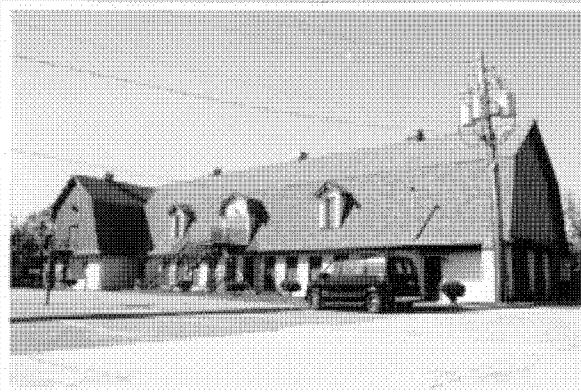
Resource No. 22155, Real Property No. 85
Miscellaneous Outdoor Recreation Facility



Resource No. 22156, Real Property No. 92
Dental Clinic



Resource No. 22157, Real Property No. 252
Bowling Center



Resource No. 22158, Real Property No. 253
Youth Center



Resource No. 22159, Real Property No. 246
Base Theater



Resource No. 22160, Real Property No. 247
Recreation Center



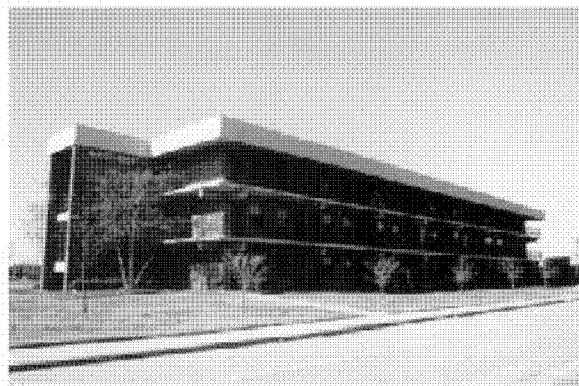
Resource No. 22161, Real Property No. 244
Arts and Crafts Center



Resource No. 22162, Real Property No. 254
Child Care Center



Resource No. 22163, Real Property No. 266
Air Force Clinic



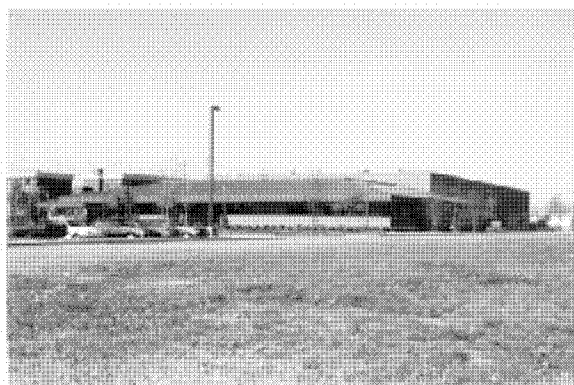
Resource No. 22164, Real Property No. 162
Visiting Airmens' Quarters



Resource No. 22165, Real Property No. 52
Thrift Shop



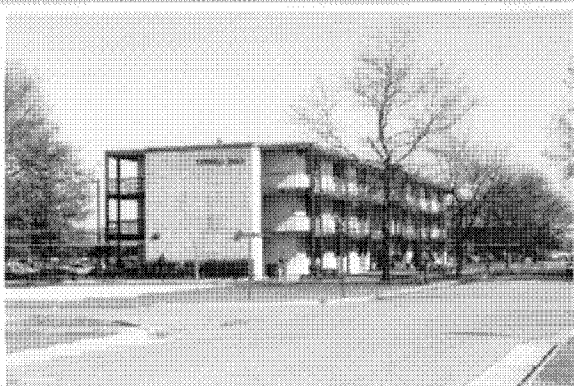
Resource No. 22166, Real Property No. 51
Animal Clinic



Resource No. 22167, Real Property No. 140
Airmens' Dining Hall



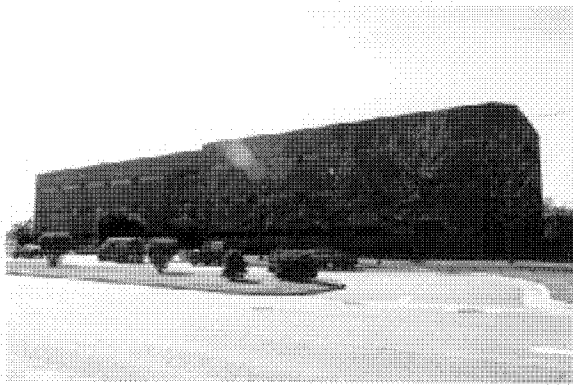
Resource No. 22168, Real Property No. 132
Airmens' Dormitory



Resource No. 22169, Real Property No. 123
Airmens' Dormitory



Resource No. 22170, Real Property No. 142
Major Command Headquarters



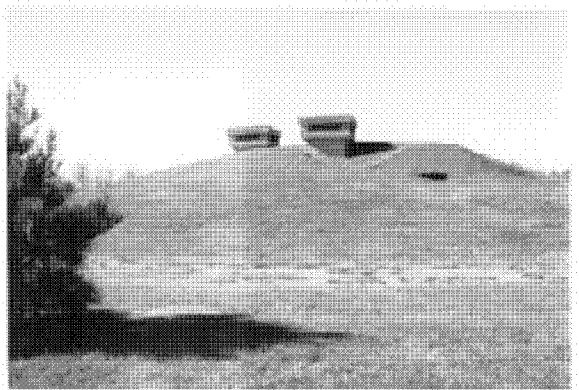
Resource No. 22171, Real Property No. 25
Data Processing Installation



Resource No. 22172, Real Property No. 21
Major Command Headquarters



Resource No. 22173, Real Property No. 18
AFOSI Office



Resource No. 22174, Real Property No. (none)
World War II Bunker



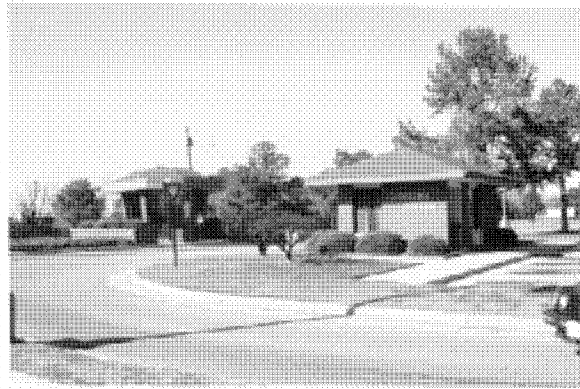
Resource No. 22175, Real Property No. 15
Base Personnel Office



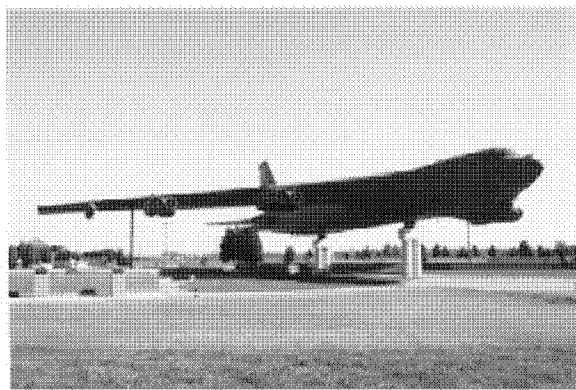
Resource No. 22176, Real Property No. 30
Vehicle Maintenance Shop



Resource No. 22177, Real Property No. 24
Electrical Substation



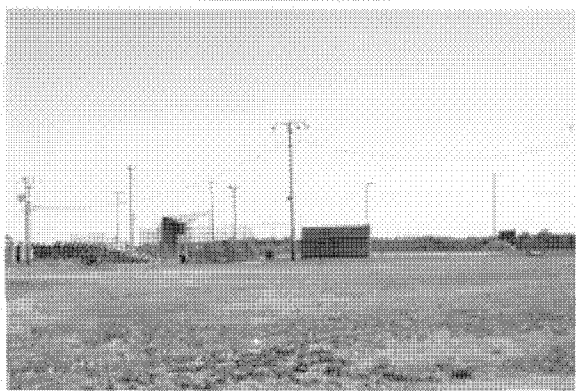
Resource No. 22178, Real Property No. 11
Security Police Identification Control



Resource No. 22179, Real Property No. (none)
B-52 Static Display



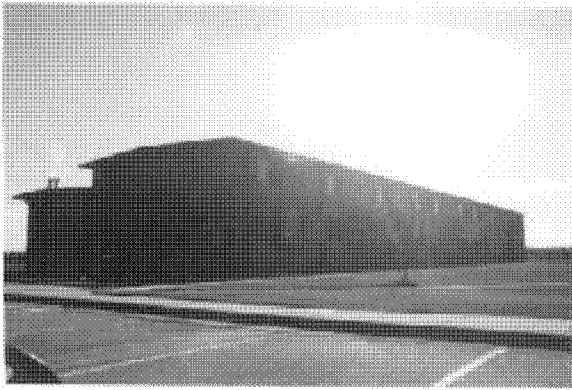
Resource No. 22180, Real Property No. 94
Temporary Lodging Facility



Resource No. 22181, Real Property No. 72
Athletic Field - Softball



Resource No. 22182, Real Property No. 67
Visiting Officers' Quarters



Resource No. 22183, Real Property No. 68
Visiting Officers' Quarters



Resource No. 22184, Real Property No. 77
NCO Professional Education Center



Resource No. 22185, Real Property No. 76
Library Recreation



Resource No. 22186, Real Property 75
Visiting Airmens' Quarters



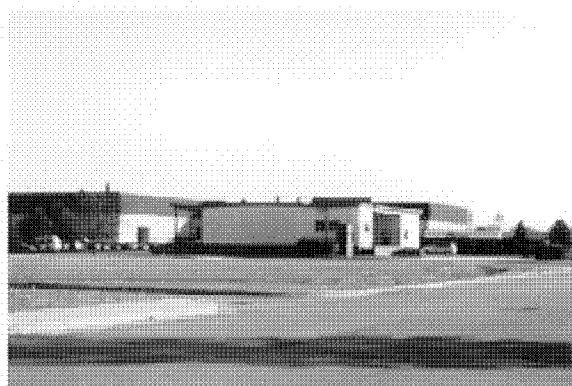
Resource No. 22187, Real Property No. 475
Monuments/Memorial



Resource No. 22188, Real Property No. 291
Commissary Store



Resource No. 22189, Real Property No. 290
Exchange Sales Store



Resource No. 22190, Real Property No. 271
Medical/Dental Education and Training

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT LANGLEY AFB

Resource Number: 22001

Property Description: Crew Readiness
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 9/1/92
Base Map Building Number: 1362

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Fighter Alert Facility

Statement of Significance: The building was designed and used as a fighter alert facility which housed both aircraft and crews. The building symbolizes the U.S. fear of Soviet air attack and the need to defend the U.S. through rapid interception.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	3
Total Score for Priority Matrix:	21
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	NRHP eligible now.

Importance: Exceptional
Eligibility Eligible

Height: 40
Square Footage: 30085
Original Planned Duration: Permanent
Existing Use: Satellite basing
Other Use/Dates: Fighter Alert
Comments on Use:
Primary Building Materials: Steel Frame
Character Defining Features: Aircraft bays, crew accommodations

Resource Number: 22114

Property Description: ACC Headquarters, formerly TAC Headquarters.
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 9/1/92
Base Map Building Number: 693

Operational Support & Installations: Base and Command Centers
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Major Command Headquarters

Statement of Significance: The ACC (formerly TAC) headquarters was instrumental in the day to day operation of this major Cold War Command.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	22
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	No
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Already determined eligible for pre-Cold War associations and is included in a proposed National Register district.

Importance: Exceptional
Eligibility Listed

Height: 30
Square Footage: 52953
Original Planned Duration: Permanent
Existing Use: ACC Headquarters
Other Use/Dates: TAC Headquarters
Comments on Use:
Primary Building Materials: Brick
Character Defining Features: Administrative Offices, Headquarters Sign
Year of Document:

Resource Number: 22191

Property Description: Architectural drawings and historical maps
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 9/1/92
Base Map Building Number: inside 621

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Documentary Collection

Statement of Significance: Illustrates the development of the base, and contains drawings of historical structures on the base.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	3
Total Score for Priority Matrix:	18
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	Inventory and copy; copies to base and originals to a permanent curatorial facility.

Record/Document Category: Drawing Files
Year of Document: various
Period of Association: All four phases
Comments on Condition: handled a lot; benign neglect

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Langley AFB, and to provide research materials for this study:

Ms. Suzanne Allan
Base Community Planner/Cultural Resources Manager
1 CES/CECP
209 Thornell Avenue
Langley AFB, Virginia 23665-2291
(804) 764-2696

MSgt Beggs
Wing Historian
1st FW History Office
159 Sweeney Boulevard, Suite 200
Langley AFB, Virginia 23665-2291
(804) 764-2713

Dr. Paul McAllister
Historian
HQ ACC History Office
162 Dodd Blvd., Suite 132
Langley AFB, Virginia 23665-1994
(804) 764-3186

Dr. Paul Green
Cultural Resource Manager
HQ ACC\CEVA
129 Andrews Street, Suite 102
Langley AFB, Virginia 23665-2769
(804) 764-3056

Mr. Jeff Woodcock
Virginia Air and Space Museum
(804) 727-0900, ext. 719

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Langley AFB history and Cold War context.

Dr. Paul McAllister, Historian, HQ ACC History Office, November 2 - 9, 1994

Dr. Paul Green, Cultural Resource Manager, HQ ACC\CEVA, November 2 - 9, 1994

Mr. Jeff Woodcock, Virginia Air and Space Museum, November 4, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-15: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT LITTLE ROCK AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
John A. Evaskovich
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

June 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. conducted a cultural resource inventory at Little Rock Air Force Base, Arkansas, between November 14 and 17, 1994 to identify extant Cold War resources important to the base, its history, and Cold War mission as part of the ongoing Department of Defense Legacy Program. Environmental scientists James A. Lowe and John A. Evaskovich comprised the field team and were welcomed to the base by Robert Seay, Chief, Environmental Flight, from the Environmental Office. Mr. Seay arranged for an escort to accompany the field team on an orientation tour of the base.

A variety of repositories were inventoried on base: the Wing History Office, Public Affairs Office, Civil Engineering Office and Drafting Department, Real Estate Office, and Environmental Office. Informal interviews were conducted with personnel long affiliated with the base to better understand the relationship of specific base properties to the Cold War era. A photographic reconnaissance of the base was conducted to document Cold War properties as well as representative architecture on the base.

Four resources were selected for documentation and evaluation due to their importance within the base Cold War context. The Bomber Alert Facility represents the United States Air Force alert posture and deterrence capabilities indicative of the Cold War era. Recommendations include further documentation, National Register of Historic Places eligibility, and stewardship. The Base Newspaper Collection, Documentary Collection, and Office Files illustrate the development of the base during the Cold War, describe historical base events, and provide information on specific base properties. Recommendations include further documentation, stewardship, and conservation for the two collections, and stewardship for the Office Files.

LIST OF ACRONYMS

ABS	- Air Base Squadron
ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AD	- Air Division
AFB	- Air Force Base
AG	- Airlift Group
AGE	- Air Ground Equipment
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
ANG	- Air National Guard
AREFG	- Air Refueling Group
AREFS	- Air Refueling Squadron
AS	- Airlift Squadron
AW	- Airlift Wing
BMW	- Bombardment Wing
CCTW	- Combat Crew Training Wing
DoD	- Department of Defense
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center
SAC	- Strategic Air Command
SAD	- Strategic Air Division
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SMS	- Strategic Missile Squadron
SMW	- Strategic Missile Wing
SRW	- Strategic Reconnaissance Wing
START	- Strategic Arms Reduction Talks

LIST OF ACRONYMS (Continued)

TAC - Tactical Air Command
TAW - Tactical Airlift Wing
TRG - Tactical Reconnaissance Group
USAF - United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapon systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	5
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	18
4.0 METHODOLOGY	24
4.1 INVENTORY	24
4.2 EVALUATION OF IMPORTANT RESOURCES	25
4.2.1 Documentation	25
4.2.2 Evaluation of Importance	25
4.2.2.1 Cold War Context	25
4.2.2.2 NRHP Criteria	26
4.2.2.3 Exceptional Importance	27
4.2.3 Evaluation of Integrity	27
4.2.4 Priority Matrix	28
4.2.5 Resource Organization	29
4.3 BASE SPECIFIC METHODS	29
5.0 RECONNAISSANCE INVENTORY RESULTS	31
6.0 EVALUATION RESULTS	32
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	32
6.1.1 Documentation	32
6.1.1.1 Base Newspaper Collection	32
6.1.1.2 Documentary Collection	34
6.1.1.3 Office Files	35
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	35

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1 Alert Facilities	35
6.2.1.1 Bomber Alert Facility	35
6.3 MATERIEL DEVELOPMENT FACILITIES	36
6.4 TRAINING FACILITIES	36
6.5 INTELLIGENCE FACILITIES	37
7.0 UNDOCUMENTED RESOURCES	38
8.0 FUTURE THREATS TO RESOURCES	40
9.0 PRELIMINARY RECOMMENDATIONS	41
9.1 NRHP ELIGIBILITY	41
9.1.1 Evaluation and Determination of NRHP Eligibility.....	41
9.1.2 Implications of NRHP Eligibility	43
9.2 EVALUATED RESOURCE RECOMMENDATIONS.....	44
9.2.1 Base Newspaper Collection	46
9.2.2 Documentary Collection	46
9.2.3 Office Files	47
9.2.4 Bomber Alert Facility.....	47
10.0 REFERENCES CITED	48
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Little Rock Air Force Base	6
Figure 2.2 Little Rock Air Force Base Layout	7
Figure 2.3 Standard Strategic Air Command Base Layout	9
Figure 2.4 Little Rock Air Force Base Land Use Diagram	11
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	12
Figure 3.1 Little Rock Air Force Base, 1950-1960	19
Figure 3.2 Little Rock Air Force Base, 1960-1970	20
Figure 3.3 Little Rock Air Force Base, 1970-1990	22
Figure 3.4 Little Rock Air Force Base, 1990-present	23

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	33
Table 6.2 Evaluated Resource Prioritization by Priority Rank	33
Table 9.1 Recommendations for Evaluated Resources	45

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

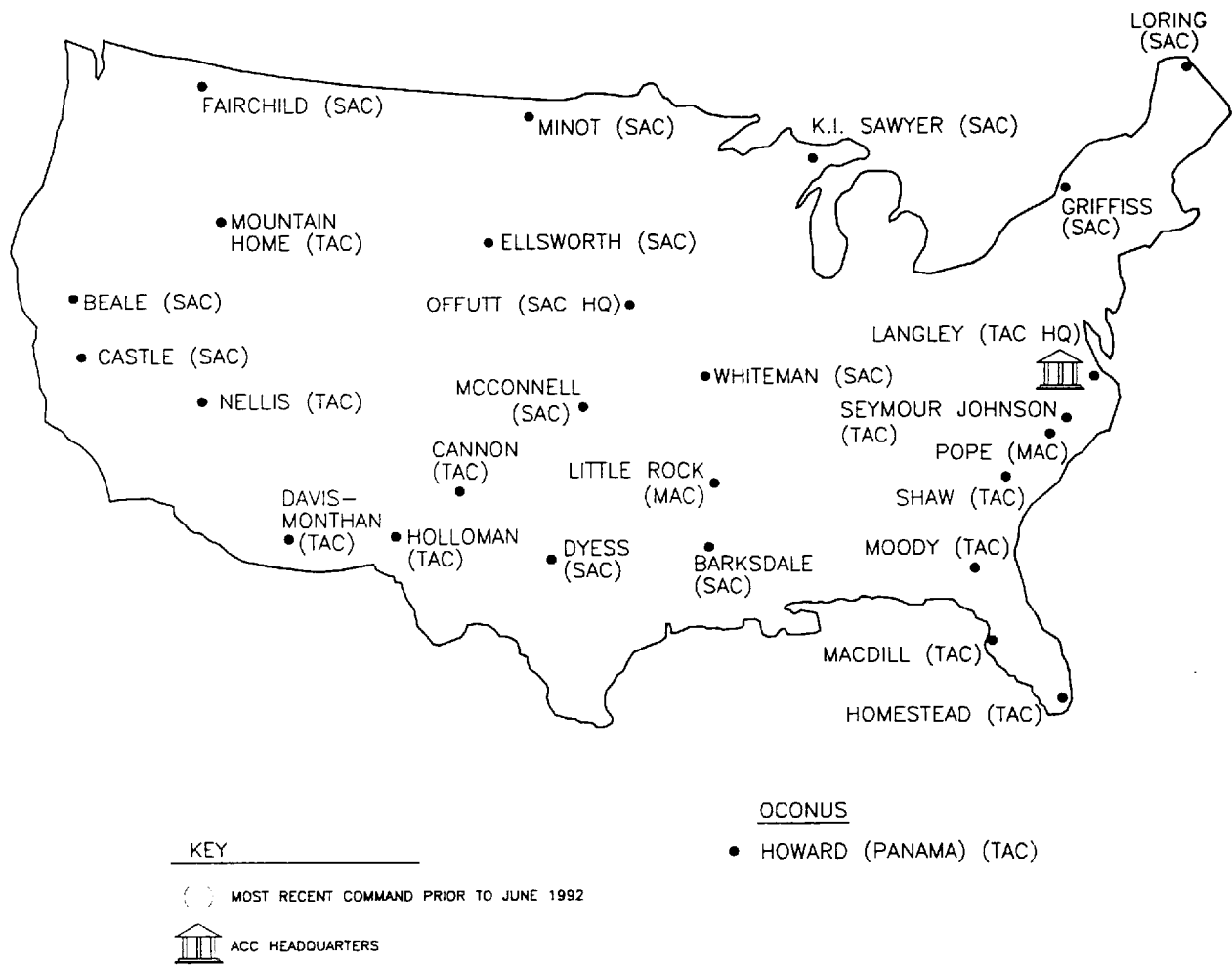
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\LIT_ROCK\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to the Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Little Rock Air Force Base (AFB). Little Rock AFB, a former Military Airlift Command (MAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The 314th Airlift Wing (AW) is the host unit at Little Rock AFB, and its assigned aircraft is the C-130 *Hercules*. Headquarters Eighth Air Force at Barksdale AFB, Louisiana, directs the operations of the 314th AW. The wing has two primary missions: "providing airlift support for United States and allied forces anywhere in the world anytime, and operating the only Department of Defense (DoD) C-130 formal training school" (Public Affairs Office 1994a:1; 1994b:15). As the host unit of Little Rock AFB, the 314th AW supports the logistics mission of the Air Force by engaging in joint operations and training. Emergency response to national and international regions stricken by natural disasters and civil disorders is another responsibility of the wing (Perdue 1994:1-2; Public Affairs Office 1994b:15).

Several units within the wing play key roles in accomplishing the wing's overall mission. The 62nd Airlift Squadron (AS) has the dual mission of training U.S. and allied aircrews and instructors in the operational use of the C-130 aircraft and participating in operational airlifts. The 53rd AS provides initial training qualification, requalification, and upgrading of formal training in the C-130 and also supports airlift missions when directed. The 50th AS and 61st AS are responsible for the delivery and resupply of DoD and allied combat troops in forward battle areas by utilizing airland, airdrop, and extraction techniques. The 189th Airlift Group (AG) of the Arkansas Air National Guard (ANG) is also assigned to Little Rock AFB and provides additional crew training (Perdue 1994:1-2; Public Affairs Office 1994c:2).

The Combat Aerial Delivery School is located at Little Rock AFB. The most recent addition to base activities, its mission is to provide "aircrews with a 'Ph.D.' in C-130 tactical employment; expand and enhance theater combat delivery methods and expertise; conduct tactics development and testing; and [conduct] C-130 operational tests and evaluations" (Public Affairs Office 1994b:15).

2.2 GEOGRAPHIC DESCRIPTION

Little Rock AFB is located near the center of Arkansas in Pulaski County, immediately northwest of the city of Jacksonville and approximately 15 mi (24 km) northeast of the state capitol at Little Rock (Figure 2.1). The base consists of approximately 6,100 acres (2,468 ha) of land, with the elevation averaging 300 ft (91 m) above mean sea level. The base is situated along the junction of the Ouachita Mountains and the Mississippi Alluvial Plain. The Arkansas River is 15 mi (24 km) to the southwest, and the Mississippi River is approximately 65 mi (104 km) to the east. The topography in this region is characterized by northeast-southwest trending parallel ridges and valleys. The region is characterized by a humid, subtropical climate similar to much of the southeastern United States (Environmental Office n.d.:2; Fenneman 1938:632,663; Mueller 1989:323; Perdue 1994:1-3).

2.3 CURRENT BASE LAYOUT

Little Rock AFB was initially designed and built to be an operational Strategic Air Command (SAC) medium bomber base for B-47 *Stratojet* and B-58 *Hustler* bombers. It became a Tactical Air Command (TAC) base years later in 1970, and then a MAC base in 1974. Its primary mission since 1970 has been to airlift troops and cargo utilizing the C-130 aircraft.

The main runway, taxiways, and parking apron at Little Rock AFB (Figure 2.2) are oriented east-northeast to west-southwest, with a "christmas tree" alert apron located south and adjacent to the eastern end of the runway. All buildings, facilities, and structures at Little Rock AFB are located south of the main runway, and most are located in the western half of the base. The development extends west along the southern edge of the base and fills the southwest corner. The eastern half of the base is used for facilities such as the sewage treatment plant, jet engine test stands, and the weapons storage area. There are large areas of open space around these facilities.

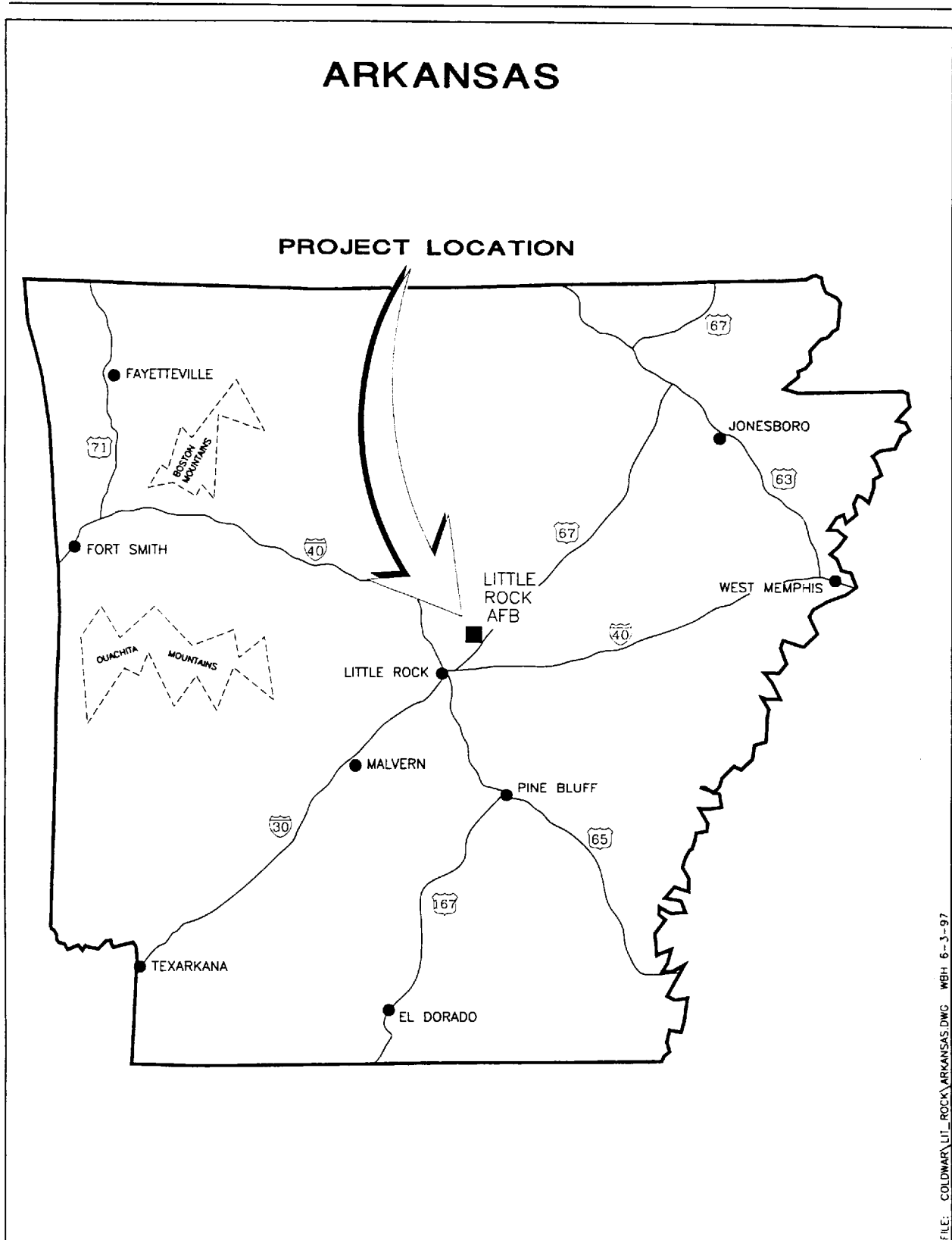
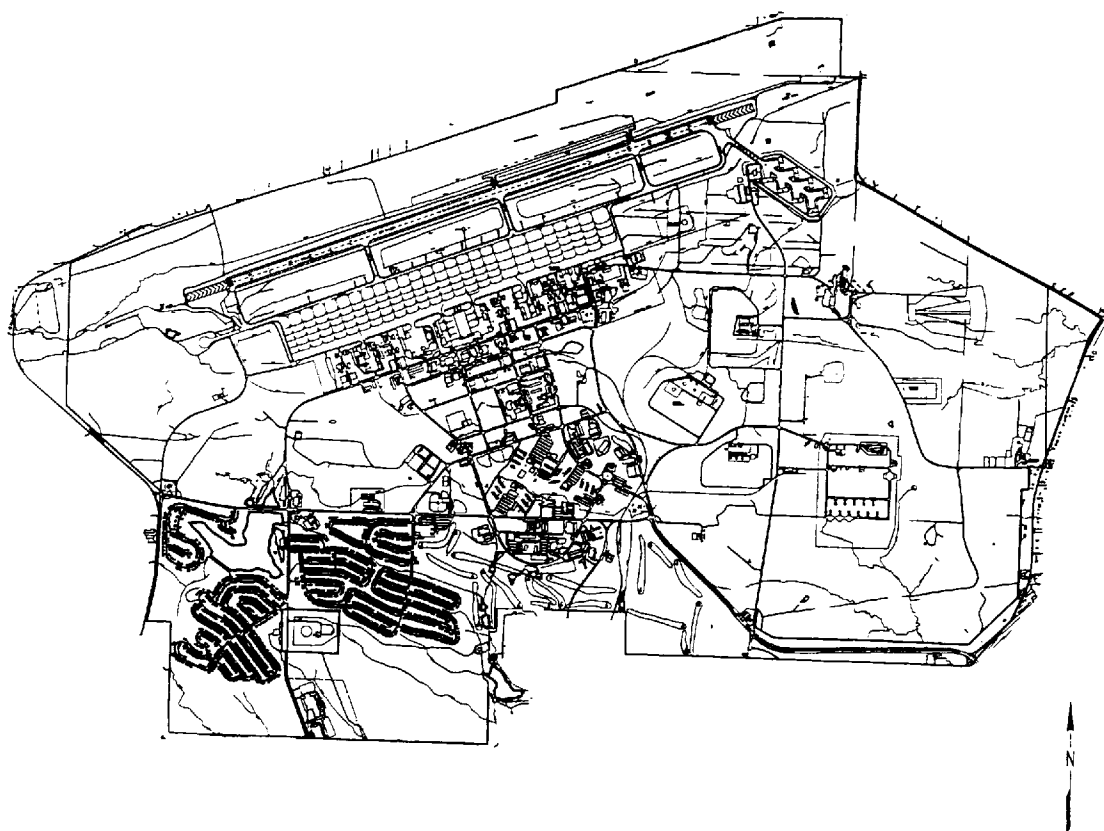


Figure 2.1 Location of Little Rock Air Force Base.



FILE: COLDWAR\11. ROCK\1. LAYOUT.DWG

Figure 2.2 Little Rock Air Force Base Layout.

Because of the base's initial construction as a SAC base, it resembles the standard SAC base layout (Figure 2.3). Like the standard, Little Rock AFB's development is primarily on one side of the runway and towards one end of it. Although the standard has the sewage treatment plant and the jet engine test stands on the opposite side of the runway, and Little Rock AFB has these facilities on the same side of the runway as the main base development, they both achieve the apparent goal of having these facilities away from the main base.

Differences include Little Rock AFB's placement of the bomber alert facility at the non-developed end of the runway, whereas the standard places it at the developed end. Also, Little Rock AFB's weapons storage area is located away from the bomber alert facility, whereas the standard places it nearby.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facility - provides for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

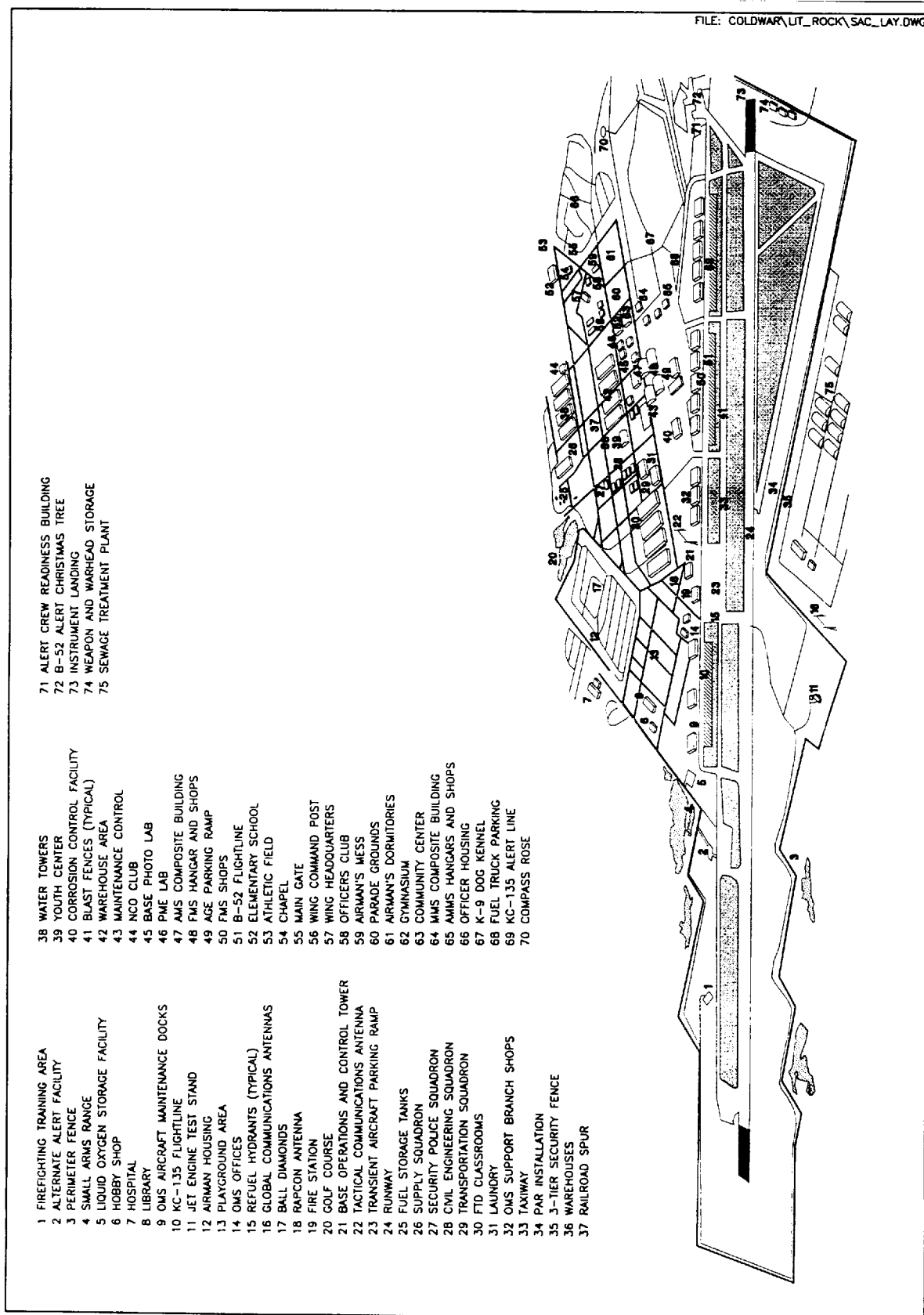


Figure 2.3 Standard Strategic Air Command Base Layout.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

The pattern of land use at Little Rock AFB (Figure 2.4) only roughly resembles that of a standard SAC base land use diagram (Figure 2.5). At Little Rock AFB, the mission facilities are along the runway, including the bomber alert facility. Farthest from the flight line are family housing, industrial, and recreation areas. In between is a mix of community, base support, unaccompanied housing, and recreation areas. This general land use pattern is similar to that shown in the standard diagram.

However, there are also differences between Little Rock AFB and the standard diagram. At Little Rock AFB, headquarters facilities, including the command post, are located within the mission area along the flight line, whereas the standard diagram places them within the community area in the middle of the main base development, away from the flight line. Other differences from the standard land use diagram include Little Rock AFB's multiple and dispersed industrial areas, a weapon and warhead storage area located away from the flight line, and the large amount of open space between the mission area and the rest of the base developments.

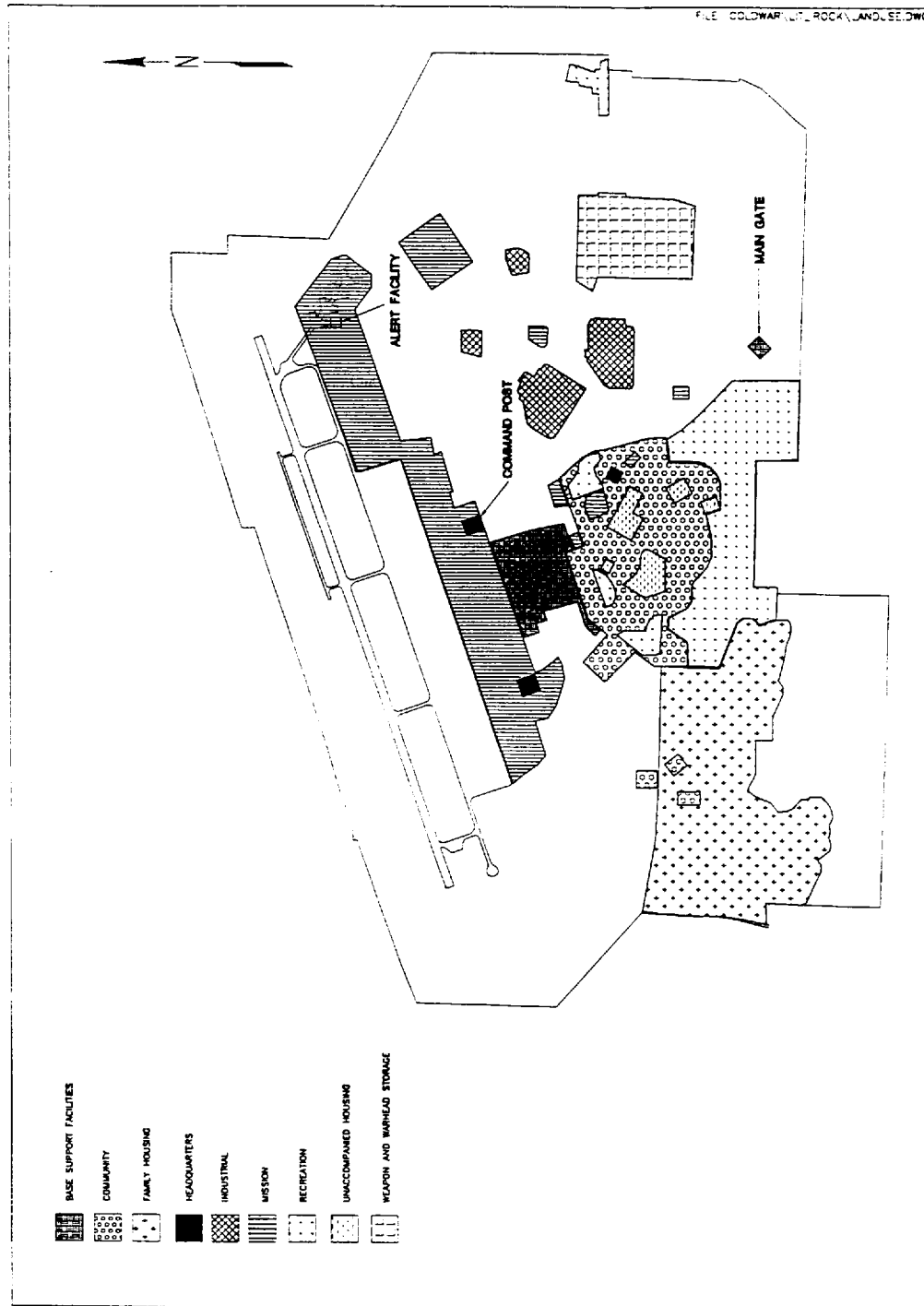


Figure 2.4 Little Rock Air Force Base Land Use Diagram.

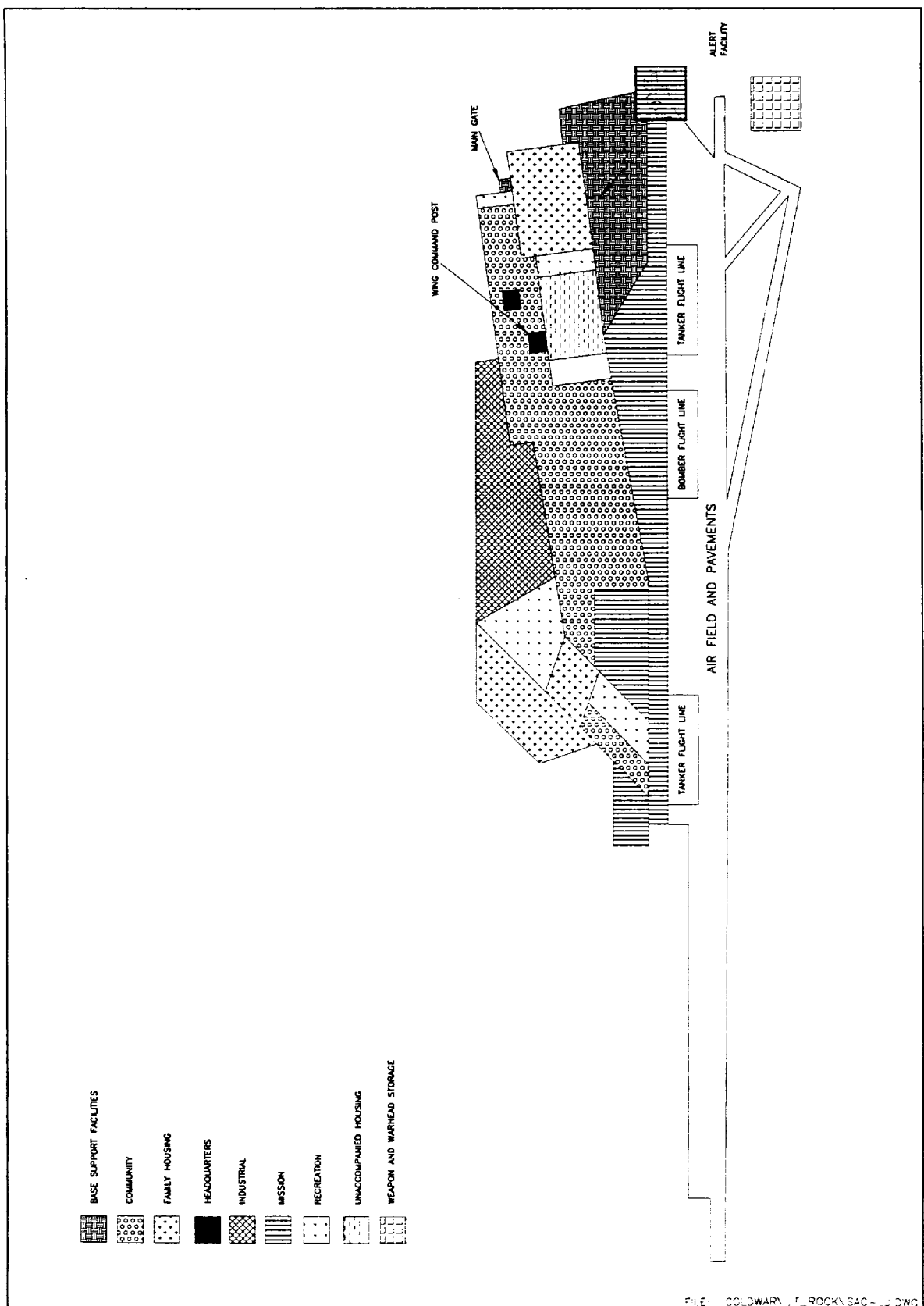


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

The site of Little Rock AFB was owned previously by the U.S. military during World War II for the Arkansas Ordnance Plant, a government facility built in 1942 on 9,000 acres of land in the vicinity of Jacksonville, Arkansas. The plant manufactured fuses, detonators, percussion caps, and bomb components, which were then shipped to other installations for load and assembly operations. The plant closed in 1945 following the end of World War II, and the Jacksonville area suffered from the economic impact. The War Assets Administration promoted the relocation of non-military industries to the site by offering the vacant buildings at low cost to those interested companies. Several companies operated out of the old plant buildings between 1947 and 1952 (Public Affairs Office 1980:4; Santeford et al. 1986:23-24).

During this period, SAC continued to expand its operations following the Soviet development of a nuclear device in 1949 and the outbreak of the Korean conflict in 1950 (Lewis et al. 1995). In 1951, the Arkansas Congressional Delegation made public their interest in establishing an air force base in central Arkansas. The State government had "recapture" rights on the land formerly occupied by the old ordnance plant, and repurchasing clauses had been included in the deeds to purchasers after the war. The citizens of Jacksonville organized a fund drive to raise the money to purchase the land from the various landowners so the property could be donated to the Air Force. Recalcitrant landowners unwilling to sell had their land condemned by court action to facilitate the process (Public Affairs Office 1980:4-6, 8-10; Santeford et al. 1986:23-24).

The DoD asked Congress in May 1952 to authorize the funds necessary to construct Little Rock AFB. In June, the House Armed Services Committee approved the bill, and, in December 1952, the Air Force gave its final approval for the Jacksonville site. Initial construction and grading began in November 1953, and, by May 1954, deeds were secured for the first 325 of a total of 6,359 acres for the base (Mueller 1989:323; Public Affairs Office 1980:7,10-12; Santeford et al. 1986:25).

The base was designed as a model SAC installation with facilities to accommodate two medium bombardment wings. The 4225th Air Base Squadron (ABS) was activated at the base on February 1, 1955; SAC assumed control the same day, and the base was officially named Little Rock AFB. Assigned to the Second Air Force, the 4225th ABS laid the ground work for the formation of the 825th Air Division, which replaced the squadron and took over host responsibilities at the base upon completion of construction. The base was officially activated by SAC orders on August 1, 1955. The primary mission of the 825th Air Division was to "monitor and coordinate the manning, training, equipping and operational readiness of assigned units for the primary purpose of conducting strategic air warfare on a global scale" (Wing History Office 1955a:1). The 70th Strategic Reconnaissance Wing (SRW), with its 70th Air Refueling Squadron (AREFS), the 384th Bombardment Wing (BMW), and the 825th Combat Support Group were assigned to Little Rock AFB in September 1955 (DoD 1973:1; Mueller 1989:323-324; Owen 1984:5; Public Affairs Office 1980:14,20).

The concern of SAC for increased Soviet military strength and the potential for a surprise attack fostered the SAC alert program in 1957. SAC's goal was to place one third of its aircraft on continuous ground alert to act as a deterrent to a potential Soviet nuclear attack (Lewis et al. 1995; SAC 1988:1). Little Rock AFB played an integral role in testing this alert concept. SAC conducted three successive operational tests during late 1956 through late 1957 to prove the feasibility of such a concept: Operation Try Out, Operation Watch Tower, and Operation Fresh Approach. Between April and November 1957, Little Rock AFB participated in Operation Try Out under the direction of the 825th Air Division. The 70th SRW, 384th BMW, 70th AREFS, and the 825th Combat Support Group successfully completed the training that validated the feasibility of the alert program. The overall mission of the 70th SRW changed in 1961 from reconnaissance to bombardment, and the wing converted from the RB-47 to the B-47 aircraft and was redesignated a BMW (Public Affairs Office 1980:29; 1994b:14; SAC 1988:1; 1991:1-2). In 1962, the 70th BMW was deactivated, and its assets and the 70th AREFS were absorbed by the 384th BMW.

Research and development in missile technology continued during the early 1960s following United States Air Force (USAF) approval to develop the second generation Titan II intercontinental ballistic missile (ICBM) (Lewis et al. 1995). The Air Force decided in June 1960 that Little Rock AFB would become one of the support bases for the new missile; and in April 1962, the 308th Strategic Missile Wing (SMW) was activated as the largest unit on base. The wing consisted of the 373rd Strategic Missile Squadron (SMS) and the 308th Missile Maintenance Squadron. The mission of the 308th SMW was

to develop and maintain the required state of readiness for Titan II [ICBMs] to conduct strategic warfare according to the Emergency War Order as directed by Headquarters Eighth Air Force in accordance with policies of the Strategic Air Command and Higher Headquarters . . . [and] . . . to maintain operational capability to carry out the mission of nuclear deterrence. (Owen 1984:8-9).

The base augmented its nuclear deterrent capabilities on January 1, 1964, when the Titan II ICBM became operational at 18 sites surrounding Little Rock AFB (Mueller 1989:325; Public Affairs Office 1980:28-29,39-42; 1994b:14; Wing History Office 1960:1; n.d.:43-44,47). In August 1965, an accident occurred at Missile Site 4 near Searcy, Arkansas, that killed 53 civilian workers engaged in site modifications. A memorial has since been erected in their memory just outside the southeastern perimeter of the base (Public Affairs Office 1980:42; Wing History Office n.d.:48).

The Cuban Missile Crisis manifested itself in the fall of 1962. It was a military response by the United States to the construction of missile sites in Cuba by the Soviet Union (Lewis et al. 1995). This occurred before the Titan II mission at Little Rock AFB became operational. However, Little Rock AFB did contribute to SAC's efforts during the crisis. On October 22, the wing command post received the order to disperse the 384th BMW's B-47 aircraft. Eleven B-47s were deployed to three municipal airports, while the remaining B-47s at Little Rock AFB stayed on increased alert status. The dispersed B-47s returned to Little Rock AFB on November 25, and the wing alert status was decreased the same day. The wing also supported Operation Common Cause during the crisis; it provided aerial refueling support for the reconnaissance aircraft

conducting aerial surveillance over Cuba (Public Affairs Office 1980:29-30; Wing History Office 1962:1,4).

Arkansas ANG units moved permanently to Little Rock AFB in September 1962. Upon arrival, the 189th Tactical Reconnaissance Group (TRG) was formed to assist the Air Force in its aerial surveillance activities. Units from the 189th TRG were activated for 11 months of duty when the intelligence ship *Pueblo* was seized by North Korea in 1968.

Coinciding with the 1964 activation of the Titan II was the phase-out of the B-47 and the inactivation of the 384th BMW at Little Rock AFB. The B-58, a medium size bomber, and the KC-135 *Stratotanker* replaced the aging B-47s and KC-97 tankers. The 43rd BMW replaced the 384th in September 1964 and assumed command of the 70th AREFS. The B-58 remained at Little Rock AFB until January 1970 when it was sent to the Aircraft Storage Center at Davis-Monthan AFB in Arizona. At the same time, the 43rd BMW and the 825th, now the 825th Strategic Air Division (SAD), and the 825th Combat Support Group were deactivated, and the 70th AREFS was transferred (Mueller 1989:324-325; Owen 1984:5-6; Public Affairs Office 1980:30-31; 1994b:14).

The Air Force officially transferred jurisdiction of Little Rock AFB from SAC to TAC on April 1, 1970. The 4442nd Combat Crew Training Wing (CCTW) was transferred to Little Rock AFB to provide training for pilots and flight engineers in the C-130. The 64th Tactical Airlift Wing (TAW), designated as the new host unit in March 1970, was also assigned to the base and utilized the C-130 aircraft. Its mission "was to provide air transportation for airborne forces by airdrop, airland, and aerial extraction" (Public Affairs Office 1994b:14). This brief designation lasted until May 1971 when the 64th TAW was deactivated, and the 314th TAW was activated as the host unit at Little Rock AFB. The 314th TAW acquired the assets and missions of the 64th TAW and the 4442nd CCTW. Upon activation at Little Rock AFB, the mission of the 314th TAW was "to provide command and staff supervision of tactical airlift squadrons and assigned support units engaged in providing tactical airlift support for airborne forces and other personnel, equipment

supplies and aeromedical evacuation of patients within the theater of operations." In short, the mission was to "Organize, equip and train assigned units to conduct tactical airlift operations on a global basis...[and]...provide pathfinder capability for other tactical airlift units...." (DoD 1973:13; Doty 1971:7-8).

The 834th Air Division (AD) was activated at Little Rock AFB in 1972 and assigned to Twelfth Air Force until it was transferred in December 1974 (Mueller 1989:325; Owen 1984:6; Public Affairs Office 1980:47-48; 1994b:14). MAC became the host organization at Little Rock AFB in December 1974, and the 314th TAW and other airlift units at Little Rock AFB were transferred from TAC to MAC. The 314th TAW was reassigned from the 834th AD to 22nd Air Force. The following year, four C-130 aircraft from the 314th TAW supported a U.S. Marine landing to rescue crew members from the captured ship S.S. *Mayaguez* (Public Affairs Office 1980:52).

In 1975, the 189th TRG received eight KC-135 tankers, enabling the ANG unit to refuel its own planes. In 1976, the 189th TRG became the 189th Air Refueling Group (AREFG) under SAC, although it was still considered an ANG unit. By 1980, the 189th AREFG had been integrated into the SAC tanker force. The 189th AREFG was redesignated the 189th AG ANG in October 1986 and continues in that capacity today utilizing the C-130 (Public Affairs Office 1980:35-37; 1994b:24).

Little Rock AFB maintained its dual mission as an airlift center and missile control center until August 1985. At that time, the Titan II missile sites maintained by the 308th SMW as part of the nuclear defense triad were inactivated and all launch facilities were destroyed. The 308th SMW was also deactivated. Throughout the remaining years of the Cold War, the 314th TAW continued its mission of maintaining global airlift responsibilities to combat areas, responding to national and international emergencies with humanitarian aid, and training of aircrews from both the United States and allied countries (Danner 1989:1; Public Affairs Office 1994b:14).

In 1991, the 314th TAW was redesignated the 314th AW. In June 1992, the 314th AW and Little Rock AFB were aligned under the newly formed Air Mobility Command, the successor to MAC. Then in October 1993, the wing and base were once again re-aligned, this time to ACC.

3.2 BASE DEVELOPMENT

Virtually the entire base was constructed during the decade of the 1950s, with the exception of periodic renovations and some new facilities in the 1970s and 1980s. Construction and grading commenced in 1953-1954, and the majority of base facilities were completed between 1955-1958.

Old weapon storage bunkers and facilities from the ordnance plant were extant when construction of the base began in 1953. Some of the currently remaining structures are located west of the weapon storage area (Figure 3.1). Construction of the runway, taxiways, parking apron, and 90 buildings was underway by June 1955 (Public Affairs Office 1980:15-19; Wing History Office 1955b; 1956; 1957). These buildings include mission, industrial, base support, community, recreation, and housing facilities. Housing was a serious problem at Little Rock AFB since its initial construction, and the dormitory construction helped to alleviate the problem. However, the need for officer and enlisted family housing units to be built was still acute. The 1956 Capehart Housing Amendment to the National Housing Act of 1949 provided the necessary legislation to augment existing housing facilities at Air Force bases nationwide. The base Capehart housing project was begun in 1957, with the first housing completed for occupation in June 1959. A total of 1,535 units were planned: 613 for officers, and 922 for airmen (Public Affairs Office 1980:25,28; Wing History Office 1956:240-241,259-260; 1957:28-29).

The SAC alert program at Little Rock AFB was improved substantially with the 1960 completion of the alert facility, alert apron, and traffic check house (Figure 3.2). A fire training facility was

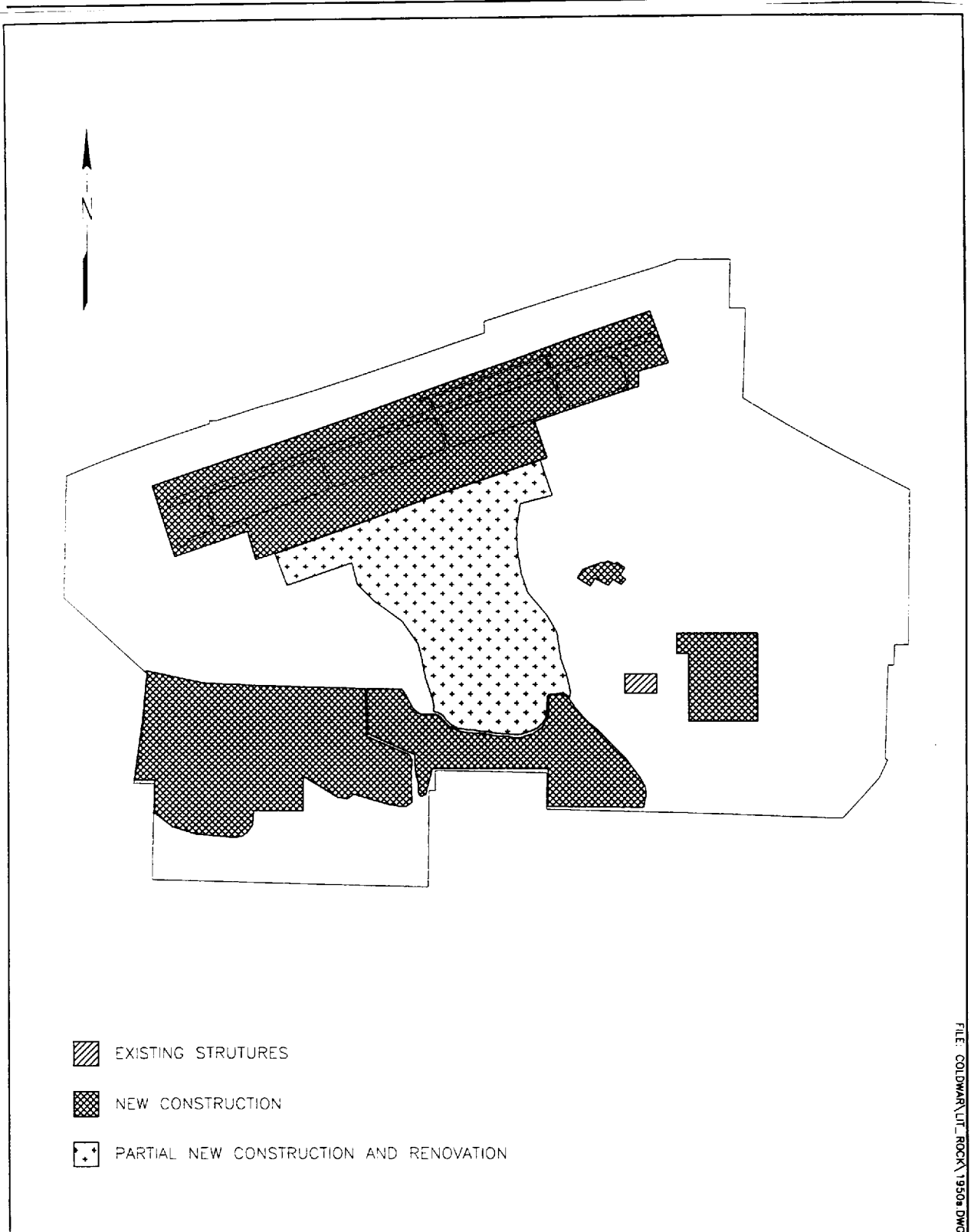


Figure 3.1 Little Rock Air Force Base, 1950-1960.

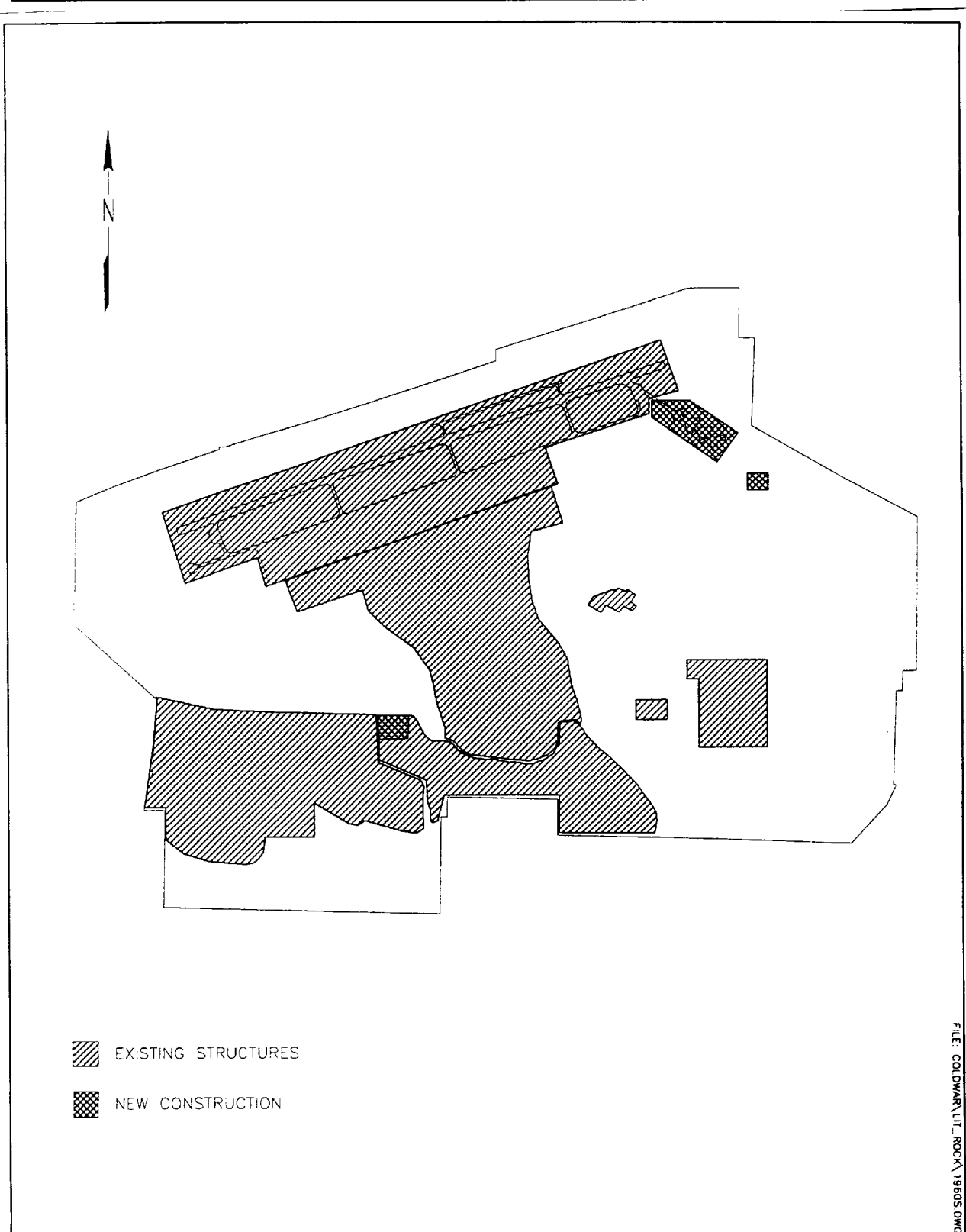


Figure 3.2 Little Rock Air Force Base, 1960-1970.

also completed in 1960. Base warehouse facilities and an additional maintenance hangar were completed between 1961 and 1963. The base bowling center was completed in 1961, the small arms range in 1962, and the base hospital in 1964.

During the 1970s, major construction projects completed in the main base area included an avionics shop, a jet engine maintenance shop, maintenance docks and general purpose aircraft shops, several housing support and storage buildings, several covered storage facilities, hazardous storage facilities, and a child care center (Figure 3.3).

In the 1980s, base construction of new facilities included a new base commissary and youth center completed in 1980, three large, covered storage facilities in 1980 and 1983, a branch exchange in 1982, a new security police canine kennel in 1983, and a series of buildings for the training and billeting of students participating in the Phoenix Ace law enforcement training program (Figure 3.3). The latter is located immediately west of the small arms range. In the mid-1980s, the flight simulator building was expanded to facilitate the C-130 training mission of the 314th AW (Figure 3.3, 3.4).

Construction continued on base following the end of the Cold War. Significant buildings completed in the 1990s include a flying training classroom and a general purpose aircraft shop built just south of the alert facility and west of the alert apron in 1990 and 1991 respectively (Figure 3.4).

In 1992, two security police operations buildings were completed at the eastern end of the mission area along the flight line, and a large maintenance hangar was completed at the western end of the flight line. In 1994, a new base personnel office was completed, and one of the old wing headquarters buildings nearby was renovated so completely that it appears to be new. The bomber alert facility is currently being renovated.

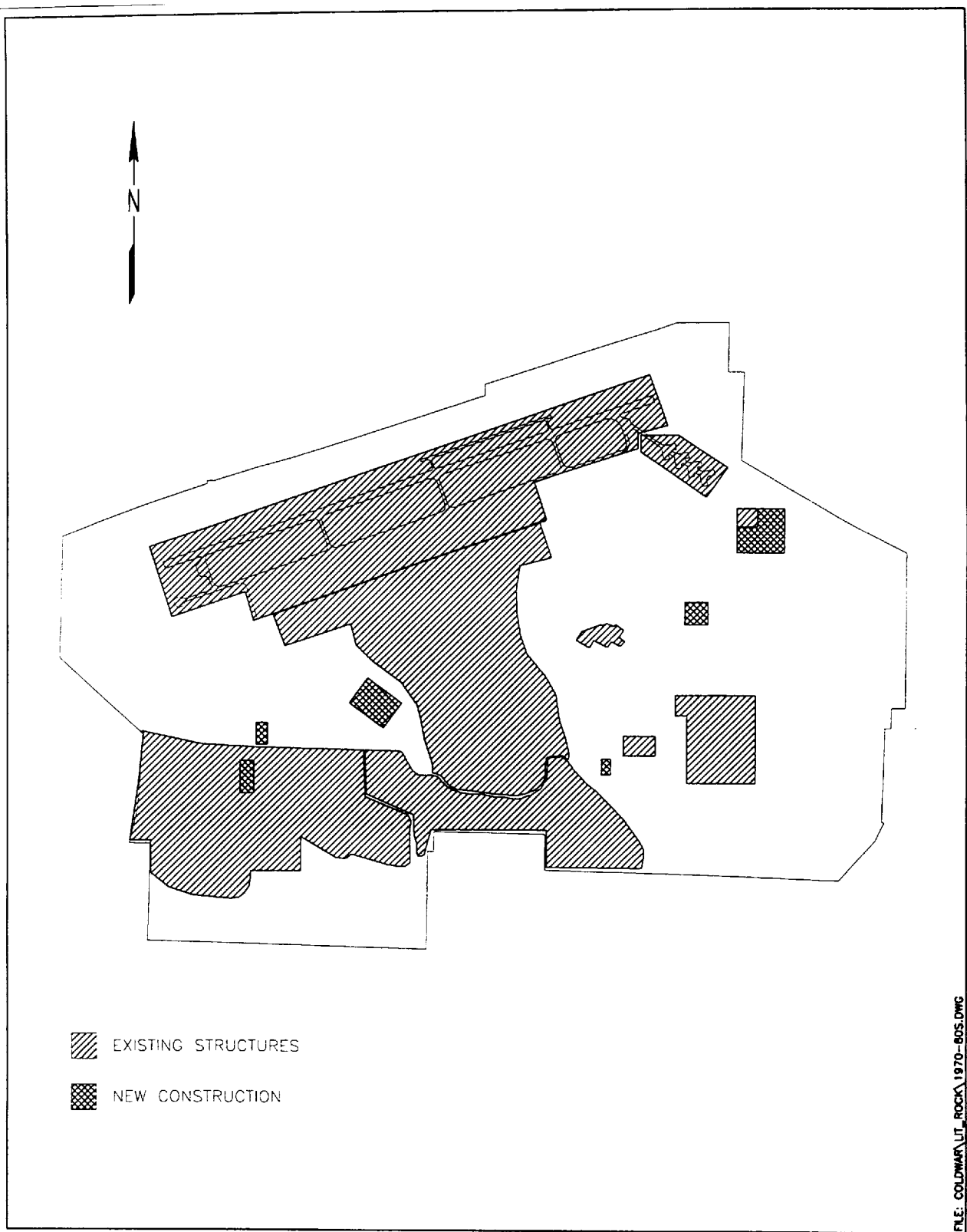


Figure 3.3 Little Rock Air Force Base, 1970-1990.

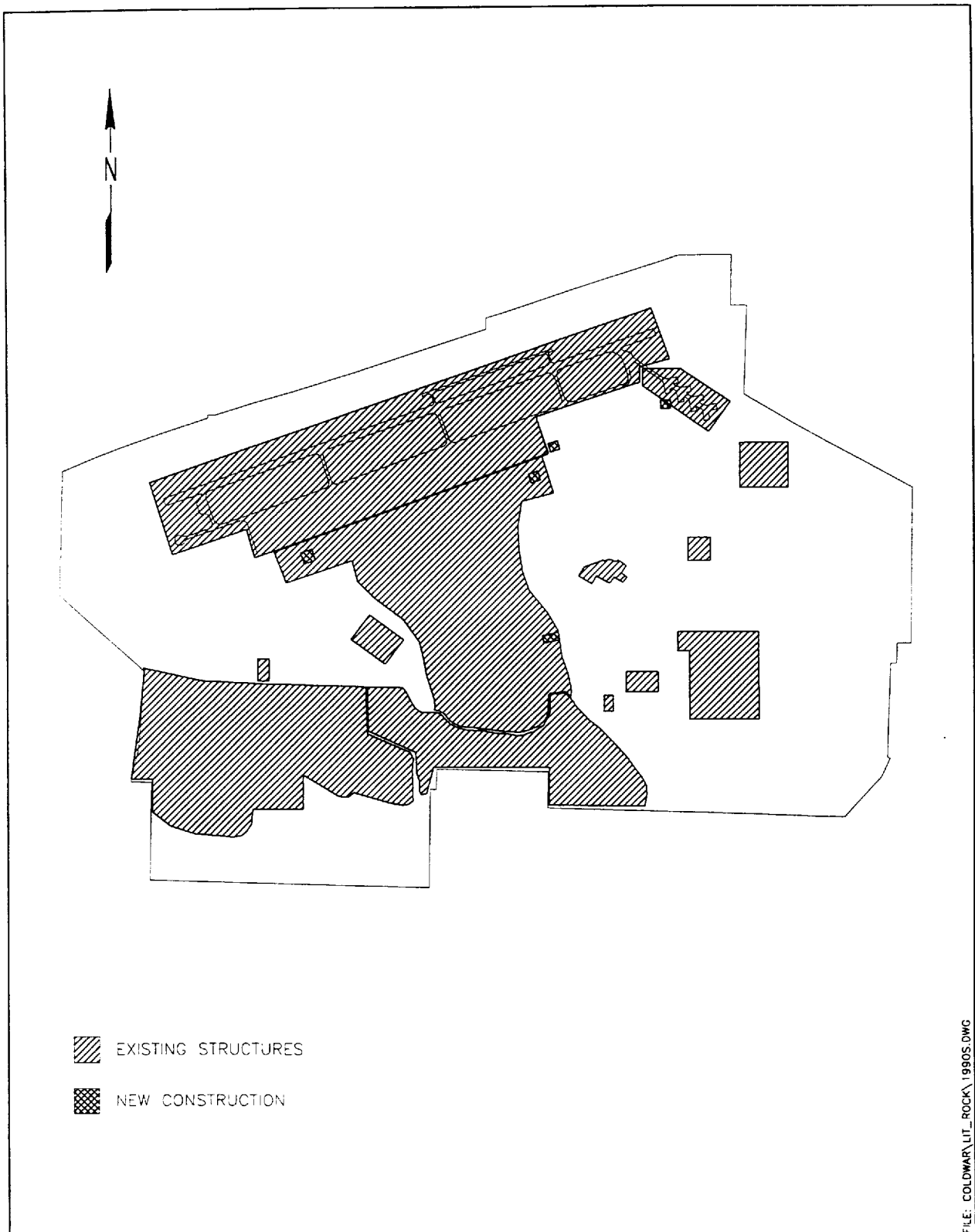


Figure 3.4 Little Rock Air Force Base, 1990-present.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Little Rock AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Little Rock AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Little Rock AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Little Rock AFB, the Mariah field team met with Robert Seay, Chief, Environmental Flight, of the Environmental Office. He arranged an orientation tour of the base for the Mariah team. During the tour, the field team became familiar with the base layout and identified certain buildings for evaluation and documentation. This objective completed, the team began the information search on base.

The Wing History Office supplied wing histories that augmented base historical information provided by the Public Affairs Office. These histories were examined to determine the various wing missions at Little Rock AFB and to link the base to significant events that occurred during the Cold War era. The Wing History Office also had in its possession a bound collection of base newspapers that is virtually complete and dates from 1958 to the present; a photograph and slide collection of various subjects that spans the decades since Little Rock AFB was built; and a three volume collection of newspaper clippings that deals with all aspects of the base.

Architectural drawing files were inventoried in the Drafting Department of the Civil Engineering Office. Drafting also provided base layout maps on computer discs, current hard copies of base layout maps, and decade maps useful for depicting base development over the Cold War years. Property Cards from the Real Estate Office established information pertinent to the resources chosen for documentation and evaluation based on their Cold War significance.

A photographic reconnaissance was conducted to document Cold War properties and representative architecture on base. Several informal interviews were conducted with personnel long affiliated with the base, especially the Real Property Officer, to better understand the relationship of specific base properties to the Cold War era. Finally, selected resources were documented and evaluated based on their Cold War importance. These resources were more fully documented using a lap-top computer database to store information about the resources.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Little Rock AFB, 110 resources were inventoried. Appendix A lists the inventoried resources, and Appendix B shows their location on the base. Photographs of the inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Four resources were evaluated at Little Rock AFB, one of them falling under the DoD category of real property and three under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to the evaluated building could not be secured. In this instance, documentation describing changes to the building was consulted to provide insight into the integrity of the building's interior.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Base Newspaper Collection (Resource No. 25109, Located in Real Property No. 370)

This resource is located in the Wing History Office at Wing Headquarters and consists of a bound collection of newspapers and three scrapbooks of newspaper clippings. The bound collection of the base newspaper, the *Air Scoop*, is virtually continuous from its inception in 1958 and spans three temporal periods of the Cold War era. The issues from 1958-1959 are incomplete, and those from 1962 are missing. Associated with this resource are three scrapbooks containing local newspaper clippings that discuss all aspects of Little Rock AFB. Dating from 1952 through the 1970s, this resource covers at least two of the temporal time periods of the Cold War era and can provide information and insight into the issues involved in locating the base in Jacksonville, Arkansas, as well as the lives of base personnel and activities that occurred on base. This

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Base Newspaper Collection	25109	None	Rec/Doc-Obj	12
Documentation	Documentary Collection	25110	None	Rec/Doc-Obj	15
Documentation	Office Files	25111	None	Rec/Doc-Obj	16
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	25002	160	Real-Bldg	21

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
21	25002	160	Bomber Alert Facility
16	25111	None	Office Files
15	25110	None	Documentary Collection
12	25109	None	Base Newspaper Collection

resource can provide information and insight into the development of the base throughout the Cold War era.

This resource is located in a secured area and is in fair condition. However, the resource is not actively curated. The newspapers show evidence of wear due to handling, and some of the scrapbook clippings are loose.

6.1.1.2 Documentary Collection (Resource No. 25110, Located in Real Property No. 528)

This documentary collection consists of architectural drawings and aerial photographs located in a secured vault/controlled access facility inside the Drafting Department within the Civil Engineering Office. No index exists for the collection, although the collection is cataloged numerically and by subject matter. The architectural drawings represent most buildings and structures extant on base, including initial construction, modification, renovation, and repair drawings. The collection also includes master plans, landscapes, runways and taxiways, topography, utilities, roads and railroads, and other associated and miscellaneous projects. These drawings are compiled on a variety of mediums (mylar, blue prints, vellum, etc.) and are a record of construction and renovations completed for all buildings on base, past and present. The collection also contains approximately 62 aerial photographs of the base dating from 1975-1982, although most of the photos are undated.

This resource can provide information concerning the history of the base for future evaluations of extant buildings and structures on base. It also illustrates the development of the base throughout the Cold War era. Although the collection is stored in a secured area, it is continuously used by base engineers, and is thus subject to wear and tear.

6.1.1.3 Office Files (Resource No. 25111, Located in Real Property No. 370)

This collection is located in the Wing History Office at Wing Headquarters and spans all four temporal periods of the Cold War era. This resource consists of a complete wing history collection of the 314th TAW assigned to Little Rock AFB from 1971 to the present. Also extant is a brief history collection of the 64th TAW which was assigned to Little Rock AFB in 1970. Historical information is also available concerning the 825th Air Division and Second Air Force; these organizations were in the SAC chain of command at Little Rock AFB from 1954-1964.

This collection provides information on base personnel and activities, the involvement of the base in major Cold War events, and the development of the various missions throughout the Cold War era. All of these histories are stored in a secured area and are in good condition. Copies of these histories are also on file at the USAF Historical Research Center at Maxwell AFB, Alabama.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 25002, Real Property No. 160)

Real Property No. 160 is a permanent, 23,190 ft² facility constructed primarily of reinforced concrete in 1960. Located at the eastern end of the flight line and immediately west of the "christmas tree" alert apron, the Bomber Alert Facility is a two story building characterized most by the rapid egress ramps found on all four sides of its exterior and a sloped earthen berm that extends up the four sides of the building and covers the first story. This facility was the original crew readiness building constructed for SAC alert bomber crews stationed at Little Rock AFB. It was designed to house aircrews standing alert duty and to facilitate rapid egress from the building to bomber aircraft parked on the adjacent alert apron during a national emergency situation or operational readiness inspection from 1960 until 1970.

Although the earthen berm has been removed temporarily to waterproof the exterior of the building, when this waterproofing is completed the berm will be replaced and the exterior integrity of the building once again will be intact. Internal modifications are currently underway with some alterations to the original interior design. This is being done to promote a better use of space to facilitate aerial delivery training programs planned for this facility in the near future. Thus interior integrity will be partially affected. The associated facilities (security tower, fence, check house, and alert apron) remain intact. Since the features that characterize the building as an alert facility remain intact, i.e. the ramps and the earthen berm, it is determined that the facility's integrity is intact.

The Bomber Alert Facility is exceptionally important to Little Rock AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). Though this facility was used for this purpose during Phases II and III, it characterizes the policy and strategy enacted during Phase II of the Cold War. This facility meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Little Rock AFB.

6.4 TRAINING FACILITIES

None were evaluated at Little Rock AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Little Rock AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Little Rock AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Little Rock AFB. These resources should be investigated further for a more comprehensive analysis of the base's Cold War context.

Little Rock AFB has an interpretive display and monument located on base behind the B-47 static display at the intersection of Arnold Drive and Vandenburg Boulevard. The display discusses the Titan II program, the 308th SMW, and missile launch sites located in the region near Little Rock AFB. This display consists of two concrete walls in front of which is a Titan II re-entry vehicle on a concrete slab emanating from the base of the walls. Interpretive plaques are mounted on the walls. A time capsule has been set into this display for future generations. This visual and written display portrays the U.S. nuclear defense program and deterrence during the latter two temporal phases of the Cold War era.

A memorial exists at Little Rock AFB just outside the base property line in the southeastern portion of the base. This memorial is a stone monument (Real Property No. 400) with an interpretive description discussing the fate of 53 civilian workers who died in a Titan II silo during a construction accident in August 1965 near Searcy, Arkansas. This memorial conveys to the public the danger and seriousness connected with the construction and maintenance of the U.S. missile program for national defense during the Cold War.

The Wing History Office has several collections in its possession which span the latter three temporal periods of the Cold War. A very large photograph, slide, and negative collection of

various subjects spans the decades since Little Rock AFB was built. A collection of approximately 100 slides relates to the 308th SMW.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Little Rock AFB revealed approximately 330 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the various base missions and acquisition of the Titan II missile system. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Little Rock AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

During the base visit, no immediate or future threats to any of the evaluated resources were identified. However, due to the use of the Base Newspaper Collection and the Documentary Collection by base personnel, attention to these resources to reduce wear is recommended.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Little Rock AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Little Rock AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Little Rock AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Little Rock AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
25002	160	Bomber Alert Facility		*	*	*		NRHP eligible now.
Record or Document - Object								
25109	None	Base Newspaper Collection		*		*	*	
25110	None	Documentary Collection		*		*	*	
25111	None	Office Files		*				

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Base Newspaper Collection (Resource No. 25109, Located in Real Property No. 370)

This collection of newspapers and newspaper clippings is in fair condition. However, it is not actively curated and is showing signs of wear. It is recommended that this collection be inventoried and copied. It is further recommended that the copies go to the base for its use, and the originals go to a permanent curatorial facility for stewardship and conservation.

9.2.2 Documentary Collection (Resource No. 25110, Located in Real Property No. 528)

This collection of architectural drawings and aerial photographs is subject to continuous use by base engineers and is showing signs of wear. It is recommended that this collection be inventoried and copied. It is further recommended that the copies go to the base for its use, with the originals going to a permanent curatorial facility for stewardship and conservation.

9.2.3 Office Files (Resource No. 25111, Located in Real Property No. 370)

This collection of histories is in good condition and is stored in a secured area. Copies of the histories are also on file at the USAF Historical Research Center at Maxwell AFB, Alabama. Therefore, stewardship of the collection at Little Rock AFB is recommended.

9.2.4 Bomber Alert Facility (Resource No. 25002, Real Property No. 160)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through III. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its defining features is intact. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Danner, D. D.

- 1989 *History of the 314th Tactical Airlift Wing (TAW), January-June 1989*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.

Department of Defense

- 1973 *Executive Order 11508 Installation Survey Report, Little Rock Air Force Base, Arkansas*. On file, Air Force Historical Research Center, Maxwell Air Force Base, Alabama.
- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Doty, R. W.

- 1971 *History of the 314th Tactical Airlift Wing, Little Rock Air Force Base, Arkansas*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.

Environmental Office

- n.d. Portion of an environmental assessment for the construction of SAB nature trail. On file, Environmental Office, Little Rock Air Force Base, Arkansas.

Fenneman, N. M.

- 1938 *Physiography of Eastern United States*. McGraw-Hill Book Company, Inc., New York and London.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.
-

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*, volume 1. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Owen, B. L.

- 1984 *Survey Report of Executive Order 12348 for Little Rock Air Force Base, Jacksonville, Arkansas*. On file, Air Force Historical Research Center, Maxwell Air Force Base, Alabama.

Perdue, B. L.

- 1994 *Water Requirements at Little Rock Air Force Base: Final Report*. On file, Planning Office, 314th Civil Engineering Squadron, Little Rock Air Force Base, Arkansas.

Public Affairs Office

- 1980 *Little Rock Air Force Base: Silver Anniversary Review, 1955-1980*. On file, Public Affairs Office, Little Rock Air Force Base, Arkansas.
- 1994a *314th Airlift Wing*. Fact Sheet (June) on file, Public Affairs Office, Little Rock Air Force Base, Arkansas.
- 1994b *Little Rock Air Force Base*. Base Guide and Telephone Directory on file, Public Affairs Office, Little Rock Air Force Base, Arkansas.
- 1994c *314th Airlift Wing*. Fact Sheet (October) on file, Public Affairs Office, Little Rock Air Force Base, Arkansas.

Santeford, L. G., J. Stewart-Abernathy, R. H. Lafferty III

- 1986 *A Background and Literature Search for Significant Historic Archaeological Sites at Little Rock Air Force Base in Pulaski County, Arkansas*. On file, Planning Office, 314th Civil Engineering Office, Little Rock Air Force Base, Arkansas.

Strategic Air Command

- 1988 *Strategic Air Command and the Alert Program: A Brief History*. Office of the Historian, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska.
-

-
- 1991 *Alert Operations and the Strategic Air Command, 1957-1991*. Office of the Historian, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska.

United States Air Force

- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

Wing History Office

- 1955a *Historical Report of the 825th Air Division, 1 September to 30 September, Little Rock Air Force Base, Jacksonville, Arkansas*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.
- 1955b *Historical Report of the 825th Air Division, 1 December-30 December 1955, Little Rock Air Force Base, Jacksonville, Arkansas*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.
- 1956 *Second Air Force Historical Data, 1 July-31 December, 1956*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.
- 1957 *825th Air Division, 1-31 August 1957*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.
- 1960 *825th Air Division, 1-30 June 1960*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.
- 1962 *384th Bombardment Wing (M), 1-30 November 1962*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.
- n.d. *308th: From the Past Into the Unknown*. On file, Wing History Office, Little Rock Air Force Base, Arkansas.
-

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	25001	1714	Surveillance Inspection Shop	1956
	25002	160	Bomber Alert Facility	1960
	25003	159	Security Guard Tower	1974
	25005	125	Aircraft General Purpose Shop	1975
	25006	120	Base Operations	1956
	25007	110	Fire Station	1955
	25008	207	Maintenance Hangar (Arkansas Air National Guard)	1963
	25009	212	Special Operations	1955
	25010	216	Petroleum Operations	1955
	25011	224 A, B	Aircraft Maintenance Organizational Shop	1956
	25012	228	Aircraft Corrosion Control	1985
	25013	222	Fuel Systems Maintenance Dock	1956
	25014	234	Flying Training Classroom	1955
	25015	1700	Security Entry Control Building	1979
	25016	1712	Support Structure (Simulated Silo)	1964
	25017	1707	Special Operations (Missile Escort Vehicle Garage)	1980
	25018	238	Aircraft Organizational Maintenance Shop	1955
	25019	246	Aircraft General Purpose Shop	1956
	25020	250	Maintenance Hangar	1955
	25021	255	Medium Aircraft Maintenance Dock	1976
	25022	256	Aircraft Support Equipment Storage Facility	1964
	25023	258	Aircraft Support Equipment Storage Facility	1975
	25024	259	Aerial Delivery Facility	1975
	25025	280	Fuel System Maintenance Dock	1988
	25026	282	Fuel System Maintenance Dock	1992
	25027	389	Jet Engine Inspection Maintenance Shop	1982
	25029	380	Wing Headquarters (Intelligence and Planning)	1956
	25030	370	Wing Headquarters	1956
	25031	368	Non-destructive Inspection Shop	1971
	25032	362	Avionics Shop	1956
	25033	356	Jet Engine Inspection Shop	1955
	25034	350	Aircraft General Purpose Shop	1956
	25035	344	Group Headquarters	1956
	25036	340	Shop Survey Equipment	1955
	25037	450	Warehouse Supply and Equipment	1955
	25038	335	Communication Transmitter	1955
	25039	325	Ground Controlled Approach - Fixed	1977
	25040	320	Wing Headquarters (308th SMW)	1955
	25041	314	Command Post	1958
	25043	310	Reconnaissance Photo Lab (Formerly Intelligence and Planning For Missiles)	1956

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	25044	430	Base Warehouse Supply (Former Titan II Delivery Vehicle Maintenance)	1962
	25045	528	Base Engineering Administration	1956
	25046	538	Base Engineering Maintenance Shop	1986
	25047	432	Wing Headquarters	1993
	25048	472	Radar Tower Building (RAPCON)	1981
	25049	480	Special Operations	1956
	25050	470	Water Pump Building	1955
	25052	670	Disaster Preparedness	1956
	25053	668	Family Support Center	1956
	25054	656/658	Autohobby Shop	1958
	25055	640	Car Wash Rack	1988
	25056	744	Airman Dormitory	1955
	25057	756	Environmental Health	1955
	25058	868	Recreation Center	1956
	25059	940	Exchange Sales Store	1975
	25060	970	Bank Branch	1959
	25061	988	Data Processing Installation	1958
	25062	980	Base Theater	1956
	25063	1075	Golf Clubhouse and Equipment Storage	1959
	25064	1080	NCO Open Mess	1956
	25066	1090	Composite Clinic	1964
	25067	Unknown	Capehart Housing (120 Minn. Cir)	1958-60
	25068	Unknown	Capehart Housing (140 Penn. Drv)	1958-60
	25069	Unknown	Capehart Housing (139 Penn. Drv)	1958-60
	25070	Unknown	Officer Capehart Housing (128 MI Drv)	1958-60
	25071	Unknown	Unknown (New Building Under Construction)	1994
	25072	1992	Youth Center	1980
	25073	Unknown	Officer's Capehart Housing (105 Alabama Drv)	1958-60
	25074	Unknown	General's Capehart Housing (106 Arizona)	1958-60
	25075	Unknown	Officer's Capehart Housing (100 Colorado)	1958-60
	25076	1996	Branch Exchange	1982
	25077	1995	Family Housing Management Office	1959
	25080	790	Commissary	1980
	25081	874	Swimmer's Bath House	1957
	25082	1036	Visiting Airman's Quarters	1955
	25083	1030	Officer's Open Mess	1955
	25084	1024	Visiting Airman's Quarters (Billeting Office)	1955
	25086	100	Base Engineering Maintenance Shop	1976
	25087	102	Reserve Forces Operational Training (Arkansas ANG)	1965
	25088	610	Small Arms Indoor Gunnery Range	1956
	25089	620	Specified Headquarters (Recruiting)	1942
	25090	1220	Gymnasium	1956
	25091	642	Wing Headquarters	1958
	25092	648	Medical Food Inspection	1960

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	25093	549	Vehicle Maintenance Shop	1956
	25094	830	Photolab	1955
	25095	1230A, B	Flight Simulator Training	1956
	25096	1240	Physical Training (Pressure Chamber)	1959
	25097	1250	Wing Headquarters (314 Support Group) (Renovated)	1956
	25099	950	Chapel Center	1956
	25102	1575	Base Warehouse and Supply and Equipment (DRMO)	1942
	25103	1368	Base Engineering Covered Storage	1940's
	25104	None	Stables	n/d
	25105	1420	Camp Troop (Phoenix Ace Dorms)	1984
	25106	1389	Troop Camp (Phoenix Ace Combat Mobility School)	1983
	25108	1502	Traffic Check House (Main Gate)	1982
Real Property - Landscape				
	25065	780	Baseball Park	1957
	25078	590	Outdoor Recreation Pavillion	1980
	25079	Unknown	Family Camp	n/d
Real Property - Object				
	25004	150	Explosive Ordnance Disposal	1956
	25085	400	Monuments/memorials (Memorial to Civilians Killed in Silo Accident)	n/d
	25098	1105	Monuments/memorials (C-119, B-47, Titan II Monuments)	1985
	25107	1505	Monuments/memorials (C-130 at Main Gate)	1989
Real Property - Structure				
	25028	391	Test Cell	1968
	25051	578	Water Storage	1955
	25100	1348	Fuel Storage	1967
	25101	none	Arkansas Ordnance Ruins	1940's
Record or Document - Object				
	25109	None	Base Newspaper Collection	Various
	25110	None	Documentary Collection	Various
	25111	None	Office Files	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

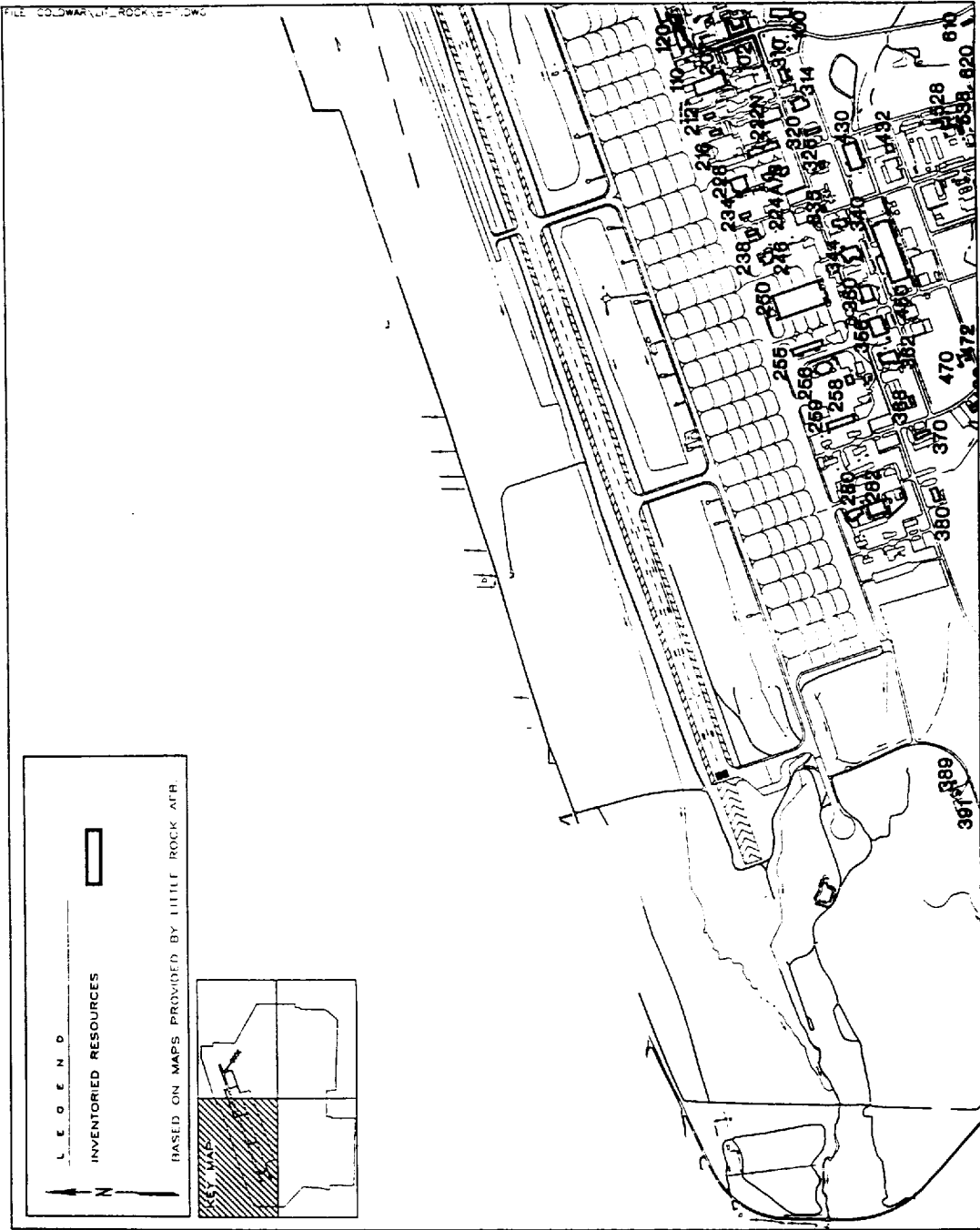


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 4).

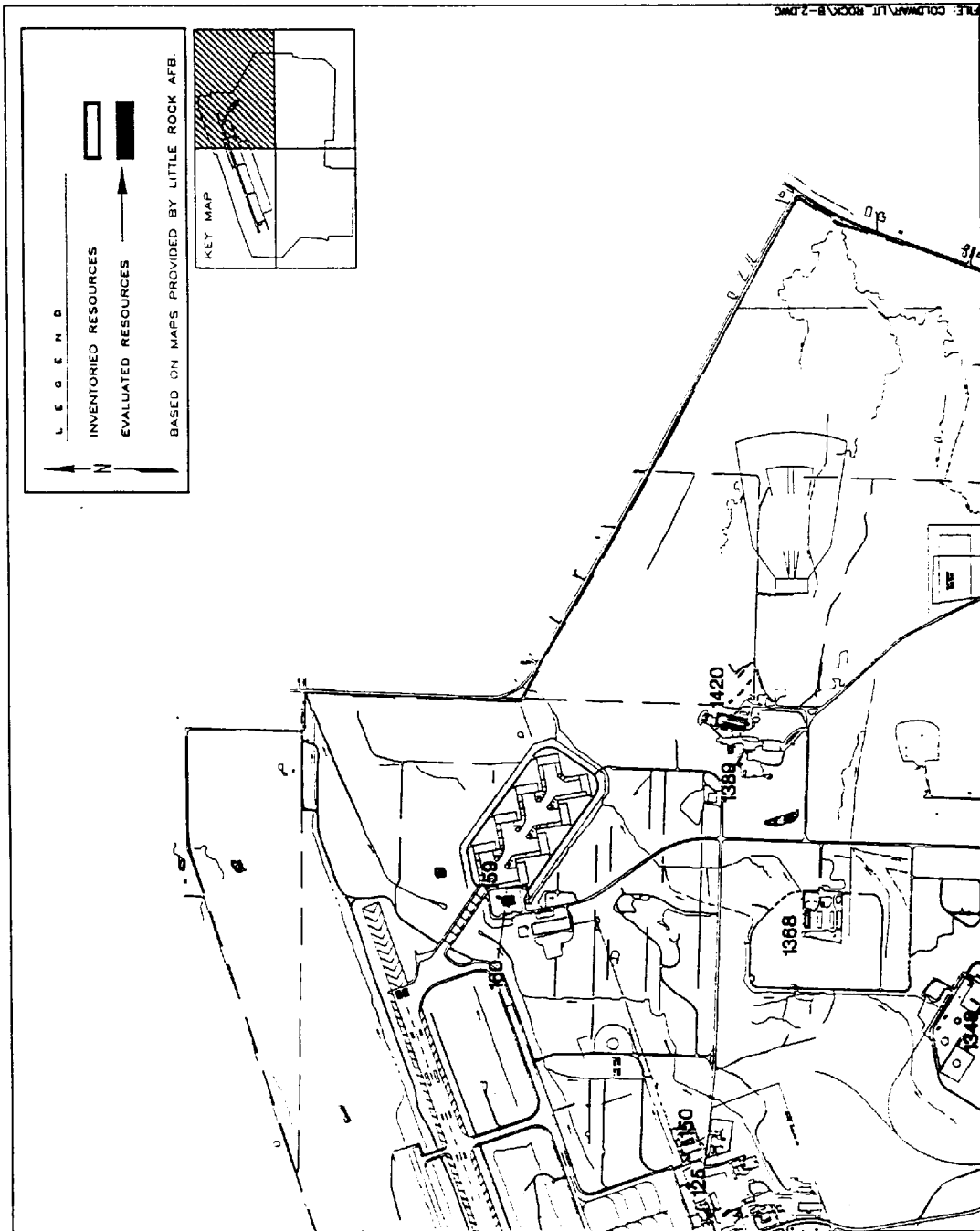


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 4).

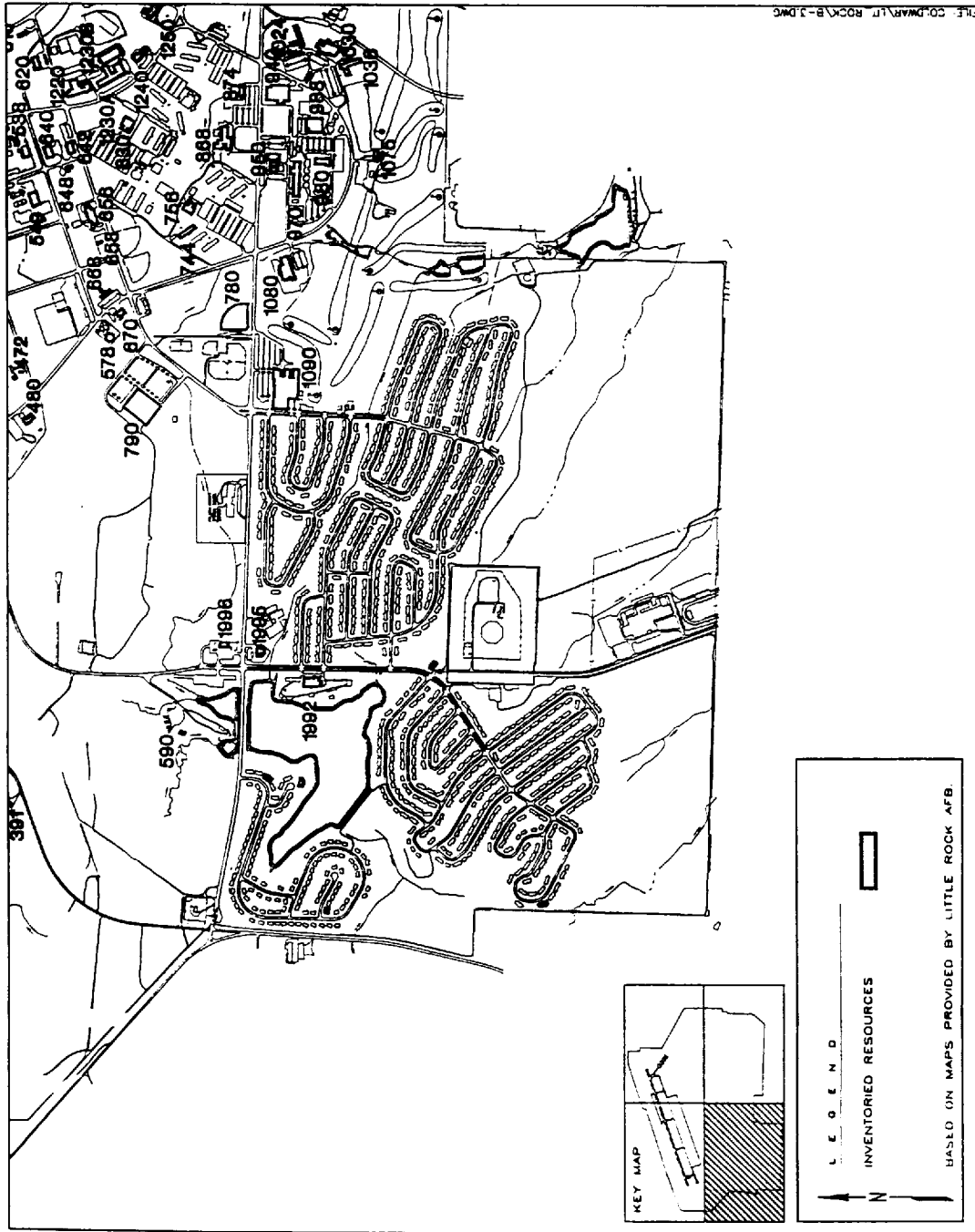


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 4).

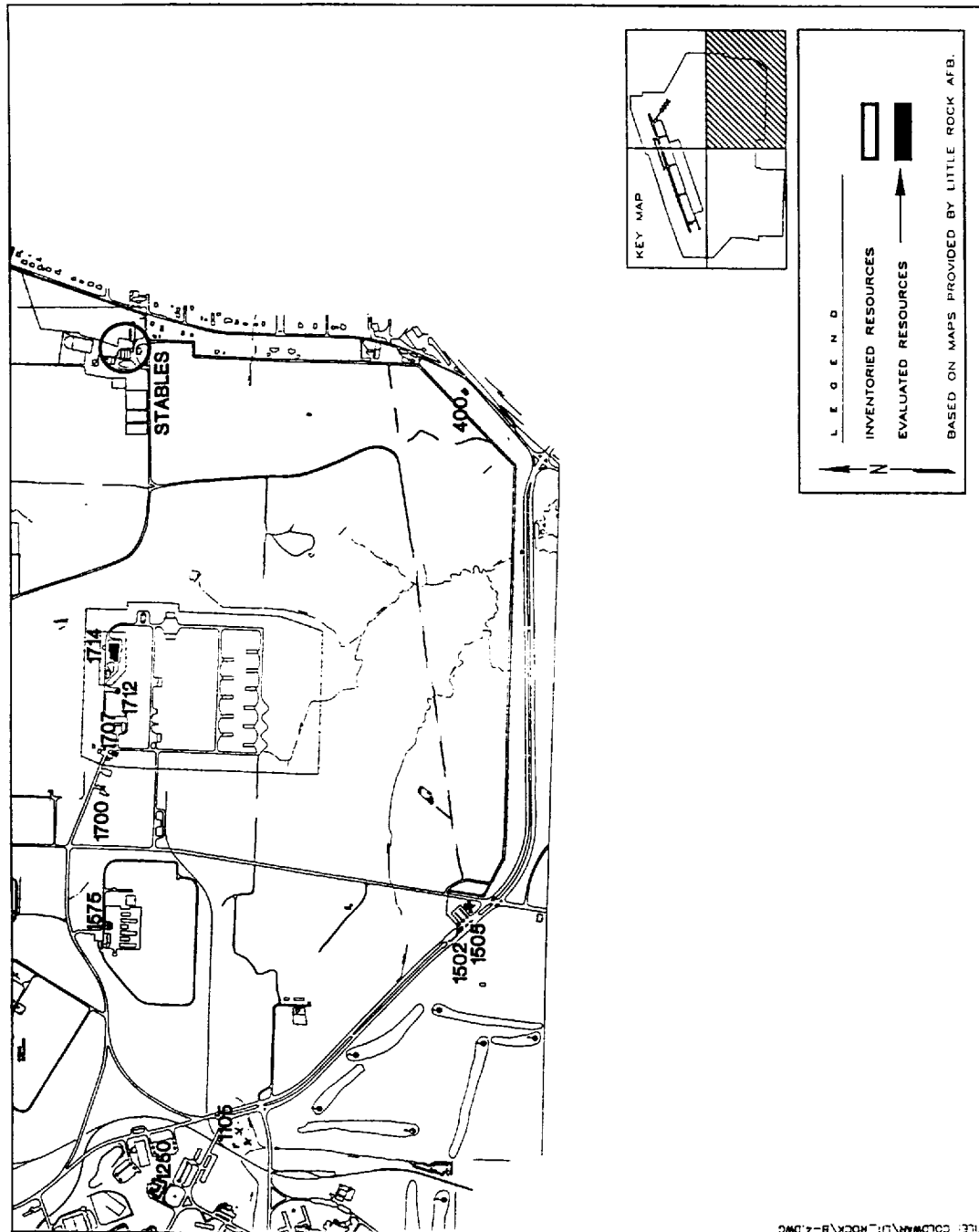
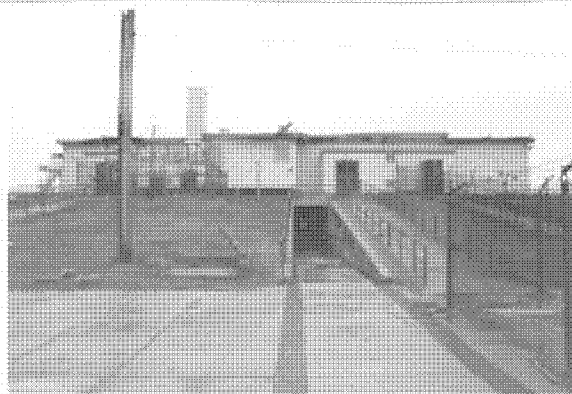


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 4).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 25001, Real Property No. 1714
Surveillance Inspection Shop



Resource No. 25002, Real Property No. 160
Flight Training Classroom (Former Crew
Readiness Quarters)



Resource No. 25003, Real Property No. 159
Security Guard Tower



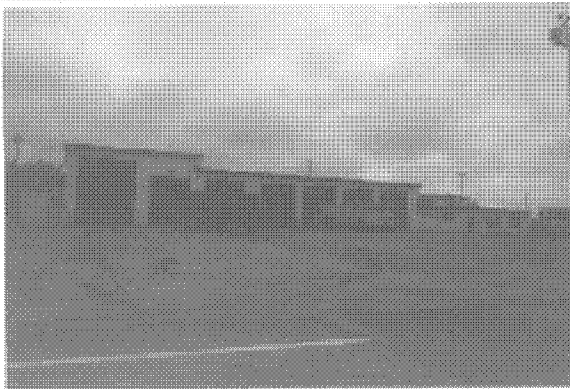
Resource No. 25004, Real Property No. 150
Explosive Ordnance Disposal



Resource No. 25005, Real Property No. 125
Aircraft General Purpose Shop



Resource No. 25006, Real Property No. 120
Base Operations



Resource No. 25007, Real Property No. 110
Fire Station



Resource No. 25008, Real Property No. 207
Maintenance Hangar (Arkansas ANG)



Resource No. 25009, Real Property No. 212
Special Operations



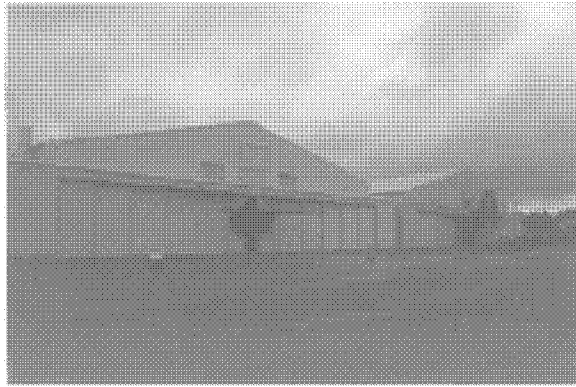
Resource No. 25010, Real Property No. 216
Petroleum Operations



Resource No. 25011, Real Property No. 244 A
and B, Aircraft Maintenance Organizational Shop



Resource No. 25012, Real Property No. 228
Aircraft Corrosion Control



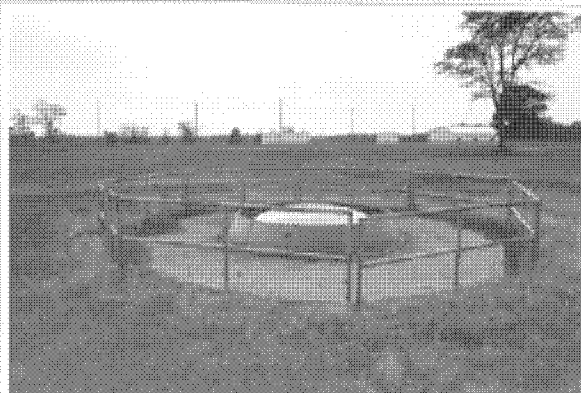
Resource No. 25013, Real Property No. 222
Fuel Systems Maintenance Dock



Resource No. 25014, Real Property No. 234
Flight Training Classroom



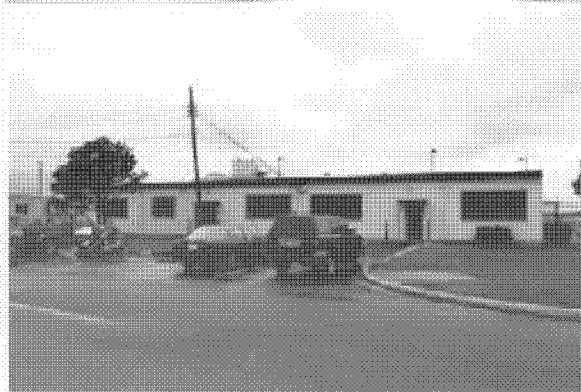
Resource No. 25015, Real Property No. 1700
Security Entry Control Building



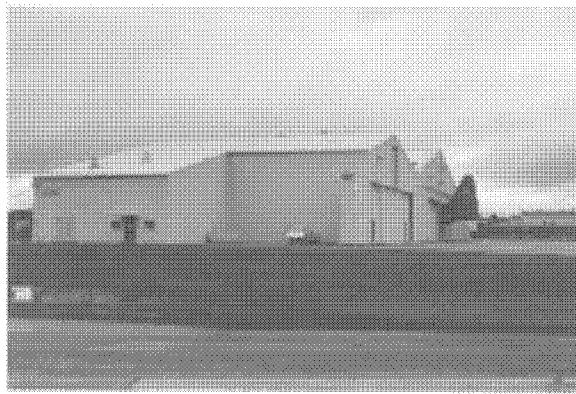
Resource No. 25016, Real Property No. 1712
Support Structure (Simulated Silo)



Resource No. 25017, Real Property No. 1707
Special Operations (Missile Escort Vehicle
Garage)



Resource No. 25018, Real Property No. 238
Aircraft Organizational Maintenance Shop



Resource No. 25019, Real Property No. 246
Aircraft General Purpose Shop



Resource No. 25020, Real Property No. 250
Maintenance Hangar



Resource No. 25021, Real Property No. 255
Medium Aircraft Maintenance Dock



Resource No. 25022, Real Property No. 256
Aircraft Support Equipment Storage Facility



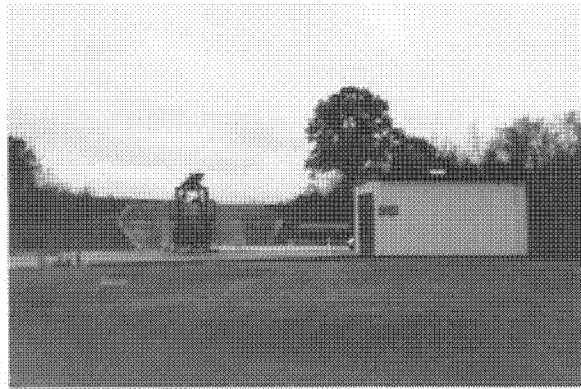
Resource No. 25023, Real Property No. 258
Aircraft Support Equipment Storage Facility



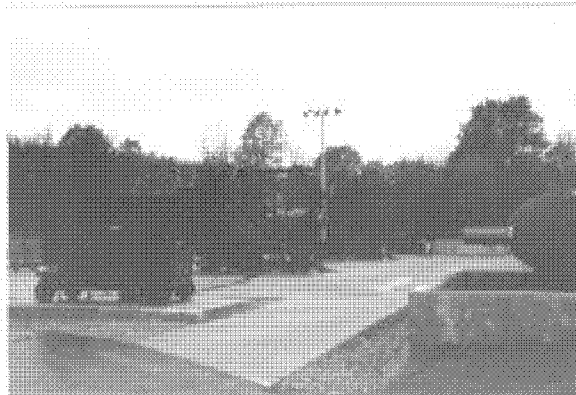
Resource No. 25024, Real Property No. 259
Aerial Delivery Facility



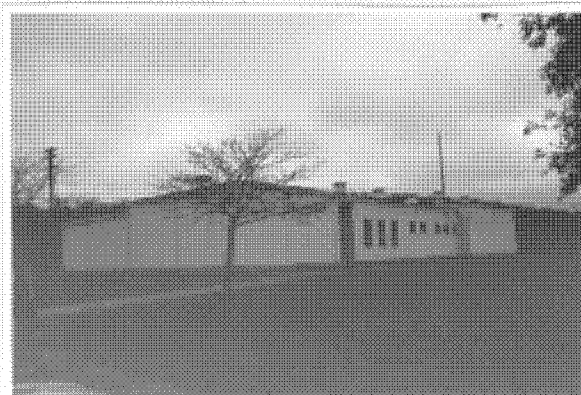
Resource Nos. 25025-25026, Real Property Nos. 280 and 282, Maintenance Dock Fuel Systems



Resource No. 25027, Real Property No. 389
Jet Engine Inspection Maintenance Shop



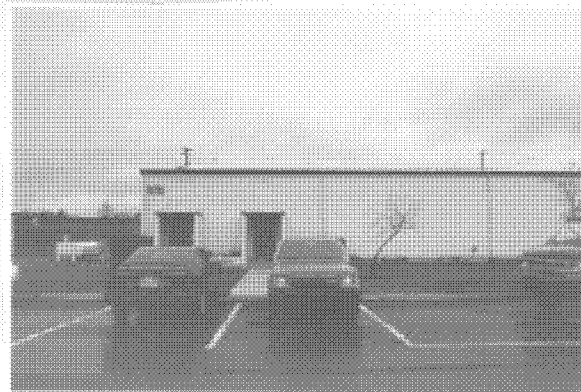
Resource No. 25028, Real Property No. 391
Test Cell



Resource No. 25029, Real Property No. 380
Wing Headquarters (Intelligence and Planning)



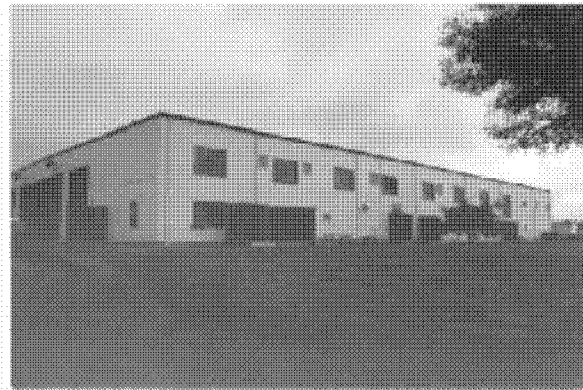
Resource No. 25030, Real Property No. 370
Wing Headquarters



Resource No. 25031, Real Property No. 368
Non-Destructive Inspection Shop



Resource No. 25032, Real Property No. 362
Avionics Shop



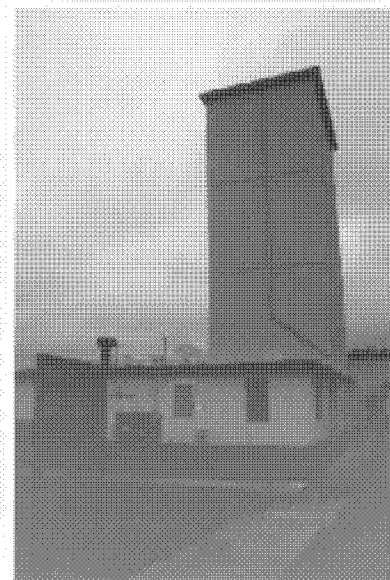
Resource No. 25033, Real Property No. 356
Jet Engine Inspection Shop



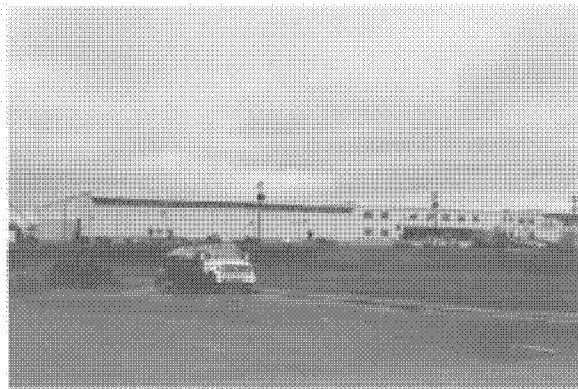
Resource No. 25034, Real Property No. 350
Aircraft General Purpose Shop



Resource No. 25035, Real Property No. 344
Group Headquarters



Resource No. 25036, Real Property No. 340
Shop Survey Equipment



Resource No. 25037, Real Property No. 450
Warehouse Supply and Equipment



Resource No. 25038, Real Property No. 335
Communication Transmitter



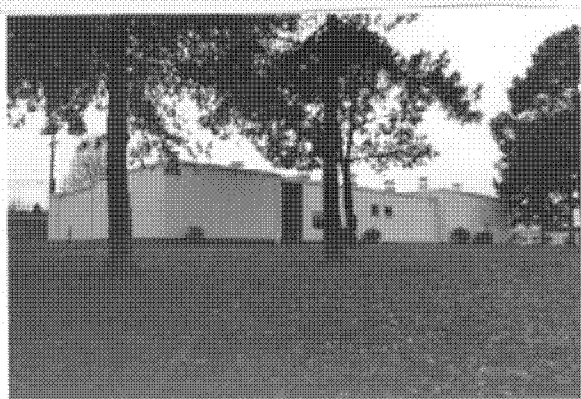
Resource No. 25039, Real Property No. 325
Ground Controlled Approach - Fixed



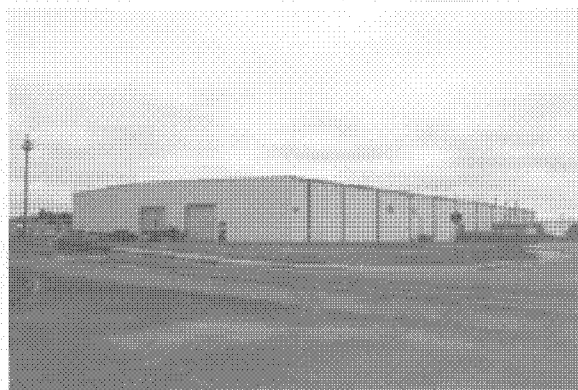
Resource No. 25040, Real Property No. 320
Wing Headquarters (308th SMW)



Resource No. 25041, Real Property No. 314
Command Post



Resource No. 25043, Real Property No. 310
Reconnaissance Photo Lab



Resource No. 25044, Real Property No. 430
Base Warehouse Supply



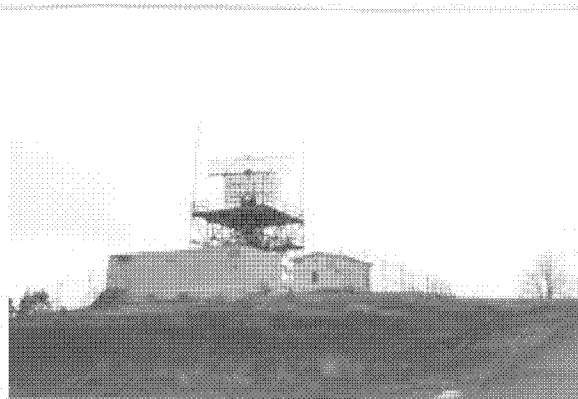
Resource No. 25045, Real Property No. 528
Base Engineering Administration



Resource No. 25046, Real Property No. 538
Base Engineering Maintenance Shop



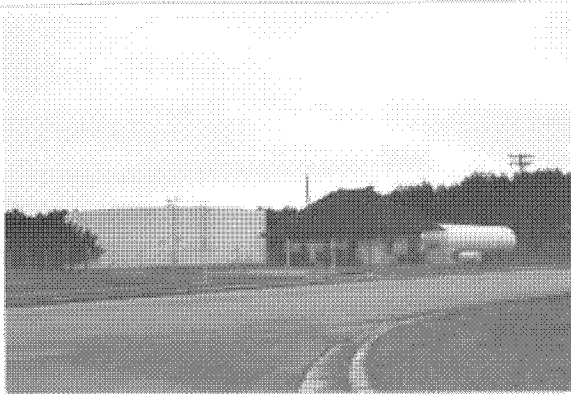
Resource No. 25047, Real Property No. 432
Wing Headquarters



Resource No. 25048, Real Property No. 472
Radar Tower Building (RAPCON)



Resource No. 25049, Real Property No. 480
Special Operations



Resource Nos. 25050-25051, Real Property Nos. 470 and 578, Water Pump Building and Water Storage



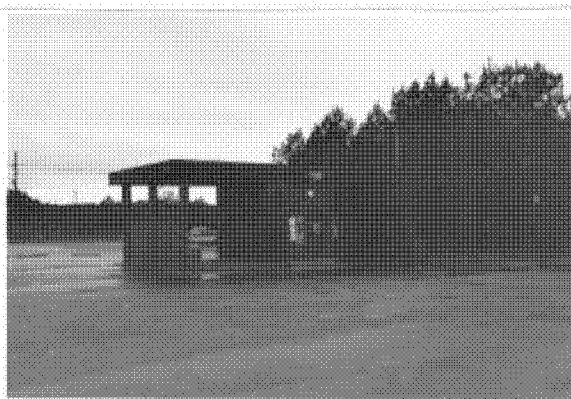
Resource No. 25052, Real Property No. 670
Disaster Preparedness



Resource No. 25053, Real Property No. 668
Family Support Center



Resource No. 25054, Real Property Nos. 656 and 658, Autohobby Shop



Resource No. 25055, Real Property No. 640
Car Wash Rack



Resource No. 25056, Real Property No. 744
Airman Dormitory



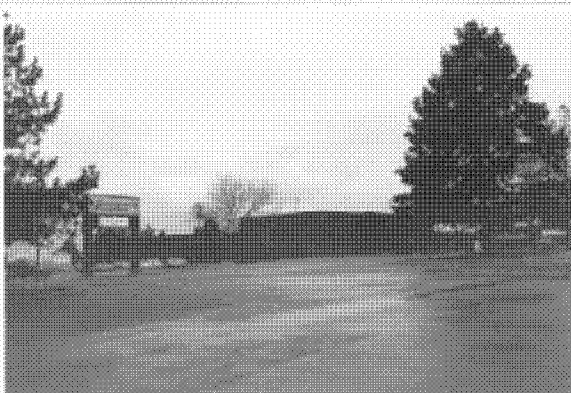
Resource No. 25057, Real Property No. 756
Environmental Health



Resource No. 25058, Real Property No. 868
Recreation Center



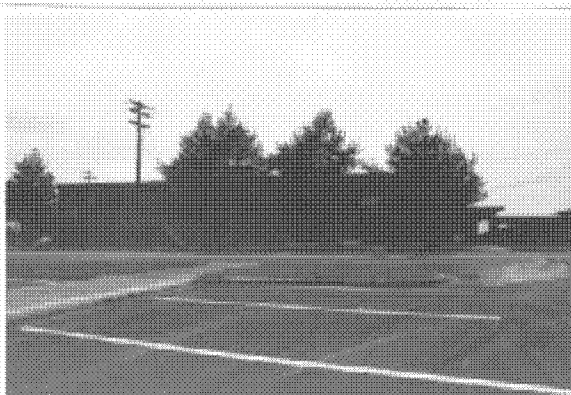
Resource No. 25059, Real Property No. 940
Exchange Sales Store



Resource No. 25060, Real Property No. 970
Bank Branch



Resource No. 25061, Real Property No. 988
Data Processing Installation



Resource No. 25062, Real Property No. 980
Base Theater



Resource No. 25063, Real Property No. 1075
Golf Clubhouse and Equipment Storage



Resource No. 25064, Real Property No. 1080
Non-Commissioned Officer Open Mess



Resource No. 25065, Real Property No. 780
Baseball Park



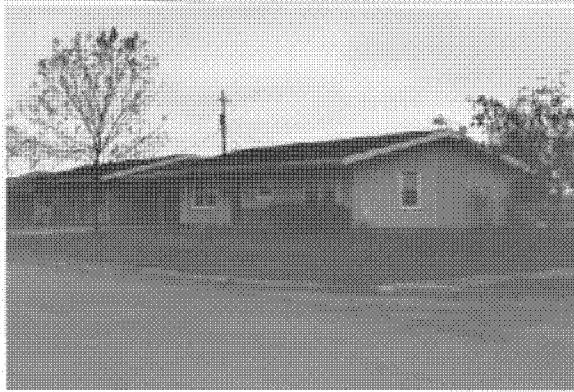
Resource No. 25066, Real Property No. 1090
Composite Clinic



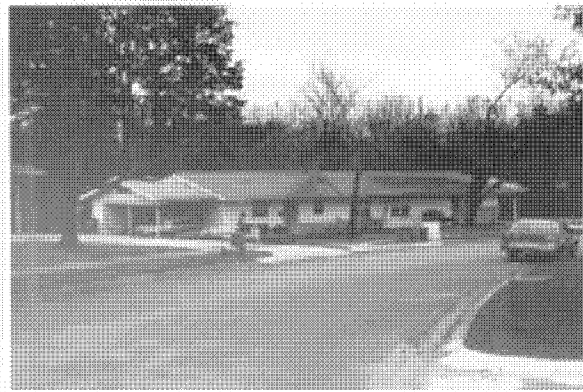
Resource No. 25067, Real Property No. (none)
Capehart Housing (120 Minnesota Circle)



Resource No. 25068, Real Property No. (none)
Capehart Housing (140 Pennsylvania Drive)



Resource No. 25069, Real Property No. (none)
Capehart Housing (139 Pennsylvania Drive)



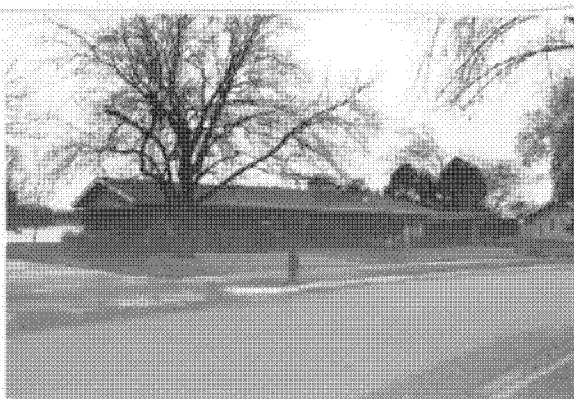
Resource No. 25070, Real Property No. (none)
Officer Capehart Housing (128 Michigan Drive)



Resource No. 25071, Real Property No. (none)
New Building Under Construction



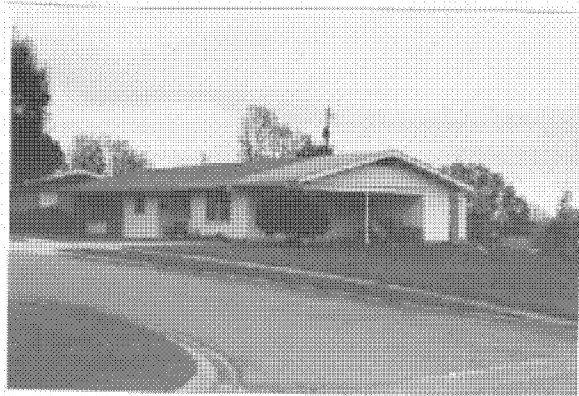
Resource No. 25072, Real Property No. 1992
Youth Center



Resource No. 25073, Real Property No. (none)
Officer's Capehart Housing (105 Alabama Drive)



Resource No. 25074, Real Property No. (none)
General's Capehart Housing (106 Arizona)



Resource No. 25075, Real Property No. (none)
Officer's Capehart Housing (100 Colorado)



Resource No. 25076, Real Property No. 1996
Branch Exchange



Resource No. 25077, Real Property No. 1995
Family Housing Management Office



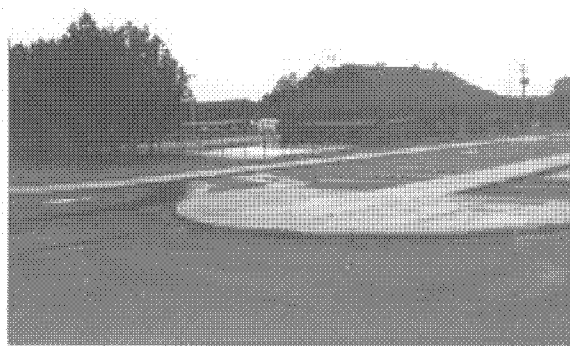
Resource No. 25078, Real Property No. 590
Outdoor Recreation Pavilion



Resource No. 25079, Real Property No. (none)
Family Camp



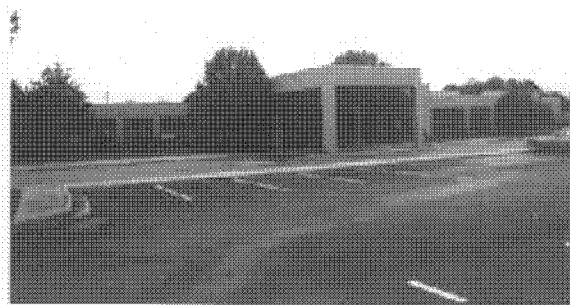
Resource No. 25080, Real Property No. 790
Commissary



Resource No. 25081, Real Property No. 874
Swimmer's Bath House



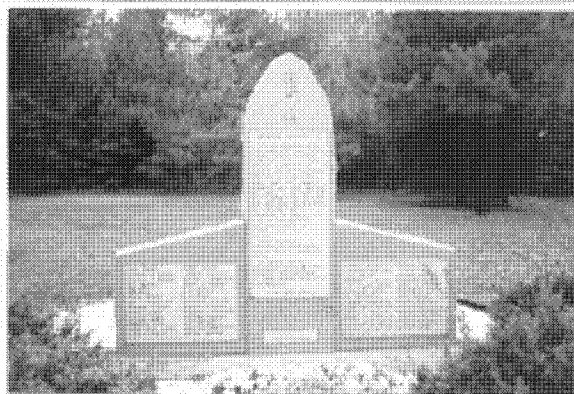
Resource No. 25082, Real Property No. 1036
Visiting Airman's Quarters



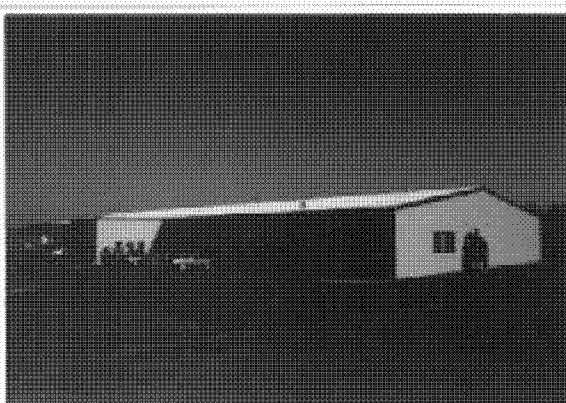
Resource No. 25083, Real Property No. 1030
Officer's Open Mess



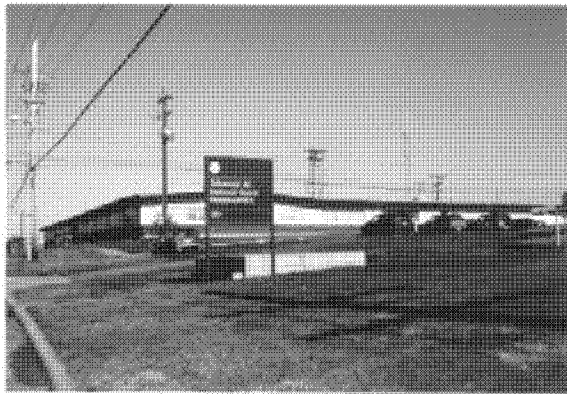
Resource No. 25084, Real Property No. 1024
Visiting Airman's Quarters (Billeting Office)



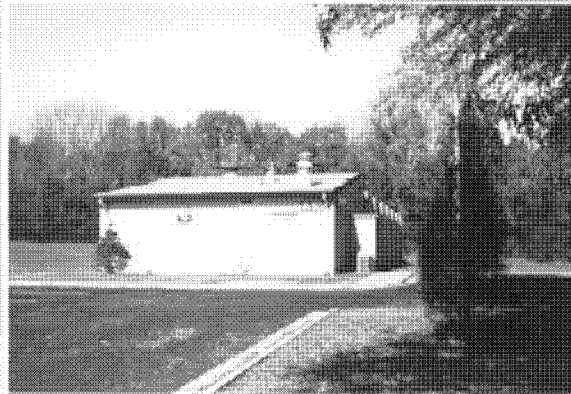
Resource No. 25085, Real Property No. 400
Memorial to Civilians Killed in Silo Accident



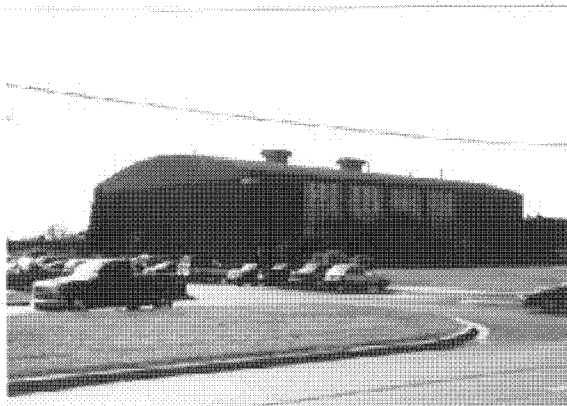
Resource No. 25086, Real Property No. 100
Base Engineering Maintenance Shop



Resource No. 25087, Real Property No. 102
Reserve Forces Operational Training (Arkansas
ANG)



Resource No. 28088, Real Property No. 610
Small Arms Indoor Gunnery Range



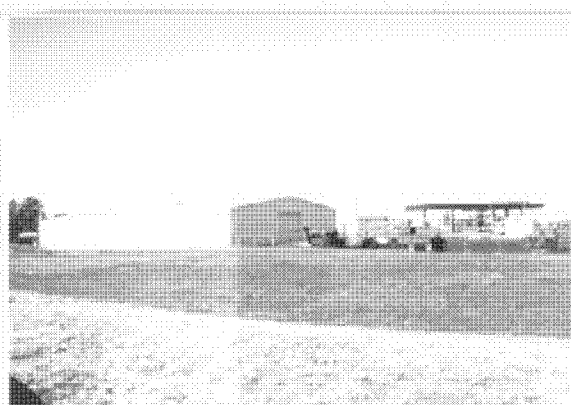
Resource No. 25090, Real Property No. 1220
Gymnasium



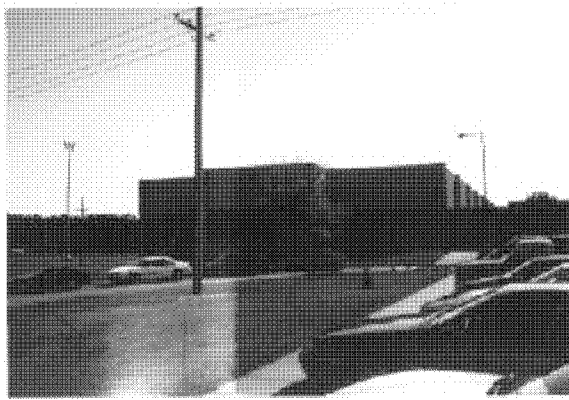
Resource No. 25091, Real Property No. 642
Wing Headquarters



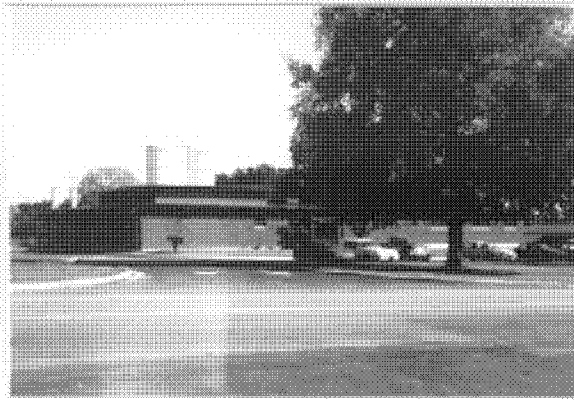
Resource No. 25092, Real Property No. 648
Medical Food Inspection



Resource No. 25093, Real Property No. 549
Vehicle Maintenance Shop



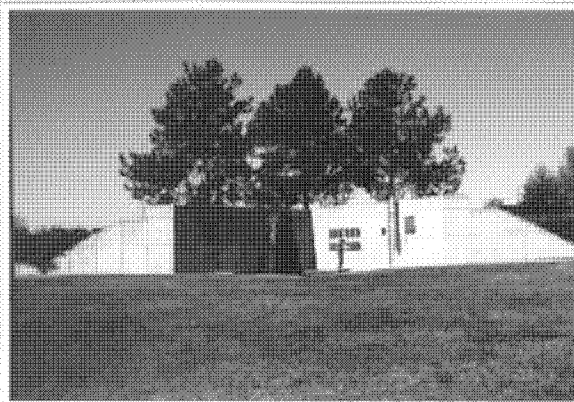
Resource No. 25095, Real Property Nos. 1230A and B, Flight Simulator Training



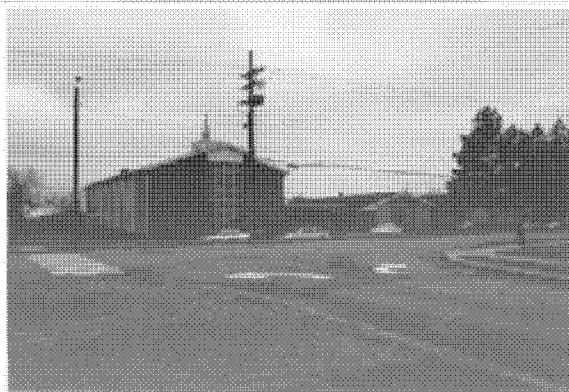
Resource No. 25096, Real Property No. 1240 Physical Training (Pressure Chamber)



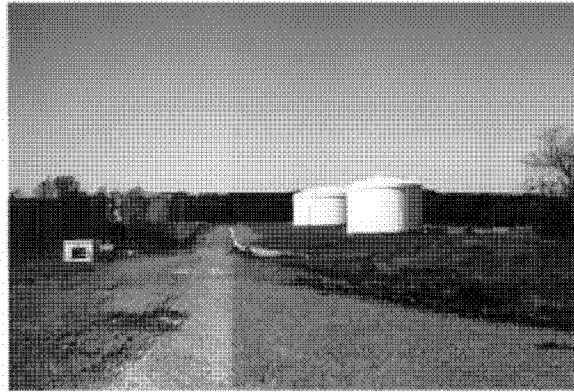
Resource No. 25097, Real Property No. 1250 Wing Headquarters (314th Support Group)



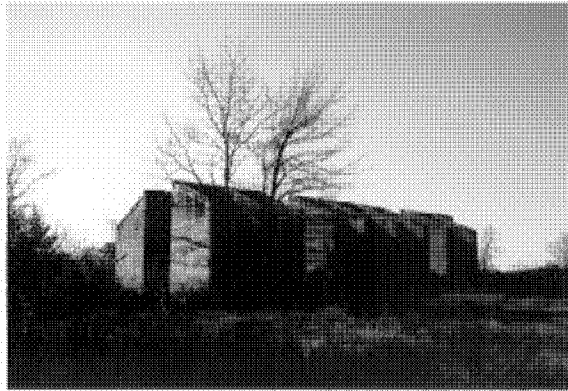
Resource No. 25098, Real Property No. 1105 Monuments/Memorials (C-119, B-47, Titan II)



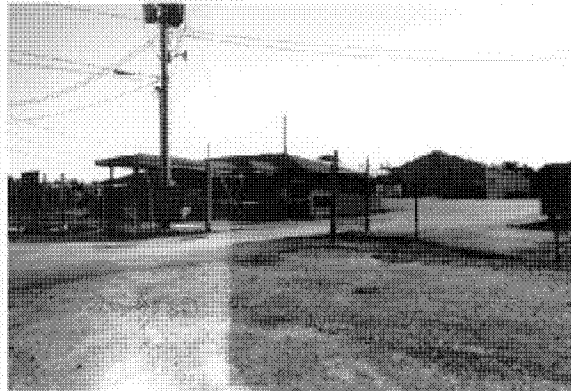
Resource No. 25099, Real Property No. 950 Chapel Center



Resource No. 25100, Real Property No. 1348 Fuel Storage



Resource No. 25101, Real Property No. (none)
Arkansas Ordnance Ruins



Resource No. 25102, Real Property No. 1575
Base Warehouse and Supply and Equipment



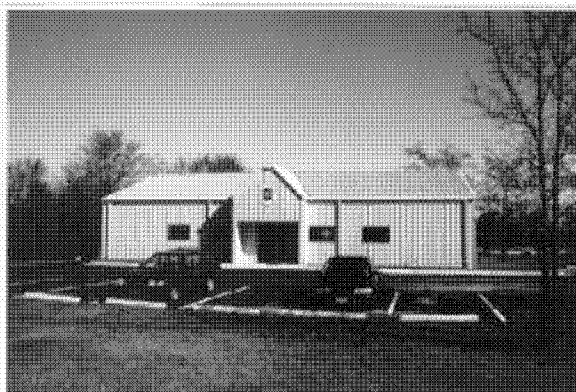
Resource No. 25103, Real Property No. 1368
Base Engineering Covered Storage



Resource No. 25104, Real Property No. (none)
Stables



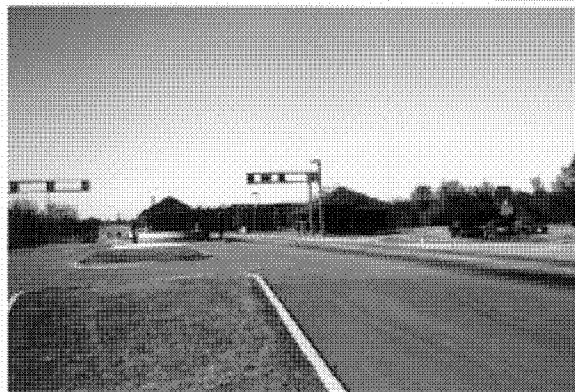
Resource No. 25105, Real Property No. 1420
Troop Camp (Phoenix Ace Dorms)



Resource No. 25106, Real Property No. 1389
Troop Camp (Phoenix Ace Combat Mobility School)



Resource No. 25107, Real Property No. 1505
Static Display (C-130 at Main Gate)



Resource No. 25108, Real Property No. 1502
Traffic Check House (Main Gate)

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT LITTLE ROCK AFB

Resource Number: 25002

Property Description: Alert facility
Associated Property: 25003, 25029, 25041
Non-Inventoried Association: Security facilities (e.g., fence, guard house), and the alert apron.
Sub-installation:
Address: 160 Marshall Road Little Rock AFB, AR
Base Map Date: 10/1/94
Base Map Building Number: 160

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Bomber Alert Facility

Statement of Significance: This property was directly related to the Cold War effort. It served as a component of first line, rapid response nuclear delivery system (one arm of the nuclear triad deterrent). This resource is also significant for its architectural design elements, such as ramped entrances and an earthen berm.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	21

Comments on Threats: This resource is currently undergoing a second renovation with a certain loss in the original interior fabric. However, the original appearance of the building, both interior and exterior, will be maintained following completion of construction.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Weighed against other SAC alert facilities, the partial loss of original fabric here reduces its level of significance. However, it will maintain its basic architectural fabric, especially in outward appearance with earthen berms, ramps, and tunnels.

Importance: Exceptional

Eligibility Eligible

Height: 20

Square Footage: 23190

Original Planned Duration: Permanent

Existing Use: Aerial Delivery Training Facility

Other Use/Dates: SAC alert facility

Comments on Use: The current (and extensive) renovation includes temporary removal of the earth berms to waterproof the building and remodeling (with some partition changes) the interior. This is being done to prepare the building for continued use as a training facility.

Primary Building Materials: Poured Concrete

Character Defining Features: Earthen berms, rapid egress ramps and tunnels.

Resource Number: 25109

Property Description: Base newspaper "Air Scoop." In addition, the collection includes three scrap books containing a personal collection of local newspaper clippings concerning LRAFB. These clippings date from 1952 to the 1970s.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 4119 Cannon Drv. Little Rock AFB, AR

Base Map Date: 10/1/94

Base Map Building Number: inside 370

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Base Newspaper Collection

Statement of Significance: This resource is mostly continuous from 1952 to the present and may provide additional insight into the activities and personnel at Little Rock AFB during the Cold War Era, especially from a social perspective. The collection of clippings provides additional social significance from the period before Jacksonville was chosen for the base location, and discusses the communities attempts to bring the base to Jacksonville..

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	1
Temporal Phase Relationship:	3
Level of Importance:	1
Percent Historic Fabric:	3
Severity of Threats:	1
Total Score for Priority Matrix:	12
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Object Condition: In Storage/Benign Neglect

Record/Document Category: Newspaper collection

Year of Document: 1952-present

Period of Association: All temporal periods of the Cold War Era

Comments on Condition: The newspaper collection is bound ,with the earlier portion of the collection is in fair condition, while the latter issues are in excellent condition. The newspaper clippings are in fair condition and should be curated.

Resource Number: 25110

Property Description: Architectural drawing and engineering files located in vault in CE building. These are contained in 11 hanging filing cabinets, one table of miscellaneous drawings, and 24 hanging files of proposed projects (not yet funded). Types of drawings include master base plans, landscapes, buildings (initial construction, modification, renovation, and repair), runways and taxiways, topography, utilities, roads and railroad, and other miscellaneous constructed facilities. One folder included 62 base aerial photos dating from 1975 and 1982. Most of these photos were undated.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 528 Thomas Ave. Little Rock AFB AR

Base Map Date: 10/1/94

Base Map Building Number: inside 528

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: These drawings are a record of construction and renovations completed for all buildings on base, past and present. They can also provide further information for future evaluations of extant buildings and structures on base.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	2
Temporal Phase Relationship:	3
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	15
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: This resource is located in a controlled access facility and is in good condition. No index exists.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Architectural Drawing Files and Aerial Photographs

Year of Document: various

Period of Association: All temporal periods of the Cold War era.

Resource Number: 25111

Property Description: Wing History Collection
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 4119 Cannon Ave. Little Rock AFB, AR
Base Map Date: 10/1/94
Base Map Building Number: inside 380

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Office Files

Statement of Significance: This history collection details the activities of the 314th Tactical Airlift Wing at Little Rock AFB. Further research into the various volumes that span 1970-1993 could provide additional insight into the activities conducted at the base in general and specific facilities in particular during the Cold War era.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	No
Preservation/Conservation/Repair:	No
Comments on Resource Management:	

Object Condition: In Storage/Benign Neglect
Record/Document Category: Report
Year of Document: various
Period of Association: 1970 -present
Comments on Condition: A duplicate set of these documents is stored at the USAF Historical Research Center at Maxwell AFB, Alabama.

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Little Rock AFB and to provide research materials for this study:

Robert Seay
Chief, Environmental Flight
314 CES/CEV
528 Thomas Avenue
Little Rock AFB, Arkansas 72009-5005
(501) 988-6435

Jennifer Gray
Facility Security Officer
1255 Vandenburg Boulevard
Little Rock AFB, Arkansas 72099-5020
(501) 988-6984

Ray McEuen
Deputy Base Civil Engineer
314 CES/CE
528 Thomas Avenue
Little Rock AFB, Arkansas 72099-5005
(501) 988-3322

William Meadows
Environmental Technician
314 CES/CEV
528 Thomas Avenue
Little Rock AFB, Arkansas 72099-5005
(501) 988-6435

Richard Munch
Real Property Officer
314 CES/CERR
209 Thornell Avenue
Little Rock AFB, Arkansas 72099-5053
(501) 988-6988

TSgt A. Carl Rhode
Wing Historian
314 AW/HO
4119 Cannon Drive
Little Rock AFB, Arkansas 72099
(501) 988-6332

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Little Rock AFB history and Cold War context.

Richard Munch, Real Property Officer, November 14 and 15, 1994

Robert Seay, Chief, Environmental Flight, November 14, 1994

William Meadows, Environmental Technician, November 14, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-16: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT LORING AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

James A. Lowe and David P. Staley of Mariah Associates, Inc. conducted a Cold War material culture inventory at Loring Air Force Base, Maine, between July 18 and 21, 1994. This project to ascertain extant Cold War resources important to the base's Cold War context and to the Cold War national history was conducted as part of the Air Combat Command Cold War Study under the ongoing Department of Defense Legacy Program. On site inspections were conducted to inventory the resources. This was then augmented with information gathered from the Civil Engineering, Public Affairs, and Wing History offices. During this inventory and research, resources were identified and then photographed.

The team selected four resources to further document and evaluate as important to the base's Cold War context: the Bomber Alert Facility, two Large Aircraft Maintenance Docks, and a Segregated Storage Igloo. These facilities represent the United States Air Force alert posture, deterrent capability, and weapons delivery potential during the Cold War. Recommendations for all four of the resources include eligibility to the National Register of Historic Places, stewardship, and further documentation.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
AFB	- Air Force Base
AFS	- Air Force Station
AGE	- Air Ground Equipment
AMC	- Air Materiel Command
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
amsl	- above mean sea level
AREFS	- Air Refueling Squadron
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
DoD	- Department of Defense
DRMO	- Defense Reutilization Marketing Office
FIS	- Fighter Interceptor Squadron
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Non-Commissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
ORI	- Operation Readiness Inspection
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center
SAC	- Strategic Air Command
SAGE	- Semi-Automatic Ground Environment
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SRAM	- Short Range Attack Missile
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
USAF	- United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Capehart Housing Act - passed in 1955 as an amendment to the National Housing Act. It authorized the use of quarters allowances to pay off Wherry housing mortgages. Construction of new houses was set at 46,500 units at 88 bases. Construction was begun on 9,000 units by 1957.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

GLOSSARY (Continued)

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	6
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	17
4.0 METHODOLOGY	22
4.1 INVENTORY	22
4.2 EVALUATION OF IMPORTANT RESOURCES	23
4.2.1 Documentation	23
4.2.2 Evaluation of Importance	23
4.2.2.1 Cold War Context	23
4.2.2.2 NRHP Criteria	24
4.2.2.3 Exceptional Importance	25
4.2.3 Evaluation of Integrity	25
4.2.4 Priority Matrix	26
4.2.5 Resource Organization	27
4.3 BASE SPECIFIC METHODS	27
5.0 RECONNAISSANCE INVENTORY RESULTS	29
6.0 EVALUATION RESULTS	30
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	30
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	30
6.2.1 Alert Facilities	30
6.2.1.1 Bomber Alert Facility	30
6.2.2 Maintenance Docks/Hangars	32

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.2.1 Large Aircraft Maintenance Dock	32
6.2.2.2 Large Aircraft Maintenance Dock	34
6.2.3 Weapons Storage.....	35
6.2.3.1 Segregated Storage Igloo	35
6.3 MATERIEL DEVELOPMENT FACILITIES	36
6.4 TRAINING FACILITIES.....	36
6.5 INTELLIGENCE FACILITIES	36
7.0 UNDOCUMENTED RESOURCES	37
8.0 FUTURE THREATS TO RESOURCES	39
9.0 PRELIMINARY RECOMMENDATIONS	40
9.1 NRHP ELIGIBILITY	40
9.1.1 Evaluation and Determination of NRHP Eligibility.....	40
9.1.2 Implications of NRHP Eligibility	42
9.2 EVALUATED RESOURCE RECOMMENDATIONS	44
9.2.1 Bomber Alert Facility.....	44
9.2.2 Large Aircraft Maintenance Dock	46
9.2.3 Large Aircraft Maintenance Dock	46
9.2.4 Segregated Storage Igloo	46
9.3 BASE CLOSURE	47
10.0 REFERENCES CITED	48
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Loring Air Force Base	5
Figure 2.2 Loring Air Force Base Layout	7
Figure 2.3 Standard Strategic Air Command Base Layout	8
Figure 2.4 Loring Air Force Base Land Use Diagram	10
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	11
Figure 3.1 Loring Air Force Base, 1947-1953	19
Figure 3.2 Loring Air Force Base, 1953-1961	21

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	31
Table 6.2 Evaluated Resource Prioritization by Priority Rank	31
Table 9.1 Recommendations for Evaluated Resources	45

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

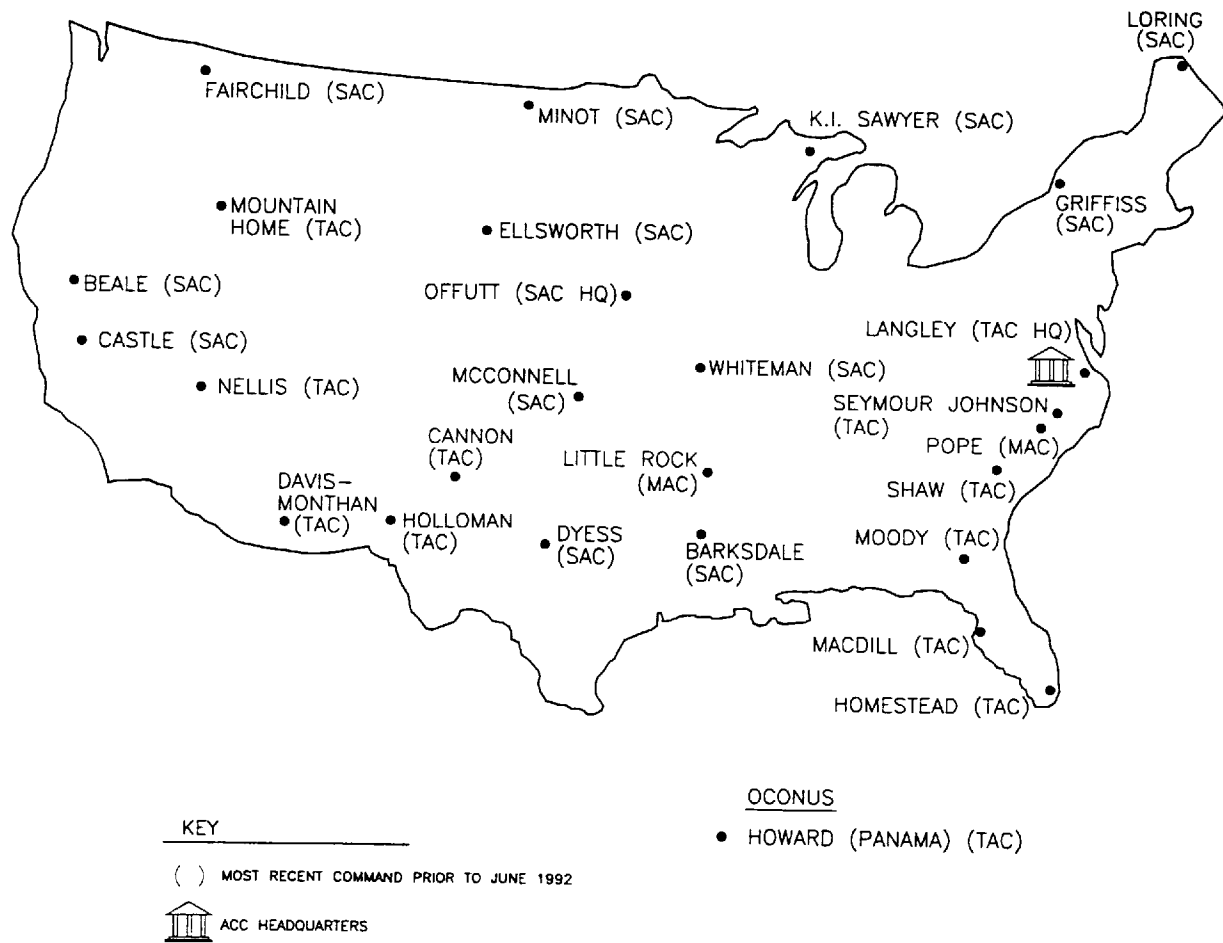
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: LORING\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Loring Air Force Base (AFB). Loring AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Loring AFB was scheduled for closure September 30, 1994, and during the field visit possessed only enough personnel for downsizing the base. The base has no current mission as such. During the Cold War, the mission at Loring AFB was to develop and maintain the capability for long-range bombardment operations and effective refueling operations within its SAC commitment to deterrence. Due to its strategic location in the extreme northeastern United States, aircraft assigned to Loring AFB also assisted Naval operations by participating in sea surveillance training missions utilizing the Harpoon anti-ship missile. Since 1959, Air Defense Command (ADC) and then Tactical Air Command (TAC) Fighter Interceptor Squadrons (FIS) were also assigned to Loring AFB to intercept, identify, and, if necessary, destroy unidentified aircraft penetrating the sovereign airspace of the United States and Canada (Civil Engineering Office, Loring AFB 1991:1; Loring AFB 1990:1,5). [Editor's Note: This report is written based upon existing conditions and findings made during the field reconnaissance. Since that time, Loring AFB has been closed by the Base Re-Alignment and Closure Commission.]

2.2 GEOGRAPHIC DESCRIPTION

Loring AFB is located in Aroostook County in the northeastern tip of Maine near the Canadian border, about 8 mi (13 km) northeast of the town of Caribou and 4 mi (6 km) northwest of Limestone (Figure 2.1). The base consists of approximately 8,300 acres (3,359 ha) located at approximately 450 ft (137 m) above mean sea level (amsl) on a relatively high, level plateau. Soils consist of a silty glacial till containing of a mixture of boulders, gravel, sand, silt, and clay. Originally, the majority of the area surrounding the base was coniferous forest, chiefly pine, hemlock, and spruce. However, while forest still predominates, considerable agriculture is practiced in the area today with potatoes and broccoli the primary crops (Civil Engineering Office, Loring AFB 1991:3,4; 1966:2; Loring AFB 1961:1-2).

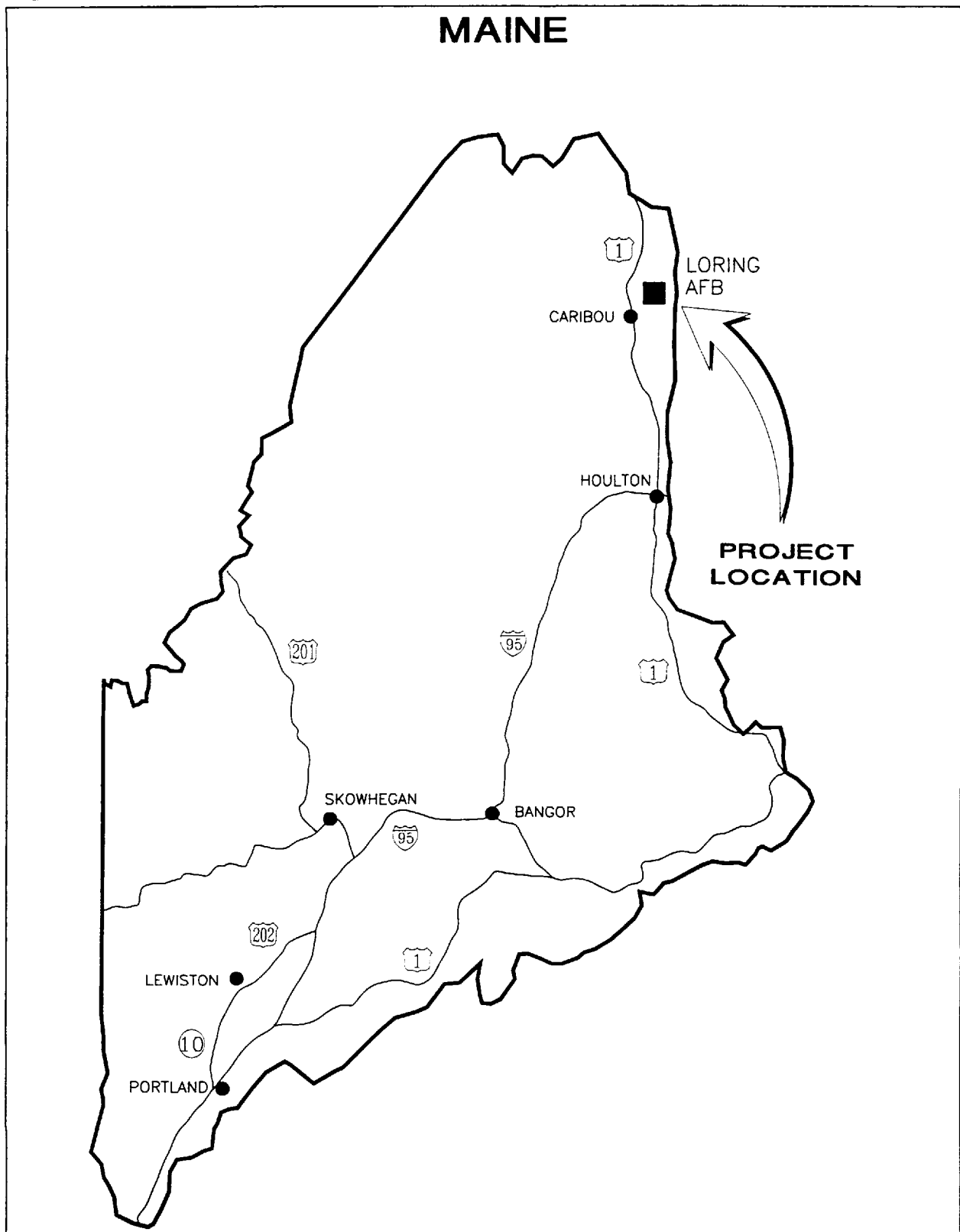


Figure 2.1 Location of Loring Air Force Base.

2.3 CURRENT BASE LAYOUT

The layout of Loring AFB (Figure 2.2) is very similar to the standard SAC base layout (Figure 2.3). Most of the development is located to the west of the runway. The few auxiliary facilities located east of the runway include the weapons storage facility, small arms range, grenade launching area, and cold weather test area. Both ends of the runway are clear of any developments for safety reasons. The alert apron is in a 'christmas tree' formation and is located to the east of the southern end of the runway.

The major development of the base is located on the western side of the runway, extends from the center to the southern end of the runway, and expands west. Within this major development are located the mission, community, housing, and recreation areas. Facilities located along the western edge of the base include sewage treatment facilities, landfills, and asbestos waste disposal areas. The recreation areas are also on the far western side of the base, clustered around the main gate. These areas include a golf course, ski area, and family camping area.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facility - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

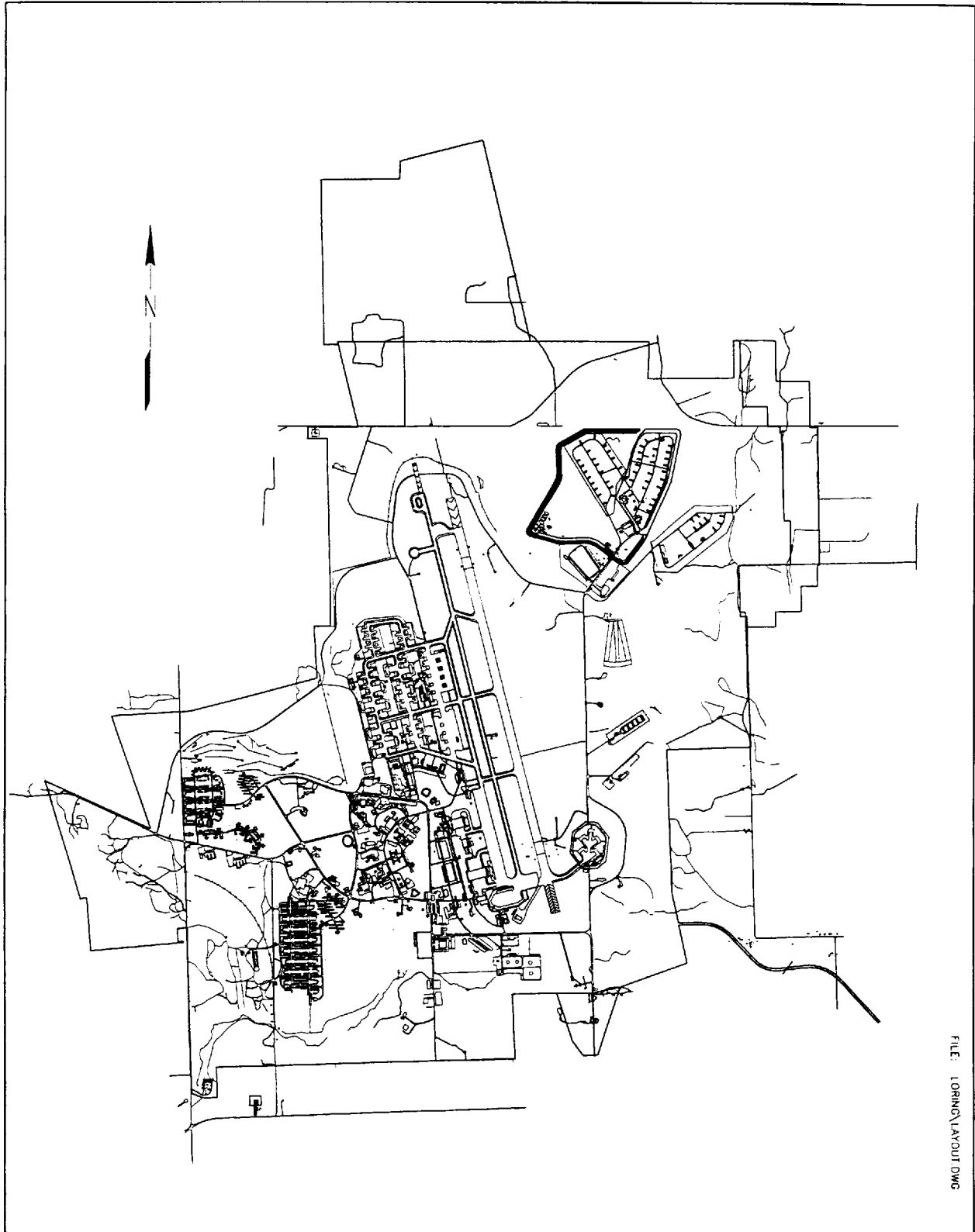
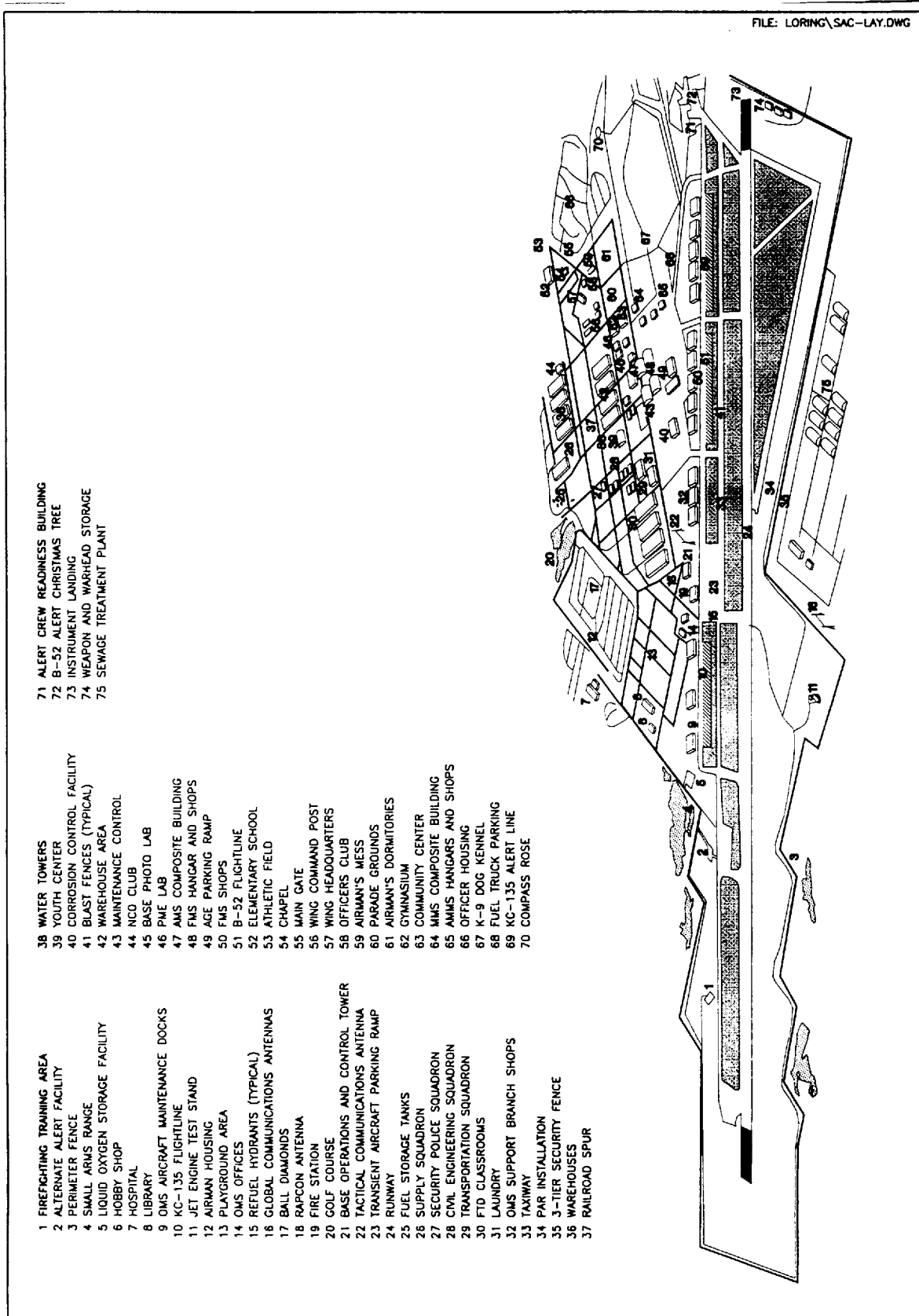


Figure 2.2 Loring Air Force Base Layout.



Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

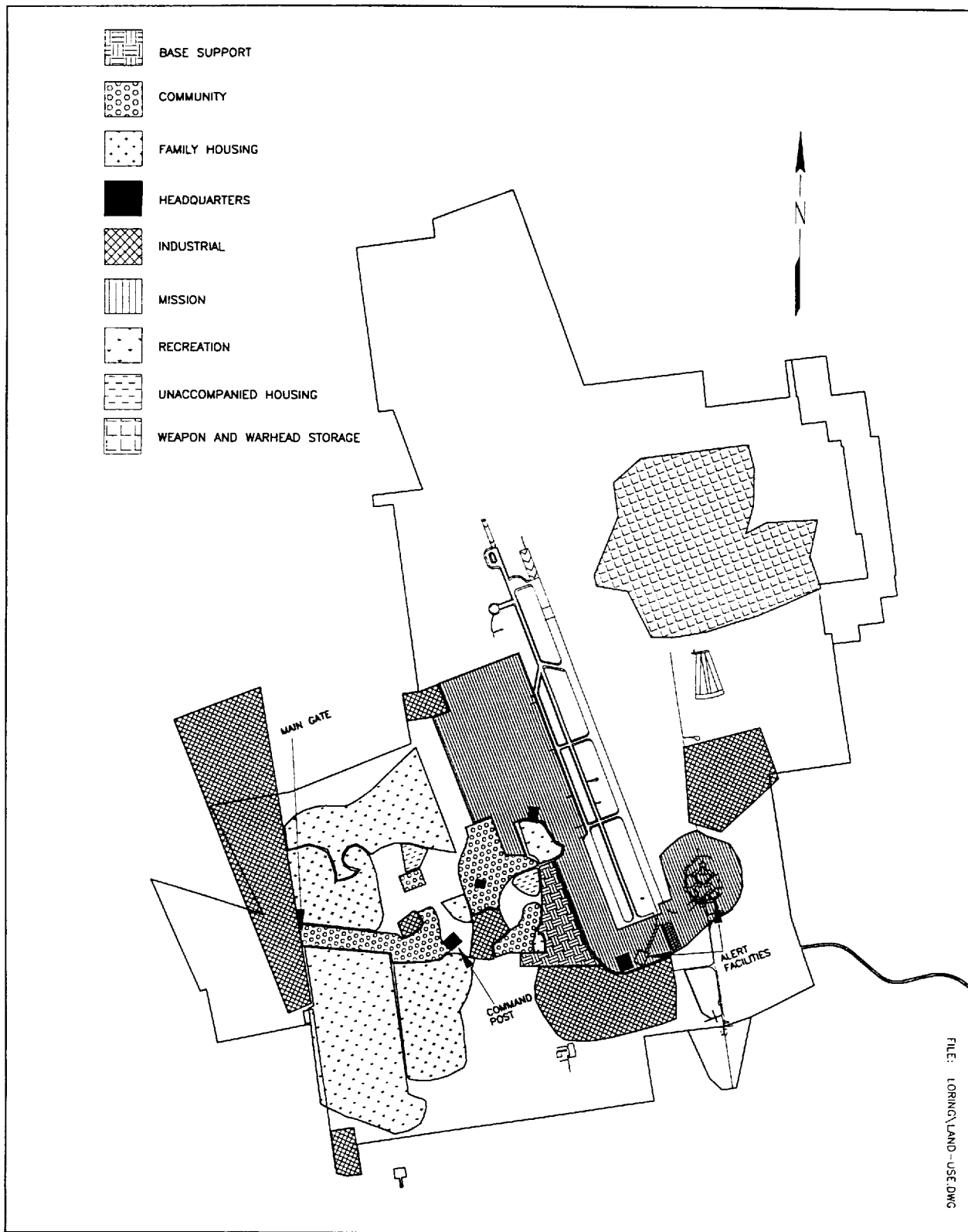
Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapons and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Base land use at Loring AFB (Figure 2.4) generally resembles the standard SAC land use plan (Figure 2.5), but there are deviations. The most significant difference between Loring AFB and SAC land use is the location of industrial areas. Loring AFB industrial areas encircle the base. Landfills are located on the extreme western side of the base; the sewage treatment facilities are located in the extreme southwestern corner; a small industrial area is located northwest of the northern mission area; the Defense Reutilization Marketing Office (DRMO) storage area is northeast of the alert apron; and the warehouse storage facilities are located to the southwest and south of the mission area and runway. The SAC land use map depicts the standard industrial area in one area only, on the far side of the base away from the runway.

The mission area location is similar on both plans; however, the Bomber Alert Facility and alert apron at Loring AFB are on the opposite side of the runway from their placement on the SAC land use plan. The weapons storage area at Loring AFB, while on the same side of the runway as on the SAC land use plan, is located away from the alert apron. The standard plan has the weapons storage area close to the alert apron. Loring AFB has designated clear zones for the



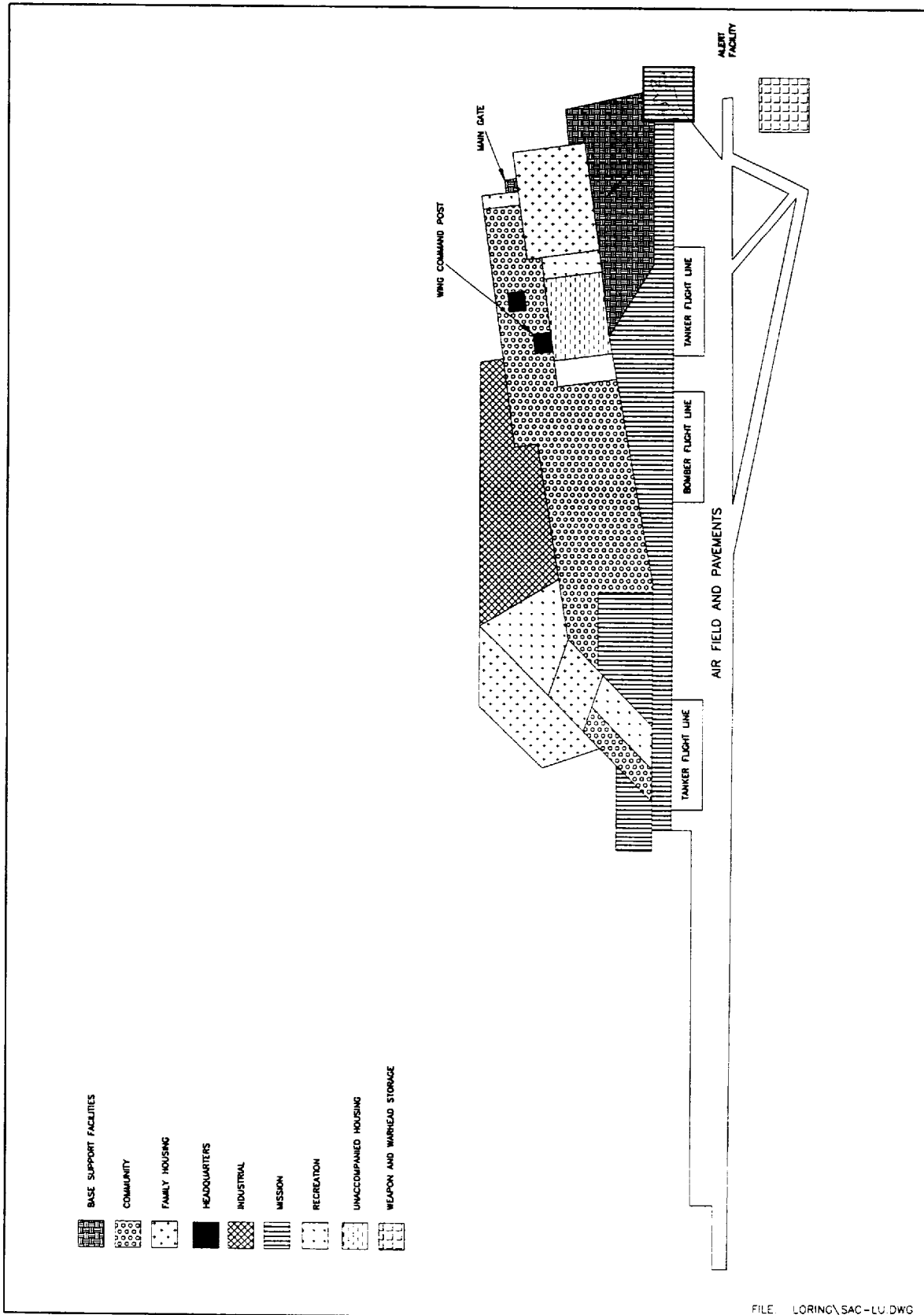


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

landing and takeoff of aircraft and surrounding the alert facility, the weapons storage area, and the maintenance hangars located northwest of the runway. The SAC land use map does not depict any clear zones.

Base housing at Loring AFB corresponds to the SAC land use plan with the housing located on the far side of the base away from the runway and mission areas. Unaccompanied housing, the community area, and the headquarters facilities at Loring AFB are located in the middle of the main base development, the same location shown on the SAC land use map.

Recreational areas at Loring AFB correspond roughly to the SAC land use plan with some recreational areas located along the perimeter of the base (golf course, family camping, and ski area), and with smaller areas located in the central portion of the base for easier access by personnel.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Loring AFB, originally Limestone AFB, was one of the first postwar United States Air Force (USAF) bases to be designed and built as an Air Force installation and not converted from a previous Army air field. As a SAC base, it was also the first to support a new architectural concept to accommodate the newly created SAC plans for high speed, heavy aircraft, specifically the B-36 *Peacemaker* bomber. Planning of the installation was begun by the Army Corps of Engineers, New England Division, in June 1946 for a tract of land that was approximately 80% forest and 20% farmland (Department of Defense [DoD] 1972:14; Loring AFB 1987:A-1; Nason 1988:3).

The Army authorized the initial construction of Limestone AFB on April 5, 1947. Contracts for the multi-million dollar construction project were awarded to Lane Construction Company of Meriden, Connecticut, and T.W. Cunningham, Inc., of Bangor, Maine (Loring AFB 1989:8; Stevens and Tyson 1980:4). Construction began on April 15, 1947, and lasted until 1953 (DoD 1972:14; Mueller 1989:327). Limited funding, severe winters, and the enormous size of the project dictated that the base would have to be built in phases. The first phase called for the construction of a north-south runway, the Arch Hangar, the Base Operations building and control tower, an electric power plant, a railroad spur, barracks, and a water supply system. The completion date for the first phase was scheduled for June 30, 1949 (Loring AFB 1989:8; Pickart and Wessel 1994:3-13 - 3-14; Stevens and Tyson 1980:4).

The Korean conflict provided the catalyst for the second phase of construction at Limestone AFB and increased funding from Congress was forthcoming (Lewis et al. 1995). Due to the mounting tension in Korea, USAF Headquarters determined that Limestone AFB needed to begin limited operations. On June 12, 1950, the first plane landed at Limestone AFB, and on July 1, the 4215th Base Service Squadron was given the assignment for increased operational capacity at the base

(Stevens and Tyson 1980:35,37,40,41). Construction at the base accelerated in 1951. The original 300 x 9,160 ft (91 x 2,792 m) runway was extended to 10,000 ft (3,048 m), and eight Luria maintenance hangars were constructed in the vicinity of the Arch Hangar. Other construction completed by 1952 included a base hospital, motor pool, communications facility, Officer's club, and additional barracks. One of these barracks was alternately used as an alert facility in future decades.

Another important construction project of major proportion was implemented on August 4, 1951, when construction began in the northeastern corner of the base on a maximum security storage area for the most advanced weapons in the USAF inventory. This mini-base was self-sufficient and included barracks, recreational facilities, offices, warehouses, weapon maintenance areas, and 28 storage igloos. Named Caribou Air Force Station (AFS) in 1953 and operating under the authority of the Air Materiel Command (AMC), its sole mission was to protect and maintain strategic weapons used by SAC (Stevens and Tyson 1980:27).

The 42nd Bombardment Wing (BMW) (Heavy) was activated and assumed host responsibilities at Limestone AFB on February 25, 1953, and was assigned to the 8th Air Force. The 69th, 70th, and 75th Bombardment Squadrons (BMS), all members of the 42nd BMW, received their full complement of B-36 bombers by August 13, 1953 (Mueller 1989:327-329; Stevens and Tyson 1980:42,46). The following year, the base was officially renamed Loring AFB in honor of Major Charles J. Loring. Major Loring, a native of Maine, received the medal of honor posthumously for deliberately crashing his crippled aircraft into enemy gun emplacements in Korea, destroying them in the process (Mueller 1989:327; Nason 1988:3; Stevens and Tyson 1980:65).

In October 1954, SAC headquarters activated the 45th Air Division at Loring AFB, and the division assumed base host responsibilities. In July 1955, the mission of the 42nd BMW was expanded with the activation of the 42nd Air Refueling Squadron (AREFS) and the arrival of 21 KC-97 tankers (Mueller 1989:329; Stevens and Tyson 1980:59-60, 62). However, the 75th BMS was deactivated in October 1955, leaving only two BMSs in the 42nd BMW (Mueller 1989:329).

Preparations to receive the B-52 *Stratofortress* were underway in September 1955 (Stevens and Tyson 1980:78). On June 16, 1956, the first B-52 arrived at Loring AFB and was christened the "State of Maine." By September, Loring AFB had acquired 20 of the 45 new aircraft to be assigned to the base (Stevens and Tyson 1980:79-82). The first KC-135 *Stratotanker* arrived in December 1957. The KC-135s replaced the propeller driven KC-97s, and the 42nd AREFS was now capable of joining the 42nd BMW to pursue the mission of sustaining long-range bombardment and refueling capabilities worldwide. The 42nd BMW and 42nd AREFS were the first all-jet, bomber-tanker combat unit in SAC (Loring AFB 1987:A-3; Stevens and Tyson 1980:86-87).

Significant advancements by the Soviet Union in the development of intercontinental ballistic missiles (ICBMs) caused SAC to implement the ground alert program at various bases in the United States. The Loring AFB Alert Force was established in October 1957. In July 1958, the Alert Force moved into four wings of Real Property No. 6000, initially built as a barracks, and utilized the parking apron located south of base operations for the alert aircraft. However, under this arrangement, crews remained 1.0 mi (1.6 km) from their aircraft (Pickart and Wessel 1994:3-27,3-28; Stevens and Tyson 1980:88-89). A specially designed Bomber Alert Facility was constructed east of the southern end of the runway in 1960. An alert apron, with a design known as the crow's foot or "christmas tree," was built next to this facility to park the B-52s in proximity to the air crews. This lay out saved valuable minutes for the pilots and crews to reach their aircraft in response to an emergency situation or during Operation Readiness Inspection (ORI) drills (Stevens and Tyson 1980:96).

The strategic location of Loring AFB was important to national defense. In October 1959, an ADC tenant, the 27th FIS, was assigned to Loring AFB (Mueller 1989:329). Equipped with the new F-106 *Delta Dart*, the 27th FIS was "part of a realignment of air defense weapons within the Semi-Automatic Ground Environment (SAGE) System to provide increased defense capabilities for the northeastern United States" (Stevens and Tyson 1980:93-94). The 27th FIS remained at Loring AFB until July 1, 1971.

Development of the Quail and Hound Dog air-launched missiles began in 1952 and 1956 respectively during the Eisenhower administration (Lewis et al. 1995). Loring AFB received the Hound Dog and Quail missiles between December 1960 and June 1961, and, by the end of 1961, the missiles were fully integrated into Loring's Alert Force. The 42nd Airborne Missile Maintenance Squadron (AMMS) was activated at Loring AFB on November 1, 1962, as part of a SAC program to provide specialized maintenance for its airborne missile inventory (Mueller 1989:329; Stevens and Tyson 1980:109).

Caribou AFS became the property of Loring AFB in July 1962 and was renamed East Loring. The Atomic Energy Commission transferred ownership and control of the special weapons to SAC. The 3080th Aviation Depot Group was inactivated and replaced by the 23rd Munitions Maintenance Squadron (MMS) which maintained and loaded the weapons for the 42nd BMW. To facilitate this, a road connected East Loring directly to the rear entrance of the Bomber Alert Facility (Civil Engineering Office, Loring AFB 1966:2; Mueller 1989:328; Stevens and Tyson 1980:107-111).

During the 1962 Cuban Missile Crisis, Loring AFB was placed on heightened alert status. Like other bases around the United States, Loring AFB participated in increased airborne alert missions: the 42nd BMW launched four B-52 bombers to participate in "Hard Head" and "Chrome Dome," operations over the North Atlantic and the Mediterranean respectively. Many units and their personnel went on 12 hour shifts, seven days a week, for the duration of the 40 day crisis (Stevens and Tyson 1980:112-113).

In 1966, the 70th BMS was deactivated, leaving the 42nd BMW with the 69th BMS (Mueller 1989:329). In July 1968, the arrival of the 407th AREFS doubled the strength of the tanker fleet. This squadron was at Loring AFB until its deactivation in 1990 (Stevens and Tyson 1980:86-87).

During the 1970s and 1980s, the 42nd BMW continued to receive state-of-the-art weapons technology for integration into the arsenal of the B-52, including the Short Range Attack Missile

(SRAM) and the Harpoon anti-ship missile (Lewis et al. 1995). The 42nd BMW at Loring AFB had integrated a SRAM loaded B-52 into its Alert Force by September 1972. The 42nd BMW became the first operational unit to utilize the SRAM because of Loring AFB's strategic position as the northernmost base in the continental United States (Lewis et al. 1995; Mueller 1989:328; Stevens and Tyson 1980:114). Loring AFB received the first Harpoon-modified B-52 in September 1983; in 1984, the first wing with the Harpoon missile was operational (Lewis et al. 1995; Loring AFB 1987:A-2).

Throughout the 1980s, the mission of the 42nd BMW in general and the 69th BMS in particular was to maintain a B-52 force capable of short-notice, long-range bombing worldwide, strategic sea surveillance and reconnaissance, aerial minelaying, and Harpoon anti-ship missile operations. They would be assisted by the 42nd and 407th AREFS in sustaining air refueling support (Loring AFB 1990:1). In 1990, the 407th AREFS was deactivated at Loring AFB, leaving only one refueling squadron.

In June 1991, the Base Realignment and Closure Commission voted to close Loring AFB in September 1994. In September 1991, as part of SAC-wide restructuring, the 42nd BMW became the 42nd Wing. In June 1992, the Air Force underwent restructuring, and Loring AFB became part of the new ACC. The 42nd Wing was again renamed, this time to 42nd Bomb Wing. [Editor's Note: Loring AFB was closed September 30, 1994. It is currently still under USAF control, and is managed by the Air Force Base Conversion Agency.]

3.2 BASE DEVELOPMENT

Construction at Loring AFB progressed in stages due to the cost and the enormous size of the base to be built. Between 1947 and 1949, the initial runway, base operations and control tower, electric power plant, railroad spur, and Arch Hangar were constructed. Maps depicting this early development are not available, although photographs depicting the expansion have been sent to the USAF archives at Maxwell AFB from the Loring AFB Wing Historian's office.

During the Korean Conflict, the base expanded northeast of the runway with the construction of Caribou AFS. The expansion included recreational, office, warehouse, maintenance, and weapons storage facilities to protect and store strategic and conventional weapons. In addition, the original 300 x 9,160 ft (91 x 2,792 m) runway was extended to 10,000 ft (3,048 m), and eight maintenance hangars were constructed in the vicinity of the Arch Hangar, located west of the southern end of the runway. Other construction completed by 1952 included a base hospital, motor pool, communications facility, Officer's club, and additional barracks, all located in the central portion of the base and west of the runway (Figure 3.1).

Loring AFB kept growing in size and manpower due to the addition of units and responsibilities to the base. Buildings and facilities completed in 1954 included a base chapel, gymnasium, Wing and Group headquarters, and an electric power plant (Stevens and Tyson 1980:68). A housing shortage was alleviated somewhat by the completion of the first Wherry Housing units in August 1954. These housing units were built in accordance with the 1949 National Housing Act (Wherry-Spence Act) that provided family housing on or near military installations (Lewis et al. 1995). Additional Wherry housing was completed in 1957. Under the Capehart Housing Act of 1955, Capehart family housing units were completed in 1958 and 1960 (Stevens and Tyson 1980:68, 96-98).

Also in 1954, construction emphasis at Loring AFB shifted toward expanding aircraft parking and maintenance facilities, and expanding the runway to meet the new USAF criteria for runway construction (Goldberg 1957:195; Lewis et al. 1995; Stevens and Tyson 1980:68,73,78). The new B-52 required a longer distance for takeoff, and the runways also had to withstand the heavy weight of the aircraft. Contracts were awarded in 1953 for the construction of eight multipurpose hangars. Before these were completed in 1954, the Corps of Engineers let another contract for 11 additional hangars; all were constructed northwest of base operations. Still another contract was awarded for the construction of "a mammoth double cantilever maintenance hangar that would dwarf the Arch Hangar" (Stevens and Tyson 1980:68,73). The double cantilever hangar, known as the DC Hangar,

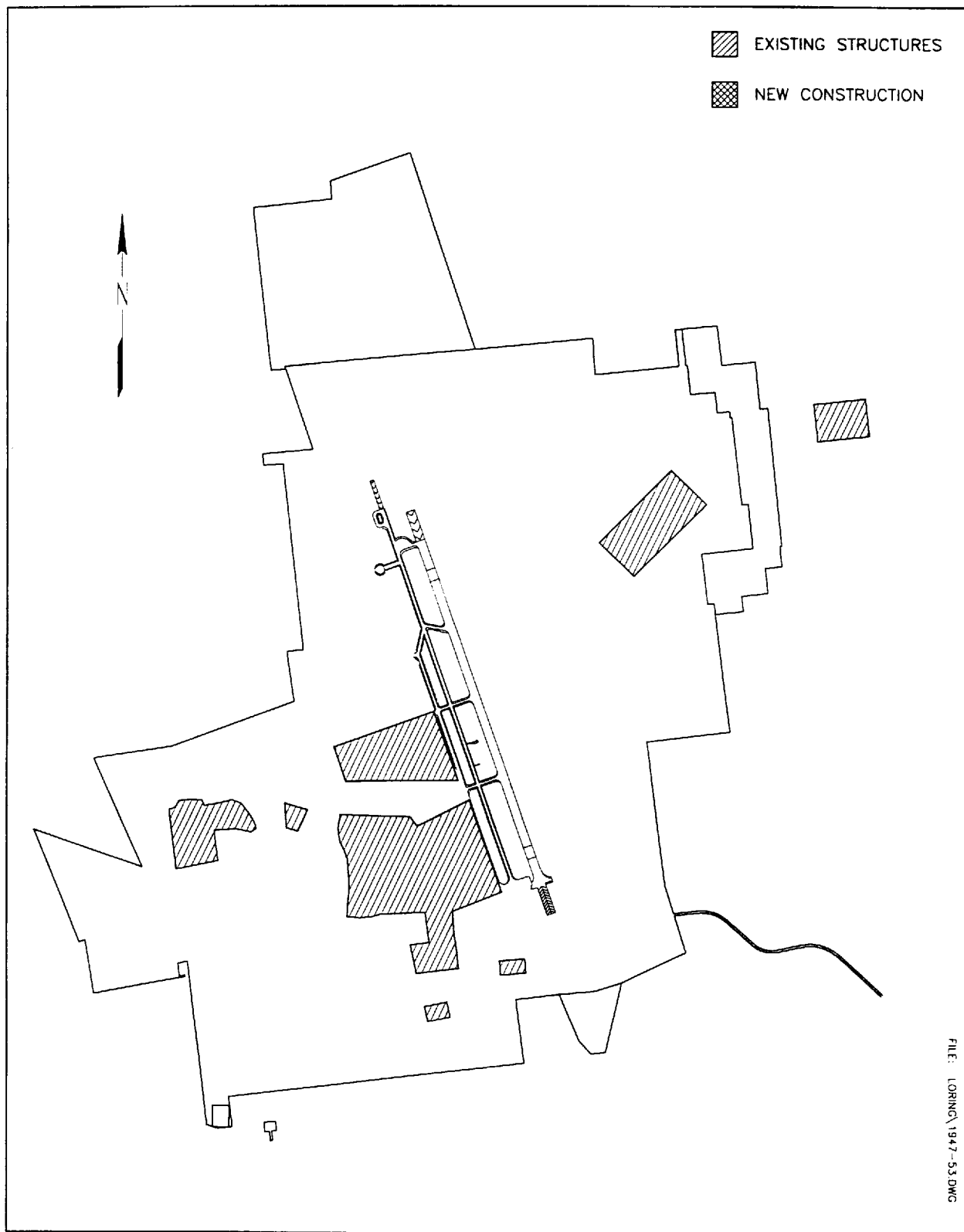


Figure 3.1 Loring Air Force Base, 1947-1953.

was completed in 1955; the other hangars and additional taxiways and parking aprons for the high volume of visiting aircraft were completed during 1955 and 1956.

The last construction project of major proportion was the expansion of the runway between May and November 1955 to prepare for the arrival of the new B-52 and to meet the new USAF requirements for runways, taxiways, and parking aprons. This entailed replacing 1,000 ft (305 m) at the southern end of the runway with concrete and constructing a 2,000 ft (610 m) extension with an additional 1,000 ft (305 m) overrun at the northern end of the runway. When completed, the runway achieved its present length of 12,100 ft (3,688 m).

Built in response to the 1957 SAC alert strategy, a specially designed Bomber Alert Facility was constructed east of the southern end of the runway in 1960. An alert apron, with a design known as the crow's foot or "christmas tree," was built to park the B-52s in proximity to this facility. In 1959, an alert hangar, crew readiness facility, maintenance hangar, flight simulator building, and rocket storage building were constructed at the base to accommodate the 27th FIS. Parking aprons and roads connected these facilities. These facilities were located southwest of the southern end of the runway and were connected to it by the "hot chute" flight line (Figure 3.2).

Loring AFB is the only ACC base to have its own dam and storage reservoir, built on the Little Madawaska River in 1959 to augment water supplied from wells which could not keep pace with base expansion. Other construction during the late 1950s and early 1960s included a large indoor swimming pool, a second chapel, a library, a non-commissioned officer (NCO) club, and renovation of the base commissary. A nine hole golf course and club house were built in 1961, located north of the Capehart housing development near the west gate entrance (Figure 3.2).

Between the 1960s and the present, construction of various new facilities and renovation of older buildings contributed to maintaining Loring AFB's mission as a SAC base and to making base personnel comfortable in the far northern environment.

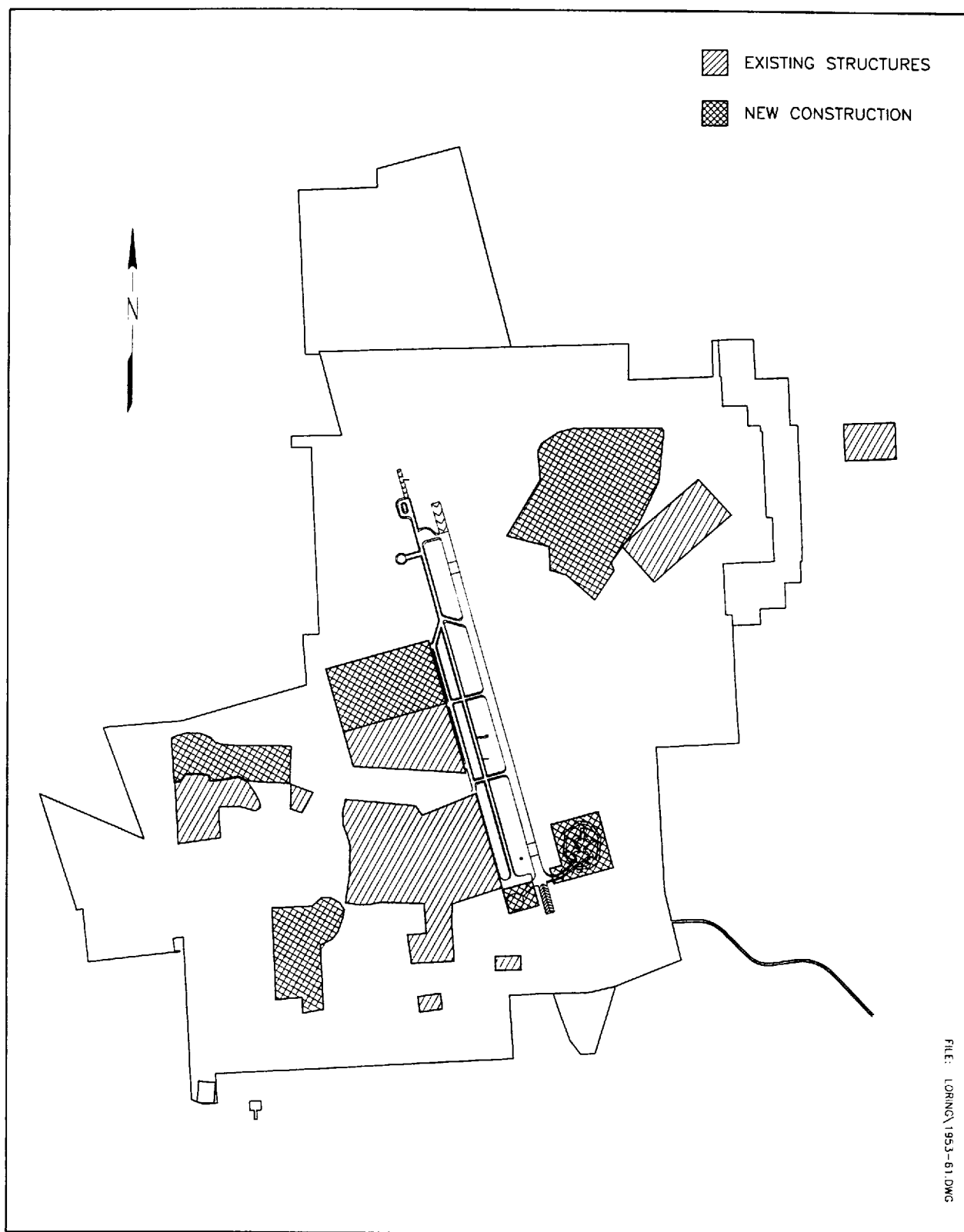


Figure 3.2 Loring Air Force Base, 1953-1961.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Loring AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Loring AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Loring AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance

of the resource. The fifth is the percentage of remaining historic fabric, or integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Loring AFB, Mariah scientists James Lowe and David Staley were welcomed by the point of contact and chief informant, Spurge Nason, Community Planner and Base Conversion Officer. Following discussion of the objectives and needs for completing the base inventory, Mr. Nason provided the field team with work space within the Real Estate Office. Mr. Nason then escorted the team to the Civil Engineer's Office and to the recently combined Public Affairs and Wing Historian's Office. At each location, base personnel were informed of the type of information and documentation needed by the Mariah team to complete its research and inventory of the base's history and Cold War context.

Following introduction to the base personnel, Mr. Nason led the field team on a tour of the base. Mr. Nason has been at Loring AFB for the past 19 years, and his knowledge of the base provided insight into areas for focus during Mariah's visit to Loring AFB. After the tour, the Mariah team photographed the various types of base architecture represented. Because the base was scheduled to close in September 1994 and was rapidly scaling down activities and personnel, the team had free

access and was able to photograph the buildings along the flight line, in and around the Bomber Alert Facility, and in the weapons storage area.

Once the photography was completed, team members divided tasks to research and inventory the contents of the offices mentioned above. Real Estate Office Property Change Lists, Inventory Codes, and cards were used to determine the location, current use, date of construction, and building materials of the facilities on base. The Drafting Office in the Civil Engineering Office provided disks containing C-Tabs depicting base layout, building numbers, runways, and roads. The Civil Engineering Office hanging map file collection was inventoried, and an attempt was made to acquire base maps by decade to show base expansion. However, many maps had been destroyed by water damage, and the team was only able to obtain current maps and maps representing the 1950s and 1960. Due to the upcoming closure date, the Wing Historian had already sent the Wing's history collection to Maxwell AFB to be stored in the USAF archives. The collection included Wing histories, a base newspaper collection, and photographs. The Public Affairs Officer shared an office with the Wing Historian and, with most materials packed for storage and moving, could provide no additional information to the Mariah team. Mr. Nason, the base Community Planner, provided the team with additional planning documents and research material.

Although the various research materials at Loring AFB were limited by the base's imminent closure, those available were used by the Mariah field team to select and study four resources for documentation and evaluation. Documentation of these resources also included additional photography and completion of a Property Management form designed specifically for this project.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Loring AFB, 188 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Four resources were evaluated at Loring AFB, all of them falling under the DoD category of real property. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

None were evaluated at Loring AFB.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 9125, Real Property No. 8970)

This building, uniquely constructed to function as a B-52 Bomber Alert Facility, is located east of, but adjacent to, the southern end of the runway. Completed in 1960, the facility integrated spaces for living, working, and recreation for SAC personnel on active alert status. In 1967, Project One Roof relocated all operational and maintenance alert force activities back into Real Property No. 6000 which had housed the alert force between 1958 and 1960. The Bomber Alert Facility was again utilized as an alert facility after a major renovation in 1983 and until the end of the Cold War.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	9125	8970	Real/Bldg	21
Maintenance Docks/Hangars	Large Aircraft Maintenance Dock	9003	8250	Real/Bldg	19
Maintenance Docks/Hangars	Large Aircraft Maintenance Dock	9102	8280	Real/Bldg	20
Storage	Segregated Storage Igloo	9146	260	Real/Bldg	23

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
23	9146	260	Segregated Storage Igloo
21	9125	8970	Bomber Alert Facility
20	9102	8280	Large Aircraft Maintenance Dock
19	9003	8250	Large Aircraft Maintenance Dock

The building's function as a Bomber Alert Facility is demonstrated by its architectural features: nearly windowless, semi-subterranean, and covered ramped entries for rapid egress.

The exterior of the facility retains its integrity and conveys the association and feeling of the facility's relationship to ground alert during the Cold War. The field team was unable to gain access into the building, thus the integrity of the interior of the facility could not be visually assessed. However, due to the building's initial construction as an alert facility, and its use as such during the last Phase of the Cold War, the integrity is determined to be intact.

The Bomber Alert Facility is extremely important to Loring AFB's Cold War context and to Cold War history at the national level. Known as the "Molehole," this building represents the alert posture promulgated by SAC as part of the United States deterrence strategy and exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to NSC-68's concept of deterrence through a survivable force and to Killian Report recommendations for the dispersion of bombers across the country (Lewis et al. 1995). The B-52 bomber force was an integral part of the DoD defense triad and was relied on as the United State's primary manned nuclear bomber for over 30 years. This facility served this purpose during Phases II, III, and IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.2 Maintenance Docks/Hangars

6.2.2.1 Large Aircraft Maintenance Dock (Resource No. 9003, Real Property No. 8250)

Called the "Arch Hangar," this large aircraft maintenance hangar was constructed in 1952, and at the time of its completion, the building comprised the largest monolithic roof structure in the United States with the exception of a similar hangar built at Ellsworth AFB, South Dakota. The facility was variously used as a field maintenance hangar, a SRAM support facility, and a

non-destructive inspection lab. This building is located west of the southern end of the runway along the parking apron.

The building is constructed of brick and reinforced concrete. The primary structural system is reinforced concrete arches with a clear span of 340 ft (104 m). The arches are buttressed by 14 ft x 20 in (4 m x 51 cm) concrete structures at the base of each arch. The arches define nine bays and support a concrete roof. This construction provided massive, unimpeded open space sufficient to house two B-36 bombers at once. The building has an uncomplicated grace that arises from its concrete arches, rounded massing, and clean lines. This reinforced concrete arch construction is unique to two bases, Loring AFB and Ellsworth AFB, South Dakota, where a similar structure was built.

Although offices have been constructed in the interior, they have not compromised the overall integrity of the building, and the exterior has been modified little. The interior space can still be perceived from the central entrance. Thus, the integrity of the building is intact.

The structure was built to provide protection and maintenance for two B-36 bombers at once, at a time when the B-36 was the backbone of the SAC strategic force. These bombers were integral to the base mission from 1953 until 1956, when the 42nd BMW changed to B-52s. The B-36 was critical to Phases I and II of the Cold War era, in that it was the world's largest bomber and the only bomber at that time that could reach the Soviet Union (Knaack 1988). This capability answered directly to the National Security Council's 1949 declaration that deterrence would be the national military strategy (McDougall 1985). The B-36 has a large bomb and fuel capacity, which allow it to reach its target, drop its bomb load, and return to its home base. When the B-36 was operationalized, the B-29 and B-50 lost their heavy bomber status and were reclassified as medium bombers, while the B-36 was classified a heavy bomber (Polmar and Laur 1990). The B-36's wingspan is 230 ft (70 m) and its length is 160 ft (49 m); the hangar can fit two of these aircraft placed nose to nose. The arched reinforced concrete construction, large span, and use for the B-36

give this structure its exceptional Cold War significance. This building fulfilled its primary role during Phase II of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.2.2 Large Aircraft Maintenance Dock (Resource No. 9102, Real Property No. 8280)

Real Property No. 8280 is a maintenance hangar located north of the Arch Hangar on the western side of the runway. Completed in 1955, the building was one of the first double cantilever structures built in the United States, hence its name, "DC Hangar."

The building is exceptionally significant for its architecture because it represents a revolutionary engineering design that allowed enough space for five B-36 aircraft. It was one of the first double cantilever hangars built for the Air Force and, because of the northern Maine environment, required special construction techniques. The building is characterized by the double cantilever design, massive open space, large sliding doors, and tremendous steel trusses that support the roof. Although the building was modified slightly in 1957 to accommodate the B-52, it retains its exterior and interior integrity.

It is significant to the base's history because it was designed and built in response to the need for increased maintenance space as Loring AFB acquired more aircraft, and as transient aircraft traffic increased due to the base's strategic location and its importance as the northernmost base in the continental United States. It was originally constructed for the B-36, which at the time was the backbone of SAC's deterrent force. This building was extant during Phases II through IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.3 Weapons Storage

6.2.3.1 Segregated Storage Igloo (Real Property No. 260, Resource No. 9146)

Located in the middle of East Loring's weapons storage area, Real Property No. 260 was constructed in 1952 specifically to store nuclear components for the assembly of nuclear weapons. The facility was used for this function until approximately 1964. The facility's early Cold War date of construction, associated security measures (concrete blockhouses with gunsights and an observation tower), and its architectural design make it unique among USAF property types. The structure is characterized by massive, 10 ft (3 m) thick reinforced concrete walls and four interior vaults with steel doors, all part of the nuclear blast-proof construction. The exterior wall design includes imitation windows that are actually solid concrete. The primary goal of this design was security. The design gave the structure the appearance of a staff building if photographed or viewed from a distance.

The integrity of both the exterior and interior is currently intact. However, the facility is now abandoned and starting to deteriorate. The resulting threat to this particular structure is high and its integrity could be compromised.

This facility is extremely important because it is part of the first operational atomic weapons storage site constructed under the control of SAC in response to the onset of the Cold War. During its operation, it was one of only two fully capable SAC conventional weapons storage facilities in the continental United States. The security measures associated with the building, along with the nuclear blast-proof construction, illustrate the importance of survivability to the country's strategy of strategic deterrence. As such, it played a significant role in the waging of the Cold War and represents the significant warfighting capability of the USAF. The facility storage area was the closest to the Soviet Union within the continental United States, therefore its setting at Loring AFB also emphasizes the concept of strategic location. It fulfilled this function during Phase II of the Cold War era, and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Loring AFB.

6.4 TRAINING FACILITIES

None were evaluated at Loring AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Loring AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Loring AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Loring AFB. These resources should be investigated further for a more comprehensive analysis.

A Master Plan dating to 1957 was found at the Community Planner's office. Bound in a large, blue binder, this collection of original engineering drawings also contains aerial photographs.

The Wing History Office contained a few miscellaneous historic items, including two folders of photographs, five boxes of slides, and a bound history titled *The Loring Episode* (Stevens and Tyson 1980). One folder consists entirely of facility construction photographs, the other contains a mixture of construction, commander, and personnel photographs. The subject material of the slides consists mostly of personnel and some property. These items from the Wing History office are to be sent to ACC. Any duplicates of property photographs will be donated to the Limestone Historical Society (SSgt JoAnne Scibetta-Sargent, personal communication, July 7, 1994).

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Loring AFB revealed approximately 155 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Loring AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

There is no historic preservation plan for Loring AFB. Following closure in September 1994, the base will become the Defense Finance and Accounting Center. As yet, nothing definite has been decided for facilities not connected to the latter function (Spurge Nason, personal communication, July 18, 1994). Properties evaluated for this project are perceived as having a moderate to high level of threat to their interior and exterior integrity because of the impending closure. All have been abandoned and utilities have been shut off. Minimum maintenance to sustain the exterior of these buildings and provide weather proofing is planned for Real Property Nos. 8250, 8280, and 8970. No plans as yet have been made for Real Property No. 260.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Loring AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Loring AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Loring AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Loring AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Bomber Alert Facility (Resource No. 9125, Real Property No. 8970)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II, III, and IV. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact based upon partial visual inspection and use of the building for this purpose during the last phase of the Cold War. Therefore, this building is

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
9003	8250	Large Aircraft Maintenance Dock		*	*	*		NRHP eligible now.
9102	8280	Large Aircraft Maintenance Dock		*	*	*		NRHP eligible now.
9125	8970	Bomber Alert Facility		*	*	*		NRHP eligible now.
9146	260	Segregated Storage Igloo		*	*	*		NRHP eligible now.

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.2 Large Aircraft Maintenance Dock (Resource No. 9003, Real Property No. 8250)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II. It meets NRHP criteria (a) and (c) based on its role in maintaining the B-36 force and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact as only minimal modifications have been made to the interior. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.3 Large Aircraft Maintenance Dock (Resource No. 9102, Real Property No. 8280)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II. It meets NRHP criteria (a) and (c) based on its role in maintaining the B-36 force and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact as only minimal modifications have been made. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.4 Segregated Storage Igloo (Resource No. 9146, Real Property No. 260)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique

to this building type and identify it as an example of Cold War military architecture. The integrity of the facility is intact based upon direct observation. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.3 BASE CLOSURE

Because the base is scheduled for closure, and only minimum maintenance and weather proofing is planned for facilities 8250, 8280, and 8970, the threat of impact to the integrity of these facilities is great. Facility 260 is already beginning to deteriorate and no plans have been made for its maintenance, thus its integrity is currently being adversely affected. It is recommended that stewardship of all four of these buildings be undertaken immediately and that determinations of eligibility be formalized quickly to prevent any further loss of integrity to these buildings which are recommended as eligible to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Civil Engineering Office, Loring Air Force Base

- 1966 *42nd Civil Engineering Information Brochure, Loring Air Force Base, Maine*. On file, Real Estate Office, Loring Air Force Base, Maine.
- 1991 *Executive Summary Brochure, Facility Improvement Program, Loring Air Force Base, Maine*. On file, Civil Engineering Squadron, 42 CES/DEVD, Loring Air Force Base, Maine.

Department of Defense

- 1972 *Installation Survey Report, Loring Air Force Base and Caswell Air Force Station, Limestone, Maine*. On file, Real Estate Office, Loring Air Force Base, Maine.
- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Goldberg, A.

- 1957 *A History of the United States Air Force, 1907-1957*. D. Van Nostrand Company, Inc., Princeton, New Jersey.

Knaack, M. S.

- 1988 *Encyclopedia of U.S. Air Force Aircraft and Missile Systems, Vol. II: Post World War II Bombers 1945-1973*. Office of Air Force History, Washington, D.C.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.
-

Loring Air Force Base

- 1961 *Abbreviated Master Plan, Loring Air Force Base, Limestone, Maine.* On file, Real Estate Office, Loring Air Force Base, Maine.
- 1987 *Air Installation Compatible Use Zone (AICUZ), Loring Air Force Base: A Report to the Governments and Citizens of the Loring Air Force Base Environs.* On file, Real Estate Office, Loring Air Force Base, Maine.
- 1989 *Real Property Study, Annual Review, Loring Air Force Base, Maine.* On file, Real Estate Office, Loring Air Force Base, Maine.
- 1990 *Economic Resource Impact Statement, Fiscal Year 1990, Loring Air Force Base, Maine.* On file, Real Estate Office, Loring Air Force Base, Maine.

McDougall, W. A.

- 1985 *The Heavens and the Earth: A Political History of the Space Age.* Basic Books, Inc., New York.

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*, Vol. 1. Office of History, United States Air Force, Washington, D.C.

Nason, S.

- 1988 *Commanders Executive Summary Brochure, Loring Air Force Base, Maine.* On file, Real Estate Office, Loring Air Force Base, Maine.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years.* National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised).* National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Pickart, M.M., and T.C. Wessel

- 1994 *Draft Architectural and Historic Evaluation, Loring Air Force Base, Aroostook County, Maine.* Archaeological and Historical Consultants, Inc., Centre Hall, Pennsylvania; The Earth Technology Corporation, Colton, California.

Polmar, N., and T. M. Laur, Eds.

- 1990 *Strategic Air Command: People, Aircraft, and Missiles.* Second edition. The Nautical and Aviation Publishing Company of America, Baltimore, Maryland.
-

Stevens, W.E. SSgt, and AIC P.G. Tyson

1980 *The Loring Episode*. On file, Wing History Office, Loring Air Force Base, Maine.

United States Air Force

1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	9002	291	Water Supply Building	1960
	9003	8250	Large Aircraft Maintenance Dock	1952
	9004	5100	Wing Headquarters	1954
	9005	6000	Squadron Operations	1952
	9006	5210	Base Library	1990
	9007	5910	Base Theater	1986
	9008	5904	Recreation Center	1987
	9009	5900	Gymnasium	1954
	9010	5906	Arts and Crafts Center	1983
	9011	5902	Indoor Swimming Pool	1958
	9012	6350	Permanent Party Airman Dormitory	1983
	9013	6201	Special Operations	1959
	9014	6540	Non-Commissioned Officers Open Mess	1987
	9016	6555	Bowling Center	1985
	9018	6510	Base Engineering Maintenance Shop	1954
	9019	6565	Combat Arms Training Maintenance	1953
	9020	6515	Security Police Kennel Support	1956
	9021	6580	Animal Clinic	1955
	9022	4000	Base Engineering Maintenance Shop	1952
	9023	3005	Fire Station	1956
	9024	None	New England Telephone Company Exchange	Unknown
	9025	6525	Airman Dining Hall	1986
	9026	5007	Data Processing Installation	1983
	9027	5000	Base Personnel Office	1988
	9028	5001	Communication Facility	1987
	9029	5002	Electric Power Station	1954
	9030	5003	Post Office Center	1957
	9031	2510	Service Station Exchange	1955
	9032	5005	Bank Branch	1957
	9033	8700	Store Commissary	1986
	9034	5300	Morale, Welfare, Recreation Supply and Non-Appropriated Fund	1953
			Central Storage	
	9035	8702	Sales Store Exchange	1975
	9036	5050	Flight Simulator Training	1952
	9038	5301	Warehouse Supply and Base Equipment	1953
	9039	8701	Water Pump Station	1961
	9040	5302	Chapel Center	1986
	9041	5055	Base Photo Laboratory	1954
	9043	5920	Outdoor Recreation Pavillion	1964
	9045	1300	Damon Elementary School	1954
	9046	1350	Child Care Center	1956
	9048	1502	Traffic Check House	1988
	9049	1500	Security Police Control Identification	1988
	9050	2718	Wherry Family Housing	1954
	9051	2808	Wherry Family Housing	1954
	9052	2757	Wherry Family Housing	1954
	9053	2303	Family Housing Appr. 1950-1969	1957
	9054	2202	Family Housing Appr. 1950-1969	1953
	9055	2122	Family Housing Appr. 1950-1969	1953
	9056	2112	Visiting Officers' Quarters - "Maine Lodge"	1953
	9057	2501	Visiting Officers' Quarters	1990
	9058	2500	Officers' Quarters	1952
	9059	2550	Officers' Open Mess	1952

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	9060	3520	Base Chapel	1986
	9061	3360	Youth Center	1973
	9062	3502	Composite Medical Center	1988
	9064	3010	Wing Headquarters	1952
	9065	4116	Family Housing Appr. 1950-1969	1953
	9066	4200	Family Housing Appr. 1950-1969	1953
	9067	4300	Family Housing Management Office	1989
	9068	4484	Base Engineering Maintenance Shop	1986
	9069	4682	Wherry Family Housing	1954
	9074	4805	Miscellaneous Recreation Building - Ski Chalet	1969
	9075	1200	Water Pump Station	1952
	9076	7300	Base Engineering Administration	1953
	9077	6570	Automotive Hobby Shop	1986
	9078	7270	Base Engineering Covered Storage Facility	1986
	9079	7250	Base Hazardous Storage	1954
	9080	7206	Liquid Oxygen Storage	1959
	9081	7204	Solid Waste Disposal Facility	1954
	9082	8251	General Purpose Aircraft Shop	1952
	9083	7210	Traffic Management Facility	1986
	9084	7213	Base Hazardous Storage	1952
	9085	7220	Warehouse Supply and Equipment Base	1986
	9086	8265	Base Engineering Covered Storage Facility	1955
	9087	7260	Liquid Fuel Pump Station	1952
	9089	7240	Electric Power Station Building	1954
	9090	7310	Heating Facility Building	1953
	9091	7315	Base Cold Storage	1952
	9092	7330	Base Laundry and Dry Cleaning	1990
	9093	7510	Vehicle Maintenance Shop	1953
	9095	14220	Locomotive Shop and Shelter	1991
	9096	7809	Petroleum Operations Heated Parking	1991
	9097	7841	Vehicle Operations Heated Parking	1959
	9098	8440	Security Police Central Control	1960
	9099	8420	Security Police Operations	1960
	9100	8430	Security Police Operations	1960
	9101	8390	Base Engineering Pavement and Grounds Facility	1960
	9102	8280	Large Aircraft Maintenance Dock	1955
	9105	8410	Alert Hangar	1960
	9106	8412	Aircraft Equipment Shop and Storage Facility	1991
	9107	8260	Jet Engine Maintenance Shop	1989
	9108	8262	General Purpose Aircraft Shop	1956
	9109	8261	Test Cell	1989
	9110	7610	Group Headquarters	1957
	9111	7600	Vehicle Refueling Shop	1955
	9115	8713	Weapons System Maintenance Management Facility	1983
	9116	8202	Fire Station	1988
	9117	8200	Base Operations	1952
	9118	8201	Utility Vault -Airfield Lighting	1952
	9119	8205	Fire Station	1981
	9120	8000	Surface Weather Observation Facility	1987
	9121	8810	Survey Equipment Storage	1956
	9122	8800	Avionics Shop	1954
	9123	8820	Correction Facility	1954
	9124	8840	Squadron Operations - Life Support	1986
	9125	8970	Bomber Alert Facility	1960
	9126	8990	Master Surveillance and Control	1986

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	9128	8938	Base Supply and Equipment Warehouse	1961
	9129	None	Cold Weather Testing Fences and Test Buildings	Unknown
	9130	8950	Security Police Entry Control Building	1959
	9131	8960	Base Engineering Covered Storage Facility	1967
	9132	8951	Base Engineering Covered Storage Facility	1959
	9133	8952	Magazine Storage	1959
	9134	405	Base Hazardous Storage	1958
	9135	700	Small Arms Range Systems	1970
	9137	24	Explosive Ordnance Disposal	1956
	9138	109	Conventional Munitions Shop	1956
	9139	101	Indoor Small Arms Range	1952
	9140	107	Base Supply and Equipment Warehouse	1952
	9141	216	Conventional Munitions Shop	1952
	9142	220	Security Police Entry Control Building	1976
	9143	272	Storage Igloo	1955
	9144	276	Storage Igloo	1952
	9145	259	Security Police Entry Control Building	1952
	9146	260	Segregated Storage Igloo	1952
	9147	262	Security Police Entry Control Building	1952
	9148	227	Alert Fire Team Facility	1983
	9149	229	Electric Power Station Building	1983
	9150	232	Surveillance Inspection Shop	1954
	9151	233	Missile Assembly Shop	1956
	9152	2770	Wherry Family Housing	1954
	9153	2768	Wherry Family Housing	1954
	9154	2905	Capehart Family Housing	1954
	9155	2910	Capehart Family Housing	1954
	9156	8718	Vehicle Fueling Station	1986
	9157	8712	Vehicle Operations Heated Parking	1986
	9158	8716	Vehicle Operations Heated Parking	1986
	9159	8740	Vehicle Operations Heated Parking - Nose Dock	1956
	9160	8622	Base Supply and Equipment Warehouse - Nose Dock	1954
	9163	8116	Hydraulic Fluid Building	1991
	9164	8118	Hydraulic Fluid Building	1991
	9166	8721	Base Hazardous Storage - Acid Storage	1954
	9167	8720	Missile Run Up Shop	1960
	9168	8710	Missile Assembly Shop	1960
	9169	8711	Explosive Ordnance Disposal	1960
	9170	2006	Base Engineering Pavement and Grounds Facility	1954
	9171	2004	Golf Clubhouse	1961
	9172	8968	Crew Readiness - Visitation Center	1986
	9173	360	Sanitary Sewage Pump Station	1952
	9174	361	Munitions Maintenance Administration	1956
	9175	370	Air Force Plant Administration Office	1952
	9176	368	Conventional Munitions Shop	1952
	9177	365	Armament Test Facility - Heavy Metal Lab	1952
	9178	367	Air Force Plant Administration Office	1952
	9179	374	Base Supply and Equipment Warehouse	1956
	9181	343	Above Ground Storage Magazine	1952
	9182	339	Storage Igloo	1952
	9183	329	Storage Igloo	1954
	9184	9082	Storage Igloo	1954
	9185	9062	Storage Igloo	1954
	9187	None	Capehart Family Housing	1958

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Landscape				
	9015	6545	Tennis Court	1990
	9017	6549	Softball Athletic Field	1983
	9044	3305	Athletic Field Track	1987
	9070	14505	Miscellaneous Outdoor Recreation Facility - Bomber/Refueler Playground	1989
	9071	14500	Miscellaneous Outdoor Recreation Facility - Malabeam Lake Picnic Area	1960
	9072	4701	Family Camps	1987
	9073	4804	Miscellaneous Outdoor Recreation Facility - Ski Slope	1967
	9094	14222	Load and Unload Conveyor and Coal Stockpile	1985
	9104	None	Tanker Cage	1989
	9113	6800	Hazardous Waste Disposal Landfill	1989
	9114	None	Vehicle Storage Lot	Unknown
	9136	None	East Loring Ordnance Disposal	Unknown
Real Property - Object				
	9047	667	Billboard	1981
	9161	None	"42nd Wing Mission" Sign	Unknown
Real Property - Structure				
	9001	296	Metawaska Dam	Unknown
	9037	8705	Airport Surveillance Radar	1964
	9042	7200	Water Storage Tank	1952
	9063	3510	Water Storage Tank	1954
	9088	7317	Diesel Storage	1955
	9103	8402	Blast Deflector	1989
	9112	6900	Fireman Training Facility	1976
	9127	None	Alert Facility Runway Motorized Security Gate	1986
	9162	None	Blast Deflector	Unknown
	9165	8122	Fuel Storage Tank	1991
	9180	1026	Water Storage Tank	1956
	9186	None	Christmas Tree Alert Aircraft Apron	1961
Record or Document - Object				
	9188	None	Map Files-Civil Engineering	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

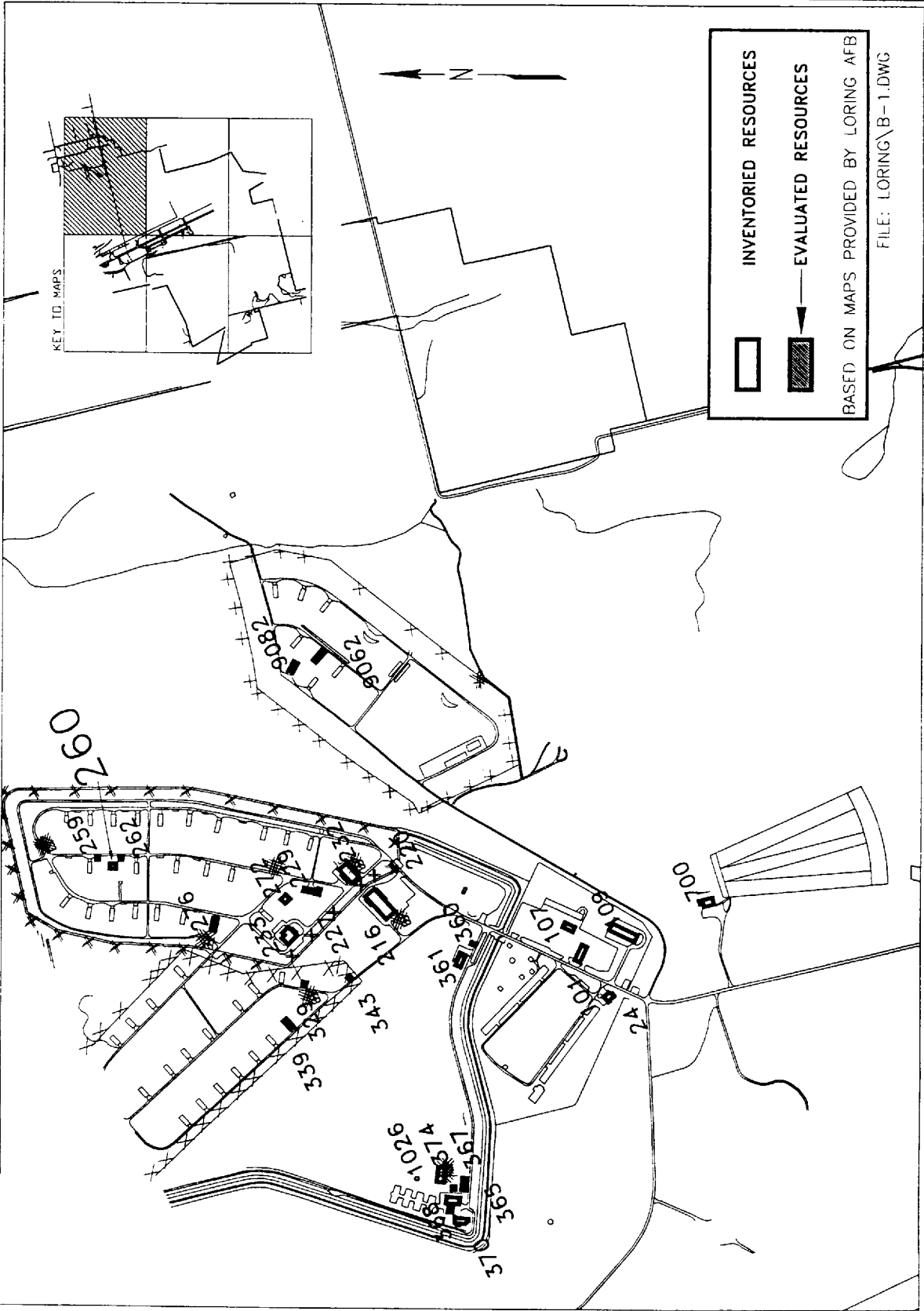


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 1 of 5).

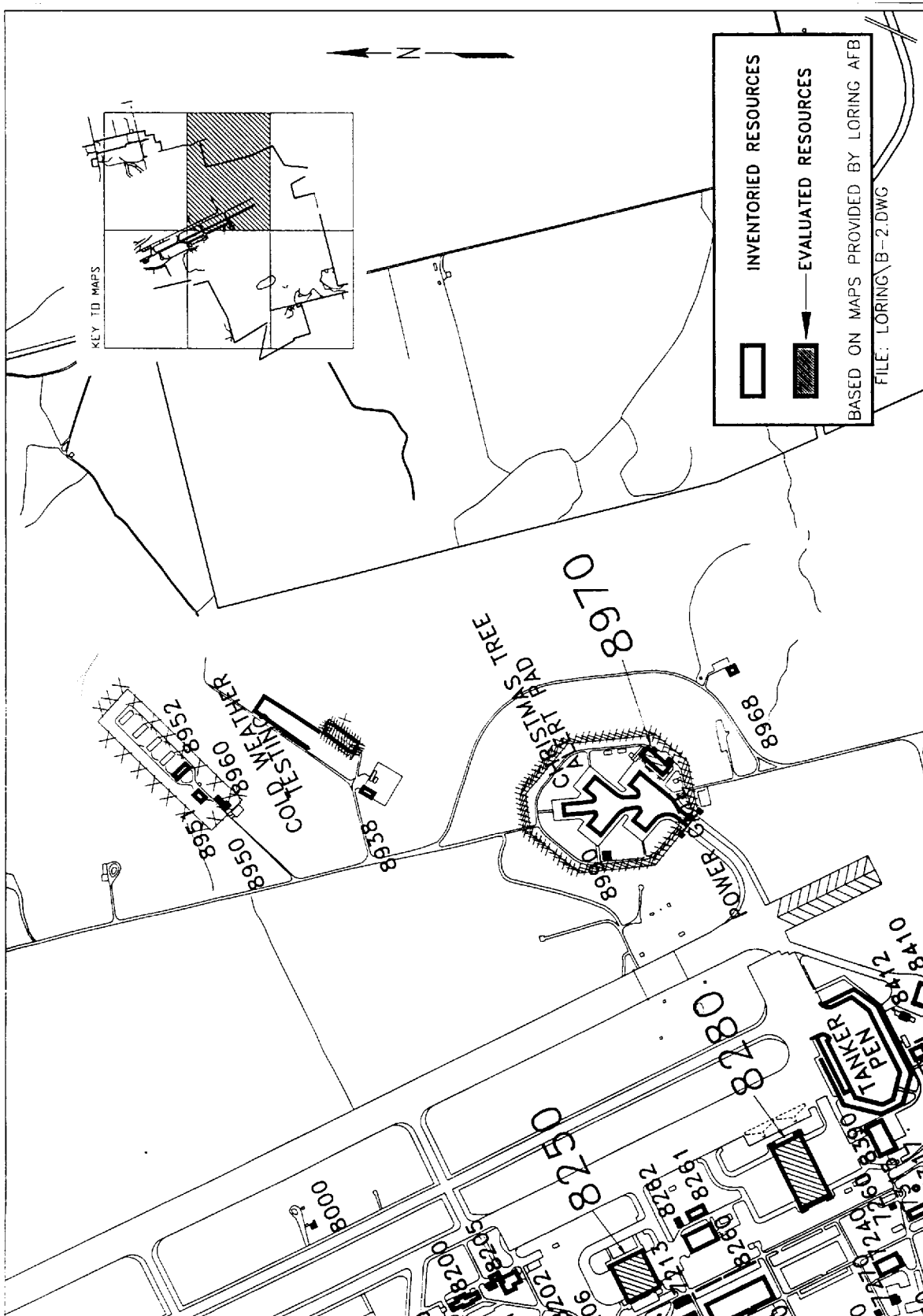
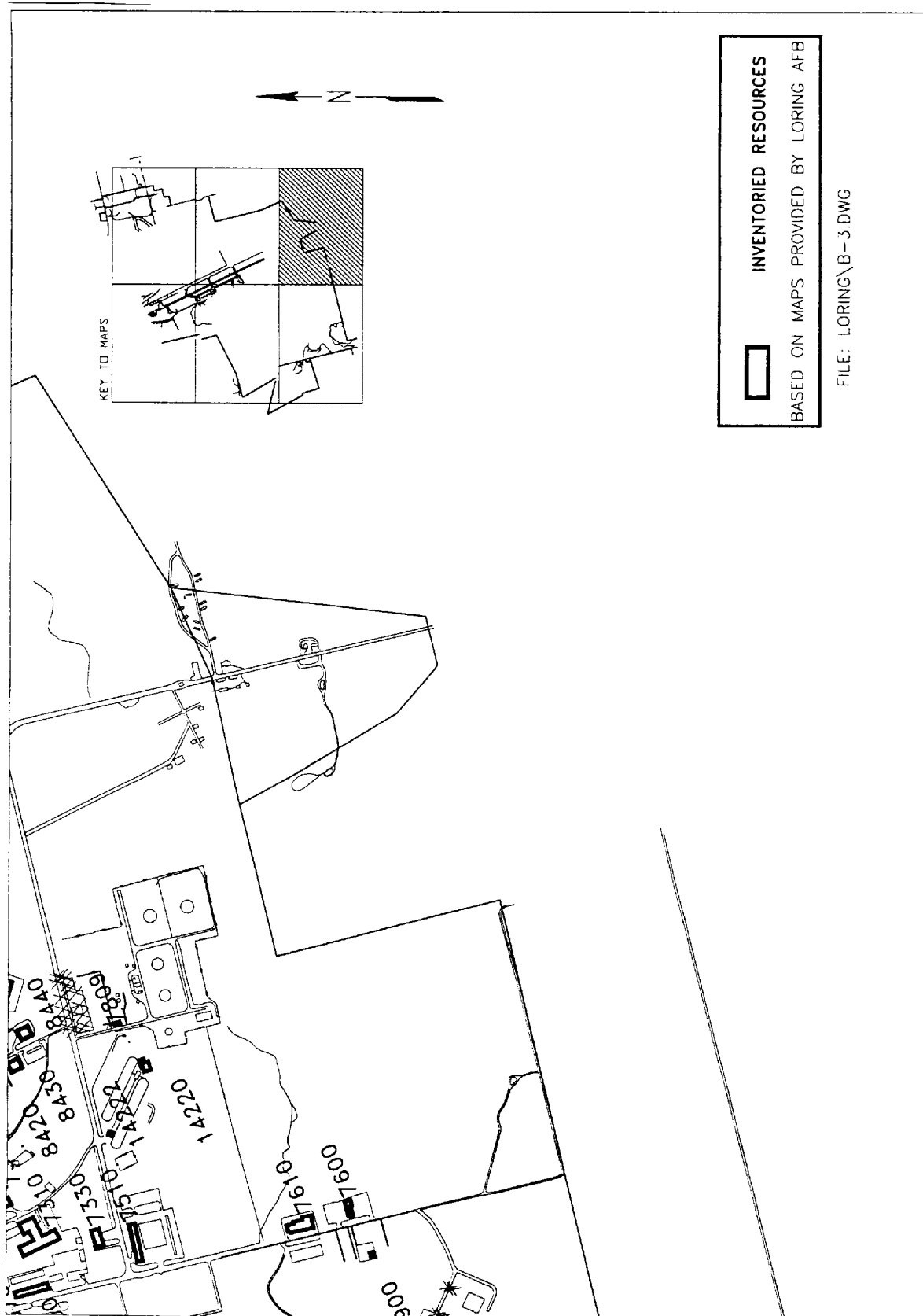


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 2 of 5).



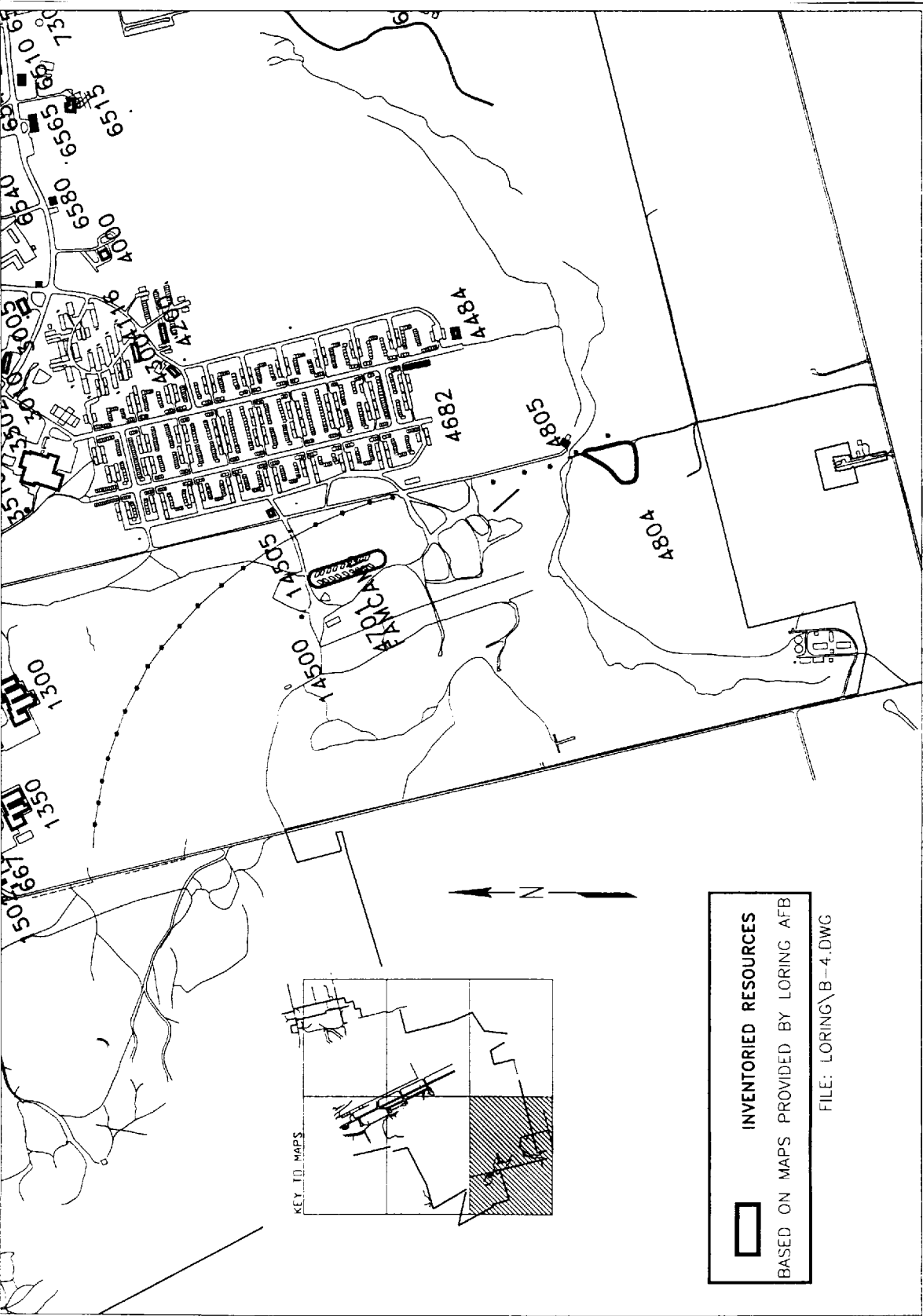
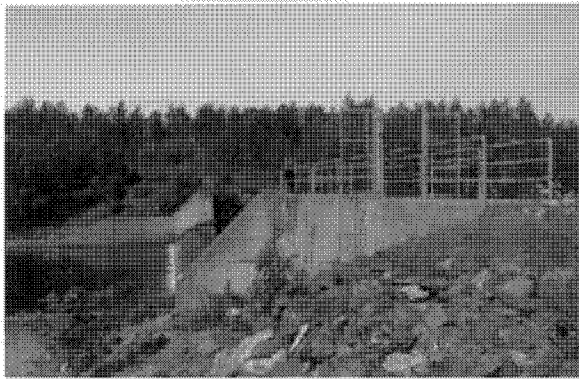


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 4 of 5).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 9001, Real Property No. 296,
Metawaska Dam



Resource No. 9002, Real Property No. 291,
Water Supply Building



Resource No. 9003, Real Property No. 8250,
Aircraft Corrosion Control



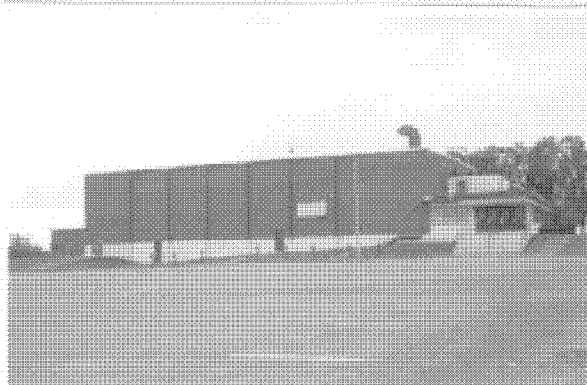
Resource No. 9004, Real Property No. 5100,
Wing Headquarters



Resource No. 9005, Real Property No. 6000,
Squadron Operations



Resource No. 9006, Real Property No. 5210,
Base Library



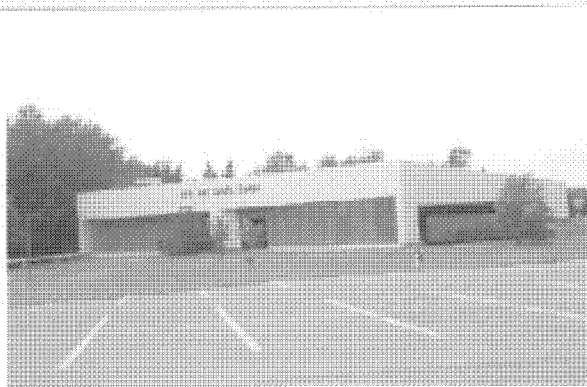
Resource No. 9007, Real Property No. 5910,
Base Theater



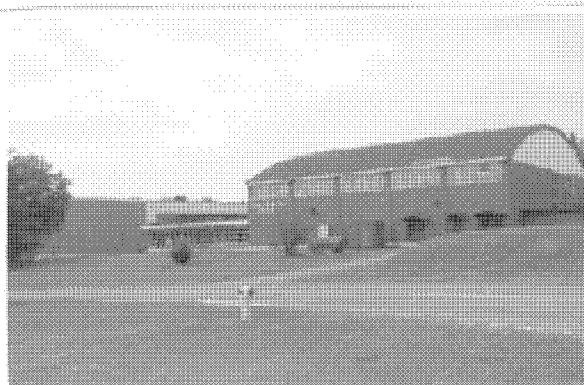
Resource No. 9008, Real Property No. 5904,
Recreation Center



Resource No. 9009, Real Property No. 5900,
Gymnasium



Resource No. 9010, Real Property No. 5906,
Arts and Crafts Center



Resource No. 9011, Real Property No. 5902,
Indoor Swimming Pool



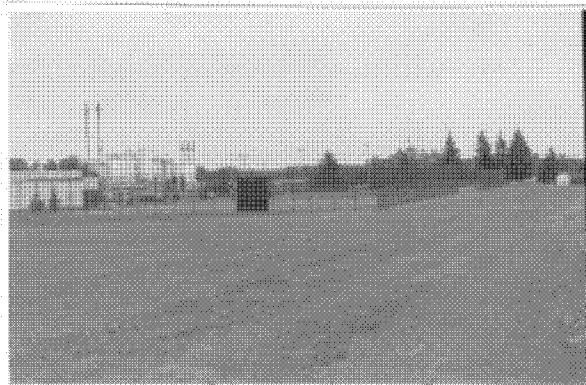
Resource No. 9012, Real Property No. 6350,
Airman Dormitory



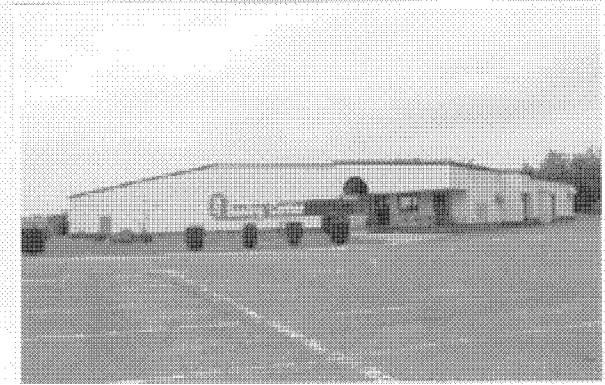
Resource No. 9013, Real Property No. 6201,
Special Operations



Resource No. 9014, Real Property No. 6540,
Non-Commissioned Officer's Open Mess



Resource No. 9015, Real Property No. 6545,
Tennis Court



Resource No. 9016, Real Property No. 6555,
Bowling Center



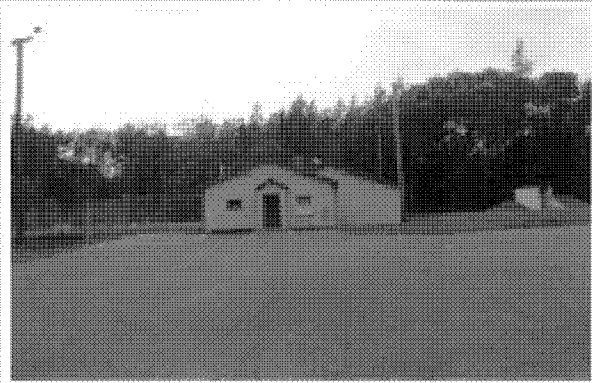
Resource No. 9017, Real Property No. 6549,
Softball Athletic Field



Resource No. 9018, Real Property No. 6510,
Base Engineering Maintenance Shop



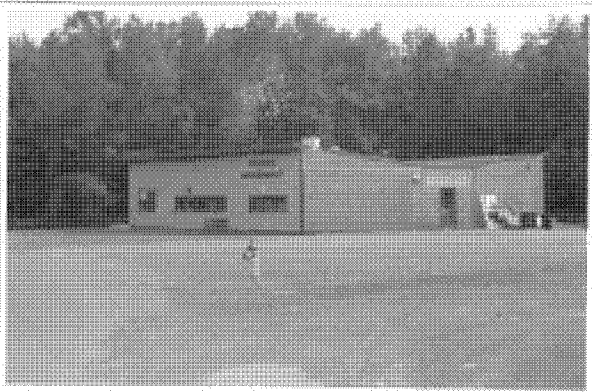
Resource No. 9019, Real Property No. 6565,
Combat Arms Training Maintenance



Resource No. 9020, Real Property No. 6515,
Security Police Kennel Support



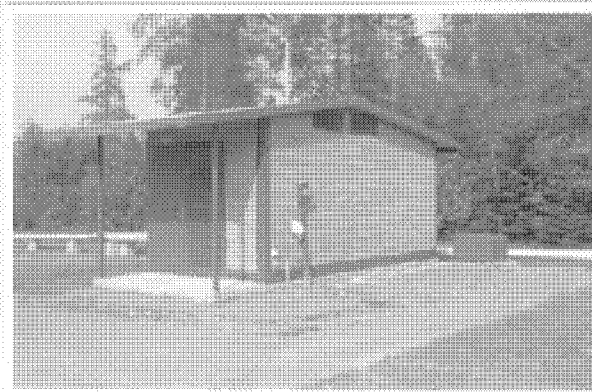
Resource No. 9021, Real Property No. 6580,
Animal Clinic



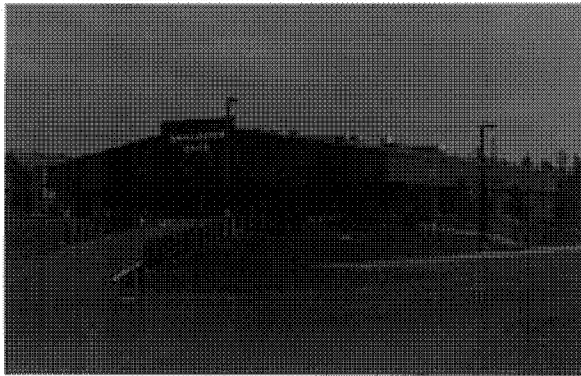
Resource No. 9022, Real Property No. 4000,
Base Engineering Maintenance Shop



Resource No. 9023, Real Property No. 3005,
Fire Station



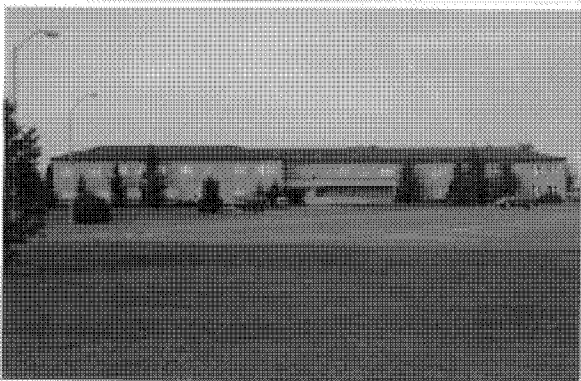
Resource No. 9024, Real Property No. (none),
New England Telephone Company Exchange



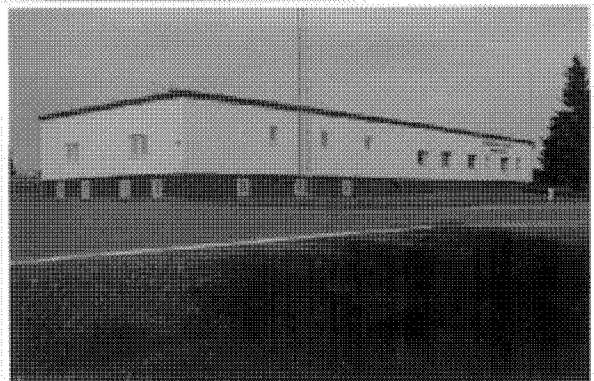
Resource No. 9025, Real Property No. 6525,
Airman Dining Hall



Resource No. 9026, Real Property No. 5007,
Data Processing Installation



Resource No. 9027, Real Property No. 5000,
Base Personnel Office



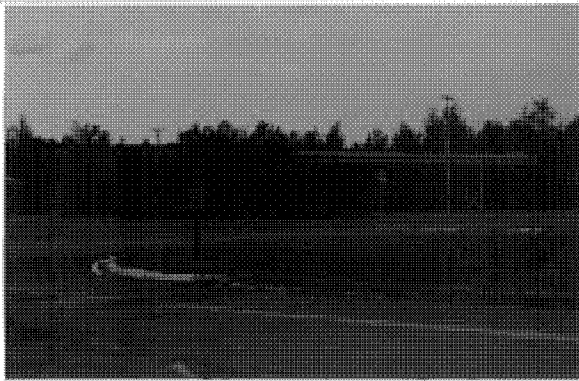
Resource No. 9028, Real Property No. 5001,
Communication Facility



Resource No. 9029, Real Property No. 5002,
Electric Power Station



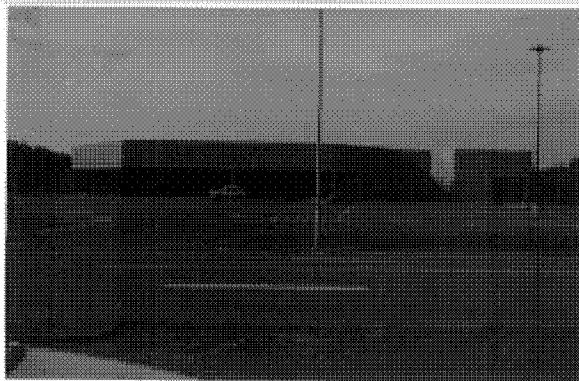
Resource No. 9030, Real Property No. 5003,
Post Office Center



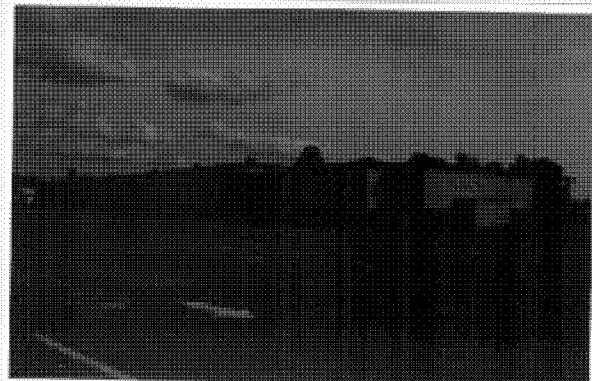
Resource No. 9031, Real Property No. 2510,
Service Station Exchange



Resource No. 9032, Real Property No. 5005,
Bank Branch



Resource No. 9033, Real Property No. 8700,
Store Commissary



Resource No. 9034, Real Property No. 5300,
MWR Supply and NAF Central Storage



Resource No. 9035, Real Property No. 8702,
Sales Store Exchange



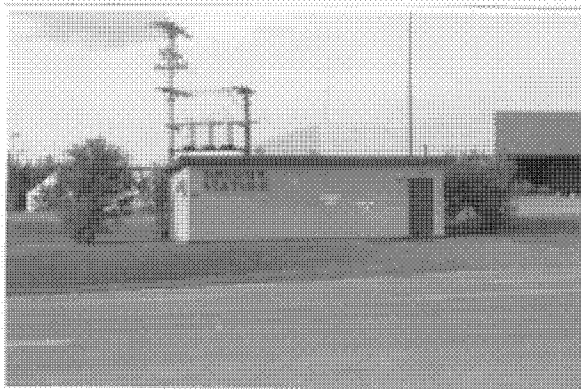
Resource No. 9036, Real Property No. 5050,
Flight Simulator Training



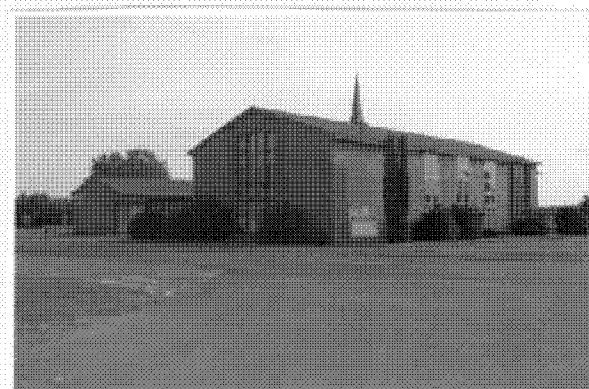
Resource No. 9037, Real Property No. 8705,
Airport Surveillance Radar



Resource No. 9038, Real Property No. 5301,
Warehouse Supply and Base Equipment



Resource No. 9039, Real Property No. 8701,
Water Pump Station



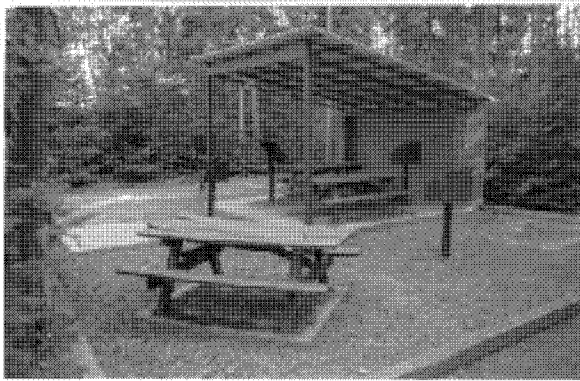
Resource No. 9040, Real Property No. 5302,
Chapel Center



Resource No. 9041, Real Property No. 5055,
Base Photo Laboratory



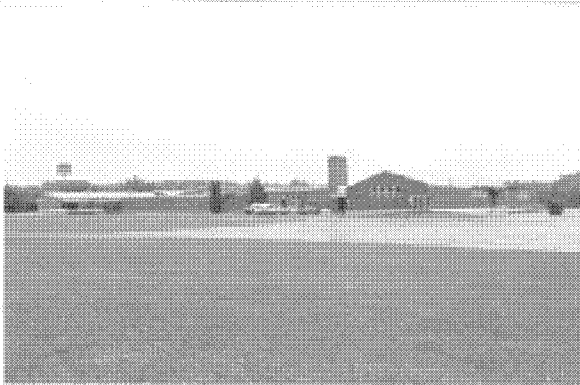
Resource No. 9042, Real Property No. 7200,
Water Tank Storage



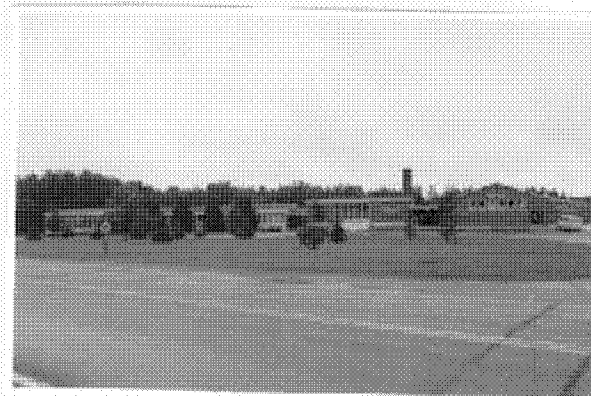
Resource No. 9043, Real Property No. 5920,
Outdoor Recreation Pavilion



Resource No. 9044, Real Property No. 3305,
Athletic Field Track



Resource No. 9045, Real Property No. 1300,
Damon Elementary School



Resource No. 9046, Real Property No. 1350,
Child Care Center



Resource No. 9047, Real Property No. 667,
Billboard



Resource Nos. 9048 and 9049, Real Property
Nos. 1502 and 1500, Traffic Check House and
Security Police Control Identification



Resource No. 9050, Real Property No. 2718,
Wherry Family Housing



Resource No. 9051, Real Property No. 2808,
Wherry Family Housing



Resource No. 9052, Real Property No. 2757,
Wherry Family Housing



Resource No. 9053, Real Property No. 2303,
Family Housing Appr. 1950-1969



Resource No. 9054, Real Property No. 2202,
Family Housing Appr. 1950-1969



Resource No. 9055, Real Property No. 2122,
Family Housing Appr. 1950-1969



Resource No. 9056, Real Property No. 2112,
Visiting Officer's Quarters - "Maine Lodge"



Resource No. 9057, Real Property No. 2501,
Visiting Officer's Quarters



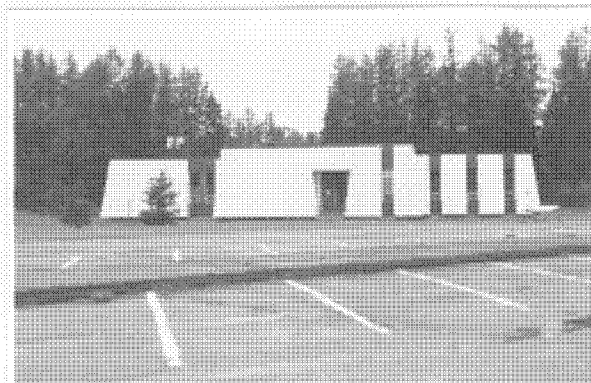
Resource No. 9058, Real Property No. 2500,
Officer's Quarters



Resource No. 9059, Real Property No. 2550,
Officer's Open Mess



Resource No. 9060, Real Property No. 3520,
Base Chapel



Resource No. 9061, Real Property No. 3360,
Youth Center



Resource No. 9062, Real Property No. 3502,
Composite Medical Center



Resource No. 9063, Real Property No. 3510,
Water Storage Tank



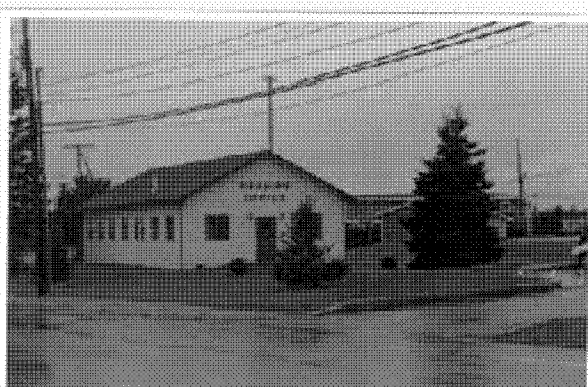
Resource No. 9064, Real Property No. 3010,
Wing Headquarters



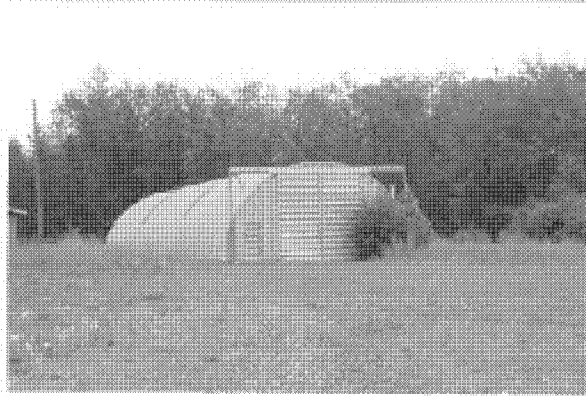
Resource No. 9065, Real Property No. 4116,
Family Housing Appr. 1950-1969



Resource No. 9066, Real Property No. 4200,
Family Housing Appr. 1950-1969



Resource No. 9067, Real Property No. 4300,
Family Housing Management Office



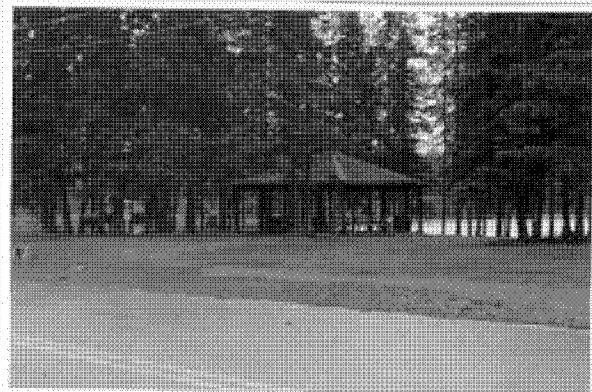
Resource No. 9068, Real Property No. 4484,
Base Engineering Maintenance Shop



Resource No. 9069, Real Property No. 4682,
Wherry Family Housing



Resource No. 9070, Real Property No. 14505,
Miscellaneous Outdoor Recreation Facility -
Bomber/Refueler Playground



Resource No. 9071, Real Property No. 14500,
Miscellaneous Outdoor Recreation Facility -
Malabean Lake Picnic Area



Resource No. 9072, Real Property No. 4701,
Family Camps



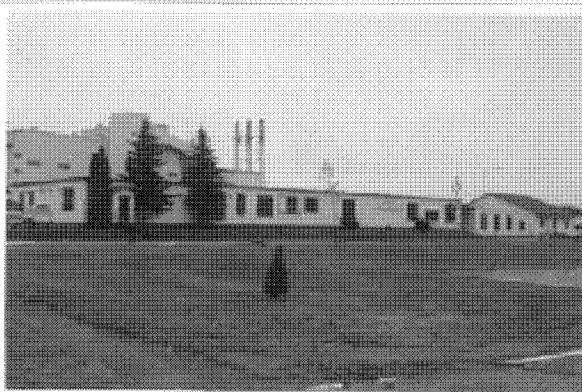
Resource No. 9073, Real Property No. 4804,
Miscellaneous Outdoor Recreation Facility - Ski
Slope



Resource No. 9074, Real Property No. 4805,
Miscellaneous Recreation Building - Ski Chalet



Resource No. 9075, Real Property No. 1200,
Water Pump Station



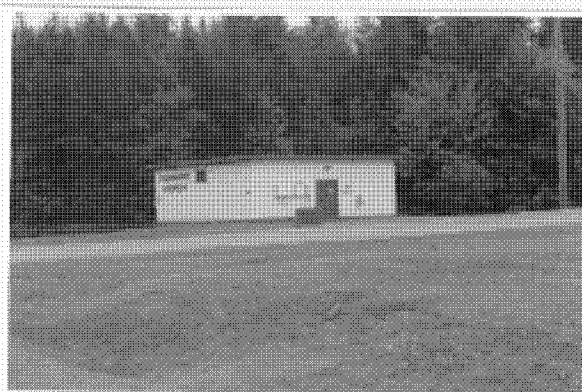
Resource No. 9076, Real Property No. 7300,
Base Engineering Administration



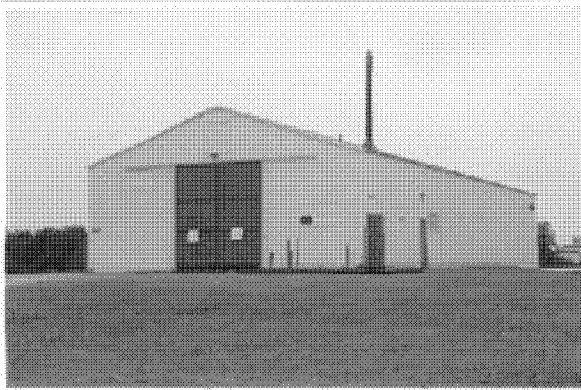
Resource No. 9077, Real Property No. 6570,
Automotive Hobby Shop



Resource No. 9078, Real Property No. 7270,
Base Engineering Covered Storage Facility



Resource No. 9079, Real Property No. 7250,
Base Hazardous Storage



Resource No. 9080, Real Property No. 7206,
Liquid Oxygen Storage



Resource No. 9081, Real Property No. 7204,
Solid Waste Disposal Facility



Resource No. 9082, Real Property No. 8251,
General Purpose Aircraft Shop



Resource No. 9083, Real Property No. 7210,
Traffic Management Facility



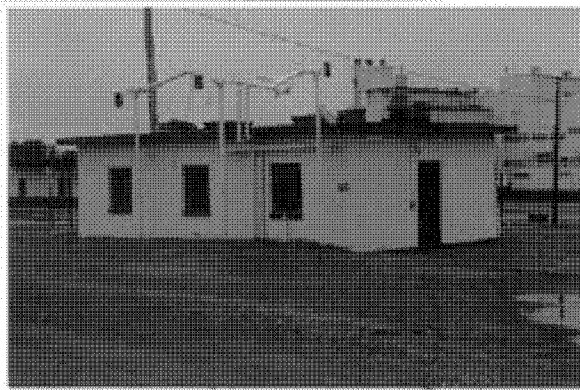
Resource No. 9084, Real Property No. 7213,
Base Hazardous Storage



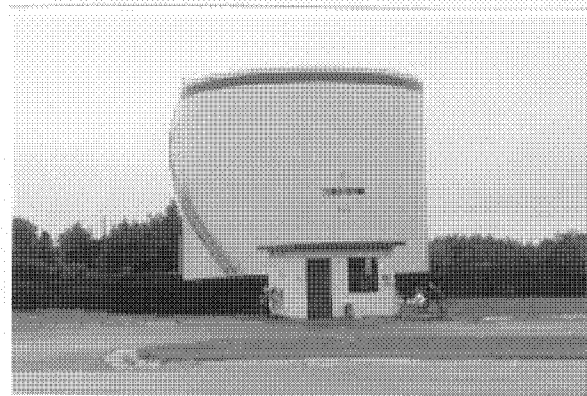
Resource No. 9085, Real Property No. 7220,
Warehouse Supply and Base Equipment



Resource No. 9086, Real Property No. 8265,
Base Engineering Covered Storage Facility



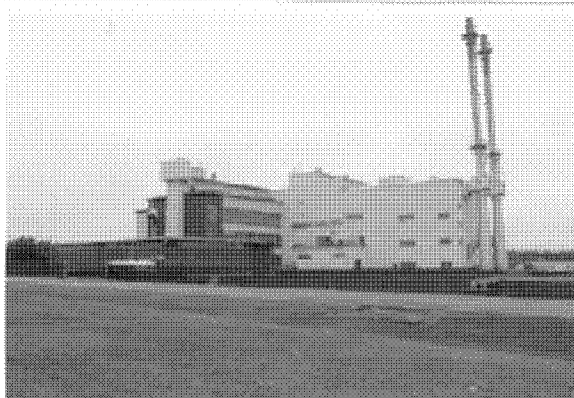
Resource No. 9087, Real Property No. 7260,
Liquid Fuel Pump Station



Resource No. 9088, Real Property No. 7317,
Diesel Storage



Resource No. 9089, Real Property No. 7240,
Electric Power Station Building



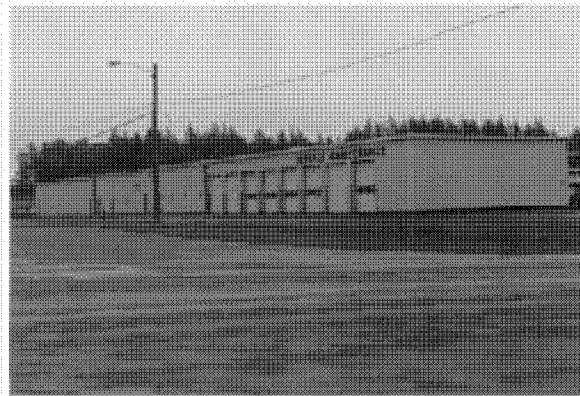
Resource No. 9090, Real Property No. 7310,
Heating Facility Building



Resource No. 9091, Real Property No. 7315,
Base Cold Storage



Resource No. 9092, Real Property No. 7330,
Base Laundry and Dry Cleaning



Resource No. 9093, Real Property No. 7510,
Vehicle Maintenance Shop



Resource No. 9094, Real Property No. 14222,
Load and Unload Conveyor and Coal Stockpile



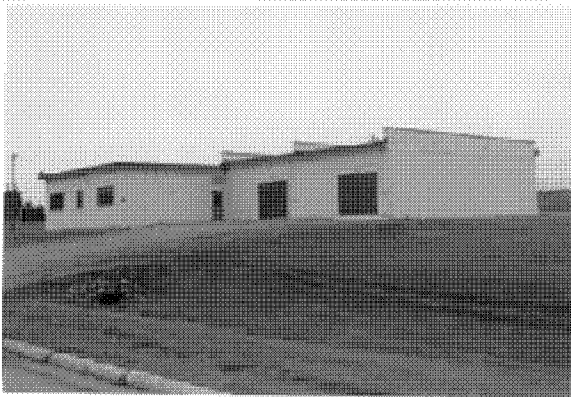
Resource No. 9095, Real Property No. 14220,
Locomotive Shop and Shelter



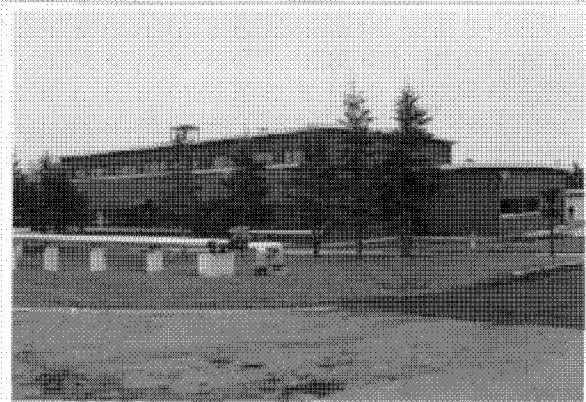
Resource No. 9096, Real Property No. 7809,
Petroleum Operations Heated Parking



Resource No. 9097, Real Property No. 7841,
Vehicle Operations Heated Parking



Resource No. 9098, Real Property No. 8440,
Security Police Central Control



Resource No. 9099, Real Property No. 8420,
Security Police Operations



Resource No. 9100, Real Property No. 8430,
Security Police Operations



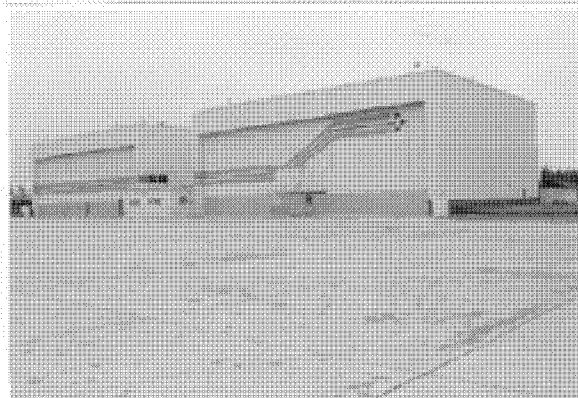
Resource No. 9101, Real Property No. 8390,
Base Engineering Pavement and Grounds
Facility



Resource No. 9102, Real Property No. 8280,
Maintenance Hangar



Resource No. 9103, Real Property No. 8402,
Blast Deflector



Resource No. 9105, Real Property No. 8410,
Alert Hangar



Resource No. 9106, Real Property No. 8412,
Aircraft Equipment Shop and Storage Facility



Resource No. 9107, Real Property No. 8260,
Jet Engine Maintenance Shop



Resource No. 9108, Real Property No. 8262,
General Purpose Aircraft Shop



Resource No. 9109, Real Property No. 8261,
Test Cell



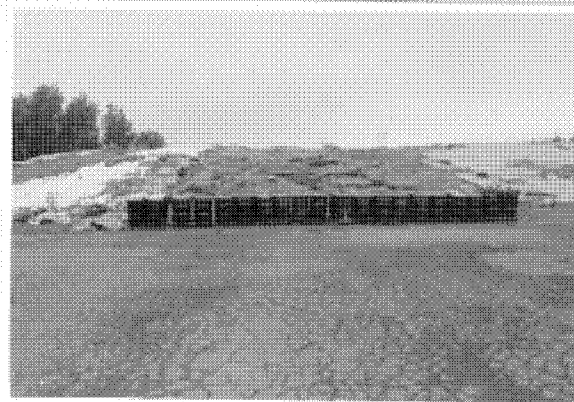
Resource No. 9110, Real Property No. 7610,
Group Headquarters



Resource No. 9111, Real Property No. 7600,
Vehicle Refueling Shop



Resource No. 9112, Real Property No. 6900,
Fireman Training Facility



Resource No. 9113, Real Property No. 6800,
Hazardous Waste Disposal Landfill



Resource No. 9114, Real Property No. (none),
Vehicle Storage Lot



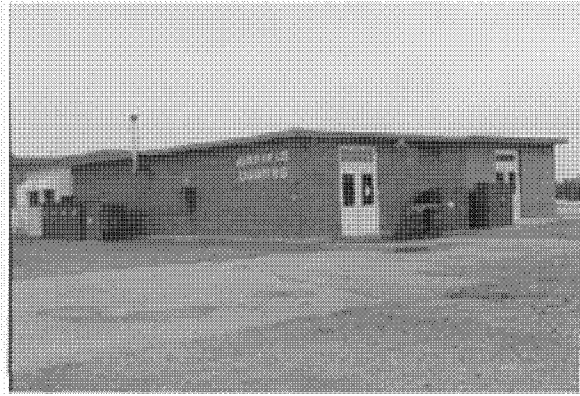
Resource No. 9115, Real Property No. 8713,
Weapons System Maintenance Management
Facility



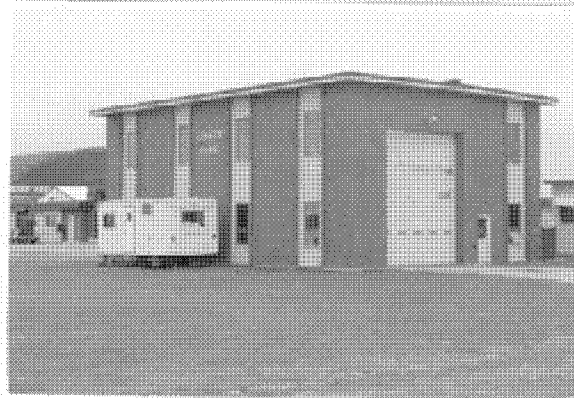
Resource No. 9116, Real Property No. 8202,
Fire Station



Resource No. 9117, Real Property No. 8200,
Base Operations



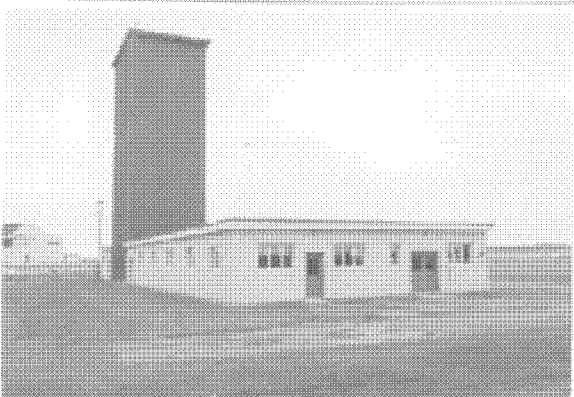
Resource No. 9118, Real Property No. 8201,
Utility Vault - Airfield Lighting



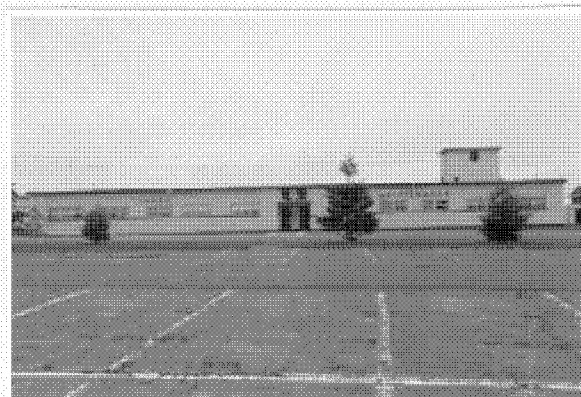
Resource No. 9119, Real Property No. 8205,
Fire Station



Resource No. 9120, Real Property No. 8000,
Surface Weather Observation Facility



Resource No. 9121, Real Property No. 8810,
Survey Equipment Storage



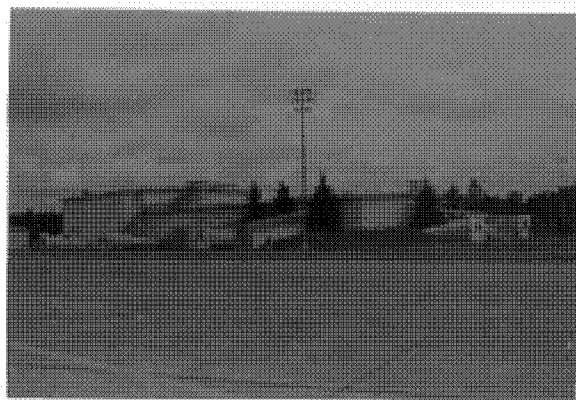
Resource No. 9122, Real Property No. 8800,
Avionics Shop



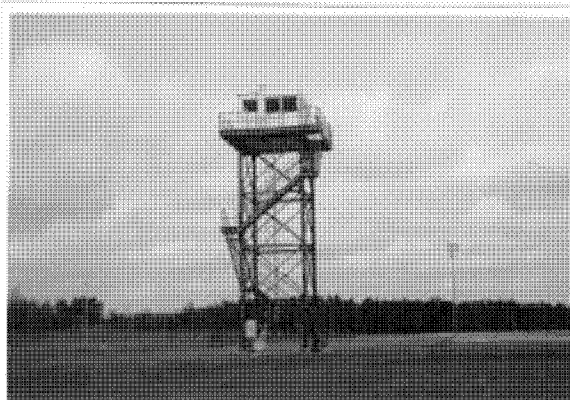
Resource No. 9123, Real Property No. 8820,
Correction Facility



Resource No. 9124, Real Property No. 8840,
Squadron Operations - Life Support



Resource No. 9125, Real Property No. 8970,
Crew Readiness



Resource No. 9126, Real Property No. 8990,
Master Surveillance and Control



Resource No. 9127, Real Property No. (none),
Alert Facility Runway Motorized Security Gate



Resource No. 9128, Real Property No. 8938,
Warehouse Supply and Base Equipment



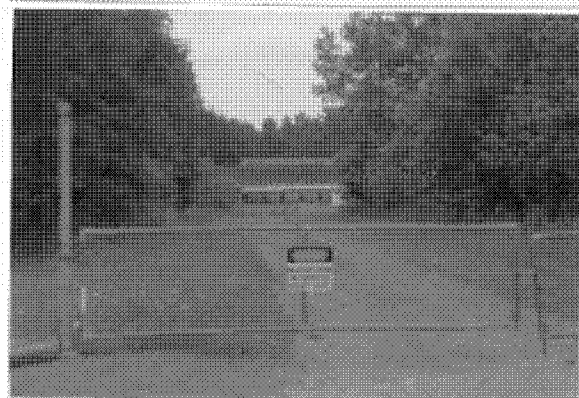
Resource No. 9129, Real Property No. (none),
Cold Weather Testing Fences and Test Buildings



Resource No. 9134, Real Property No. 405,
Base Hazardous Storage



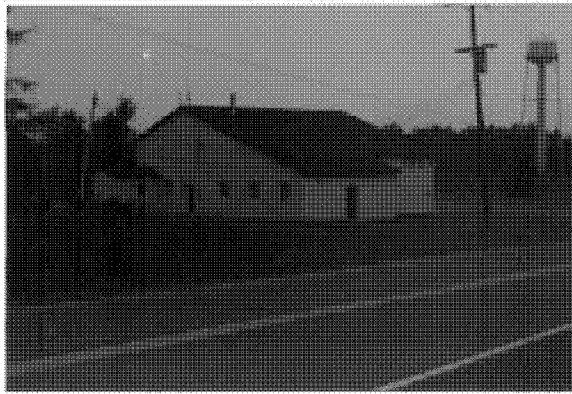
Resource Nos. 9130, 9131, 9132, and 9133, Real Property Nos. 8950, 8960, 8951, and 8952, Security
Police Entry Control Building; Base Engineering Covered Storage Facility (2); Magazine Storage



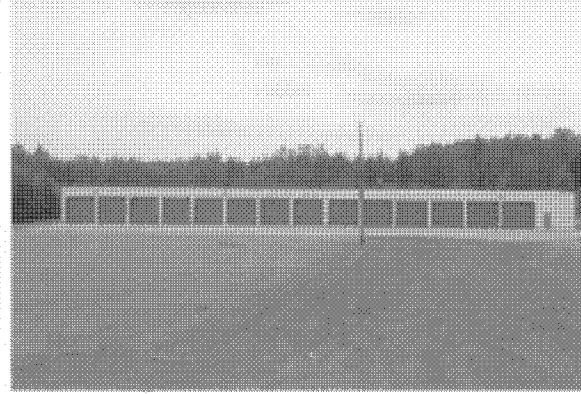
Resource No. 9135, Real Property No. 700,
Small Arms Range Systems



Resource No. 9136, Real Property No. (none),
East Loring Ordnance Disposal



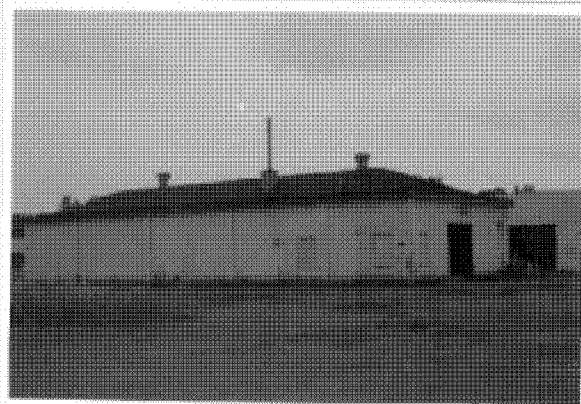
Resource No. 9137, Real Property No. 24,
Explosive Ordinance Disposal



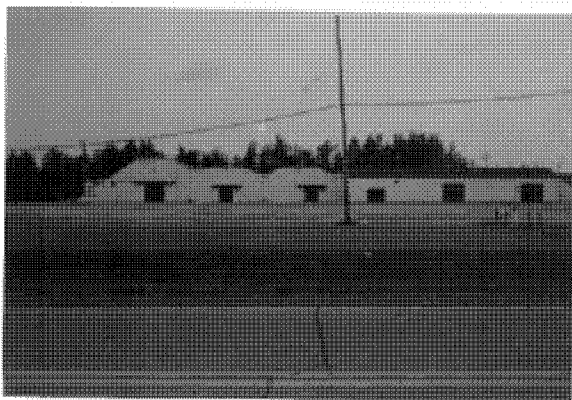
Resource No. 9138, Real Property No. 109,
Conventional Munitions Shop



Resource No. 9139, Real Property No. 101,
Indoor Small Arms Range



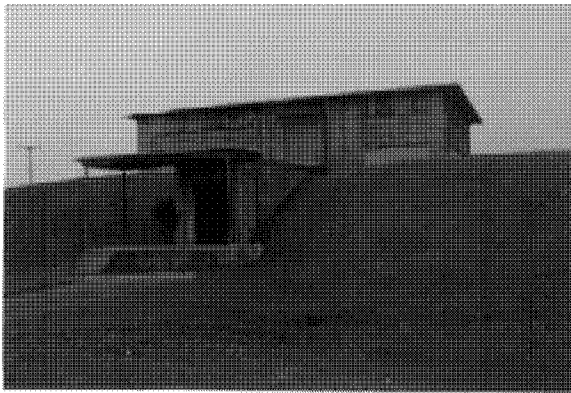
Resource No. 9140, Real Property No. 107,
Warehouse Supply and Base Equipment



Resource No. 9141, Real Property No. 216,
Conventional Munitions Shop



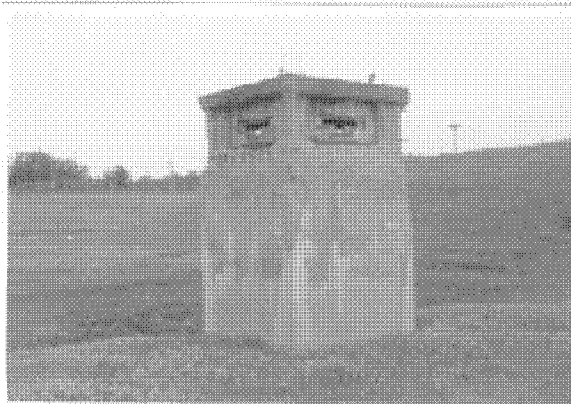
Resource No. 9142, Real Property No. 220,
Security Police Entry Control Building



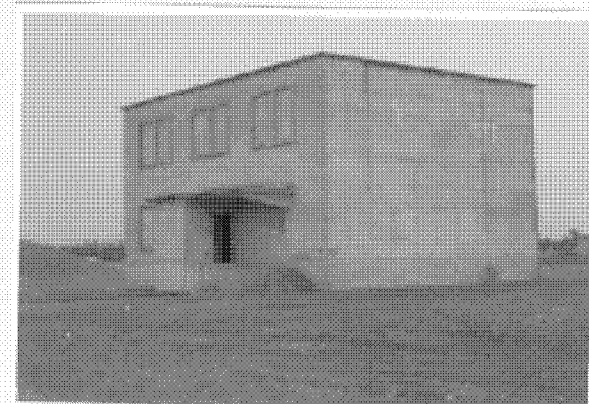
Resource No. 9143, Real Property No. 272,
Storage Igloo



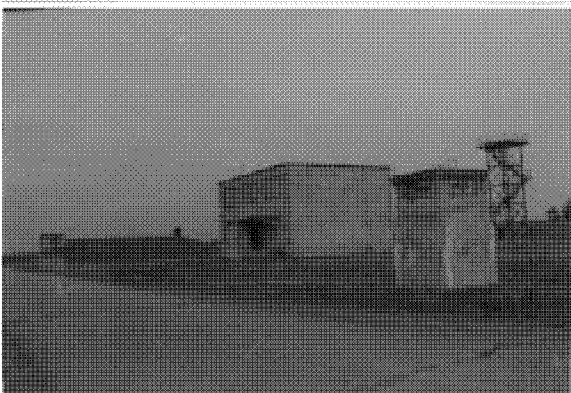
Resource No. 9144, Real Property No. 276,
Storage Igloo



Resource No. 9145, Real Property No. 259,
Security Police Entry Control Building



Resource No. 9146, Real Property No. 260,
Storage Igloo



Resource No. 9147, Real Property No. 262,
Security Police Entry Control Building



Resource Nos. 9148 and 9149, Real Property
Nos. 227 and 229, Alert Fire Team Facility and
Electric Power Station Building



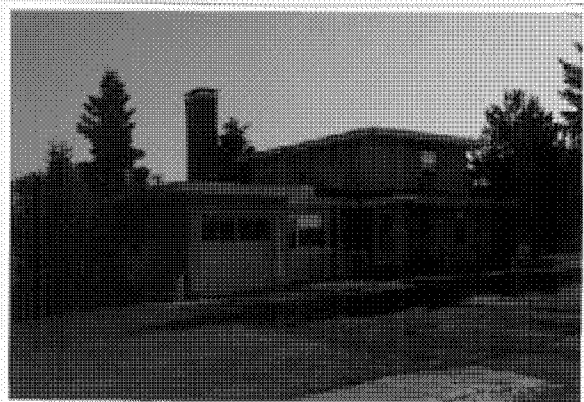
Resource No. 9150, Real Property No. 232,
Surveillance Inspection Shop



Resource No. 9151, Real Property No. 233,
Missile Assembly Shop



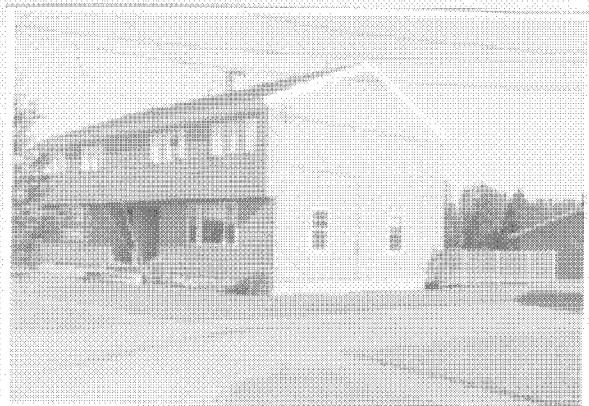
Resource No. 9152, Real Property No. 2770,
Wherry Family Housing



Resource No. 9153, Real Property No. 2768,
Wherry Family Housing



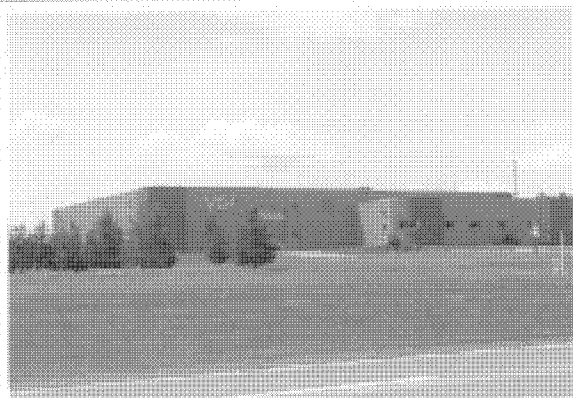
Resource No. 9154, Real Property No. 2905,
Capehart Family Housing



Resource No. 9155, Real Property No. 2910,
Capehart Family Housing



Resource No. 9156, Real Property No. 8718,
Vehicle Fueling Station



Resource No. 9157, Real Property No. 8712,
Vehicle Operations Heated Parking



Resource No. 9158, Real Property No. 8716,
Vehicle Operations Heated Parking



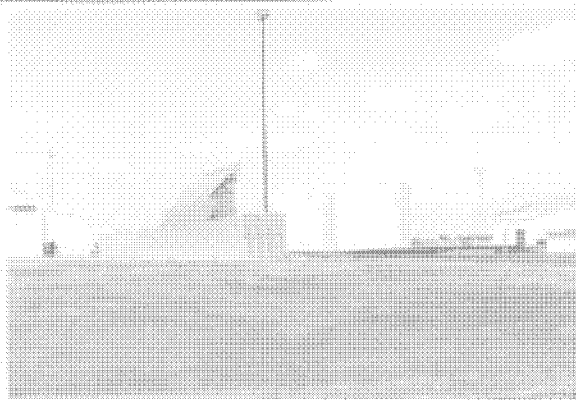
Resource No. 9159, Real Property No. 8740,
Vehicle Operations Heated Parking - Nose Dock



Resource No. 9160, Real Property No. 8622,
Warehouse Supply and Base Equipment - Nose
Dock



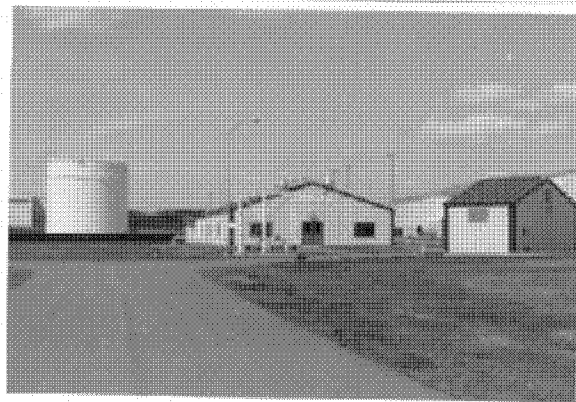
Resource No. 9161, Real Property No. (none),
"42nd Wing Mission" Sign



Resource No. 9162, Real Property No. (none),
Blast Deflector



Resource No. 9166, Real Property No. 8721,
Base Hazardous Storage - Acid Storage



Resource Nos. 9163, 9164 and 9165, Real Property Nos. 8116, 8118 and 8122, Hydraulic Fluid Building
(2); Fuel Storage Tank



Resource No. 9167, Real Property No. 8720,
Missile Run Up Shop



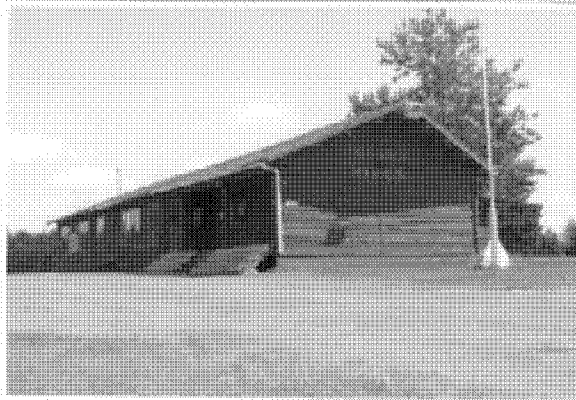
Resource No. 9168, Real Property No. 8710,
Missile Assembly Shop



Resource No. 9169, Real Property No. 8711,
Explosive Ordnance Disposal



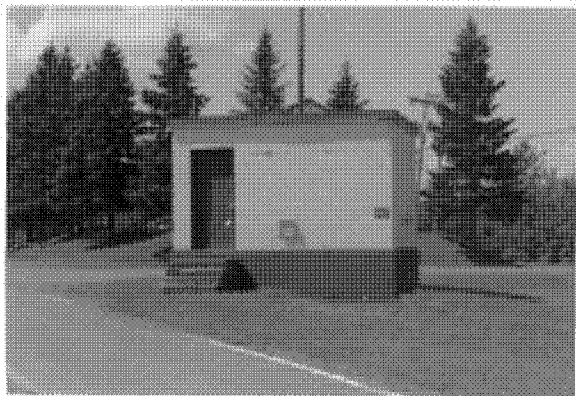
Resource No. 9170, Real Property No. 2006,
Base Engineering Pavement and Grounds
Facility



Resource No. 9171, Real Property No. 2004,
Golf Clubhouse



Resource No. 9172, Real Property No. 8968,
Crew Readiness - Visitation Center



Resource No. 9173, Real Property No. 360,
Sanitary Sewage Pump Station



Resource No. 9174, Real Property No. 361,
Munitions Maintenance Administration



Resource No. 9175, Real Property No. 370,
Air Force Plant Administration Office



Resource No. 9176, Real Property No. 368,
Conventional Munitions Shop



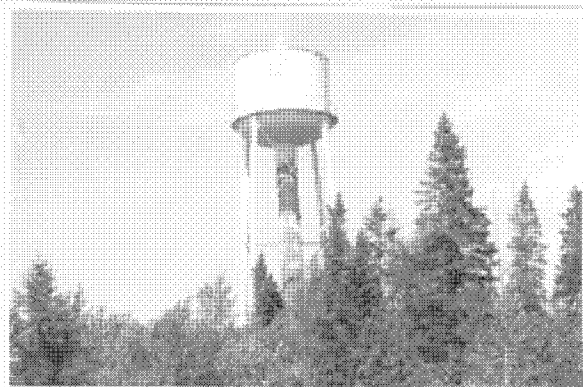
Resource No. 9177, Real Property No. 365,
Armament Test Facility - Heavy Metal Lab



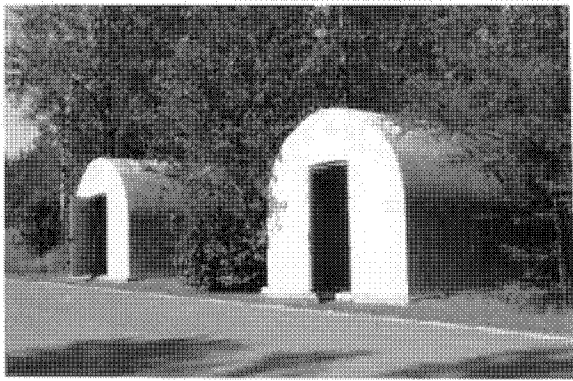
Resource No. 9178, Real Property No. 367,
Air Force Plant Administration Office



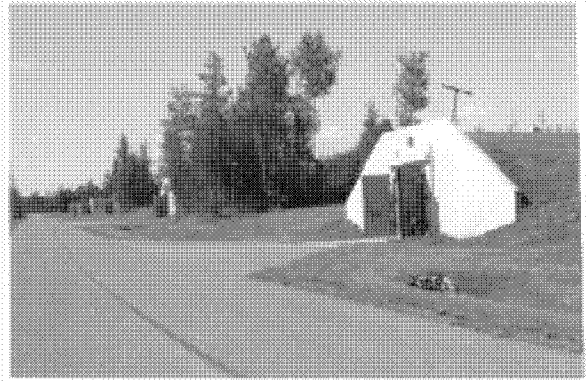
Resource No. 9179, Real Property No. 374,
Warehouse Supply and Base Equipment



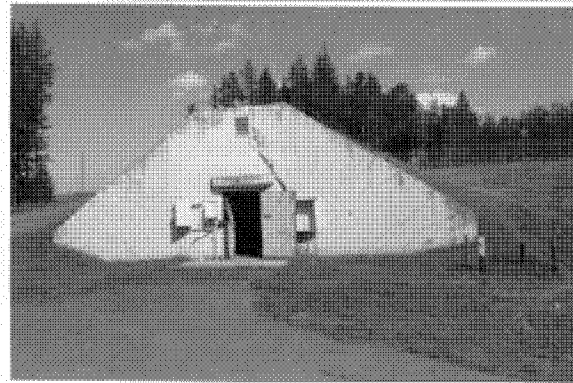
Resource No. 9180, Real Property No. 1026,
Water Tank Storage



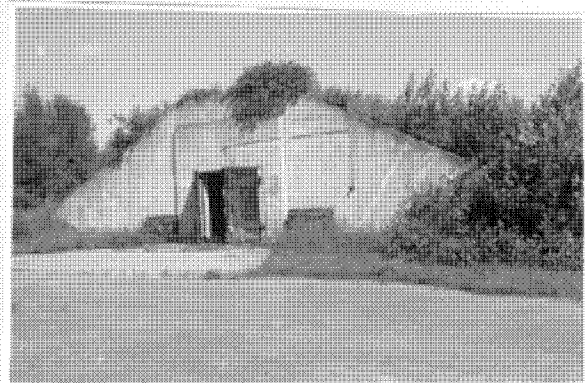
Resource No. 9181, Real Property No. 343,
Above Ground Storage Magazine



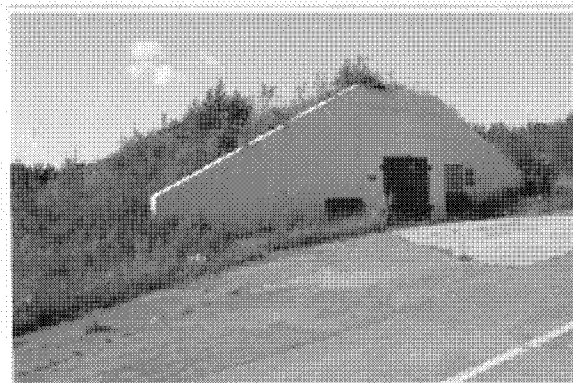
Resource No. 9182, Real Property No. 339,
Storage Igloo



Resource No. 9183, Real Property No. 329,
Storage Igloo



Resource No. 9184, Real Property No. 9082,
Storage Igloo



Resource No. 9185, Real Property No. 9062,
Storage Igloo



Resource No. 9186, Real Property No. (none),
"Christmas Tree" Alert Aircraft Apron



Resource No. 9187, Real Property No. (none),
Capehart Family Housing

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT LORING AFB

Resource Number: 9003

Property Description: The "Arch Hangar" listed as Aircraft Corrosion Control on AF Real Property Inventory

Associated Property: 9082

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 10/30/92

Base Map Building Number: 8250

Operational Support & Installations:

Combat Weapons and Support Systems: Maintenance Docks/Hangars

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Large Aircraft Maintenance Dock

Statement of Significance: This hangar is significant in terms of political policy and military strategy in that it represents a central hangar on one of the first bases designed specifically for the Air Force and SAC. It is also significant for its architectural style and the engineering effort expended in its construction. The concrete superstructure is supported by massive poured concrete arches and created space for two B-36 bombers.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 3

Temporal Phase Relationship: 4

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 19

Comments on Threats: Subsequent to base closure, plans call for maintenance sufficient enough to retain structural integrity and weather tightness. All utilities will be shut off.

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally significant for its architecture.

Importance: Exceptional

Eligibility: Eligible

Height: 90
Square Footage: 126303
Original Planned Duration: Permanent
Existing Use: Abandoned
Other Use/Dates: Organization Maintenance Hangar, Field Maintenance Hangar, SRAM Support Facility, Air Conditioning Plant
General Purpose Shop, Non-destructive Inspection Lab
Comments on Use: Contains two stories of occupiable space.
Primary Building Materials: Poured Concrete, Brick, and Concrete Block
Character Defining Features: Monolithic concrete arches with 340 ft span; enormous unimpeded open interior space.

Resource Number: 9102

Property Description: DC (Double Cantilever) Hangar
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 10/30/92
Base Map Building Number: 8280

Operational Support & Installations:
Combat Weapons and Support Systems: Maintenance Docks/Hangars
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Large Aircraft Maintenance Dock

Statement of Significance: This hangar is significant in that it is one of the earliest hangars on an Air Force base designed for the Air Force and the Strategic Air Command. This hangar was designed and built in response to the Air Forces need for larger maintenance space for their ever increasing aircraft. It is also architecturally significant in that it represents revolutionary engineering design that allowed the storage of five B-36 aircraft. It was one of the first double cantilever hangars constructed for the Air Force and, because of the Maine environment, required special building techniques in its manufacture.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	3
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	3
Total Score for Priority Matrix:	20
Comments on Threats:	Maintenance will be restricted to structural integrity and weather tightness. All utilities are discontinued.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Efforts should be made to document this building before it begins to deteriorate.

Importance: Exceptional
Eligibility: Eligible

Height: 66
Square Footage: 194243
Original Planned Duration: Permanent
Existing Use: Abandoned
Other Use/Dates:
Comments on Use: Modified in 1957 for B-52 use.
Primary Building Materials: Concrete Block, Corrugated Metal
Character Defining Features: Double Cantilever design, massive open space, large sliding doors, tremendous metal trusses.

Resource Number: 9125

Property Description: Alert Facility - Molehole
Associated Property: 9126, 9127, 9172, 9186
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 10/30/92
Base Map Building Number: 8970

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Bomber Alert Facility

Statement of Significance: This building represents the Alert posture taken by the US as part of the deterrence strategy. The building possesses feeling and association and demonstrates those relationships with the architectural features such as being nearly windowless, semisubterranean, and the ramped entries for rapid egress. More importantly, this building is significant because of its disuse between approximately 1967 and 1986. The windowless atmosphere and remoteness of the facility was cause for severely reduced crew morale. Command decided that building 6000 could function as a sufficient alert facility and had greater access to normal base facilities.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	21
Comments on Threats:	Structural Integrity and weatherproofing only.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Given the uniqueness of this Molehole, ie the fact that this specially designed building was not used, this example should be considered for National Register Listing.

Importance: Exceptional
Eligibility: Eligible

Height: 20
Square Footage: 73871
Original Planned Duration: Permanent
Existing Use: Abandoned
Other Use/Dates:
Comments on Use: Abandoned between 1967 and 1983; "pickled in 1976"
Primary Building Materials: Poured Concrete

Resource Number: 9146

Property Description: Storage Igloo
Associated Property: 9147, 9145, 9150, 9143, 9152, 9141
Non-Inventoried Association: 9142, 9148, 9149, 9144
Sub-installation: East Loring Ammunition Storage
Address:
Base Map Date: 10/30/92
Base Map Building Number: 260

Operational Support & Installations:
Combat Weapons and Support Systems: Storage
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Segregated Storage Igloo

Statement of Significance: This facility was utilized for the storage of nuclear components for the assembly of nuclear weapons. The early date of construction during the Cold War, the security measures associated with the structure, and the architectural style of the building to store nuclear weapons components make this structure unique among USAF property types.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	4
Total Score for Priority Matrix:	23
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	This facility is not in use and is gradually deteriorating in condition. The base is scheduled to close soon and efforts should be made to preserve this important example of Cold War cultural resource

Importance: Exceptional
Eligibility: Eligible

Height: 20
Square Footage: 2250
Original Planned Duration: Permanent
Existing Use: This structure has not been in use for 3 decades
Other Use/Dates: The structure was utilized for the storage of nuclear weapons components between 1952 and approximately 1964
Primary Building Materials: Poured Concrete
Character Defining Features: This structure is characterized by its massive, ten foot thick reinforced concrete walls and four interior vaults and heavy steel doors. It possesses imitation window designs which are actually the concrete walls; this design is for security to give the structure the appearance of a staff building if photographed from a distance

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Loring AFB, and to provide research materials for this study:

Spurge Nason
Community Planner/Base Conversion Officer
Box 523
Limestone, ME 84750
(207) 328-7075

SSgt Clayton Peters
Auto CAD
42nd CES/CEES
Building 7300
Loring AFB, ME 04751-5000
(207) 999-2408

SSgt JoAnne Scibetta-Sargent
Wing Historian
42nd BW/HO
Building 5000
Loring AFB, ME 04751-5000
(207) 999-2547

SSgt Boston
Commander of Security Police
42nd MSSQ/SPS
Loring AFB, ME 04751-5000
(207) 999-7297

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Loring AFB history and Cold War context.

Spurge Nason, Community Planner/Base Conversion Officer, July 18, 1994

SSgt Joanne Scibetta-Sargent, Wing Historian, July 19, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-17: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT MACDILL AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Patience Elizabeth Patterson
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

May 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

MacDill Air Force Base and Avon Park Air Force Range were inventoried by Patience Elizabeth Patterson and David P. Staley of Mariah Associates, Inc. between May 31 and June 5, 1994, as part of the Air Combat Command Cold War study. Information was gathered at the base from the Environmental Office, the Drafting Section of Civil Engineering, the Community Planning Office, the Real Property Office, the Public Affairs Office, the Wing History Office, and on-site inspections.

An initial reconnaissance of the base and range was accomplished with Mr. Bob Hoffman, Chief of Environmental Analyses. This initial orientation enabled the field team to become familiar with the facilities and determine what property types were present and which were likely to be relevant to the Cold War study. A photographic inventory was taken of the different types and styles of facilities present on the base.

From the inventory, on-site inspection, and research, seven resources were evaluated as important within the base's Cold War context and were more fully documented. Six of these relate to Operational and Support Installations on the base, and one relates to Combat Weapons and Support Systems. All temporal phases, as described in the study's historic context and methodology document (Lewis et al. 1995), are represented.

Four of the resources evaluated are documentary. Architectural drawings, maps, aerial photographs, history office files, a bound base newspaper collection, and early maps and layout plans for the bombing range at Avon Park Air Force Range are all present. One particular 1940 layout plan of MacDill Army Air Field has the signature of General Henry "Hap" Arnold and is framed. Further documentation, stewardship, and conservation are recommended for these resources.

Two of the evaluated resources are primary command headquarters and one is the Bomber Alert Facility constructed during the base's tenure as a SAC base. These resources are recommended as eligible for listing on the National Register of Historic Places. Stewardship and further documentation to nominate the resources to the National Register are also recommended.

LIST OF ACRONYMS

AAF	-	Army Air Field
ABW	-	Air Base Wing
ACC	-	Air Combat Command
ACHP	-	Advisory Council on Historic Preservation
AFB	-	Air Force Base
AFR	-	Air Force Range
AGE	-	Air Ground Equipment
BRAC	-	Base Realignment and Closure
BMG	-	Bombardment Group
BMW	-	Bombardment Wing
CRS	-	Component Repair Squadron
DoD	-	Department of Defense
EMS	-	Equipment Maintenance Squadron
EW	-	Electronic Warfare
FTD	-	Field Training Detachment
HABS	-	Historic American Buildings Survey
LOX	-	Liquid Oxygen
Mariah	-	Mariah Associates, Inc.
NCO	-	Noncommissioned Officer
NHPA	-	National Historic Preservation Act
NOAA	-	National Oceanic and Atmospheric Administration
NPS	-	National Park Service
NRHP	-	National Register of Historic Places
OCONUS	-	Off Continental United States
POL	-	Petroleum, Oils, and Lubricants
RDJTF	-	Rapid Deployment Joint Task Force
RTU	-	Replacement Training Unit
SAC	-	Strategic Air Command
SALT	-	Strategic Arms Limitation Treaty
SDI	-	Strategic Defense Initiative
SHPO	-	State Historic Preservation Officer
START	-	Strategic Arms Reduction Talks
TAC	-	Tactical Air Command
TACAN	-	Tactical Air Navigation Station
TFW	-	Tactical Fighter Wing
TTW	-	Tactical Training Wing
USAF	-	United States Air Force
USCENTCOM	-	United States Central Command
USREDCOM	-	United States Readiness Command
USSOCOM	-	United States Special Operations Command
USSTRIKCOM	-	United States Strike Command
WRSK	-	War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Flexible Response - A military strategy adopted by President Kennedy whereby different potential crisis situations are matched with an equal number of potential options for reaction. Under this strategy, nuclear weapons are used for only two purposes: for deterrence and as a weapon of last resort.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - The war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

GLOSSARY (Continued)

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	iii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 MACDILL AFB HISTORY AND COLD WAR CONTEXT	13
3.2 AVON PARK AFR HISTORY AND COLD WAR CONTEXT	18
3.3 BASE DEVELOPMENT	20
4.0 METHODOLOGY	26
4.1 INVENTORY	26
4.2 EVALUATION OF IMPORTANT RESOURCES	27
4.2.1 Documentation	27
4.2.2 Evaluation of Importance	27
4.2.2.1 Cold War Context	27
4.2.2.2 NRHP Criteria	28
4.2.2.3 Exceptional Importance	29
4.2.3 Evaluation of Integrity	29
4.2.4 Priority Matrix	30
4.2.5 Resource Organization	31
4.3 BASE SPECIFIC METHODS	31
5.0 RECONNAISSANCE INVENTORY RESULTS	33
6.0 EVALUATION RESULTS	34
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	34
6.1.1 Base and Command Centers	34
6.1.1.1 Major Command Headquarters	34
6.1.1.2 Major Command Headquarters	38
6.1.2 Documentation	39

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.1.2.1 Documentary Collection.....	39
6.1.2.2 Documentary Collection.....	39
6.1.2.3 Base Newspaper Collection.....	39
6.1.2.4 Map Files.....	40
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	40
6.2.1 Alert Facilities	40
6.2.1.1 Bomber Alert Facility.....	40
6.3 MATERIEL DEVELOPMENT FACILITIES	41
6.4 TRAINING FACILITIES.....	41
6.5 INTELLIGENCE FACILITIES.....	41
7.0 UNDOCUMENTED RESOURCES	42
8.0 FUTURE THREATS TO RESOURCES	44
9.0 PRELIMINARY RECOMMENDATIONS	45
9.1 NRHP ELIGIBILITY	45
9.1.1 Evaluation and Determination of NRHP Eligibility.....	45
9.1.2 Implications of NRHP Eligibility.....	47
9.2 EVALUATED RESOURCE RECOMMENDATIONS	49
9.2.1 Major Command Headquarters	49
9.2.2 Major Command Headquarters	51
9.2.3 Documentary Collection.....	51
9.2.4 Documentary Collection.....	51
9.2.5 Base Newspaper Collection.....	52
9.2.6 Map Files.....	52
9.2.7 Bomber Alert Facility.....	52
10.0 REFERENCES CITED	53
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of MacDill Air Force Base and Avon Park Air Force Range.....	5
Figure 2.2 MacDill Air Force Base Layout	7
Figure 2.3 Standard Tactical Air Command Base Layout	8
Figure 2.4 MacDill Air Force Base Land Use Diagram	11
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	12
Figure 3.1 MacDill Air Force Base 1950s	22
Figure 3.2 MacDill Air Force Base 1960s	23
Figure 3.3 MacDill Air Force Base 1980s	24
Figure 3.4 MacDill Air Force Base 1990s	25

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	35
Table 6.2 Evaluated Resource Prioritization by Priority Rank	36
Table 9.1 Recommendations for Evaluated Resources	50

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

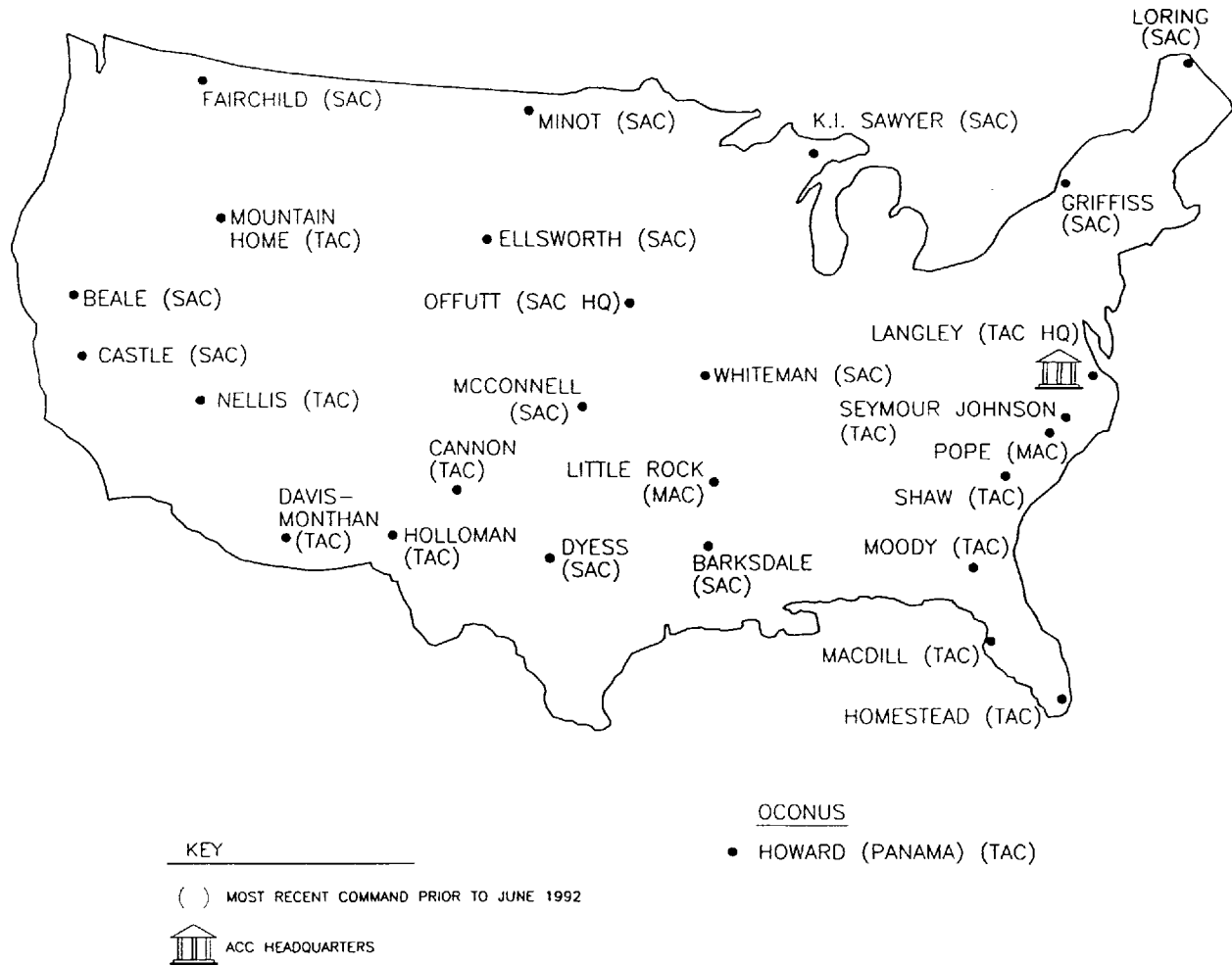
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\STANDARD\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing in the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on MacDill Air Force Base (AFB) and its associated Avon Park Air Force Range (AFR). MacDill AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The host unit at MacDill AFB is the 6th Air Base Wing (ABW). Its mission is to support the two major unified commands and a number of tenant units on base. The U.S. Central Command (USCENTCOM) and the U.S. Special Operations Command (USSOCOM), both tenants on base, are two of the six unified commands in the United States military system. The staffs of both commands come from Air Force, Army, Navy, and Marine Corps personnel. The mission of USCENTCOM is responsibility for United States military and security interests in Southwest Asia, the Arabian Peninsula, and Northeast Africa. The mission of USSOCOM is to provide a reserve of combat ready forces for the defense of the United States and Canada and for global deployment.

In addition, MacDill AFB operates Avon Park AFR, an auxiliary facility in central Florida. The missions of the facility are to maintain and operate the air-to-ground bombing and gunnery range, to provide a realistic electronic combat crew training environment, and to maintain an auxiliary airfield in the event of an aircraft emergency. The primary user of the range is the 56th Fighter Wing from MacDill AFB, although other units from the Air Force, Navy, Army, Marine Corps, and National Guard also conduct training exercises at the range.

2.2 GEOGRAPHIC DESCRIPTION

MacDill AFB is located on the western coast of central Florida in the Tampa metropolitan area (Figure 2.1). It is 8 mi (13 km) south of downtown Tampa. The installation consists of 5,630 acres of fee-owned land on the southernmost tip of Interbay Peninsula in Hillsborough County. To the east of the peninsula is Hillsborough Bay, to the west is Old Tampa Bay, and to the south Tampa Bay.

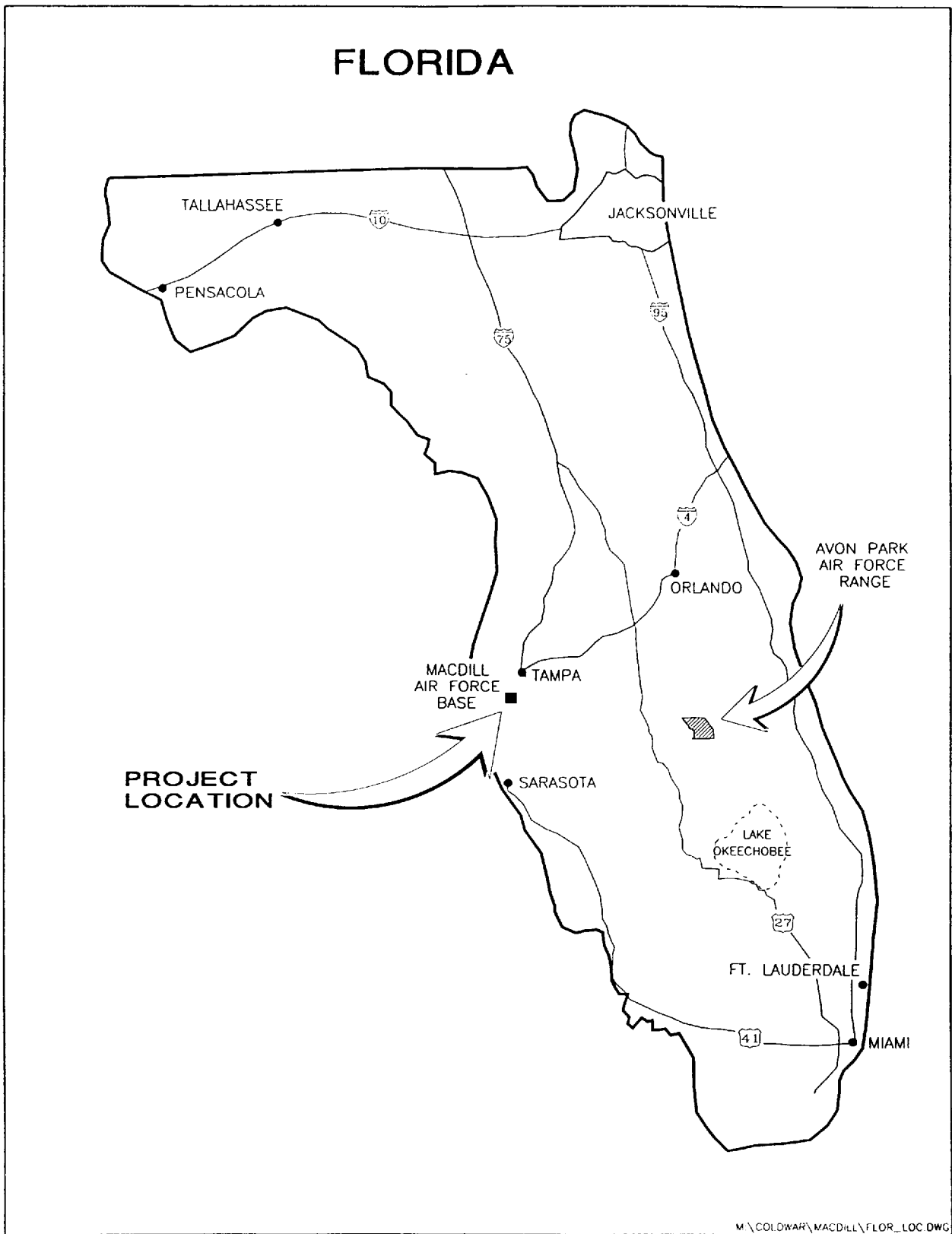


Figure 2.1 Location of MacDill Air Force Base and Avon Park Air Force Range.

The terrain is flat with elevations above mean sea level in the single digits. Well over half of the base is within the 100 year flood plain, and portions of the southern area are mangrove swamps. Approximately 1,100 acres of the fee-owned acreage are marsh areas and protected wetlands under State and Federal statutes (United States Air Force [USAF] 1983).

Avon Park AFR is an auxiliary facility located within Polk and Highland Counties in central Florida, 95 mi (153 km) east-southeast of MacDill AFB. The range covers 167 square miles (106,110 acres) of coastal plain in central Florida. Much of the area encompassed by the range is open space, with more than 60,000 acres of wetlands, 15,000 acres of pine plantations, forests, streams, lakes, and a river. Currently, Avon Park AFR is shared with the State of Florida's Avon Park Correctional Institution. Over 560 acres of range land have been turned over to the U.S. Bureau of Prisons (USAF 1989).

2.3 CURRENT BASE LAYOUT

The MacDill AFB layout is similar to that of a standard TAC base, including the airfield (Figures 2.2 and 2.3). One primary or instrument runway was originally constructed in the early 1940s. This runway is 11,420 ft (3,481 m) long and 300 ft (91 m) wide and is on a northeast-southwest axis. The crosswind runway intersects the primary runway on its northern end at approximately 90 degrees. The crosswind runway is 7,167 ft (2,185 m) long and 150 ft (46 m) wide and is on a northwest-southeast axis.

The mission-related buildings are adjacent to and east of the runways and flight apron. They are laid out in an arrowhead shape or "V" pointing to the west and the runways. They provide a buffer to the other part of the base immediately to the east which contains industrial and administrative buildings. Next is unaccompanied housing, administration, and community related buildings, and lastly and furthest east is family housing. The medical complex and portions of the family housing are situated to the east and south along the bay and around the golf course. A portion of industrial structures and buildings lies south of the runways and west of the golf

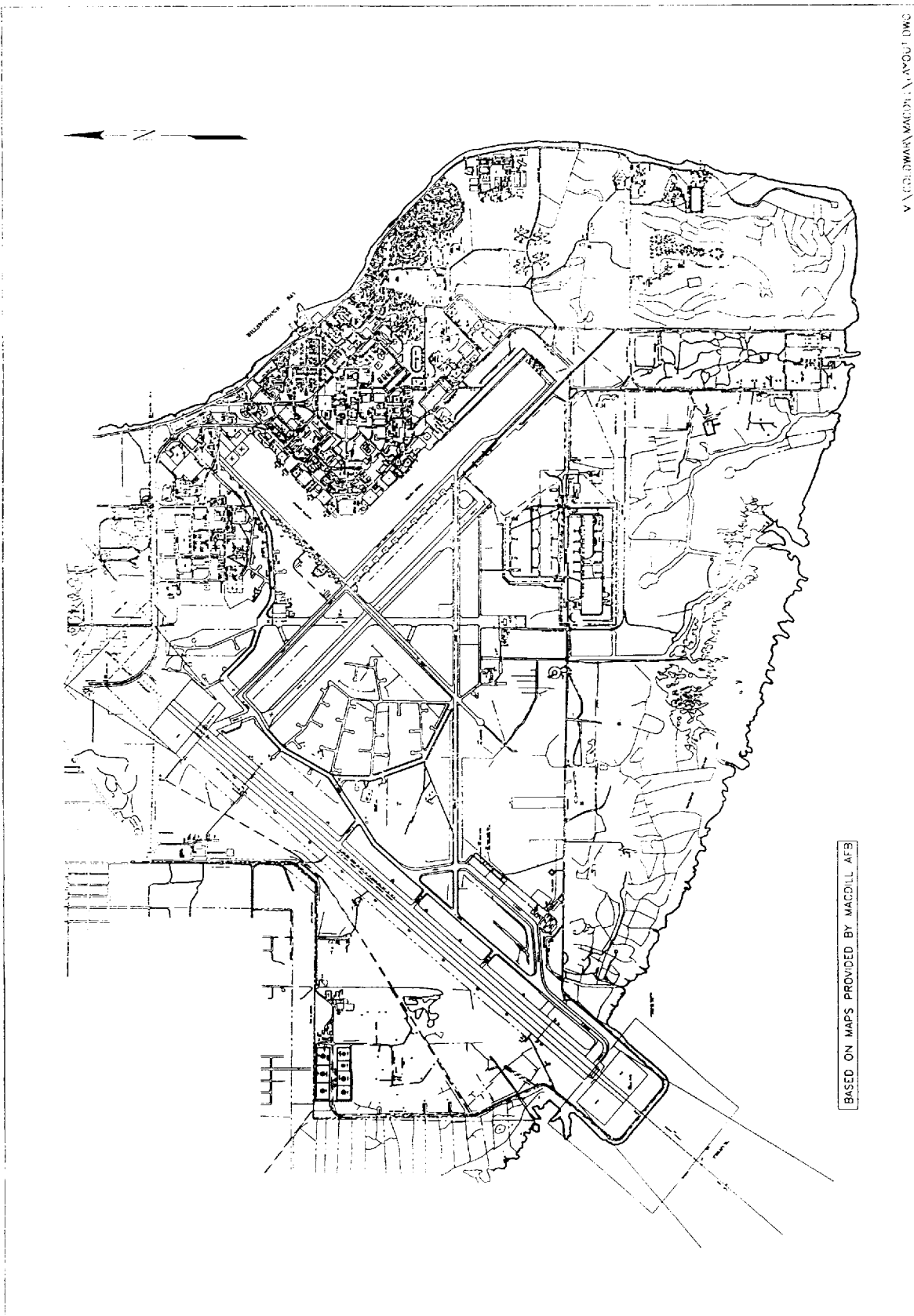


Figure 2.2 MacDill Air Force Base Layout.

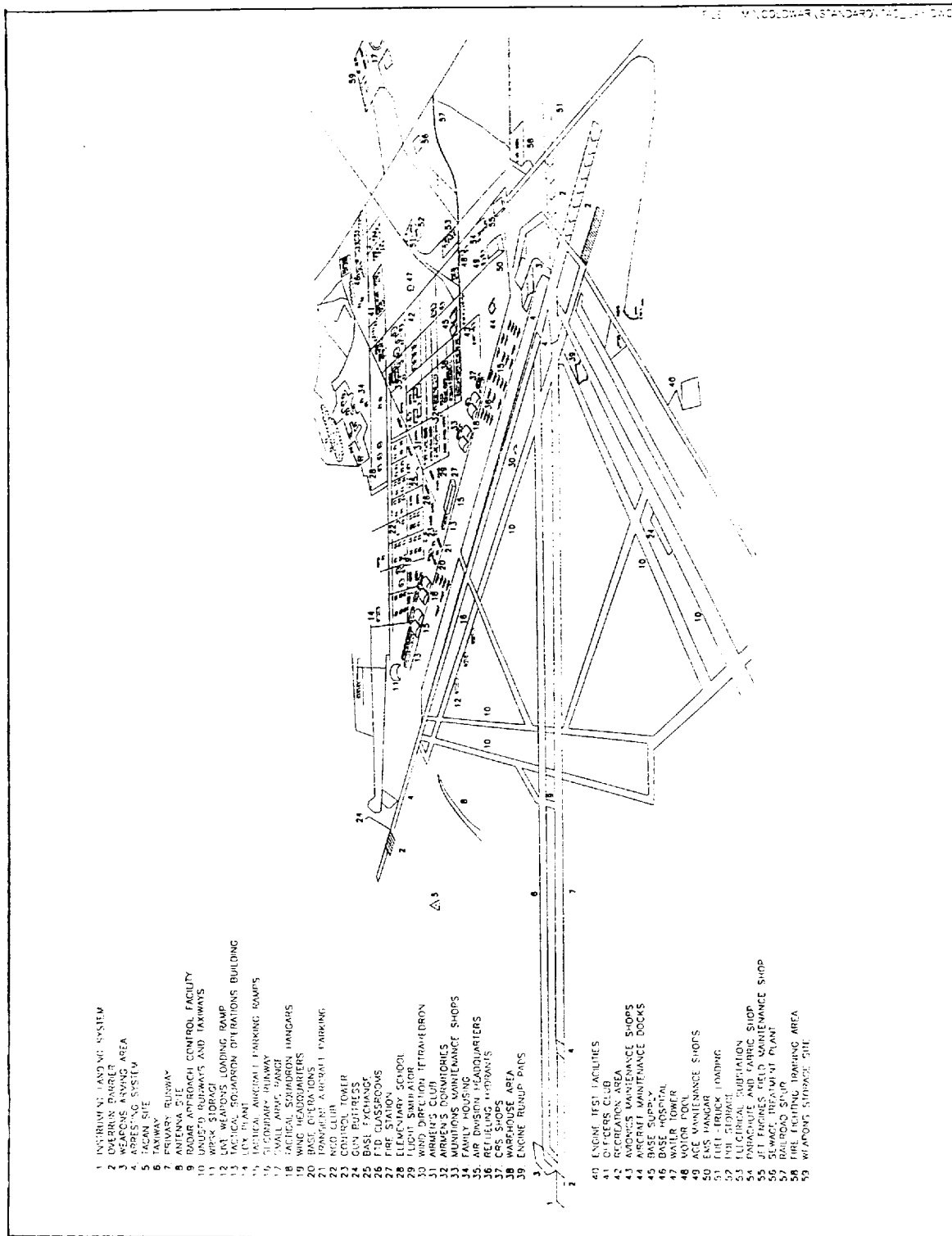


Figure 2.3 Standard Tactical Air Command Base Layout.

course and housing areas. These industrial facilities house the Ordnance Depot, small arms firing ranges, and warehouses. The fuel storage tanks are located on the western side of the primary runway. A number of industrial, administrative, and community facilities are located north of the crosswind runway and east of the northern end of the primary runway. A large portion of the southern end of the base is Open Space. These areas contain protected wetlands and other areas not suitable for construction or other uses.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - facilities for base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan for MacDill AFB and Figure 2.5 is a diagrammatic land use plan for a standard TAC base. MacDill AFB does not strictly conform to the TAC land use layout since it has fragmented use areas. Industrial functions on MacDill AFB are carried out in several areas around the runways. Ordnance storage and disposal are placed to the south of the crosswind runway and east of the southernmost housing and recreation areas. Fuel storage, communications antennae, a doppler radar facility, and a control tower are situated on the portion of the base west of the primary runway.

In a general sense, the standard TAC land use pattern is followed in that the mission, support, and personnel facilities are generally placed in that order from the flight lines. Community, recreation and family housing are furthest away from mission functions. The standard land use patterns are followed at MacDill AFB within the exigencies of geography and topography, which somewhat dictate placement of the various use areas.

Avon Park AFR encompasses over 106,000 acres, only 20,000 acres of which is impacted by developments. The remaining acreage is open space containing 15,000 acres of pine plantations, 15,000 - 25,000 acres of forested land, and several thousand acres of critical habitat for endangered plants and animals. Within the open space, 80,000 acres are open to the public for recreational purposes and 90,000 acres are used for grazing under a cattle range leasing program.

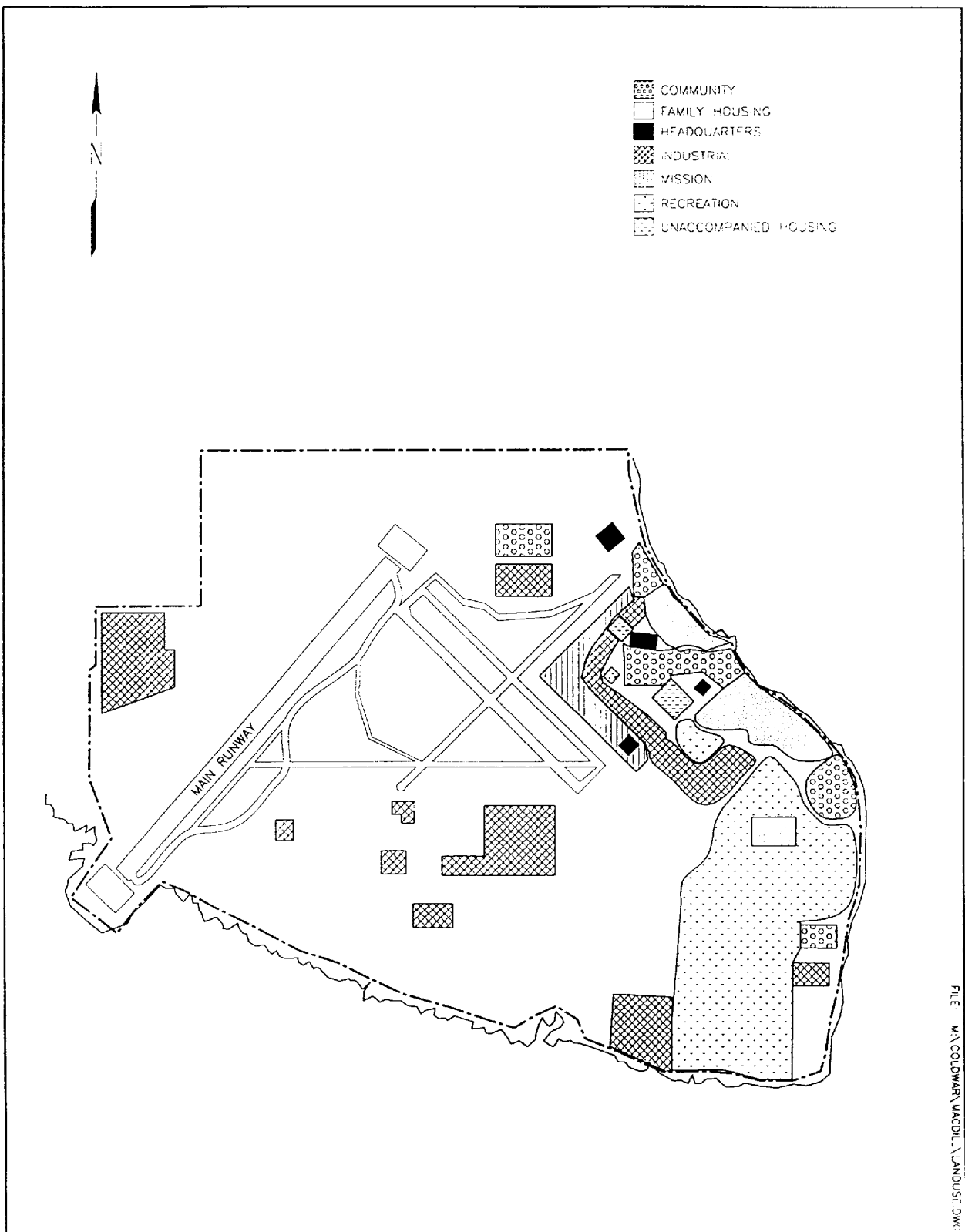


Figure 2.4 MacDill Air Force Base Land Use Diagram.

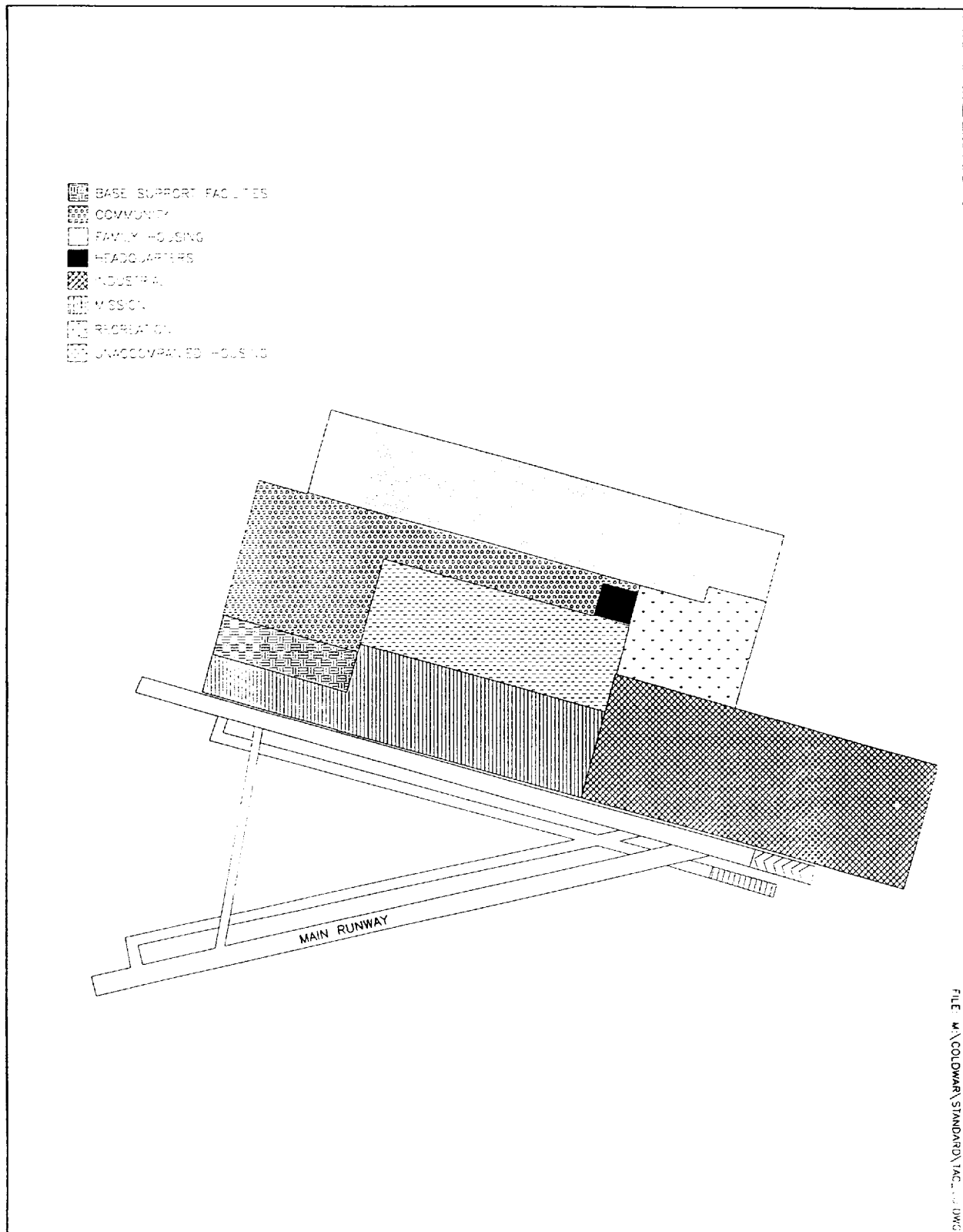


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 MACDILL AFB HISTORY AND COLD WAR CONTEXT

MacDill AFB had its beginnings with the passage of the Wilcox National Defense Act of 1935. Congressman J. Mark Wilcox of West Palm Beach Florida introduced a bill authorizing the creation of seven air fields in the United States, Puerto Rico, and Panama for the defense of United States interests in the vulnerable Caribbean (USAF Historical Division 1961). The City of Tampa successfully lobbied in Washington, D.C., for the development of an air field in the city.

Initial acquisition of the land for the air field began in 1939, and construction began on November 28, 1939. Personnel were deployed from Barksdale Field, Louisiana, and Mitchel Field, New York, to the new field. In May of 1940, there were over 1,000 men at MacDill Army Air Field (AAF), along with 14 planes.

Black troops were stationed at the air field in August 1940. During World War II, the military was still segregated under a policy of "separate but equal." The Black troops stationed at MacDill AAF lived in the "north area" of the base, the present site of the Commissary. They had their own theater, non-commissioned officer (NCO) club, barracks, and other facilities similar to those provided on the main portion of the base. These facilities were provided under an expansion program, and construction of the facilities was completed by mid-July, 1942. Today, only the Black Motor Pool facility remains and is currently used as a base civil engineering facility.

The air field was officially activated on April 16, 1941, and was named after Colonel Leslie MacDill, who was killed in a plane crash at Bolling Field near Washington, D.C., on November 9, 1938. MacDill AAF's first "official" commander was Colonel Clarence L. Tinker. The previous commanders of the air field had fewer than 500 people under their command; therefore, they were not considered "official" (USAF Historical Division 1961:2).

MacDill AAF's first mission was transitional training of aircrews in the B-17 *Flying Fortress* long range bomber and the B-26 *Marauder* medium range bomber. From 1941 to 1943, the host units at the field were the 29th, 44th, and 21st Bombardment Groups (BMG). B-17 replacement crew training continued until March of 1945. Training for B-29 *Super Fortress* crews was provided until the end of the war.

Immediately after the Japanese attacked Pearl Harbor, MacDill AAF became the staging point for ferrying combat aircraft to the Far East. Project X, as it was called, involved preparing the aircraft and briefing the crews for their long flights via the South Atlantic and Africa to Australia (USAF Historical Division 1961).

MacDill AAF had served as command headquarters for the III Bomber Command and the III Fighter Command since 1941. With the end of the war in 1945 and the subsequent downsizing of the military, both commands were deactivated on April 8, 1946 (USAF Historical Division 1961).

Already by the end of 1946, the seeds of anti-Communist propaganda were growing. This was illustrated by the reaction to the Black riot that erupted at MacDill AAF on October 27, 1946. The circumstances which caused the riot had been brewing for some time and were not confined to this air field alone. Ultimately, an outburst by a Black soldier led to an investigation. In the previous 90 days, there had been 22 mass disturbances in the military, all attributed to "Communist propaganda with the definite objective of infiltrating the armed forces, which has manifested itself by inciting the Negro soldier to demand preference rather than equality" (Gropman n.d.:66). A Black counterintelligence special agent, assigned to the Negro Unit at MacDill AAF, discovered that the riot was spontaneous and found no evidence of Communist agitation. Despite his findings, reports from MacDill AAF indicated that the blame continued to be placed on Communist agitation (Gropman n.d.:68).

In January of 1946, MacDill AAF became a base under the Strategic Air Command (SAC), and in 1948, was officially designated MacDill AFB. It continued its tradition of supporting programs of concentrated air training. Some of the major SAC organizations which were assigned to the base were the 311th Reconnaissance Wing, the 55th Reconnaissance Group, the 305th, 306th, and 307th Bombardment Wings (BMW), and the 6th Air Division.

MacDill AFB continued as a SAC base throughout the 1950s. In 1959, the 305th BMW was transferred to Bunker Hill AFB, Indiana, and was immediately replaced at MacDill AFB with an Air Defense Weapons Wing equipped with assorted fighter aircraft. In 1960, the Air Defense Weapons Wing was deactivated, and it was announced that MacDill AFB would be downsized and a major portion of the base closed by June 1962 (Department of Defense [DoD] 1973:10; USAF Historical Division 1961).

The base, however, remained open. The Cuban Missile Crisis was a factor in this reversal of fortune. Since MacDill AFB's original purpose was to protect America's interests in the Caribbean, the base was retained as an active installation and in September of 1961, the United States Strike Command (USSTRIKCOM) was activated there. Instead of closing, MacDill AFB assumed a dual role with a SAC bomber force and a USSTRIKCOM fighter force.

USSTRIKCOM's mission was to provide a strong ready reserve of versatile fighting personnel able to be sent on a moment's notice anywhere in the world. USSTRIKCOM's versatility fulfilled Kennedy's strategy of "Flexible Response" (Lewis et al. 1995) by allowing the DoD to tailor the country's retaliation to meet the level of the initial aggressive act. Prior to USSTRIKCOM, the United States had no capability or policy in place to fight a limited tactical war. USSTRIKCOM forces and administration allowed for a flexible response and retaliation against hostile aggressiveness (Benson and Hines 1988:30).

MacDill AFB was transferred from SAC to TAC on July 1, 1962, with an Air Division and two tactical fighter wings (TFW) being activated on that date. The last B-47 *Stratojet* bomber left the

base in March of 1963 (USAF 1994). From April 1962 to February 1963, the base had F-84 *Thunderjet* aircraft. MacDill AFB then received the first F-4C *Phantom II* jet aircraft in the Air Force, and both the 12th and 15th TFWs made the transition from F-84s to F-4Cs.

MacDill AFB's training role continued under TAC as fighter squadrons were flying missions in the Vietnam War. The 12th TFW was transferred to Cam Ranh Bay Air Base in Vietnam and the 15th TFW became a Replacement Training Unit (RTU) to replace those pilots lost in combat in Vietnam. MacDill AFB also trained aircrews of the B-57 *Night Intruder* from 1968 through 1970. The base was following its tradition, established in World War II, of training replacement aircrews in an organized and thorough fashion.

MacDill AFB was literally teeming with people by 1970, with over 8,500 military and civilian personnel on the base. Upgrading and construction of mission-related facilities, along with medical and housing facilities, occurred in the 1950s and 1960s. In 1970, the 15th RTU mission changed from training to a combat ready operational role, and the F-4E replaced the F-4C. This resulted in additional construction and development.

The United States Readiness Command (USREDCOM), a unified command consisting of all four branches of the DoD, was activated at MacDill AFB in January 1972 as the replacement for USSTRIKCOM. USREDCOM provided planning and exercise functions for a general reserve of combat ready forces to reinforce other unified commands as required. MacDill AFB kept its dual role of training and maintaining global fighter readiness. Once assigned to the base, the 1st TFW trained F-4E and F-4D crews (USAF 1994; DoD 1973:12).

In 1975, the 56th TFW was established at MacDill AFB. The F-4 was still the primary training aircraft until 1979. The F-16 *Fighting Falcon* was the newest addition and conversion to that aircraft was completed by June 1982. The 56th TFW was changed to a tactical training wing (TTW) as the emphasis switched again from combat ready to pilot training, this time for the F-16.

The formation of the Rapid Deployment Joint Task Force (RDJTF) at MacDill AFB by President Carter and the Joint Chiefs of Staff occurred on March 1, 1980. The RDJTF was subordinate to USREDCOM and was formed due to changes in the balance of power in the Middle East. In Iran, the Shah was replaced by the fanatical theocrat Ayatollah Khomeini, and Afghanistan was invaded and conquered by Soviet forces (Benson and Hines 1988:39-50).

During 1981 and 1982, RDJTF evolved from a force designed to deploy virtually anywhere on the globe to a regional unified command representing American interests in the Middle East and North Africa. The RDJTF became a separate joint task force on October 1, 1981, and was no longer subordinate to USREDCOM. The RDJTF was deactivated on December 31, 1982, and USCENTCOM was established on January 1, 1983, to replace it, taking over RDJTF's responsibilities for United States military activity in both Northeast Africa and Southwest Asia. USCENTCOM, currently stationed at MacDill AFB, provides security assistance to friendly countries in its area of responsibility (Benson and Hines 1988:48). Desert Shield and Desert Storm were both operations of USCENTCOM.

Another unified command still at MacDill AFB is USSOCOM. USREDCOM was deactivated and USSOCOM established its headquarters in USREDCOM's old headquarters in April of 1987. USSOCOM unifies more than 47,000 active duty and reserve forces from the Army, Navy, Marine Corps, and Air Force under a single commander. The mission of USSOCOM is to prepare assigned forces to carry out special operations, psychological operations, and civil affairs operations as required, and if directed by the President or Secretary of Defense, to plan and conduct special operations (MacDill AFB 1993a:28).

In April 1991, the Base Realignment and Closure (BRAC) Commission recommended MacDill AFB cease all flight operations by September 1993, and declared approximately 3,500 acres to be disposed of as excess property (USAF 1994). All flight operations ceased and downsizing actions were begun at the base.

In June 1992, MacDill AFB came under the jurisdiction of ACC. In October 1992, the National Oceanic and Atmospheric Administration (NOAA) announced plans to relocate to the base. A new round of base closure and realignment actions reversed the 1991 ruling of closing the flight line at MacDill AFB and limited flight operations continued at the base under the management of NOAA.

Early in 1994, the 6th ABW became the new host unit. With most of the flight operations gone, this wing's mission is to support the two major unified commands, USSOCOM and USCENTCOM, and a number of tenant units.

3.2 AVON PARK AFR HISTORY AND COLD WAR CONTEXT

What is now Avon Park AFR came into being in January 1942 with the Office of the Chief of Engineers in Washington, D.C., granting authority for the construction of a general bombing and gunnery range located 10 mi (16 km) east-northeast of Avon Park, Florida, in Polk and Highland Counties. Initially known as the "World's Largest Bombing Range," there were 175 square miles for the range (USAF 1989), which consisted of massive tropical wildlife sanctuary abundant with grazing cattle and Florida wildlife, but little else (USAF 1990).

The 88th BMG was assigned to Avon Park Army Air Base early in 1942 due to the good weather in Florida which allowed more training opportunities. The base population grew from the original 100 troops to approximately 5,000 in a period of only one year. In less than a year, two runways, five practice bombing ranges, one aerial gunnery range, one demolition range, and one incendiary range were in operation. By December of 1942, initial construction of the cantonment area was completed to include 276 buildings. By 1943, the base had a population of 8,000 airmen.

After World War II, the base population dropped to just 500 personnel and then 200 personnel. The base reverted to caretaker status in July 1950 with only 10 personnel retained. The only

activities at the range during the early 1950s included cattle grazing, civilian fishing camps, and an occasional bivouac by various military units. In 1951, the U.S. Bureau of Prisons opened a minimum security prison camp on the base, which today is known as the Avon Park Correctional Institution. Prison laborers dismantled approximately 50 World War II buildings on the base and used the salvaged materials to rehabilitate other buildings.

On April 1, 1956, the base was merged with Avon Park Air Force Range under SAC and was used by SAC units of the 2nd Air Force for pilot, bombing, and gunnery training. An advanced water survival school was also conducted by SAC at the range in 1958 (USAF 1989). Jurisdiction over the range changed hands multiple times, resting with MacDill AFB from 1956 to 1961, McCoy AFB between 1961 and 1962, then MacDill AFB again in 1962. On July 1, 1962, Avon Park AFR was reassigned to TAC, but was under the control of the 836th Air Division at MacDill AFB (USAF 1990).

In the early 1970s, plans for adding Electronic Warfare (EW) training to activities conducted at Avon Park AFR were proposed, and the first EW troops were transferred to the range in 1972 and assigned to the 1st Combat Support Squadron. During the following three years, EW equipment was shipped to the range for training. In July 1975, the squadron was redesignated as the 56th Combat Support Squadron.

Training opportunities provided by the range throughout the 1970s, 1980s, and 1990s were and are varied. Four bombing ranges are used to train pilots and weapons system operators on procedures and patterns for air-to-ground weapons delivery, providing practice in locating and bombing targets in a realistic environment. The range is also capable of providing familiarization with threat radar signals and tactical threat employment scenarios. The range also provides an artillery range for artillery and machine gun training, and wooded areas for bivouac and parachute drop training by Army, National Guard, and Reserves units.

Due to the downsizing at MacDill AFB that began in 1991, no military personnel were assigned or posted at Avon Park AFR. In 1993, Avon Park AFR was also downsized, military personnel were transferred, and the range was converted to a civilian-run operation. Some of the earlier housing on the range is currently used by employees of the Avon Park Correctional Institution which is nearby.

3.3 BASE DEVELOPMENT

MacDill AFB is surrounded by water on three sides and the City of Tampa to the north. Those physical restrictions on base development, along with the fact that much more than half of the base area is within the 100 year floodplain, has limited expansion and development. In addition, much of the wetland areas are now protected by state and federal statutes. In fact, when planning development, emphasis has been put on more efficient use of space within areas already developed. As a result, when looking at diagrams of base development through the decades, it often appears that no development or expansion has taken place.

By the end of World War II, MacDill AFB had seen tens of thousands of personnel pass through its facilities. Its primary runway, which is northeast-southwest in orientation, runs the length of base property, from the clear zone in the bay to the clear zone on the north side of the base. It effectively separates the western part of the base from the remainder. Fuel storage tanks and transmitters occupy that side of the base. The north area of the base was the Black soldier's area. Construction at the base in 1942 and 1943 was to produce facilities for the Black troops stationed on the base in a "separate but equal" philosophy. These were dismantled in 1949 when the military was desegregated.

The majority of the buildings on base are to the east of the flight lines, between the flight apron and the shore on Hillsborough Bay. Mission related buildings are closest to the flight line, with industrial, administrative, and unaccompanied housing behind the hangars in their arrowhead placement pointing to the flight line.

The Ordnance Depot and Storage, built in 1955, is located to the south of the crosswind runway (Figure 3.1). The hospital was built in the 1950s as well. In planning, it was originally situated at the south end of the peninsula, but was moved further to the north when construction began in 1956. The area at the south end of the peninsula was used instead as a recreation area. The 1960s brought the construction of large headquarters buildings, dormitories, and community oriented facilities. All of these are within the main area of the base east of the flight line (Figure 3.2).

The 1970s and 1980s were periods of building and continued development within the already developed areas on the eastern side of the base (Figure 3.3). Some family housing appropriations were made, and units were built in the area to the south of the hospital and around the golf course and recreation areas. The present control tower was built in 1972 to replace the old control tower atop Hangar 3.

In the 1990s, expansion on the base has been limited to mission-related areas to the north of the flight lines, and in the areas immediately south of the commissary and community-related structures (Figure 3.4). Portions of this expansion or rehabilitation were for the arrival of the two unified commands on base.

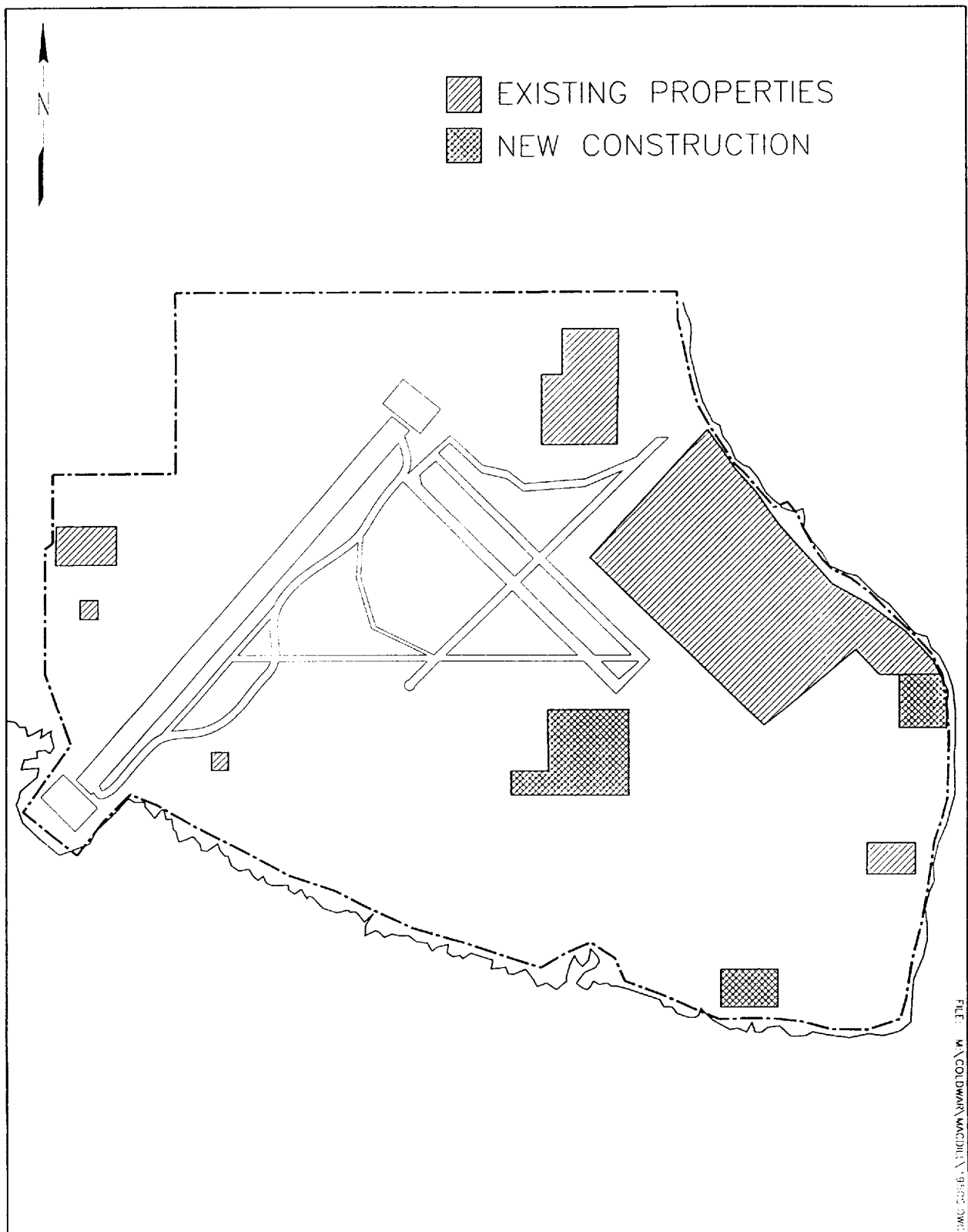


Figure 3.1 MacDill Air Force Base 1950s.

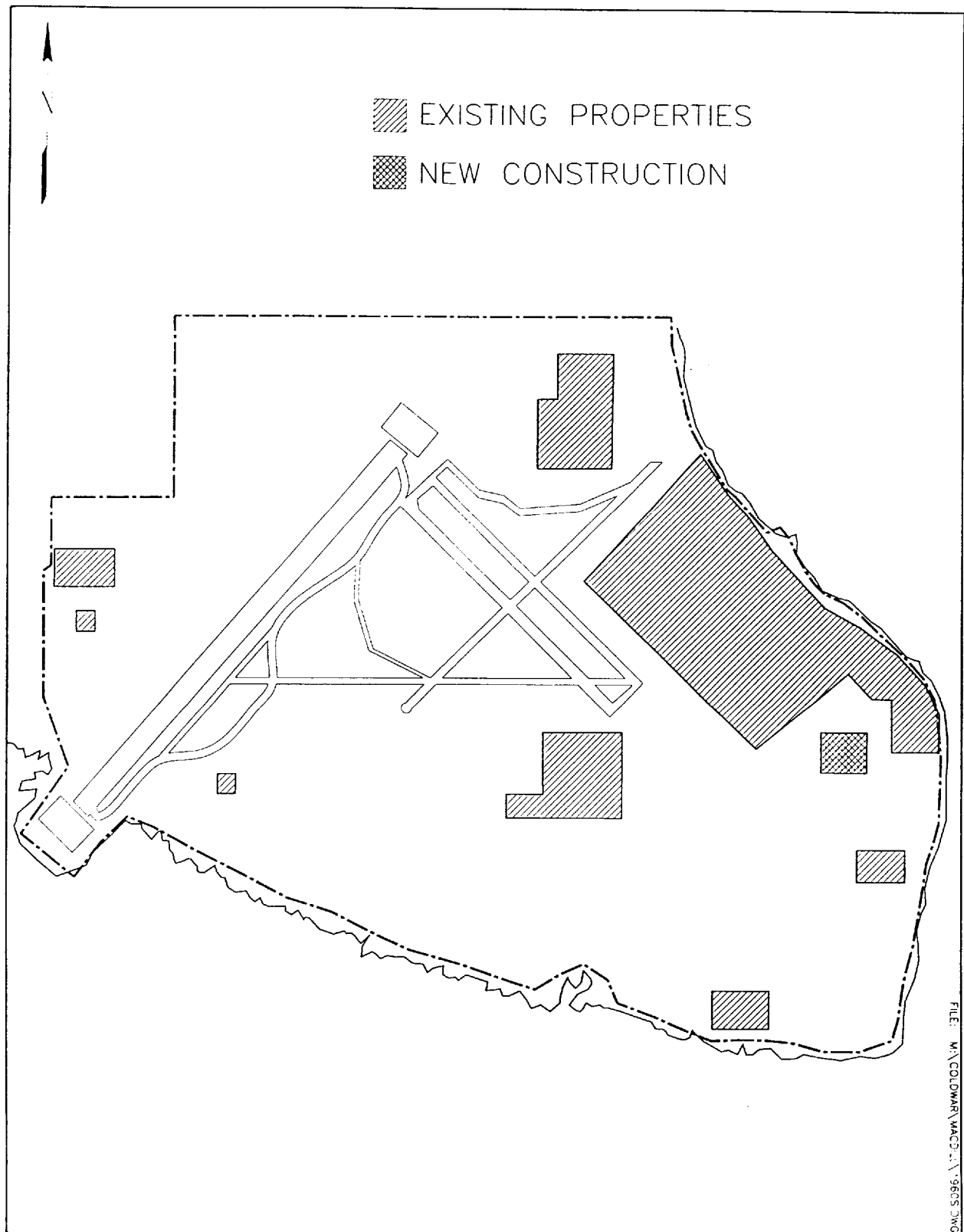


Figure 3.2 MacDill Air Force Base 1960s.

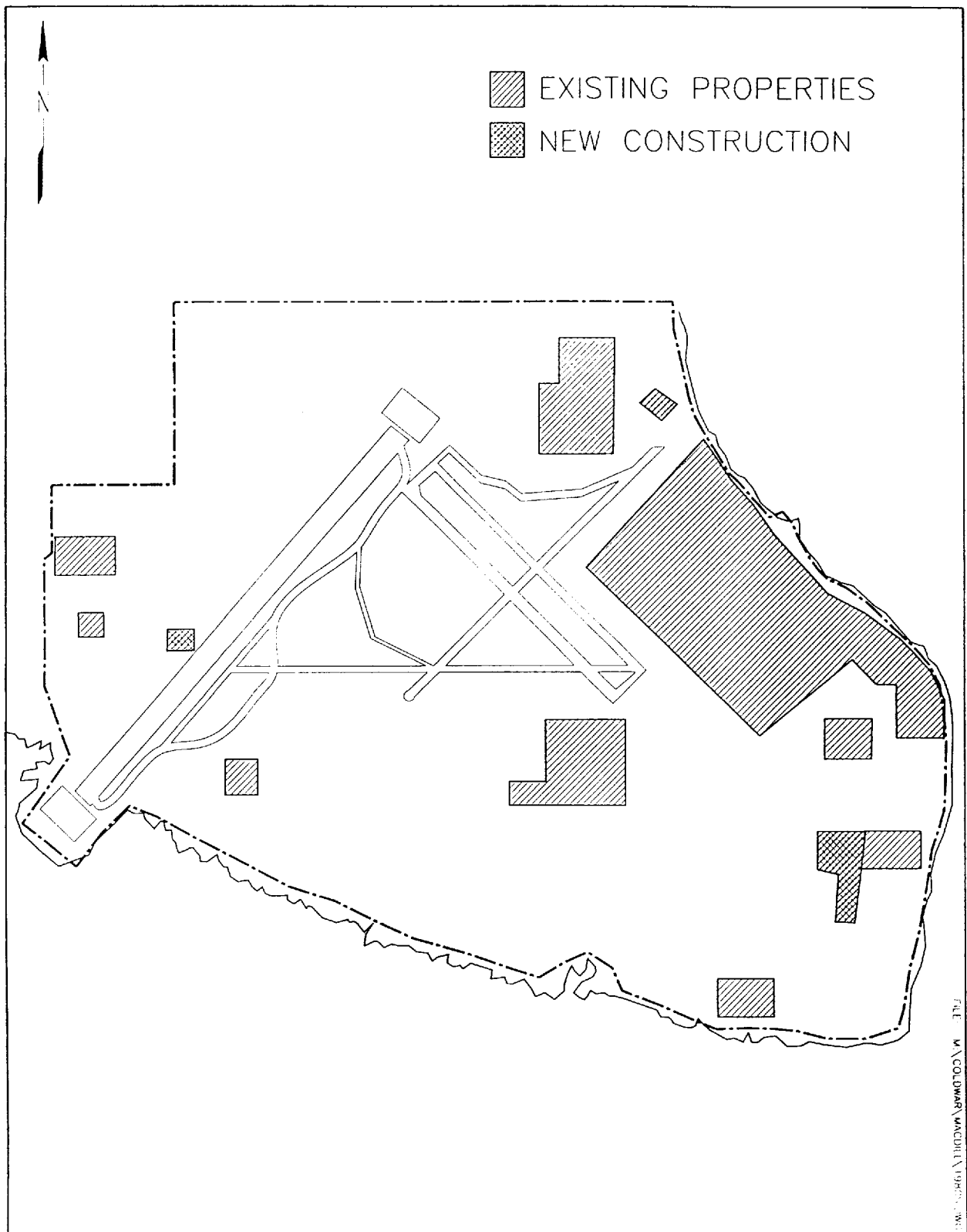


Figure 3.3 MacDill Air Force Base 1980s.

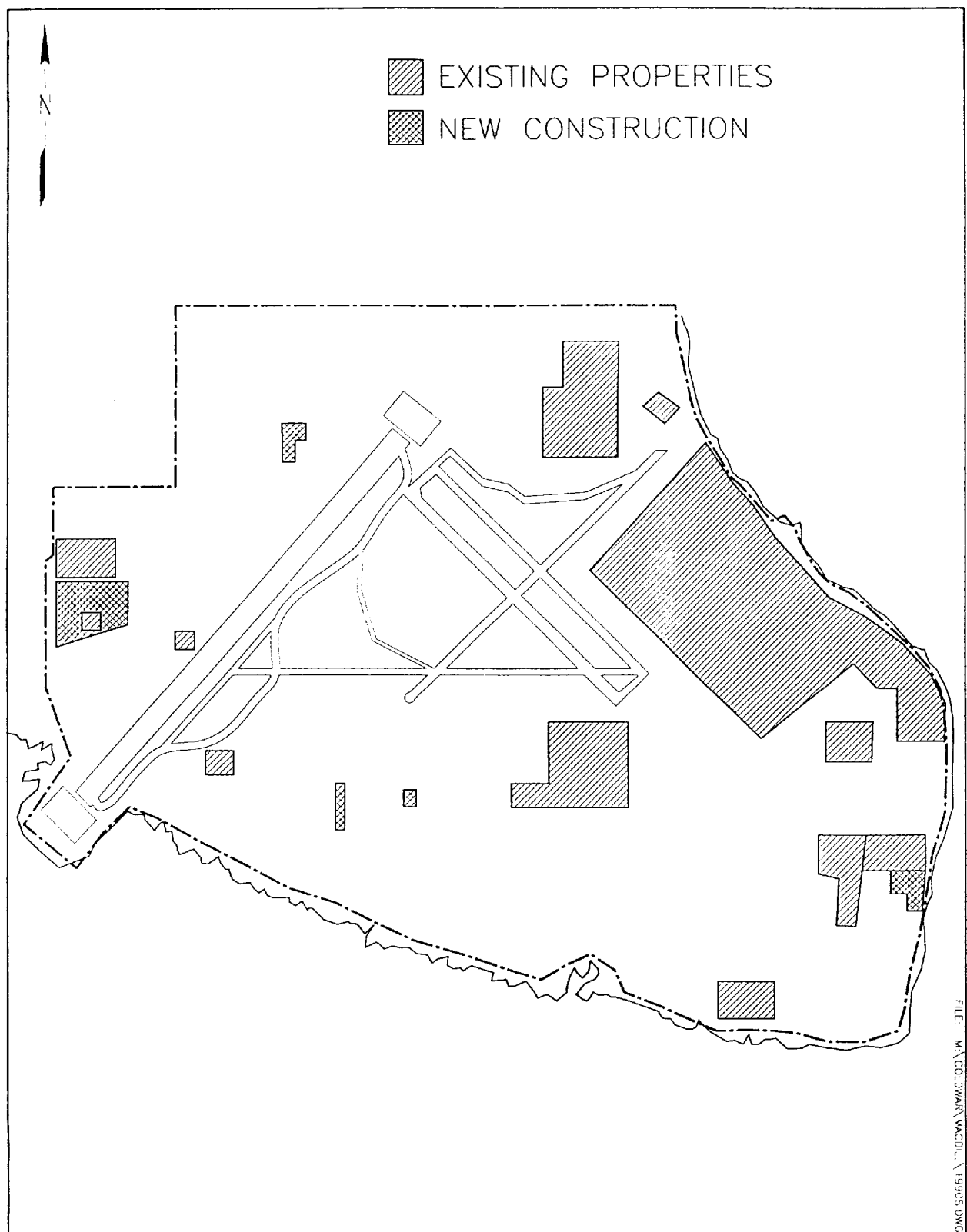


Figure 3.4 MacDill Air Force Base 1990s.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of MacDill AFB and Avon Park AFR was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of MacDill AFB and Avon Park AFR, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at MacDill AFB and Avon Park AFR were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the

importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF Interim Guidance (1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF Interim Guidance (1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at MacDill AFB, the field team met their point of contact, Mr. Bob Hoffman. The objectives of and needs for accomplishing the base inventory were discussed. Mr. Hoffman accompanied the team on a tour of the base - with the exception of the flight line area - and the team began to familiarize themselves with the base layout and the types of facilities present. They established themselves in an office in order to have a contact point and working space. Mr. Hoffman introduced the team to the other points of contact within Civil Engineering, including the Real Property Officer, the Community Planner, and Drafting Section personnel. They established the project needs from each of the contacts in regard to computerized and earlier Property Change lists and cards, planning documents and maps, and base layout plans, maps, and drawings from each decade for the base. They expressed the possibility of more requests to come and established a time frame for their needs.

In areas where clearance might be necessary, the field team notified the appropriate personnel regarding their presence and the time frame required for photography. The Property Change list, base maps, and the first reconnaissance with Mr. Hoffman were used to assemble a list of

resources to be inventoried and evaluated. Visits with the Base Historian and the Public Affairs Officer were undertaken and needs were established with those offices. A historian at the USCENTCOM was also contacted. The photographic inventory of property types on the base was begun on day one and was accomplished concurrently with other tasks. The field team arranged to drive to Avon Park AFR and inventory the installation there at the end of the visit at MacDill AFB. The final task was to determine if a debriefing session was necessary or requested from the Base Commander or Base Engineer. It was not, and the team left with the promise of continued, follow-up contact.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of MacDill AFB and Avon Park AFR, 158 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Seven resources were evaluated at MacDill AFB, three of them falling under the DoD category of real property and four under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Base and Command Centers

6.1.1.1 Major Command Headquarters (Real Property Nos. 501/501A, Resource No. 5003)

This Major Command Headquarters is a two-story building of concrete masonry unit construction completed in 1969 at the heart of the base on the eastern side. The windows are long, thin and vertical. The roof overhangs the second floor, the second floor overhangs the first, and there is a porticoed entrance to the building. The building exterior has a light colored cementitious stucco. The building originally contained state-of-the-art command and control equipment such as conference rooms with glass projection screens, pneumatic tubes for communication throughout the building, teletype, radio, telephone, short wave radio, and closed circuit TV. All personnel entering the building had to have at least a SECRET level facility clearance and locks were on all doors. Independent operation of the building was assured by generators. It was reported that

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Base and Command Centers	Major Command Headquarters	5003	501, 501A	Real/Bldg	18
Base and Command Centers	Major Command Headquarters	5004	540	Real/Bldg	17
Documentation	Documentary Collection	5006	None	RecDoc/Obj	17
Documentation	Documentary Collection	5007	None	RecDoc/Obj	12
Documentation	Base Newspaper Collection	5008	None	RecDoc/Obj	12
Documentation	Map Files	5009	None	RecDoc/Obj	16
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	5001	1105	Real/Bldg	19

* Scale ranges from 1 to 24.

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
19	5001	01105	Bomber Alert Facility
18	5003	00501, 501A	Major Command Headquarters
17	5004	00540	Major Command Headquarters
17	5006	None	Documentary Collection
16	5009	None	Map Files
12	5007	None	Documentary Collection
12	5008	None	Base Newspaper Collection

computers were the backbone of the facility, and the unimpressive exterior concealed an exciting military nerve center.

This building was the central headquarters for multiple major commands on the base, including USSTRIKCOM during the late 1960s, the unified USREDCOM in the 1970s, and RDJTF at the beginning of the 1980s before it became USCENTCOM. At present, USSOCOM is headquartered in this building and has been there since 1987. Thus this building has continually housed major command headquarters since 1969. Aspects of policy and strategy of the Cold War have certainly been directed and carried out from this building.

Due to the building's current use as the Major Command Headquarters for USSOCOM, access to the interior of the facility was not obtained by the field team. However, the real property card for the building indicates no major renovations, and the use of the facility as a classified headquarters continuously from 1969 to the present suggests that no major changes have occurred. Therefore, interior and exterior integrity are determined to be intact.

This Major Command Headquarters is exceptionally important to MacDill AFB's Cold War context and to Cold War history at the national level. As the headquarters of USSTRIKCOM, it represents the switch during the Kennedy administration to a military strategy and government policy of Flexible Response. It was the headquarters of USREDCOM, one of the first unified commands in the U.S. military. It also housed RDJTF, which was formed due to the changes in the balance of power in the Middle East. Finally, it has housed USSOCOM since its formation in 1987 as the replacement unified command for USREDCOM. During its long tenure as a headquarters, it has been witness to changing U.S. military strategies throughout most of the Cold War era. This facility was used for this purpose during Phases III and IV of the Cold War and meets NRHP criterion (a).

6.1.1.2 Major Command Headquarters (Real Property No. 540, Resource No. 5004)

This building, the headquarters for USCENTCOM, has at least two stories, possibly three. It is constructed of concrete masonry unit with a tan, cementitious stucco on the exterior. In plan, it has a stair-step configuration. Narrow, vertical windows are located high up on the second/third floor and there are very few entrances/exits to the building. Windows and entrances are a factor in security, and the scarcity of these illustrates the importance placed on security at this command center. The building is located on the northeastern part of the base and was completed in 1982.

USCENTCOM is the successor of RDJTF. USCENTCOM is a unified command which has responsibility for the Middle East, parts of North Africa, and southwest Asia. Although its activation occurred near the end of the Cold War era (January 1, 1983), it still evidences the policies and strategies of the U.S. and its concern for stability in the Persian Gulf, southwest Asia, and northern Africa.

Due to the building's current use as the headquarters for USCENTCOM, access to the interior of the building was not obtained by the field team. However, due to the recent construction date of the building, and as evidenced by the real property card for the building, no major changes have occurred. Thus, the building's integrity is determined to be intact.

This Major Command Headquarters is exceptionally important to MacDill AFB's Cold War context and to Cold War history at the national level. As the headquarters of USCENTCOM, a regional unified command, this building represents the growing U.S. interest in the Middle East and U.S. concern for the unsettling of the balance of power in that region. This facility was used as the USCENTCOM headquarters during Phase IV of the Cold War and meets NRHP criterion (a).

6.1.2 Documentation**6.1.2.1 Documentary Collection** (Located in Real Property No. 30, Resource No. 5006)

This resource is a collection of files located in the Base Engineering Administration's Planning Office. The files contain miscellaneous architectural drawings and plans, as well as aerial photographs. The collection includes original mylar, linen, and paper drawings of individual buildings and the whole base dating from 1940 to 1994. The collection also includes as-built drawings of the Wherry housing developments. Some of the recent drawings are actively used. The collection is stored in five drawers, the top one uncovered and exposed to the moist air.

The collection contains information essential to the history of the base. It documents base land use and development from pre-Cold War through to the present. It also provides information on individual buildings, some of which are evaluated as important through this study.

6.1.2.2 Documentary Collection (Located in Real Property No. 299, Resource No. 5007)

This collection of files is located in the Base Historian's office. The files contain unique historic newspaper clippings, photographs, correspondence, base guidebooks, and other miscellaneous data sorted by year. The files bear the mark of various personalities in that records are kept and maintained at the whim of the historian. These files are not comprehensive or systematically gathered. The various materials found in the files provide information on base events and the development of the base throughout the Cold War era.

6.1.2.3 Base Newspaper Collection (Located in Real Property No. 299, Resource No. 5008)

This bound collection of MacDill AFB's newspaper is located in the Public Affairs Office. The newspapers date from the 1950s through the 1970s. They may be somewhat incomplete, but they

provide descriptions of base activities throughout those decades. This collection is important since it records the history of the base as it was affected by the developments of the Cold War.

6.1.2.4 Map Files (Located in Real Property No. 30, Resource No. 5009)

These documents are located in the Base Engineering Administration's Planning Office. They are not stored with the rest of the drawings and other documents of this type. The fact that these maps are segregated from the others places them at some risk. This set contains the early Tab Sheets for Avon Park AFR when the Air Force was coming into being. There is also a 1940 Layout Plan for MacDill AAF with the signature of General Henry "Hap" Arnold on it. Since this 1940 map is framed, the value of the map has obviously been recognized. This set of maps is important since it illustrates the development of the range during the early stages of the Cold War era.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Real Property No. 1105, Resource No. 5001)

This concrete masonry unit building was constructed in 1959 as the crew readiness or Bomber Alert Facility. It is meant to be semi-subterranean with two floors and entrance/exit ramps for rapid egress to the flight line and planes during alerts. Due to the area's geology, the first floor is actually built at ground level but is covered up by earthen berms on all sides of the structure.

This facility has gone through several "incarnations" since its deactivation as a Bomber Alert Facility. The facility was originally used solely for the support of bomber crews during alert duty. It was noted as being used as officer's quarters for a period (time frame unknown). It is now being used by the unified USSOCOM and has most likely been rehabilitated and upgraded

to meet their needs and specifications. There are no flight operations associated with its present function.

Externally, this facility does not appear to have changed from its original purpose. High profile security fencing and other security measures are still in place and in use. Access to the secured facility was not obtained by the field team. However, the real property card for the building shows no major renovations of the interior of the facility. Thus, the building's integrity is determined to be intact.

This Bomber Alert Facility is exceptionally important to MacDill AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). This facility was used for this purpose during Phases II through III of the Cold War and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at MacDill AFB or Avon Park AFR.

6.4 TRAINING FACILITIES

None were evaluated at MacDill AFB or Avon Park AFR.

6.5 INTELLIGENCE FACILITIES

None were evaluated at MacDill AFB or Avon Park AFR.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on MacDill AFB. During the fieldwork at the base, the field team could not inventory all the resources present on the base due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at MacDill AFB. These resources should be investigated further for a more comprehensive analysis.

Two documents, both of which were in draft form and unavailable for review by the field team, are directly applicable to the present study. One is a *Historical Study of MacDill AFB, Florida* (MacDill AFB 1993b), completed by Engineering Sciences, Inc. This document, currently located in the Base Historian's office, discusses buildings and structures located within a portion of the base in a brief summary. The other document, *Historic Building Survey for MacDill Air Force Base, Florida* (MacDill AFB 1994), discusses a historic building survey of the portion of the base scheduled to remain under Air Force control. The survey work, completed under contract with Computerized Industrial Measurements, Inc. and Hardlines: Design and Delineation, includes Historic American Buildings Survey (HABS) documentation of the overall base and individual buildings, an existing conditions report, and an evaluation of buildings for eligibility to the NRHP.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to MacDill AFB revealed approximately 280 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to deployment of unified commands to the base. The vast majority of these documents are available on microfilm. Future studies of Cold War history at MacDill AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of potential future contacts, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

MacDill AFB continues to consolidate uses and rehabilitate structures. Since space is at a minimum, there is an objective, through an Executive Order, to demolish or remove World War II structures and other temporary buildings such as trailers from the base. The base does not have a Preservation Plan. The previously mentioned historical study has taken place, and Mr. Hoffman, a marine biologist, serves as an environmental/cultural resource manager to aid in the Section 106 process. The base planning office has also identified land use areas on base to aid in efforts to make the base more efficient. The capital improvement projects currently planned appear to pose no threat to the resources evaluated by this study.

In April 1991, the BRAC Commission recommended that MacDill AFB cease all flight operations by September 1993 and declared approximately 3,500 acres as excess property to be disposed of later in 1993. In October 1992, NOAA announced plans to relocate to the base. A new round of BRAC actions reversed the 1991 ruling of closing the flight line at the base. One of the provisions of the law allowed the NOAA Aircraft Operations Center to manage the flight line, thereby continuing flight operations at the base (USAF 1994). Portions of the base will be under the authority of NOAA and portions will be under the Air Force. The document discussed in Chapter 7.0 (MacDill AFB 1994) was completed to produce records that would assist the base in complying with Sections 106 and 110 of the NHPA prior to this exchange of authority.

The BRAC Commission and the Air Force are coordinating plans and objectives for the base resources. The process is one that is ongoing, and resolutions to some problems have not yet been achieved.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at MacDill AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at MacDill AFB and Avon Park AFR, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on MacDill AFB and Avon Park AFR have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is

intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at MacDill AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Major Command Headquarters (Real Property Nos. 501/501A, Resource No. 5003)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV, and meets NRHP criterion (a) based on its role as the command headquarters for USSTRIKCOM, USREDCOM, RDJTF, and USSOCOM. The integrity of the building and its features is intact based upon inspection and review of existing documentation. Therefore, this building is recommended as eligible to the NRHP.

Table 9.1 Recommendations for Evaluated Resources.

			Management Recommendations*					
Resource No.	Real Property No.	Property Type	No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	Comments
Real Property - Buildings								
5001	1105	Bomber Alert Facility		*	*	*		NRHP eligible now.
5003	501, 501A	Major Command Headquarters		*	*	*		NRHP eligible now.
5004	540	Major Command Headquarters		*	*	*		NRHP eligible now.
Record/Document - Object								
5006	None	Documentary Collection		*		*	*	
5007	None	Documentary Collection		*		*	*	
5008	None	Base Newspaper Collection		*		*	*	
5009	None	Map Files		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

Recommendations include stewardship to maintain the current level of integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.2 Major Command Headquarters (Real Property No. 540, Resource No. 5004)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase IV, and meets NRHP criterion (a) based upon its role as a major command headquarters for USCENTCOM. The integrity of the building and its features is intact based upon inspection and review of documentation. Therefore, this building is recommended as eligible for listing on the NRHP. Further documentation is recommended to nominate the resource to the NRHP. Stewardship is also recommended to retain the building's current level of integrity.

9.2.3 Documentary Collection (Located in Real Property No. 30, Resource No. 5006)

This collection of architectural drawings and plans and aerial photographs has undergone no inventory or active preservation. It is recommended that the entire collection be inventoried and duplicated. It is further recommended that the copies be retained by the base for its use, with the originals sent to a permanent curatorial facility for stewardship and conservation.

9.2.4 Documentary Collection (Located in Real Property No. 299, Resource No. 5007)

This collection includes newspaper clippings, photographs, correspondence, base guidebooks, and miscellaneous data that has been sorted by year. It is recommended that the collection be completely inventoried and duplicated, with the copies kept at the base for its use and the originals stored at a permanent curatorial facility for stewardship and conservation.

9.2.5 Base Newspaper Collection (Located in Real Property No. 299, Resource No. 5008)

The collection of base newspapers kept in the Public Affairs Office should be inventoried for completeness. It is further recommended that the collection be stored at a permanent curatorial facility for stewardship and conservation, with a duplicate set kept at the base for its use.

9.2.6 Map Files (Located in Real Property No. 30, Resource No. 5009)

This collection of early Tab Sheets for Avon Park AFR and the 1940 Layout Plan for MacDill AAF with the signature of General Arnold on it are valuable resources that are currently stored away from the other maps of the base and range. It is recommended that the Tab Sheets for Avon Park AFR be inventoried and duplicated, with the copies kept at the base for its use and the originals stored at a permanent curatorial facility for stewardship and conservation. The Layout Plan signed by General Arnold is currently framed. This is a resource that should be kept at the base for viewing by the public. It is recommended that a conservation specialist be consulted on ways to preserve this map while having it available for viewing.

9.2.7 Bomber Alert Facility (Real Property No. 1105, Resource No. 5001)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III, and meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence. The integrity of the building is determined to be intact based upon inspection and review of documentation. Therefore, this building is recommended as eligible to the NRHP. Further documentation is recommended to nominate the resource to the NRHP. Stewardship is also recommended to retain the building's current level of integrity.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Benson, L. R. and J. E. Hines

- 1988 *The United States Military in North Africa and Southwest Asia Since World War II*. United States Central Command, History Office.

Department of Defense

- 1973 Installation Survey Report. Executive Order 11508. MacDill Air Force Base, Florida. Office, Assistant Secretary of Defense for Installations and Logistics.
- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Gropman, A. L.

- n.d. *The Air Force Integrates 1945-1964*. Department of the Air Force. On file in Base Historian's Office, MacDill AFB, Florida.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for Headquarters, Air Combat Command. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

MacDill Air Force Base

- 1993a *MacDill Air Force Base*. (Unofficial Installation Guide). MARCOA Publishing, Inc., San Diego.
- 1993b *Historical Study of MacDill AFB, Florida (Draft)*. Engineering Sciences, Inc.
- 1994 *Historic Building Survey for MacDill Air Force Base, Florida*. (Draft) Prepared by Hardlines: Design & Delineation. Submitted to Computerized Industrial Measurements, Inc.
-

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

United States Air Force

- 1983 *Installation Survey Report*. MacDill Air Force Base and Avon Park Air Force Range. GSA Control Numbers 5700-24124 MAFB 5700-24587 AVP AFR. Office, Assistant Secretary of the Air Force (Manpower, Reserve Affairs and Installations).
- 1989 Fact Sheet: Avon Park Air Force Range History. 56th Tactical Training Wing, Public Affairs Division, MacDill Air Force Base.
- 1990 Welcome to the 56th Combat Support Squadron, Avon Park Air Force Range, Avon Park, Florida, 33825. 56th Combat Support Squadron, Avon Park Air Force Range.
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
- 1994 Fact Sheet: MacDill AFB, Florida. 6th Air Base Wing, Public Affairs, MacDill Air Force Base.

United States Air Force Historical Division

- 1961 Notes on MacDill Air Force Base 1939-1960. On file at the Base Historian's Office. MacDill Air Force Base, Florida.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	5001	1105	Bomber Alert Facility	59
	5002	373	Major Command Headquarters	59
	5003	501,	Major Command Headquarters	1969
		501A		
	5004	540	Major Command Headquarters	1982
	5005	1050	Base Engineering Maintenance Shop	1944
	5010	1098	Security Police Identification Control	1981
	5011	151	Permanent Party Airman's Dormitory	1969
	5012	143	Wing Headquarters	1969
	5013	41	Base Theater	1941
	5014	102	Credit Union	
	5015	101	Civilian Pay	
	5016	205	Group Headquarters	1942
	5017	307	Recreation Center	1968
	5018	240	Wing Headquarters	1941
	5019	40	Communications Facility	1951
	5021	435	Family Housing APPR 50-69	1950
	5022	312	Visiting Officers Quarters	1985
	5023	355	Chapel	1968
	5024	344	Post Office	1941
	5025	397	Officers Open Mess	1941
	5026	402	Family Housing APPR FY 50-69	1941
	5027	381	Child Care Center	1979
	5028	383	Child Care Center	1942
	5029	382	Youth Center	1974
	5030	786	Wherry Family Housing	1952
	5031	771	Wherry Family Housing	1966
	5032	767	GTE Communication Exchange	
	5033	711	Composite Medical Facility	1956
	5034	710	Physical Training	1973
	5035	715	Medical Equipment Management Office	1988
	5037	871	Family Housing APPR 50-69	1966
	5038	1885	Florida Air National Guard	
	5039	1882	Firing Range Control House	1982
	5045	905	Temporary Lodging Facility	1985
	5046	700	Explosive Ordinance Disposal	1959
	5048	707	Golf Clubhouse/Equipment	1953
	5049	74	NAF Human Resources	1960
	5050	82	Air Force Clinic	1954
	5051	65	Group Headquarters	1959
	5052	66	Water Treatment Facility	1953
	5053	717	Reserve Force Aeroevacuation Training	1959
	5054	660	Wherry Family Housing	1965
	5055	662	Family Housing Detached Garage	1950
	5057	1203	Tinker Elementary School	

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	5058	353	Family Housing Management Office	1981
	5059	925	Commissary	1974
	5060	925	Barnett Bank	1980
	5061	926	Child Development Annex	1980
	5062	926	Base Exchange	1980
	5063	934	Managed Care	1993
	5064	930	Fast Food Service (Burger King)	1987
	5065	1079	Petroleum Operations Building	1990
	5066	1064	Base Engineering Maintenance Shop	1943
	5067	1	Maintenance Hangar	1941
	5068	1061	Vehicle Refueling Shop	1978
	5069	77	Hydraulic Fluid Building	1954
	5070	500	Vehicle Maintenance Shop	1967
	5071	175	Vehicle Operations Administration	1989
	5072	265	Family Support Center	1991
	5073	311	Library Recreation	1943
	5074	250	Law Center	1954
	5075	259	Airman's Dining Hall (Detached)	1967
	5076	377	Airman's Dormitory	1960
	5077	300	Arts and Crafts Center	1971
	5078	303	Gymnasium	1975
	5079	847	Major Command Headquarters Supply Warehouse	1982
	5080	49	Base Supply and Equipment Warehouse	1953
	5081	46	Airman's Swimming Pool	1949
	5082	241	Thrift Shop	1941
	5083	7	Lithography & Distribution Production Plant	1953
	5084	26	Fire Station	1941
	5085	532	Non-Air Force Administration Office	1992
	5086	521	Family Housing APPR FY 50	1940
	5087	522	Family Housing APPR FY 50	1940
	5088	411	Visiting Officers Quarters	1968
	5089	378	Airman's Dormitory	1960
	5090	379	Airman's Dormitory	1960
	5091	535	Base Supply and Equipment Warehouse	1944
	5092	90	Wing Headquarters	1956
	5093	45	Vehicle Fuel Station	1942
	5094	200	Survival Equipment Shop	1955
	5095	826	Aircraft Weapons Calibration Shelter	1965
	5096	833-840	Storage Igloos	1955
	5097	907	Skeet Range	
	5098	247	Base Engineering Maintenance Shop	1990
	5101	8	Fire Station (Flight Line)	1952
	5102	3	Maintenance Hangar	1941
	5103	2	Maintenance Hangar	1941
	5104	827	Aircraft Weapons Calibration Shelter	1965

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	5105	12	Base Engineering Maintenance Shop	1941
	5106	30	Base Engineering Administration	1941
	5107	1144	Base Engineering Maintenance Shop	1969
	5108	1194	Aircraft Maintenance Organizational Shop	1984
	5109	1065	Aircraft Corrosion Control	1979
	5110	499	Non-commissioned Officers Mess	1959
	5113	594	Traffic Check House	1944
	5114	1108	Control Tower	1972
	5115	1121	Liquid Fuel Analysis Technical Laboratory	1955
	5119	555	Exchange Service Station	1964
	5120	527	Vehicle Maintenance Shop	1942
	5121	111	Base Civil Engineering Storage Facility	1941
	5122	9	Non Air Force Administrative Offices	1982
	5123	83	Material Services	1958
	5124	828	Aircraft Weapons Calibration Shelter	1964
	5125	829	Aircraft Weapons Calibration Shelter	1965
	5126	235	Automotive Shop	1975
	5127	429	Vehicle Fuel Station	1975
	5128	41	Control Tower	1984
	5137	None	Traffic Check House (Avon Park Bombing Range)	
	5139	202AFR	Recreation Center (All Ranks Club)	1942
	5140	236AFR	Group Headquarters	1975
	5141	238AFR	Permanent Party Airman's Dormitory	1975
	5143	434AFR	Miscellaneous Recreational Building	1981
	5144	240AFR	Permanent Party Airman's Dormitory	1973
	5145	424AFR	Special Operations	1986
	5147	242AFR	Branch Exchange	1973
	5148	439AFR	Miscellaneous Recreational Building	1986
	5149	244AFR	Commissary Store	1984
	5150	425AFR	Arts and Crafts Center	1942
	5151	445AFR	Base Supply and Equipment Warehouse	1986
	5152	448AFR	Family Housing FY APPR 70	1975
	5153	44AFR	Maintenance Hangar	1944
	5155	447AFR	Visiting Officers Quarters	1987
	5156	600AFR	Natural Resources Building	1987
	5157	25AFR	Base Engineering Maintenance Shop	1985
	5158	None	Florida ANG Unit Training Equipment Site	
	5160	29AFR	Group Headquarters	1991
	5161	43AFR	Fire Station	1981
	5162	77AFR	Medical Storage	1988
	5163	73AFR	Base Engineering Maintenance Shop	1944
	5164	72AFR	Base Engineering Maintenance Shop	1944
	5165	401AFR	Consolidated Swimming Pool	1979
	5166	427AFR	Bowling Center "Avon Lanes"	1982

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	5040	None	Coon's Creek Beach	
	5111	None	"MacDill" Landscape	
	5142	428AFR	Athletic field (softball)	1972
Real Property - Object				
	5020	None	F-4 Static Display/MIA POW Memorial	
	5138	None	AVON PARK AF RANGE (Sign)	
	5159	None	Static Display - propellar	
Real Property - Site				
	5056	698	Baseball Athletic Field	1971
	5099	1188	Fireman Training Facility	1988
	5100	None	Flight Line Overview	
	5146	561AFR	Tennis Court	1974
Real Property - Structure				
	5036	713	Water Storage Tank	1956
	5041	None	Beach Cabana	
	5042	2017	Miscellaneous Recreation Facility	1984
	5043	60	Communication Receiver	1953
	5044	None	Antennae	
	5047	908	Bus Shelter	1984
	5112	None	Pelican Piers	
	5116	1125	Jet Fuel Storage	1952
	5117	1133	Communication Transmitters	1953
	5118	None	Doppler Radar	
	5154	None	Water tower, tank, pump house	
Record or Document - Object				
	5006	None	Documentary Collection	
	5007	None	Documentary Collection	
	5008	None	Base Newspaper Collection	
	5009	None	Map Files	

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

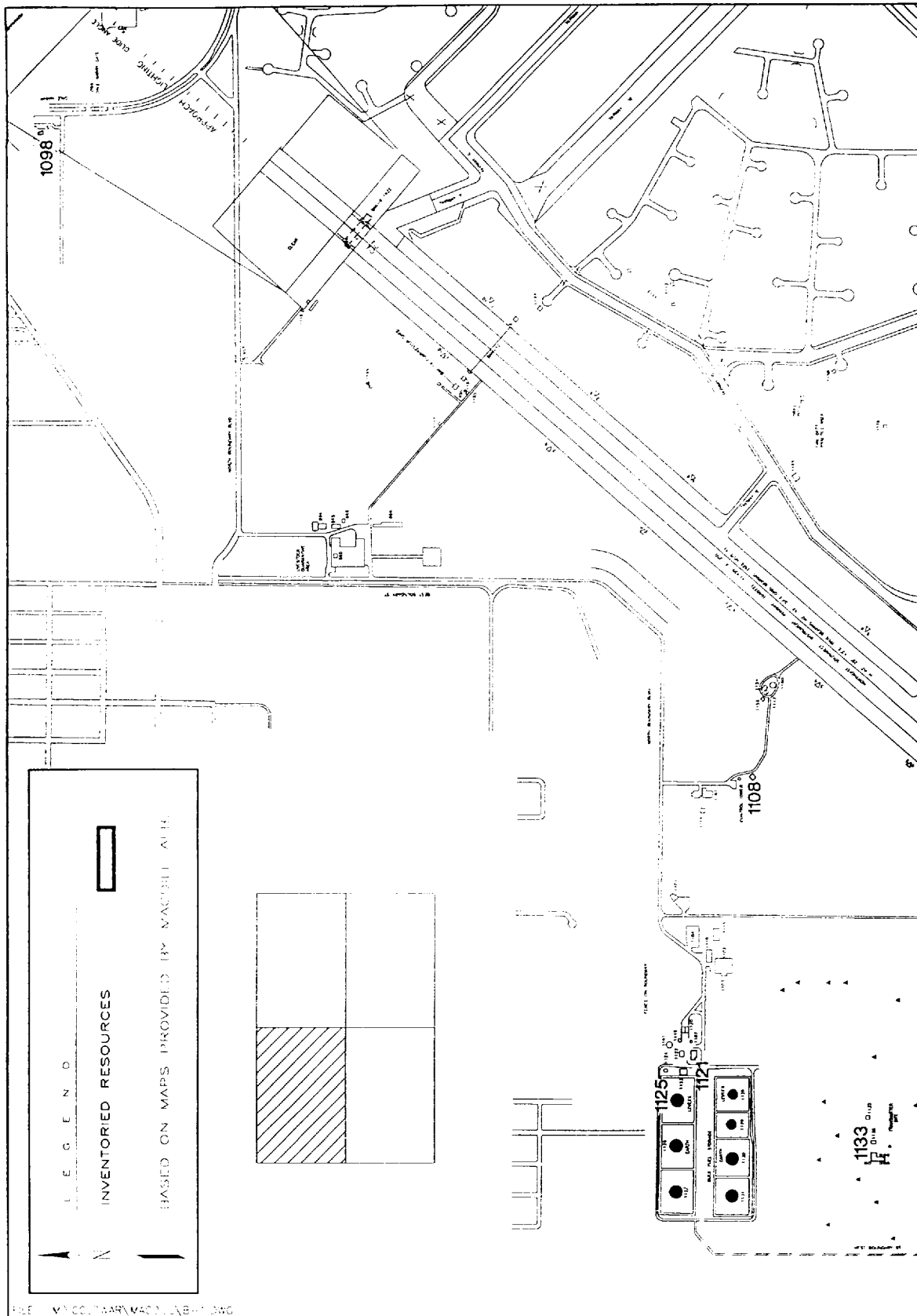


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 4).

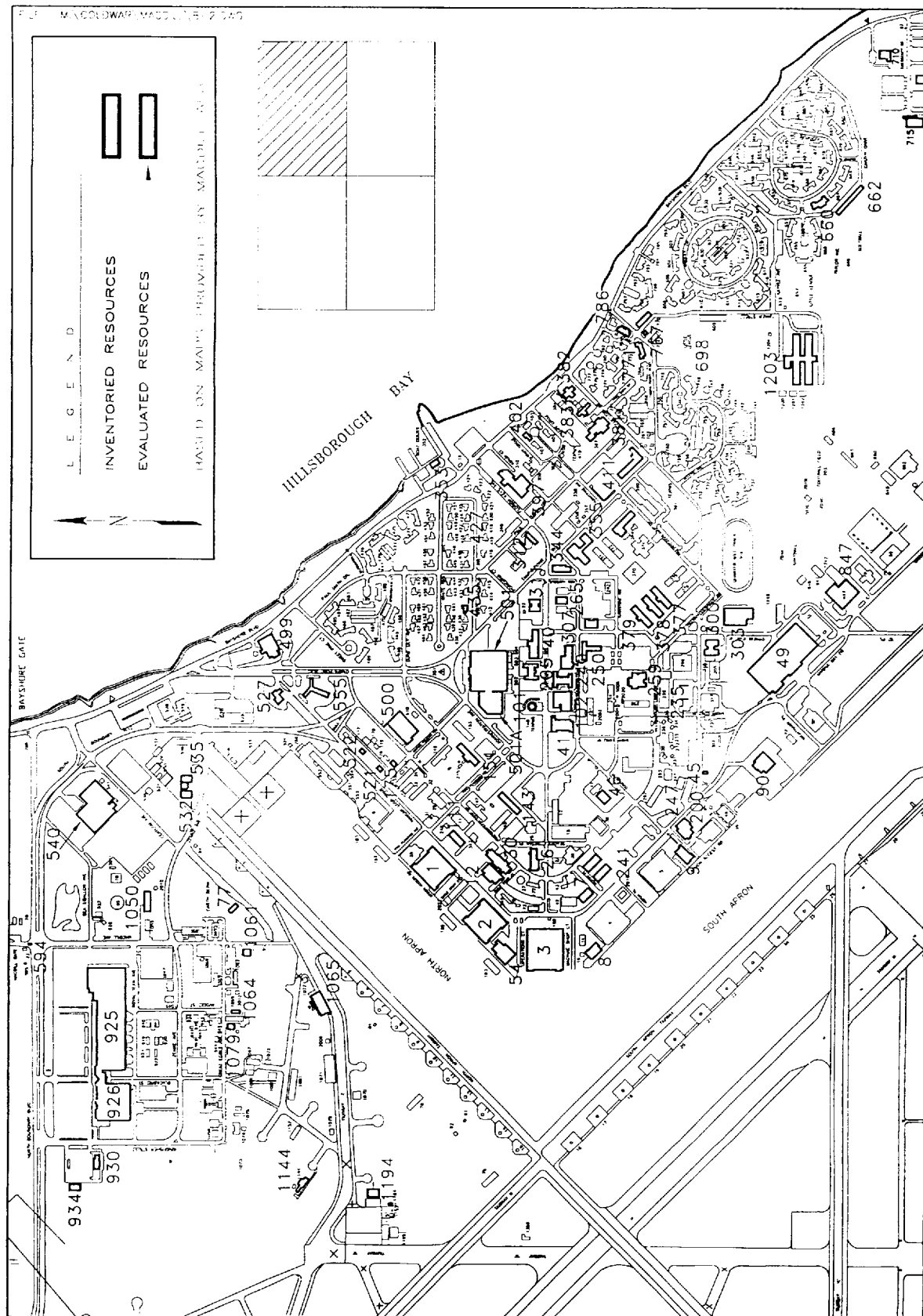


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 4).

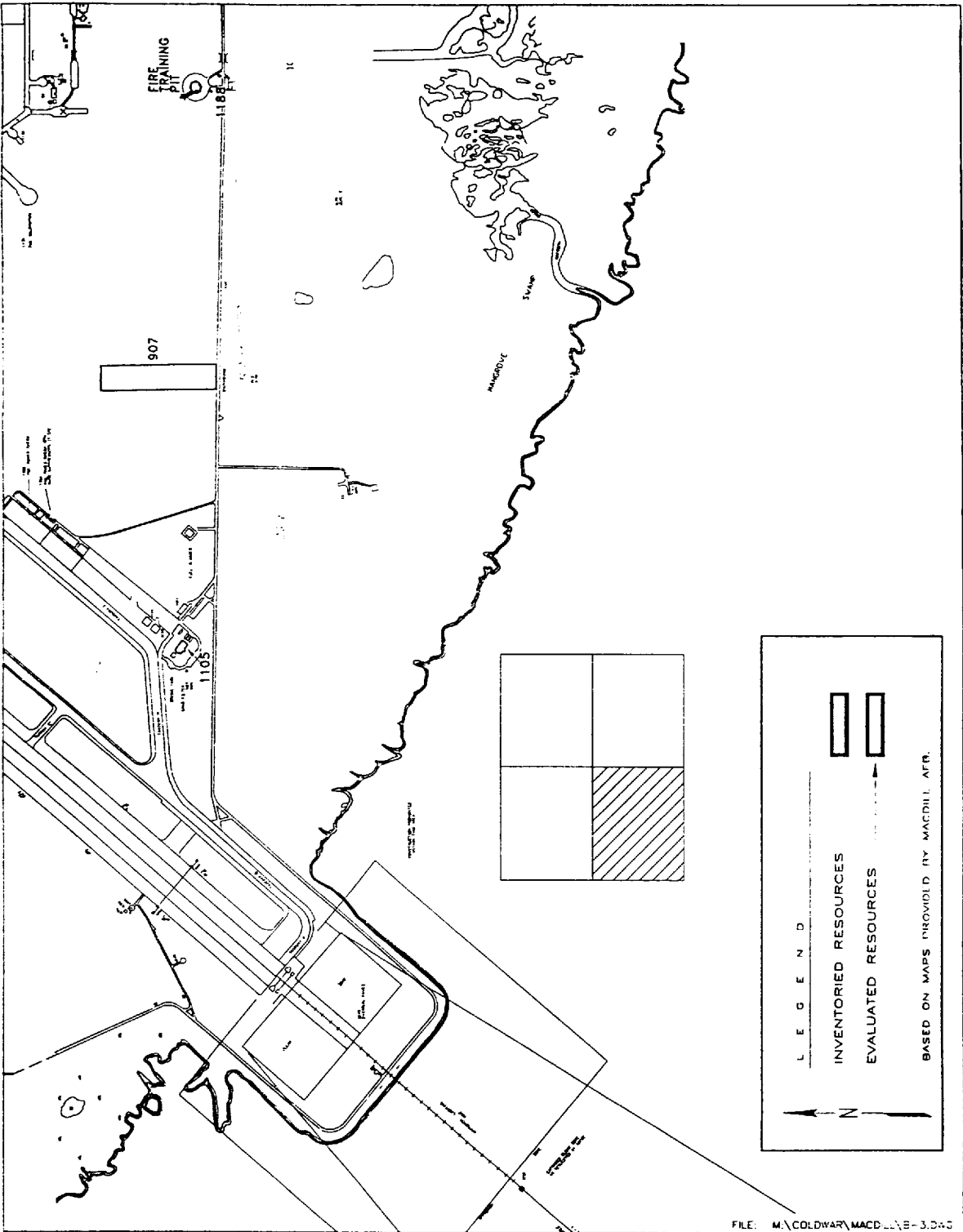


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 4).

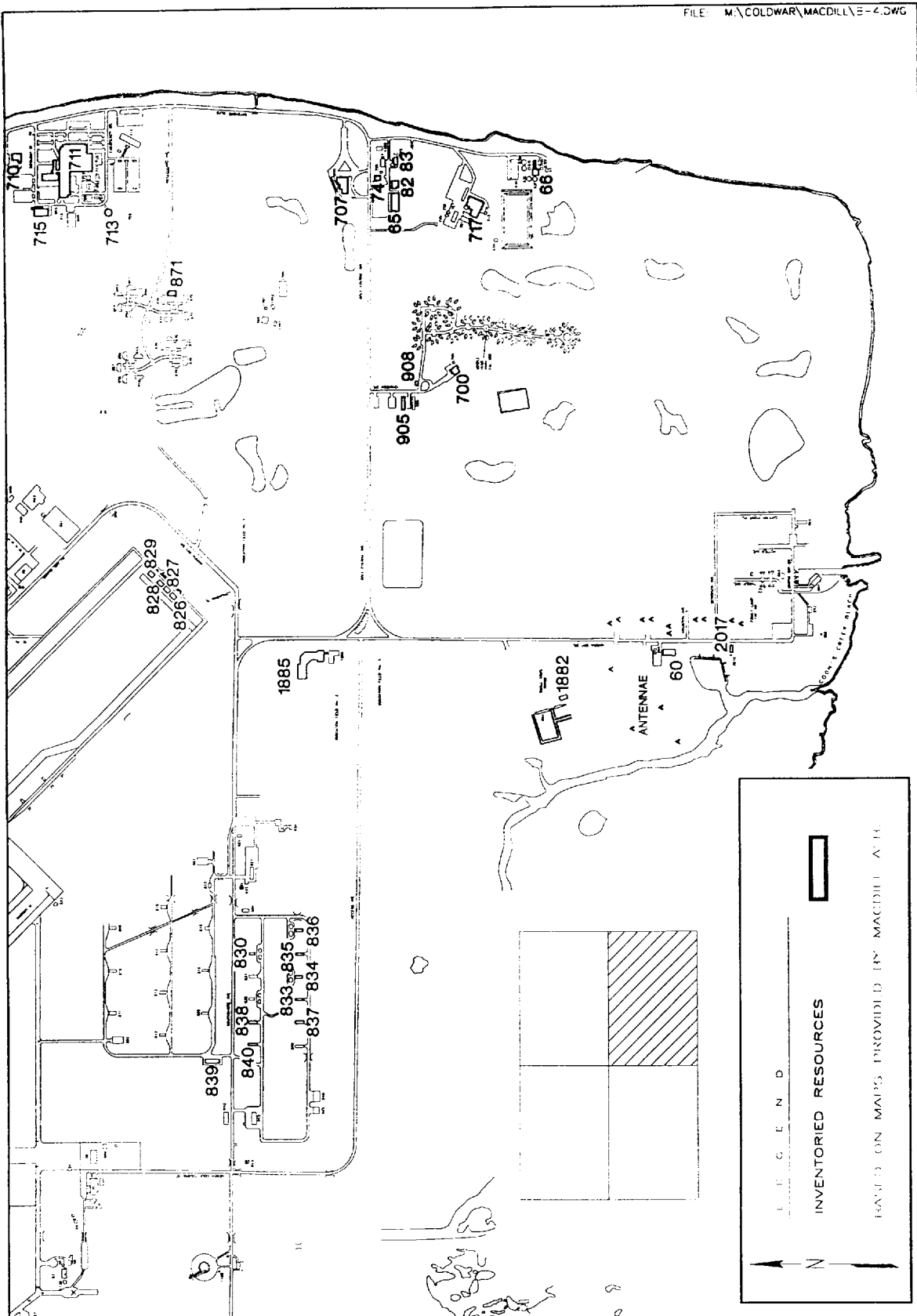


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 4).

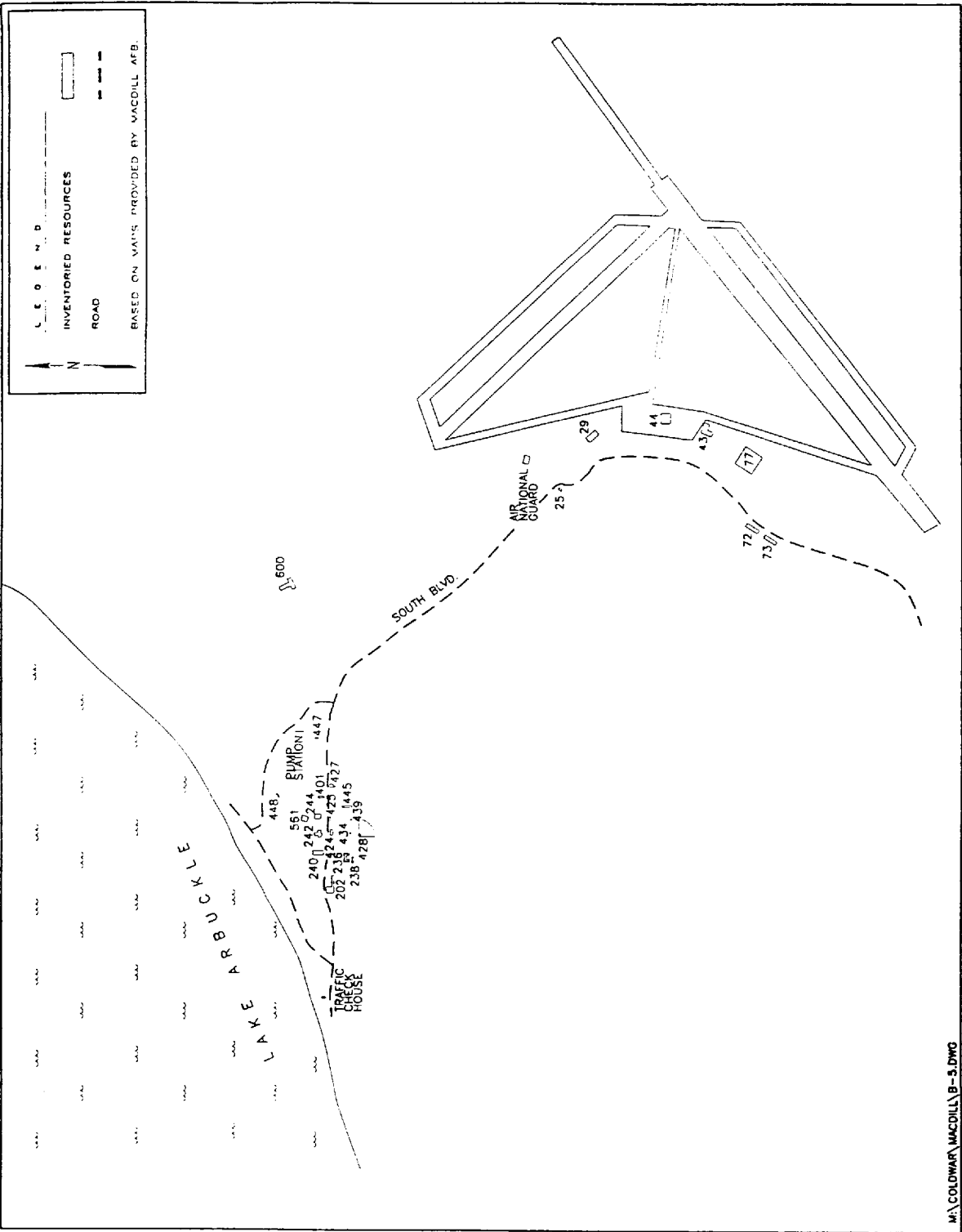
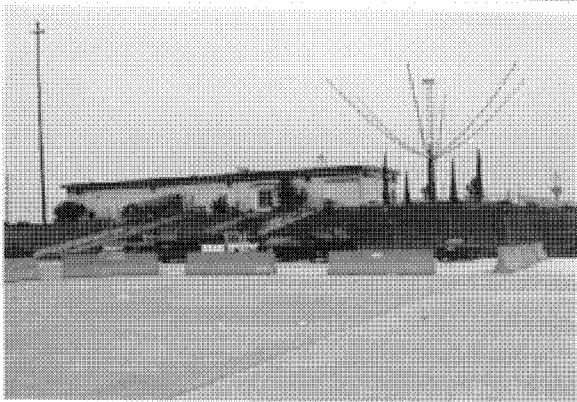
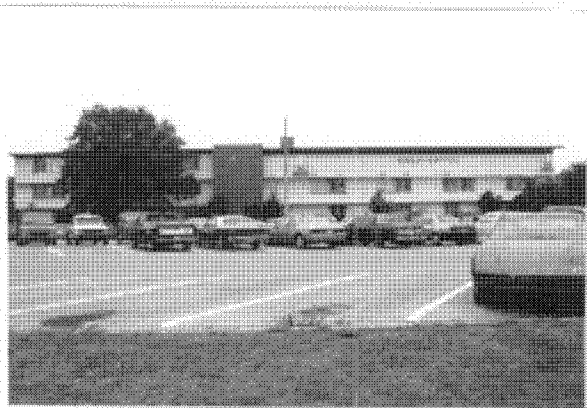


Figure B.5 Base Layout Map Showing Inventoried Resources at Avon Park Air Force Range.

APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



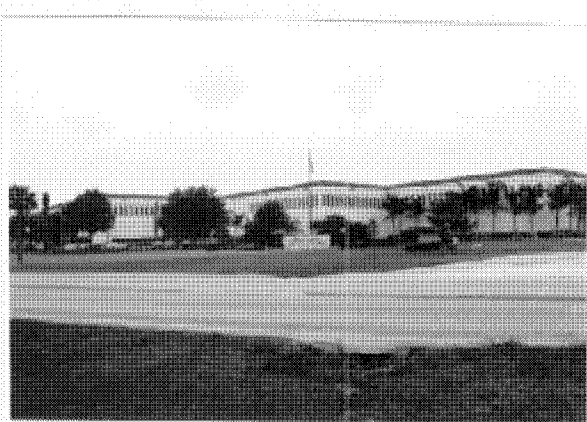
Resource No. 5001, Real Property No. 1105
Crew Readiness Facility



Resource No. 5002, Real Property No. 373
Major Command Headquarters



Resource No. 5003, Real Property Nos. 501 and
501A, Major Command Headquarters



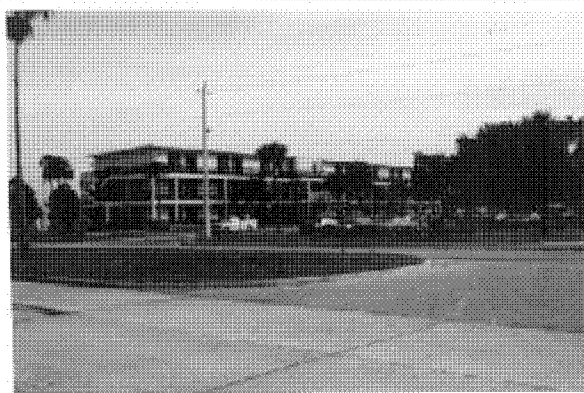
Resource No. 5004, Real Property No. 540
Major Command Headquarters



Resource No. 5005, Real Property No. 1050
Base Engineering Maintenance Shop



Resource No. 5010, Real Property No. 1098
Security Police Identification Control



Resource No. 5011, Real Property No. 151
Permanent Party Airman's Dormitory



Resource No. 5012, Real Property No. 143
Wing Headquarters



Resource No. 5013, Real Property No. 41
Base Theater



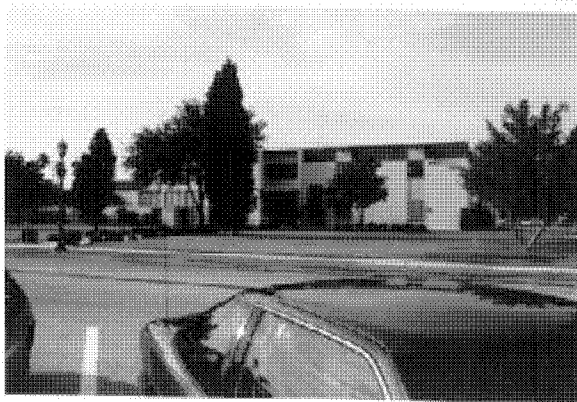
Resource No. 5014, Real Property No. 102
Credit Union



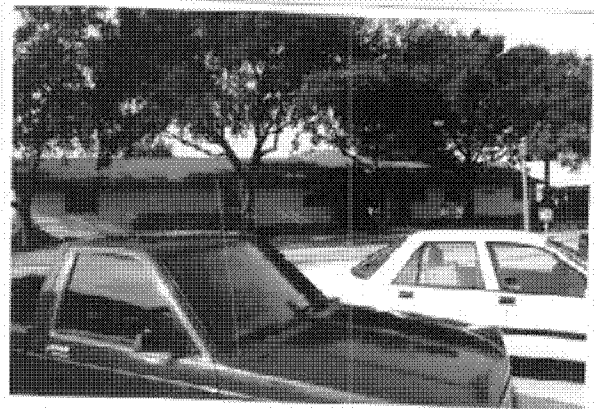
Resource No. 5015, Real Property No. 101
Civilian Pay



Resource No. 5016, Real Property No. 205
Group Headquarters



Resource No. 5017, Real Property No. 307
Recreation Center



Resource No. 5018, Real Property No. 240
Wing Headquarters



Resource No. 5019, Real Property No. 40
Communications Facility



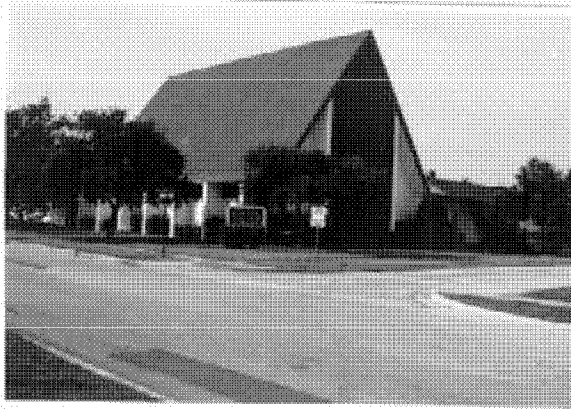
Resource No. 5020, Real Property No. (none)
F-4 Static Display/MIA POW Memorial



Resource No. 5021, Real Property No. 435
Family Housing FY Appr. 1950-1969



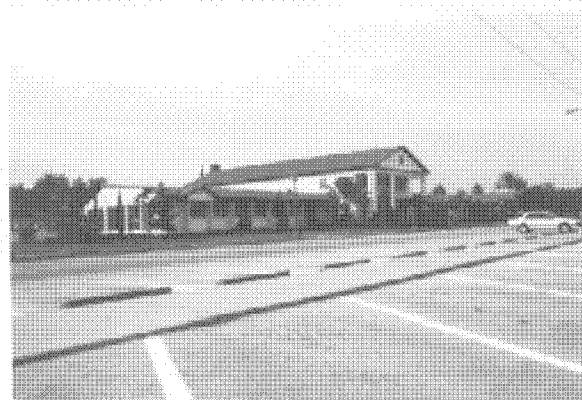
Resource No. 5022, Real Property No. 312
Visiting Officer's Quarters



Resource No. 5023, Real Property No. 355
Chapel



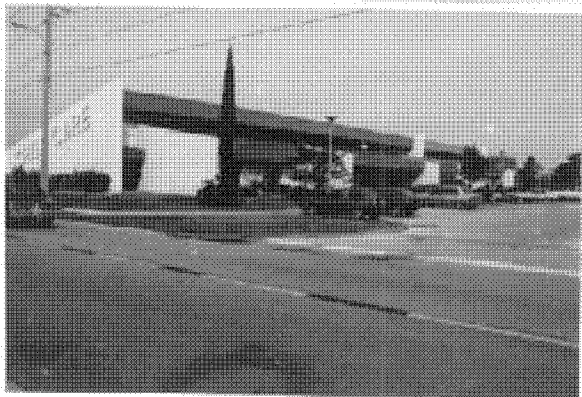
Resource No. 5024, Real Property No. 344
Post Office



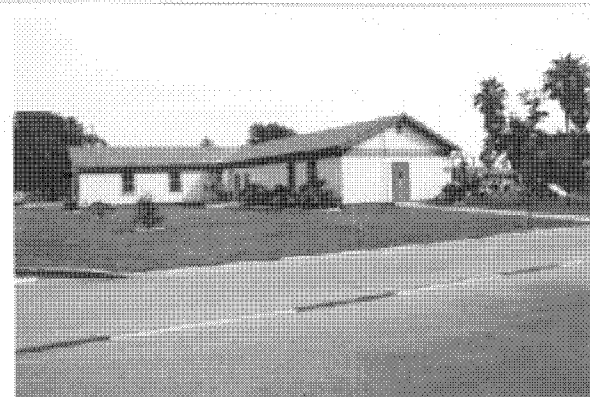
Resource No. 5025, Real Property No. 397
Officer's Open Mess



Resource No. 5026, Real Property No. 402
Family Housing FY Appr. 1950-1969



Resource No. 5027, Real Property No. 381
Child Care Center



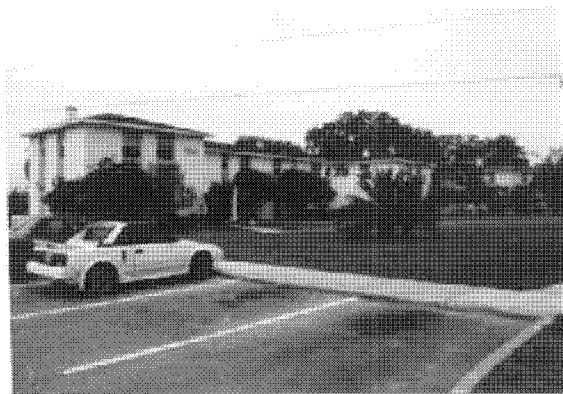
Resource No. 5028, Real Property No. 383
Child Care Center



Resource No. 5029, Real Property No. 382
Youth Center



Resource No. 5030, Real Property No. 786
Wherry Family Housing



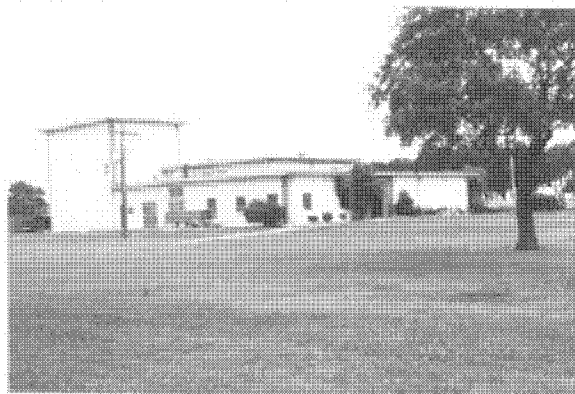
Resource No. 5031, Real Property No. 771
Wherry Family Housing



Resource No. 5032, Real Property No. 767
GTE Communication Exchange



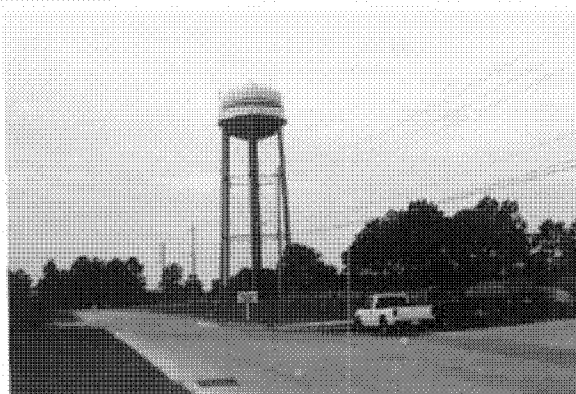
Resource No. 5033, Real Property No. 711
Composite Medical Facility



Resource No. 5034, Real Property No. 710
Physical Training



Resource No. 5035, Real Property No. 715
Medical Equipment Management Office



Resource No. 5036, Real Property No. 713
Water Storage Tank



Resource No. 5037, Real Property No. 871
Family Housing FY Appr. 1950-1969



Resource No. 5038, Real Property No. 1885
Florida Air National Guard



Resource No. 5039, Real Property No. 1882
Firing Range Control House



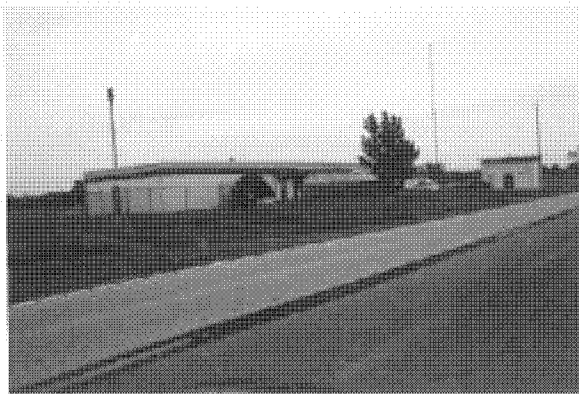
Resource No. 5040, Real Property No. (none)
Coon's Creek Beach



Resource No. 5041, Real Property No. (none)
Beach Cabana



Resource No. 5042, Real Property No. 2017
Miscellaneous Recreation Facility



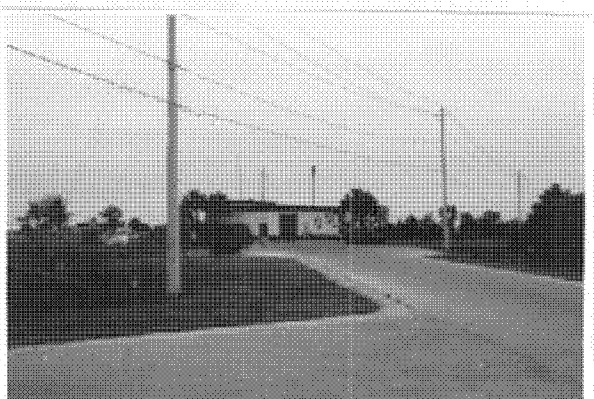
Resource No. 5043, Real Property No. 60
Communication Receiver



Resource No. 5044, Real Property No. (none)
Antennae



Resource No. 5045, Real Property No. 905
Temporary Lodging Facility



Resource No. 5046, Real Property No. 700
Explosive Ordnance Disposal



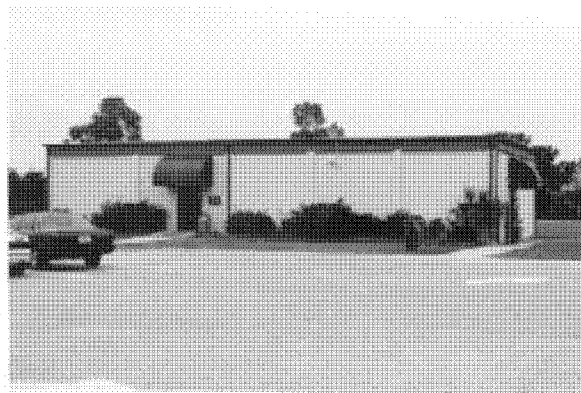
Resource No. 5047, Real Property No. 908
Bus Shelter



Resource No. 5048, Real Property No. 707
Golf Clubhouse/Equipment



Resource No. 5049, Real Property No. 74
Non-Air Force Human Resources



Resource No. 5050, Real Property No. 82
Air Force Clinic



Resource No. 5051, Real Property No. 65
Group Headquarters



Resource No. 5052, Real Property No. 66
Water Treatment Facility



Resource No. 5053, Real Property No. 717
Reserve Force Aeroevacuation Training



Resource No. 5054, Real Property No. 660
Wherry Family Housing



Resource No. 5055, Real Property No. 662
Family Housing Detached Garage



Resource No. 5056, Real Property No. 698
Baseball Athletic Field



Resource No. 5057, Real Property No. 1203
Tinker Elementary School



Resource No. 5058, Real Property No. 353
Family Housing Management Office



Resource No. 5059, Real Property No. 925
Commissary



Resource No. 5060, Real Property No. 925
Barnett Bank



Resource No. 5061, Real Property No. 926
Child Development Annex



Resource No. 5062, Real Property No. 926
Base Exchange



Resource No. 5063, Real Property No. 934
Managed Care



Resource No. 5064, Real Property No. 930
Fast Food Service (Burger King)



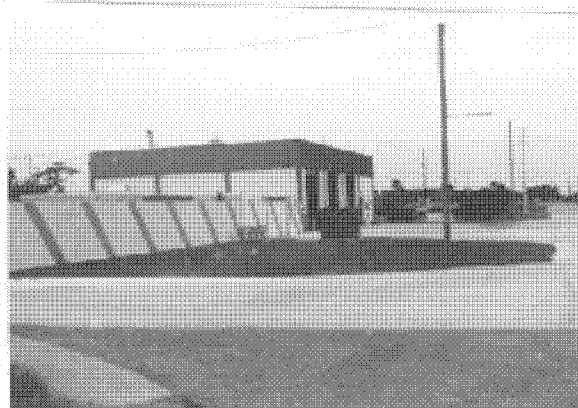
Resource No. 5065, Real Property No. 1079
Petroleum Operations Building



Resource No. 5066, Real Property No. 1064
Base Engineering Maintenance Shop



Resource No. 5067, Real Property No. 1
Maintenance Hangar



Resource No. 5068, Real Property No. 1061
Vehicle Refueling Shop



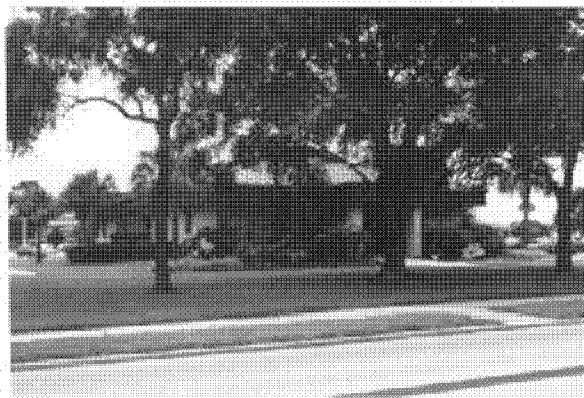
Resource No. 5069, Real Property No. 77
Hydraulic Fluid Building



Resource No. 5070, Real Property No. 500
Vehicle Maintenance Shop



Resource No. 5071, Real Property No. 175
Vehicle Operations Administration



Resource No. 5072, Real Property No. 265
Family Support Center



Resource No. 5073, Real Property No. 311
Library Recreation



Resource No. 5074, Real Property No. 250
Law Center



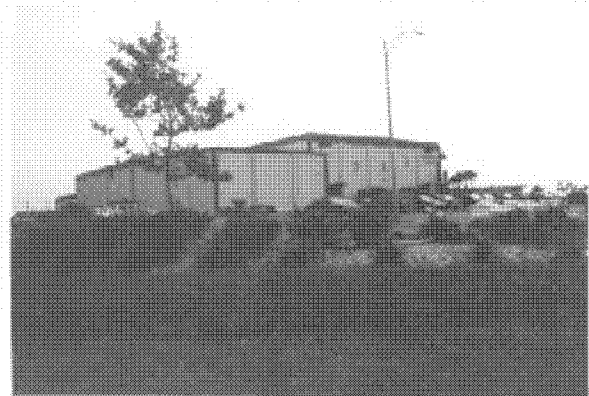
Resource No. 5075, Real Property No. 259
Airman's Dining Hall (Detached)



Resource Nos. 5076, 5089, and 5090, Real
Property Nos. 377, 378, and 379, Airman's
Dormitories



Resource No. 5077, Real Property No. 300
Arts and Crafts Center



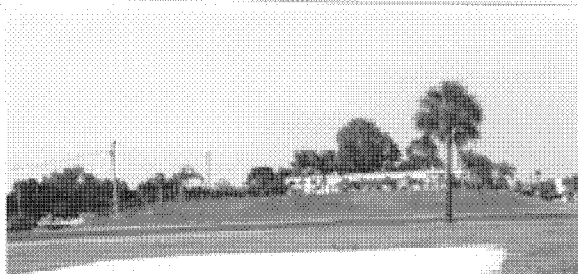
Resource No. 5078, Real Property No. 303
Gymnasium



Resource No. 5079, Real Property No. 847
Major Command Headquarters Supply
Warehouse



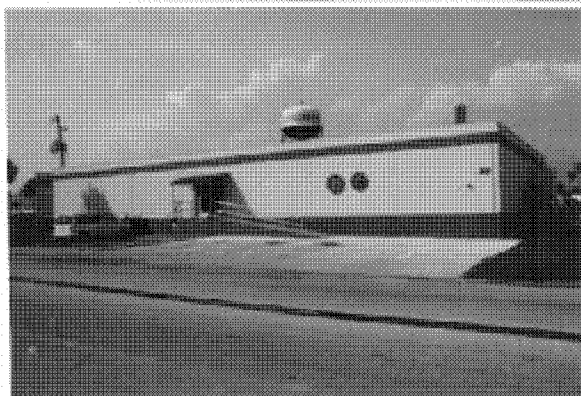
Resource No. 5080, Real Property No. 49
Base Supply and Equipment Warehouse



Resource No. 5081, Real Property No. 46
Airman's Swimming Pool



Resource Nos. 5082 and 5098, Real Property
Nos. 241 and 247, Thrift Shop and Base
Engineering Maintenance Shop



Resource No. 5083, Real Property No. 7
Lithography & Distribution Production Plant



Resource No. 5084, Real Property No. 26
Fire Station



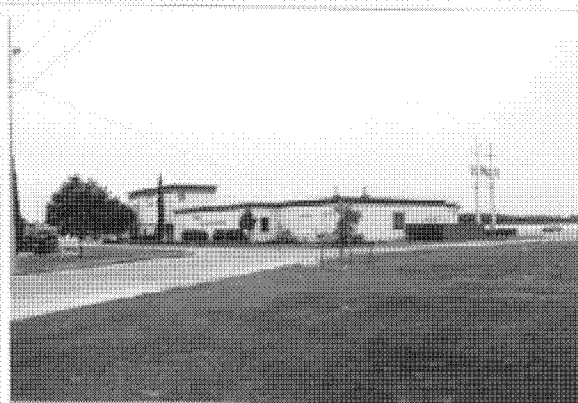
Resource Nos. 5085 and 5091, Real Property
Nos. 532 and 535, Non-Air Force Administration
Office and Base Supply and Equipment
Warehouse



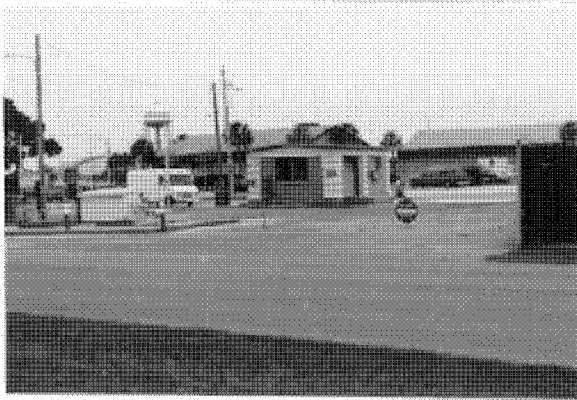
Resource Nos. 5086 and 5087, Real Property
Nos. 521 and 522, Family Housing FY Appr.
1950



Resource No. 5088, Real Property No. 411
Visiting Officer's Quarters



Resource No. 5092, Real Property No. 90
Wing Headquarters



Resource No. 5093, Real Property No. 45
Vehicle Fuel Station



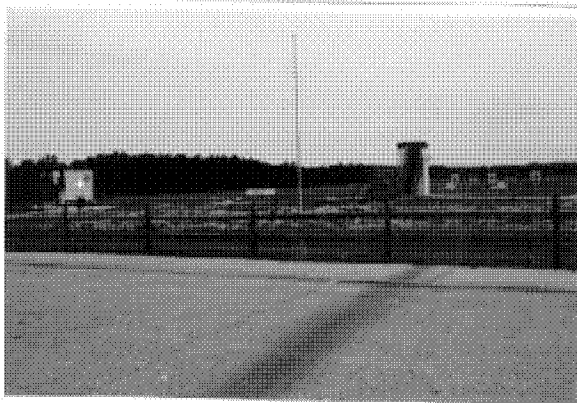
Resource No. 5094, Real Property No. 200
Survival Equipment Shop



Resource Nos. 5095, 5104, 5124, and 5125, Real
Property Nos. 826-829, Aircraft Weapons
Calibration Shelters



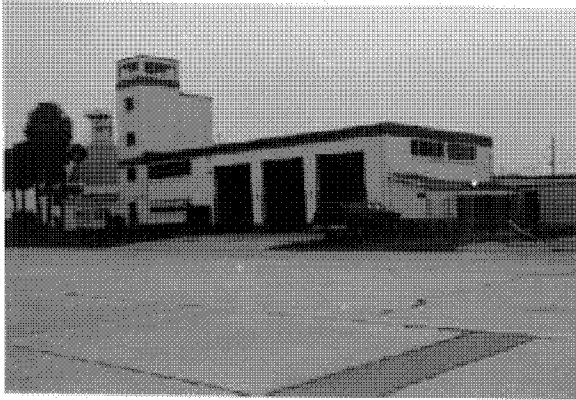
Resource No. 5096, Real Property Nos. 833-840
Storage Igloos



Resource No. 5097, Real Property No. 907
Skeet Range



Resource No. 5099, Real Property No. 1188
Fireman Training Facility



Resource No. 5101, Real Property No. 8
Fire Station (Flight Line)



Resource No. 5102, Real Property No. 3
Maintenance Hangar



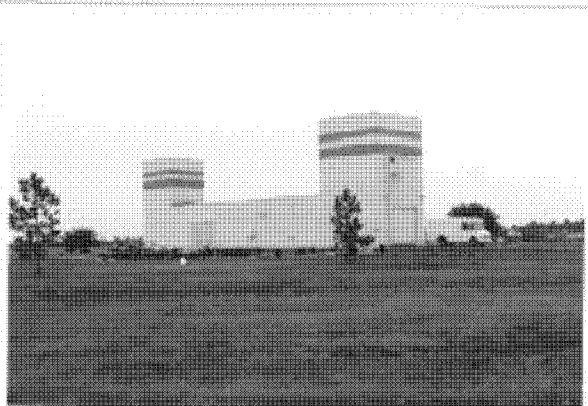
Resource No. 5103, Real Property No. 2
Maintenance Hangar



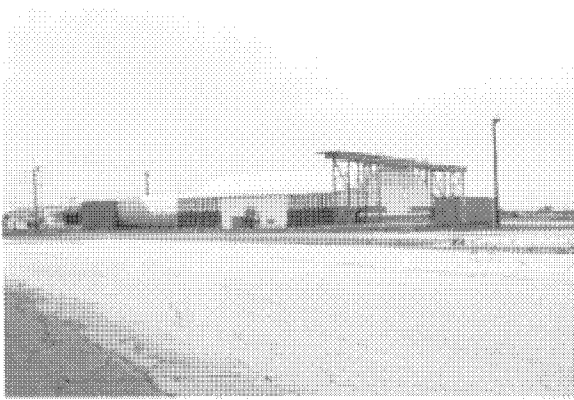
Resource No. 5105, Real Property No. 12
Base Engineering Maintenance Shop



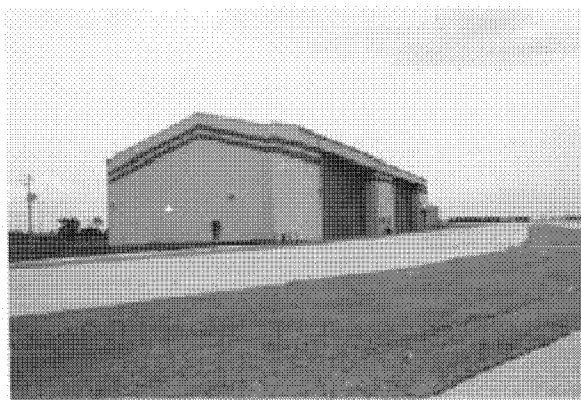
Resource No. 5106, Real Property No. 30
Base Engineering Administration



Resource No. 5107, Real Property No. 1144
Base Engineering Maintenance Shop



Resource No. 5108, Real Property No. 1194
Aircraft Maintenance Organizational Shop



Resource No. 5109, Real Property No. 1065
Aircraft Corrosion Control



Resource No. 5110, Real Property No. 499
Non-Commissioned Officer's Mess



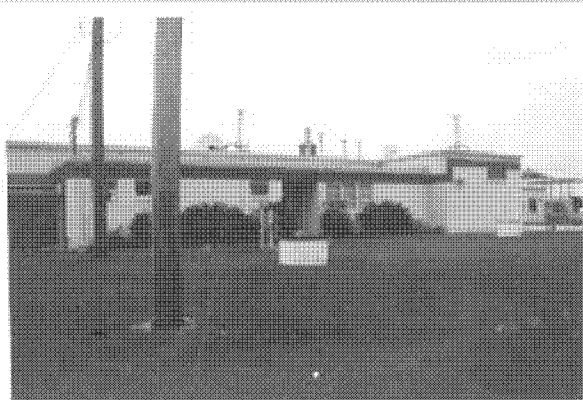
Resource No. 5112, Real Property No. (none)
Pelican Piers



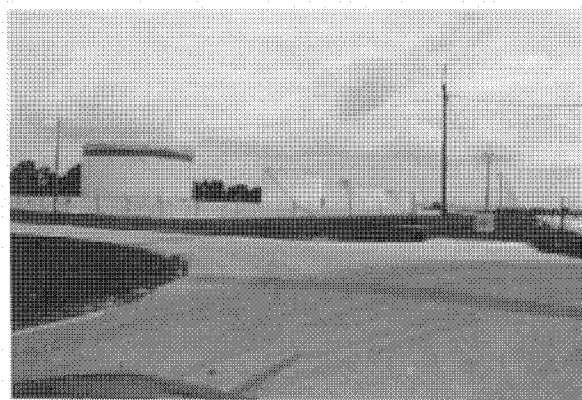
Resource No. 5113, Real Property No. 594
Traffic Check House



Resource No. 5114, Real Property No. 1108
Control Tower



Resource No. 5115, Real Property No. 1121
Liquid Fuel Analysis Technical Laboratory



Resource No. 5116, Real Property No. 1125
Jet Fuel Storage



Resource No. 5117, Real Property No. 1133
Communication Transmitters



Resource No. 5118, Real Property No. (none)
Doppler Radar



Resource No. 5119, Real Property No. 555
Exchange Service Station



Resource No. 5120, Real Property No. 527
Vehicle Maintenance Shop



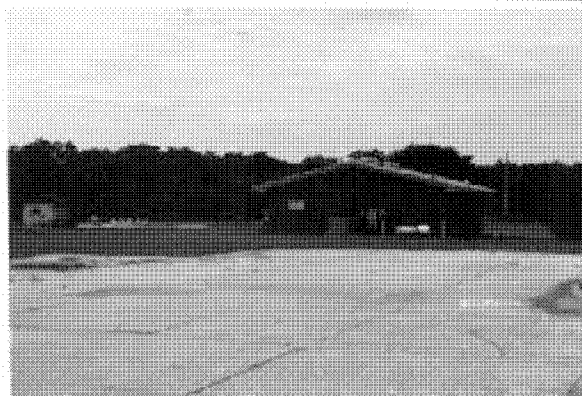
Resource No. 5121, Real Property No. 111
Base Civil Engineering Storage Facility



Resource No. 5123, Real Property No. 83
Material Services



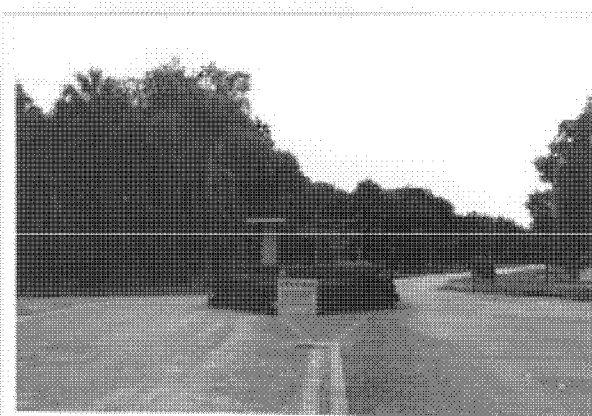
Resource Nos. 5126 and 5143, Real Property
Nos. 235 and 434AFR, Automotive Shop and
Miscellaneous Recreational Building



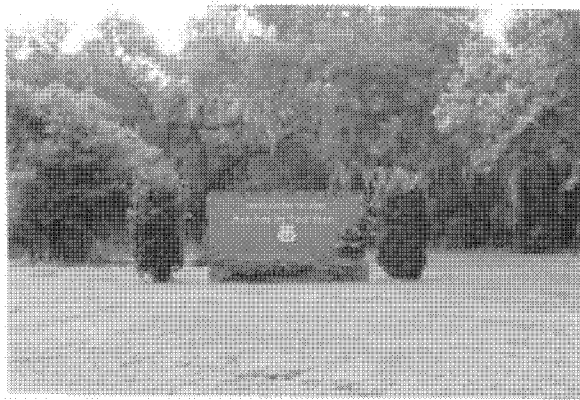
Resource Nos. 5127 and 5148, Real Property
Nos. 429 and 439AFR, Vehicle Fuel Station and
Miscellaneous Recreational Building



Resource No. 5128, Real Property No. 41
Control Tower



Resource No. 5137, Real Property No. (none)
Traffic Check House (Avon Park Bombing
Range)



Resource No. 5138, Real Property No. (none)
"Avon Park Air Force Range" Sign



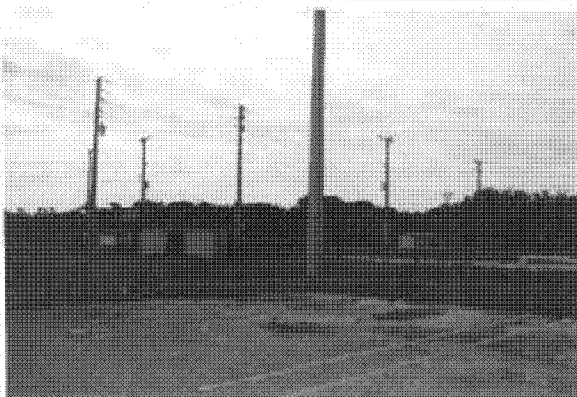
Resource No. 5139, Real Property No. 202AFR
Recreation Center (All Ranks Club)



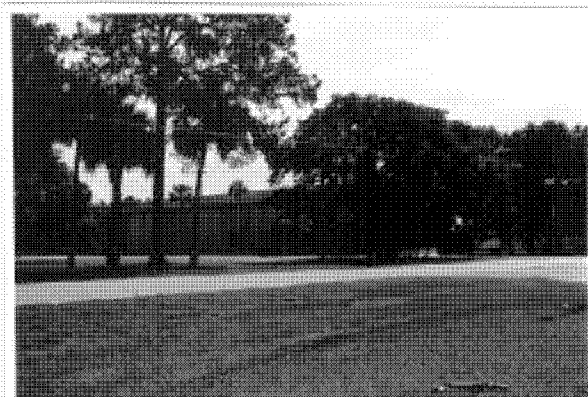
Resource No. 5140, Real Property No. 236AFR
Group Headquarters



Resource No. 5141, Real Property No. 238AFR
Permanent Party Airman's Dormitory



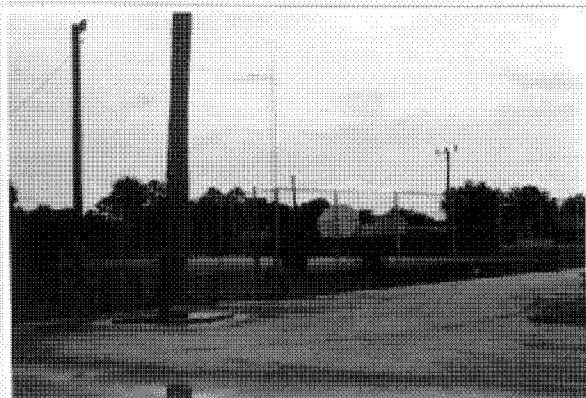
Resource No. 5142, Real Property No. 428AFR
Athletic Field (Softball)



Resource No. 5144, Real Property No. 240AFR
Permanent Party Airman's Dormitory



Resource No. 5145, Real Property No. 424AFR
Special Operations



Resource No. 5146, Real Property No. 561AFR
Tennis Court



Resource No. 5147, Real Property No. 242AFR
Branch Exchange



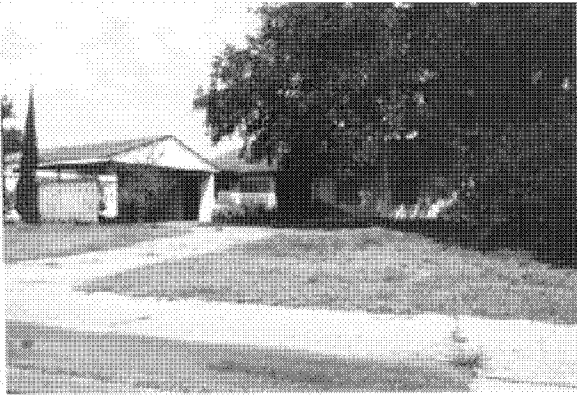
Resource No. 5149, Real Property No. 244AFR
Commissary Store



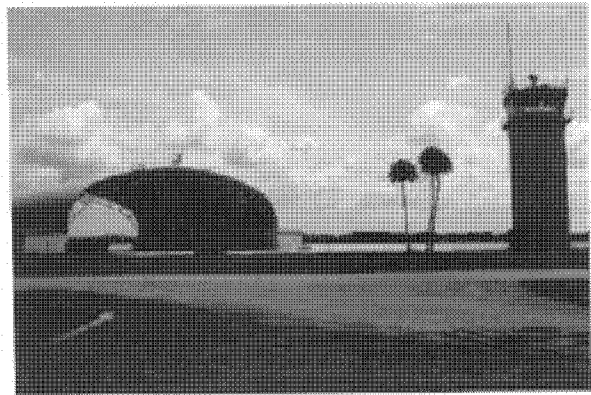
Resource No. 5150, Real Property No. 425AFR
Arts and Crafts Center



Resource No. 5151, Real Property No. 445AFR
Base Supply and Equipment Warehouse



Resource No. 5152, Real Property No. 448AFR
Family Housing FY Appr. 1970



Resource No. 5153, Real Property No. 44AFR
Maintenance Hangar



Resource No. 5154, Real Property No. (none)
Water Tower, Tank, and Pump House



Resource No. 5155, Real Property No. 447AFR,
Visiting Officer's Quarters



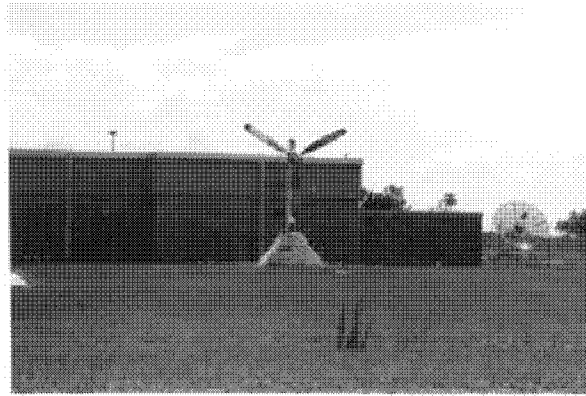
Resource No. 5156, Real Property No. 600AFR
Natural Resources Building



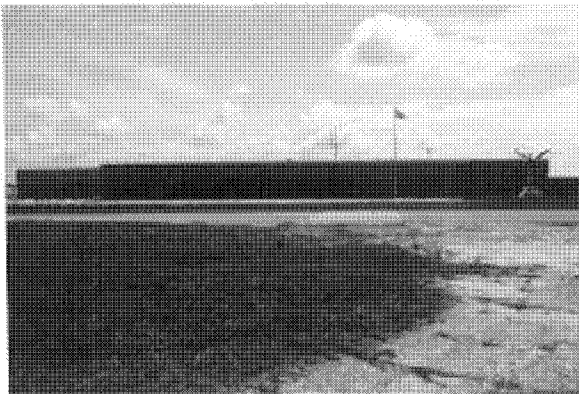
Resource No. 5157, Real Property No. 25AFR
Base Engineering Maintenance Shop



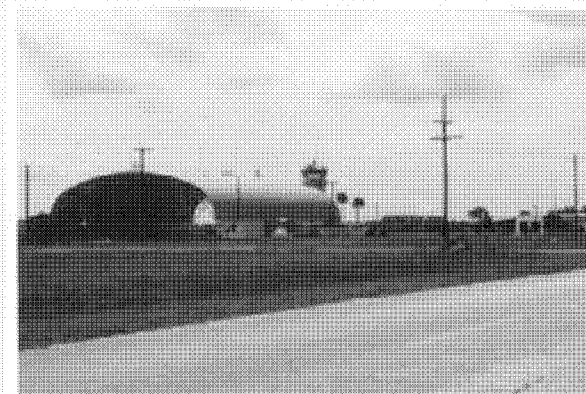
Resource No. 5158, Real Property No. (none)
Florida ANG Unit Training Equipment Site



Resource No. 5159, Real Property No. (none)
Static Display - propellar



Resource No. 5160, Real Property No. 29AFR,
Group Headquarters



Resource No. 5161, Real Property No. 43AFR
Fire Station



Resource No. 5162, Real Property No. 77AFR
Medical Storage



Resource No. 5163, Real Property No. 73AFR
Base Engineering Maintenance Shop



Resource No. 5164, Real Property No. 72AFR
Base Engineering Maintenance Shop



Resource No. 5165, Real Property No. 401AFR
Consolidated Swimming Pool



Resource No. 5166, Real Property No. 427AFR
Bowling Center "Avon Lanes"

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT MACDILL AFB

Resource Number: 5001

Property Description: Crew Readiness Facility or Alert Facility. This is a typical SAC installation facility. It is semi-subterranean with two floors, ramped entrance/exits for rapid egress to flight line and planes during Alerts.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 4701 Southshore Ave., MacDill AFB, FL.

Base Map Date: 4/7/94

Base Map Building Number: 1105

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Bomber Alert Facility

Statement of Significance: The Alert Facility embodies the national strategy and policy of "ready-to-go" status of the forces; the national stance of defense, deterrence, and immediate response.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats: This facility has gone through several "incarnations" since its deactivation as an Alert Facility. It is now being used by the unified U. S. Special Operations Command and has most likely been re-habilitated and upgraded to meet their needs and specifications. Externally this facility does not appear changed from its original purpose. High profile security fencing, guards, etc. are still in place and in use.

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility Eligible

Height: 20

Square Footage: 23654

Original Planned Duration: Permanent

Existing Use: SOCCENT/COMSOC headquarters for portions of the Special Operations Command (a unified command).

Other Use/Dates: Noted as being used as Officer's quarters for a period (time frame unknown).

Comments on Use: At present this facility is being utilized by the U.S. Special Operations Command and is secured using the existing security measures, e.g. fencing, motion detectors, etc.

Primary Building Materials: Concrete Masonry Unit

Character Defining Features: The semi-subterranean construction (first floor below ground level) in this case the building is bermed or built up to cover the first floor. The first and second floors have ramps which allowed rapid egress to the flight line. High security fencing and other detection devices secure the perimeter of the facility.

Resource Number: 5003

Property Description: This facility is a 2-story building of concrete masonry unit construction. Thin, vertical windows on each side create a certain rhythm. The roof overhangs the second floor, the second floor overhangs the first. There is a porticoed entrance to the building. The building exterior has a light colored cement texture. When constructed in 1968 the building contained state-of-the-art command and control equipment such as conference rooms with glass projection screens, pneumatic tubes for communication throughout the building, teletype, radio, telephone and short wave radio and closed circuit TV. All personnel had to have at least SECRET clearance and locks were on all doors. Independent operation was assured by generators. "Computers will be the backbone here." "Unimpressive exterior conceals exciting military nerve center."

Associated Property: 373

Non-Inventoried Association:

Sub-installation:

Address: 7701 Tampa Point Blvd., MacDill AFB, FL. 33621

Base Map Date: 4/7/94

Base Map Building Number: 501, 501A

Operational Support & Installations: Base and Command Centers

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Major Command Headquarters

Statement of Significance: Pres. Kennedy created the United States Strike Command in October, 1961. Construction was complete in 1968 at which time U.S. Strike Command took possession of the building. Aspects of policy and strategy of the Cold War have certainly been directed and carried out from the building. The building has retained its part in the Cold War as the U.S. Strike Command was deactivated and the U.S. Readiness Command (USREDCOM) became its successor at the of 1971.

end

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	18
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: At present the U.S. Special Operations Command is housed in this facility. As it carries on as a unified command its use of the facility guarantees its use and upkeep.

Importance: Exceptional
Eligibility Eligible

Height: 20
Square Footage: 183443
Original Planned Duration: Permanent
Existing Use: U.S. Special Operations Command (a unified command)
[Major Command Headquarters]
Other Use/Dates: U.S. Strike Command, U.S. Readiness Command
Comments on Use:
Primary Building Materials: Concrete Masonry Unit
Character Defining Features: As a command headquarters security is evident through the tupe of architectural details, small windows, very few entrances/exits. There are no purely distinctive features for this building other than its seemingly central location.

Resource Number: 5004

Property Description: USCENTCOM, Central Command Headquarters. This building has at least 2 stories, possibly three. In plan it has a stair-step configuration. Thin, vertical windows are located high up on the second/third floor and there are very few entrance/extis to the building. Windows and entrances are a factor in security and illustrates the importance placed on security, etc.at this command center.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 7115 South Boundary Blvd., MacDill AFB, FL 3362

Base Map Date: 4/7/94

Base Map Building Number: 540

Operational Support & Installations: Base and Command Centers

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Major Command Headquarters

Statement of Significance: U.S. Central Command is a successor of the Rapid Deployment Joint Task Force. CentCom is a unified command which has responsibility for the Middle East, parts of North Africa, and southwest Asia. Its inception (Jan. 1, 1983) comes near the end of the Cold War period but still evidences the policies and strategies of the U.S. and its concern for stability in the Persian Gulf and southwest Asia.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	1
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility Eligible

Height: 030

Square Footage: 153048

Original Planned Duration: Permanent

Existing Use: U.S. Central Command Headquarters

Other Use/Dates: None

Comments on Use:

Primary Building Materials: Concrete Masonry Unit

Character Defining Features: High windows and few entrance/exits typify the high security level at the headquarters.

Resource Number: 5006

Property Description: Collection of architectural drawings and aerial photographs.
Associated Property: Bldg. 30
Non-Inventoried Association:
Sub-installation:
Address: 6721 Hillsborough Loop Drive 33621-5207
Base Map Date: 4/7/94
Base Map Building Number: inside 30

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Documentary Collection

Statement of Significance: Original mylars, linen, and paper drawings of buildings and base ranging from 1940 to 1994. Collection includes as built drawings of Wherry housing developments. Many of these resources are likely to be unique.

Cold War Relationship-Nat'l. Recognition: 2
Theme Relationship: 2
Temporal Phase Relationship: 4
Level of Importance: 2
Percent Historic Fabric: 4
Severity of Threats: 3
Total Score for Priority Matrix: 17
Comments on Threats: Of the 5 drawers of miscellaneous drawings in the drafting room, one occupies the top shelf which is not covered and is exposed to the elements.

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: Yes
Preservation/Conservation/Repair: Yes
Comments on Resource Management: The unique 1940s vintage maps and drawings should be archived.

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: 1940
Period of Association: World War II and all phases of the Cold War
Comments on Condition: Located in miscellaneous drawer with other drawings being actively used. Top drawer case has no lid and exposes contents to the moist atmosphere.

Resource Number: 5007

Property Description: History Office files by year containing assorted documents and photographs

Associated Property:

Non-Inventoried Association: Bldg. 299

Sub-installation:

Address: 8208 Hanger Loop Dr.

Base Map Date: 4/7/94

Base Map Building Number: inside 299

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: Files contain unique historic newsclippings, photographs, correspondence, base guidebooks, etc.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 1

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 2

Severity of Threats: 1

Total Score for Priority Matrix: 12

Comments on Threats: The files bear the mark of various personalities. Records are kept and maintained at the whim of the historian. Files are not comprehensive or systematically gathered.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Efforts should be continued to identify and sort photographic records.

Object Condition: Being Preserved

Record/Document Category: Variety of document types

Year of Document:

Period of Association: All

Resource Number: 5008

Property Description: Base Newspaper Collection
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 8208 Hanger Loop
Base Map Date: 4/7/94
Base Map Building Number: inside 299

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Base Newspaper Collection

Statement of Significance: Newspapers from the 1950s through 1970s, may be incomplete. Would provide description of base activities through those decades.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	1
Temporal Phase Relationship:	4
Level of Importance:	1
Percent Historic Fabric:	3
Severity of Threats:	1
Total Score for Priority Matrix:	12
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	Collection is bound and is located in the Public Affairs Office.

Object Condition: Being Preserved
Record/Document Category: Newspapers
Year of Document:
Period of Association: 1950s to 1970s
Comments on Condition: Bound

Resource Number: 5009

Property Description: Avon Park Tab Sheets 1947 and MacDill Field Layout Plan 1940

Associated Property:

Non-Inventoried Association:

Sub-installation: Avon Park

Address: 6721 Hillsborough Loop Dr.

Base Map Date: 4/7/94

Base Map Building Number: inside 30

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Map Files

Statement of Significance: Early Tab Sheets for Avon Park when Air Force was coming into being. Also a 1940 Layout Plan for MacDill Field with signature of Hap Arnold.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 16

Comments on Threats: These Maps are not stored with the rest of the drawings. They are stored in the CE Headquarters Planning Office. The value of the framed 1940 map is recognized.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: These holdings should be copied and archived.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Maps

Year of Document: 1947

Period of Association: 1940s

Comments on Condition: The fact that these maps are segregated from the others places them at some risk. These maps are held by the base planner- Mr. Steve Galloway.

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on MacDill AFB and Avon Park AFR, and to provide research materials for this study:

Mr. Bob Hoffman
Chief of Environmental Analyses/Natural & Cultural Resource Manager
6 CES/CEVA
7621 Hillsborough Loop Drive
MacDill AFB, FL 33621-5207
(813)828-2567

Mr. Steve Galloway
Community Planner
6 CES
7613 Hillsborough Loop Drive
MacDill AFB, FL 33621-5207

Mrs. Connie Farrow
Real Property Officer
6 CES/CERR
7615 Hillsborough Loop Drive
MacDill AFB, FL 33621-5207
(813)828-3935

SMSgt Ray Mattingly
Public Affairs Office
6 ABW/PA
8119 Marina Bay Drive
MacDill AFB, FL 33621-5541
(813)828-2215

MSgt Jo Gaston
Wing Historian
6 ABW/HO
8119 Marina Bay Drive
MacDill AFB, FL 33621-5541
(813)828-2680

Dr. Jay E. Hines
Historian
HQ USCENTCOM/HO
MacDill AFB, FL 33608-7001
(813)828-6353

SMSgt Richard Stevens
Facility Security Officer
6 SPS
7235 Bay Shore Boulevard
MacDill AFB, FL 33621
(813)828-2045

KNOWLEDGEABLE INDIVIDUALS

The following individuals were identified during the investigations as people with some knowledge of MacDill AFB history during the Cold War. They were either unavailable during the investigation or possess much more information than could be documented during this preliminary survey.

Frank Schmol, 6th CES
MacDill AFB, FL

Mike Cawley, 6th CES
MacDill AFB, FL

Andy Rey, 6th CES
MacDill AFB, FL

Gus Longo, 6th CES
Staging Area
MacDill AFB, FL

Mr. Paul Ebersbach
Avon Park AFR, FL
(813)452-4119

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-18: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT McCONNELL AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Patience Elizabeth Patterson
David P. Staley
Katherine J. Roxlau**

**Mariah Associates Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

February 1996

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

McConnell Air Force Base was inventoried by Patience E. Patterson and David P. Staley of Mariah Associates, Inc. between August 16 and 20, 1994 as part of the Air Combat Command Cold War study for the ongoing Department of Defense Legacy Program. Information was gathered at the base from the files of the Real Property Office, Site Development Office, Environmental Office, Public Affairs Office, and History Office.

An initial reconnaissance of the base was accomplished with Mr. Jay Zimmerman, the Cultural/Natural Resource Officer for the base. This initial orientation enabled the team to become familiar with the base and determine what property types were extant on base. It also allowed for the determination of specific properties which would likely be relevant to the Cold War study. Photographs were taken of these resources and of resources that were representative of the different types of properties on the base.

From the reconnaissance, on-site inspection, and research, three resources were determined to be important to the base and national Cold War history. One of the resources is a building and two are bodies of data in the form of historical documentation, architectural drawings, photographs, and maps. Stewardship, further documentation, and nomination to the National Register of Historic Places is recommended for the building. Further documentation, stewardship, and conservation are recommended for the two documentary collections.

LIST OF ACRONYMS

AAF	- Army Air Force
ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AFP 13	- Air Force Plant No. 13
AGE	- Air Ground Equipment
AMC	- Air Materiel Command
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
ARRS	- Air Rescue and Recovery Squadron
ARS	- Air Refueling Squadron
ARW	- Air Refueling Wing
ATC	- Air Training Command
BG	- Bomb Group
BMCO	- Ballistic Missile Construction Office
BRAC	- Base Realignment and Closure Commission
BMW	- Bombardment Wing
BW	- Bomb Wing
CCTW	- Combat Crew Training Wing
CES	- Civil Engineering Squadron
DoD	- Department of Defense
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
HQ	- Headquarters
KANG	- Kansas Air National Guard
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OMS	- Organizational Maintenance Squadron
RED HORSE	- Rapid Engineering Deployable, Heavy Operations Repair Squadron, Engineer
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SIOP	- Single Integrated Operations Plan
SMW	- Strategic Missile Wing

LIST OF ACRONYMS (Continued)

START - Strategic Arms Reduction Talks
TAC - Tactical Air Command
TFG - Tactical Fighter Group
TFW - Tactical Fighter Wing
USAF - United States Air Force
USSTRATCOM - United States Strategic Command
USTRANSCOM - United States Transportation Command

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Gaither Report - a report concerning the Cold War produced by the Gaither Committee in 1957. It predicted an increase in the arms race and continued escalation of the Cold War. It recommended a drastic increase in military spending and initiation of a multibillion-dollar civil defense system.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the United States' military. It included recommendations for research and development of new technologies, including long-range nuclear missiles, as well as dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

GLOSSARY (Continued)

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion on the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	5
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	14
3.1 BASE HISTORY AND COLD WAR CONTEXT	14
3.2 BASE DEVELOPMENT	21
4.0 METHODOLOGY	27
4.1 INVENTORY	27
4.2 EVALUATION OF IMPORTANT RESOURCES	28
4.2.1 Documentation	28
4.2.2 Evaluation of Importance	28
4.2.2.1 Cold War Context	28
4.2.2.2 NRHP Criteria	29
4.2.2.3 Exceptional Importance	30
4.2.3 Evaluation of Integrity	30
4.2.4 Priority Matrix	31
4.2.5 Resource Organization	32
4.3 BASE SPECIFIC METHODS	32
5.0 RECONNAISSANCE INVENTORY RESULTS	34
6.0 EVALUATION RESULTS	35
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	35
6.1.1 Documentation	35
6.1.1.1 Documentary Collection	35
6.1.1.2 Documentary Collection	37

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	37
6.2.1 Alert Facilities	37
6.2.1.1 Bomber/Tanker Alert Facility.....	37
6.3 MATERIEL DEVELOPMENT FACILITIES	38
6.4 TRAINING FACILITIES	39
6.5 INTELLIGENCE FACILITIES.....	39
 7.0 UNDOCUMENTED RESOURCES.....	 40
 8.0 FUTURE THREATS TO RESOURCES	 41
 9.0 PRELIMINARY RECOMMENDATIONS	 42
9.1 NRHP ELIGIBILITY.....	42
9.1.1 Evaluation and Determination of NRHP Eligibility.....	42
9.1.2 Implications of NRHP Eligibility.....	44
9.2 EVALUATED RESOURCE RECOMMENDATIONS.....	45
9.2.1 Documentary Collection	47
9.2.2 Documentary Collection	47
9.2.3 Bomber/Tanker Alert Facility.....	48
 10.0 REFERENCES CITED	 49
 APPENDIX A: RECONNAISSANCE INVENTORY	
 APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
 APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
 APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
 APPENDIX E: ADDITIONAL RESOURCES	
 APPENDIX F: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.....	2
Figure 2.1 Location of McConnell Air Force Base	6
Figure 2.2 McConnell Air Force Base Layout.....	7
Figure 2.3 Standard Strategic Air Command Base Layout	9
Figure 2.4 McConnell Air Force Base Land Use Diagram	11
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	12
Figure 3.1 McConnell Air Force Base 1950-1960	22
Figure 3.2 McConnell Air Force Base 1960-1970	24
Figure 3.3 McConnell Air Force Base 1970-1980	25
Figure 3.4 McConnell Air Force Base 1980-present.....	26

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.....	36
Table 6.2 Evaluated Resource Prioritization by Priority Rank.....	36
Table 9.1 Recommendations for Evaluated Resources	46

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.

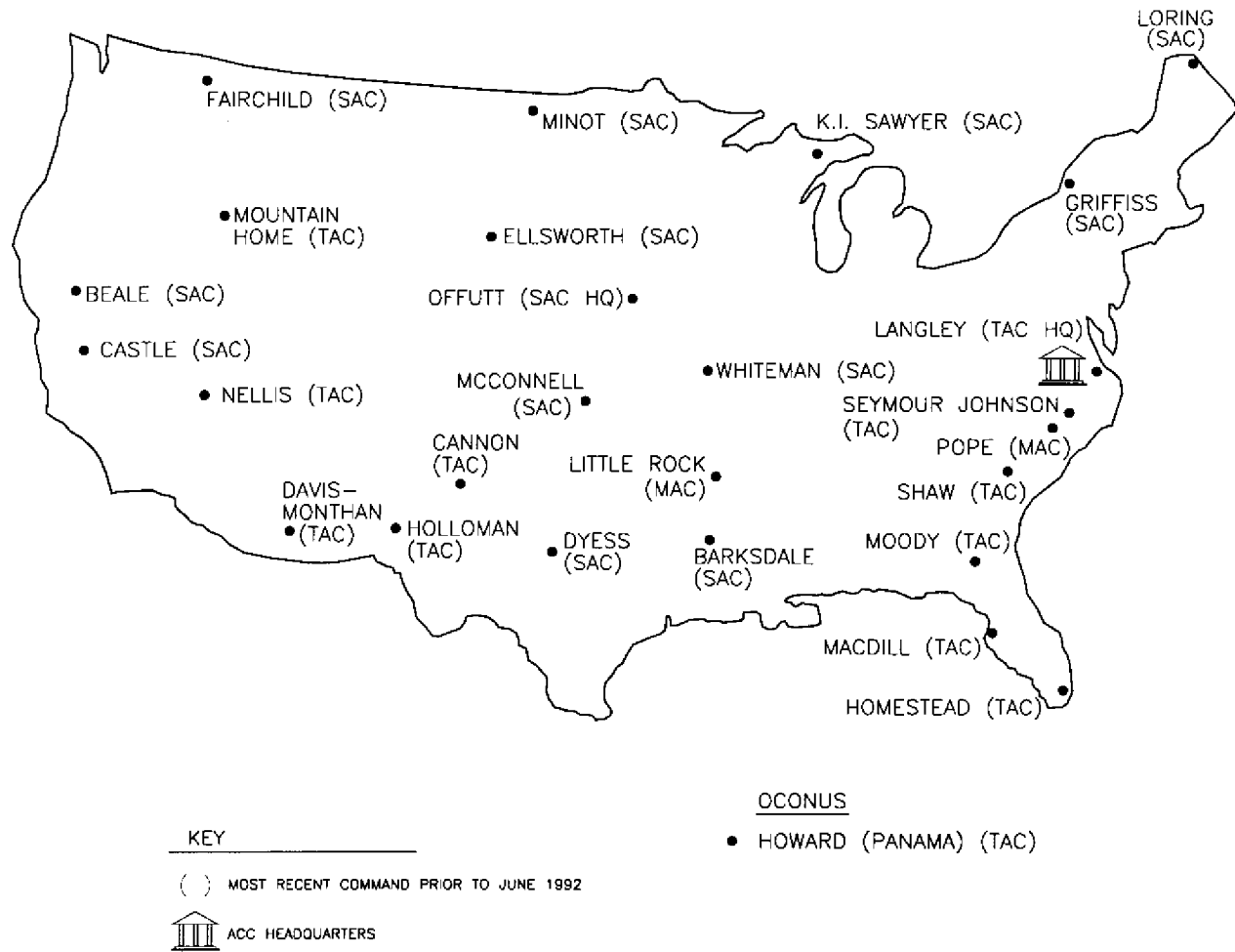


Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

The phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

The phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing in the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC, HQ Air Mobility Command, and McConnell AFB to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on McConnell Air Force Base (AFB). McConnell AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The host unit at McConnell AFB is the 22nd Air Refueling Wing (ARW). It reports to the 15th Air Force, headquartered at Travis AFB, California, and is a component of HQ Air Mobility Command and the unified United States Transportation Command (USTRANSCOM). The 22nd ARW was activated at McConnell AFB on January 1, 1994 after transferring from March AFB, California (United States Air Force [USAF] 1994a).

The mission of the 22nd ARW is to provide extensive global capability through worldwide mobility operations, meeting airlift and air refueling requirements with one of the USAF's three KC-135R *Stratotanker* "core tanker wings." The 22nd ARW supports global contingency and conventional operations and the Single Integrated Operations Plan (SIOP). The wing also provides base support for all tenant organizations assigned to McConnell AFB (USAF 1994a). The 22nd ARW is divided into four groups responsible for all support and operations functions needed for the wing to accomplish its mission: 22nd Operations Group, 22nd Logistics Group, 22nd Support Group, and 22nd Medical Group (USAF 1994a).

The 384th Bomb Group (BG), a component of ACC and the unified United States Strategic Command (USSTRATCOM), is at present a tenant on base. The 384th BG retains its B-1B bomber operational mission in support of conventional combat taskings by the Joint Chiefs of Staff. The 384th BG is conducting the transfer of B-1Bs to other military units in accordance with the Base Realignment and Closure Commission (BRAC) and Department of Defense (DoD) directives. These units include the Kansas Air National Guard (KANG) located on the west side of McConnell AFB (USAF 1994b).

The 184th Tactical Fighter Group (TFG) is part of the KANG. The group presently flies the technologically advanced F-16C; however, the F-16Cs are slated to be replaced by the B-1B and its

mission. The current mission of the 184th TFG is three-fold: to provide combat-ready forces to augment active forces; to train aircrews and combat support personnel; and as the state militia, to support civil authority (McConnell AFB 1992).

2.2 GEOGRAPHIC DESCRIPTION

McConnell AFB is located in south-central Kansas, near the city of Wichita in Sedgwick County (Figure 2.1). The base lies 150 mi (241 km) southeast of the geographic center of the continental United States (GRW Engineers, Inc. 1984:1-1). The base covers 4 mi² (10 km²) or 2,470 acres (999 ha) on the southeastern side of Wichita (population ca. 305,000) within the Arkansas River Lowland section of the Central Lowland physiographic province. The base area lies entirely within this broad, flat to gently rolling area. McConnell AFB is underlain by the sedimentary Wellington shale formation. The silty loam soils are derived from weathering of these shales and from wind deposited silts (loess) (GRW Engineers, Inc. 1984:2-4).

McConnell AFB and the surrounding area have four distinct seasons, from snowy winters to hot summers. The area's vegetation is typical of the semi-arid Central Plains region, with adaptations to agriculture and urbanization. Rainfall averages approximately 31 inches (79 cm) per year and is quite variable (GRW Engineers, Inc. 1984:2-5 - 2-10).

2.3 CURRENT BASE LAYOUT

The dominant feature of McConnell AFB is the airfield. Runways, land within runway clearances, and approach zones account for approximately 41% of land use (GRW Engineers, Inc. 1984:4-1). The instrument runway is positioned in a northeast to southwest direction and is 12,400 ft (3,780 m) long by 200 ft (61 m) wide (Figure 2.2). It has both parallel and crosswind taxiways. The flight apron and mission buildings are situated mainly along the eastern edge of the runway. Across the runway to the west are the KANG facilities, and Boeing Corporation buildings are located south of the KANG facilities. KANG and Boeing Corporation have use of

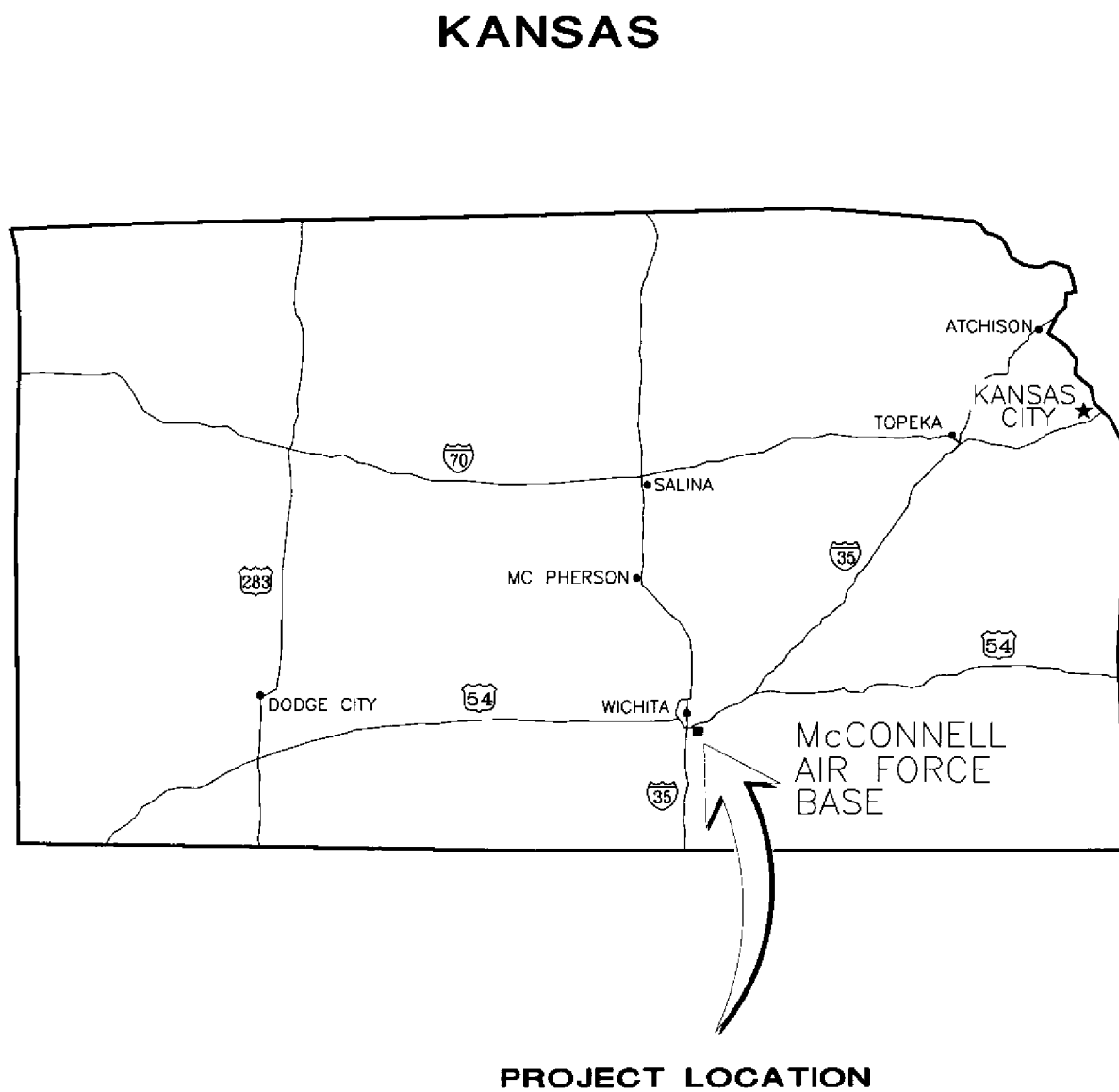


Figure 2.1 Location of McConnell Air Force Base.

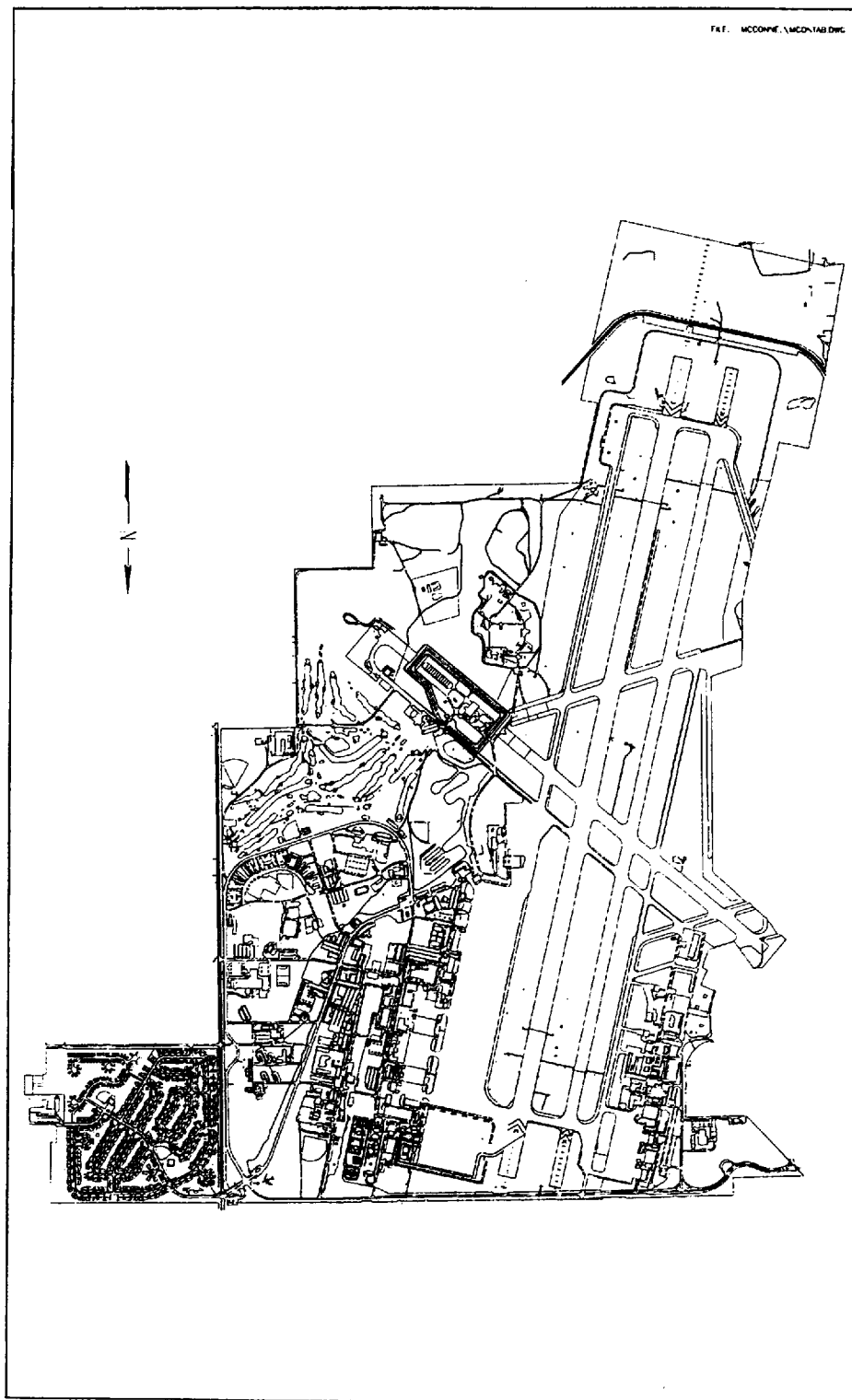


Figure 2.2 McConnell Air Force Base Layout.

the runway; however, military flights take precedence. Remnants of the older portion of the base can be seen on the western side of the base, between the Boeing Corporation and KANG facilities.

Industrial facilities are located at both the northern and southern ends of McConnell AFB. The southern facilities are mainly weapons storage areas. Headquarters for the host unit are centrally located, well east of the flight line. Community facilities such as the hospital, unaccompanied housing, and the "Emerald City" recreation area are, for the most part, centrally located to the east of the flight line, away from the airfield portion of the base. Outdoor recreation areas, such as the golf course, are located on the eastern side of the base (GRW Engineers, Inc. 1984:4-1). Commanders' housing is located on the northeastern side of the base proper.

The base layout is quite similar to standard SAC bases (Figure 2.3). With the standard base, the mission and support facilities extend along the main runway, with other base development extending perpendicular to the flight line and away from the runway. McConnell AFB's facilities are located to the east of the runway and the major portion of its mission and support functions are carried on in those areas. Individual characteristics of the base layout, such as runway configuration, were created by former tenants prior to SAC residency. Because of a runway that crosses the main runway, most base development extends only along the northern half of the main runway. However, the rest of the base extends perpendicular to the flight line, as with the standard SAC layout.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

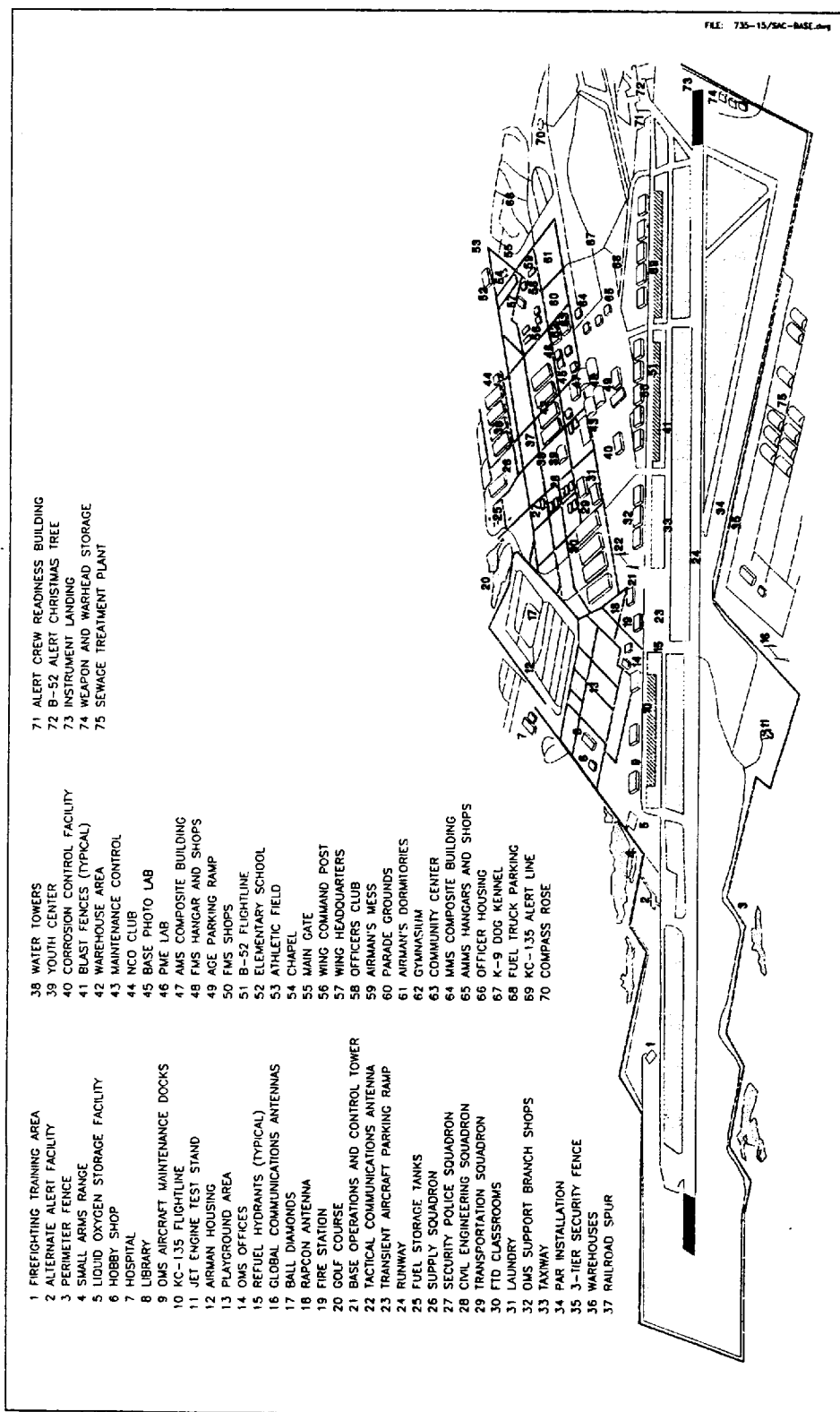


Figure 2.3 Standard Strategic Air Command Base Layout.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas. Open space comprises around 30% of the base land use.

The land use at McConnell AFB (Figure 2.4) is very similar to the standard SAC pattern of land use (Figure 2.5). All McConnell AFB facilities are east of the runway, with the KANG and Boeing Corporation facilities the only ones west of the runway. This parallels the standard land use, except for weapon and warhead storage which is usually on the other side of the runway. Locating the weapon and warhead storage on the other side of the runway is a prudent safety precaution; however, McConnell AFB appears to have taken the alternative precaution of placing the storage area at the end of the base, far from any community, mission, and housing areas.

At McConnell AFB, the mission area is along the flight line, with the central part of the base consisting of a mix of base support, industrial, community, recreation, and unaccompanied housing. The headquarters buildings are also among these land use areas. The outer area of the

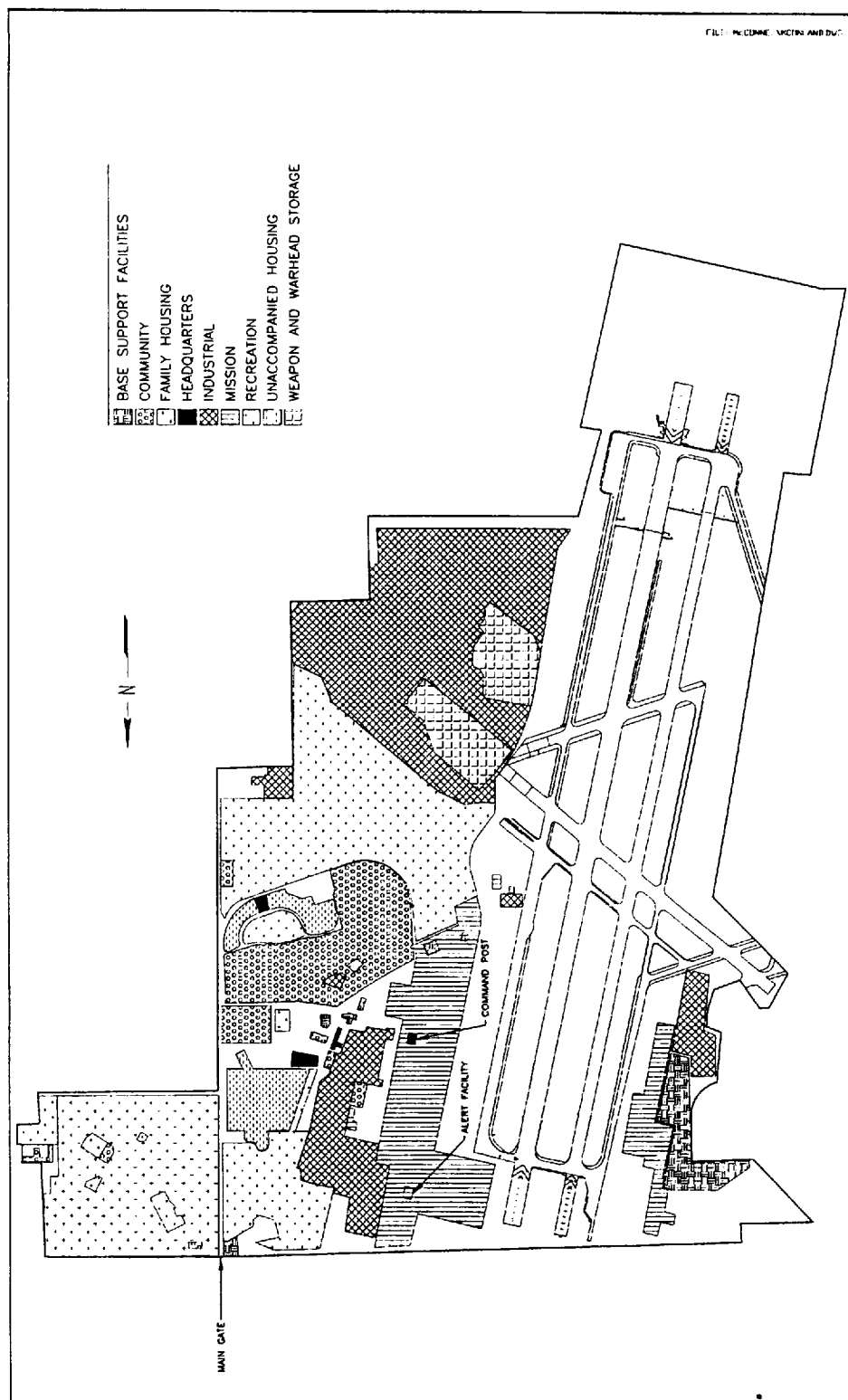


Figure 2.4 McConnell Air Force Base Land Use Diagram.

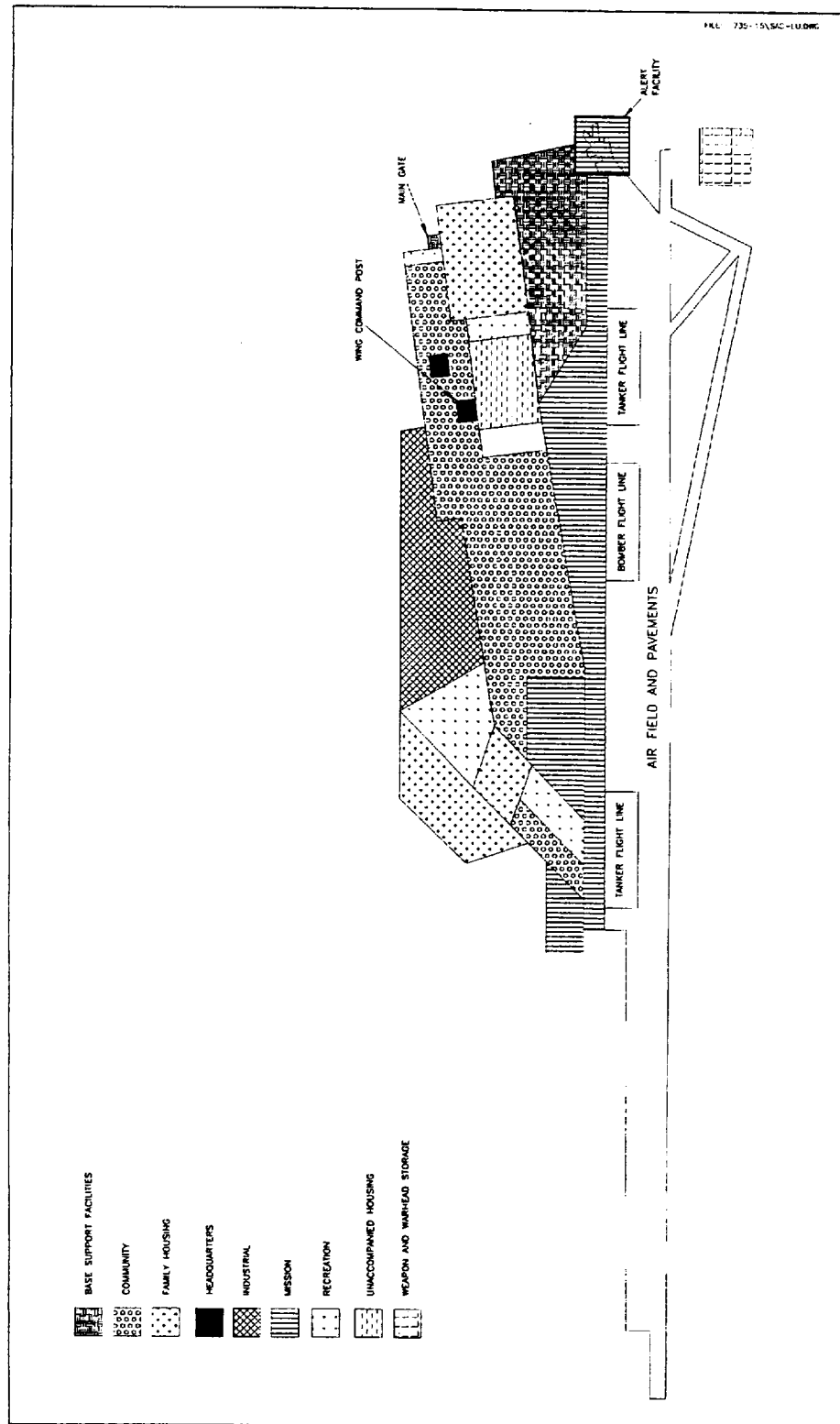


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

base consists of family housing and recreation areas. The alert facility is located to one end of the flight line within the mission area. All of these characteristics match the standard land use diagram.

Differences between the land use pattern at McConnell AFB and that on the standard diagram include McConnell AFB's placement of the command post within the mission area of the base, whereas the standard places it within the central area of the base among community and base support facilities. Another difference is McConnell AFB's use of three industrial areas, whereas the standard only shows one area. However, like the standard, McConnell AFB's large industrial area is on the outer edge of the base.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

The history of McConnell AFB is linked with the early history of Wichita, Kansas and with aviation history in particular. In 1908, the first Kansas aircraft exhibition was held southeast of Wichita in a 640-acre field. The field was known locally as the "California Section" since it was owned by a California-born farmer (USAF 1994a:1). The flat terrain and moderate weather made for ideal flying conditions. Early aviation pioneers, such as Clyde Cessna, saw the advantages of the area and Cessna returned to Wichita in 1916 to begin his aircraft manufacturing business, the Cessna Aircraft Company. Today, McConnell AFB is surrounded by aircraft corporation facilities (Stubbs 1980:2-3).

In October of 1924, Wichita hosted the National Air Congress and for two days 100,000 people from around the region watched air races open to both civilian and military aircraft. Forty-seven aircraft participated (Stubbs 1980:1-2). City planners had proposed a Wichita Municipal Airport to support the growing aircraft industry and the National Air Congress of 1924 raised funds for that facility. The spectacle was held on the California Section, and it was that site that was proposed for the airport (McConnell AFB 1986:1).

By mid-1929, the Wichita Municipal Airport was under construction. Plans called for an administration/terminal building, three recreational areas, and space for private aircraft companies. Evidence of this development that remains at McConnell AFB is the Stearman Aircraft Company hangar (Real Property No. 9), located by the flight line on the western side of the base. The company erected the building for storage and display purposes. By 1929, there were 15 aviation companies in Wichita and more were forming. The top aircraft producers of the time included Swallow, Travel Air, Stearman, Cessna, Knoll, and Swift companies (McConnell AFB 1986:1).

The Great Depression, which began in 1929, caused shortages of capital and slowed production, and the airport was not finished until 1935. Nonetheless, when the Wichita Municipal airport did open, it contained the latest technological innovations and architectural planning and design. Still evident today is the 37 ft (11 m) long cast concrete, colored panel depicting Charles A. Lindbergh's historic arrival on the coast of Ireland in his plane, the *Spirit of St. Louis*. The airport had a weather bureau and an aerological station (one of the few making upper air observations) and a lighting system that illuminated the entire 4,800 ft (1,463 m) runway (McConnell AFB 1986:2).

An integral part of McConnell AFB's history is Air Force Plant No. 13 (AFP 13), located immediately west of the current runway and south of the KANG facilities. The plant produced the B-29 *Superfortress* bomber for the Boeing Airplane Company. The government acquired the land at the airport in 1940 and the plant was completed in 1942. By 1945, and the end of World War II, Boeing vacated the plant and it remained empty until 1947. AFP 13 underwent a succession of owners, including SAC and Air Materiel Command (AMC), but was eventually deeded to the Boeing Corporation in 1979.

In August 1941, the KANG became the first military unit assigned to the airport (USAF 1994c). In March of 1942, the Army Air Force (AAF) Materiel Center, Midwestern Procurement District was established in the administration building at the airport. For much of World War II, it occupied most of the building space and even took up space in an adjoining airplane production plant (Stubbs 1980:3). In September 1945, the Materiel Center was transferred to Oklahoma City and the 4156th AAF Base Unit was activated and became the host unit at the airport. The mission, carried out by civilians, was the servicing, dispatching, and maintenance of transient and locally-based aircraft (USAF 1994c). On October 11, 1946, the 4156th AAF Base Unit was ordered to cease operations by the end of the month. The airport then continued operations on a commercial basis (Stubbs 1980:3).

In 1950, Boeing Aircraft Company built 10 B-47 *Stratojets* (USAF 1994c). However, before SAC could take possession of the B-47s, crews had to be trained. Since some facilities were already available at the airport and the manufacturer was on the other side of the runway, downtime when parts were needed would be less and costs would be kept to a minimum if the manufacturer and the crews were located near one another. The USAF began proceedings to make the airport a permanent military training facility (Stubbs 1980:4-9). Wichita Municipal Airport was officially designated Wichita AFB in June of 1951. Air Training Command (ATC) hosted the base and the 3520th Combat Crew Training Wing (CCTW) was activated at the base to conduct B-47 combat crew training (USAF 1994c).

An aggressive building program was undertaken at Wichita AFB in 1954 while its military occupants lived in a "tent city" (McConnell AFB 1986:3-6). That same year the base's name was changed to McConnell AFB in honor and memory of the two McConnell brothers from Wichita who died while flying missions in World War II (McConnell AFB 1986:5-6). The building program was completed in 1956.

McConnell AFB's mission of training continued. In April of 1955, the 1000th B-47 crew graduated from training. ATC continued its host responsibilities at the base until 1958 when SAC took over as host unit. The 3520th CCTW of ATC was redesignated the 4347th CCTW of SAC. SAC continued to train B-47 crews under the 42nd Air Division.

In 1957, the Soviets successfully deployed two satellites, Sputnik I and II, into orbit around the Earth, demonstrating their ability to deploy an ICBM capable of reaching the United States. This resulted in the Gaither Report, a series of recommendations for military buildup. Although President Eisenhower increased military funding only slightly, the report touched off a "missile gap" panic and the ICBM program expanded, initiating development of the second generation missiles, the Titan II and the Minuteman series (Lewis et al. 1995).

In 1960, additional funds were released by the Air Force to begin construction and development of the Titan II launch sites. As a direct result of these national strategies and policies, McConnell AFB was chosen for deployment of one of three Titan II missile wings. The 18 launch sites were to be located from 20 to 50 mi (32 to 80 km) from McConnell AFB in a half-ring extending from the northeast to the south (McConnell AFB 1986:7). The McConnell Area Office of the U.S. Army Corps of Engineers Ballistic Missile Construction Office (BMCO) headed the construction of the 18 Titan II launch complexes from October 1960 through September 1963 (Holcombe 1963). On March 1, 1962, the 381st Strategic Missile Wing (SMW) of SAC was activated at McConnell AFB under the 4347th CCTW (USAF Historical Research Center 1985). Two missile squadrons were activated and each was assigned nine Titan II ICBMs. Each missile was brought into alert status as it was accepted into the SAC inventory (McConnell AFB n.d. a).

In 1963, the B-47 was phased out and the 42nd Air Division's 4347th CCTW departed as well. During McConnell AFB's time as a B-47 training base, 60,000 crew members and maintenance personnel graduated from the 3520th and the 4347th CCTWs (McConnell AFB 1986:6).

When the B-47 was phased out in 1963, Tactical Air Command (TAC) took over host operations at McConnell AFB. Tactical training and operations were carried out by the 388th Tactical Fighter Wing (TFW) along with host unit responsibilities. The 381st SMW continued missile alert operations as a SAC tenant unit (McConnell AFB 1986:7). The 388th TFW was bestowed the honors and lineage of the 23rd Pursuit Group (Flying Tigers of World War II) and was redesignated the 23rd TFW in February 1964. The wing was responsible for training F-105 *Thunderchief* pilots and maintenance personnel for duty with units in Thailand and Vietnam (McConnell AFB 1986:7). McConnell AFB's 23rd TFW was assigned duty in Vietnam. By the end of 1965, the 23rd TFW was back at McConnell AFB carrying out their new mission as a Replacement Training Unit of pilots and maintenance crews for units still engaged in Southeast Asia (Stubbs 1980:11). McConnell AFB also assumed responsibility for the Smokey Hill Bomb Range in central Kansas. Schilling AFB had previously provided this support, but Schilling AFB was closing. McConnell

AFB could provide the necessary support for the range since it was still used by SAC and TAC aircrews for bombing practice (Stubbs 1980:11).

In April 1971, McConnell AFB acquired a new mission with the arrival of the SAC tenant unit 91st Air Refueling Squadron (ARS), which was equipped with the KC-135A. In July of 1972, the 23rd TFW was reassigned to England AFB, Louisiana. With this move, SAC once again became responsible for McConnell AFB and the 381st SMW became the host unit at the base. The 91st ARS combined with the 384th ARW, thus making McConnell AFB a dual wing SAC base with both aircraft and missiles assigned to it (Stubbs 1980:11-12).

A third major mission was taken on by McConnell AFB in 1973 with the arrival of the 819th Civil Engineering Squadron (CES). This was a "RED HORSE" unit, which stands for Rapid Engineering Deployable, Heavy Operations Repair Squadron, Engineer. This unit was a quick-acting, mobile, civil engineering unit capable of deploying anywhere in the world to repair heavily damaged airfields and facilities. When not on mobility training to support their mission, the 819th CES traveled to other bases within SAC to support heavy construction projects (Stubbs 1980:13).

At the end of 1973, another tenant unit was assigned to McConnell AFB. Detachment 6 of the 37th Air Rescue and Recovery Squadron (ARRS), under Military Airlift Command (MAC), took over operational control of the 384th UH-1F helicopters. One year later, in 1974, the 'F' models were phased out and replaced with the HH-1H *Iroquois* helicopter. These helicopters provided increased capability in support of the 381st SMW Titan II operations and any possible disaster situations (Stubbs 1980:13).

On August 24, 1978, the 381st SMW lost a Titan II Complex, No. 533-07, located near Rock, Kansas due to an accidental oxidizer spill (Scallorn 1978). The Titan II missile consisted of a two-stage rocket engine-powered vehicle. The fuel (hydrazine and unsymmetrical dimethylhydrazine) and oxidizer (nitrogen tetroxide) used for propulsion are hypergolic, i.e., ignite upon contact with

each other, creating 430,000 pounds of thrust for the first stage. Both components of the fuel are stored in the missile (McConnell AFB n.d. b). During maintenance of this particular missile, a leak of the highly toxic and deadly oxidizer occurred, causing an explosion that killed two Propellant Transfer System Team personnel (Scallorn 1978).

McConnell AFB was the first base to have women serve on a missile combat crew. In 1976 and 1977, the Air Force began to deal with the inequities of gender with programs to recruit women for the Air Force Academy and for combat crew members in the Titan II program (Lewis et al. 1995). In August 1978, Airman First Class Tina Ponzer was the first enlisted woman to begin crew duty with the 381st SMW. In September, the first female officer, First Lieutenant Patricia Fornes, assumed duties as a Titan II crew member with the 381st SMW. She later became one of the first women to assume command of a missile complex (Office of the Historian, HQ, SAC 1983:66; McConnell AFB 1986:9).

In May 1981, international attention focused on McConnell AFB when a missile crew officer was accused of illegal contact with officials from the Soviet Union. It was feared that classified materials had been compromised through his contact. Pre-trial hearings began on base, but were later moved to Washington, D.C. The officer was acquitted due to an amnesty agreement made with SAC officials (McConnell AFB 1986:10).

President Ronald Reagan advocated military build-up as the only way to bargain with the Soviets in reduction talks (Lewis et al. 1995), and he announced the details of his strategic modernization program in October 1981. The Titan II ICBMs would be phased out of the USAF inventory (Lewis et al. 1995). Although this process of deactivation stemmed partly from strategic arms negotiations with the Soviet Union, it was primarily a result of strategic modernization and advances in technology (McConnell AFB 1986:10).

In 1985, the 381st SMW was deactivated and the 384th ARW became the host unit at McConnell AFB. On July 15, 1986, a four-person crew completed alert duties at missile complex 533-09, the

last complex dismantled in the two-year deactivation of the Titan II at McConnell AFB. This ended 23 years of around-the-clock alert duty for Titan II missile crews at McConnell AFB. As each missile was dismantled and removed, the associated launch complex was turned over to a U.S. Army Corps of Engineers contractor, who then continued the dismantling and destruction of the complex in accordance with arms control agreements (Graham 1986).

Two announcements in 1983 heralded further changes for McConnell AFB. The KC-135R, a re-engined, quieter, more fuel-efficient version of the *Stratotanker*, was to be stationed at McConnell AFB. In 1984, the KC-135R began operations at the base. McConnell AFB became the first base to have a complete inventory of KC-135R aircraft (USAF 1994c). Also, Reagan reactivated the development of the B-1 bomber (Lewis et al. 1995), and McConnell AFB was selected as the fourth and final base to receive the new B-1B *Lancer* aircraft.

In 1986, a \$130 million construction program began at McConnell AFB in preparation for the B-1B bomber. Some facilities had to be refurbished and new facilities built, including a new munitions maintenance facility (USAF 1994c). On July 1, 1987, the 384th ARW was redesignated the 384th Bombardment Wing (BMW), Heavy. The 91st ARS was deactivated on October 1, 1987, and the refueling operations at McConnell AFB became the sole responsibility of the 384th ARS under the 384th BMW. All 17 B-1B bombers allocated to McConnell AFB were delivered to the base in 1988. The first aircraft and crew assumed alert status on January 1, 1989 (USAF 1994c).

On September 28, 1991, President Bush ordered the stand down of all bombers, missiles, and tankers currently on alert, an action which was in response to the end of the Cold War and the change in Soviet Union leadership. This event occurred just 20 months after the first B-1B assumed alert posture at McConnell AFB. Wing leaders prepared their units for a conventional combat mission (USAF 1994b). In June 1992, McConnell AFB was reassigned to the newly created ACC, with the 384th Bomb Wing (BW) as base host. On January 1, 1994, the 22nd ARW was activated at McConnell AFB and assumed base host responsibilities, transferring the base to HQ Air Mobility

Command and USTRANSCOM. The 384th BW, still an ACC component, is currently a tenant on base.

3.2 BASE DEVELOPMENT

In the 1940s, Wichita Municipal Airport was the site of much military activity. In March of 1942, the AAF Materiel Center, Midwestern Procurement District established its headquarters in the Wichita Municipal Airport administration building. By this time, the government was leasing 1,337 acres (541 ha) of what was known as the "California Section" from the city. There were five runways, each 50 ft (15 m) wide and 4,500 to 7,500 ft (1,371 to 2,286 m) long. A parking apron and seven taxiways were provided. One hangar and three small warehouses were the only buildings available for use (McConnell AFB 1986:3) (Figure 3.1). The old administration building and the Stearman Hangar are located on the northwestern side of the base. The old KANG building, located on the eastern side of the runways and to the north of the northwest/southeast taxiway, was utilized by the pilots from various commands testing the B-47 (Stubbs 1980:4).

In June of 1951, the USAF activated Wichita Municipal Airport to serve as a training center for combat crews for the B-47s being produced by the Boeing Airplane Company. In the early years the "Air Force and Boeing personnel got together and planned the roads, water, sewage and buildings in a way that would benefit both the base and the Boeing Plant" (Stubbs 1980:5). By June 1954, two new 12,000 ft (3,658 m) runways were completed. As Wichita AFB became McConnell AFB, a major construction program with funding totalling more than \$22 million transformed the airport into an air force base (Figure 3.1). Major improvements completed during the three year program included 490 Capehart housing units, 10 mi (16 km) of paved streets, two swimming pools, two B-47 hangars, service clubs, a theater, a bank, a commissary, a base exchange, a hospital, and a child care center (Stubbs 1980:4). Some of the family housing was built in 1956, with the remaining Capehart units completed in 1959. Much of the base's configuration

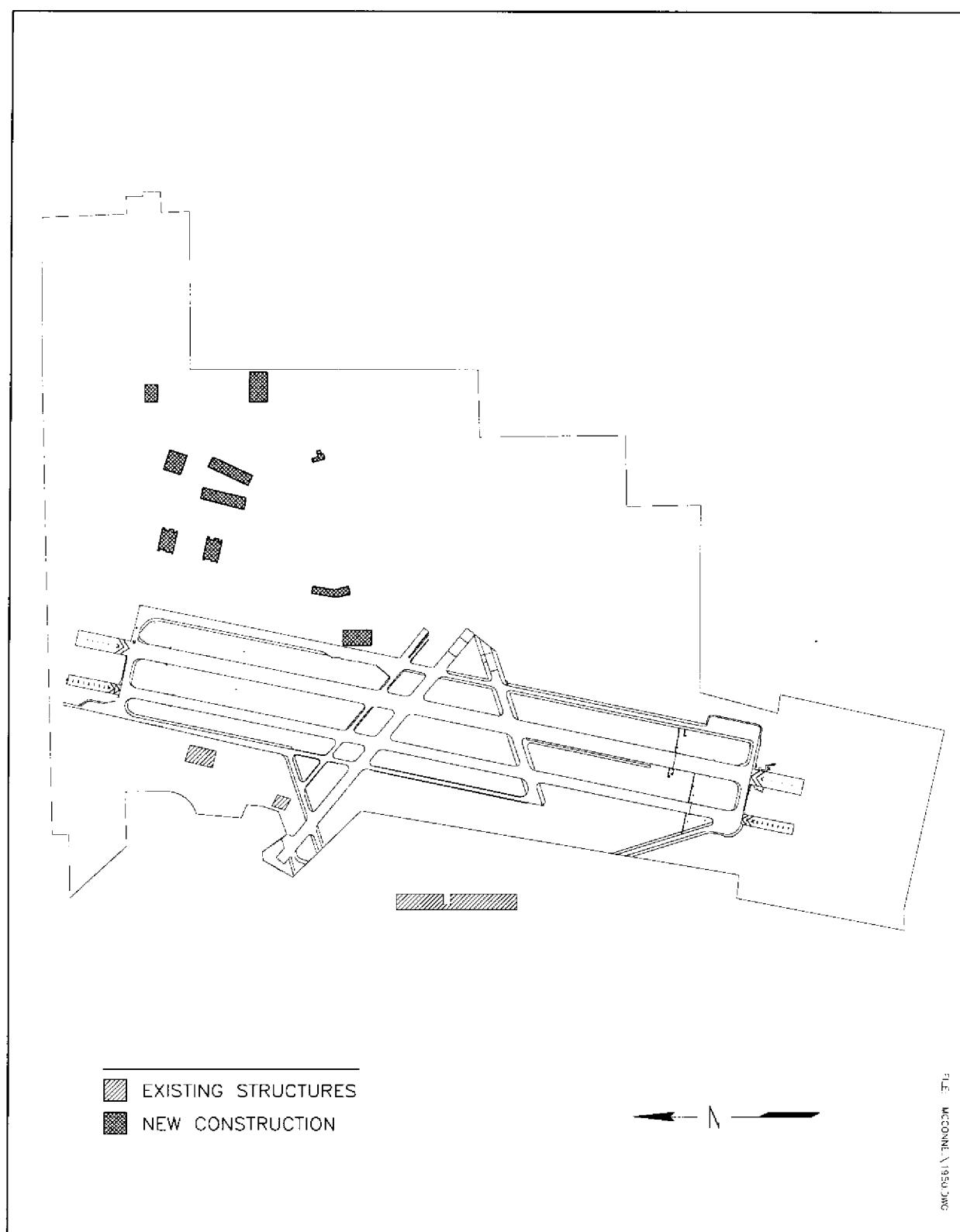


Figure 3.1 McConnell Air Force Base 1950-1960.

today was essentially determined by the first major construction effort on the base, which ended in 1956.

In the early 1960s, 18 Titan II ICBM launch complexes were located around Wichita. None of these were on McConnell AFB proper. On base were facilities dedicated to the armaments, reentry vehicles, and the basic maintenance of the missiles and their components. Some of these facilities were located in the old weapons storage area located to the southeast of the runways (Figure 3.2). Others were incorporated into existing facilities such as the maintenance docks (Real Property Nos. 1106 and 1107). The base golf course was created in the early 1960s.

In the 1970s, a new mission was activated at McConnell AFB with the arrival of the 91st ARS and the KC-135A. In December of 1972, the 384th ARW arrived. The Bomber/Tanker Alert Facility was constructed in 1974 for use by these tanker squadrons (Figure 3.3).

In 1983, it was announced that McConnell AFB was selected to receive the B-1B bomber as a follow-on mission after the deactivation of the Titan II missiles. In early 1986, construction began in preparation for the arrival of the B-1B (Figure 3.4). More than \$130 million was spent to build new facilities and refurbish old ones, including a new munitions maintenance facility. These new and highly secured facilities are located on the southeastern end of the old northwest/southeast runway, just to the north of the old weapons storage area.

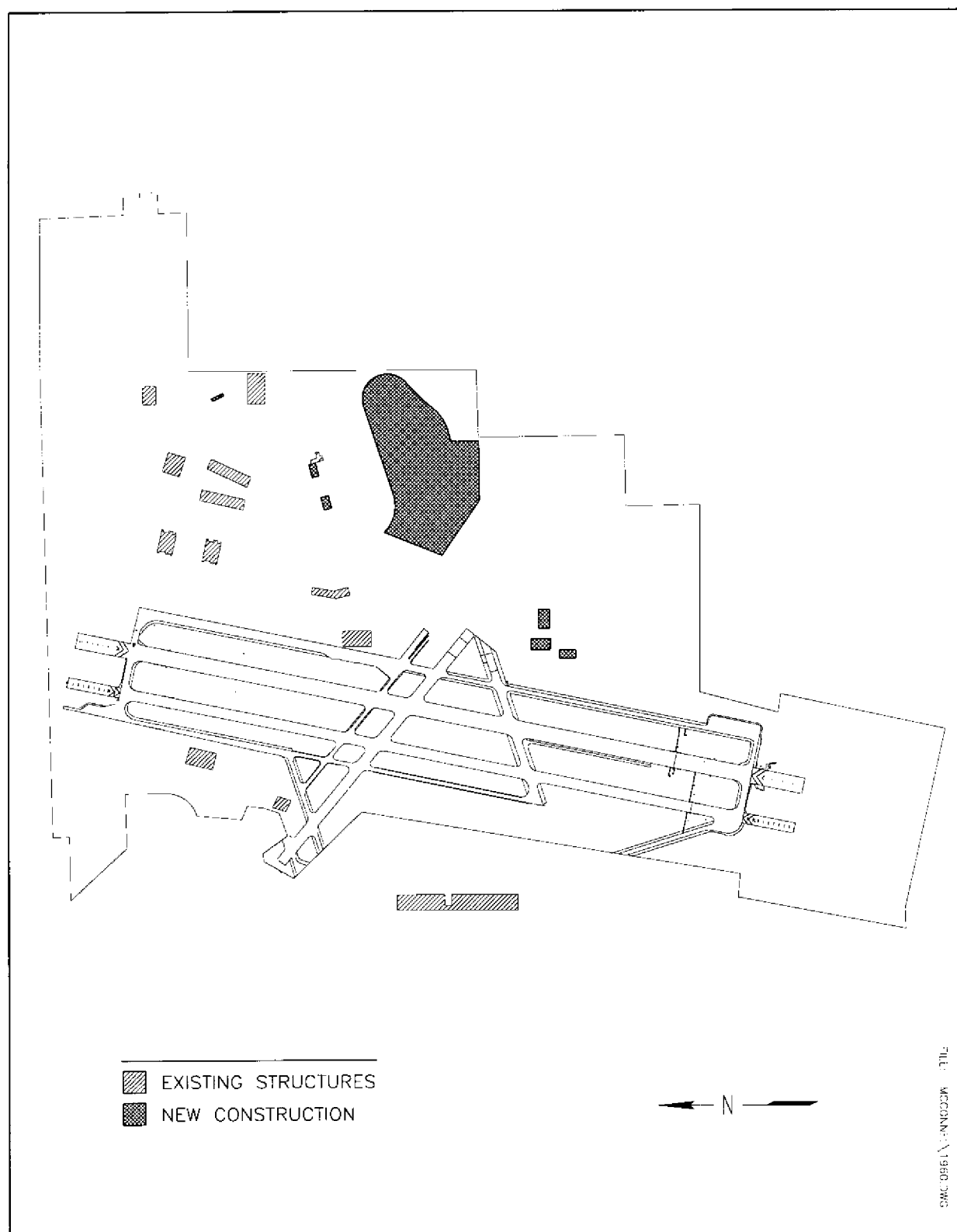


Figure 3.2 McConnell Air Force Base 1960-1970.

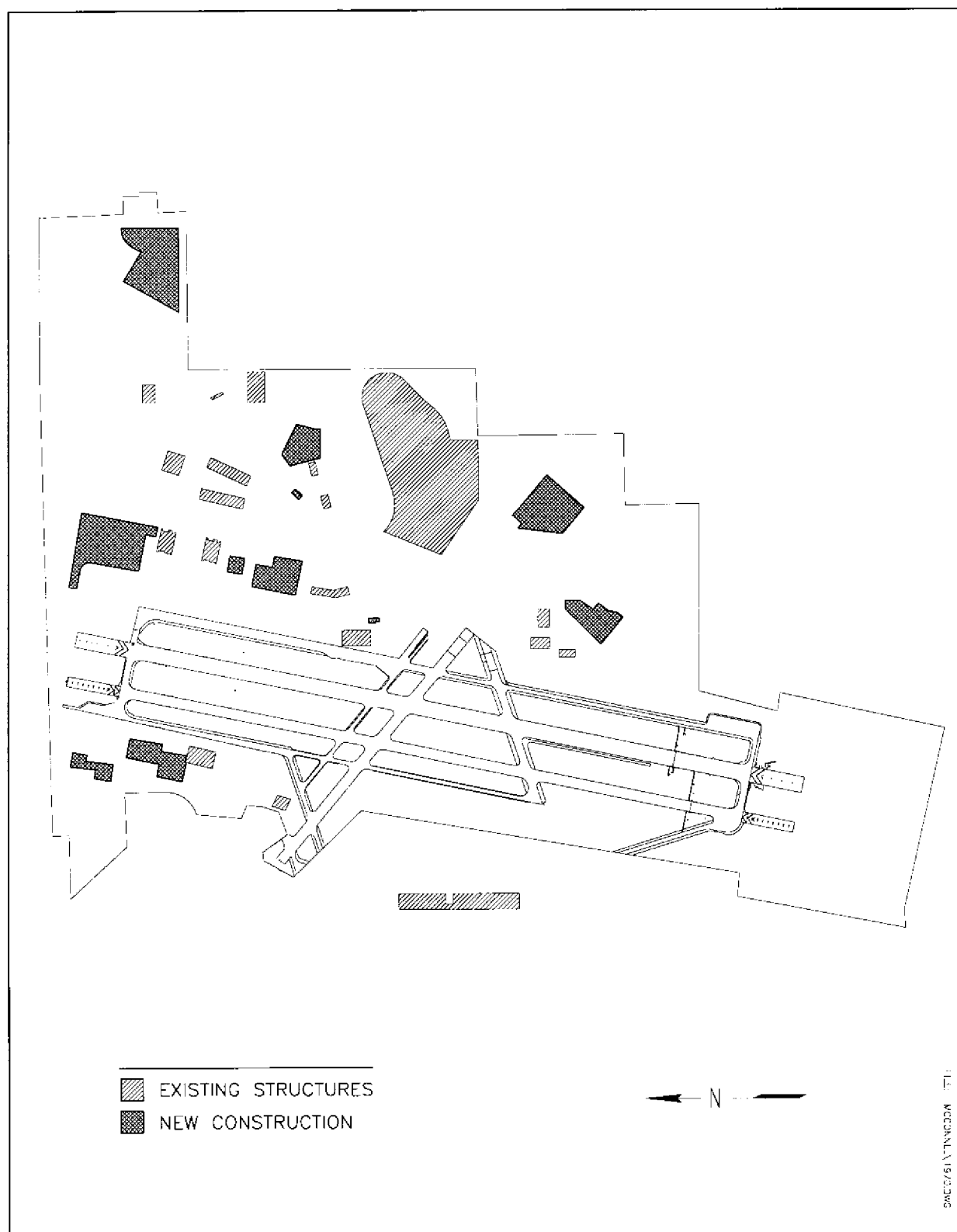


Figure 3.3 McConnell Air Force Base 1970-1980.

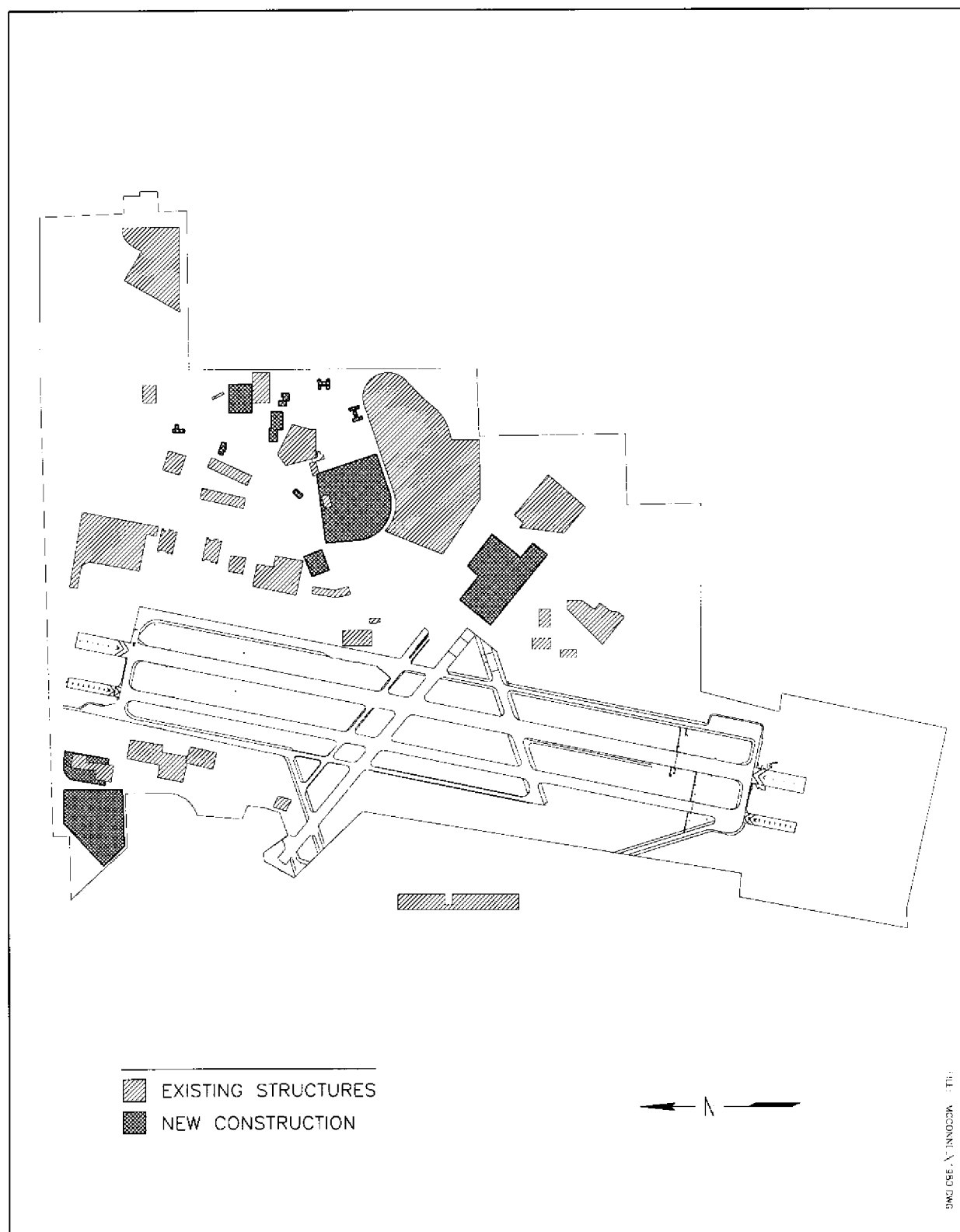


Figure 3.4 McConnell Air Force Base 1980-present.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of McConnell AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to this list to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of McConnell AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at McConnell AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF Interim Guidance (1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that area may not preclude intact integrity for the resource. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF Interim Guidance (1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at McConnell AFB, the Mariah field team met with Mr. Jay Zimmerman, the Cultural/Natural Resources Officer within the 22nd CES. Mr. Zimmerman accompanied the field team on a tour of the base, familiarizing the team with the base layout and facilities, and identifying which facilities might be significant resources within the context of the inventory. The photographic inventory of property types on the base began with this tour and continued throughout the base visit. The field team was introduced to personnel in the Real Property Office and discussed with staff the need for access to the Real Property Change List, the older files containing the Property Change Cards, earlier planning documents, old property inventories, and other pertinent documents the office might have in its files. Reviews of the property change list, base maps, and the first reconnaissance with Mr. Zimmerman were used to assemble a "first priority" list of resources to be documented and evaluated.

The Site Development Office (Drafting Office) in Civil Engineering provided copies of the computer generated C-Tabs, or maps, of the base, as well as project files containing architectural

drawings, maps, aerial photographs, and other historical documents. Project files and maps pertaining to each decade of base history were pulled, and the maps were copied.

The present Wing Historian, TSgt Daniel Wheaton of the 22nd ARW History Office, also provided materials for use in the study. Copies of the current missions for the host unit and tenant units on base were obtained from the 22nd ARW Public Affairs Division.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of McConnell AFB, 139 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried properties are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at McConnell AFB, one of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to the evaluated building could not be secured. In this instance, documentation describing any changes to the building was consulted to provide insight into the integrity of the building's interior.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Located in Real Property No. 948, Resource No. 12138)

This resource is a set of files containing photographs, maps, and drawings relating to construction and renovation projects at McConnell AFB as well as projects on facilities over which McConnell AFB has jurisdiction, such as Titan II launch facilities. A detailed list of the collection contents is provided in Appendix E. The collection is located in the Site Development Section of the 22nd CES in Real Property No. 948. Drawings are ink on linen, vellum, and mylar and include base drawings, location maps, and unique "as built" drawings of facilities. The files also contain several base aerial photographs.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

USAF Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	12138	None	RecDoc/Obj	14
Documentation	Documentary Collection	12139	None	RecDoc/Obj	14
Combat Weapons and Support Systems					
Alert Facilities	Bomber/Tanker Alert Facility	12052	978	Real/Bldg	18

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
18	12052	978	Bomber/Tanker Alert Facility
14	12138	None	Documentary Collection
14	12139	None	Documentary Collection

The collection represents the history of base use and development from inception through the present, including the Cold War era, and serves as supporting documentation for each resource on base, including those chosen for evaluation.

An inventory of this collection has been entered into a data base accessible at the Site Development Section. Although the collection is protected, it is not stored in a temperature or humidity controlled environment.

6.1.1.2 Documentary Collection (Located in Real Property No. 384, Resource No. 12139)

This collection provides a history of the base and the host unit and includes news clippings, scrapbooks, photographs, and other objects of memorabilia. The collection also contains information about the Titan II mission at the base, a mission whose physical presence has largely been erased by subsequent missions assigned to McConnell AFB. A detailed list of the contents of this collection is located in Appendix E.

Some materials in this collection are currently being stored in a closet. Base plans for the near future include the inventory and appropriate storage of these materials. Objects contained in the collection could contribute to displays or exhibits about the base and its history.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber/Tanker Alert Facility (Real Property No. 978, Resource No. 12052)

The Bomber/Tanker Alert Facility was completed in 1974, and is a two-story 25,508 ft² building of concrete block construction with a dry-vit coating. The facility is located at the northern end of the instrument runway and was originally used solely for refueling tankers conducting their mission of

support for the bombers. When the B-1Bs were assigned their mission at McConnell AFB, the facility was then used by KC-135 and B-1B squadrons. Separate parking slots on the alert apron for KC-135s and B-1B are indicated by differently configured blast deflectors. The property record for this facility documents a 170 ft (52 m) long by 5 ft (1.5 m) wide tunnel originating at the facility, but does not state when the tunnel was constructed, nor the tunnel's purpose or destination. The tunnel is not illustrated on base maps. No other alert facilities at bases in this study exhibited a tunnel. The facility was removed from its alert duty function in 1991, and the status of the facility is unknown at this time.

This alert facility does not have characteristic "mole hole" architectural elements such as semi-subterranean construction and ramped exits. However, it does have a secured area on the flight apron and is surrounded by security. The facility's exterior integrity remains intact. Access to the interior of the facility was not obtained; however, the real property card for the building indicates no major renovations and no changes in use. Thus, interior integrity is also determined to be intact.

This Bomber/Tanker Alert Facility is extremely important to McConnell AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers and tankers across the country (Lewis et al. 1995). This facility was used for this purpose during Phases III and IV of the Cold War and meets NRHP criterion (a).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at McConnell AFB.

6.4 TRAINING FACILITIES

None were evaluated at McConnell AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at McConnell AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on McConnell AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at McConnell AFB. These resources should be investigated further for more comprehensive analyses. A listing of such resources is provided in Appendix E.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to McConnell AFB revealed approximately 120 citations. Most of these are unit histories and special collections. More specific topics are the histories of base realignment due to acquisition of the F-105s, KC-135As, the 381st SMW and Titan IIs, and the B-1B bomber. The vast majority of these documents are available on microfilm. Future studies of Cold War history at McConnell AFB should allot time to researching these documents.

As part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus lists of persons informally interviewed at the base and potential future contacts, are presented in Appendix F.

8.0 FUTURE THREATS TO RESOURCES

The planned disposal of buildings at McConnell AFB over the next three fiscal years does not include any resources evaluated in this study. The Military Construction Program through fiscal year 1996 also does not contain any indicated actions for evaluated resources on base. Thus, there are presently no known threats to any of the resources which have been evaluated in this report.

It was reported to the Mariah field team that there are facilities on McConnell AFB which have previously been identified as historically and/or architecturally significant. The former Stearman Hangar (Real Property No. 9) has been nominated for inclusion to the NRHP. Real Property No. 1218, the former KANG facility, is in the process of being nominated. Real Property No. 2, a metal-sided facility associated with the Wichita Municipal Airport, was recommended as potentially eligible for inclusion on the NRHP. The SHPO requested revision of the original nomination, but agreed with this determination of eligibility. According to Mr. Zimmerman, the Cultural/Natural Resources Officer, the NPS will be completing a historical survey on McConnell AFB sometime in the near future.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at McConnell AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at McConnell AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on McConnell AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is designed to take place during the

planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at McConnell AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
12052	978	Bomber/Tanker Alert Facility		*	*	*		NRHP eligible now.
Real Property-Object								
12138	None	Documentary Collection		*		*	*	
12139	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Located in Real Property No. 948, Resource No. 12138)

This collection of drawings, maps, and photographs is protected, but not stored in a temperature or humidity controlled environment. The collection has already been inventoried and this inventory entered into a database. It is recommended that the collection be copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.2 Documentary Collection (Located in Real Property No. 384, Resource No. 12139)

This collection includes objects of memorabilia and documents such as newspaper clippings, photographs, and scrapbooks. Future plans for the collection include inventory and appropriate storage. It is recommended that the entire collection be inventoried, and that the objects of

memorabilia be maintained and stewarded. It is further recommended that the documents be duplicated, that the copies be retained by the base for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Bomber/Tanker Alert Facility (Real Property No. 978, Resource No. 12052)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV, and meets NRHP criterion (a) based on its role in sustaining a survivable force to meet the needs of deterrence. The integrity of the building and its features is intact. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Graham, V. M., SMSgt

- 1986 "Goodbye to Titan," *Airman Magazine*. Vol. XXX, No. 8:21-25. AFSINC. Kelly Air Force Base, Texas.

GRW Engineers, Inc.

- 1984 *The McConnell AFB Comprehensive Plan*. GRW Engineers, Inc. Lexington, Kentucky.

Holcombe, J. H., Lt. Colonel, C.E. 1963 *History McConnell Area U.S. Army Corps of Engineers Ballistic Missile Construction Office*. McConnell Air Force Base, Kansas.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

McConnell Air Force Base

- 1986 *McConnell AFB: A Historical Perspective. Dedicated to the Wichita Air Pioneers*. History Office, 22nd Air Refueling Wing. McConnell Air Force Base, Kansas.
-

1992 *Real Property Study, McConnell Air Force Base, Kansas*. Executive Order 12512.

n.d. a "The Missile Years 1961 - 1981". 381st Strategic Missile Wing History. Manuscript on file in the 22nd Air Refueling Wing History Office. McConnell Air Force Base, Kansas.

n.d. b *McConnell AFB Installation Guide*. Benchmark Publications, Inc.

National Park Service

1990 *National Register Bulletin 22: Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. Report prepared by Marcella Sherfy and W. Ray Luce, National Park Service. Washington, D.C.

1991 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation (revised)*. Report prepared by the National Register Branch, National Park Service. Washington, D.C.

Office of the Historian, Headquarters, Strategic Air Command

1983 *SAC Missile Chronology 1939-1982*. Headquarters, Strategic Air Command. Offutt Air Force Base, Nebraska.

Scallorn, B. G., Colonel

1978 "Report of Missile Accident Investigation Major Missile Accident Titan II Complex 533-7 Assigned to 381st Strategic Missile Wing, McConnell AFB, Kansas." Report on file in History Office, 384th Air Refueling Wing. McConnell Air Force Base, Kansas.

Stubbs, K. D., 1st Lt

1980 "The History of McConnell Air Force Base." Manuscript on file History Office, 22nd Air Refueling Wing, McConnell Air Force Base, Kansas.

United States Air Force

1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

1994a *Fact Sheet "22nd Air Refueling Wing (ACC)"*. 22nd Air Refueling Wing. Public Affairs Division, McConnell Air Force Base, Kansas.

1994b *Fact Sheet "History 384th Bomb Group, Air Combat Command"*. 22nd Air Refueling Wing. Public Affairs Division, McConnell Air Force Base, Kansas.

1994c *Fact Sheet "McConnell Air Force Base History"*. 22nd Air Refueling Wing. Public Affairs Division, McConnell Air Force Base, Kansas.

USAF Historical Research Center

1985 "USAF Establishment Lineage and Honors History." USAF Historical Research Center Form 24 (April 1984). Maxwell Air Force Base, Alabama.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	12001	948	Base Engineering Administration	1953
	12002	938	Base Engineering Storage CV Facility (Self Help)	1986
	12004	950	Troop Subsistence Warehouse (Cold Storage)	1952
	12005	1106	Large Aircraft Maintenance Dock	1954
	12006	1107	Large Aircraft Maintenance Dock	1954
	12007	1176	Fuel Systems Maintenance Dock	1987
	12008	714	Vehicle Maintenance Shop	1988
	12009	951	Animal Clinic	1961
	12010	1094	Flight Simulator Training (B-1B Flight Simulator)	1988
	12011	701	Base Hazardous Storage	1953
	12012	696	Base Engineering Administration	1953
	12013	695	Base Engineering Administration	1952
	12014	642	Reserve Forces General Training Support	1993
	12015	196	Visiting Officers' Quarters (O1-O10)	1993
	12017	193	Transient Lodging Facility - Non Appropriated (TLF)	1952
	12018	187A/B	Housing Supply & Storage Facility (Linen Exchange)	1953
	12019	183	Family Housing Appropriation FY 50-69 (Commanders' Housing)	1956
	12020	181	Family Housing Appropriation FY 50-69 (Brig. Gen.'s House)	1956
	12021	185	Visiting Officers' Quarters	1953
	12022	384	Group Headquarters (22nd Air Refueling Wing Headquarters)	1987
	12023	197	Consolidated Open Mess	1952
	12024	198	Swimmers' Bath House	1955
	12025	202	Visiting Officers' Quarters	1959
	12026	250	Composite Medical Facility (Hospital)	1994
	12028	1090	Base Warehouse and Supply and Equipment (and Commissary)	1952
	12030	739	Communications Facility (Comm Squadron)	1987
	12031	740	Base Package Store (and Disaster Preparedness)	1954
	12032	795	Base Personnel Office	1952
	12033	810	Law Center	1955
	12034	520	Base Theater	1955
	12035	804	Recreation Library	1952
	12036	490	Bank IV McConnell	Unknown
	12037	522	Base Forms & Publications Warehouse	1955
	12038	806	Dental Clinic	1954
	12039	338	Child Care Center	1981
	12040	412	Recreation Center (Emerald City)	1994
	12041	406	Swimmers' Bath House	1993
	12044	408	Airmen's Detached Dining Hall (Chisolm Trail Inn)	1985

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	12045	415	MWR Sup/NAF C-Stor (Recreational Issue)	1994
	12047	424	Arts and Crafts Center	1993
	12048	1115	Security Police Operations	1989
	12050	985	Security Police Entry Control	1987
	12051	979	Master Surveillance and Control (Guard Tower)	1987
	12052	978	Crew Readiness (Alert Facility)	1974
	12055	980	Refueling Vehicle Shop	1965
	12056	990	Petroleum Operations Bldg.	1954
	12057	1102	Hydraulic Fluid Bldg.	1987
	12058	1128	Weapon and Release System Shop	1966
	12059	1166	Aircraft Corrosion Control	1966
	12060	1105	Inflight Kitchen (Plains Inn)	1954
	12061	1111	Base Supply and Equipment Warehouse (note the chute drying tower)	1966
	12063	1169	Jet Engine Maintenance Shop	1955
	12064	1170	Avionics Shop (HQ Group, USAF Command Post, SQ Operations)	1988
	12066	1168	Security Police Entry Control Bldg.	1987
	12067	1180	Group Headquarters (384th Bomber Group)	1970
	12068	1182	Squadron Operations	1970
	12069	1112	Base Operations	1952
	12070	1201	Fire Station	1952
	12071	1120	Base Photo Lab (VI Lab)	1953
	12072	1218	Heated Parking Vehicle Operations	1952
	12073	1219	Non-Destructive Inspection Shop	1952
	12074	1220	Air Freight/Passenger Terminal	1988
	12075	842	Exchange Service Station	1970
	12076	11150	Sanitary Sewage Pump Station	1976
	12077	1375	Integrated Maintenance Facility (Weapons Storage Area)	1988
	12078	1376	Storage Igloo (WSA)	1988
	12079	1396	A/SE Storage Facility Shop (Aircraft Support Equipment)	1987
	12080	1391	Security Police Entry Control Bldg.	1988
	12081	1419	Munitions Maintenance Administration	1967
	12082	1411	Conventional Munitions Shop	1962
	12083	1401	Storage Igloo (WSA)	1952
	12084	1413	Storage Igloo (WSA)	1963
	12085	1	Municipal Air Museum (Old Wichita Airport)	30s
	12086	9	Weapons and Release Systems Shop (KANG - old Stearman Hangar - acquired 1952)	1952
	12087	70	Control Tower	1969

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	12088	43	Petroleum Operations Bldg.	1953
	12089	41	Maintenance Hangar (KANG)	1953
	12090	50	Maintenance Hangar (KANG)	1985
	12091	54	Maintenance Hangar (KANG)	1987
	12092	51	Maintenance Hangar (KANG)	1985
	12093	17	Operational Training Reserve Forces (KANG)	1952
	12097	732	Group Headquarters	1954
	12098	750	Group Headquarters	1954
	12099	510	Chapel Center	1952
	12100	710	Vehicle Maintenance Shop	1952
	12101	852	Field Training Facility	1987
	12102	1099	Precision Measurement Lab	1962
	12103	312	Education Center	1953
	12104	316	Permanent Party Airmen's Dormitory	1986
	12105	317	Permanent Party Airmen's Dormitory	1970
	12106	318	Permanent Party Airmen's Dormitory	1970
	12107	319	Permanent Party Airmen's Dormitory	1955
	12108	320	Permanent Party Airmen's Dormitory	1955
	12109	350	Permanent Party Airmen's Dormitory	1994
	12110	328	Major Command Headquarters	1952
	12111	329	HQ Group	1952
	12112	330	HQ Group (since demolished)	1952
	12113	331	Reserve Forces General Training (since demolished)	1952
	12114	332	Arts and Crafts Center (since demolished)	1954
	12116	327	HQ Group	1952
	12118	1336	Golf Clubhouse and Equipment	1963
	12119	1349	Base Supply and Equipment Warehouse	1980
	12120	1358	Security Police Canine Kennel	1976
	12121	None	Re-entry Vehicle Nose Cone Golf Shelter	Unknown
	12122	None	Porto Potty	Unknown
	12123	360	Credit Union	Unknown
	12124	335	Snack Bar Exchange (Burger King)	Unknown
	12125	352	Sales Store Exchange (BX)	1981
	12126	515	Data Processing Installation	1983
	12127	170	Guard Shack (Main Gate Entrance)	
	12128	173	Security Police Control Inspection	1991
	12131	8217	Capehart Family Housing (8217 Tinker)	1959
	12132	8224	Capehart Family Housing (8224 Tinker)	1959
	12133	3136	Capehart Family Housing (3136 Mitchell)	1959
	12134	2953	Capehart Family Housing	1959
	12135	2816	Capehart Family Housing (2816 Arnold Court)	1959

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property/Building				
	12136	2914	Family Housing Appropriation FY 70A (2914 Spicer Court)	1994
	12137	2919	Family Housing Appropriation FY 70A (2916 Spicer Court #1)	1994
Real Property/Landscape				
	12049	46015	Miscellaneous Outdoor Recreation Facility (Obstacle Course)	1984
	12115	None	Softball field - recreation	Unknown
	12117	None	Tennis Courts	Unknown
Real Property/Object				
	12016	46082	Memorial Monuments (Memorial Walk)	76-92
	12094	None	Static Display - B-47	Unknown
	12095	None	Static Display - F-105	Unknown
	12096	None	Static Display - Titan Reentry Vehicle Nose Cone	Unknown
	12129	None	Entrance Gate Sign (Air Pioneers)	Unknown
	12130	None	Entrance Gate Sign (MAFB Welcome)	Unknown
Real Property/Site				
	12053	20026	Alert Apron (Blast Deflector-Tanker)	1954
	12062	1109	Power Check Pad with Suppressor	1986
Real Property/Structure				
	12003	None	Fuel Storage Tanks	Unknown
	12027	None	Foam Storage Tank (Artwork)	Unknown
	12029	700	Water Tank Storage (Water Tank Tower)	1952
	12042	407	Recreational Pavillion	1993
	12043	403	Non-commissioned Officers' Swimming Pool	1954
	12046	426	POV Washrack	1993
	12054	20074	Blast Deflectors - B-1B	1988
	12065	None	Foam Storage Tank (Mural on the Tank)	Unknown
Record or Document/Object				
	12138	None	Architectural Files	Various
	12139	None	Wing History Office	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

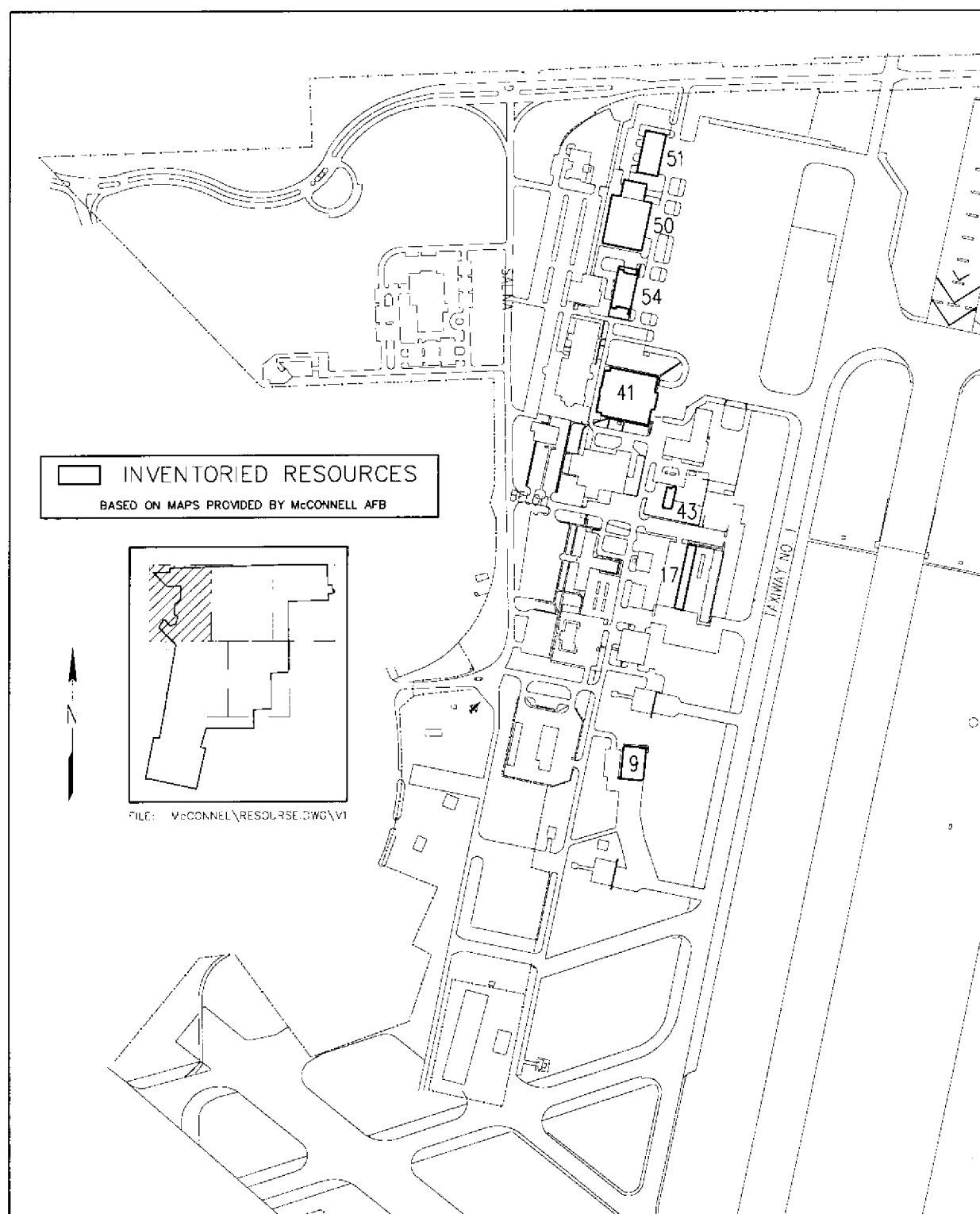


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 5).

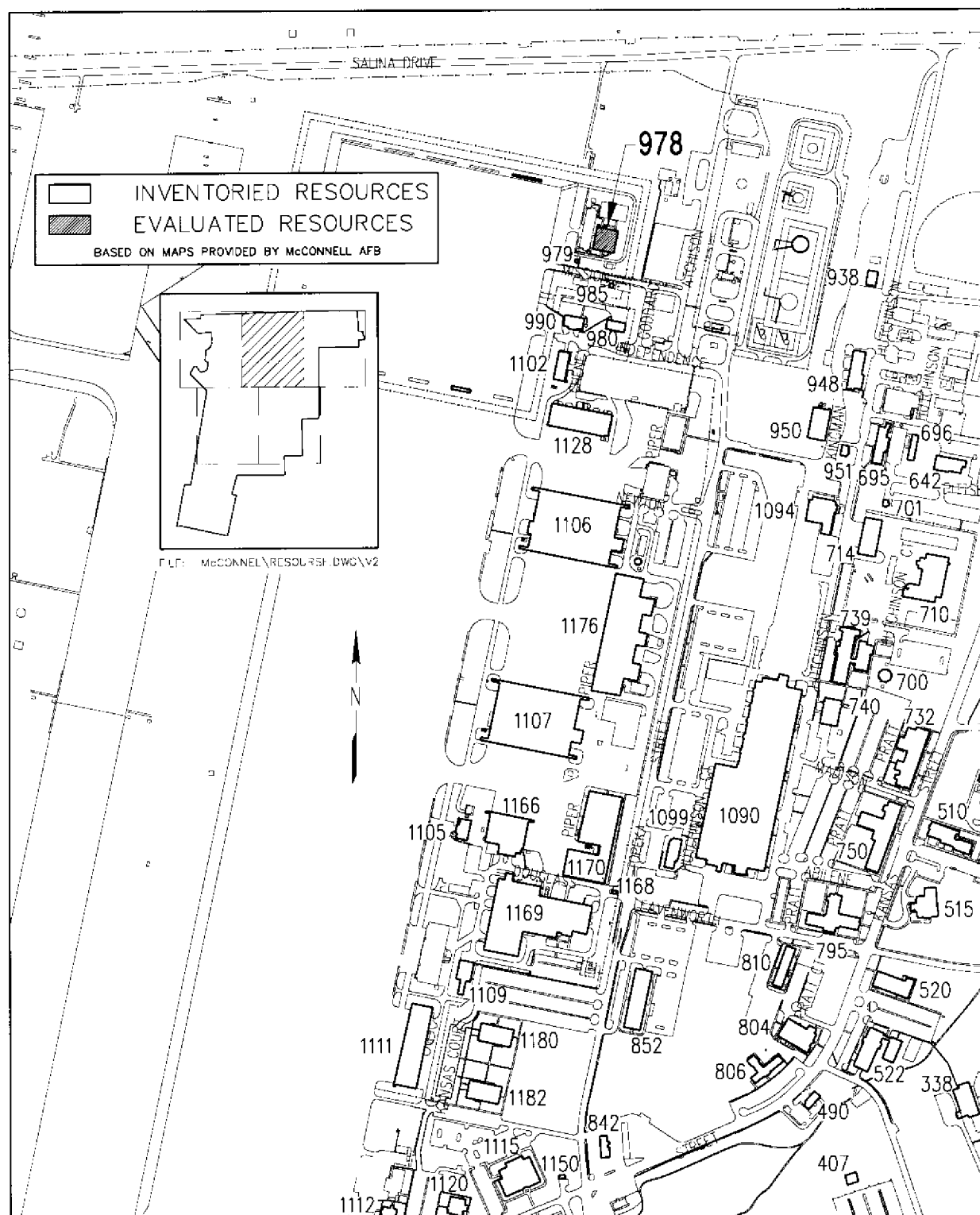


Figure B.2 Base Layout Map Showing Inventoried Resources (Map 2 of 5).

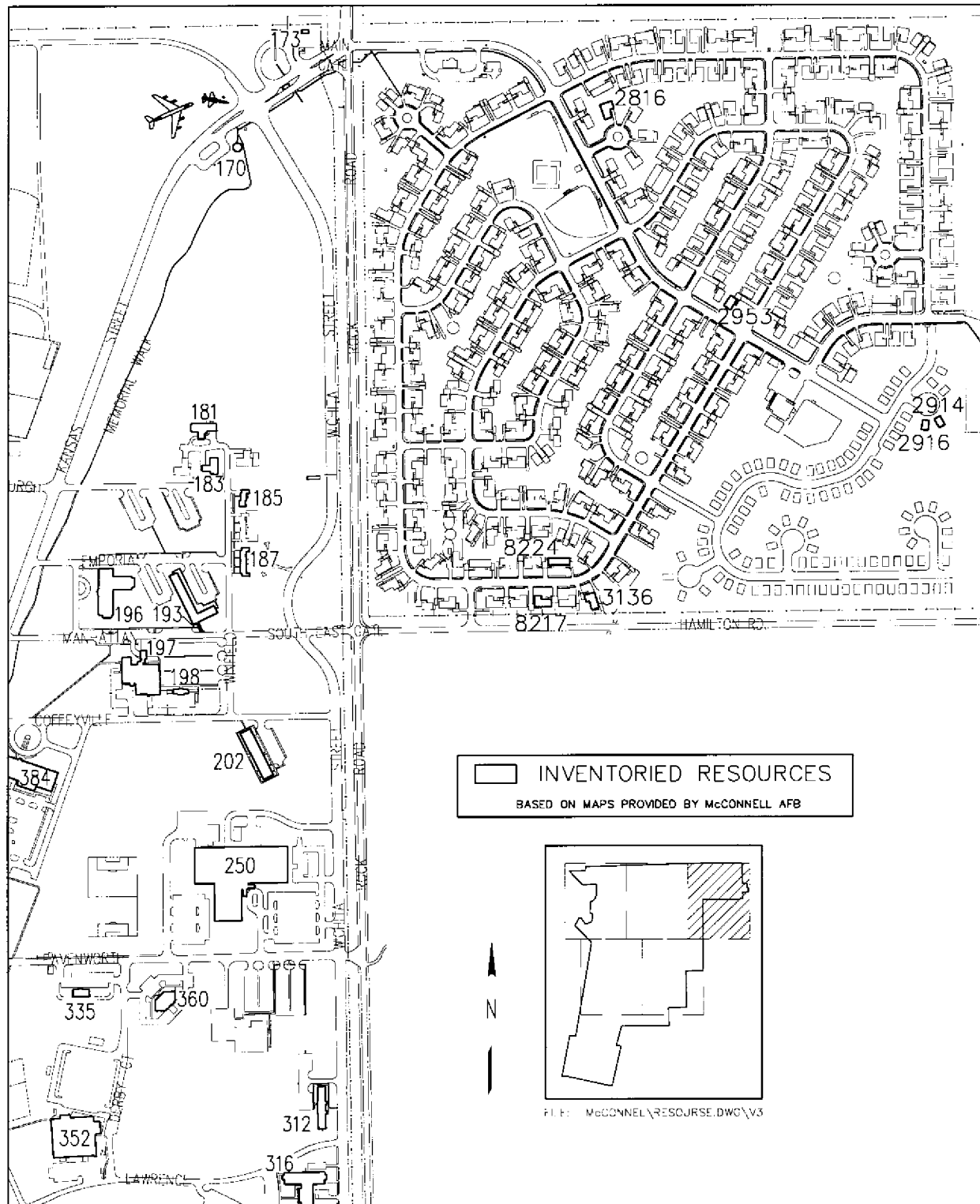


Figure B.3 Base Layout Map Showing Inventoried Resources (Map 3 of 5).

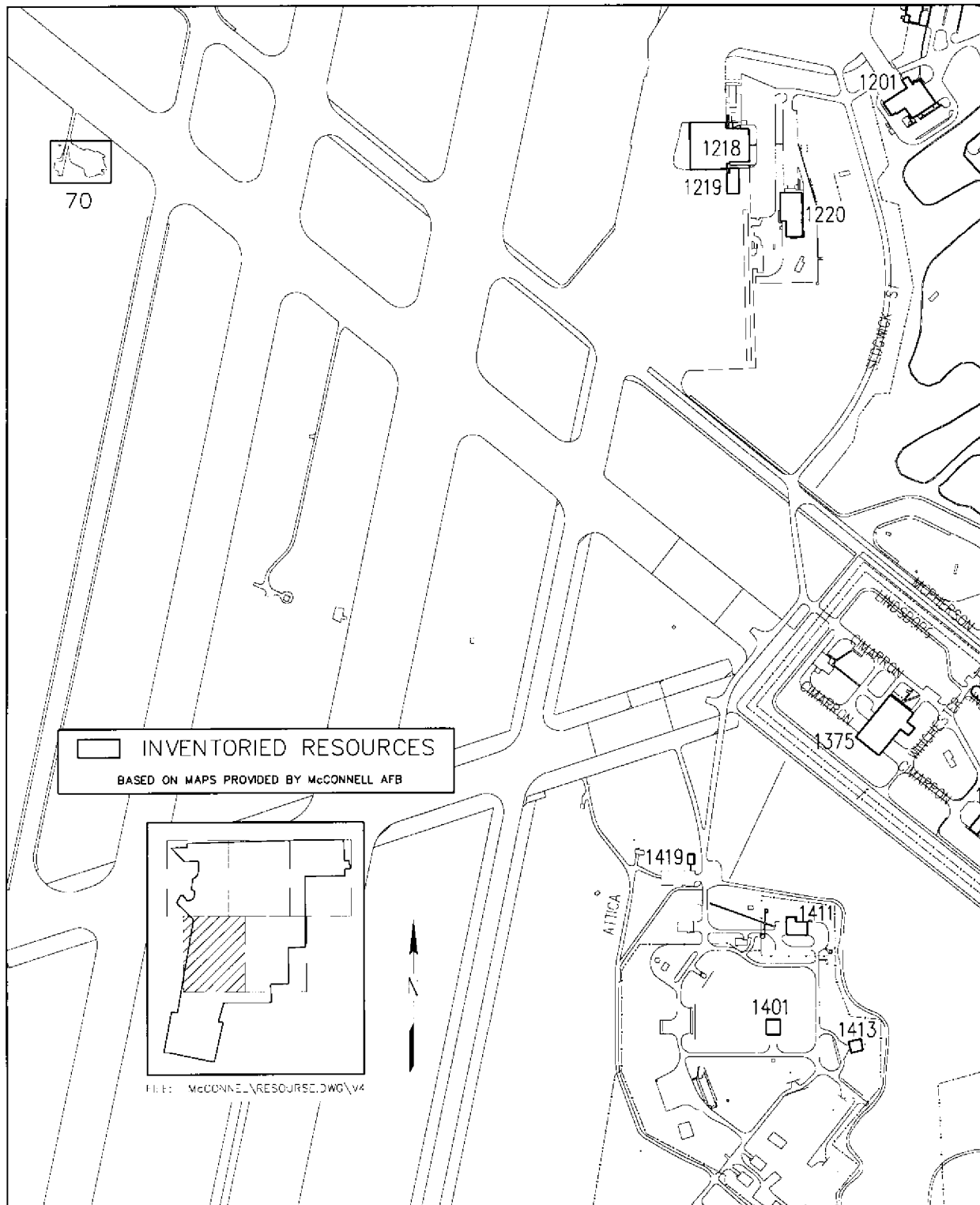


Figure B.4 Base Layout Map Showing Inventoried Resources (Map 4 of 5).

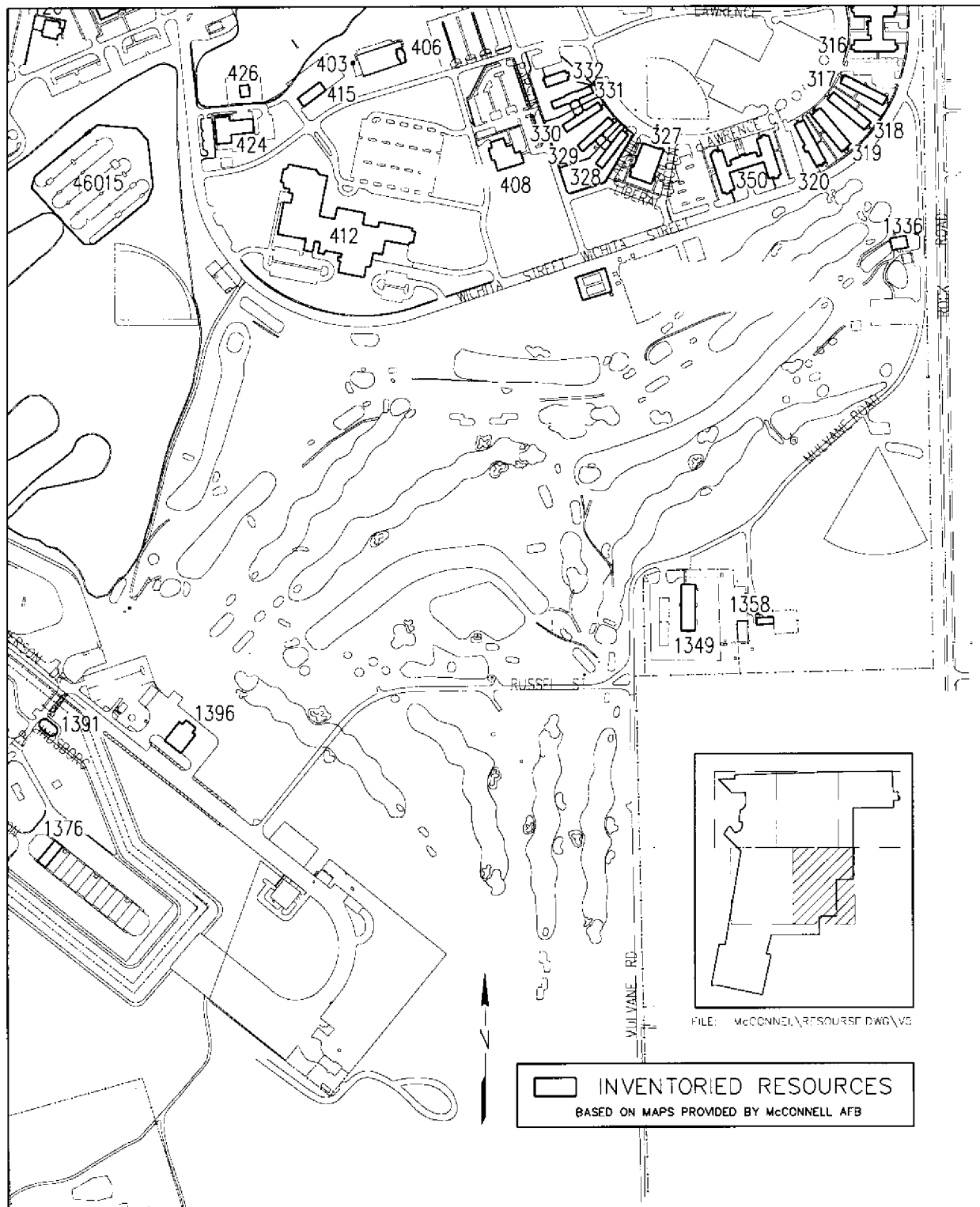
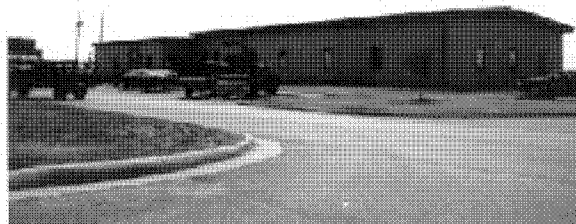


Figure B.5 Base Layout Map Showing Inventoried Resources (Map 5 of 5).

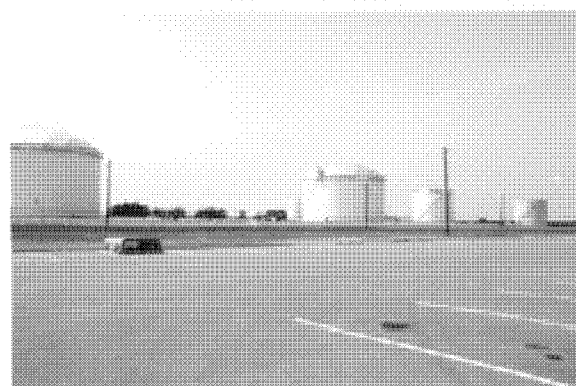
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 12001, Real Property No. 948
Base Engineering Administration



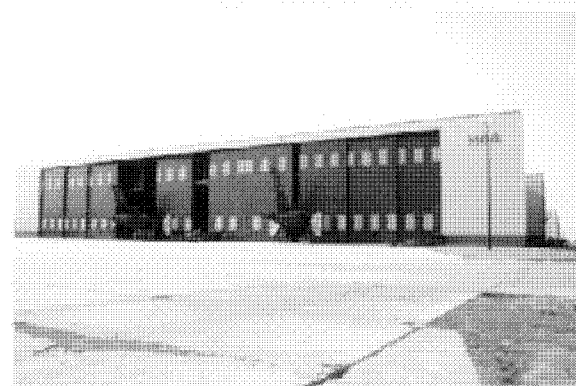
Resource No. 12002, Real Property No. 938
Base Engineering Storage CV Facility



Resource No. 12003, Real Property (none)
Fuel Storage Tanks



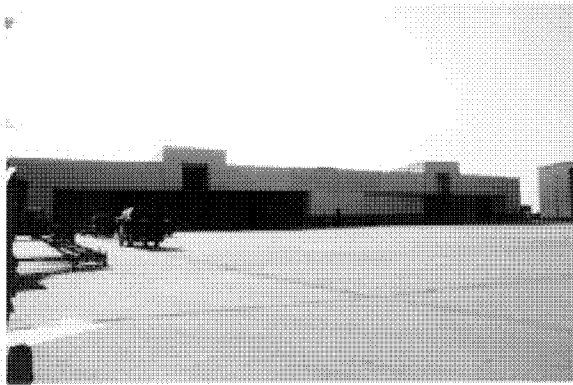
Resource No. 12004, Real Property No. 950
Troop Subsistence Warehouse (Cold Storage)



Resource No. 12005, Real Property No. 1106
Large Aircraft Maintenance Dock



Resource No. 12006, Real Property No. 1107
Large Aircraft Maintenance Dock



Resource No. 12007, Real Property 1176
Fuel Systems Maintenance Dock



Resource No. 12008, Real Property No. 714
Vehicle Maintenance Shop



Resource No. 12009, Real Property No. 951
Animal Clinic



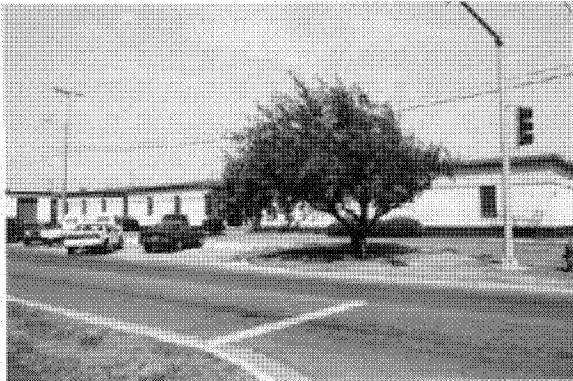
Resource No. 12010, Real Property No. 1094
Flight Simulator Training



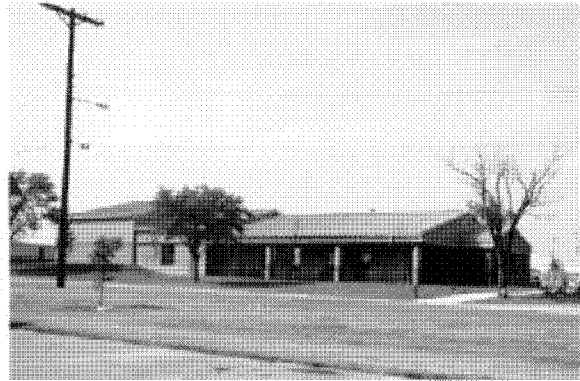
Resource No. 12011, Real Property No. 701
Base Hazardous Storage



Resource No. 12012, Real Property No. 696
Base Engineering Administration



Resource No. 12013, Real Property 695
Base Engineering Administration



Resource No. 12014, Real Property 642
Reserve Forces General Training Support



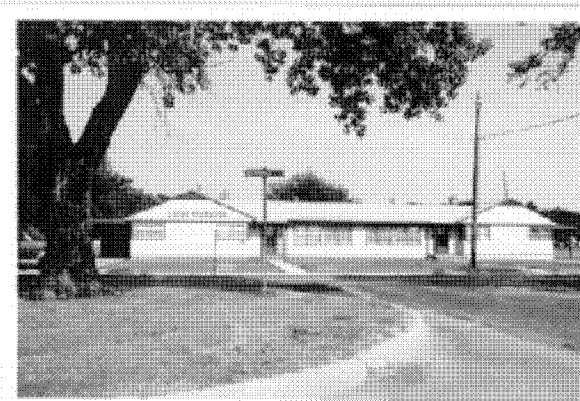
Resource No. 12015, Real Property No. 196
Visiting Officers' Quarters (O1-O10)



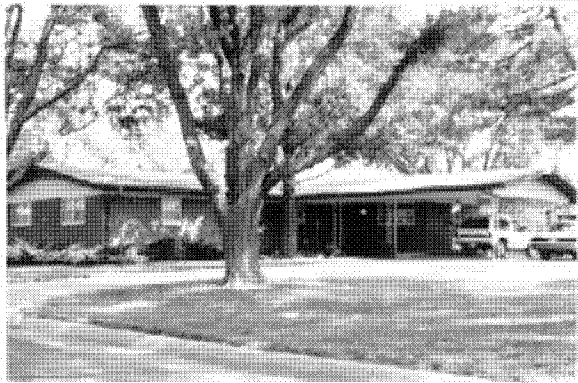
Resource No. 12016, Real Property No. 46082
Memorial Monuments (Memorial Walk)



Resource No. 12017, Real Property No. 193
Transient Lodging Facility - Non Appropriated



Resource No. 12018, Real Property No. 187A/B
Housing Supply and Storage Facility



Resource No. 12019, Real Property No. 183
Family Housing Appropriation FY 50-69
(Commanders' Housing)



Resource No. 12020, Real Property No. 181
Family Housing Appropriation FY 50-69 (Brig.
Gen.'s House)



Resource No. 12021, Real Property No. 185
Visiting Officers' Quarters



Resource No. 12022, Real Property No. 384
Group Headquarters (22nd AREFW HQ)



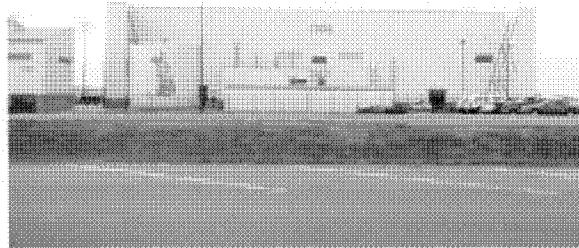
Resource No. 12023, Real Property No. 197
Consolidated Open Mess



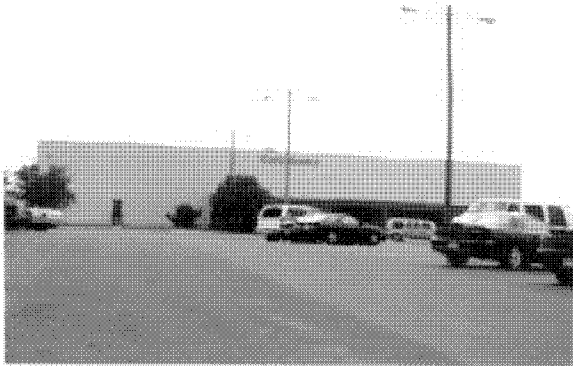
Resource No. 12024, Real Property No. 198
Swimmers' Bath House



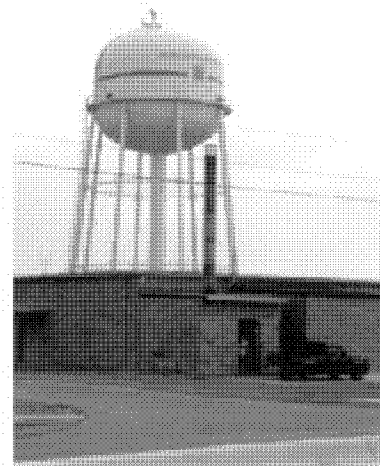
Resource No. 12026, Real Property No. 250
Composite Medical Facility



Resource No. 12027, Real Property No. (none)
Foam Storage Tank



Resource No. 12028, Real Property No. 1090
Base Warehouse, Supply, and Equipment (and
Commissary)



Resource No. 12029, Real Property No. 700
Water Tank Storage



Resource No. 12030, Real Property No. 739
Communications Facility



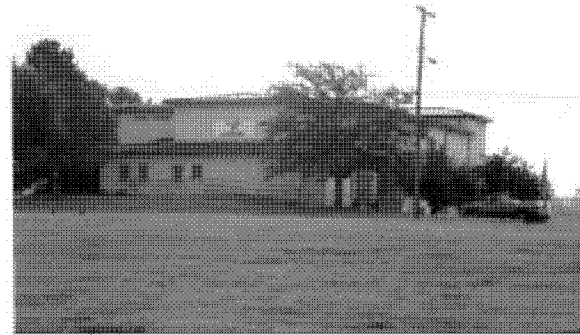
Resource No. 12031, Real Property No. 740
Base Package Store (and Disaster Preparedness)



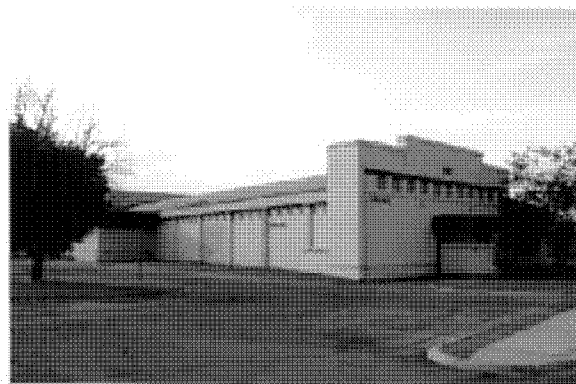
Resource No. 12032, Real Property No. 795
Base Personnel Office



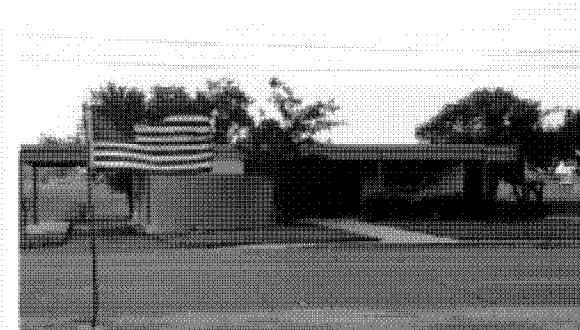
Resource No. 12033, Real Property No. 810
Law Center



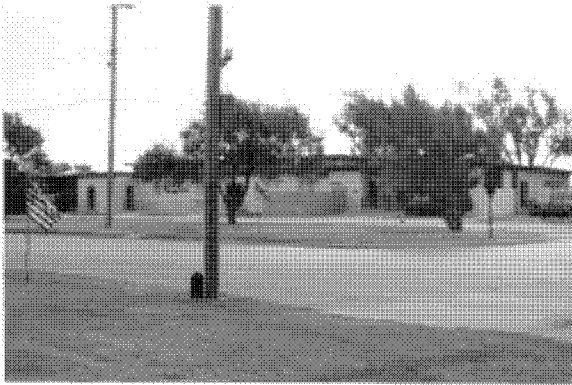
Resource No. 12034, Real Property 520
Base Theater



Resource No. 12035, Real Property No. 804
Recreation Library



Resource No. 12036, Real Property No. 490
Bank IV McConnell



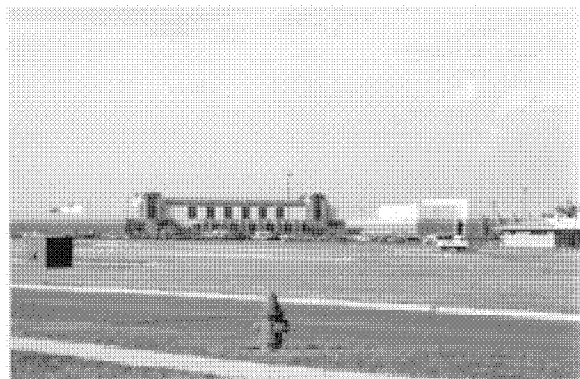
Resource No. 12037, Real Property No. 522
Base Forms and Publications Warehouse



Resource No. 12038, Real Property No. 806
Dental Clinic



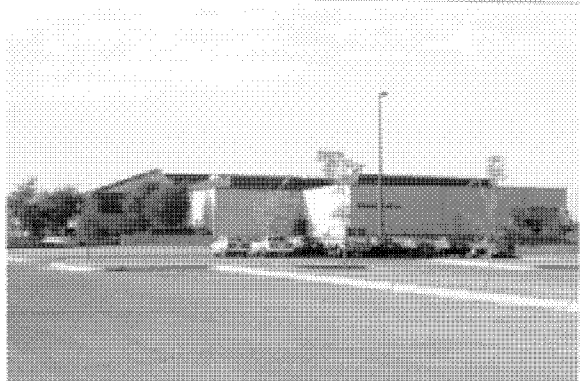
Resource No. 12039, Real Property 338
Child Care Center



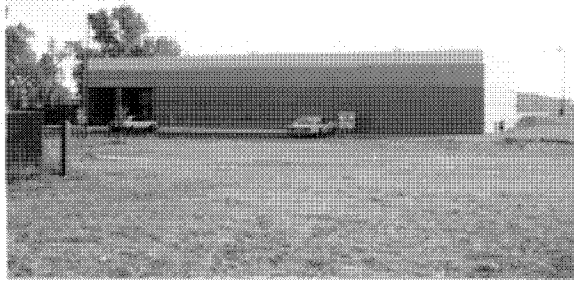
Resource No. 12040, Real Property No. 412
Recreation Center (Emerald City)



Resource Nos. 12041-12043, Real Property Nos.
403, 406, 407, Bath House, Pool, and Pavilion



Resource No. 12044, Real Property No. 408
Airmen's Detached Dining Hall (Chisolm Trail
Inn)



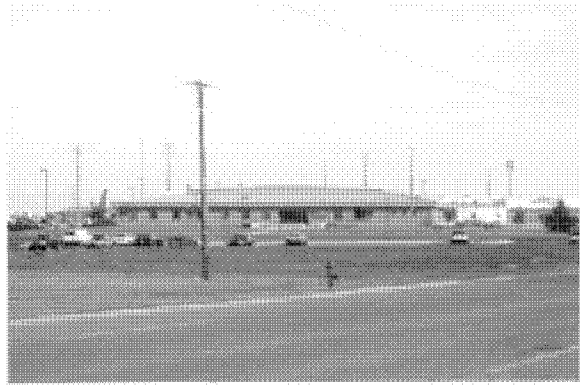
Resource No. 12045, Real Property No. 415
MWR Supply/NAF Storage



Resource No. 12046, Real Property No. 426
POV Washrack



Resource No. 12047, Real Property No. 424
Arts and Crafts Center



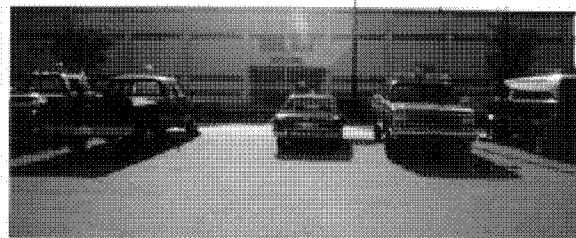
Resource No. 12048, Real Property No. 1115
Security Police Operations



Resource No. 12049, Real Property No. 46015
Obstacle Course



Resource No. 12050, Real Property No. 985
Security Police Entry Control



Resource No. 12052, Real Property No. 978
Crew Readiness (Alert Facility)



Resource No. 12053, Real Property No. 20026
Tanker Alert Apron (Blast Deflector)



Resource No. 12054, Real Property No. 20074
Blast Deflectors - B-1B



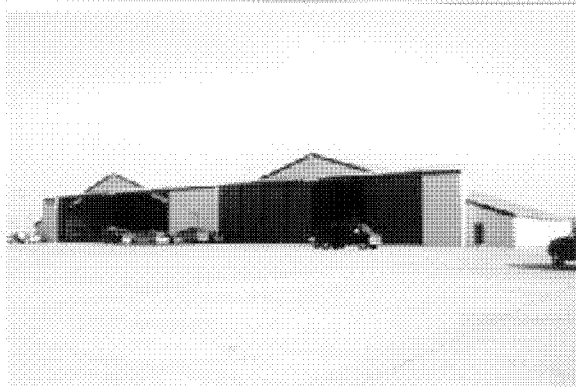
Resource No. 12055, Real Property No. 980
Refueling Vehicle Shop



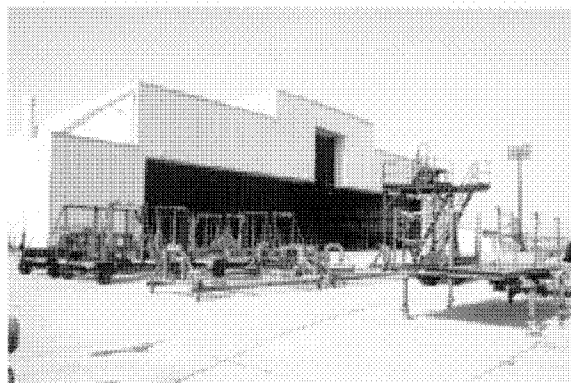
Resource No. 12056, Real Property No. 990
Petroleum Operations Building



Resource No. 12057, Real Property No. 1102
Hydraulic Fluid Building



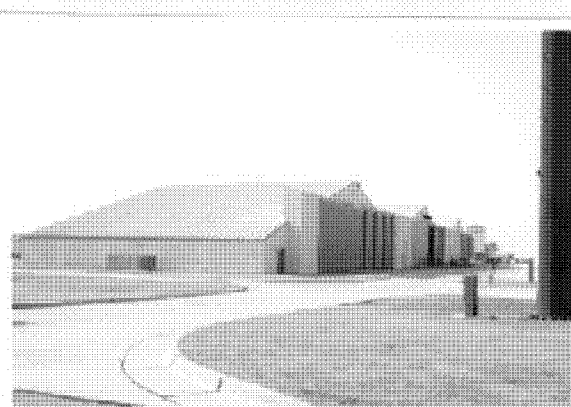
Resource No. 12058, Real Property No. 1128
Weapon and Release System Shop



Resource No. 12059, Real Property No. 1166
Aircraft Corrosion Control



Resource No. 12060, Real Property No. 1105
Inflight Kitchen (Plains Inn)



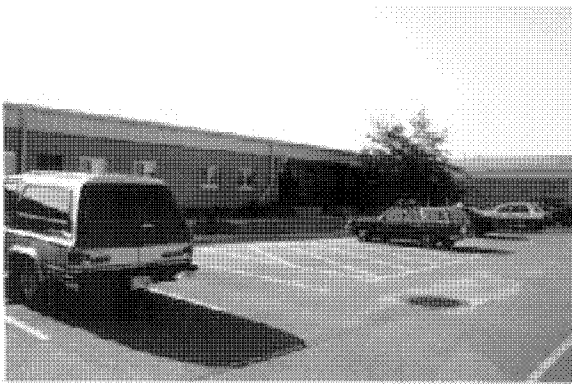
Resource No. 12061, Real Property No. 1111
Base Supply and Equipment Warehouse (note the
chute drying tower)



Resource No. 12062, Real Property No. 1109
Power Check Pad with Suppressor



Resource No. 12063, Real Property No. 1169
Jet Engine Maintenance Shop



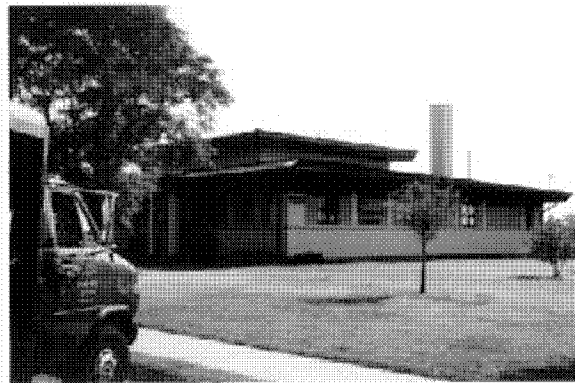
Resource No. 12064, Real Property No. 1170
Avionics Shop (HQ Group, USAF Command
Post, SQ Operations)



Resource No. 12069, Real Property No. 1112
Base Operations



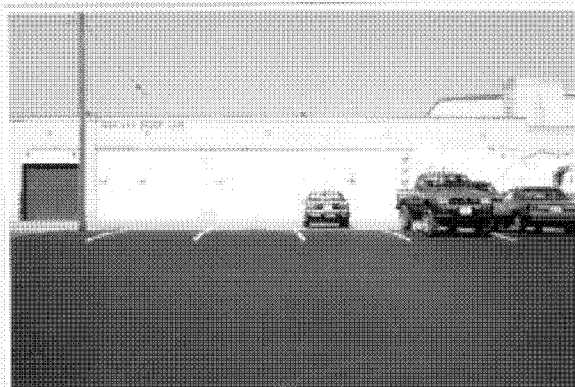
Resource No. 12070, Real Property No. 1201
Fire Station



Resource No. 12071, Real Property No. 1120
Base Photo Lab (VI Lab)



Resource No. 12072, Real Property No. 1218
Heated Parking Vehicle Operations



Resource No. 12073, Real Property No. 1219
Non-Destructive Inspection Shop



Resource No. 12074, Real Property No. 1220
Air Freight/Passenger Terminal



Resource No. 12075, Real Property No. 842
Exchange Service Station



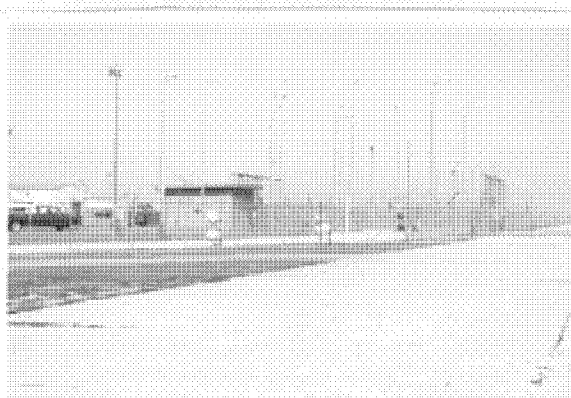
Resource No. 12077, Real Property No. 1375
Integrated Maintenance Facility (Weapons
Storage Area)



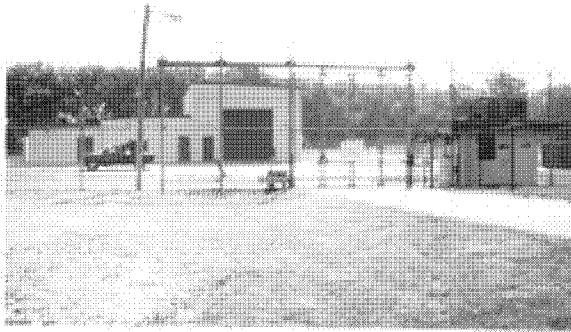
Resource No. 12078, Real Property No. 1376
Storage Igloo (WSA)



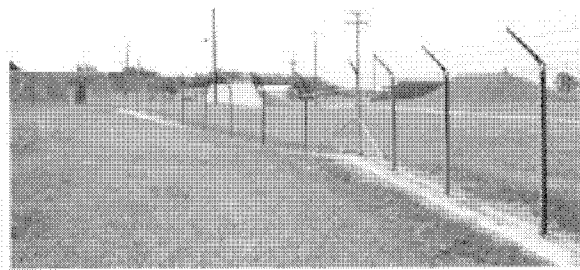
Resource No. 12079, Real Property No. 1396
Aircraft Support Equipment Storage Facility
Shop



Resource No. 12080, Real Property 1391
Security Police Entry Control Building



Resource No. 12082, Real Property No. 1411
Conventional Munitions Shop



Resource Nos. 12083, and 12084, Real Property
Nos. 1401, and 1413, Storage Igloos (WSA)



Resource No. 12086, Real Property No. 9
Weapons and Release Systems Shop



Resource No. 12087, Real Property No. 70
Control Tower



Resource No. 12088, Real Property No. 43
Petroleum Operations Bldg.



Resource No. 12089, Real Property No. 41
Maintenance Hanger (KANG)



Resource Nos. 12090-12092, Real Property Nos. 50, 51, 54, Maintenance Hangers (KANG)



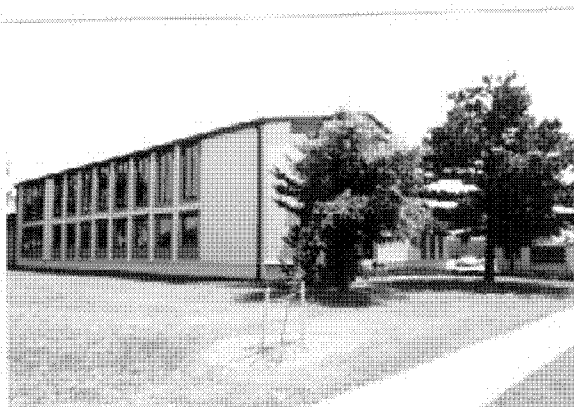
Resource No. 12093, Real Property No. 17
Operational Training Reserve Forces (KANG)



Resource No. 12097, Real Property No. 732
Group Headquarters



Resource No. 12098, Real Property No. 750
Group Headquarters



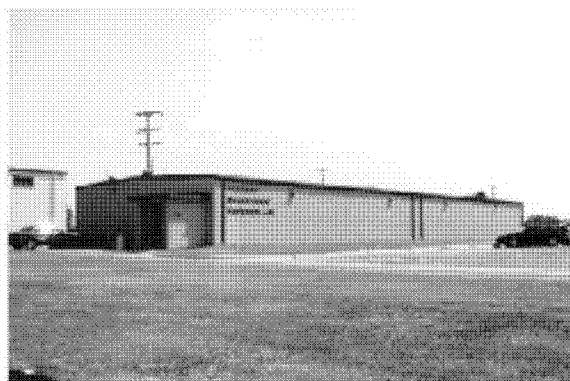
Resource No. 12099, Real Property No. 510
Chapel Center



Resource No. 12100, Real Property No. 710
Vehicle Maintenance Shop



Resource No. 12101, Real Property No. 852
Field Training Facility



Resource No. 12102, Real Property No. 1099
Precision Measurement Lab



Resource No. 12103, Real Property No. 312
Education Center



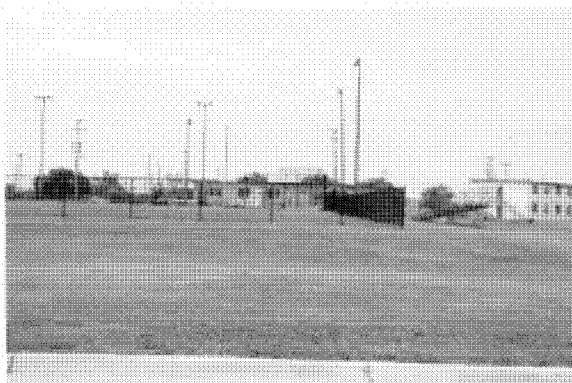
Resource Nos. 12105-12108, Real Property Nos.
317-320, Permanent Party Airmen's Dormitories



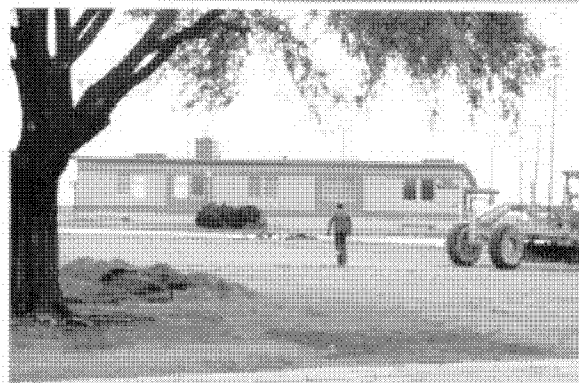
Resource No. 12109, Real Property No. 350
Permanent Party Airmen's Dormitory



Resource Nos. 12110-12114, Real Property Nos. 328-332, Major Command Headquarters, HQ Group, Reserve Forces General Training, and Arts and Crafts Center



Resource No. 12115, Real Property No. (none)
Softball field - recreation



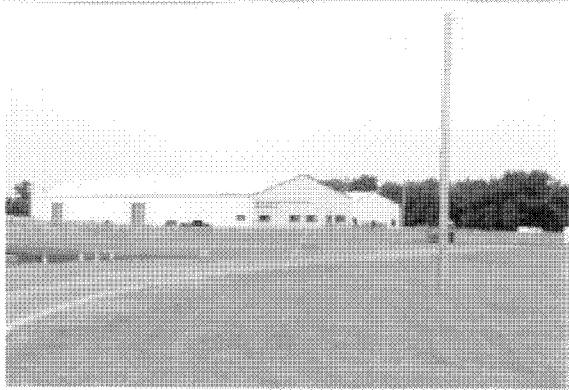
Resource No. 12116, Real Property No. 327
HQ Group



Resource No. 12117, Real Property No. (none)
Tennis Courts



Resource No. 12118, Real Property No. 1336
Golf Clubhouse and Equipment



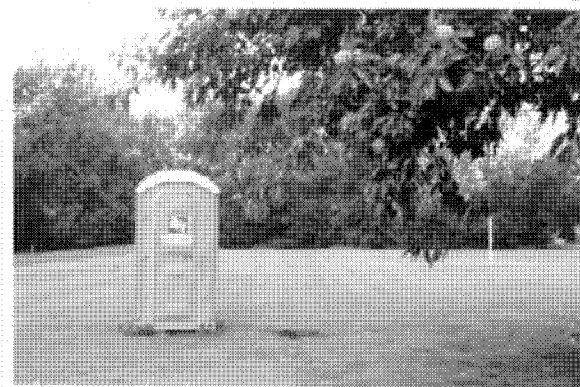
Resource No. 12119, Real Property No. 1349
Base Supply and Equipment Warehouse



Resource No. 12120, Real Property No. 1358
Security Police Canine Kennel



Resource No. 12121, Real Property No. (none)
Re-entry Vehicle Nose Cone Golf Shelter



Resource No. 12122, Real Property No. (none)
Porto Potty



Resource No. 12123, Real Property No. 360
Credit Union



Resource No. 12124, Real Property No. 335
Snack Bar Exchange (Burger King)



Resource No. 12125, Real Property No. 352
Sales Store Exchange (BX)



Resource No. 12126, Real Property No. 515
Data Processing Installation



Resource No. 12127, Real Property No. 176
Guard Shack (Main Gate Entrance)



Resource No. 12128, Real Property No. 173
Security Police Control Inspection



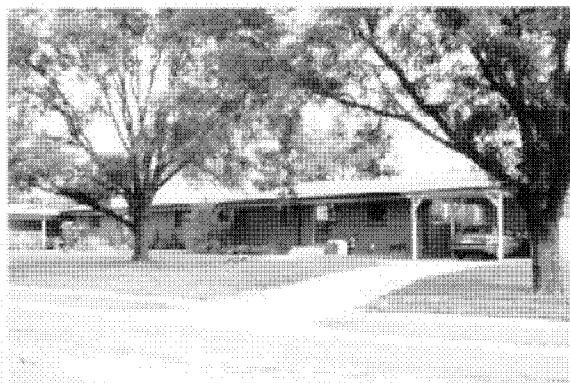
Resource No. 12129, Real Property No. (none)
Entrance Gate Sign (Air Pioneers)



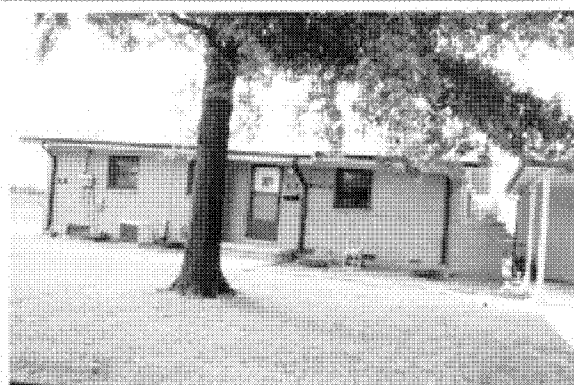
Resource No. 12130, Real Property No. (none)
Entrance Gate Sign (MAFB Welcome)



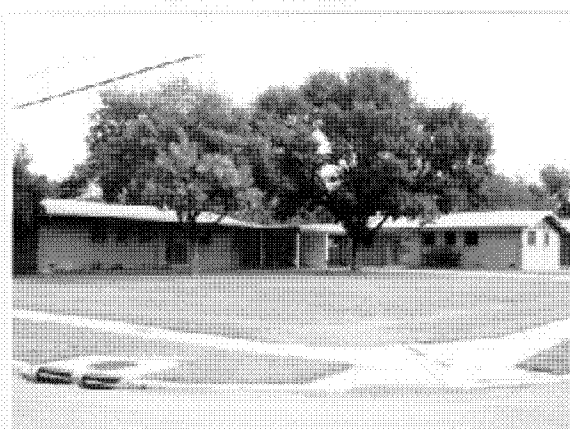
Resource No. 12131, Real Property No. 8217
Capehart Family Housing (8217 Tinker)



Resource No. 12132, Real Property No. 8224
Capehart Family Housing (8224 Tinker)



Resource No. 12133, Real Property No. 3136
Capehart Family Housing (3136 Mitchell)



Resource No. 12134, Real Property No. 2953
Capehart Family Housing (2953 Mitchell)



Resource No. 12135, Real Property No. 2816
Capehart Family Housing (2816 Arnold Court)



Resource Nos. 12136, 12137, Real Property Nos.
2914, 2916, Family Housing Appropriation FY
70A (2914 Spicer Court, 2916 Spicer Court #1)

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

PROPERTY MANAGEMENT

09-Feb-96

Resource Number:	12052
Property Description:	Alert Facility, 2-story, concrete block construction with dry-vit coating. Contains a tunnel, unidentified origination and destination.
Associated Property:	12138, Drawer 59
Non-Inventoried Association:	12050, 12051, 12053
Sub-installation:	
Address:	57708 Mission
Base Map Date:	1/1/94
Base Map Building Number:	978
Operational Support Installations:	
Combat Weapons and Support Systems:	Alert Facilities
Training Facilities:	
Material Development Facilities:	
Intelligence Facilities:	
Property Type:	Bomber/Tanker Alert Facility
Statement of Significance:	Alert Facility which is presently used for tankers instead of bombers - although the B-1B squadrons used it before. The associated apron and blast deflectors are configured for quick egress onto the runway. There are slots for KC-135s and B-1Bs and their blast deflectors. The configuration of the building is not of the "Mole Hole" architecture and therefore, relatively unique.
Cold War Relationship-National Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	18
Comments on Threats:	
No Further Work:	0
Stewardship:	00
National Register Listing:	00
Further Documentation:	00

Preservation/Conservation/Repair: 0

Comments on Resource Management: Exceptionally significant and NRHP eligible.

Importance: Exceptional

Eligibility: Eligible

Height: 20

Square Footage: 25508

Original Planned Duration: Permanent

Existing Use: Crew Readiness

Other Use/Dates: None

Comments on Use: The property report mentions a 170 foot long and 5 foot wide tunnel but does not state its origination or destination.

Primary Building Materials: Concrete Masonry Unit

Character Defining Features: The lack of "mole hole" architectural elements makes it look like a regular building. Security fencing and check point hint toward importance.

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition:

Record/Document Category:

Year of Document:

Period of Association:

Comments on Condition:

Resource Number:	12138
Property Description:	Architectural Files
Associated Property:	12001,12006, 12052,12082
Non-Inventoried Association:	
Sub-installation:	
Address:	52973 Hutchinson
Base Map Date:	1/1/94
Base Map Building Number:	inside 948
Operational Support Installations:	Documentation
Combat Weapons and Support Systems:	
Training Facilities:	
Material Development Facilities:	
Intelligence Facilities:	
Property Type:	Documentary Collection
Statement of Significance:	Supporting architectural files for each significant building on base. Includes unique as built drawings of these facilities and several varieties of aerial photographs of the base.
Cold War Relationship-National Recognition:	3
Theme Relationship:	0
Temporal Phase Relationship:	4
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	14
Comments on Threats:	This set of drawings is not significant on their own but do provide detailed support documentation.
No Further Work:	0
Stewardship:	00
National Register Listing:	0
Further Documentation:	00
Preservation/Conservation/Repair:	00
Comments on Resource Management:	
Importance:	
Eligibility:	
Height:	
Square Footage:	

Original Planned Duration:

Existing Use:

Other Use/Dates:

Comments on Use:

Primary Building Materials:

Character Defining Features:

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition: Being Preserved

Record/Document Category: Architectural Drawing

Year of Document: Various

Period of Association: Various

Comments on Condition: Not being stored in temp/humidity controlled conditions but they are being protected. The collection has been entered into a data base accessible at the site development office.

Resource Number: 12139
Property Description: History Office Archival files and Object Collection
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 57837 Coffeyville
Base Map Date: 1/1/94
Base Map Building Number: inside 384
Operational Support Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence Facilities:
Property Type: Documentary Collection
Statement of Significance: The office archives and collections contain a vast array of newsclippings, scrapbooks, and photos from throughout the base's history. Although not focused on the buildings, the collection may contain unique documents and objects related to people and events at the base. The collection also contains data about the Titan mission at the base, a mission whose physical presence has largely been destroyed.
Cold War Relationship-National Recognition: 3
Theme Relationship: 0
Temporal Phase Relationship: 4
Level of Importance: 2
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 14
Comments on Threats: These files and objects are not significant by themselves but gain significance if interpreted as a larger whole.
No Further Work: 0
Stewardship: 00
National Register Listing: 0
Further Documentation: 00
Preservation/Conservation/Repair: 00
Comments on Resource Management: Some of the collections are currently stored in a closet. It is planned that these materials will be inventoried and appropriately stored in the near

future. The Air Force should support such an effort. The collection would provide an array of interesting things to contribute to displays or an exhibit.

Importance:

Eligibility:

Height:

Square Footage:

Original Planned Duration:

Existing Use:

Other Use/Dates:

Comments on Use:

Primary Building Materials:

Character Defining Features:

Comments on Architecture:

Site Function:

Present Site Function:

Year of Association:

Associated Event/Activity:

Physical Remains/Features:

Changes to the Resource:

Object Category:

Construction Materials of Object:

Year of Manufacture:

Object Condition: Being Preserved

Record/Document Category: Various reports, letters, photos, news clippings

Year of Document: Various

Period of Association: Various

Comments on Condition: Collections need to be accessioned.

**APPENDIX E:
ADDITIONAL RESOURCES**

**CONTENTS OF RESOURCE NO. 12138, DOCUMENTARY COLLECTION,
LOCATED IN REAL PROPERTY NO. 948**

- Drawer 45 - Mylar, linen drawings, record "As Builts", specific project detail drawings of facility, system, fences, security, roads, etc. for building No. 1411.
- Drawer 52 - Plans and detail drawings on vellum and mylar, 1951, and various subsequent renovations of building No. 1112.
- Drawers 53/54 - Hangar plans and drawings; project specific record drawings, mylar, sepia; ballistic missile requirements for Missile Assembly and Maintenance Shop; drawings from Corps of Engineers BMCO.
- Drawer 59 - Mylar record and specific detail drawings of building No. 978.
- Drawer 61 - Miscellaneous - 1980s charts/tables/signs, etc. and additional documents.
- Drawer 63 - Aerial photographs:
1953 - aerial photograph of the base
1955 - 8"x 8" prints, various unidentified construction photos
1963 - aerial photograph of the base
n.d. - Hutchinson Naval Air Station
- Drawer 74 - Base Roads, 1979 and earlier; road plans leading to Titan missile sites; 1979 paper and vellum and mylar.
1958 building layout - addition to parking lot no. 75.
- Drawer 75 - "Old Runway" - 1950s and 1960s vellum and mylars of runway details, lights, drains, etc.
- Drawer 80 - POL - 1969 and earlier; early base maps from 1950s and 1960s.
-

Drawer 85 -	"Original Base layout" "Vicinity Layout" ICBM sites 1970s-1980s; 1951 base map set in Air National Guard area; 1953 base map
Drawer 86 -	Wichita Airport/KANG; Wichita Airport 1943/1944 detailed drawings; 1950s Boeing Plant.
Drawer 109 -	Building No. 1107 As Builts 1986-1990; detailed drawings and "record drawings".
Drawer 136/137 -	Master Plans, TABS 1990s, 1984, 1988

**CONTENTS OF RESOURCE NO. 12139, DOCUMENTARY COLLECTION,
LOCATED IN REAL PROPERTY NO. 384**

Titan Missile files - Unclassified documents located in Files 1 and 2. They include 11 x 14 inch laminated b/w photos of each Titan missile launch site complex and county maps.

3-ring binders:

#1 - Development of the Titan II launch site Dec. 1960-May 1961

#2 - Development of the Titan II launch site June 1961-Feb 1962

#3 - Newspaper clippings - Oxidizer Spill at 533-07 near Rock, Kansas - one death

Titan Deactivation Fact Sheet and KC-135R and B-1B information

Aerial photographs on the wall, 195? and 1978

File Drawers - McConnell Air Force Base History,

McConnell Air Force Base Guides,

Key Personnel,

Facilities, and

Construction.

Photos - Dedication, 1954, in a binder "McConnell Brothers and Cemetery Photos" news clippings also.

McConnell Air Force Base histories 1980, 1986 - photographs and negatives

McConnell Air Force Base Guides 1957 - 1993

Personnel photographs and rosters 1970s - 1990s

Base Commander photographs and biographies

Facilities - Various information files on dedication, ground breaking, color aerials of various buildings, Chapel dedication and news clippings, etc.

Many buildings have separate files with photographs and/or documents.

Various Base Project Documents - Space Use Analysis/Restoration projects

Comprehensive Plan, Facility planning 1984.

National Register Nomination Forms and correspondence for Building Nos. 1 and 9.

Economic Impact Resource Statements 1980s-90s

File Cabinet:

Bottom Drawer - Aircraft photos, literature, various plans, news clippings, awards and miscellaneous papers.

Middle Drawer - TAC to SAC transfer 1972;
distinguished visitors;
old wing histories, information, etc., and
ceremonies.

2nd from top drawer - Lineage and honors files, IG Inspections, exercises.

Top Drawer - Titan deactivation slides, facility slides, ca. 600, videos, etc.

Storage Room:

"Contrails" to "Sweepback" to 1952

22nd ARW prior Commanders from March AFB.

Maps - 1955 Master Plan map, air photos

1951 Base expansion map - hand colored 1950s and Anniversary poster

Assorted banners, sashes, and 384th Bomb Wing Flags

Assorted movie reels

Scrap books - 1953-57

1957-92

553rd SMS - 1982-1985

History of McConnell AFB 1950s

2 large boxes of patches, pins and assorted insignia

Film reels "Instant Airpower" by KTVH TV12, "The Construction of McConnell AFB 1963-1964,"

"The Workplace Hustle,"

"The Story of MAFB, the New B-52,"

"The Winning of France," and

"The Japanese Perimeter."

Drawings and paintings of aircraft.

A Thank You Award Certificate to 384th from NEACP for their assistance in 1983.

EXISTING RESOURCES NOT INVENTORIED BY THIS STUDY

The following is a list of historically significant items located at McConnell AFB. TSgt D.E. Wheaton concluded this survey on March 23, 1994. It involved all units assigned to the 22nd ARW and the 384th BG.

22nd ARW Headquarters, Building No. 384

World War II Army Air Forces uniform and service cap

1941 helmet and leather jacket

Portrait of an air-to-air refueling entitled "22 AREFW, KC-10, First Flight" signed by General Curtis LeMay

Four-volume hardbound set of the first base newspaper, Sweepback (1951-1954)

Current wing flag

22nd Operations Group

384th ARS

KC-135 full scale boom

KC-135A model (1/27 scale)

Mural: Wichita, USA map including list of past 384th ARS commanders

Saunders Trophies (1977, 1980, 1989) - bombing and navigation competition

Coconut trophy of a tiger (presented to the unit during the Gulf War)

Squadron guidon

1959 photo of the 384th ARS

Desert Storm flag of the 384th AFS

Squadron scrapbook (1959-1991)

349th ARS

Squadron guidon

22nd Operation Support Squadron

Squadron guidon

Aircraft photo collection

The 22nd Medical Group, 22nd Logistics Group, and the 22nd Support Group have guidons as their only historical items.

384th BG

Hardbound book "As Briefed...Keep the Show on the Road" (a history of the 384th BG- copyright 1946)

15th Air Force Riverside Trophy (1989) - best operation readiness inspection in 15th Air Force

Saunders Trophy (1989)- bombing and navigation competition

George C. Kenney Trophy (1989) - best operation readiness inspection in SAC

Individualized wall plaques depicting all previous 384th commanders at McConnell AFB

Actual B-17 bomb fuse cap and turret gunner's control handle

Group flag

Eulogy To A Silo Queen - an anonymous poem found in a 1950s scrapbook.

APPENDIX F:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the Mariah field team to help identify Cold War material culture extant on McConnell AFB and to provide research materials for this study:

Mr. Jay Zimmerman (POC)
Cultural/Natural Resource Officer
22nd CES/CERR
53000 Hutchinson St. Ste. 109
McConnell AFB, KS 672221-3617
(316)652-3889
(316)652-4344 (FAX)

MSgt Allen
Site Development Office
22nd CES/CEE
53000 Hutchinson St.
McConnell AFB, KS 67221-3617
(316)652-6144

Mrs. Sandy Kurt
Real Property Office
22nd CES/CERR
53000 Hutchinson St.
McConnell AFB, KS 67221-3617
(316)652-3925

TSgt Daniel E. Wheaton
History Office
22nd ARW/HO
57837 Coffeyville St. Bldg. No. 384
McConnell AFB, KS 67221-3504
(316)652-3105

Capt. Cox
Public Affairs Division
22nd ARW/PA
57837 Coffeyville St. Suite 240
McConnell AFB, KS 67221-3504
(316)652-3141

Sgt James/Sgt Pontow
Facility Security Office
22nd SPS/CCE
54403 Kansas St. Suite 147
McConnell AFB, KS 67221-3716
(316)652-3977

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of McConnell AFB history and Cold War context.

Mr. Jay Zimmerman (POC), Cultural/Natural Resource Officer, August 16 - 20, 1994

KNOWLEDGEABLE INDIVIDUALS

The following individuals were identified during the investigations as people with some knowledge of McConnell AFB history during the Cold War. They were either unavailable during the field investigation, or possess much more information than could be documented during this preliminary reconnaissance.

Paul Levy, SABRE/Contracts

Jim Condin, 22nd CES

Jerry Tibbs, 22nd CES

Don Winton, 22nd CES/Water Shop

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-19: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT MINOT AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**R. Blake Roxlau
Karen Lewis
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Minot Air Force Base was inventoried by Karen Lewis and R. Blake Roxlau of Mariah Associates, Inc., between July 5 and July 14, 1994 as part of the Air Combat Command Cold War Study for the ongoing Department of Defense Legacy Program. Information was gathered at the base from the Wing Historian, the Drawing Room staff, and the Civil Engineering, Real Property, and Public Affairs offices. On-site inspections were also conducted. During this research, 98 resources were inventoried and photographed. Of these, nine resources were further documented and evaluated during the course of the survey as important to the Cold War. These include three alert facilities, three sets of architectural drawings, a collection of historic objects, a missile silo replica, and a radar site.

Recommendations for the nine evaluated resources vary. The Bomber Alert Facility, Fighter Alert Facility, Semi-Automatic Ground Environment Facility, and Missile Launch Facility Trainer are all evaluated as eligible to the National Register of Historic Places, with stewardship and further documentation also recommended. The Tanker Alert Facility is recommended as potentially eligible to the National Register, with stewardship and further documentation also recommended. The three sets of Architectural Drawing Files are recommended for further documentation, stewardship, and conservation. Finally, the Museum Collection is recommended for further documentation and stewardship.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
AFB	- Air Force Base
AGE	- Air Ground Equipment
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
BMS	- Bombardment Squadron
BMW	- Bombardment Wing
BW	- Bomb Wing
DoD	- Department of Defense
FIS	- Fighter Interceptor Squadron
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
LCF	- Launch Control Facility
LF	- Launch Facility
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MIRV	- Multiple Independently-Targetable Reentry Vehicle
MMS	- Munitions Maintenance Squadron
MRE	- Meals Ready to Eat
NCO	- Non-Commissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center
SAC	- Strategic Air Command
SAGE	- Semi-Automatic Ground Environment
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SMW	- Strategic Missile Wing
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
USAF	- United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Gaither Report - a report concerning the development of the Cold War produced by the Gaither Committee in 1957. It predicted an increase in the arms race and continued escalation of the Cold War. It recommended a drastic increase in military spending and initiation of a multibillion-dollar civil defense system. It also echoed the Killian Report in recommending the dispersal of the bomber force to increase survivability.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

GLOSSARY (Continued)

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	12
3.1 BASE HISTORY AND COLD WAR CONTEXT	12
3.2 BASE DEVELOPMENT	16
4.0 METHODOLOGY	22
4.1 INVENTORY	22
4.2 EVALUATION OF IMPORTANT RESOURCES	23
4.2.1 Documentation	23
4.2.2 Evaluation of Importance	23
4.2.2.1 Cold War Context	23
4.2.2.2 NRHP Criteria	24
4.2.2.3 Exceptional Importance	25
4.2.3 Evaluation of Integrity	25
4.2.4 Priority Matrix	26
4.2.5 Resource Organization	27
4.3 BASE SPECIFIC METHODS	27
5.0 RECONNAISSANCE INVENTORY RESULTS	28
6.0 EVALUATION RESULTS	29
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	29
6.1.1 Documentation	29
6.1.1.1 Architectural Drawing Files	29
6.1.2 Memorial	32
6.1.2.1 Museum Collection	32

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	34
6.2.1 Alert Facilities	34
6.2.1.1 Fighter Alert Facility	34
6.2.1.2 Bomber Alert Facility	35
6.2.1.3 Tanker Alert Facility	36
6.2.2 Communications	37
6.2.2.1 SAGE Facility	37
6.2.3 Documentation	38
6.2.3.1 Architectural Drawing Files	38
6.2.3.2 Architectural Drawing Files	38
6.3 MATERIEL DEVELOPMENT FACILITIES	39
6.4 TRAINING FACILITIES	39
6.4.1 Missile Training	39
6.4.1.1 Missile Launch Facility Trainer	39
6.5 INTELLIGENCE FACILITIES	40
7.0 UNDOCUMENTED RESOURCES	41
8.0 FUTURE THREATS TO RESOURCES	42
9.0 PRELIMINARY RECOMMENDATIONS	43
9.1 NRHP ELIGIBILITY	43
9.1.1 Evaluation and Determination of NRHP Eligibility	43
9.1.2 Implications of NRHP Eligibility	45
9.2 EVALUATED RESOURCE RECOMMENDATIONS	47
9.2.1 Architectural Drawing Files	47
9.2.2 Museum Collection	49
9.2.3 Fighter Alert Facility	49
9.2.4 Bomber Alert Facility	49
9.2.5 Tanker Alert Facility	50
9.2.6 SAGE Facility	50
9.2.7 Architectural Drawing Files	50
9.2.8 Architectural Drawing Files	51
9.2.9 Missile Launch Facility Trainer	51
10.0 REFERENCES CITED	52

TABLE OF CONTENTS (Continued)

APPENDIX A: RECONNAISSANCE INVENTORY

APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES

APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

APPENDIX E: EXTANT SOURCES OF INFORMATION

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Minot Air Force Base.....	5
Figure 2.2 Standard Strategic Air Command Base Layout	7
Figure 2.3 Minot Air Force Base Land Use Diagram.....	9
Figure 2.4 Standard Strategic Air Command Base Land Use Diagram.....	10
Figure 3.1 Minot Air Force Base, 1950-1960.....	17
Figure 3.2 Minot Air Force Base, 1960-1970.....	18
Figure 3.3 Minot Air Force Base, 1970-1980.....	20
Figure 3.4 Minot Air Force Base, 1980-present	21

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	30
Table 6.2 Evaluated Resource Prioritization by Priority Rank	31
Table 9.1 Recommendations for Evaluated Resources	48

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

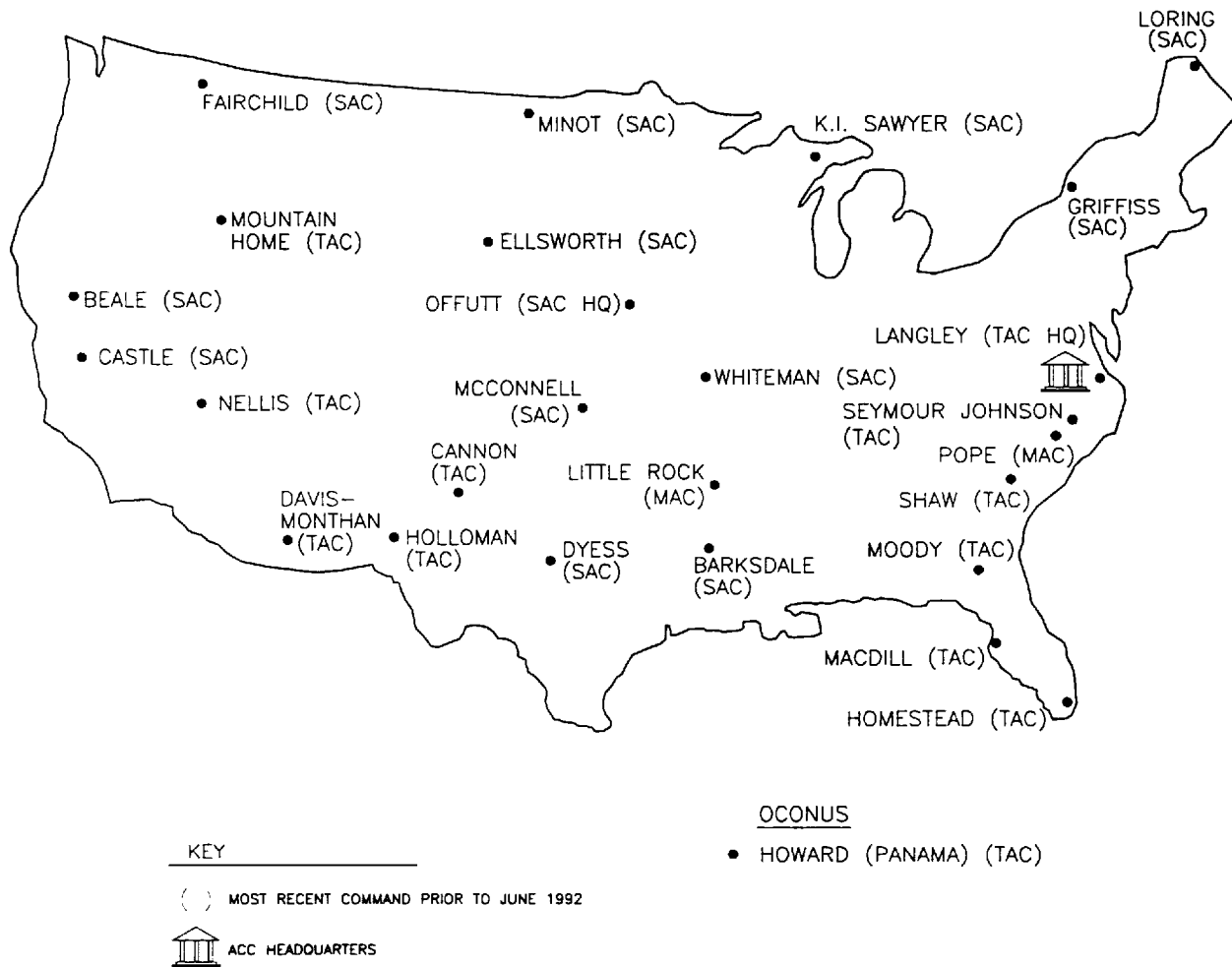
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: MINOT\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Minot Air Force Base (AFB). Minot AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Tenants at Minot AFB currently consist of the 5th Bomb Wing (BW) and the 91st Missile Group. The 5th BW is the base host which directs the 5th Operations Group, 5th Logistics Group, 5th Support Group, 5th Medical Group, and the 5th Comptroller Squadron. The 5th BW uses the Offensive Avionics System modified B-52H *Stratofortress* to achieve its mission, "ready to deliver massive firepower worldwide, on time, on target, every time" (United States Air Force [USAF] 1993a).

The 91st Missile Group is currently responsible for 150 Minuteman III missile silos, situated on more than 8,000 acres of public land surrounding the base. The 91st Missile Group was reassigned from the 91st Missile Wing to the 91st Missile Group in July of 1994. The future of the missiles, the 91st Group, and their mission is somewhat undefined, but the mission statement at this time is, "A professional team; maintaining safe, secure intercontinental ballistic missiles on alert; ready to immediately launch bombs on target" (USAF 1993b). Although there are two distinct units on base, the 5th BW and the 91st Missile Group, the base itself has a motto which unifies those stationed at Minot AFB: "Only the Best Come North."

2.2 GEOGRAPHIC DESCRIPTION

Minot AFB is located approximately 13 mi (20.9 km) north of Minot, North Dakota (Figure 2.1). The city of Minot has a population of 35,000 and is economically reliant on agricultural and retail industries. The area is located in the rolling grassy plains of north-central North Dakota, and the base is surrounded by farming and ranching land. The city of Minot itself is located in the Souris River Valley with the Souris River running through the city.

NORTH DAKOTA

PROJECT LOCATION

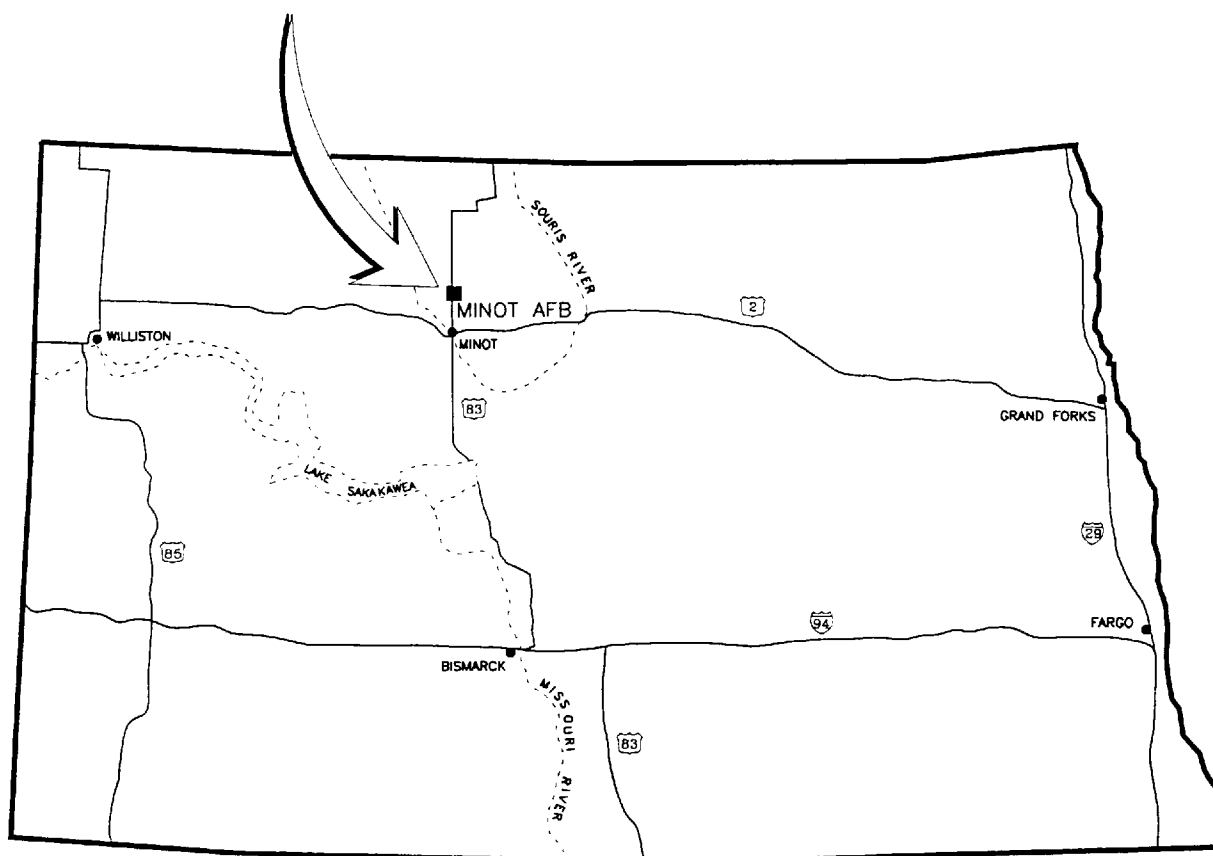


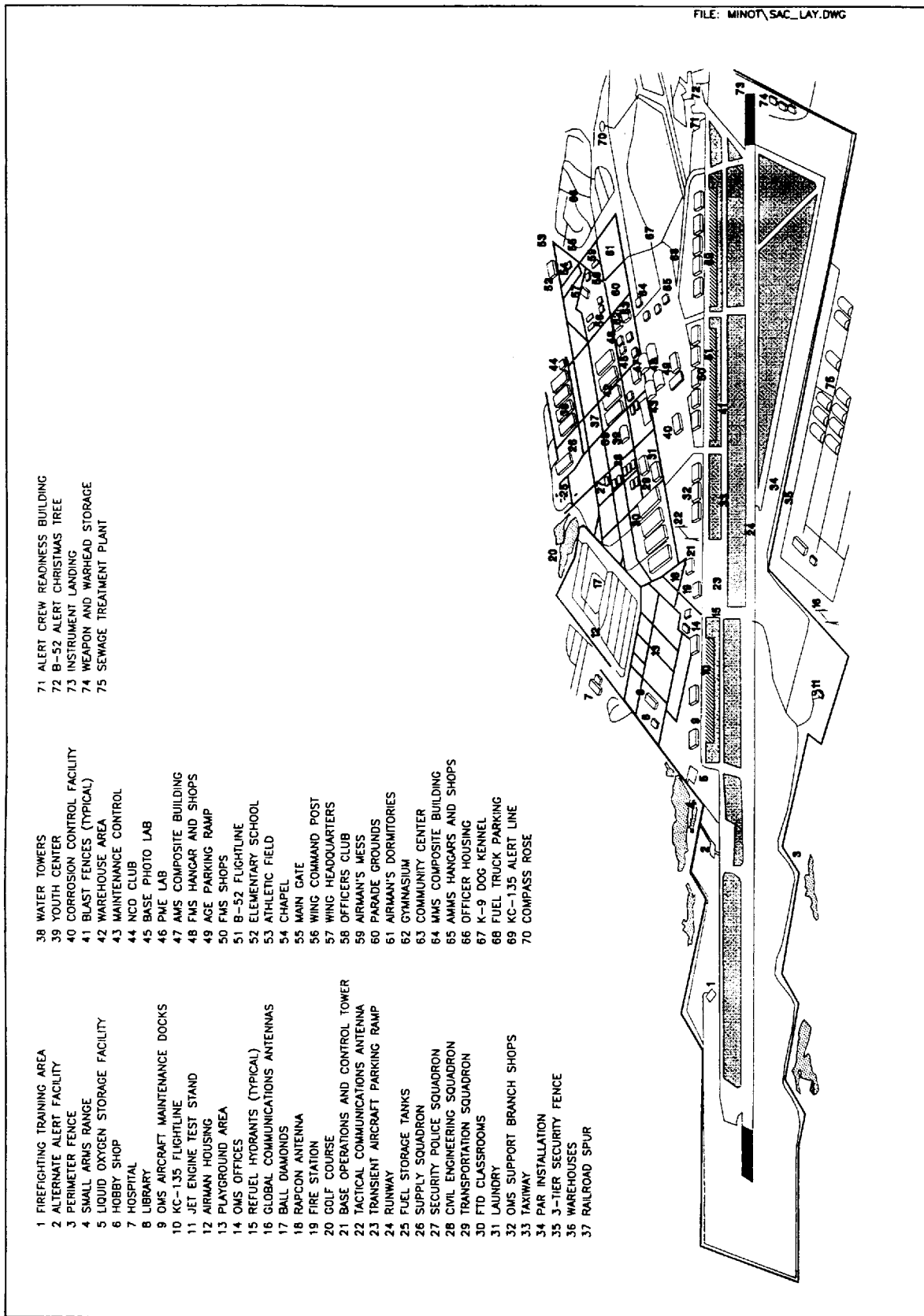
Figure 2.1 Location of Minot Air Force Base.

2.3 CURRENT BASE LAYOUT

The layout of the buildings and facilities at Minot AFB is similar to that of the standard SAC layout (Figure 2.2). The base runway and aprons are oriented northwest/southeast. The flight line forms the southwestern edge of the base, with most buildings and facilities located to the northeast of the flight line. The buildings closest to the flight line are mission-related and base support facilities. Community and administrative buildings and unaccompanied housing are centrally located, separating the mission area from the accompanied housing area to the east. The bomber, tanker, and fighter alert areas are located at the southeastern end of the runway. The location of the alert areas is similar to the standard SAC plan; however, the inclusion of a fighter alert facility and a tanker alert "christmas tree" runway is different.

There are two separate buildings for the Wing Command Post and the Wing Headquarters. The weapons storage area is located to the east of the runway. The flight line is secured by barbed wire, metal fences, and guard check points, which are currently unmanned. Throughout the base, alert klaxons or sirens and yellow lights are mounted on telephone poles, approximately 8 ft (2.4 m) from grade. Minot AFB practices alert on a quarterly basis and continues to test the klaxons throughout the year.

The original base operations building is located on the northeastern side of the runway; the new tower is a lone structure on the southwestern side of the runway. Located within the housing area are two elementary schools and numerous small parks; the housing area is one of the largest in the country. The main gate is located on the eastern side of the base, and the entrance road runs through an open space along the housing area, passing by static displays of aircraft and missiles of importance to the history of the base. The displays include Minuteman II and Hound Dog missiles, a T-33 jet trainer, and an F-102 *Delta Dagger* interceptor.



2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - provide for air combat readiness and rapid deployment of aircrews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.3 is a diagrammatic land use plan of Minot AFB and Figure 2.4 is a diagrammatic land use plan of a standard SAC base. Minot AFB's land use pattern is generally the same as that of a standard SAC base. In both plans, most of the buildings are located on one side of the flight line.

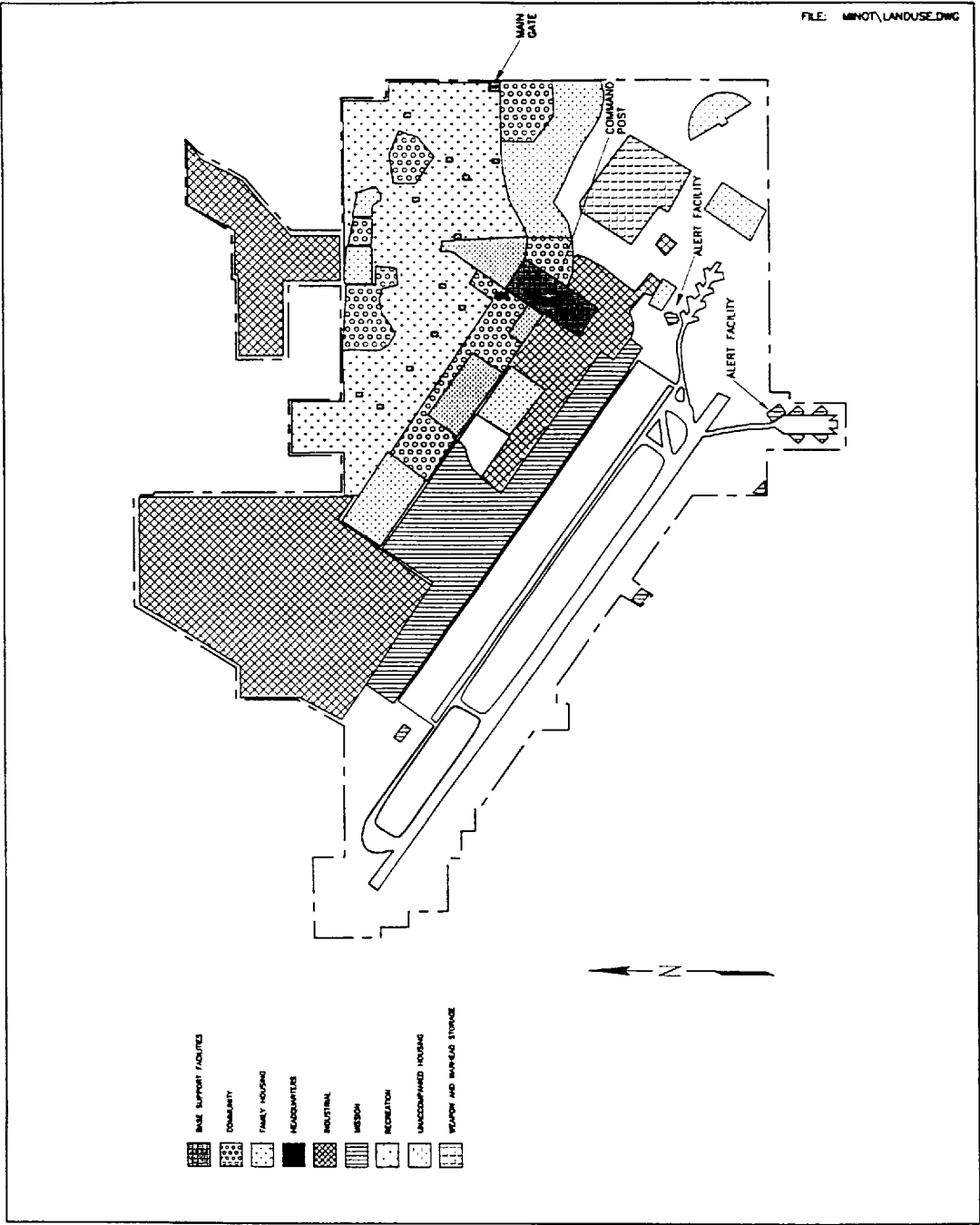


Figure 2.3 Minot Air Force Base Land Use Diagram.

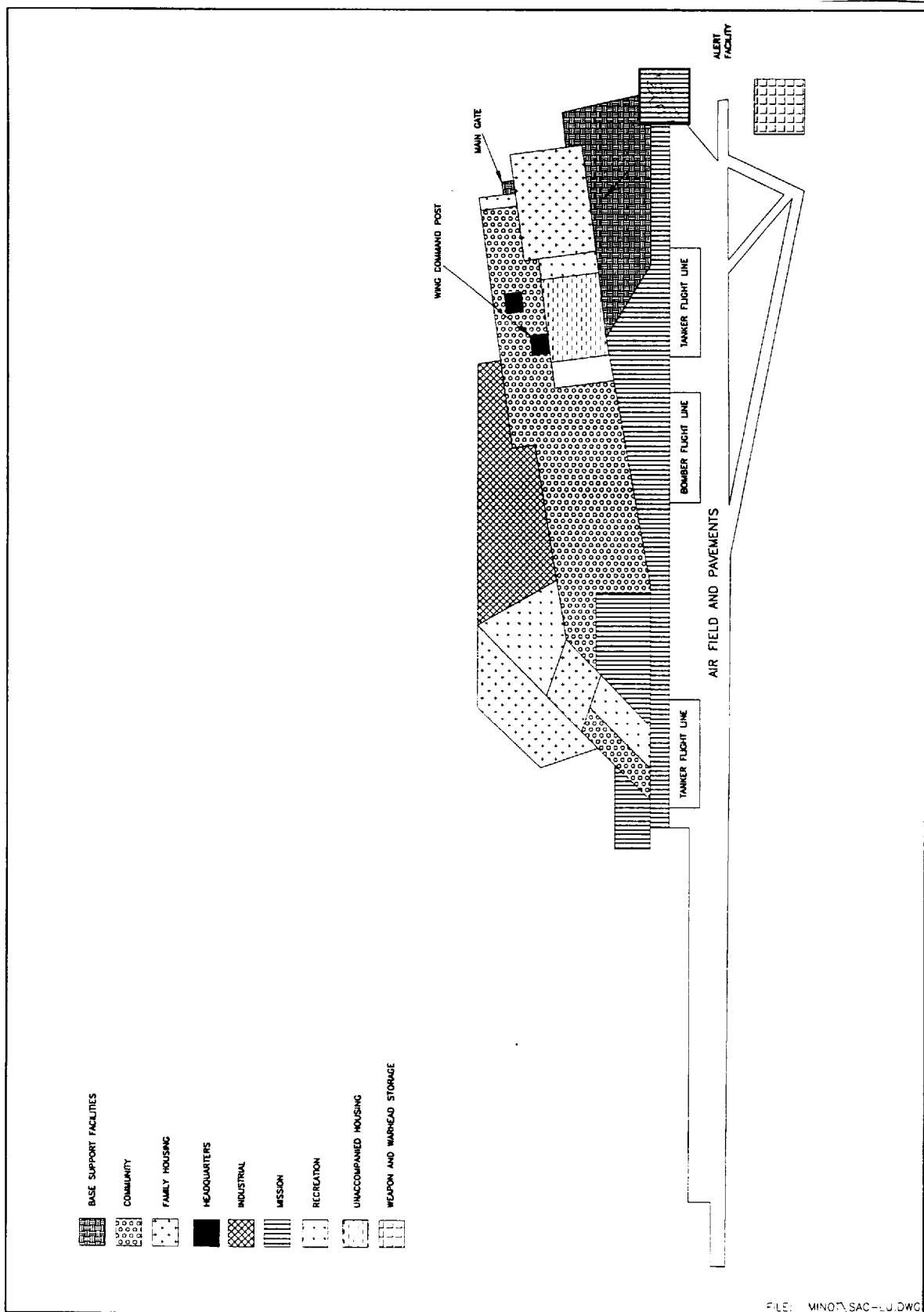


Figure 2.4 Standard Strategic Air Command Base Land Use Diagram.

Headquarters are located near the center of the base, away from the flight line. Community areas are centrally located on both plans and provide a buffer between mission/support areas and housing areas which are located at a distance from the flight line area. Recreational areas are situated in and around the housing areas.

The Minot AFB and standard SAC plans differ in that Minot AFB has a Tanker Alert Facility with its own "christmas tree" alert apron. The standard plan shows no Tanker Alert Facility. Also, no parade grounds are present at Minot AFB, but are found on the SAC plan.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Minot AFB was conceived as an interceptor base to counter the threat of Soviet trans-polar bomber attack and to improve the United States capability to detect incoming attack and to defend the nation.

The original realization of a potential bomber threat was based on the 1953 detonation of a Soviet hydrogen device and the subsequent Killian Report or Surprise Attack Study which was presented to the National Security Council in March of 1954 (Lewis et al. 1995). The report noted that in spite of the U.S. advantage in nuclear strike capability, the nation was vulnerable to surprise attack as a result of poor air defense, lack of early warning systems, and an increasing Soviet long-range bomber force.

To remedy the situation, a defense network including early warning devices and interceptor aircraft was planned for the northern United States. Several cities along the northern frontier were considered as interceptor bases. Due to its location near the Canadian border, good topography, and the availability of inexpensive land in a sparsely populated area, Minot, North Dakota, was chosen in 1954 as the location for one of the required bases (Nolan 1990). Minot was chosen over the city of Bismarck, an early tentative selection. The citizens of Minot raised money to purchase the land for the air base and welcomed the USAF with open arms (Nolan 1990).

Construction began in 1956, and Minot AFB was activated in January of 1957 as an Air Defense Command (ADC) base (USAF 1991). The 32nd Fighter Group was activated on February 7, 1957, along with its component squadrons, the 32nd Materiel Squadron and the 32nd Air Base Squadron (Reeves 1980). The 4136th Strategic Wing was also activated at this time as a SAC tenant of ADC. The wing's mission at Minot AFB was to fly KC-135 *Stratotanker*

refueling aircraft, which arrived 1959, in support of northern air defense operations (USAF 1991). The 5th Fighter Interceptor Squadron (FIS), equipped with 18 F-106 *Delta Dart* supersonic interceptors, arrived at Minot AFB on February 1, 1960. The 5th FIS was responsible for patrol and defense of the Minot Air Defense Sector, one of several north-south corridors along the northern U.S.-Canadian border.

The defense of Minot AFB's sector was facilitated by the Semi-Automatic Ground Environment (SAGE) system (Lewis et al. 1995; Reeves 1980; Schaffel 1991). The SAGE system was spread across the northern United States and Canada at various air force bases. Each SAGE location included a blast-resistant, windowless SAGE building that housed two large IBM computers and an array of radar and communications equipment. The computers cycled information received from early warning devices in Canada to the interceptor force. The computers calculated the elevation, speed, and distance of incoming targets, then figured the most efficient intercept route and relayed that information to fighters in its sector. The SAGE complex at Minot AFB was activated in June 1961. It was then realized that locating interceptor aircraft and control facilities together offered an inviting target (Reeves 1980). To remedy this problem, Minot AFB's SAGE complex was deactivated in 1963 and SAGE sector responsibilities were shifted to Great Falls AFB, Montana. However, the fighter interceptor aircraft remained at Minot AFB.

Minot AFB's role primarily as a fighter interceptor base was to be short-lived. The Soviet Union's development of the *Bear* and *Bison* bombers led to a fear of a "bomber gap" between the United States and U.S.S.R. (Goldberg 1957). This resulted in a call for the production of more U.S. long-range bombers. In 1957, the Gaither Report claimed the Soviet Union could possess a first-strike capability against the United States as early as 1959 (Lewis et al. 1995). The Gaither Report recommended that bombers be dispersed to numerous bases to help ensure that a substantial portion of the strategic bomber and tanker force would survive a Soviet first strike. Minot AFB was one of the bases chosen to carry out this military strategy of dispersal (Lewis et al. 1995; Reeves 1980).

The fact that Minot AFB was located in northern the United States and provided a relatively short attack route to the Soviet Union contributed to the decision.

On July 1, 1962, Minot AFB was reassigned from ADC to SAC (Reeves 1980; USAF 1991). The 525th Bombardment Squadron (BMS), flying late-model B-52Hs, had been activated at the base in March 1961, within the 4136th Strategic Wing (Reeves 1980; USAF 1991). Strategic forces in the form of KC-135 tankers of the 4136th Strategic Wing were already stationed at Minot AFB. The 5th FIS remained as a tenant of SAC.

The 1956 launches of the Soviet Union's Sputnik I and II satellites demonstrated that the Soviets now had the capability to hit the United States with a ballistic missile (Lewis et al. 1995). Concerns about a "missile gap" prompted increased development of U.S. intercontinental ballistic missiles (ICBMs). Early ICBMs, such as Atlas and Titan I, were fired from launch control facilities (LCFs) which could only control a single missile each. Development of the Minuteman missile, initiated in 1958, included the capability of firing ten missiles in hardened silos from a single LCF (Lewis et al. 1995). This factor, along with the use of solid fuel, made the Minuteman missile much more efficient and cost effective than earlier missiles.

In 1961, the USAF announced that Minot AFB had been chosen for deployment of a missile complex. Minot AFB was chosen as a Minuteman base because of soil suitability, location in the northern United States, and the fact that it was already a SAC operated base (Reeves 1980). Construction began on the missile field in January 1962. Fifteen LCFs and 150 launch facilities (LFs) were completed by January 1963 (Nolan 1990). Boeing Corporation installed electronic equipment and the missiles. The last of 150 Minuteman I missiles was in place on February 26, 1964, and the 455th Strategic Missile Wing (SMW) became combat ready in April 1964 (Reeves 1980).

In 1963, SAC deactivated the 4136th Strategic Wing at Minot AFB and activated the 450th Bombardment Wing (BMW) to oversee B-52 and KC-135 aircraft operations (USAF 1991). The 5th BMW then replaced the 450th in 1968.

In June 1968, the 455th SMW was redesignated the 91st SMW. The following year the 91st SMW was chosen to be equipped with Minuteman III missiles, each of which carries three Multiple Independently-Targetable Reentry Vehicles (MIRVs). The last Minuteman I missile was replaced by a new Minuteman III in December of 1971. Minuteman III missiles continue in service at Minot AFB (Reeves 1980).

In July 1971, the 91st SMW was designated the host wing of Minot AFB. The various support units and command of the base were transferred to this wing. The 5th BMW continued in service at Minot AFB as a tenant of the 91st SMW throughout the 1970s. The 23rd BMS of the 5th BMW participated in operations over Southeast Asia during 1971 and 1972 as part of bombing campaigns code named ARC Light and Linebacker II (Reeves 1980).

Fighter interceptors of the 5th FIS also continued in service at Minot throughout the 1970s. Control of the 5th FIS shifted from ADC to Tactical Air Command (TAC) in 1979, but the aircraft continued the same mission. F-106 fighters were replaced by F-15 *Eagles* in the mid-1980s. As the threat of Soviet surprise attack decreased in the late 1980s, F-15 fighter interceptors were removed from Minot in September of 1988 and the 5th FIS was deactivated (Nolan 1990).

Several changes have taken place within the last few years with the deactivation of SAC and the establishment of ACC and Air Force Space Command. B-52 bombers were removed from alert in 1991, although they continue to support worldwide U.S. military operations such as Desert Storm. Minot AFB and the 5th BMW were reassigned to ACC in July 1992. The 5th BMW was renamed the 5th BW and assumed base host responsibilities (USAF 1993a). The 91st SMW was placed under the control of Air Force Space Command in July of 1993 and was redesignated the 91st

Missile Group in July of 1994 (USAF 1993b). The KC-135 tanker squadron of the 5th BW was transferred from Minot AFB to Grand Forks AFB, North Dakota, in 1994.

3.2 BASE DEVELOPMENT

Minot AFB was built to carry out operations directly related to the Cold War. The installation was initially designed as a fighter interceptor base but continues to serve as a bomber and missile base within ACC.

Land for Minot AFB was acquired through monetary donations from Minot businessmen and the Chamber of Commerce to the U.S. Government for base establishment (Reeves 1980). Plans for family housing were formulated in November 1955 and included construction of a six million dollar 450-unit complex to include row houses, duplexes, and single family residences (Reeves 1980). An additional 620 units were ordered in December 1955 for future base personnel. The first 40 of these housing units were completed in October of 1959 and were immediately occupied (Figure 3.1).

The base was activated on January 10, 1957, and the first few buildings were officially accepted by the Air Force. Construction of buildings, roads, and utilities continued through 1959. The first church service was held in July 1958, and the base exchange was opened in September 1958 (Reeves 1980). Housing continued to be built, and with the completion of two airmen dormitories in 1973, Minot AFB had more base housing than any other USAF facility in the United States (Mueller 1989).

The construction of the SAGE facility to house early warning and command and control systems for interceptors was initiated in 1958. The three-story windowless building was constructed of heavy reinforced concrete and was designed to withstand a nuclear blast. A large fallout shelter was located in the basement of the building. Two large IBM computers were installed in 1960, and the SAGE system was activated in June of 1961 (Reeves 1980) (Figure 3.2).

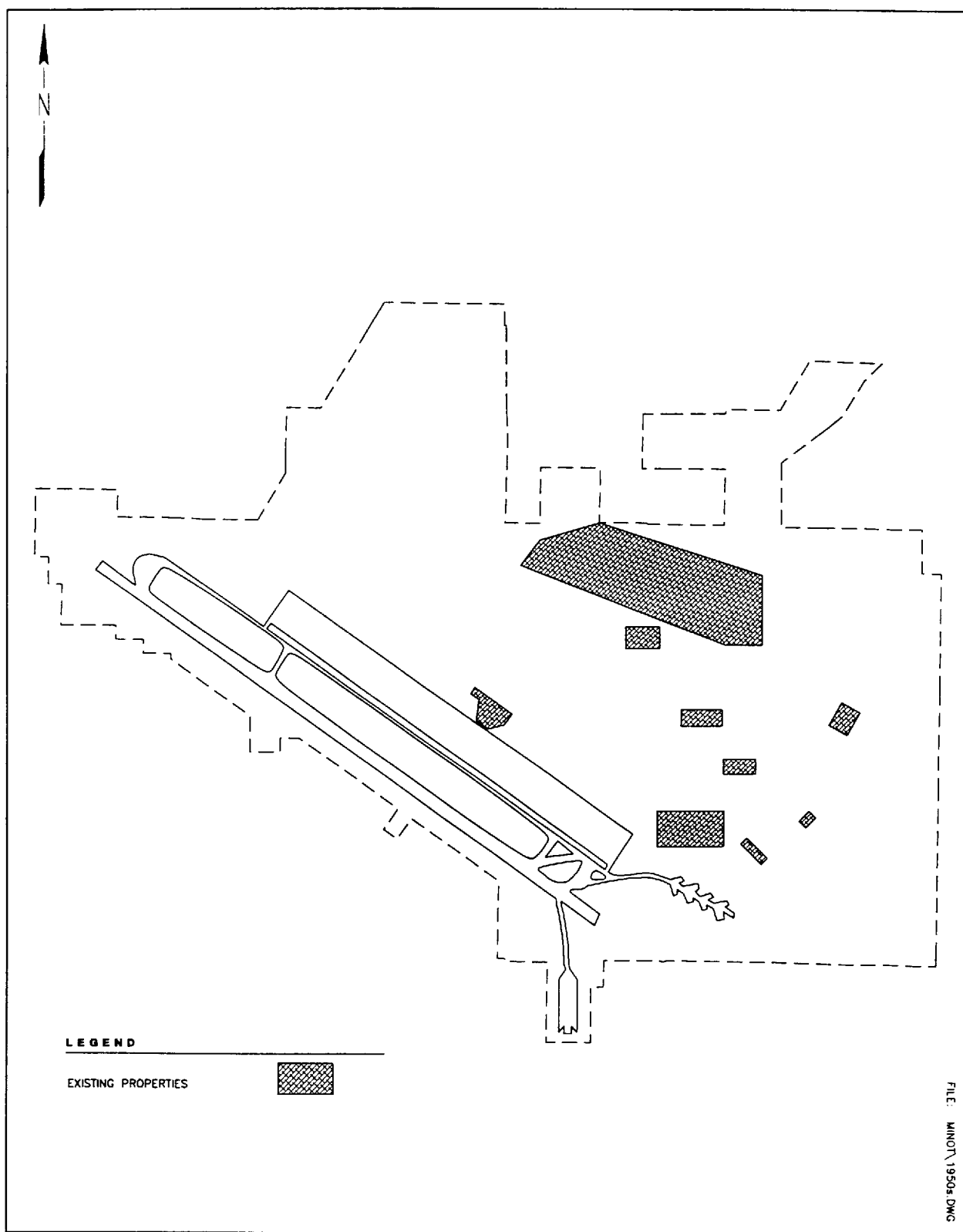


Figure 3.1 Minot Air Force Base, 1950-1960.

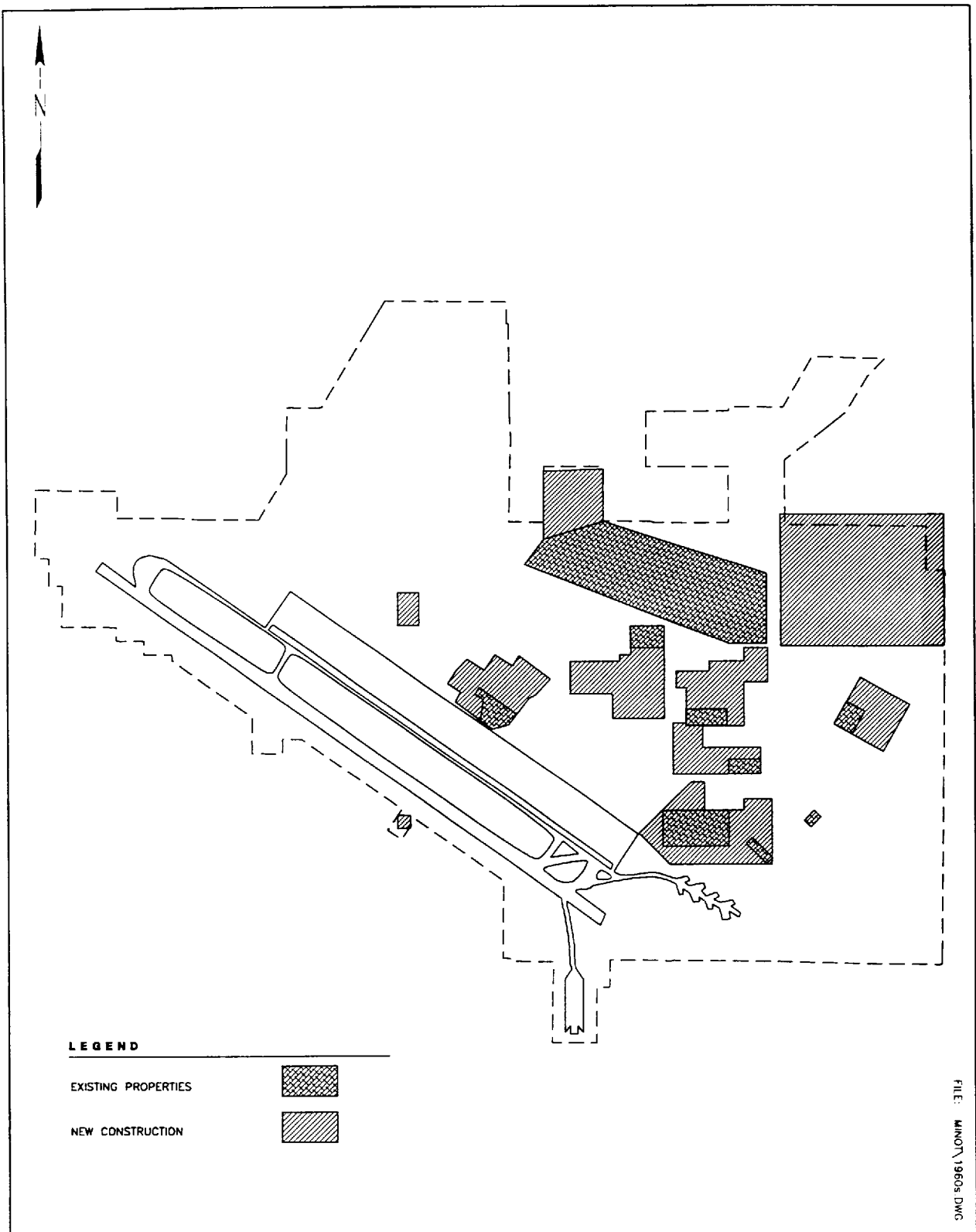


Figure 3.2 Minot Air Force Base, 1960-1970.

One of the first projects completed on the base was the construction of the 8,100 ft (2,469 m) runway and the traffic control tower. When SAC bombers and tankers began service in the early 1960s, the runway had to be lengthened to accommodate the larger planes. The runway was extended to 13,200 ft (4,023 m) with 1,000 ft (305 m) overruns. As a result of this increase, a new control tower was needed to adequately view the longer runway. The new tower was completed in 1966 and remains in operation (Reeves 1980).

After selection as a Minuteman missile base in 1961, construction of missile silos began in 1962. The Minuteman complex is located north, west and south of the base over an 8,000 acre area. Construction consisted of the excavation of pits measuring 100 x 150 x 12 ft (30 x 46 x 4 m) deep for the LCF, with another 32 ft (10 m) deep hole for the LF. After the concrete missile housing was finished in 1963, installation of the missiles and electronic equipment was turned over to Boeing Corporation personnel. Over 1500 civilian construction workers labored year round on the project, and all of the missiles were in place by April of 1964 (Reeves 1980). Construction also included a number of roads, parking areas, and maintenance and storage buildings at the missile sites and on the base itself (U.S. Army Corps of Engineers n.d.). Numerous upgrades to the missile installations, including additions such as antennas, have occurred over the years.

An exact duplicate of a LF, including a deactivated missile, was constructed at Minot AFB in 1967 and 1968. Known as U-01 or *Uniform I*, the replica LF serves as a trainer for missile maintenance crews.

Recent construction at the base has included the rehabilitation of airman dormitories in 1980, construction of a new Security Police facility, a regional hospital, a library and learning center, and a child development center (Figures 3.3 and 3.4).

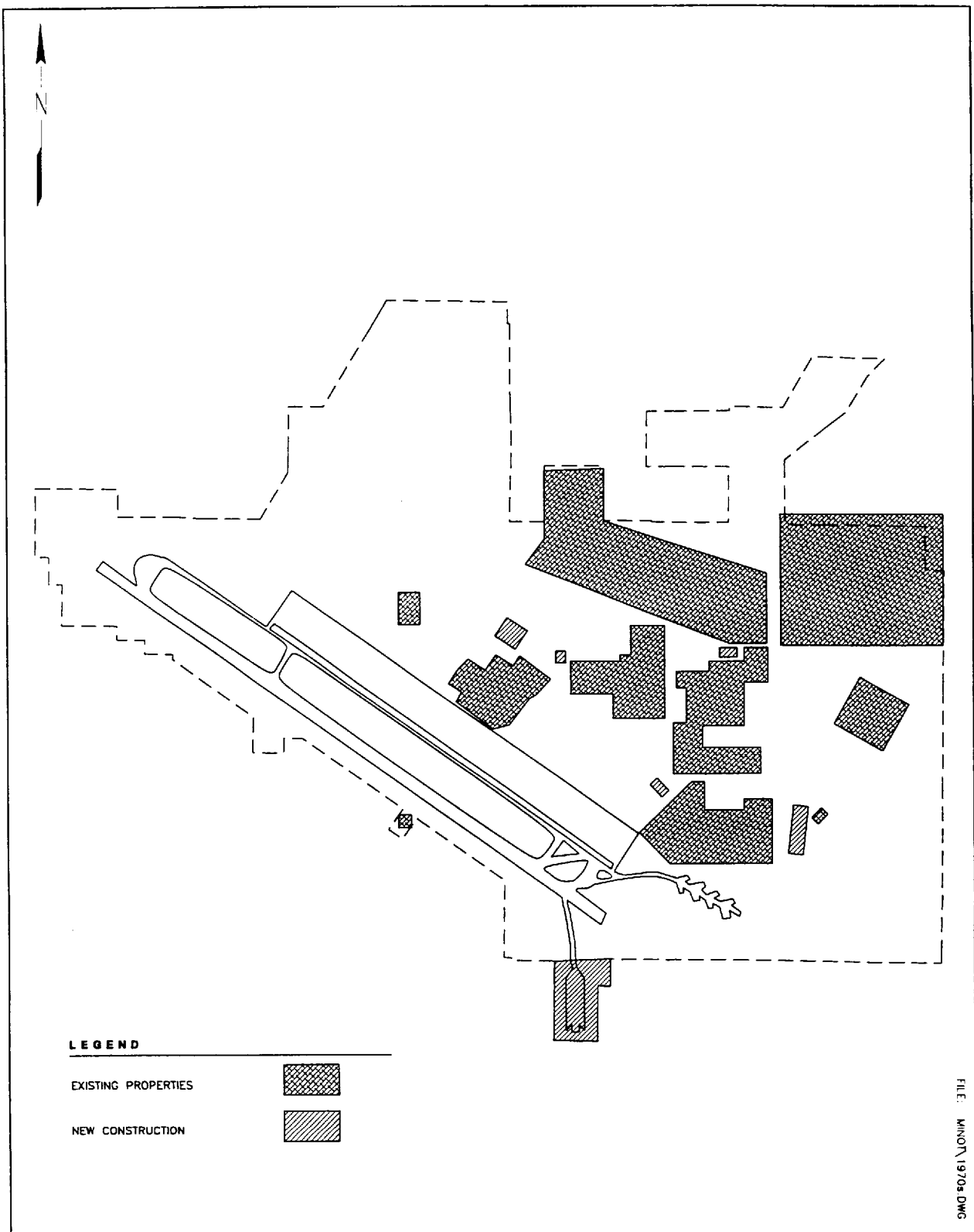


Figure 3.3 Minot Air Force Base, 1970-1980.

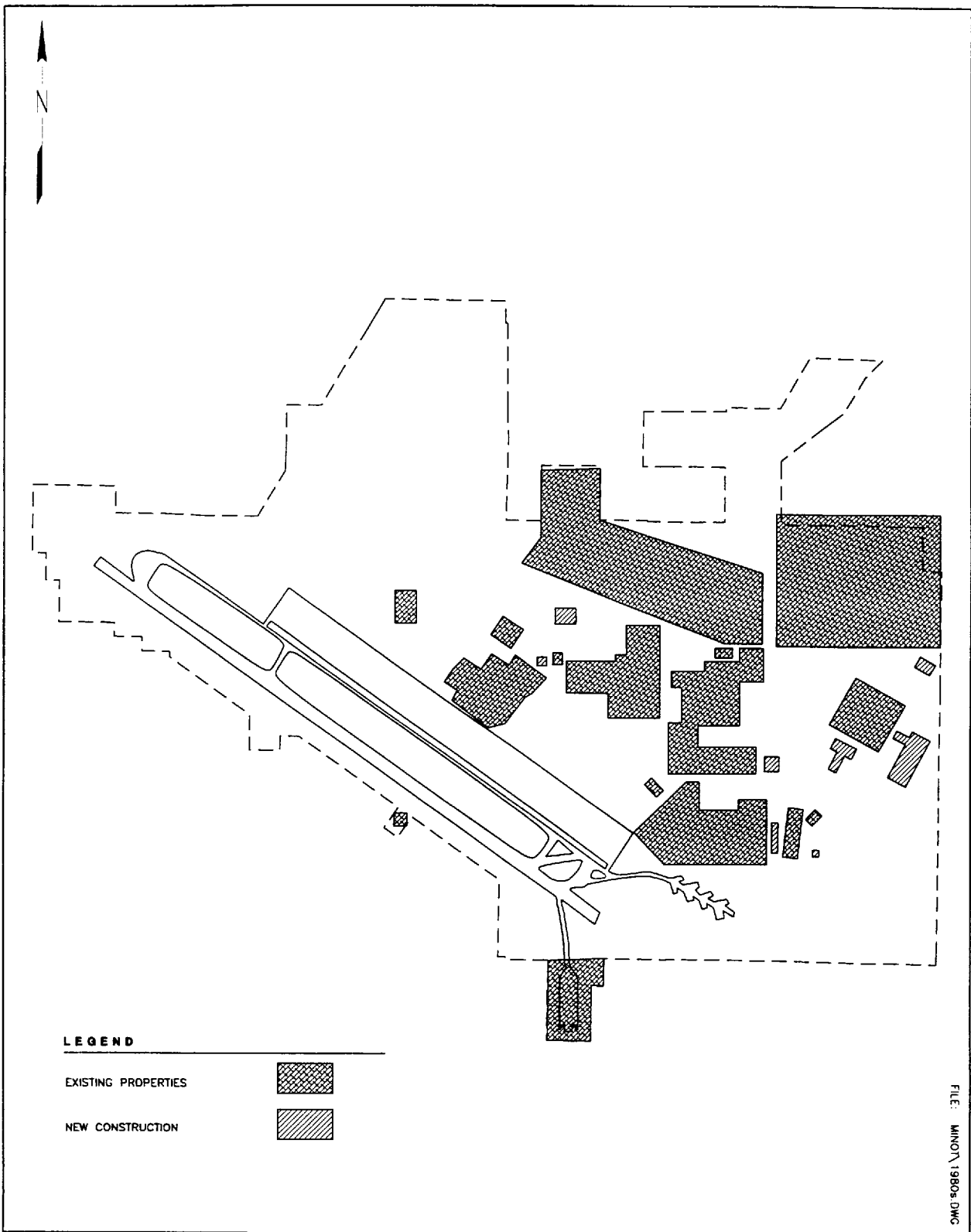


Figure 3.4 Minot Air Force Base, 1980-present.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Minot AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993c:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Minot AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Minot AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993c) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance

of the resource. The fifth is the percentage of remaining historic fabric, or integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993c) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

2Lt Tamara Schulman, an architect in the 5th BW, met with the Mariah field team upon their arrival at Minot AFB and introduced the team to the individuals who would be able to provide them with the information required to complete their work. These people included Drawing Room staff, Real Property personnel, officers knowledgeable of base operations and wing missions, and personnel who could provide easy access to facilities. The field team also spent much time with the Wing Historian, SSgt Strom. The Historian gave the team a tour of the base, discussed histories, provided historical maps, and gave access to the Heritage Center. The team was in contact with 2Lt Schulman and SSgt Strom on a daily basis.

Fieldwork began in the Heritage Center, documenting the Cold War related resources stored there. Once access to the flight line was approved, the survey of buildings began. On the weekend, the survey continued to those areas of the base that did not require an escort. The team met with the 91st Missile Group. A tour of the missile training facility was provided. 2Lt Schulman tried to obtain permission to take the team to an operational missile silo; this request was refused at the commander level.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Minot AFB, 98 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Nine resources were evaluated at Minot AFB, six of them falling under the DoD category of real property and three under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Architectural Drawing Files (Resource No. 10011, Located in Real Property No. 450)

The Minot AFB drawing files, located in the base engineering building, include two rows of 10 ft (3 m) tall drawer files of architectural drawings. The files contain numerous historical maps, original base master layouts, and construction and utility project drawings of Minot AFB and related facilities. The maps, which are stored flat, include paper, linen, mylar, vellum, and blue line reproductions. The files contain important information about historic structures on base and the development of the installation throughout the Cold War era. The majority of drawings are generally in good condition, but are threatened by frequent or occasional handling and removal from drawers.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Architectural Drawing Files	10011	None	RecDoc/Obj	14
Memorial	Museum Collection	10001	None	Real/Obj	16
Combat Weapons and Support Systems					
Alert Facilities	Fighter Alert Facility	10015	718	Real/Bldg	22
Alert Facilities	Bomber Alert Facility	10016	1085	Real/Bldg	21
Alert Facilities	Tanker Alert Facility	10017	1040	Real/Bldg	22
Communications	SAGE Facility	10014	475	Real/Bldg	21
Documentation	Architectural Drawing Files	10012	None	RecDoc/Obj	15
Documentation	Architectural Drawing Files	10013	None	RecDoc/Obj	15
Training Facilities					
Missile Training	Missile Launch Facility Trainer	10106	690	Real/Struc	21

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
22	10015	718	Fighter Alert Facility
22	10017	1040	Tanker Alert Facility
21	10014	475	SAGE Facility
21	10016	1085	Bomber Alert Facility
21	10106	690	Missile Launch Facility Trainer
16	10001	None	Museum Collection
15	10012	None	Architectural Drawing Files
15	10013	None	Architectural Drawing Files
14	10011	None	Architectural Drawing Files

6.1.2 Memorial**6.1.2.1 Museum Collection** (Resource No. 10001, Located in Real Property No. 475)

The Heritage Center is located in Room 214 of Real Property No. 475, the original command and control room of Minot AFB's SAGE system. The Heritage Center houses a collection of artifacts related to the history of Minot AFB. Within this collection are numerous artifacts that are directly related to the Cold War. The following are descriptions of these artifacts and discussions of their Cold War relationship.

Uniforms, including flight suits, a dress blue uniform, blue jackets, shirts, sweaters, hats, and helmets, are stored on hangers inside the entrance to the main room. These uniforms exemplify Air Force Cold War attire, and although they are not connected to a specific event, they may aid in the interpretation of Cold War history.

Several Minuteman missile components including nose cones, shell segments, and some electronic and wiring equipment are contained in the collection. The Minuteman missile has been in continuous service at Minot AFB since 1963 as part of the strategy of deterrence through a survivable force. These Minuteman components exemplify the missile and convey some of its structural and design configurations. They are useful in the interpretation of base history and Minot AFB's role in the Cold War, and are in good condition.

Also included are a theodolite and a collimator. The theodolite is a small device that was used in tracking missile launches. The instrument consists of various metal parts with optical devices, resembling a surveyor's transit. The theodolite is stored in its original metal canister and wooden box; the equipment and storage elements are in good condition. The collimator is a device that was used in the targeting of Minuteman I and II missiles. A card on the collimator notes that the instrument was used as a light source for an accurate position in setting up guidance system ground alignment. The collimator is 1 x 2 ft (0.3 x 0.6 m) in size and constructed of metal, optical glass,

and various electronic components. The theodolite was used at McConnell AFB, Kansas; it is not known whether the collimator was used at Minot AFB. These instruments could aid in the interpretation of the Minuteman missile system.

Also in the collection is an early design model of the Minuteman that is approximately 6 ft (1.8 m) high and constructed of wood with a center steel rod. The nose is detachable and the circular base has a wood finish. The base is inscribed with "Boeing, Minuteman, 3-Stage, Solid Propellant, Six Thousand Mile Range, Ballistic Missile." The nose is inscribed "Plans Branch." The model is in good condition and exemplifies the development of the Minuteman missile system. Since no model number could be found, it is believed that this may be an early example of a conception of the Minuteman missile system.

Approximately 60 framed photographs of aircraft (the majority of Cold War vintage), awards, and certificates are found in the collection. The items are in good condition and are stored in boxes. The photographs and other documents may be useful in the interpretation of Cold War history.

Scrapbooks from the collection include two large, wood-covered books documenting the 5th FIS and the 5th BMW, and a number of smaller books containing both photos of social and on-duty activities, and citations for various squadrons and groups. Approximately 25 videotapes and film canisters, including 16 mm, VHS, and Beta format videotapes, are also in this collection. Subjects include squadron and group activities, speeches, and instructional/training videos. The scrapbooks, videos, and film may be useful in the interpretation of base history.

All of the objects in the Heritage Center appear to be in good condition and are under the care of the Wing Historian, SSgt Strom.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Fighter Alert Facility (Resource No. 10015, Real Property No. 718)

This small aircraft maintenance dock was originally the Fighter Alert Facility, and exemplifies the earliest mission of Minot AFB as an interceptor base. Completed in 1958, the Fighter Alert Facility was constructed of corrugated asbestos panels, and according to written documents in the History Office files, contained four aircraft bays along with a day room, sleeping areas, and a utility area. Fighter interceptor pilots stayed at the facility while on alert, having only two minutes to be airborne in response to any incoming bomber attack. The Fighter Alert Facility was used for interceptor forces from 1958 through 1988.

The exterior integrity of the facility remains intact. Access to the interior of the facility was unavailable during the field visit, thus the integrity of its features could not be directly observed. However, the real property card indicates no major renovations made to the building. Also, as it has only been six years since it was used as an alert building, and is now used for aircraft maintenance, little change to the interior is likely. Thus interior integrity is also determined to be intact.

The exceptional importance of this facility lies in its sole mission to thwart any surprise attack by the Soviet Union on the United States. This building is important not only to Minot AFB's Cold War context, but also to Cold War history at the national level. This building conveys the United States fear of a Soviet bomber attack from the north and the measures taken to ensure that any such attack would be successfully intercepted. It is a direct result of Congressional approval in the 1950s for the construction of interceptor bases and the NSC-68 recommendations for a massive military build-up to "counteract the increasing threat posed by the Soviet Union" (Lewis et al. 1995). This

facility was used for this purpose during Phases II through IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.1.2 Bomber Alert Facility (Resource No. 10016, Real Property No. 1085)

The Bomber Alert Facility, constructed of reinforced concrete, was a self-contained community for B-52 bomber crews who were required to live at the facility for seven-day periods and respond to any drill or war situation at a moment's notice. Bedrooms, dining rooms, a recreation room, and a briefing room were all located in the building. Distinctive external features include several ramp tunnels that lead out to the bomber apron. The alert building is a secure facility surrounded by a chainlink and barbed wire fence with a security control entry building. A security police tower is located on the adjacent bomber alert apron. An associated building outside the alert security perimeter was previously used for marital and family activities. Tennis courts are also located outside the alert building. Although the Bomber Alert Facility is currently used for Quality Department office space, alert capabilities have been maintained and the Minot AFB bomber crews carry out alert maneuvers at this facility quarterly.

External integrity of the facility remains intact. Although access to the interior of the facility was unavailable during the field visit, the real property card for the facility indicates no major renovations to the building. The current practices of alert capability maintenance and active alert maneuvers suggest that the building's function and associated features remain intact. Thus interior integrity is also determined to be intact.

The Bomber Alert Facility is extremely important to Minot AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). The B-52 force was an integral part of the DoD defense triad and was relied upon as the United State's primary nuclear bomber force

for over thirty years. This facility was used for this purpose during Phases II through IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.1.3 Tanker Alert Facility (Resource No. 10017, Real Property No. 1040)

This concrete and steel building, built in 1974, served as a Tanker Alert Facility housing operational support and recreational functions. The facility is one of several buildings that served as the tanker alert complex located around the perimeter of the tanker alert apron. Four crew bungalows, containing sleeping and lounge accommodations, were situated at intervals adjacent to the apron. The location of the bungalows allowed tanker crews to sleep directly next to their planes. The complex also contained a maintenance building, security checkhouse, and a house where crew members could spend time with their wives and families. The presence of the Tanker Alert Facility allowed tanker crews to stay close to their planes and have the capability to be airborne in a short span of time in order to support bomber activity. The configuration and placement of the buildings around the alert apron convey the necessity for rapid response under alert conditions.

The Tanker Alert Facility appears to be intact, but not in use. Renovations are underway on this facility, while the other buildings in the complex remain dormant, but the extent of these renovations is unknown. Access to the facility was not available during the field visit; thus the integrity of the facility and any internal alert features remains unknown.

The Tanker Alert Facility was extremely important to the Cold War mission of Minot AFB and was important at the national level during the Cold War era. The Tanker Alert Facility was constructed in response to NSC-68 and the Killian report which recommended the dispersion of bombers around the country (Lewis et al. 1995). The dispersion of bombers required the dispersion of tankers to support them, thus the facility illustrates the concept of deterrence through a survivable force. This facility served this purpose during Phases III and IV of the Cold War era, and meets NRHP criterion (a).

6.2.2 Communications

6.2.2.1 SAGE Facility (Resource No. 10014, Real Property No. 475)

The SAGE Facility, located in what is now the Wing Headquarters building, was originally designed and built specifically for the SAGE system, an early warning detection system that detected incoming enemy aircraft, alerted SAC, and dispatched interceptor fighter aircraft stationed in the base's sector. Built in 1960, the building was used for the SAGE system until 1963 and is now utilized as Wing Headquarters.

This building was evaluated because of the presence of several features that convey the building's important SAGE function. Specific Cold War features that are still intact include its nuclear blast resistant, windowless, reinforced concrete construction. The basement of the building originally housed two large computers, mechanical equipment, and a large, well-stocked, fallout shelter. The computers have since been removed, but 4 to 6 inch diameter holes through the concrete ceiling show where the computer cables and conduits penetrated into the rest of the building. The fallout shelter remains, including boxes of Meals Ready to Eat (MREs), empty metal water containers, first aid supplies, and various other equipment. The upper floors contained offices, weapons control system rooms, and support facilities.

The feature of the Wing Headquarters building that best illustrates its use during the Cold War is the SAGE command room. Currently used as the Heritage Center, this room is located on the second floor of the building. This room was the command and control center of the SAGE system at Minot AFB, used by the battle staff to track incoming enemy aircraft and to dispatch interceptor fighters. The room contained radar and communications equipment to accomplish this mission. Battle staff would also meet here to determine appropriate actions. The room is approximately 2000 ft² (186 m²) in area and is 35 ft (11 m) tall. It is constructed of poured concrete and contains a glassed-in control booth, a large projection screen, acoustic ceiling tiles, and an interior balcony.

The radar and communications equipment was removed when SAGE sector responsibilities were transferred to Great Falls AFB, Montana.

This building is exceptionally important in illustrating the early Cold War mission of Minot AFB and the base's history. It epitomizes the role of Minot AFB as a first line of defense against a surprise nuclear attack. It is also highly significant to the Cold War era nationally, as it was constructed as part of the early warning detection system, SAGE, called for by the Killian Report (Lewis et al. 1995). The building's design and features convey the U.S.'s fear of a surprise first strike by the Soviet Union and the desire to have early warning and successful interception of such an attack. This building was used for this purpose during Phase II of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.3 Documentation

6.2.3.1 Architectural Drawing Files (Resource No. 10012, Located in Real Property No. 450)

The Base Engineering drawing files contain architectural drawings of the SAGE facility, a blast resistant, windowless building which housed a variety of computer, radar, and communications equipment. The drawing files document the construction of this building which was designed specifically for the Cold War mission of early detection, warning, and interception of enemy attack. The drawings are generally in good condition, but are threatened by continued use and handling.

6.2.3.2 Architectural Drawing Files (Resource No. 10013, Located in Real Property No. 450)

The base engineering drawing files contain architectural drawings of the Bomber Alert Facility, a specialized structure designed for 24 hour support of bomber crew members which contains features such as access ramps to allow quick access to awaiting aircraft. The drawing files

document the construction of this building which was designed specifically for a Cold War mission. The drawings are in good condition, but are threatened by continued use.

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Minot AFB.

6.4 TRAINING FACILITIES

6.4.1 Missile Training

6.4.1.1 Missile Launch Facility Trainer (Resource No. 10106, Real Property No. 690)

This complex is named *Uniform-I*, an exact nonworking replica of a Minuteman silo. Components of the replica include a concrete and beryllium missile tube, a heavy concrete blast door on rails, steel entry doors, access tubes, and interior components such as batteries and wiring. A concrete-filled model is stationed in the replica in place of a working missile. This training facility was built on base to provide missile maintenance crews an opportunity to learn maintenance techniques without the logistical, technical, and security difficulties associated with an active missile silo. The trainer has functioned as a LF trainer since its construction. Because the facility continues to be used, all aspects of its integrity have been retained.

Uniform-I is an excellent example of a training facility that has provided maintenance practice for Minuteman missile maintenance crews. This replica is therefore an element of the Minuteman system at Minot AFB, which directly resulted from the Killian Report's recommendation that the highest priority be placed on the development of missiles (Lewis et al. 1995). Without the training replica, retrofitting, updating, and repair of missiles and silos could not have been accomplished. This training replica conveys the exceptional significance of the Minuteman role at Minot AFB.

This facility was used for this purpose during Phases III and IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.5 INTELLIGENCE FACILITIES

None were evaluated at Minot AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Minot AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Minot AFB. These resources should be investigated further for more comprehensive analyses.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Minot AFB revealed approximately 80 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Minot AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus lists of informal interviews conducted by the field team at the base and of potential future contacts, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

There is an ongoing project to upgrade the interior of the current Wing Headquarters, which threatens the integrity of the original SAGE command and control room in that building. At this point the construction is primarily on the third floor, and the impacts have included blocking in access doors and enclosing the mezzanine with a partition. Although the Heritage Center is currently located in this SAGE room and the Base Historian is committed to preserving the space, there is the possibility of a change in priorities and the loss of the resource through capital improvements programs.

Renovations are also being conducted at the Tanker Alert Facility. While this building appeared intact during the field visit, it was not in use, and no effort at stewardship of the building was apparent. Renovations may impact the integrity of this building.

The resources of the Heritage Center have not been curated or catalogued. The Base Historian intends to inventory the resources, and at some point open the Heritage Center and provide interpretation. It would be beneficial for the Historian to have some assistance with inventorying the collection and establishing the Heritage Center.

There are no other known projects planned at Minot AFB that may impact the resources evaluated in this report.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Minot AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Minot AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Minot AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Minot AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Architectural Drawing Files (Resource No. 10011, Located in Real Property No. 450)

The architectural drawing files for the base are in good condition, but are threatened by frequent handling. It is recommended that the drawings be inventoried and copied, with the copies retained by the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation.

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
10014	475	SAGE Facility		*	*	*		NRHP eligible now.
10015	718	Fighter Alert Facility		*	*	*		NRHP eligible now.
10016	1085	Bomber Alert Facility		*	*	*		NRHP eligible now.
10017	1040	Tanker Alert Facility		*	*	*		Potentially NRHP eligible now.
Real Property - Structure								
10106	690	Missile Launch Facility Trainer		*	*	*		NRHP eligible now.
Real Property - Object								
10001	None	Museum Collection		*		*		
Record or Document - Object								
10011	None	Architectural Drawing Files		*		*	*	
10012	None	Architectural Drawing Files		*		*	*	
10013	None	Architectural Drawing Files		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Museum Collection (Resource No. 10001, Located in Real Property No. 475)

This collection of uniforms, missile components, models, photographs, and scrapbooks is in good condition, under the care of the Wing Historian, but appears to be in disarray. It is recommended that the collection be inventoried and that stewardship of the collection be continued.

9.2.3 Fighter Alert Facility (Resource No. 10015, Real Property No. 718)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based on its role to intercept any incursion into United States air space by the enemy and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is determined to be intact based upon partial observation, lack of documented major renovations, and subsequent use of the building for a compatible function over the past six years. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.4 Bomber Alert Facility (Resource No. 10016, Real Property No. 1085)

The building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is determined to be intact based upon partial observation, lack of documented major renovations, and continued use of the building for alert functions. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.5 Tanker Alert Facility (Resource No. 10017, Real Property No. 1040)

This building is evaluated as exceptionally important to the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role in sustaining a survivable force to meet the needs of deterrence. Access to the interior was not obtained, so an assessment of intact integrity could not be made. Thus the level of integrity of the building remains unknown. Therefore, this building is recommended as potentially eligible to the NRHP. Further documentation, to determine the level of integrity and to explore NRHP eligibility, is recommended. Stewardship of the building to retain its current level of integrity is recommended in the interim during this evaluation.

9.2.6 SAGE Facility (Resource No. 10014, Real Property No. 475)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II. It meets NRHP criteria (a) and (c) based on its role as the first line of defense against a surprise attack and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building and its SAGE features is determined to be intact. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.7 Architectural Drawing Files (Resource No. 10012, Located in Real Property No. 450)

The collection of drawings of the SAGE Facility are generally in good condition, but are threatened by continued use and handling. It is recommended that the drawings be inventoried and copied, with the copies retained by the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation.

9.2.8 Architectural Drawing Files (Resource No. 10013, Located in Real Property No. 450)

This collection of drawings of the Bomber Alert Facility is generally in good condition, but is threatened by continued use. It is recommended that the drawings be inventoried and copied, with the copies retained by the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation.

9.2.9 Missile Launch Facility Trainer (Resource No. 10106, Real Property No. 690)

This structure is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criteria (a) and (c) based on its role in the survivability of the Minuteman missile system and on its structural components which are unique to this structure and identify it as an example of Cold War military architecture. The integrity of the structure is determined to be intact based on the continued use of the structure as a missile maintenance trainer. Therefore, this structure is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the structure and its features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Goldberg, A., ed.

- 1957 *A History of the United States Air Force, 1907-1957*. D. Van Nostrand Company, Inc., Princeton, New Jersey.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc. Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Air Force Bases, Volume I: Active Air Force Bases Within the United States of America on September 1982*. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.
-

Nolan, R. J.

- 1990 *The Air Force Comes to North Dakota: A Study in the Site Selection of Grand Forks and Minot Air Force Bases*. Unpublished thesis. University of North Dakota, Grand Forks.

Reeves, M. B.

- 1980 A Brief History of Minot Air Force Base North Dakota 1 November 1955 - 1 September 1980. Unpublished manuscript. 91st Strategic Missile Wing, Minot Air Force Base, North Dakota.

Schaffel, K.

- 1991 *The Emerging Shield: The Air Force and the Evolution of Continental Air Defense 1945-1960*. Office of Air Force History, Washington, D.C.

United States Air Force

- 1991 *Minot Air Force Base Comprehensive Plan*. Prepared by GRW Engineers, Lexington, Kentucky.
- 1993a *Fact Sheet: 5th Bomb Wing*. 5th Bomb Wing Office of Public Affairs, Minot Air Force Base, North Dakota.
- 1993b *Fact Sheet: 91st Missile Wing*. 91st Missile Wing Office of Public Affairs, Minot Air Force Base, North Dakota.
- 1993c *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

United States Army Corps of Engineers

- n.d. *US-133A Minuteman Missile Facilities Minot Air Force Base, Minot, North Dakota*. United States Army Corps of Engineers Ballistic Missile Construction Office, Norton Air Force Base, California.
-

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	10014	475	SAGE Facility	1960
	10015	718	Fighter Alert Facility	1958
	10016	1085	Bomber Alert Facility	1960
	10017	1040	Tanker Alert Facility	1974
	10020	169	Visiting Officer's Quarters	1962
	10021	167	Group Headquarters	1957
	10023	173	Visiting Airmen's Quarters	1957
	10024	174	Officer's Open Mess	1957
	10025	178	Officer's Quarters	1961
	10026	1476	Capehart Family Housing	1960
	10027	1366	Capehart Family Housing	1960
	10029	1408	Capehart Family Housing	1960
	10030	155	Chapel Center	1957
	10031	None	Bank	unknown
	10032	292	Non-Commissioned Officer's Open Mess	1957
	10033	294	Base Theater	1966
	10034	145	Recreation Supply Storage	1959
	10035	207	Airmen's Dormitory	1981
	10036	140	Bowling Center	1961
	10037	202	Recreation Center	1957
	10038	138	Miscellaneous Recreation Building	1965
	10039	135	Group Headquarters	1958
	10040	455, 456	Gymnasium and Youth Center	1957/76
	10041	134	Thrift Shop	1959
	10042	128	In-Flight Kitchen	1957
	10044	413, 414	Heating Facility Building and LF Pumping Station	1957/58
	10048	None	Dakota Elementary School	unknown
	10049	2670	Family Housing FY Appr. 1950-1969	1964
	10050	2675	Family Housing FY Appr. 1950-1969	1964
	10051	1204	Capehart Housing	1960
	10052	145	Commissary	1959
	10055	260	Branch Exchange (Shopette)	1976
	10056	270	Cafe Snack Bar Exchange (Burger King)	1987
	10057	156	Education Center	1990
	10058	159	Temporary Lodging Facility	1972
	10059	Unknown	Child Development Center	unknown
	10060	437	Sales Store Exchange	1983
	10061	599	Vehicle Fuel Station	1965
	10064	547	Group Headquarters	1990
	10065	897	Fire Station	1957
	10066	746	Base Operations	1957

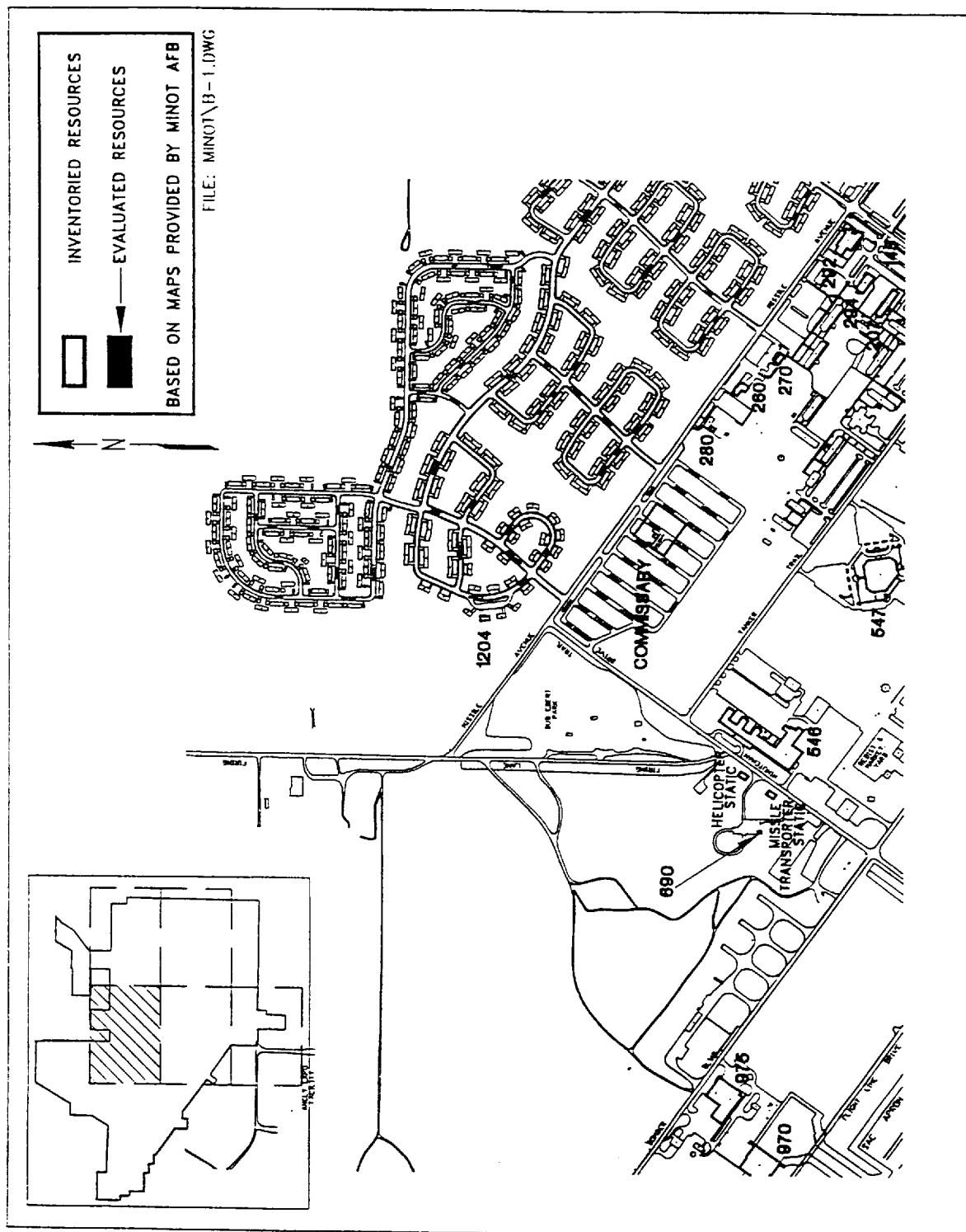
Table A.1 (Continued).

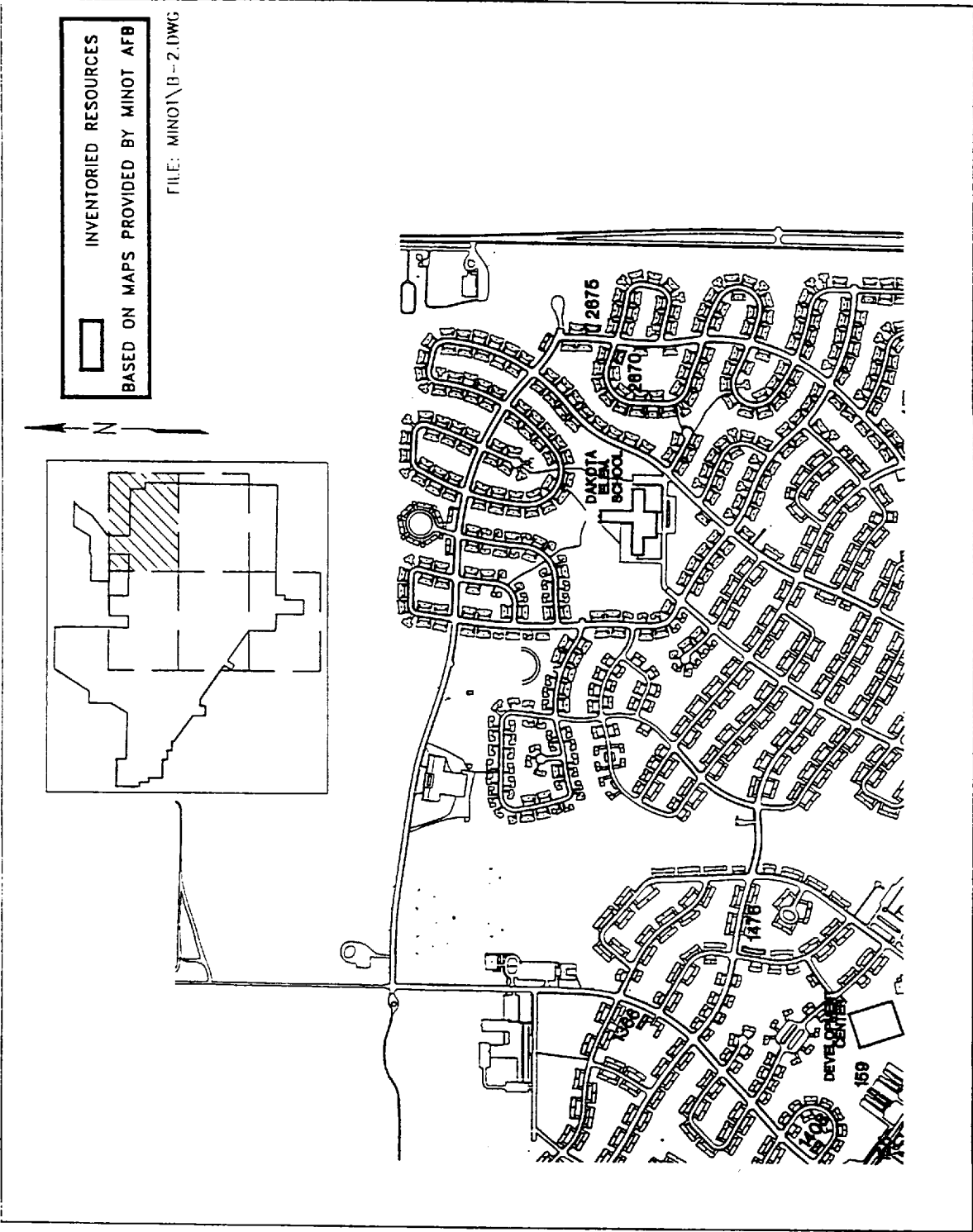
Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	10067	733	Small Aircraft Maintenance Dock	1958
	10068	899	Rescue/Recovery Helicopter Dock	1986
	10069	862, 863	Large Aircraft Maintenance Dock	1959
	10070	836, 837	Fuel Systems Maintenance Dock and Aircraft Corrosion Control	1962/61
	10071	836	Fuel Systems Maintenance Dock	1962
	10072	837	Aircraft Corrosion Control	1961
	10074	879	Base Engineer Maintenance Shop	1958
	10075	893	Survival Equipment Shop and Antenna	1958
	10076	758	Medium Aircraft Maintenance Dock	1958
	10077	761	Fuel System Maintenance Dock	1985
	10078	2038	Engine Test Cell	1983
	10079	715	Heated Parking	1961
	10081	768	Group Headquarters	1958
	10082	774	PME Lab	1961
	10083	770	Field Training Facility	1985
	10084	765	A/SE Shop	1961
	10085	767	Base Photo Lab	1957
	10086	773	Group Headquarters	1959
	10087	859	Avionics Shop	1958
	10088	857	Aircraft General Purpose Shop	1958
	10089	846	In-Flight Kitchen and Squadron Operations	1959
	10090	848	Wing Headquarters	1958
	10092	975	Weapon and Release System Shop	1961
	10093	970	Large Aircraft Maintenance Dock	1988
	10094	490	Security Police Kennel Canine	1972
	10095	445	Base Engineer Administration	1958
	10096	587	Miscellaneous Recreation Building	1985
	10098	1176	Golf Club House	1976
	10101	196	Security Police Identification Control	1990
	10102	195	Traffic Check House	1988
	10103	194	Composite Medical Facility	1988
	10104	1032	Control Tower	1966
	10110	546	Missile Service Shop	1963
Real Property - Object				
	10001	None	Museum Collection	unknown
	10009	None	5th Bomb Wing Trophy Collection	unknown
	10018	2193	Monument/Memorial (Houndog Missile)	1980
	10019	2172	Monument/Memorial (F-102 Delta Dagger)	1982
	10022	None	Cold Weather Vehicle Electrical Outlet	unknown
	10046	2182	Monuments/Memorial (F-106 Delta Dart)	1985
	10047	None	Alert Klaxon	unknown

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	10062	None	Memorial/Monument (UH-1H Rescue & Recovery Helicopter)	unknown
	10063	None	Monument/Memorial (Minuteman Missile Transporter)	unknown
	10073	None	Monument/Memorial (AGE Static Display)	unknown
	10091	None	23d Bomb Squadron Emblem on Bldg. 846	unknown
	10097	2171	Monument/Memorial (T-33 Trainer)	1976
	10099	None	Base Entrance Sign	unknown
	10100	2121	Monument/Memorial (Minuteman I Missile)	1969
	10105	None	Global Power for America Sign	unknown
	10108	None	91st Missile Group Trophy Collection	
	10109	None	91st Missile Group Commanders Photos	unknown
Real Property - Structure				
	10043	2078	Tennis Courts	1966
	10045	422	Test Cell	1958
	10053	280	Swimming Pool	1973
	10106	690	Missile Launch Facility Trainer	1968
Record or Document - Object				
	10011	None	Architectural Drawing Files	unknown
	10012	None	Architectural Drawing Files	1958
	10013	None	Architectural Drawing Files	1958

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES





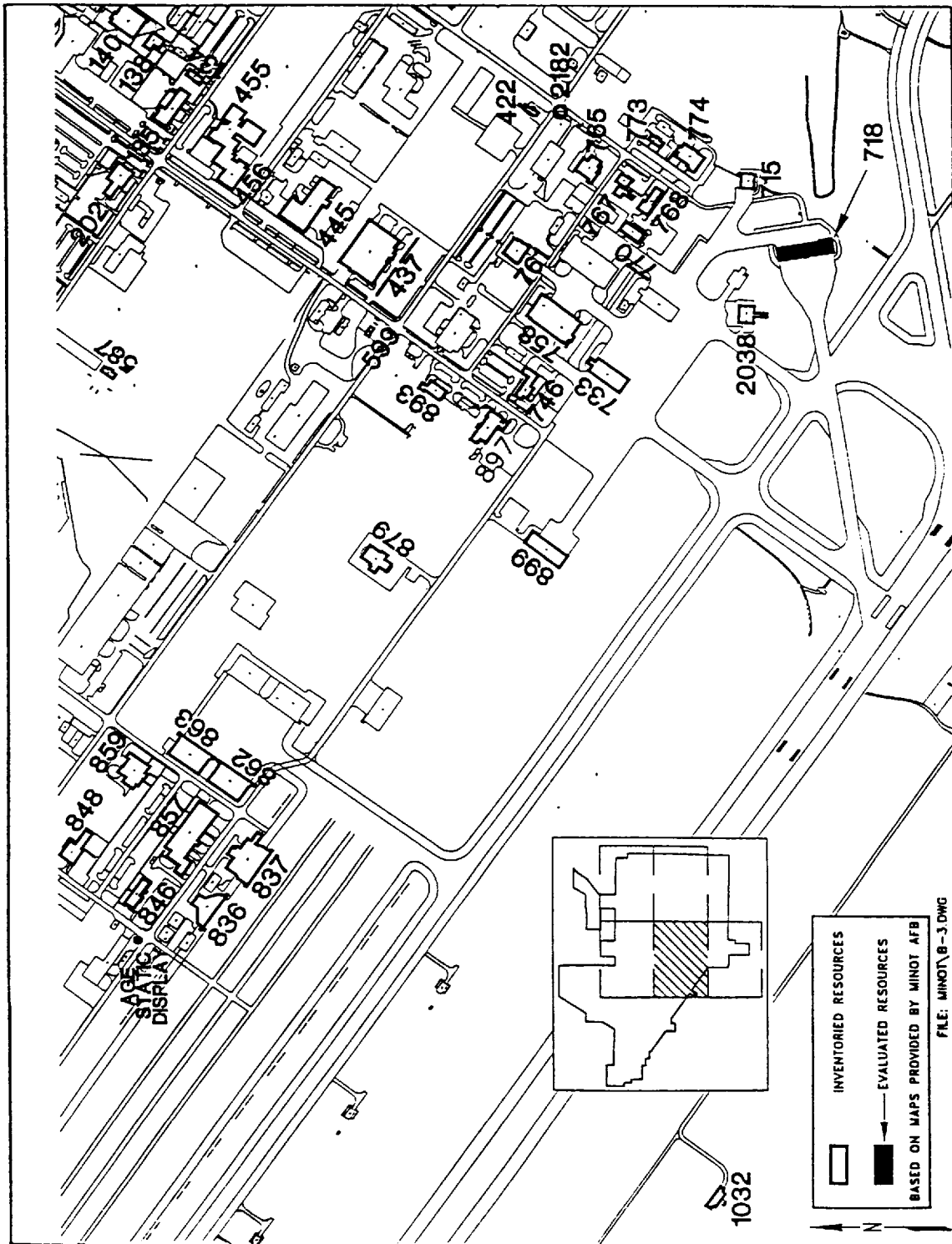


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 3 of 5).

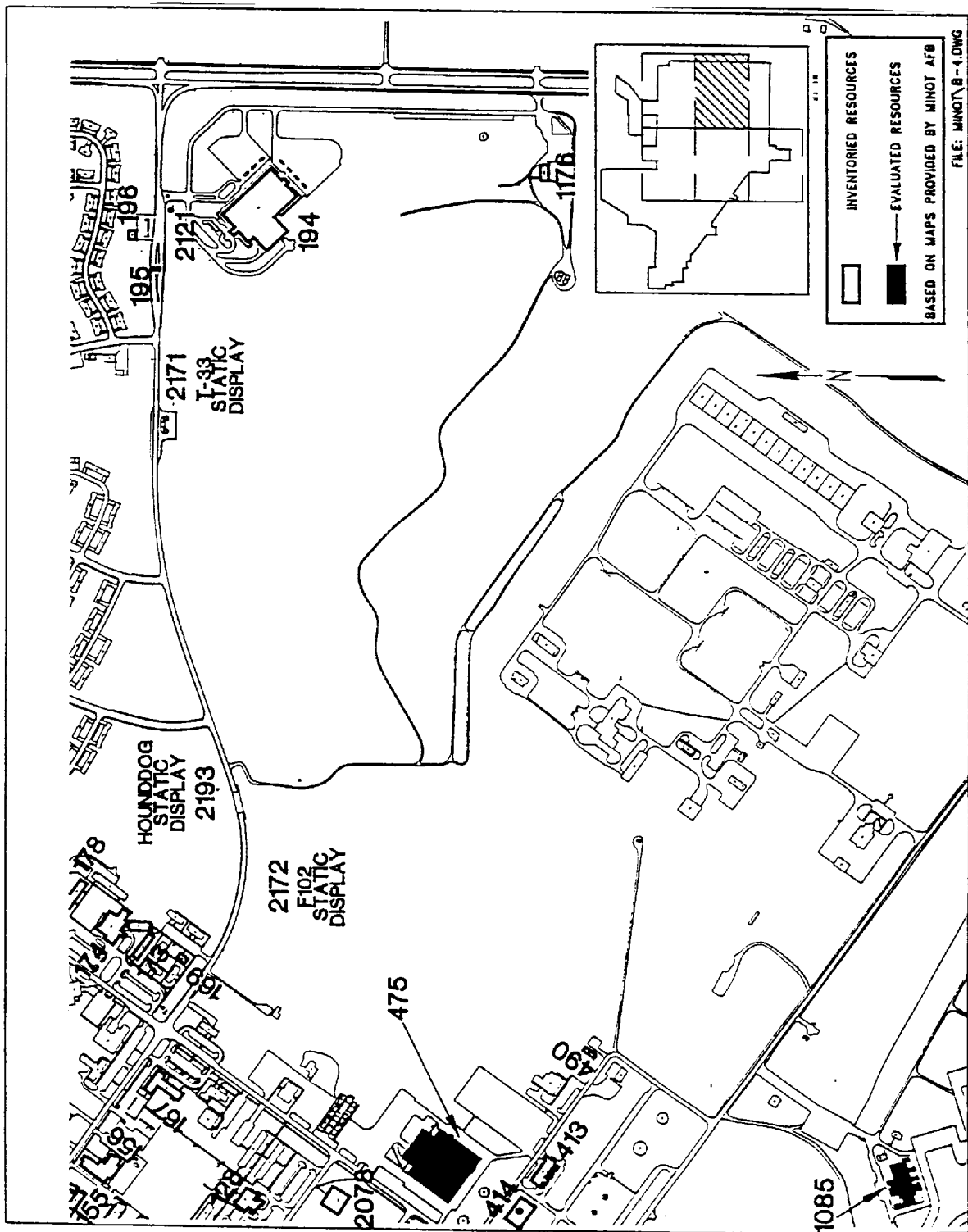


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 4 of 5).

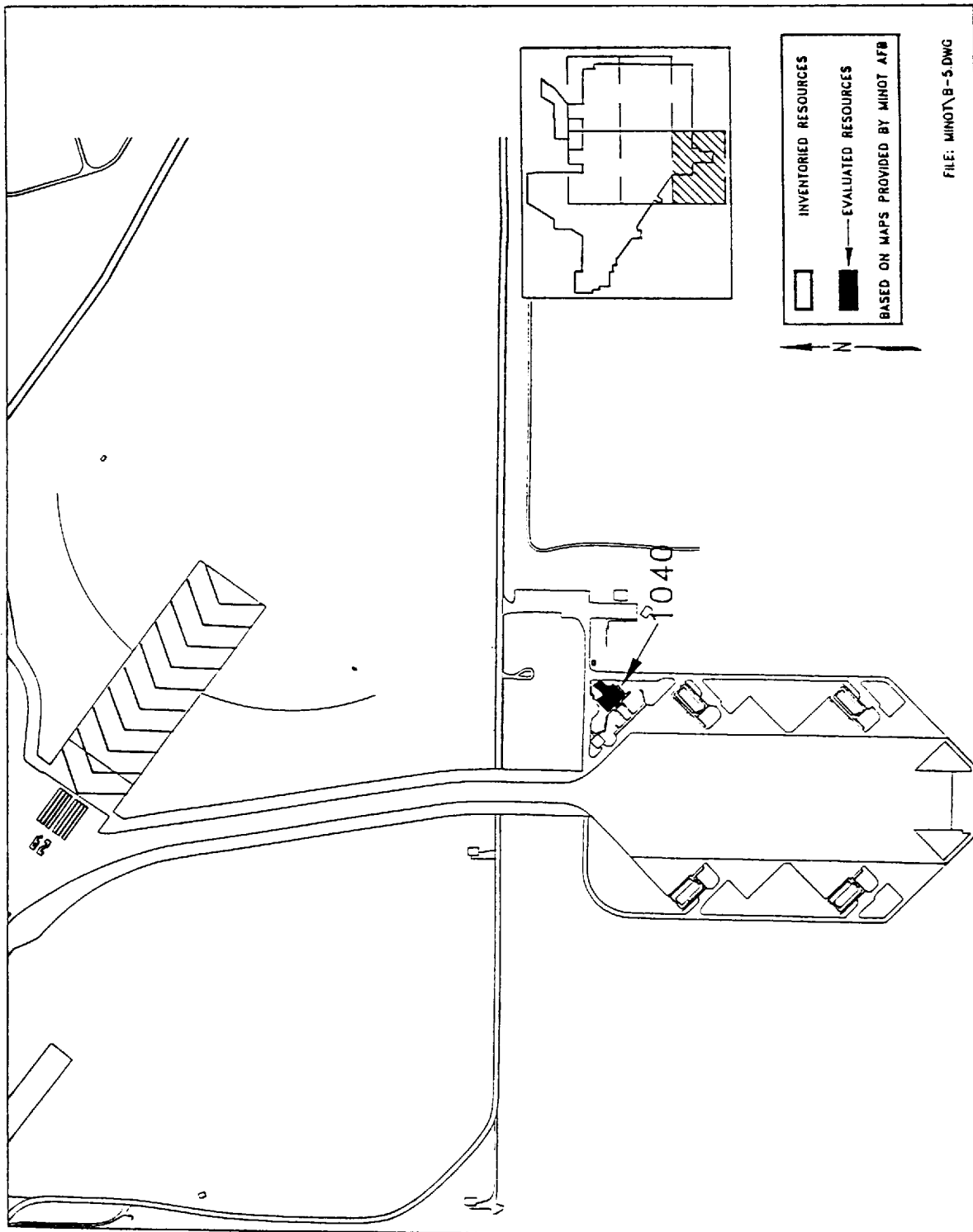
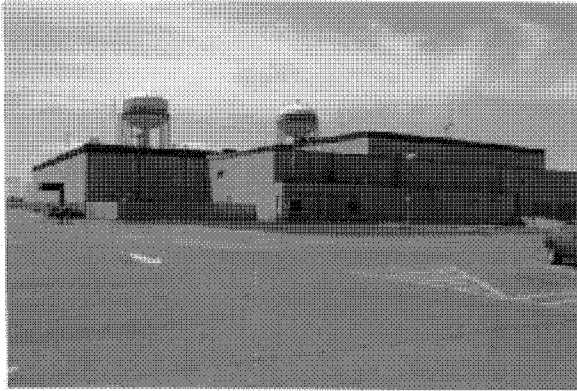
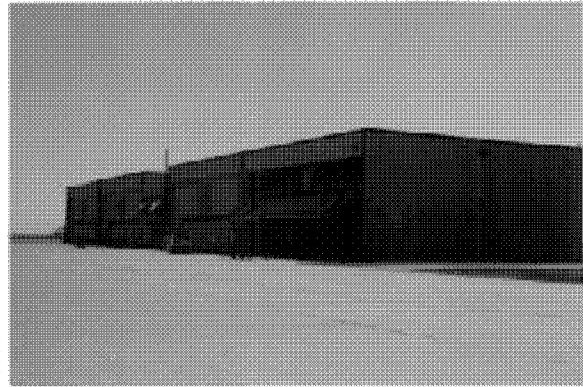


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 5 of 5).

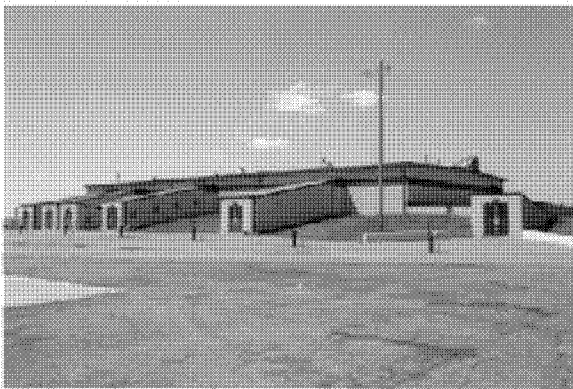
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



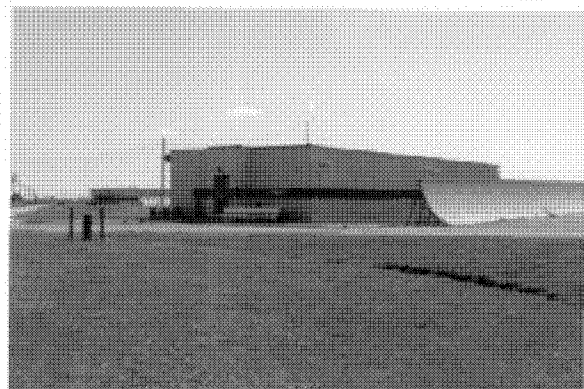
Resource No. 10014, Real Property No. 475
Wing Headquarters



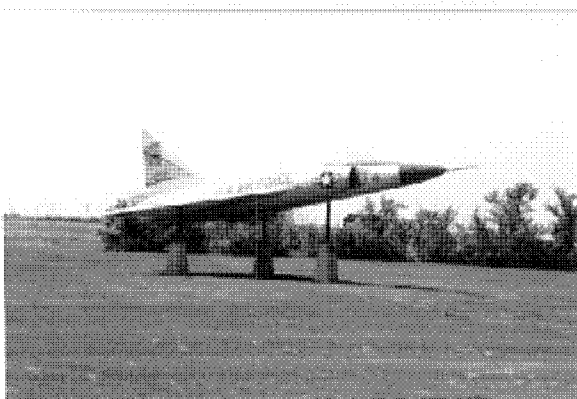
Resource No. 10015, Real Property No. 718
Small Aircraft Maintenance Dock



Resource No. 10016, Real Property No. 1085
Crew Readiness



Resource No. 10017, Real Property No. 1040
Crew Readiness



Resource No. 10019, Real Property No. 2172
Monument/Memorial (F-102 *Delta Dagger*)



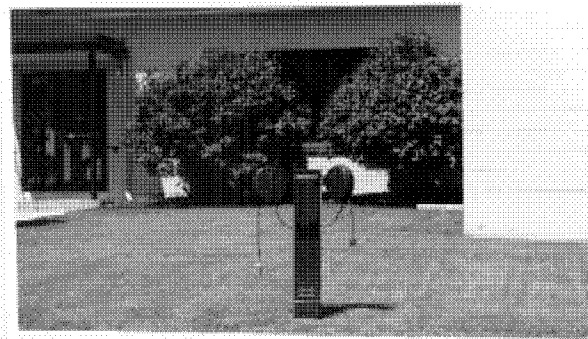
Resource No. 10020, Real Property No. 169
Visiting Officer's Quarters



Resource No. 10018, Real Property No. 2193
Monument/Memorial (Hounddog Missile)



Resource No. 10021, Real Property No. 167
Group Headquarters



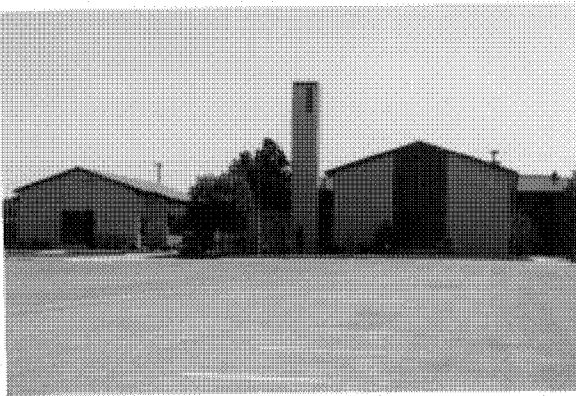
Resource No. 10022, Real Property No. (none)
Cold Weather Vehicle Electrical Outlet



Resource No. 10027, Real Property No. 1366
Capehart Family Housing



Resource No. 10029, Real Property No. 1408
Capehart Family Housing



Resource No. 10030, Real Property No. 155
Chapel Center



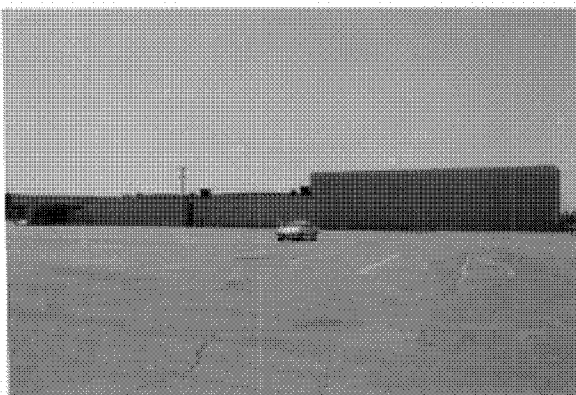
Resource No. 10031, Real Property No.
(unknown), Bank



Resource No. 10032, Real Property No. 292
Non Commissioned Officer's Open Mess



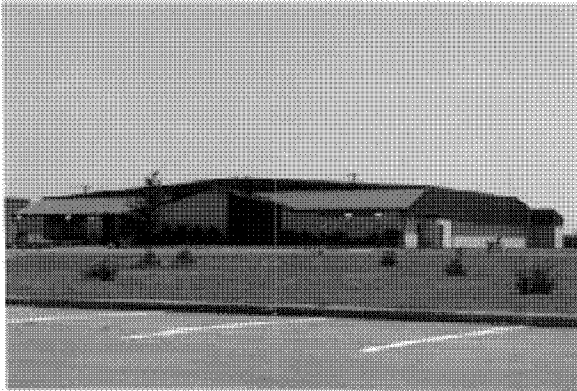
Resource No. 10033, Real Property No. 294
Base Theater



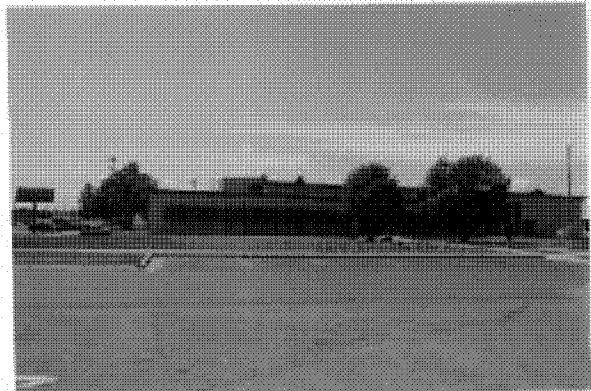
Resource No. 10034, Real Property No. 145
Recreation Supply Storage



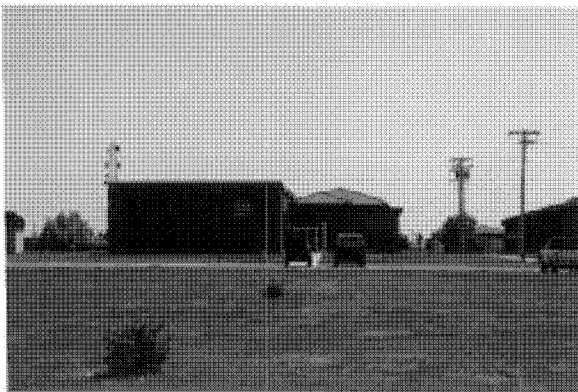
Resource No. 10035, Real Property No. 207
Airman's Dormitory



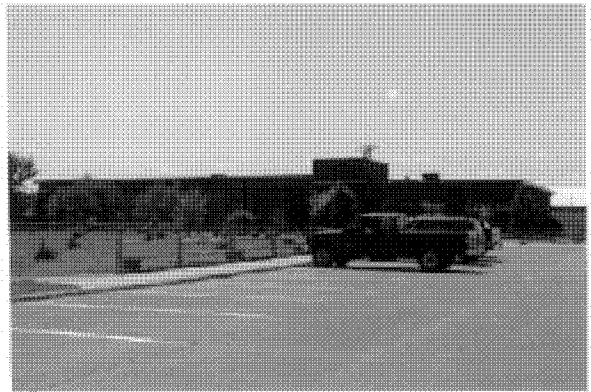
Resource No. 10036, Real Property No. 140
Bowling Center



Resource No. 10037, Real Property No. 202
Recreation Center



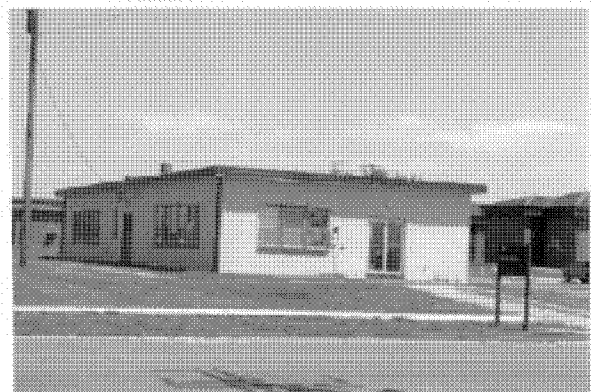
Resource No. 10038, Real Property No. 138
Miscellaneous Recreation Building



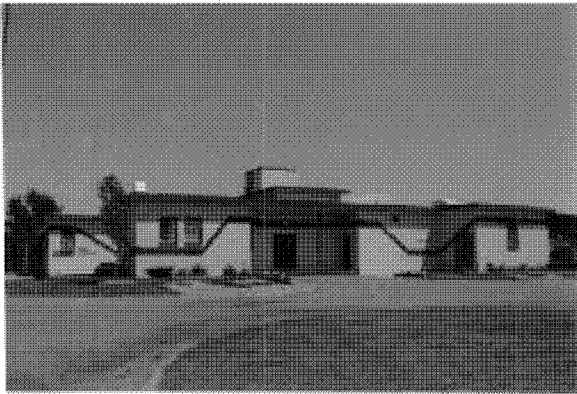
Resource No. 10039, Real Property No. 135
Group Headquarters



Resource No. 10040, Real Property Nos. 455,
456, Gymnasium and Youth Center



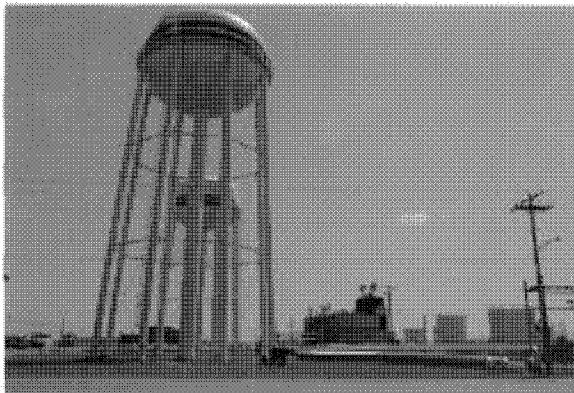
Resource No. 10041, Real Property No. 134
Thrift Shop



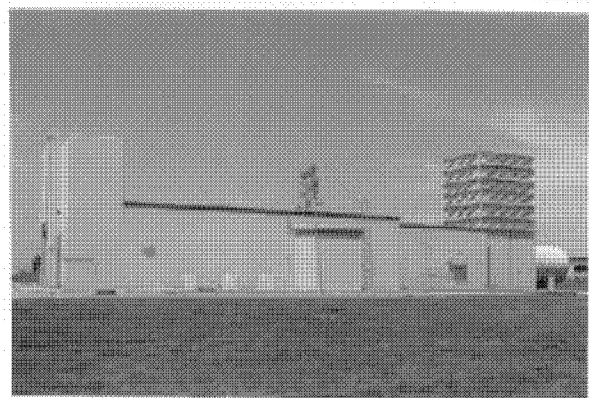
Resource No. 10042, Real Property No. 128
In-Flight Kitchen



Resource No. 10043, Real Property No. 2078
Tennis Courts



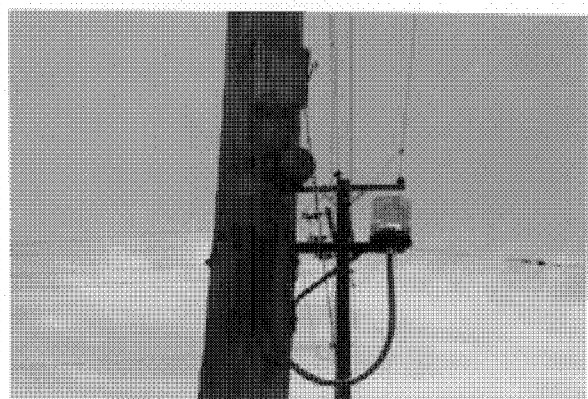
Resource No. 10044, Real Property Nos. 413,
414, Heating Facility Building and LF Pumping
Station



Resource No. 10045, Real Property No. 422
Test Cell



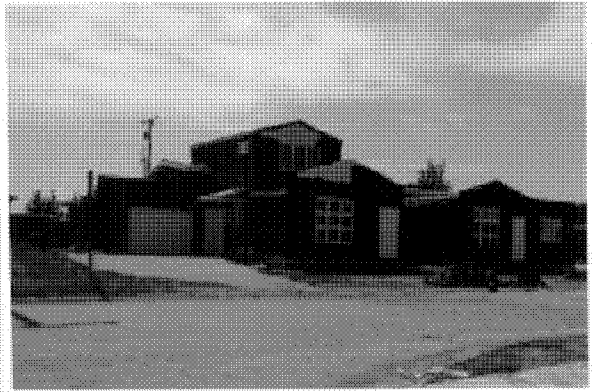
Resource No. 10046, Real Property No. 2182
Monuments/Memorial (F-106 *Delta Dart*)



Resource No. 10047, Real Property No. (none)
Alert Klaxon



Resource No. 10048, Real Property No. (unknown), Dakota Elementary School



Resource No. 10049, Real Property No. 2670 Family Housing FY Appr. 1950-1969



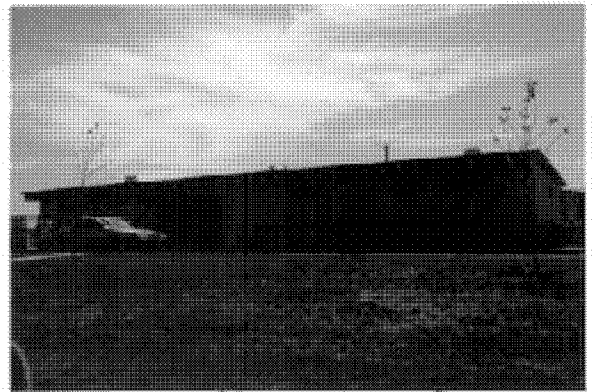
Resource No. 10050, Real Property No. 2675 Family Housing FY Appr. 1950-1969



Resource No. 10051, Real Property No. 1204 Capehart Housing



Resource No. 10052, Real Property No. 145 Commissary



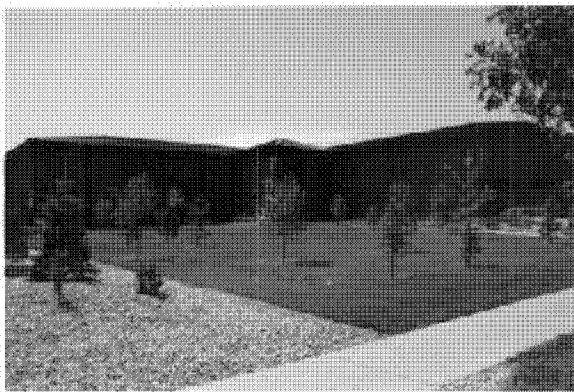
Resource No. 10053, Real Property No. 280 Swimming Pool



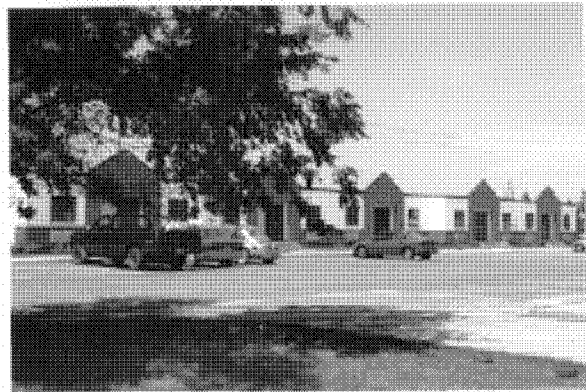
Resource No. 10055, Real Property No. 260
Branch Exchange (Shopette)



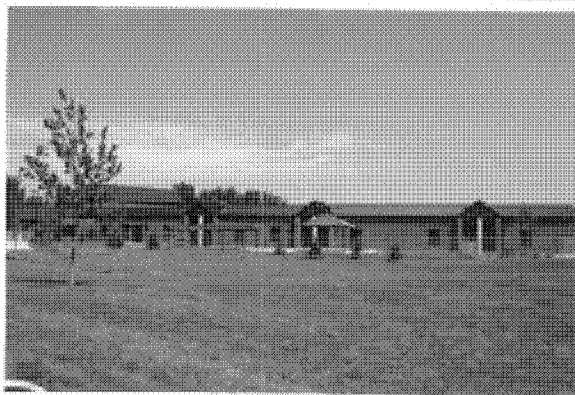
Resource No. 10056, Real Property No. 270
Cafe Snack Bar Exchange (Burger King)



Resource No. 10057, Real Property No. 156
Education Center



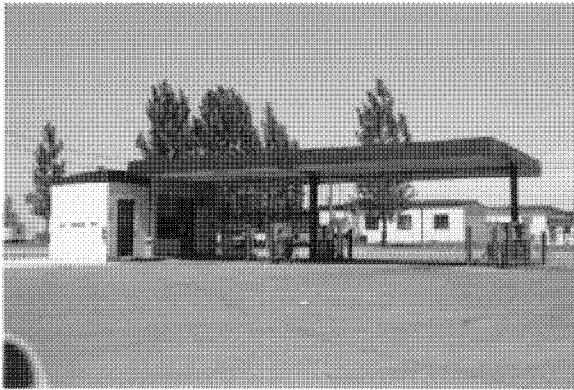
Resource No. 10058, Real Property No. 159
Temporary Lodging Facility



Resource No. 10059, Real Property No.
(unknown), Child Development Center



Resource No. 10060, Real Property No. 437
Sales Store Exchange



Resource No. 10061, Real Property No. 599
Vehicle Fuel Station



Resource No. 10062, Real Property No. (none)
Memorial/Monument (UH-1H Rescue &
Recovery Helicopter)



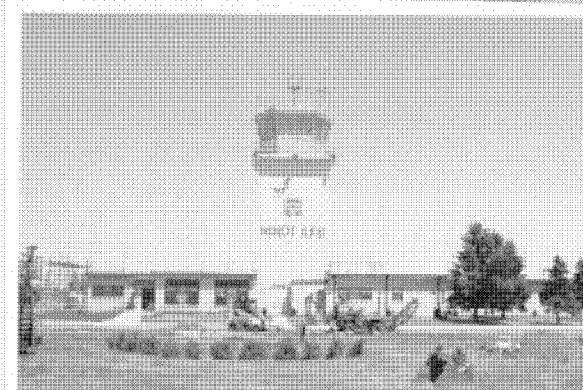
Resource No. 10063, Real Property No. (none)
Monument/Memorial (Minuteman Missile
Transporter)



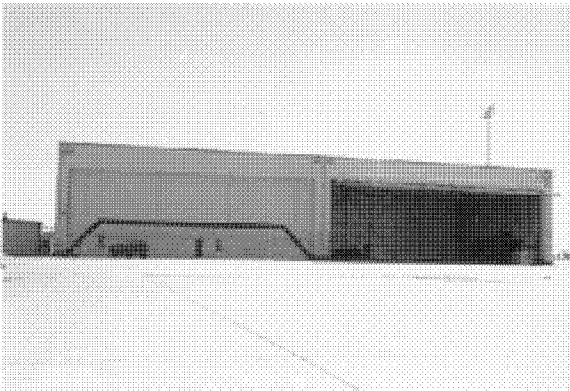
Resource No. 10064, Real Property No. 547
Group Headquarters



Resource No. 10065, Real Property No. 897
Fire Station



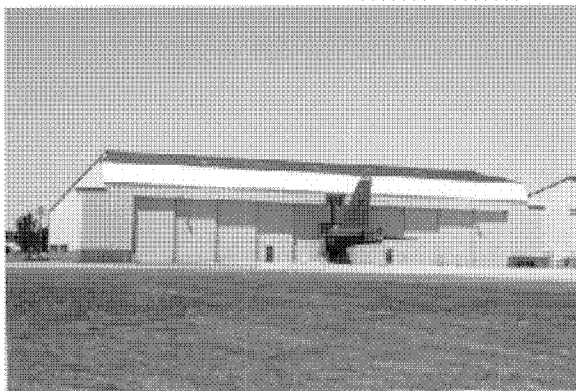
Resource No. 10066, Real Property No. 746
Base Operations



Resource No. 10067, Real Property No. 733
Small Aircraft Maintenance Dock



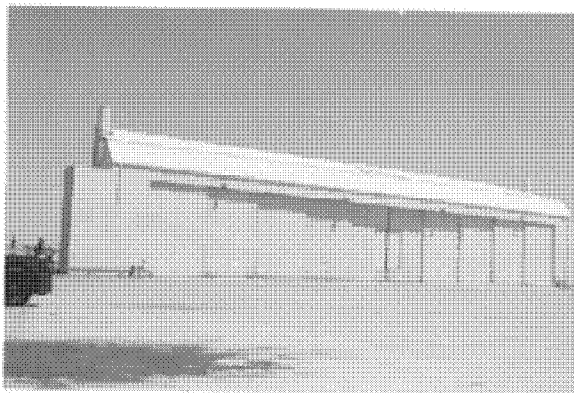
Resource No. 10068, Real Property No. 899
Rescue/Recovery Helicopter Dock



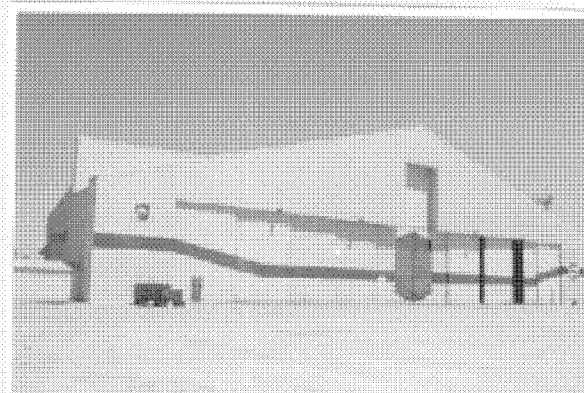
Resource No. 10069, Real Property Nos. 862,
863, Large Aircraft Maintenance Dock



Resource No. 10070, Real Property Nos. 836,
837, Fuel Systems Maintenance Dock and
Aircraft Corrosion Control



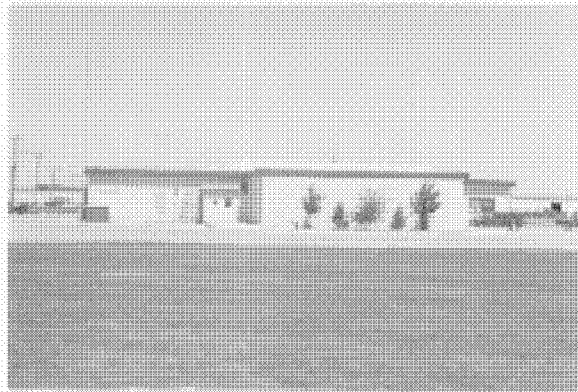
Resource No. 10071, Real Property No. 836
Fuel Systems Maintenance Dock



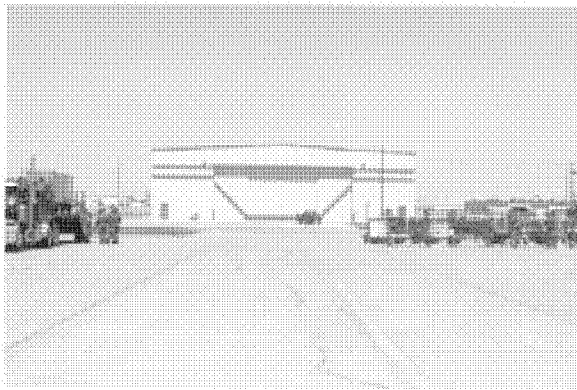
Resource No. 10072, Real Property No. 837
Aircraft Corrosion Control



Resource No. 10073, Real Property No. (none)
Monument/Memorial (AGE Static Display)



Resource No. 10074, Real Property No. 879
Base Engineer Maintenance Shop



Resource No. 10077, Real Property No. 761
Fuel System Maintenance Dock



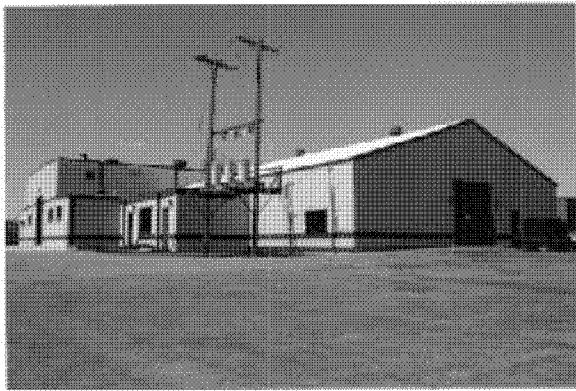
Resource No. 10081, Real Property No. 768
Group Headquarters



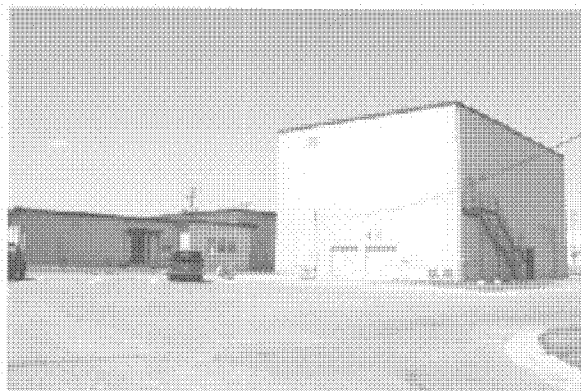
Resource No. 10082, Real Property No. 774
PME Lab



Resource No. 10083, Real Property No. 770
Field Training Facility



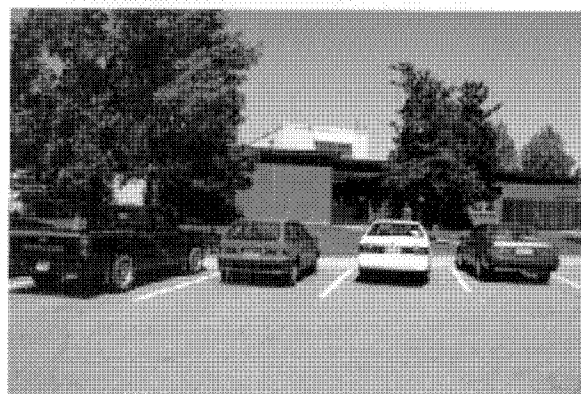
Resource No. 10084, Real Property No. 765
A/SE Shop



Resource No. 10085, Real Property No. 767
Base Photo Lab



Resource No. 10086, Real Property No. 773
Group Headquarters



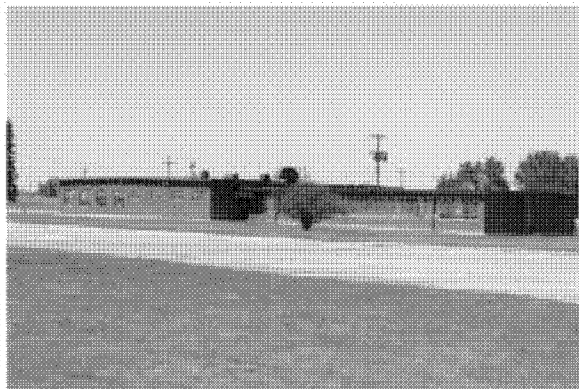
Resource No. 10087, Real Property No. 859
Avionics Shop



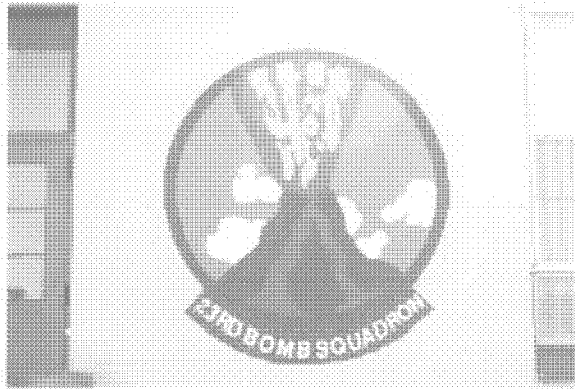
Resource No. 10088, Real Property No. 857
Aircraft General Purpose Shop



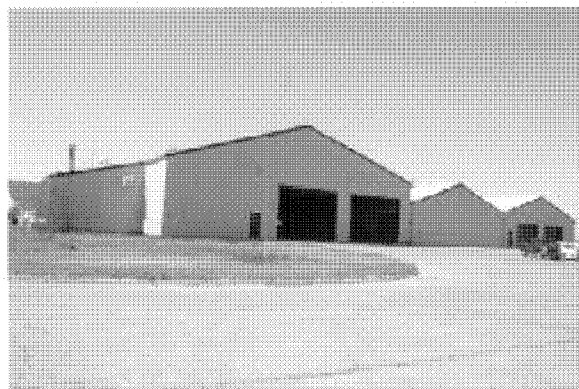
Resource No. 10089, Real Property No. 846
In-Flight Kitchen and Squadron Operations



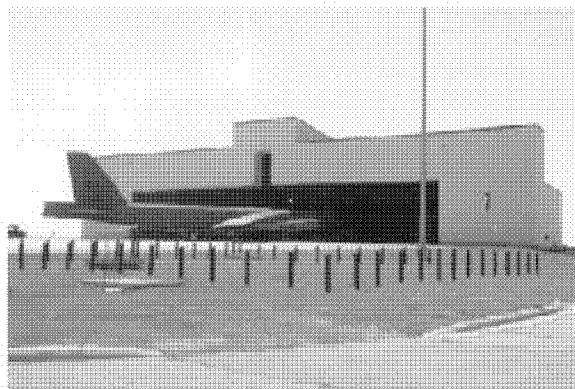
Resource No. 10090, Real Property No. 848
Wing Headquarters



Resource No. 10091, Real Property No. (none)
23d Bomb Squadron Emblem on No. 846



Resource No. 10092, Real Property No. 975
Weapons and Release Systems Shop



Resource No. 10093, Real Property No. 970
Large Aircraft Maintenance Dock



Resource No. 10094, Real Property No. 490
Security Police Canine Kennel



Resource No. 10096, Real Property No. 587
Miscellaneous Recreation Building



Resource No. 10097, Real Property No. 2171
Monument/Memorial (T-33 Trainer)



Resource No. 10098, Real Property No. 1176
Golf Club House



Resource No. 10099, Real Property No. (none)
Base Entrance Sign



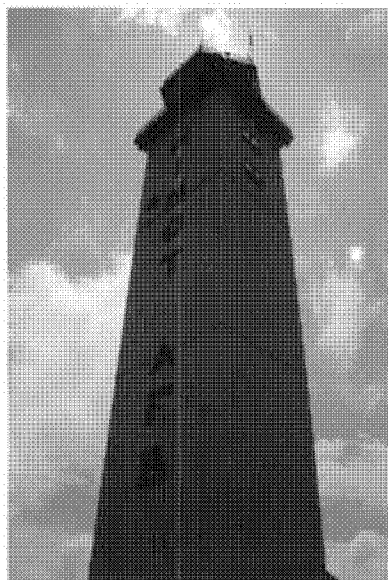
Resource No. 10100, Real Property No. 2121
Monument/Memorial (Minuteman I Missile)



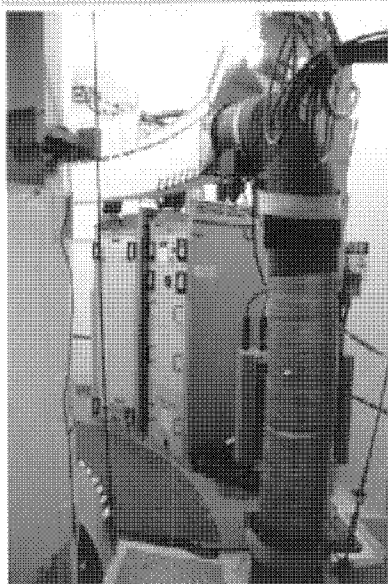
Resource No. 10101, Real Property No. 196
Security Police Identification Control



Resource No. 10102, Real Property No. 195
Traffic Check House



Resource No. 10104, Real Property No. 1032
Control Tower



Resource No. 10106, Real Property No. 690
High Bay Technical Training



Resource No. 10103, Real Property No. 194
Composite Medical Facility



Resource No. 10105, Real Property No. (none)
"Global Power for America" Sign

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT MINOT AFB

Resource Number: 10001

Property Description: Collection in Heritage Center including clothing, videos, film, photographs, missile components, and models.

Associated Property: 00475

Non-Inventoried Association:

Sub-installation:

Address: 300 Summit Drive

Base Map Date:

Base Map Building Number: inside 475

Operational Support & Installations: Memorial

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Museum Collection

Statement of Significance: Object useful to the interpretation of base history.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 3

Temporal Phase Relationship: 3

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Curate and catalog objects.

Object Category: Miscellaneous

Construction Materials of Object: Wood, metal, plastic, cloth

Year of Manufacture: unknown

Object Condition: In Storage/Benign Neglect

Period of Association: Late fifties to early sixties

Comments on Condition: Objects located in Heritage Center, which has not yet been organized, curated, etc...

Resource Number: 10011

Property Description: drawing files, two rows of ten feet tall drawer files
Associated Property:
Non-Inventoried Association: Base Engineering, Real Prop No. 450
Sub-installation:
Address: 310 Peacekeeper Place
Base Map Date:
Base Map Building Number: inside 450
Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Architectural Drawing Files

Statement of Significance: Files include drawings of historic properties

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	2
Temporal Phase Relationship:	3
Level of Importance:	2
Percent Historic Fabric:	3
Severity of Threats:	2
Total Score for Priority Matrix:	14
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: various
Period of Association: fifties to nineties
Comments on Condition: Documents in storage but threat involves drafting personnel occasional or frequent use of the files

Resource Number: 10012

Property Description:

Associated Property: SAGE building 475
Non-Inventoried Association: Base Engineering, Building 450
Sub-installation:
Address: 310 Peacekeeper Place
Base Map Date:
Base Map Building Number: inside 450

Operational Support & Installations:

Combat Weapons and Support Systems: Documentation
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Architectural Drawing Files

Statement of Significance: The files contain drawings of a historically significant building.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	2
Temporal Phase Relationship:	3
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	15
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: 1958
Period of Association: fifties to sixties
Comments on Condition:

Resource Number: 10013

Property Description: Crew Readiness Facility (Bomber) drawings
Associated Property: Crew Readiness Facility Building 1085
Non-Inventoried Association: Base Engineering, Bldg. 450
Sub-installation:
Address: 310 Peacekeeper Place
Base Map Date:
Base Map Building Number: inside 450

Operational Support & Installations:
Combat Weapons and Support Systems: Documentation
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Architectural Drawing Files

Statement of Significance: Files contain drawings of historically significant Bomber Alert Facility.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	2
Temporal Phase Relationship:	3
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	15
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: 1958
Period of Association: fifties to sixties
Comments on Condition:

Resource Number: 10014

Property Description: Wing Headquarters, Pride building; formerly SAGE building dedicated to early warning and attack readiness

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 300 Summit Drive

Base Map Date: 5/1/91

Base Map Building Number: 475

Operational Support & Installations:

Combat Weapons and Support Systems: Communications

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: SAGE Facility

Statement of Significance: The Wing Headquarters (PRIDE) building, originally SAGE building was designed for early warning and detection of Soviet attack over the north pole and for that reason has direct Cold War significance. Also contains currently used Command Room, Wing Headquarters.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 4

Percent Historic Fabric: 3

Severity of Threats: 3

Total Score for Priority Matrix: 21

Comments on Threats: Building will remain intact but ongoing construction and renovation threatens original functions of rooms and the building in general

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally significant and NRHP eligible.

Importance: Exceptional

Eligibility: Eligible

Height: 60

Square Footage: 225505

Original Planned Duration: Permanent

Existing Use: PRIDE building, wing Headquarters

Other Use/Dates: SAGE building/1960-1963

Comments on Use: Original use involved radar tracking and communication now utilized as office space

Primary Building Materials: Poured Concrete

Character Defining Features: No windows, command center intact, concrete frame ceiling.

Resource Number: 10015

Property Description: Originally Fighter alert facility, now maintenance dock

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 520 Summit Drive

Base Map Date: 5/1/91

Base Map Building Number: 718

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Fighter Alert Facility

Statement of Significance: The building served as an interceptor alert facility and for that reason has direct significance to the Cold War

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	3
Total Score for Priority Matrix:	22
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally significant, thus NRHP eligible.

Importance: Exceptional

Eligibility: Eligible

Height:

Square Footage: 20536

Original Planned Duration: Permanent

Existing Use: Maintenance dock

Other Use/Dates: Fighter Alert Hangar / 1958 - 1988

Comments on Use:

Primary Building Materials: Corrugated asbestos panels

Resource Number: 10016

Property Description: Crew Readiness Facility (Bomber), Space utilized as offices at present but building maintains capability to support Alert activities and alert maneuvers continue to be carried out on a quarterly basis

Associated Property: 01089, 01080, 01082

Non-Inventoried Association:

Sub-installation:

Address: 409 Deterrence

Base Map Date: 5/1/91

Base Map Building Number: 1085

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Bomber Alert Facility

Statement of Significance: The building served as a bomber alert facility and for that reason has direct significance to the Cold War

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 21

Comments on Threats: At present, alert capabilities are maintained reducing the risk of major structural changes, if this function ceases, threats may increase

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Exceptionally significant, thus NRHP eligible.

Importance: Exceptional

Eligibility: Eligible

Height: 15

Square Footage: 28506

Original Planned Duration: Permanent

Existing Use: Office space (quality dept) and quarterly alerts

Other Use/Dates: Bomber alert facility

Comments on Use:

Primary Building Materials: Poured Concrete

Character Defining Features: Access ramps to runway, building massing

Resource Number: 10017

Property Description: Tanker Alert facility
Associated Property: 01042
Non-Inventoried Association: 1041,1049, 1047, 1046,1043, 1044
Sub-installation:
Address: 104 Alert Ave.
Base Map Date: 5/1/91
Base Map Building Number: 1040

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Tanker Alert Facility

Statement of Significance: The buidings served as alert facilities for tankers that supported heavy bombers and for that reason have direct significance to the Cold War

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	3
Total Score for Priority Matrix:	22
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Exceptionally significant, but questionable integrity. Potential NRHP eligibility.

Importance: Exceptional
Eligibility Potential

Height: 20
Square Footage: 3750
Original Planned Duration: Permanent
Existing Use: Not presently in use
Other Use/Dates: Tanker Alert facility
Comments on Use:
Primary Building Materials: Concrete and steel

Resource Number: 10106

Property Description: Uniform-1: Minuteman Missile silo training facility.
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 315 Minuteman Drive
Base Map Date: 5/1/91
Base Map Building Number: 690

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities: Missile Training
Material Development Facilities:
Intelligence:
Property Type: Missile Launch Facility Trainer

Statement of Significance: Provided training for the Minuteman Missile system, a substantial role of Minot AFB during the Cold War.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	3
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Exceptionally significant and NRHP eligible.

Importance: Exceptional
Eligibility Eligible

Height: 0
Square Footage: 100
Original Planned Duration: Permanent
Existing Use: Training Facility
Other Use/Dates:
Comments on Use: Extends 87 feet below grade.
Primary Building Materials: Poured Concrete and Beryllium
Character Defining Features: Missile tube below surface, blast door, antenna, components

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Minot AFB, and to provide research materials for this study:

2Lt Tamara Schulman
Architect
5th Civil Engineering Squadron
(701) 723-4837

SSgt Strom
Wing Historian
5th Bombardment Wing
(701) 723-3501

SrA Chris Prater
Drafter
5th Civil Engineering Squadron
(701) 723-4830

Sgt Bret Mineart
Autocad
5th Civil Engineering Squadron
(701) 723-2872

Mr. Dwain Zodrow
Civil Engineer
5th Civil Engineering Squadron
(701) 723-4866

Ms. Colleen Johnson
Real Estate
5th Civil Engineering Squadron
(701) 723-4864

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Minot AFB history and Cold War context.

SSgt Strom, Wing Historian, 5th Bomb Wing, July 6 - 14, 1994

Col Hugh Smith, 5th Bomb Wing Headquarters, July 11, 1994

KNOWLEDGEABLE INDIVIDUALS

The following individuals were identified during the investigations as people with some knowledge of Minot AFB history during the Cold War. They were either unavailable during the field visit or possess much more information than could be documented during this reconnaissance.

Owen Brenden - former Engineering Design Chief, started working at Minot AFB in 1959.

John Sinn - Runway Inspector, still works on base with U.S. Army Corps of Engineers.

Eleanor Mignault - retired Missile Wing Commander Secretary, worked in that position for over 30 years.

Matt Klein - former Civilian Deputy to the 5th Civil Engineering Squadron beginning in 1966.

Lyle Dagner - Missile Engineer, knowledgeable on missiles in general and the Minuteman system specifically.

Morris Isaacson - former Deputy of 5th Civil Engineering Squadron.

Bob Vannett - planning.

Ray Juhola - reportedly wired most of the SAGE building.

John Fahn, Andy Klouse, Al Johnson, John Bohlig - electricians and carpenters at Minot AFB in the early 1960s.

Tony Frank - retired Chief Master Sergeant at Minot beginning in 1975.

Kevin Nelson - current Deputy to the Commander of the 5th Civil Engineering Squadron.

Ed Perdue - has been working at Minot AFB since 1961 when he started as a courier.

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-20: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT MOODY AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Patience Elizabeth Patterson
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Moody Air Force Base and the Grand Bay Weapons Range were inventoried by Patience E. Patterson and David P. Staley between October 3 and 10, 1994 as part of the Air Combat Command Cold War study under the ongoing Department of Defense Legacy Program. Information concerning base Cold War history and associated buildings was gathered on site from the files of the Real Property Office, Drafting Office, Environmental Office, Community Planning Office, Public Affairs Office, and Wing History Office. An initial photographic inventory of Cold War resources on the base and weapons range was also conducted.

Using the inventory and the information gathered on base history, resources were selected for further documentation and evaluation according to their importance to the base Cold War context. No structures or buildings were determined to be significant to the base Cold War history. However, two sets of documents were identified that significantly contribute to knowledge of base Cold War history and development. These two resources include the Documentary Collection kept in the Wing History Office and the Documentary Collection located in the Drafting Section of Civil Engineering. Further documentation in the form of inventory, stewardship, and conservation are recommended for both of these resources.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ACS	- Air Control Squadron
AFB	- Air Force Base
AGE	- Air Ground Equipment
AS	- Airlift Squadron
ATC	- Air Training Command
CES	- Civil Engineering Squadron
CRS	- Component Repair Squadron
CTAF	- Crew Training Air Force
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
FS	- Fighter Squadron
FTD	- Field Training Detachment
FW	- Fighter Wing
HABS	- Historic American Buildings Survey
LANTIRN	- Low Altitude Navigation and Targeting Infrared for Night (system)
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NATO	- North Atlantic Treaty Organization
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCNUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants
RAPCON	- Radar Approach Control
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TFS	- Tactical Fighter Squadron
TFW	- Tactical Fighter Wing
USAF	- United States Air Force
WRSK	- War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	5
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	17
4.0 METHODOLOGY	23
4.1 INVENTORY	23
4.2 EVALUATION OF IMPORTANT RESOURCES	24
4.2.1 Documentation	24
4.2.2 Evaluation of Importance	24
4.2.2.1 Cold War Context	24
4.2.2.2 NRHP Criteria	25
4.2.2.3 Exceptional Importance	26
4.2.3 Evaluation of Integrity	26
4.2.4 Priority Matrix	27
4.2.5 Resource Organization	28
4.3 BASE SPECIFIC METHODS	28
5.0 RECONNAISSANCE INVENTORY RESULTS	30
6.0 EVALUATION RESULTS	31
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	31
6.1.1 Documentation	31
6.1.1.1 Documentary Collection	31
6.1.1.2 Documentary Collection	33
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	33
6.3 MATERIEL DEVELOPMENT FACILITIES	33

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.4 TRAINING FACILITIES	33
6.5 INTELLIGENCE FACILITIES	33
7.0 UNDOCUMENTED RESOURCES	34
8.0 FUTURE THREATS TO RESOURCES	35
9.0 PRELIMINARY RECOMMENDATIONS	36
9.1 NRHP ELIGIBILITY	36
9.1.1 Evaluation and Determination of NRHP Eligibility.....	36
9.1.2 Implications of NRHP Eligibility	38
9.2 EVALUATED RESOURCE RECOMMENDATIONS.....	40
9.2.1 Documentary Collection	40
9.2.2 Documentary Collection	42
10.0 REFERENCES CITED	43
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: ADDITIONAL RESOURCES	
APPENDIX F: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Moody Air Force Base	6
Figure 2.2 Moody Air Force Base Layout	7
Figure 2.3 Standard Tactical Air Command Base Layout	8
Figure 2.4 Moody Air Force Base Land Use Diagram	11
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	12
Figure 3.1 Moody Air Force Base, 1950-1960	18
Figure 3.2 Moody Air Force Base, 1960-1970	19
Figure 3.3 Moody Air Force Base, 1970-1980	21
Figure 3.4 Moody Air Force Base, 1980-1990	22

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	32
Table 6.2 Evaluated Resource Prioritization by Priority Rank	32
Table 9.1 Recommendations for Evaluated Resources	41

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

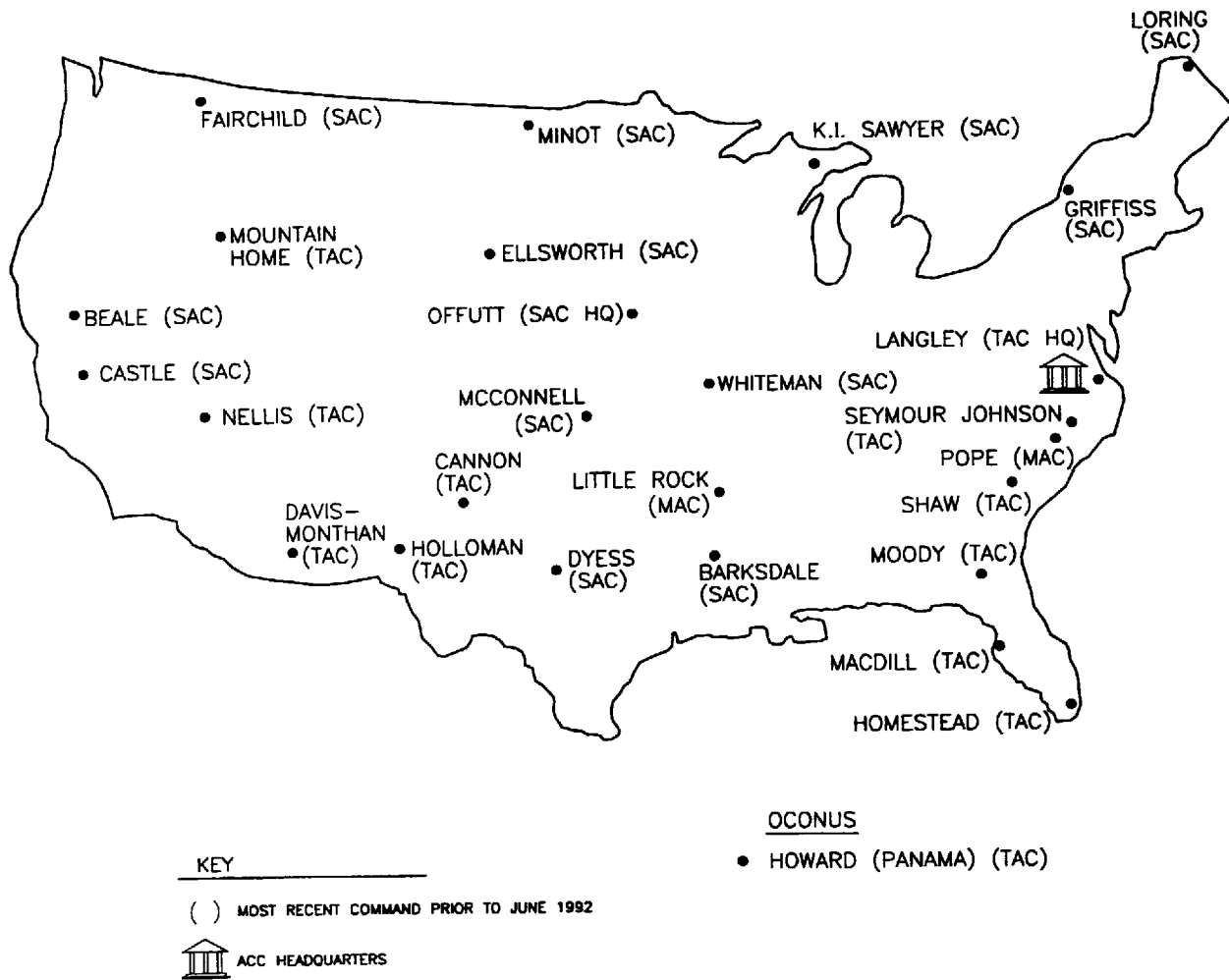
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE MOODY\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Moody Air Force Base (AFB). Moody AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The host unit on Moody AFB is the 347th Fighter Wing (FW) under ACC and the Ninth Air Force. The overall mission of the 347th FW is to train assigned forces to a high state of readiness for offensive and defensive air tactics and close air support of friendly ground forces. Additionally, the wing must maintain the capability to deploy its assigned forces worldwide in support of the United States and its allies (Moody AFB 1994).

The 347th FW has been designated a composite wing under the ACC and is currently in transition. The composite wing will consist of F-16 *Fighting Falcon*, A/OA-10 *Thunderbolt II*, and C-130 *Hercules* aircraft. At present, the wing has four flying squadrons. The 68th Fighter Squadron (FS), the 69th FS, and the 307th FS each have 18 F-16 aircraft. The 52nd Airlift Squadron (AS) has 10 C-130 aircraft. The 71st Air Control Squadron (ACS) is also a part of the wing.

The 347th FW consists of four groups: operations, logistics, support, and medical. Under the 347th Operations Group each squadron maintains its assigned aircraft. This maintenance includes aircraft servicing, unscheduled maintenance, preflights, flights, basic postflights, and munitions loading. The 347th Logistics Group's mission is to support the war fighters and includes five squadrons: Maintenance, Logistics Support, Supply, Transportation, and Contracting. The 347th Support Group performs operations, maintenance, and security functions necessary to support all of the organizations assigned and attached to Moody AFB. The group includes five squadrons: Security Police, Civil Engineering, Mission Support, Communications, and the Morale, Welfare, Recreations, and Services Squadron. The 347th Medical Group is dedicated to providing quality and comprehensive medical care. There are currently seven tenant units on Moody AFB (Moody AFB 1993:19).

2.2 GEOGRAPHIC DESCRIPTION

Moody AFB is located in south central Georgia on the northwestern edge of the Okefenokee Swamp, between the Gulf of Mexico and the Atlantic Ocean. It is situated within the boundaries of two counties, Lowndes and Lanier, and is 10 mi (16 km) northeast of Valdosta on State Highway 125 (Figure 2.1). Grand Bay Weapons Range is situated on the eastern adjacent property, 3 mi (5 km) from the main base development. Moody AFB and Grand Bay Weapons Range amount to 11,316 acres (4,580 ha).

Moody AFB and Grand Bay Weapons Range lie within the flat Coastal Plain physiographic province and the Outer Coastal Plain Forest, with a mix of beech, sweetgum, magnolia, pine, and oak. The climate is subtropical with mild winters and hot, humid summers (United States Air Force [USAF] 1993a:3-82 - 3-84). The elevation at the control tower on base is 233 ft (71 m) above mean sea level. The base is surrounded by forest and farmlands, with limited urban development occurring between Moody AFB and Valdosta (Moody AFB 1989:4).

2.3 CURRENT BASE LAYOUT

The Moody AFB layout (Figure 2.2) is similar to the standard TAC base layout (Figure 2.3). The central feature of Moody AFB, like all bases, is the airfield portion of the base. Both main runways, the north-south runway and the instrument runway, are positioned in a north/south orientation and are 8,000 ft (2,438 m) long and 150 ft (45 m) wide. Both of these runways have been operational since 1955. Prior to this, the base had four 5,000 ft (1,524 m) runways oriented north-south, east-west, northeast-southwest, and northwest-southeast. The early runways tightly bounded base buildings and facilities on the south, east, and northeast and continue to shape the current layout. Portions of these older runways can still be seen as breached expanses of concrete. The old north-south runway was lengthened in 1955 and incorporated into the present north-south runway. The southern portion of the old east-west runway is now used for mission buildings and personnel parking lots. The northern portion is a maintenance apron for aircraft.

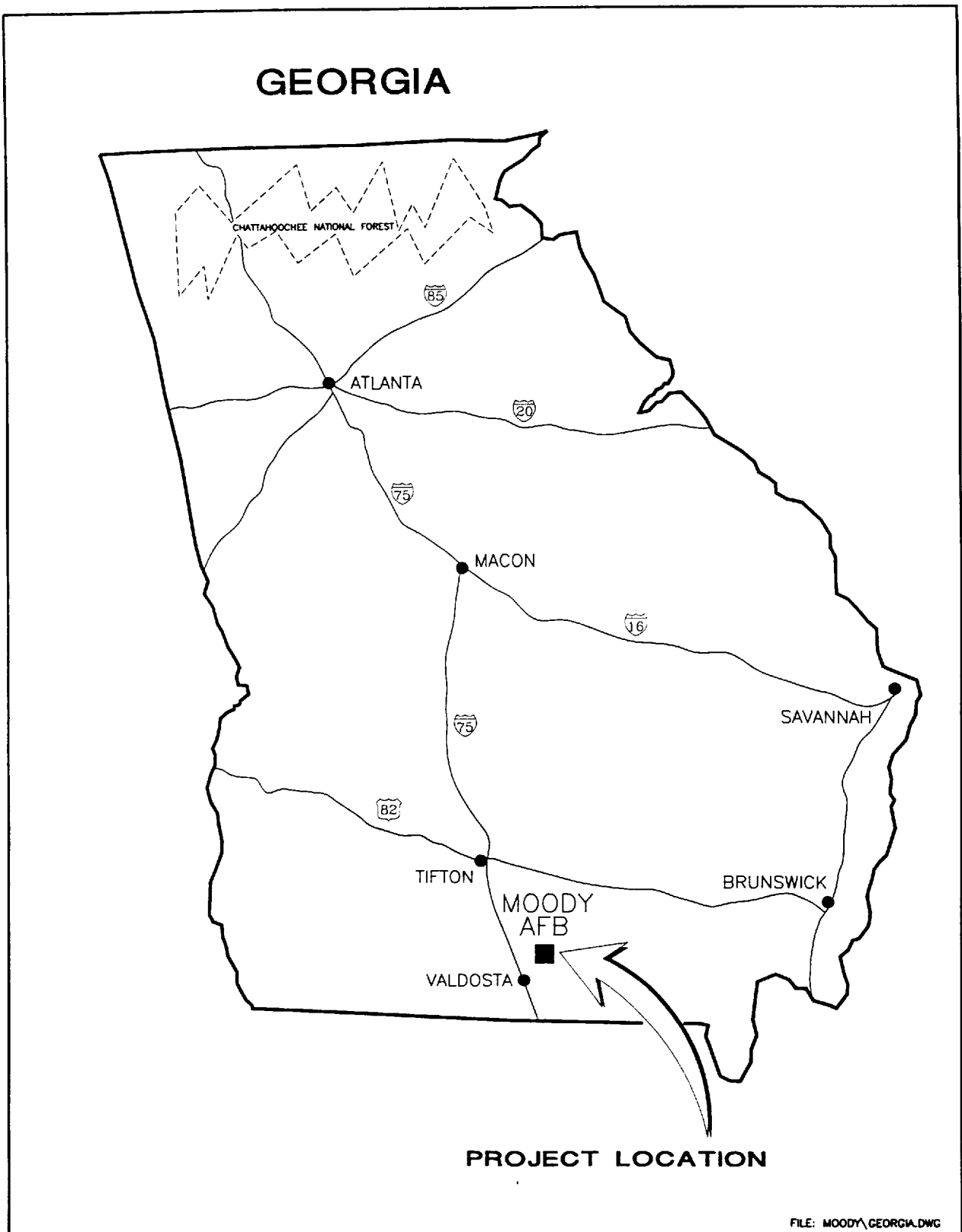


Figure 2.1 Location of Moody Air Force Base.

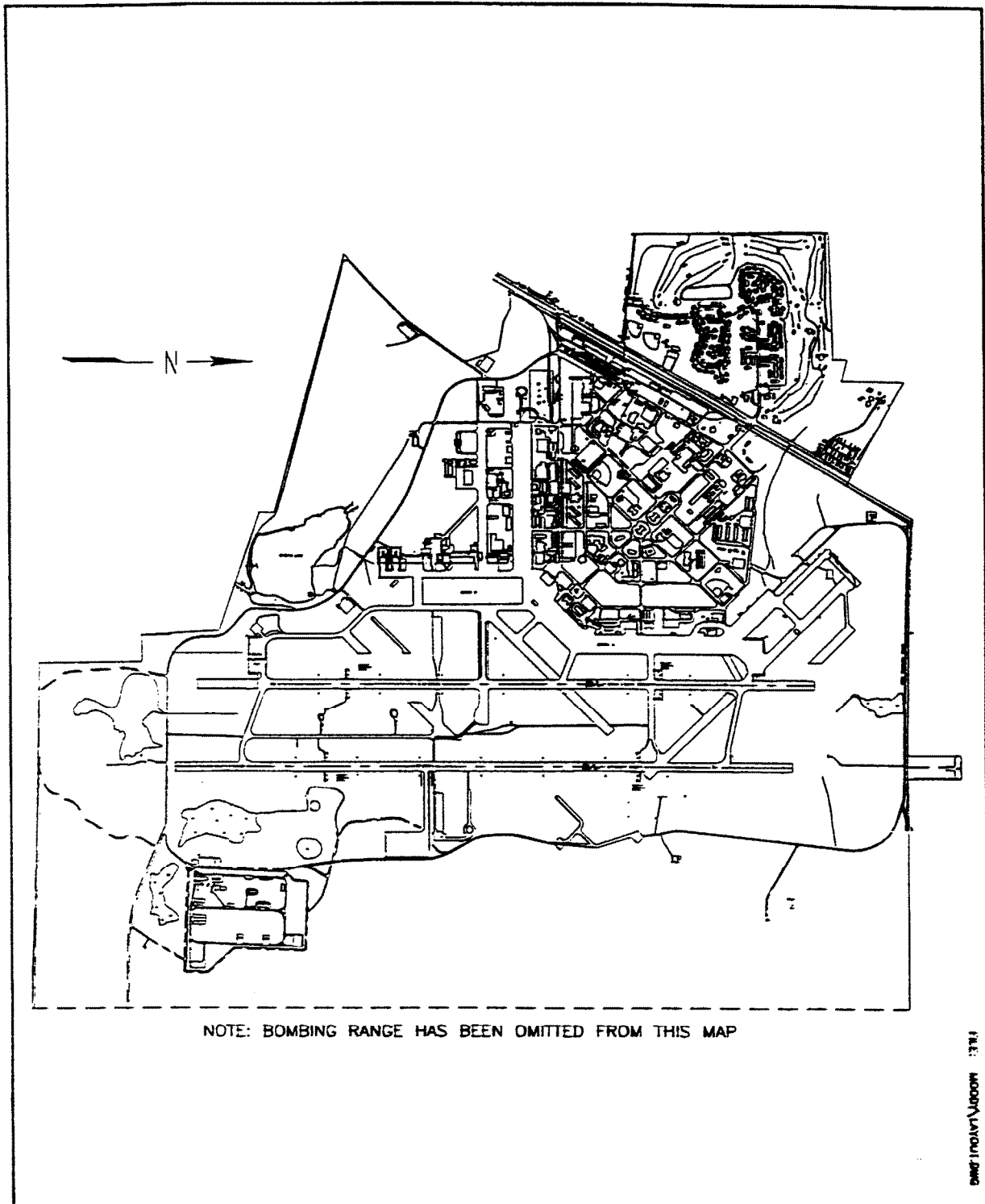


Figure 2.2 Moody Air Force Base Layout.

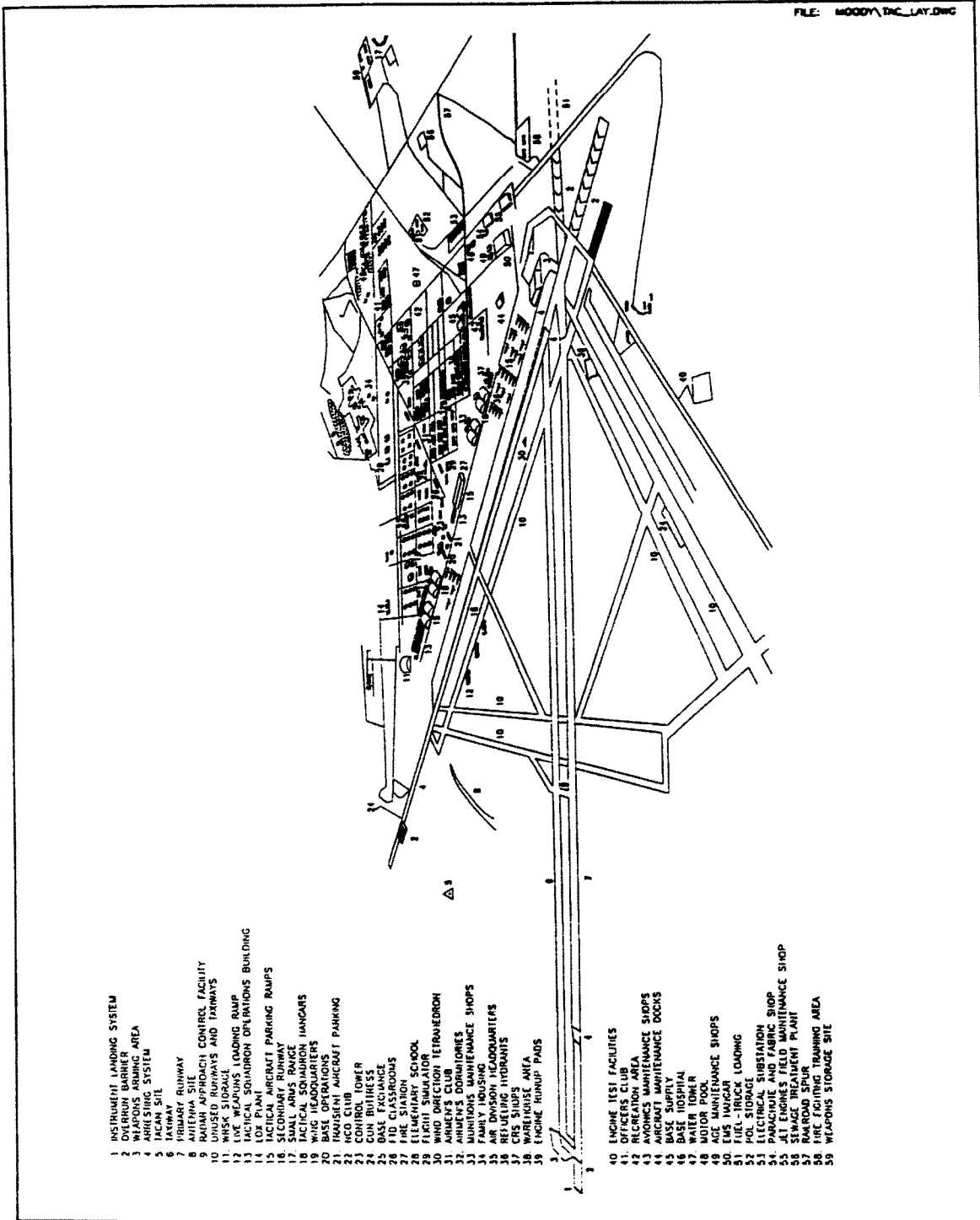


Figure 2.3 Standard Tactical Air Command Base Layout.

The majority of the base buildings are located between the four old runways and the northeast-southwest oriented State Highway 125. The main gate is located toward the northern end of the base opposite the entrance to the base housing area. A flight apron is centrally located along the old east-west runway, south of the majority of base buildings, and west of relatively recently constructed F-16 mission facilities. Mission and support buildings are also found wrapping around the inside of the area described by the old runways. Weapons storage facilities are separated from the rest of the base and located on the eastern side of the main runways, as are the new facilities associated with the 71st ACS.

Unaccompanied housing, community areas, and headquarters buildings are centrally located at the base. Accompanied or family housing is located northwest of State Highway 125. Commander's housing is located southeast of the highway at the northern end of the base. This is the only single family housing area located on the southern side of the highway. Recreational areas are found interspersed throughout the base. The base golf course lies adjacent to the family housing in the northwestern part of the base. The youth center is also located there.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan for Moody AFB, and Figure 2.5 is a diagrammatic land use plan of a standard TAC base. Moody AFB is different from the standard TAC base in some ways. Most notable is that Moody AFB's overall plan, which has been dictated by the original four runways, is irregular and extends away from the runways. The standard base plan is rectangular, with an orientation paralleling the main runways. Also, industrial areas are located along the western edge of the base, adjacent to the highway, and on the other side of the runways away from the mission area. The standard plan has the industrial area along a portion of the runway next to the mission area and no developed areas on the other side of the runway.

Despite these differences, Moody AFB follows the standard plan in a majority of ways. In both plans, mission buildings are found along the flight line, and family housing is located farthest away from the flight line. The headquarters, unaccompanied housing, recreation, base support, and community facilities tend to be located near the middle of the base, separating the mission and family housing areas.

Compared to the standard TAC plan and to other USAF bases included in this study, open spaces at Moody AFB are numerous. The abundance of open spaces on the base has contributed to the preservation of World War II buildings.

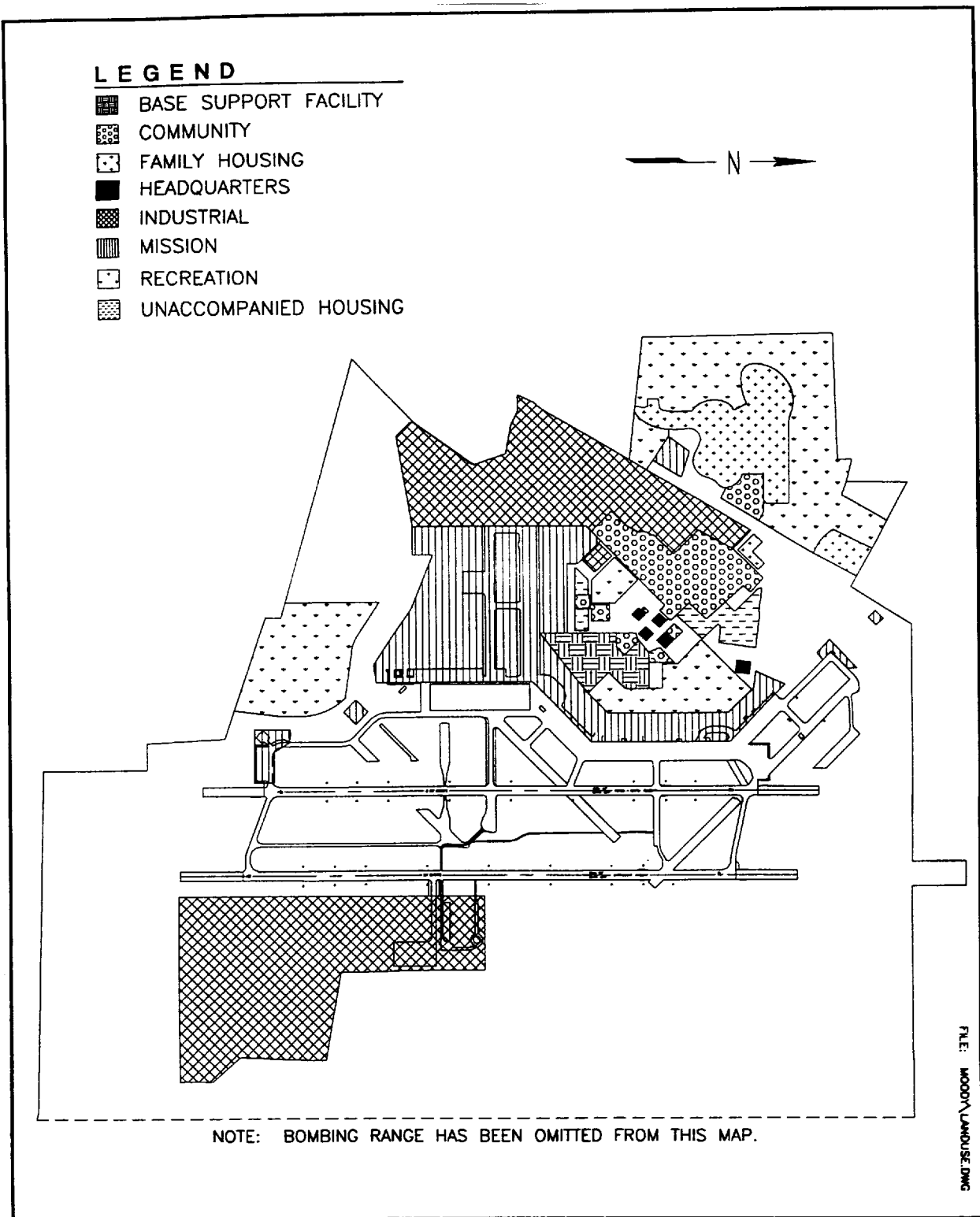


Figure 2.4 Moody Air Force Base Land Use Diagram.

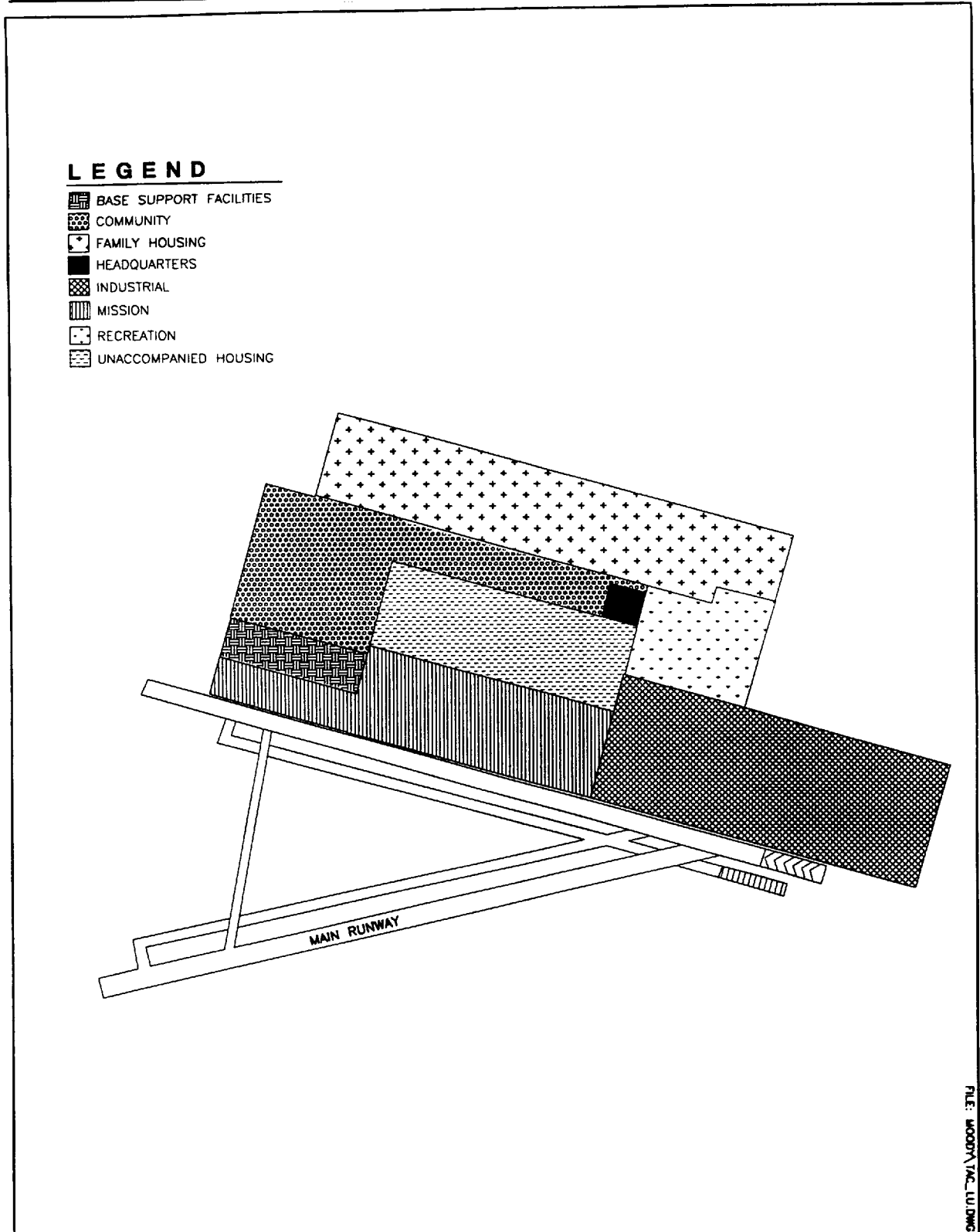


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Moody Field was established on June 2, 1941. The City of Valdosta and the Lowndes County Chamber of Commerce, desiring to benefit from the expanding World War II defense program, promoted the Valdosta area for development of an Air Corps training base (Lancaster 1964:2; 1989:50). The proposed Lakeland Flatwoods Project was approximately 9,000 acres of land in Lowndes and Lanier Counties (Department of the Air Force 1972:1). The Army Air Corps secured legal rights to the Flatwoods property in May of 1941 for development of an Army Air Forces pilot school and bombardier school. Construction of the field started on July 28, 1941, when the Georgia and Florida Railway laid a temporary spur track through a corn field to the training field site. On November 25, the first occupants arrived at Moody Field, and on December 8, the first aircraft arrived. By February 1942, training had begun in earnest at Moody Field (Lancaster 1989:55).

Moody Field was named in honor of Major George Putnam Moody who had been killed in a May 1941 accident while serving on the inspection board for twin-engine training planes to be sent to Valdosta (Lancaster 1989:54). In addition to the twin-engine advanced flying school, Moody Field operated a bomber-navigator-observer school. The original completion report (War Department 1942) for the field indicates that black air corps troops were housed and fed separately from the white troops. There are no extant records to indicate which buildings or areas of Moody Field were associated specifically with the black servicemen during its World War II history.

The field maintained a personnel strength of approximately 4,000 throughout the war effort (Lancaster 1989:55). However, Moody Field was deactivated in August of 1946, and its population shrank to caretaker capacity with one officer and 12 civilians overseeing the

installation. For five years, Moody Field was a satellite field in inactive status, administered by the 2421st Base Unit at Barksdale Field, Louisiana (Lancaster 1989:55).

In the summer of 1950, North Korea invaded South Korea, and by late autumn, China had aligned itself with the North. In the context of Cold War policy and strategy, President Truman committed the United States to defend South Korea against Communist expansion (Lewis et al. 1995). An increase in American forces and conventional weaponry was seen as necessary, and as a result, Moody Field was reactivated in May 1951 as a pilot training base. It was now a part of the new Air Force, and was subsequently renamed Moody AFB (Lancaster 1989:55).

An acute housing shortage developed with the reactivation of Moody AFB, and only two-thirds of the military people needing housing could be accommodated in Valdosta and surrounding towns (Lancaster 1964:32). Plans were drawn up for construction of a base trailer court, still located today on the northwestern side of the base, just west of State Highway 125, and east of the Sewer Treatment Plant. One hundred eighty permanent personnel were housed in the bachelor officer quarters; 85% of those personnel were married (Lancaster 1964:33). In October of 1953, the Air Force requested that the Public Housing Administration provide housing for black noncommissioned officers (NCOs) assigned to Moody AFB. The explanation for this request was that no defense housing had previously been built in Valdosta for black military personnel (Lancaster 1964:28-31).

In September 1951, four months after the re-opening of the base, Air Training Command (ATC) took control of the base. Moody AFB was one of nine newly created Crew Training Air Force (CTAF) bases. The base's primary mission was to meet the requirements of the Air Force Pilot Instrument School and Instrument Flying School. The mission aircraft were F-89 *Scorpions* and F-94 *Starfires*, both all-weather interceptor jets. In 1954, the wing was redesignated the 3550th Combat Crew Training Wing. In 1957, the F-86 *Sabrejet* became the mission aircraft. The Pilot Instrument School continued at the base until early 1958, when it moved to James Connally AFB in Waco, Texas. Moody AFB was still under ATC and was assigned the 3550th Flying Training

Wing with the primary mission of training interceptor pilots for all-weather conditions. Two years later, in 1960, the base had a combined pilot training program that included pre-flight, primary, and basic flight training together. Under this configuration, the 3550th Flying Training Wing was redesignated the 3550th Pilot Training Wing. The wing flew both T-33 and T-37 jet aircraft in its training mission. In 1963, the T-38 *Talon* replaced the T-33 as the final phase pilot training aircraft (USAF 1992a).

On December 1, 1973, the 3550th Pilot Training Wing was redesignated the 38th Flying Training Wing, but there were no changes in personnel, mission, or aircraft (USAF 1992a). Following the end of United States military involvement in Southeast Asia in 1973, ATC began plans for closing Moody AFB. TAC stressed the need for another fighter base in the southeastern United States and convinced the Air Force to transfer the base to TAC. The 347th Tactical Fighter Wing (TFW) relocated from Thailand to Moody AFB, bringing with it the 68th and 70th Tactical Fighter Squadron (TFS). Three months later, the 339th TFS joined the wing. The 347th TFW became the host unit in December 1975 (347th TFW History Office 1993) when the 38th Flying Training Wing was reassigned. The wing continued the training mission in order to retain readiness as a tactical fighter force. In 1980, the wing became a key element of the newly formed Rapid Deployment Joint Task Force (later known as the U.S. Central Command). In 1983, the 339th TFS was deactivated, and the 69th TFS was activated in its place, assuming its personnel, aircraft, and equipment. The wing continued its mission through 1987 (347th TFW History Office 1993).

In the Spring of 1987, the 347th TFW began converting from the F-4E *Phantom II* to the F-16 aircraft. The wing's three flying squadrons, along with base personnel and facilities, completed the conversion in July 1988. The wing's mission tasks were dedicated to Western Europe and the 347th TFW was included in the North Atlantic Treaty Organization (NATO) contingency plans (347th TFW History Office 1993). At the end of the Cold War period, the 347th TFW began receiving the first F-16C/D *Block 40* aircraft. The 347th TFW was the first TAC F-16 wing to operationally employ the Low Altitude Navigation and Targeting Infrared for Night (LANTIRN)

system, a system that permits improved low level, high speed navigation and targeting during night or under bad weather conditions (347th TFW History Office 1993).

Grand Bay Weapons Range is located adjacent to the main base's eastern boundary and consists of 5,874 acres (2,377 ha) of fee owned land (Moody AFB 1989:34). Construction on the weapons range complex was completed on October 29, 1987. This range allows Moody AFB pilots to gain maximum training from each mission. The complex contains a bombing pit which is a 600 x 700 ft area, a bomb target on a 600 ft diameter mound of sand, four strafing zones, two 50 ft high observation towers to triangulate bomb positions in relation to the targets, support buildings, and two parking lots. The surrounding property is undeveloped wetlands and forest (Moody AFB 1989:35).

The Base Realignment and Closure Commission announced in April 1991 that Moody AFB would be closed. However, community action to save the base resulted in reversal of the decision in July. In October 1991, the word 'tactical' was removed from the wing's and its flying squadrons' designations, leaving the 347th FW and the 68th, 69th, and 70th FS. This reflected the blurring of traditional tactical and strategic roles (USAF 1992b).

In June 1992, Moody AFB became a part of ACC. In the following November, the 307th and 308th FS were reassigned from Homestead AFB to the 347th FW due to destruction of the Florida base by Hurricane Andrew. The acquisition of these two squadrons delayed plans for transformation of the 347th FW into a composite wing. In 1993, the 71st ACS joined the wing from MacDill AFB, Florida. Later that year, the 308th and 70th FS were deactivated, leaving the 68th, 69th, and 307th FS under the 347th FW.

In May 1993, the Air Force officially announced plans to transform the 347th FW into a projected force composite wing at Moody AFB. The plans called for one ACS squadron, two F-16 squadrons, one C-130 squadron, and one A/OA-10 squadron. In July 1994, the 52nd AS was assigned to the wing with 10 C-130 aircraft. This left the base with one ACS squadron, three F-

16 squadrons, and one C-130 squadron at the end of 1994. To meet the composite wing plans, one F-16 squadron will be deactivated in 1995, and an A/OA-10 squadron with 18 aircraft will arrive at the base mid-1995 (Moody AFB 1994). With this mix of aircraft, the wing is to provide multiple-role close air support for Army battlefield commanders in air and land battlefield scenarios (USAF 1993a:2-1).

Today, after almost 20 years, the 347th FW remains the host unit for the base. Although the configuration of the wing, its mission tasks, and the accompanying nomenclature have changed somewhat, Moody AFB still performs its critical, supporting mission of training pilots and crews to be battle ready and capable of carrying out the USAF mission.

3.2 BASE DEVELOPMENT

When Moody Field was inactivated in 1946 it had a four-runway design (Figure 3.1), providing north-south, east-west, northeast-southwest, and northwest-southeast runways. There are 31 facilities which were built in 1941 that remain today. Their uses range from maintenance hangars and other maintenance facilities to headquarters buildings and community facilities. They have been upgraded and refurbished as time and necessity have dictated.

The base was reactivated in 1951 during the Korean Conflict and once again had a training mission. Development included family housing, unaccompanied housing, weapons systems maintenance facilities, Radar Approach Control (RAPCON) facilities, and two runways built in 1955 and 1956, both 150 x 8,000 ft (Figure 3.1). The two runways extend in a north-south direction and are separated by 1,225 ft. At the time, the western runway was considered to be in poor condition, but necessary and essential if mission aircraft were changed (Moody AFB 1959).

In the 1960s, community facilities were upgraded or added (Figure 3.2) including the gymnasium, base theater, swimming pool and bath house, NCO Open Mess, hospital, and Officer's Open

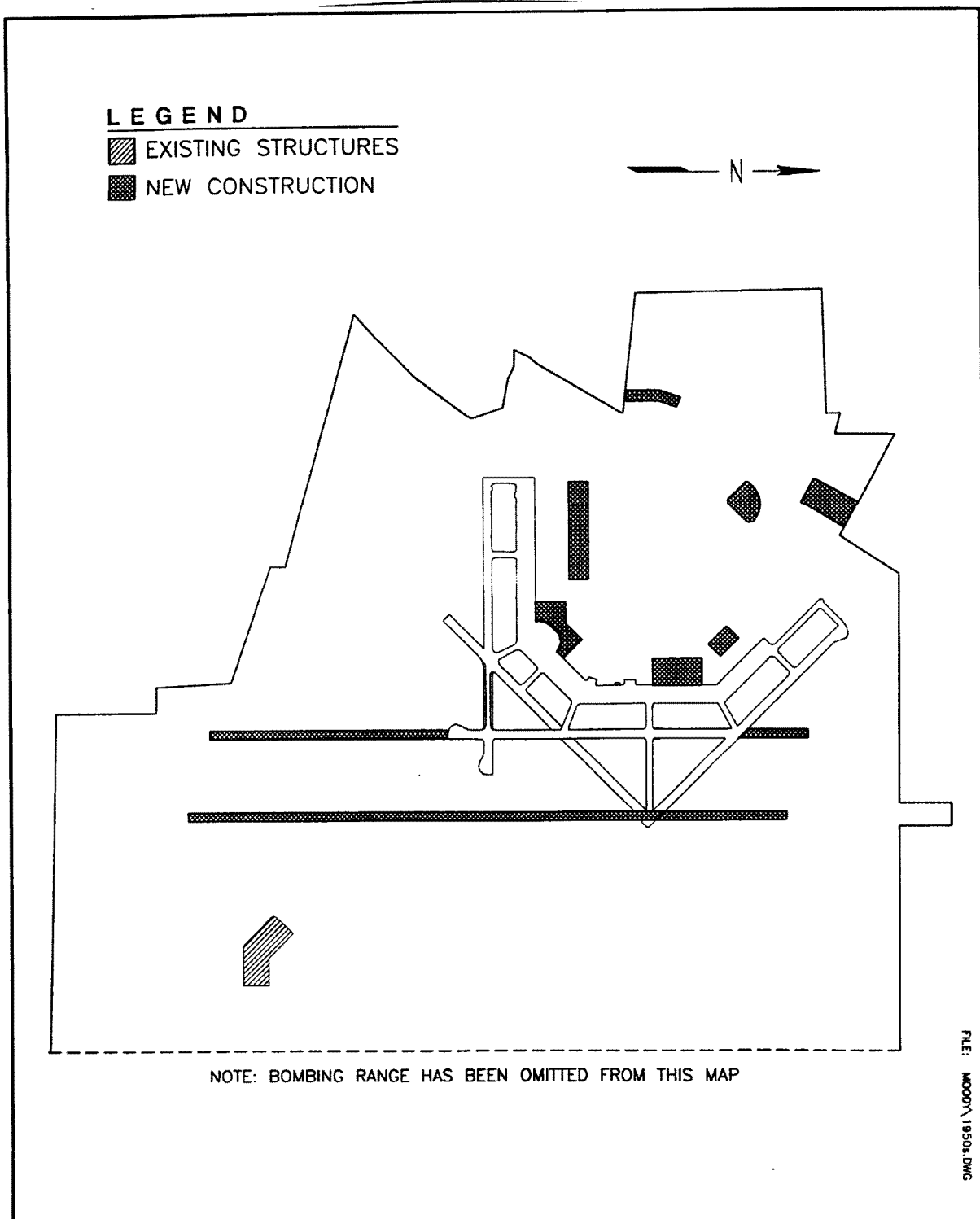


Figure 3.1 Moody Air Force Base, 1950-1960.

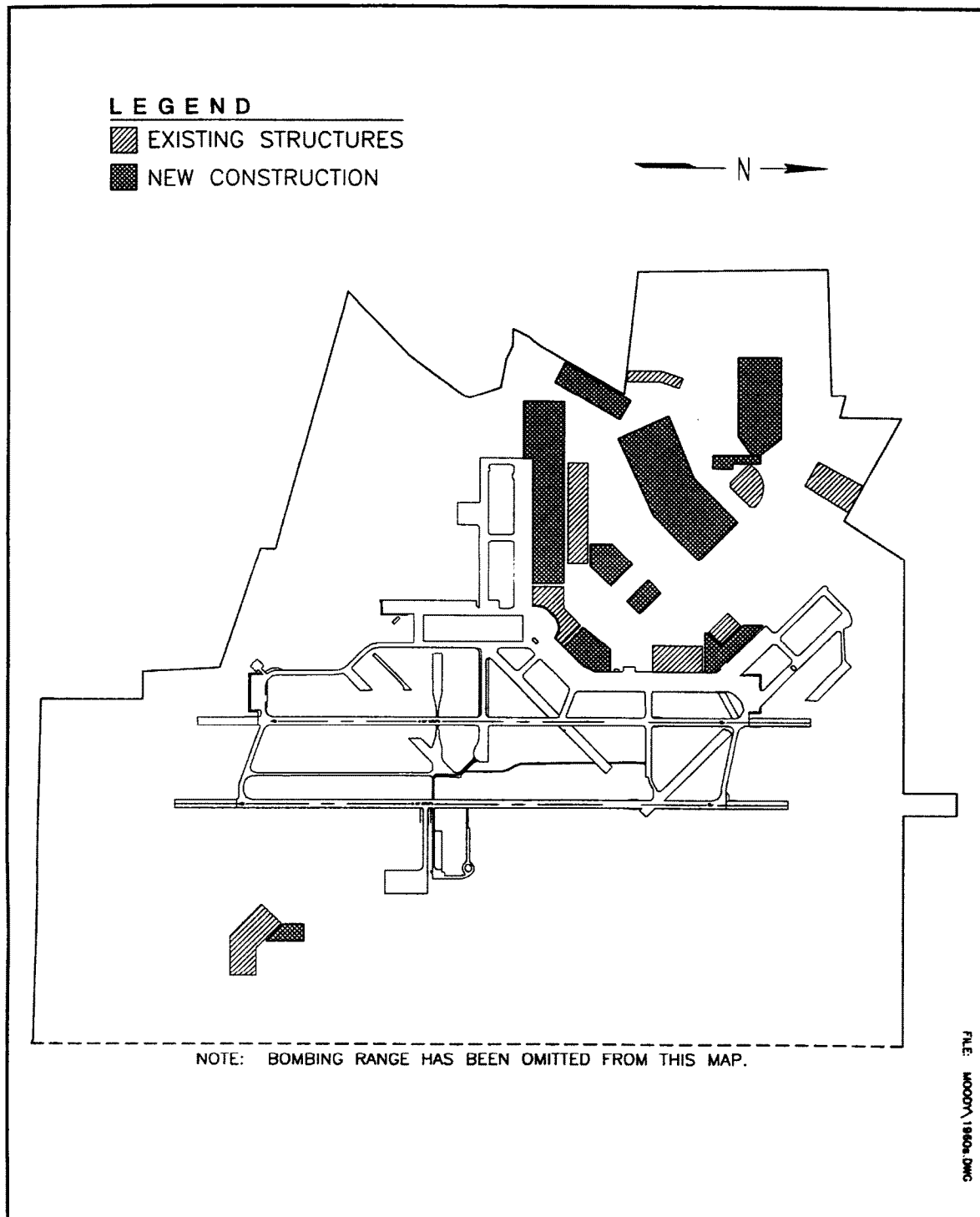


Figure 3.2 Moody Air Force Base, 1960-1970.

Mess. Several units of family housing were built in 1965 and 1966. Other newly constructed facilities were mission-oriented, such as aircraft maintenance shops, aircraft corrosion control, and base warehousing.

The 1970s brought a change in major command. Responsibility for Moody AFB was formally passed from ATC to TAC, bringing with it a new tactical fighter mission and a change-over of mission aircraft. Upgrading personnel and mission facilities for readiness was necessary (Figure 3.3). Facilities had to be altered or built to accommodate the F-4 and the 347th's mission. One hundred and one family housing units were constructed (Department of the Air Force 1972:7), and several dormitories were built during this time period. Other new community buildings included a Chapel Center, a Bowling Center, a Youth Center, and a golf course and clubhouse. Several facilities in the weapons storage area were built in 1978.

In the 1980s, Moody AFB continued its tactical fighter/training mission under TAC, and construction projects were minor, though considered adequate and appropriate to support the current mission (Figure 3.4). Construction included two airman dormitories, a small aircraft maintenance dock, two-bay and three-bay hangars, a vehicle operations facility, two sound suppressor foundations, flight line supply facilities, a billeting office, a base exchange mall complex, aircraft maintenance units, and the acquisition and construction of the Grand Bay Weapons Range (Moody AFB 1989:56). In 1986, an upgrade project enlarged the munitions storage area. Maintenance shops, a munitions build-up pad, above ground storage magazines, a hot cargo/aircraft uploading pad with taxiway and apron, and a munitions holding area were constructed (Moody AFB 1989:57).

The end of the Cold War era at Moody AFB was witness to the coming of a new composite wing structure within the Air Force. This has meant upgrades and additions to facilities for the support and operation of three types of aircraft.

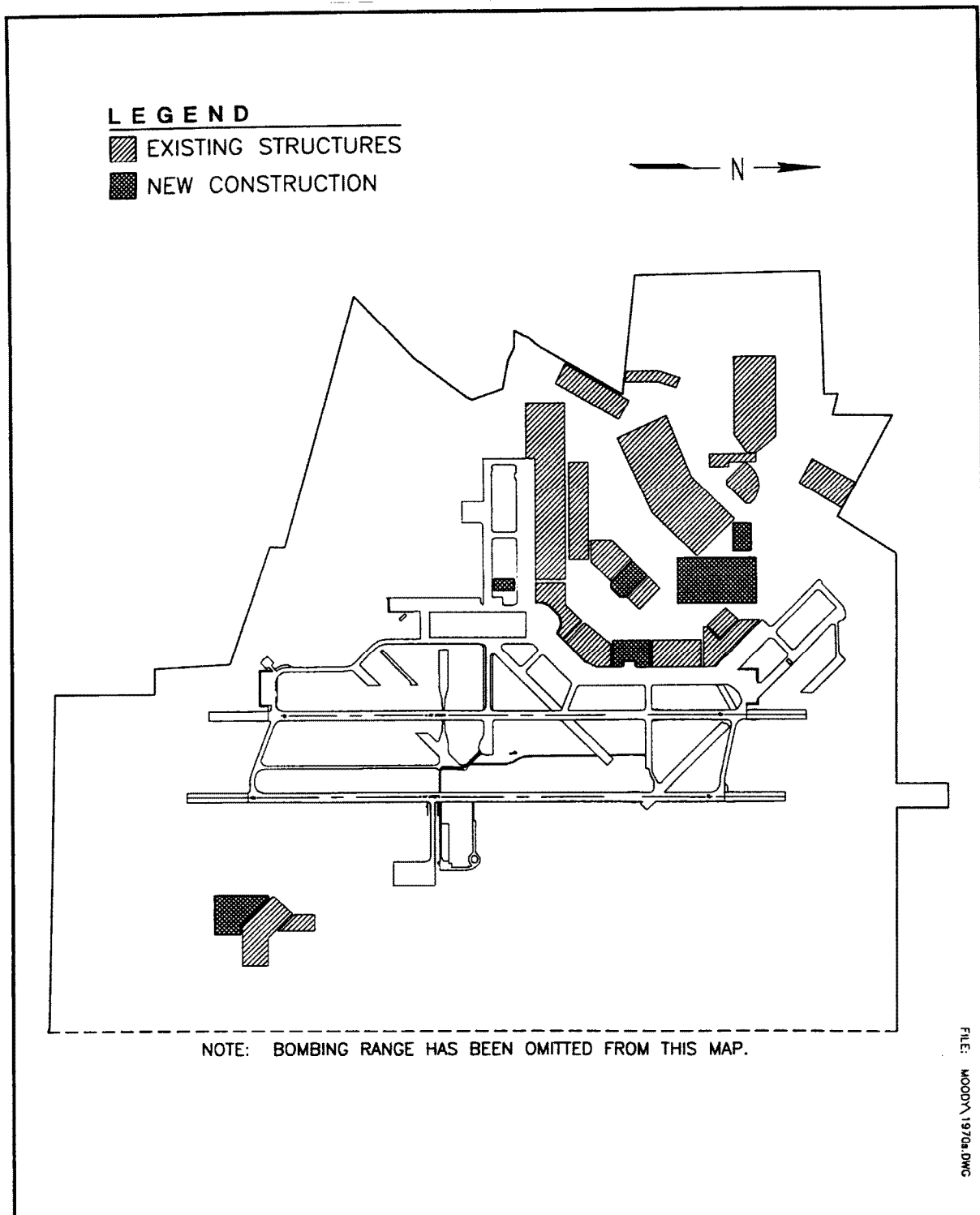


Figure 3.3 Moody Air Force Base, 1970-1980.

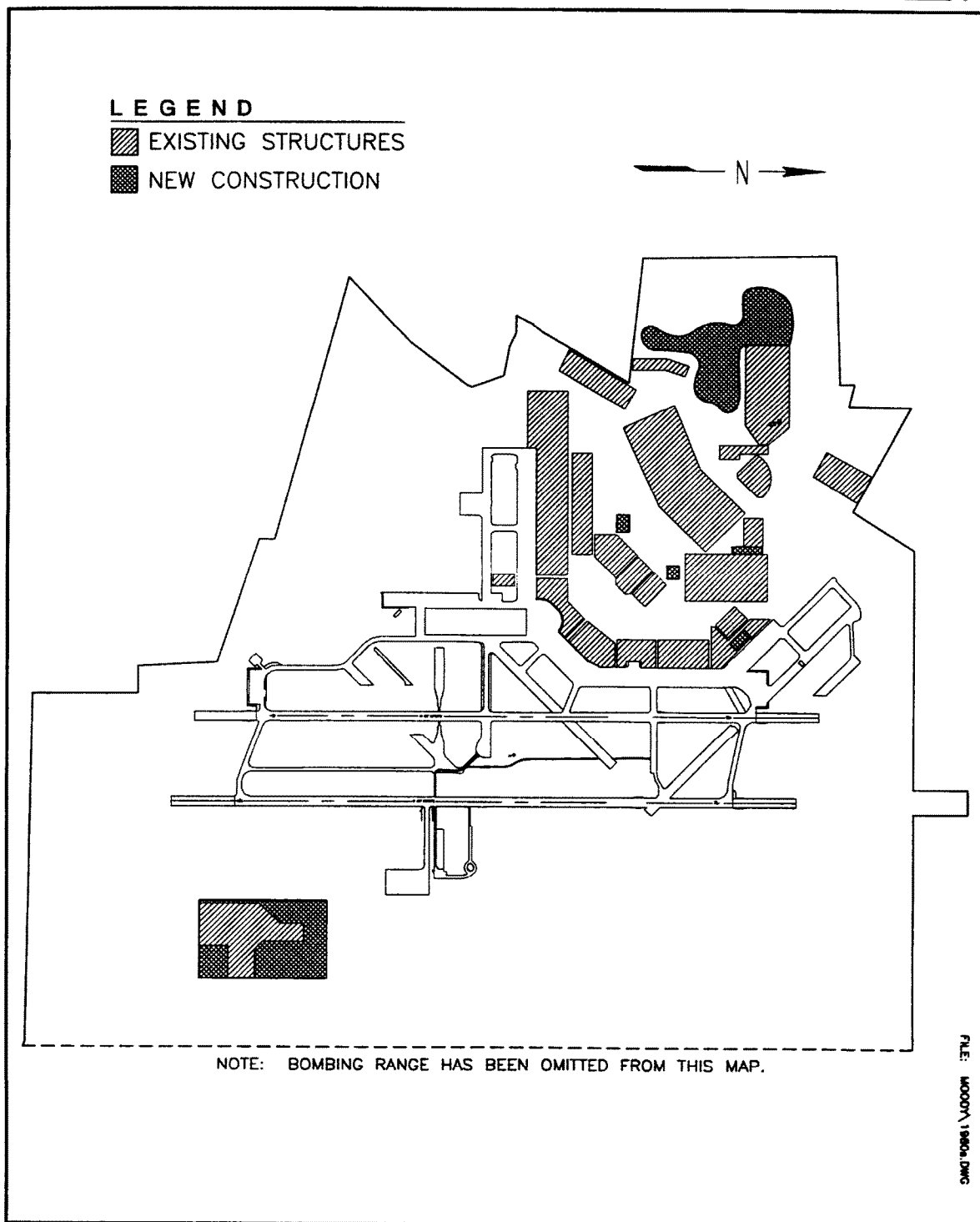


Figure 3.4 Moody Air Force Base, 1980-1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Moody AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993b:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Moody AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Moody AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993b) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993b) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Between October 3 and 10, 1994, Mariah field team members Patience E. Patterson and David P. Staley conducted the base inventory at Moody AFB. Upon arrival, an in-briefing meeting with Mr. Robert Makowski, the Cultural/Natural Resources Officer within the 347th Civil Engineering Squadron (CES), Ms. Gloria Luke, Real Property Officer, and Mr. Carlton Crenshaw, Chief Engineer, provided an opportunity to exchange information and advise Moody AFB personnel of the schedule, objectives, and needs for accomplishing the base inventory.

Mr. Makowski and Ms. Luke provided a base tour to familiarize the field team with the base layout and types of facilities present, and to provide a preliminary assessment of which facilities might be significant within the context of this inventory. A tour of the Grand Bay Bombing Range was also provided for the field team.

Ms. Luke provided an orientation of the Real Property Office holdings, and the field team was given a copy of the Real Property Change List, address cross-references, and access to historic planning documents. Information was gathered from the Real Property Office throughout the

week. The field team conducted an inventory of the drawing files in the Civil Engineering Office, and electronic and hard copies of base maps were acquired. Copies of base maps from several decades were also gathered by the field team to assist in the assessment of base development and land use. Current mission statements and historical documents were acquired at the 347th Public Affairs Office.

The collections at the History Office of the 347th FW were researched, including a cursory inventory of files, records, and photographic collections. Copies of histories, fact sheets, and other pertinent documents were collected by the field team. At the Base Planner's Office, Mr. Robert Jefferson described the overall plan for the future of the base and provided copies of portions of the Comprehensive Base Plan and other planning documents identifying proposed developments and demolition.

Throughout the base visit, a photographic inventory of base resources associated with the Cold War era was conducted. Using this inventory and the research materials collected at the various offices, resources were selected for further documentation and evaluation.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Moody AFB, 137 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Two resources were evaluated at Moody AFB, both of them falling under the DoD category of records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 19136, Located in Real Property No. 743)

The collection of the Wing History Office includes wing histories, reports, files, newsclippings, slides, and photographs. A cursory inventory is presented in greater detail in Appendix E. Although not specifically focused on buildings, the collection contains unique materials pertinent to people, events, and developments at the base, and thereby provides a history of the base and its development throughout the Cold War era. Given that the central mission of the base over the years has been the training of fighter pilots, the collection's training unit "yearbooks" are particularly significant. Many of the photographs in the collection would provide for historic, interpretive displays of Moody AFB's training heritage. The collection is generally in good condition and is well organized. The photographic component of the collection, however, is only loosely organized.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	19136	None	RecDoc/Obj	14
Documentation	Documentary Collection	19137	None	RecDoc/Obj	16

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
16	19137	None	Documentary Collection
14	19136	None	Documentary Collection

6.1.1.2 Documentary Collection (Resource No. 19137, Located in Real Property No. 918)

This resource, located in the Drafting Office of the 347th CES, is a set of architectural drawings, plans, base maps, and photographs pertaining to construction, maintenance, and modifications to Moody AFB facilities. The architectural drawings and plans are ink on linen, vellum, or mylar and pertain mostly to specific buildings dating from original base construction to the present. Additional base maps pertain to more general base systems or topics such as roads, parking lots, water systems, lighting, and various comprehensive planning graphics. The collection also includes aerial photographs. A cursory inventory of the collection is presented in greater detail in Appendix E. The collection provides a perspective on historical development of the base and is a source of detailed supporting information about particular facilities. These files are in fair condition and well organized. However, the collection is an actively used resource and, as such, is subject to continuous wear.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

None were evaluated at Moody AFB.

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Moody AFB.

6.4 TRAINING FACILITIES

None were evaluated at Moody AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Moody AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Moody AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Moody AFB. These resources should be investigated further for a more comprehensive analyses.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Moody AFB revealed approximately 150 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Moody AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts is presented in Appendix F.

8.0 FUTURE THREATS TO RESOURCES

The current establishment of aircraft at the base for the newly formed composite wing has initiated the construction of facilities along the northern end of the runway. However, all construction is located in vacant areas and will have no impact on existing buildings.

The overall plan for Moody AFB is for consolidation of mission and support functions into the Global Power Center. These plans call for the demolition of several World War II vintage structures in the center of the base and the construction of larger multipurpose buildings. It is recommended that these World War II structures be fully documented and evaluated for NRHP eligibility prior to any activities that will affect the integrity of the structures.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Moody AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Moody AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Moody AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Moody AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 19136, Located in Real Property No. 743)

This collection of histories, reports, files, newsclippings, slides, and photographs provides a history of the base and its development throughout the Cold War era. The collection is in good condition, but some parts are only loosely organized. It is recommended that the collection be inventoried and copied. It is further recommended that the base retain the copies for its use, with the originals sent to a permanent curatorial facility for stewardship and conservation.

Table 9.1 Recommendations for Evaluated Resources.

			Management Recommendations*					
Resource No.	Real Property No.	Property Type	No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	Comments
Record or Document - Object								
19136	None	Documentary Collection		*		*	*	
19137	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Documentary Collection (Resource No. 19137, Located in Real Property No. 918)

This collection of maps, pans, and photographs provides information on the development of the base throughout the Cold War era. The collection is in fair condition and well organized; however, the collection is actively used and subject to continuous wear. This has had an adverse effect on the drawings, especially the older, more fragile ones. It is recommended that the collection be inventoried and copied. It is further recommended that the base retain the copies for its use and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Department of the Air Force

- 1972 *Executive Order 11508 Installation Survey Report, Moody Air Force Base, Valdosta, Georgia*. Moody Air Force Base, Georgia.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Lancaster, J. E.

- 1964 *Moody Field: Its Establishment and Its Effects Upon the Valdosta, Georgia Area*. Paper in partial fulfillment of a History Honors Course, Valdosta State College, Georgia.
- 1989 "Establishment of Moody Field, 1940-1941." *The Piney Woods Journal of History*, Volume 1:49-66. Lowndes County Historical Society, Georgia.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Moody Air Force Base

- 1959 *Study of Facilities and Construction Programs*. Moody Air Force Base, Valdosta, Georgia.
- 1989 *Executive Order 12512 Property Survey Report on Moody Air Force Base, Valdosta, Georgia*. Real Property Office, 347th Civil Engineering Squadron, Moody Air Force Base, Georgia.
- 1993 *Moody Air Force Base, Installation of Excellence*. Installation Guide. MARCOA Publishing, Inc., San Diego.
-

1994 *Mission Statements*. 347th Public Affairs Division. Moody Air Force Base, Georgia.

National Park Service

1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.

1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

347th Tactical Fighter Wing History Office

1993 *347th FW History*. 347th Fighter Wing, Moody Air Force Base, Georgia.

United States Air Force

1992a *Fact Sheet*. "Moody Air Force Base, Georgia." 347th Fighter Wing, Public Affairs Division, Moody Air Force Base, Georgia.

1992b *Fact Sheet*. "347th Fighter Wing." 347th Fighter Wing, Public Affairs Division, Moody Air Force Base, Georgia.

1993a *Beddown of a Composite Wing at Moody AFB, GA*. Final Environmental Impact Statement. Headquarters, Air Combat Command, Langley Air Force Base, Virginia.

1993b *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

War Department

1942 *Completion Report Jobs A42-1 & A2, Moody Field, Valdosta, Georgia*. War Department, Office of the Area Engineer, Moody Field, Valdosta, Georgia.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	19001	918	Base Engineering Administration	1941
	19003	980	Base Engineering Storage Covered Facility	1954
	19004	907	Morale Welfare and Recreation Supply Non-Appropriated Fund	1941
			Central Storage	
	19005	943	Service Station Exchange	1969
	19006	970	Base Warehouse Supply and Equipment	1953
	19007	997	Base Warehouse Supply and Equipment	1961
	19009	903	Vehicle Maintenance Shop	1985
	19010	919	Base Engineering Administration	1941
	19011	995	Vehicle Operations Administration	1985
	19012	998	Traffic Management Facility	1982
	19013	841	Base Warehouse Supply and Equipment	1956
	19014	932	Base Warehouse Supply and Equipment	1978
	19015	840	Arts and Crafts Center	1982
	19016	843	Base Package Store	1989
	19017	904	Public Shopping Center (Base Exchange)	1986
	19018	902	Commissary Store	1981
	19019	552	Precision Measurement Equipment Laboratory	1981
	19020	570	Permanent Party Airman's Dormitory	1958
	19021	568	Miscellaneous Recreation Bldg. (Baseball field)	1986
	19022	583	Bowling Center	1973
	19023	134	Central Post Office	1983
	19024	571	Detached Airman's Dining Hall	1958
	19025	901	Officer's Open Mess	1968
	19026	103	Recreation Library	1941
	19027	104	Child Care Center	1941
	19028	119	Family Housing Management Office	1941
	19029	108	Base Theater	1960
	19030	585	Field Training Facility	1979
	19031	101	Wing Headquarters	1941
	19032	213	Visiting Officer's Quarters	1961
	19033	320	Transient Lodging Support Building	1986
	19034	322	Permanent Party Airman's Dormitory	1972
	19035	207	Child Care Center	1980
	19036	324	Permanent Party Airman's Dormitory	1986
	19037	400	Gymnasium	1966
	19038	328	Base Personnel Office	1970
	19039	330	Education Center	1979
	19041	900	Composite Medical	1967
	19042	205	Non-Commissioned Officer's Open Mess	1965
	19043	206	Southeastern Federal Credit Union	Unknown
	19044	913	Water Supply Building	1941

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	19045	909	Material Services	1986
	19046	150	Branch Bank	1962
	19047	590	Flight Simulator Training	1987
	19048	701	Maintenance Hangar	1941
	19049	739	Weapons System Maintenance Management Facility	1957
	19050	743	Wing Headquarters (Wing Quality Center)	1953
	19051	757	Group Headquarters (Base Information Management)	1962
	19052	662	Wing Headquarters (Mobility Center)	1954
	19053	658	Maintenance Hangar	1954
	19054	608	Group Headquarters	1941
	19055	609	Maintenance Hangar	1941
	19056	610	Combat Arms Training Maintenance Building	1941
	19057	668	Control Tower	1955
	19058	622	Base Operations	1971
	19059	621	Fire Station	1969
	19060	665	Explosive Ordinance Disposal	1954
	19061	617	Security Police Operations	1941
	19063	451	Disaster Preparedness	1961
	19064	452	Navigation Aid Shop	1988
	19066	110	Chapel Center	1971
	19067	112	Wing Headquarters	1941
	19068	109	Communication Facility	1968
	19069	102	Wing Headquarters	1941
	19070	118	Family Support Center	1981
	19071	113	Group Headquarters (Public Affairs)	1941
	19072	979	Housing Supply and Storage Facility	1941
	19073	926	Traffic Check House	1982
	19075	934	Base Supply and Equipment Warehouse	1941
	19076	753	Survival Equipment Shop	1962
	19077	754	Troop Subsistence Warehouse	1954
	19078	719	General Purpose Aircraft Shop (Egress)	1987
	19079	758	Jet Engine Inspection Maintenance Shop	1963
	19080	718	Maintenance Hangar	1941
	19081	741	Aircraft Corrosion Control	1993
	19082	744	Aircraft Corrosion Control	1993
	19083	702	Base Supply and Equipment Warehouse	1972
	19084	785	General Purpose Aircraft Shop	1966
	19085	780	Avionics Shop	1987
	19086	708	Weapon and Release System Shop	1982
	19087	770	Aircraft Maintenance Organizational Shop	1978
	19088	775	Small Aircraft Maintenance Docks	1983
	19089	773	Base Supply and Equipment Warehouse	1986
	19090	778	Base Supply and Equipment Warehouse	1988

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	19091	774	Small Aircraft Maintenance Dock	1984
	19092	788	Fuel Systems Maintenance Dock	1980
	19093	4127	Power Check with Suppressor Pad (Hush House 1)	1985
	19094	772	Aircraft Maintenance Organizational Shop	1978
	19095	769	Refueling Maintenance Shop	1962
	19096	722	Petroleum Operations Building	1972
	19097	1725	Munitions Maintenance Administration	1988
	19099	1314	Range Target Storage and Repair	1977
	19100	10	Cantonment Building (Grand Bay Bombing Range)	1987
	19101	2	Control Tower (Grand Bay Bombing Range)	1987
	19103	Unknown	Maintenance Building (Grand Bay Bombing Range)	Unknown
	19105	1	Flank Tower (Grand Bay Bombing Range)	1987
	19106	704	Squadron Operations	1968
	19107	706	Group Headquarters	1969
	19108	1708	Canine Security Police Kennel	1986
	19109	1115	Rocket Check Assembly Storage	1982
	19110	1106	Storage Igloo	1941
	19111	1104	Segregated Magazine Storage	1978
	19112	1109	Conventional Munitions Shop	1978
	19113	1100	Storage Igloo	1941
	19114	1102	Above Ground Magazine Storage (Type A, B, and C)	1978
	19115	1501	Receiver Communication	1953
	19116	Unknown	71st Air Controller Squadron	1994
	19117	1500	Security Police Operations	1953
	19119	253	Family Housing APPR 50-69	1953
	19120	1804	Youth Center	1979
	19121	1806	Golf Clubhouse and Equipment	1970
	19122	1627	Family Housing APPR 50-69	1966
	19123	1623	Family Housing APPR 50-69	1966
	19124	1609	Family Housing APPR 50-69	1965
	19125	1647	Family Housing APPR FY70A	1972
	19126	Unknown	Trailer Park	Unknown
	19127	1004	Waste Treatment Building	1941
	19128	1222	Base Engineering Maintenance Shop	1994
	19129	1216	RAPCON Center	1955
	19130	924	Security Police Identification Control	1985
	19131	925	Traffic Check House	1982
	19134	566	Swimmers Bath House	1961
	19135	454	Data Processing Installation	1972
Real Property - Landscape				
	19098	None	Mission Lake Recreational Area	None
	19133	Unknown	Tennis Courts	Unknown

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Structure				
	19002	5016	Jet Fuel Storage	1953
	19008	974	Privately Owned Vehicle Wash Rack	1941
	19040	211	Consolidated Swimming Pool	1941
	19062	618	Water Tank Storage	1941
	19065	67	Meteorological Set C - Band Radar	1967
	19074	931	Vehicle Fuel Station	1976
	19102	12	Viewing Stand (Grand Bay Bombing Range)	1990
	19104	Unknown	Strafing Target Run (Grand Bay Bombing Range)	Unknown
	19118	Unknown	Water Tower	Unknown
	19132	None	Entrance Sign	Unknown
Record or Document - Object				
	19136	None	Documentary Collection	Various
	19137	None	Documentary Collection	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

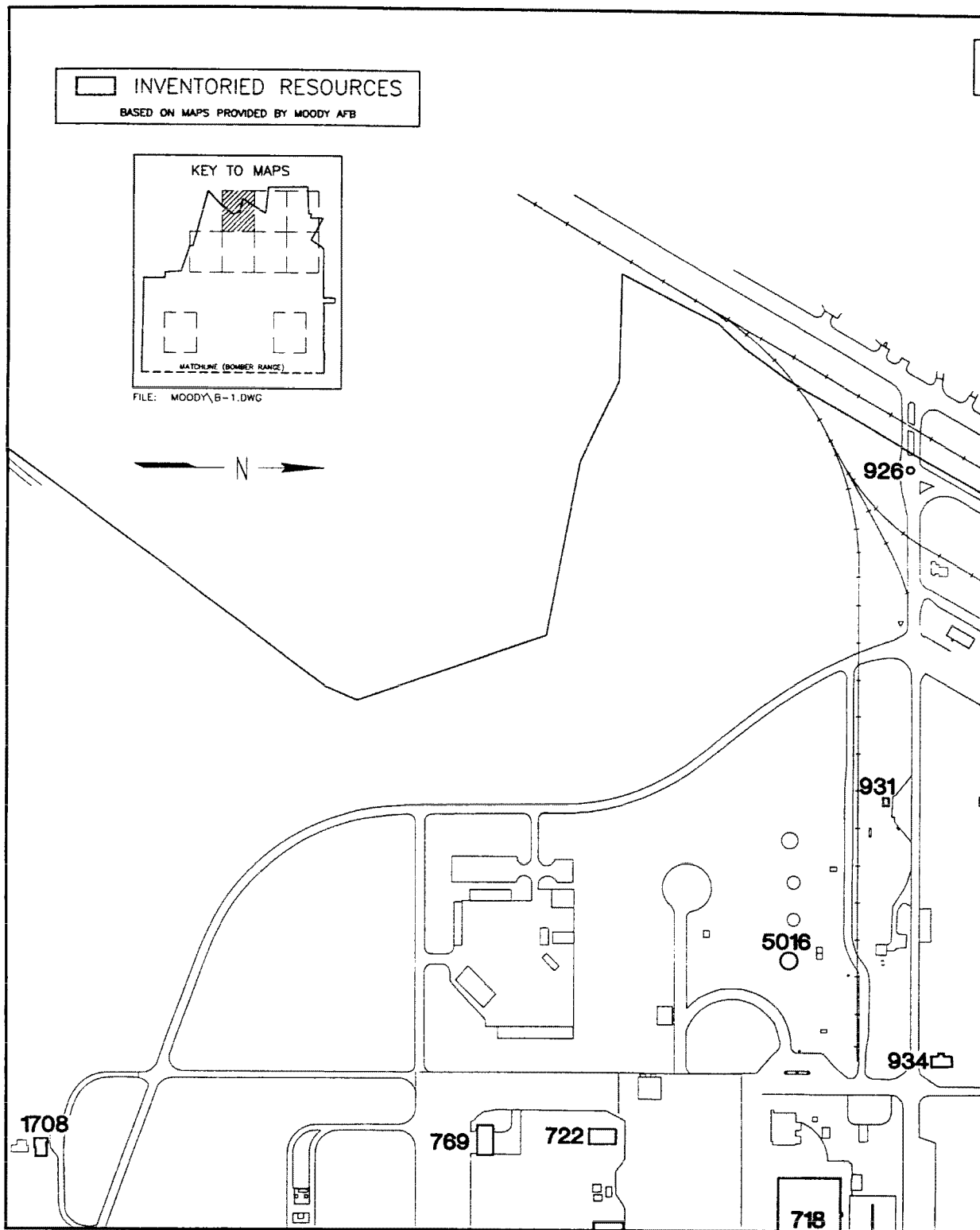


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 10).

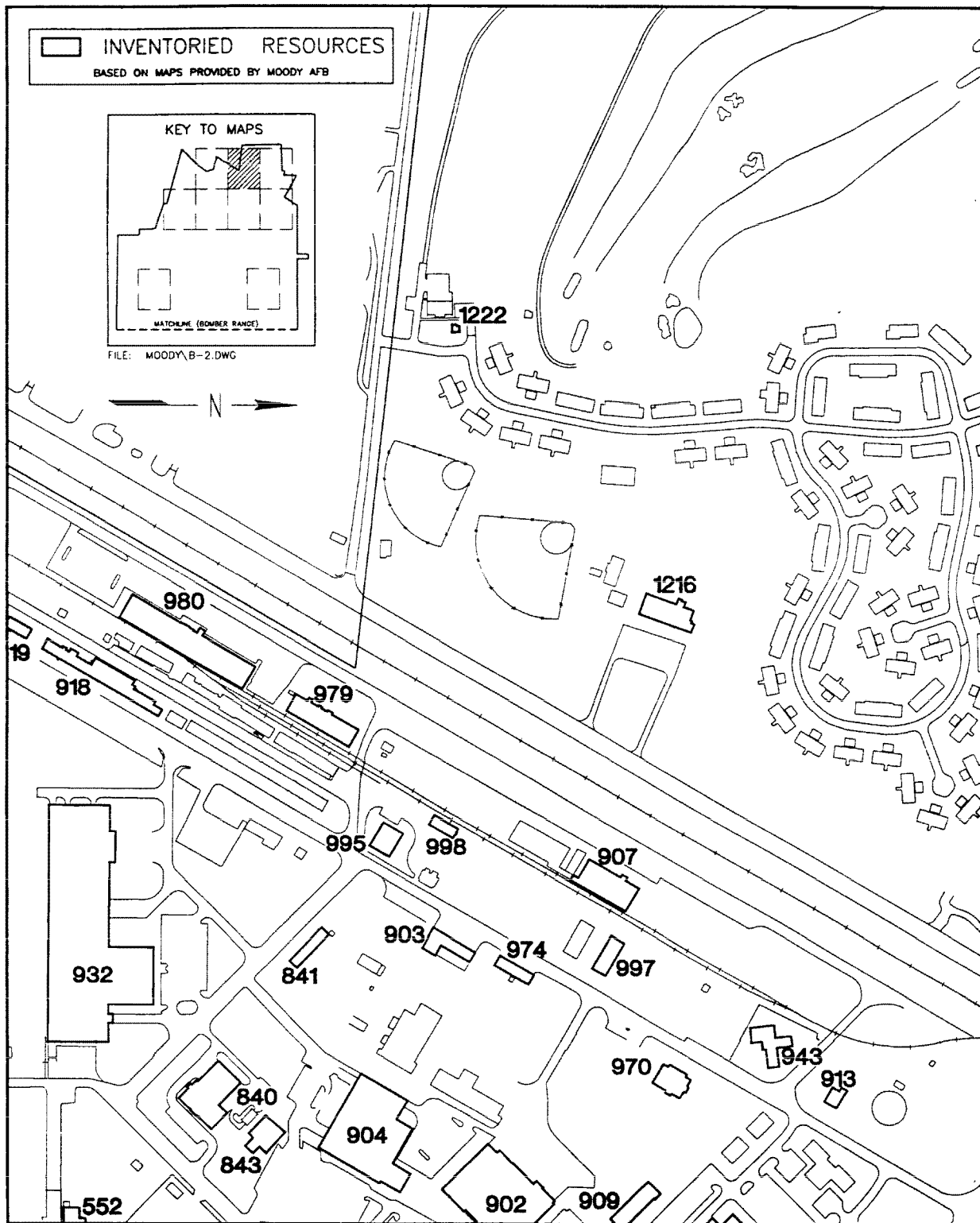


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 10).

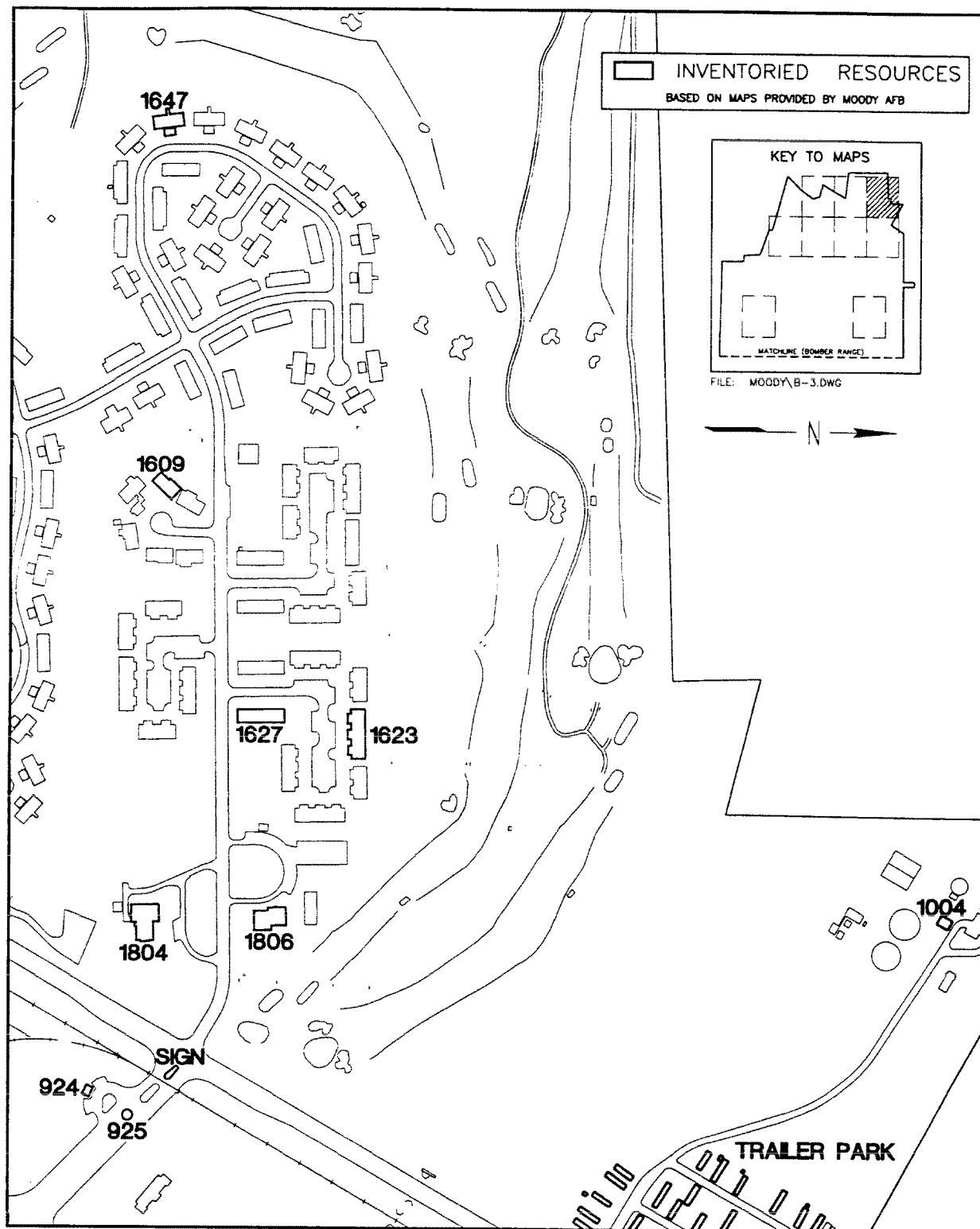


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 10).

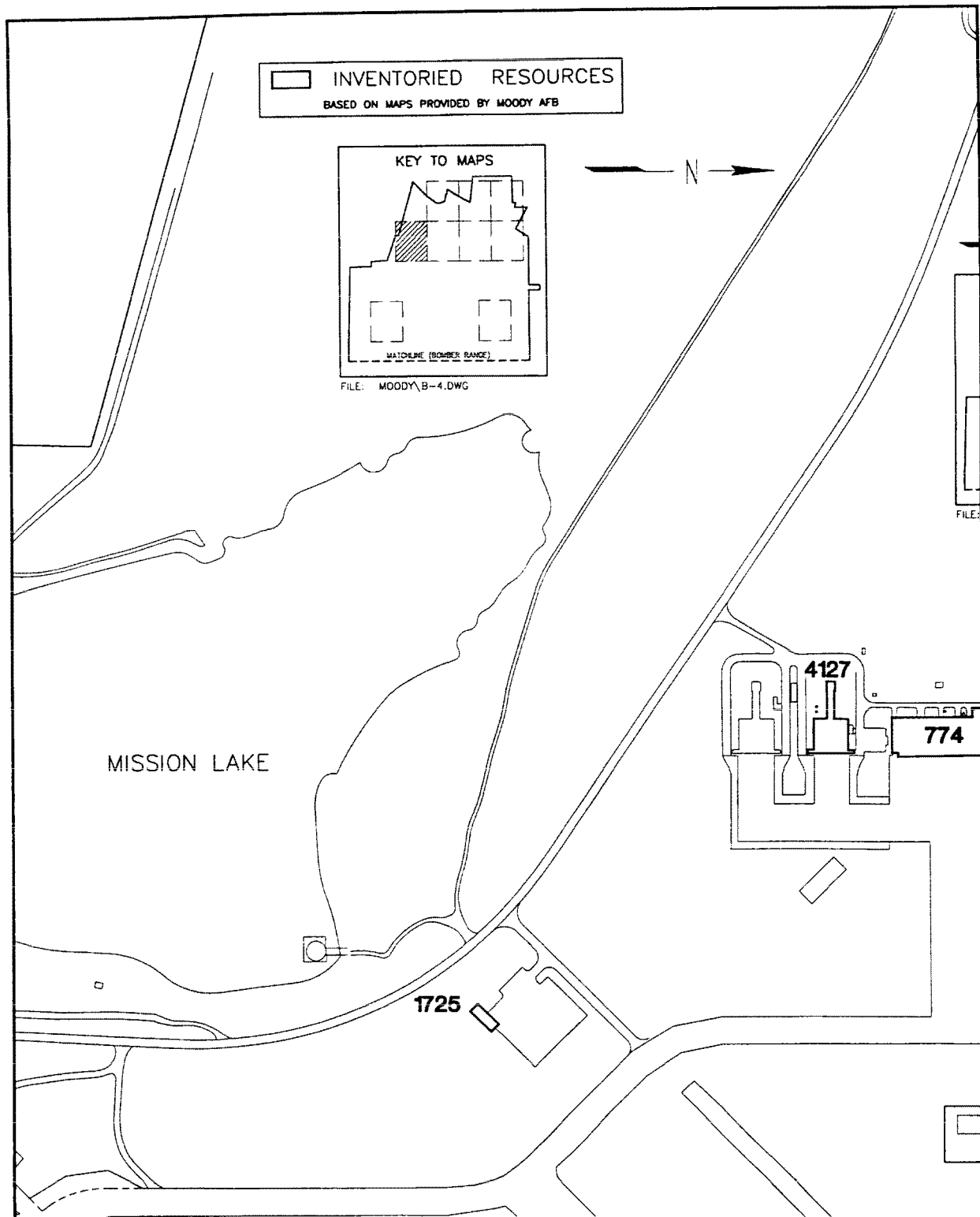


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 10).

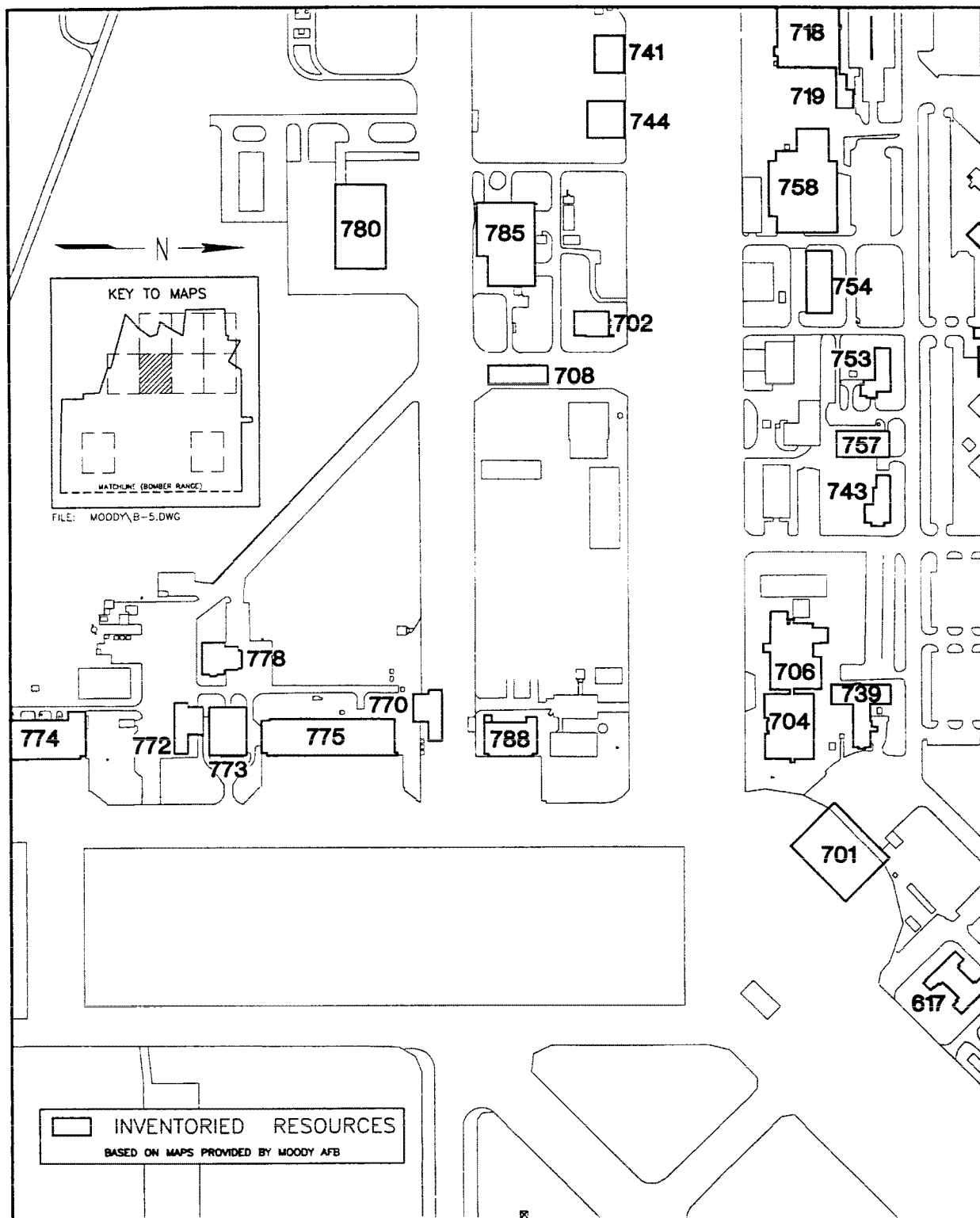


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 10).

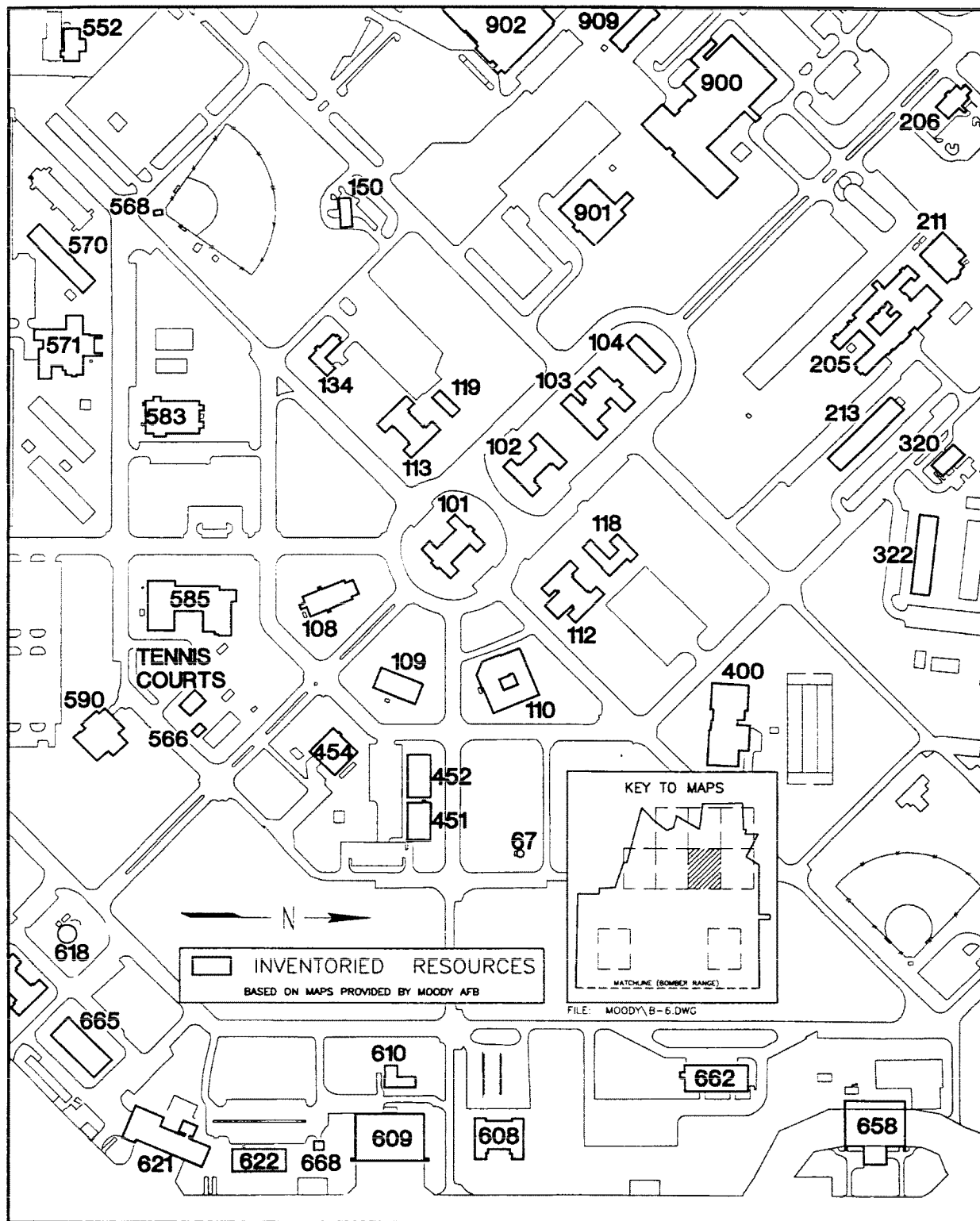


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 10).

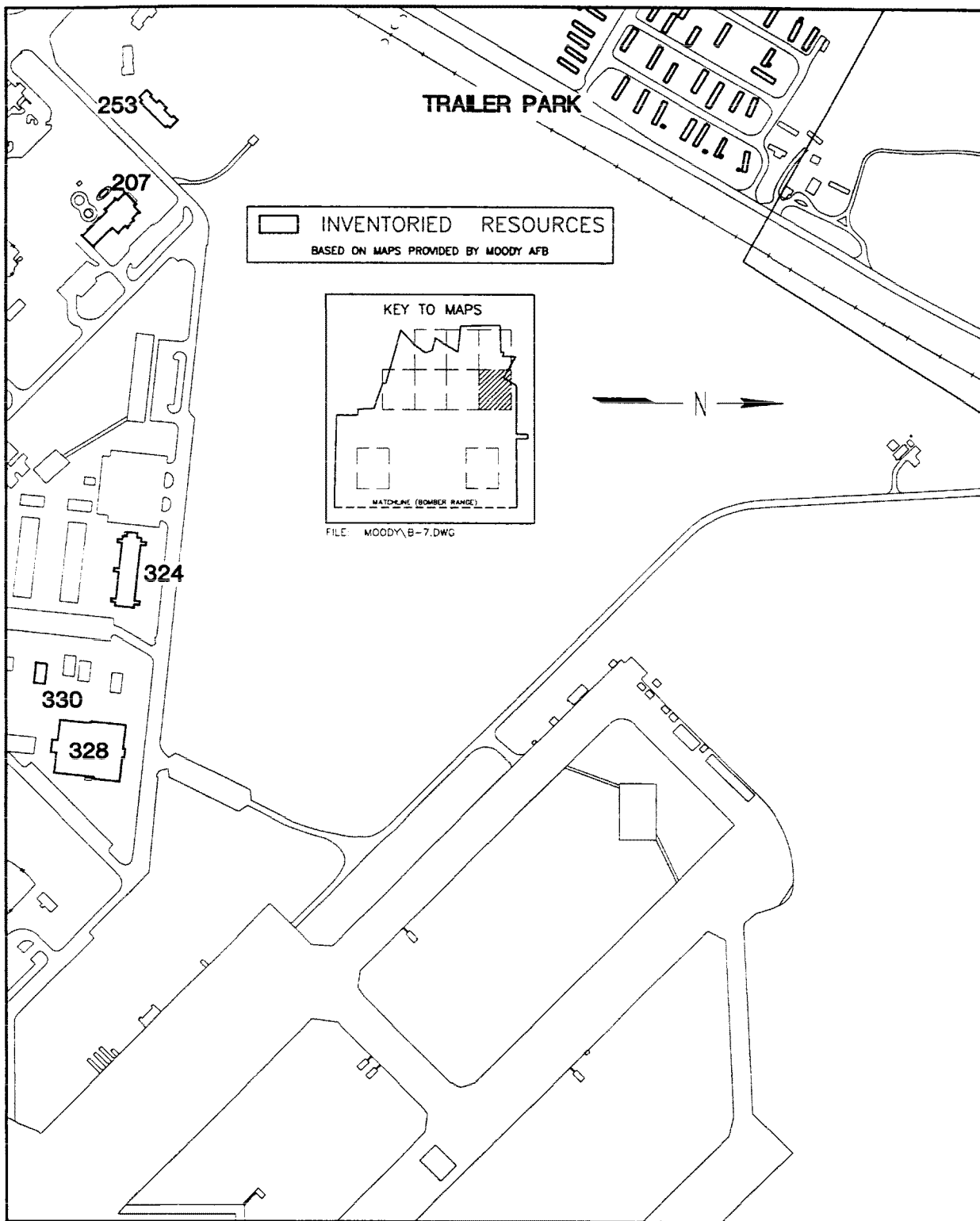


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 10).

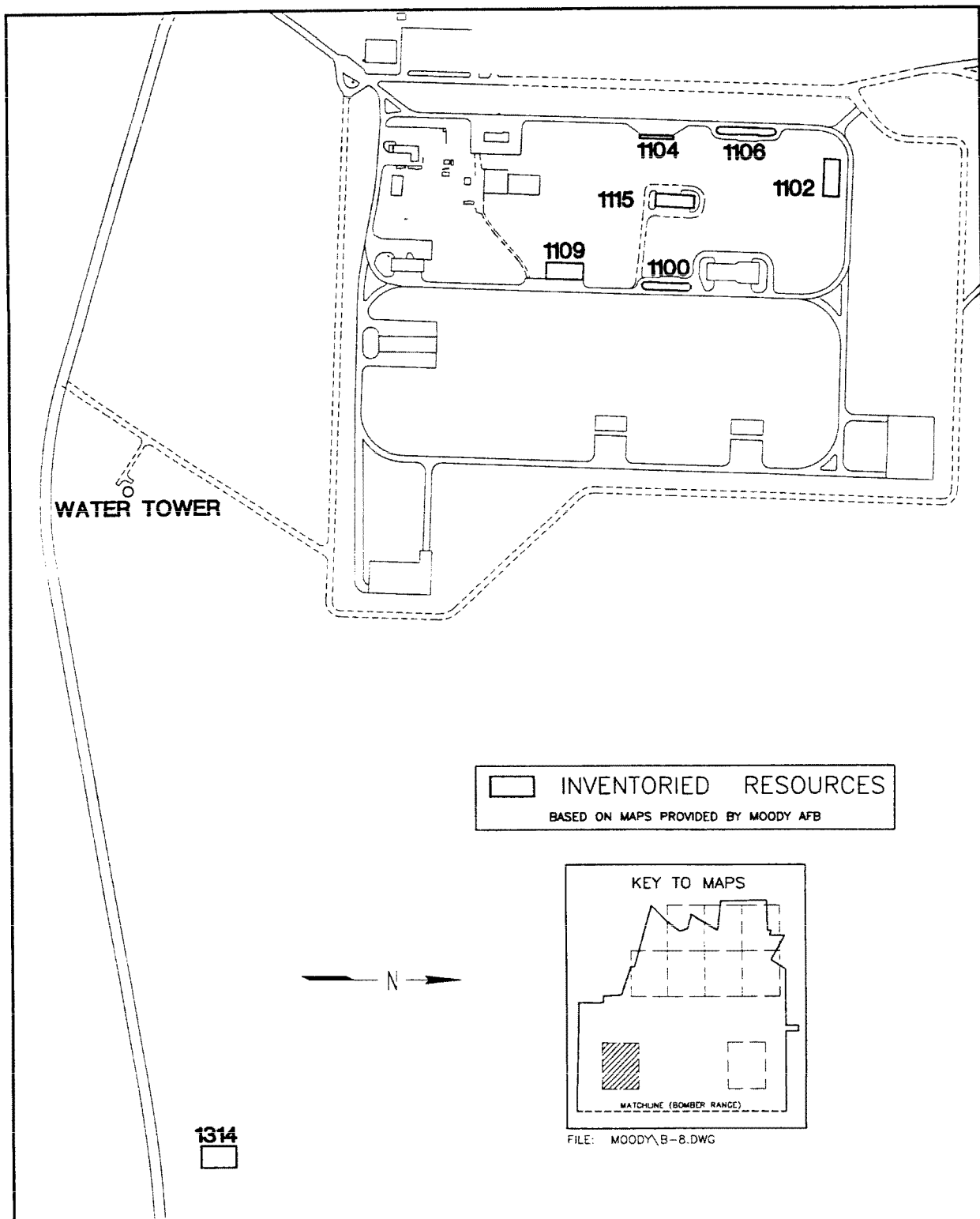


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 10).

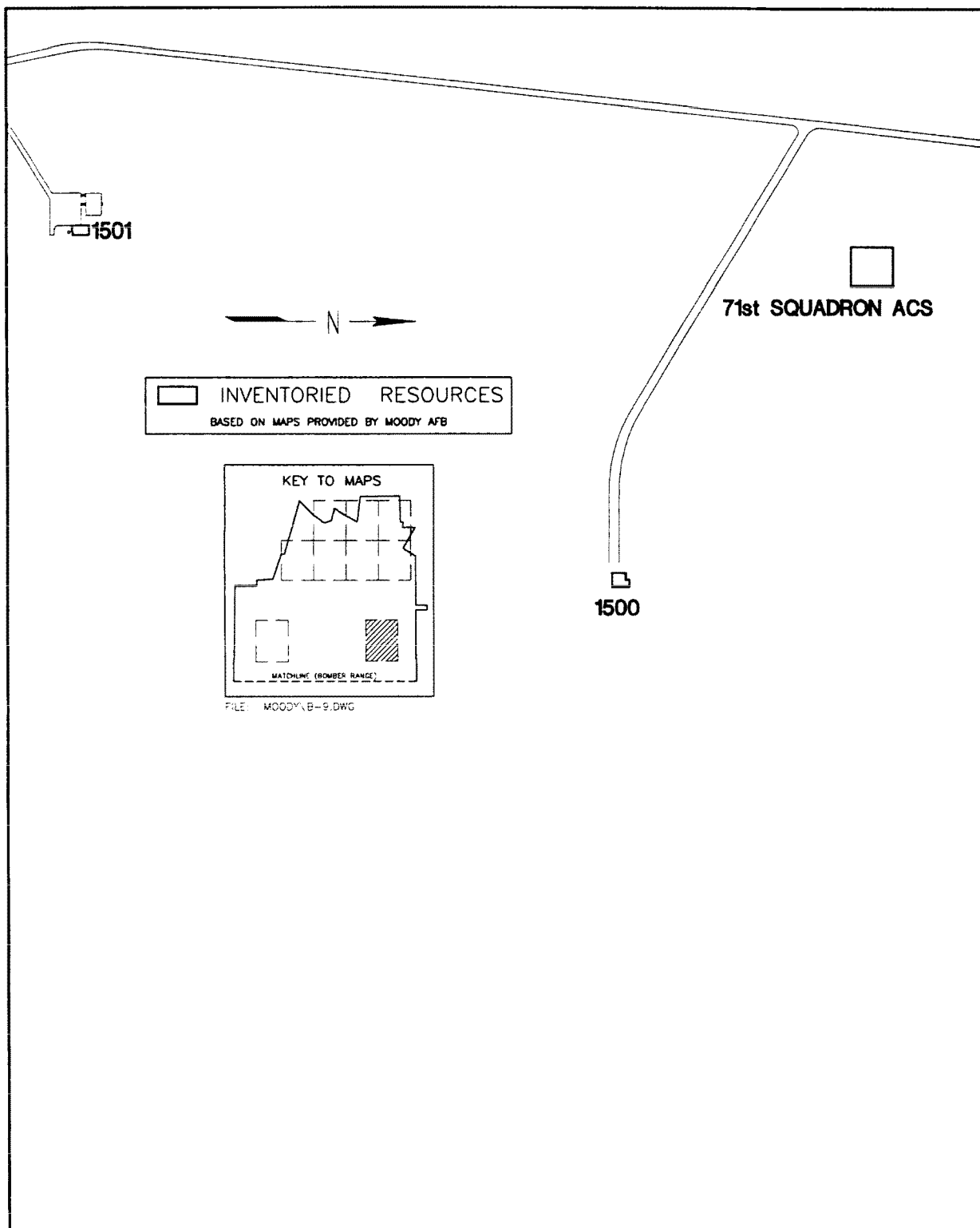


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 10).

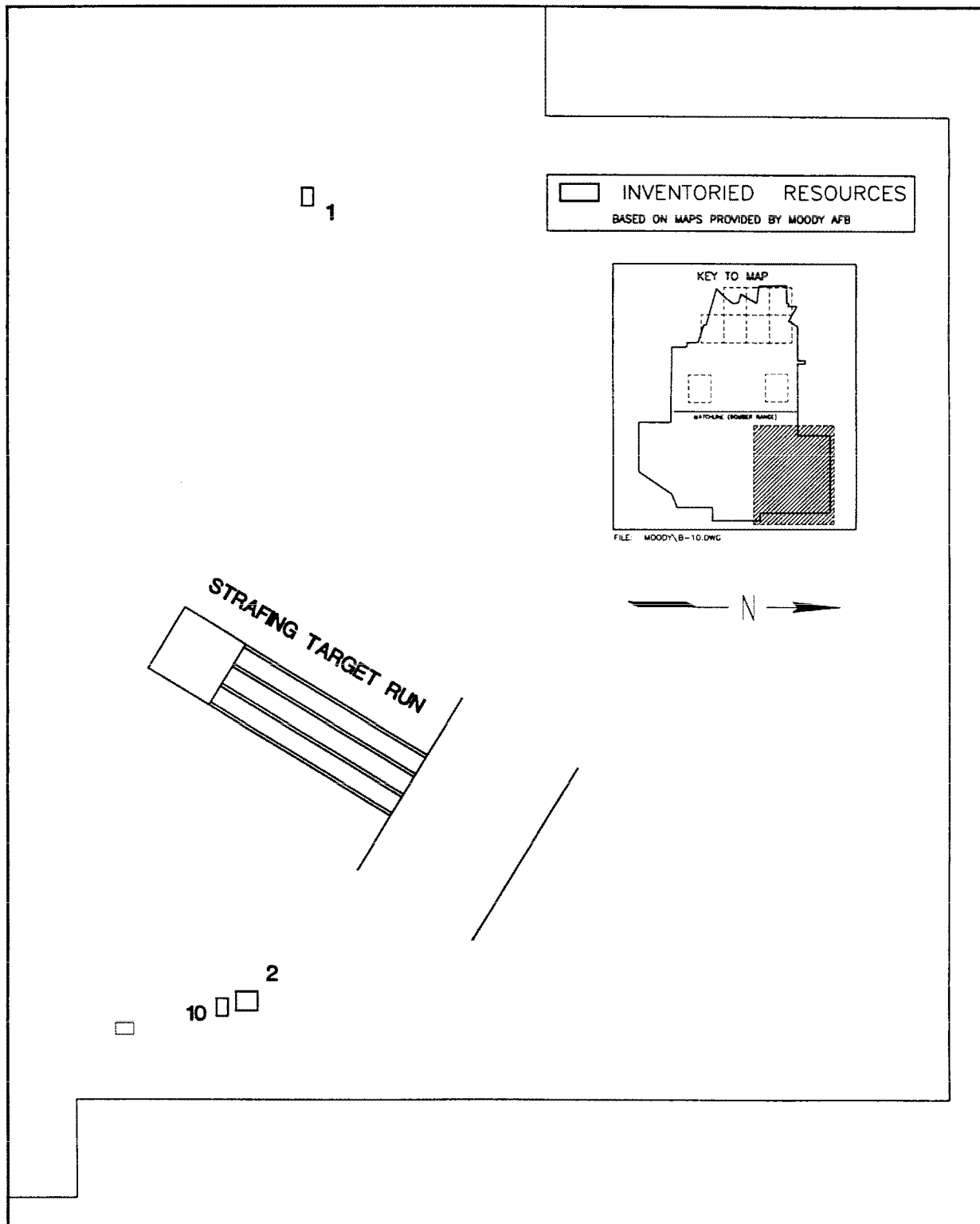
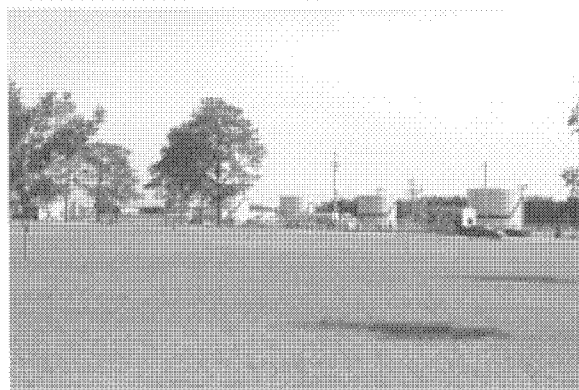


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 10 of 10).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



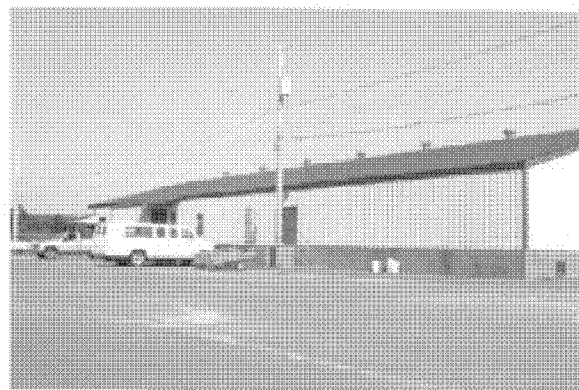
Resource No. 19001, Real Property No. 918
Base Engineering Administration



Resource No. 19002, Real Property No. 5016
Jet Fuel Storage



Resource No. 19003, Real Property No. 980
Base Engineering Storage Covered Facility



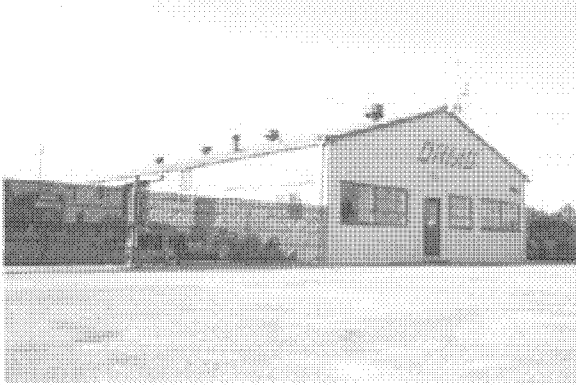
Resource No. 19004, Real Property No. 907
MWRS Non-Appropriated Fund Central Storage



Resource No. 19005, Real Property No. 943
Service Station Exchange



Resource No. 19006, Real Property No. 970
Base Warehouse Supply and Equipment



Resource No. 19007, Real Property No. 997
Base Warehouse Supply and Equipment



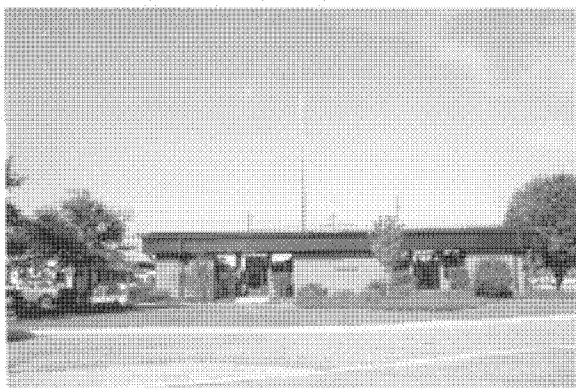
Resource No. 19008, Real Property No. 974
Privately Owned Vehicle Wash Rack



Resource No. 19009, Real Property No. 903
Vehicle Maintenance Shop



Resource No. 19010, Real Property No. 919
Base Engineering Administration



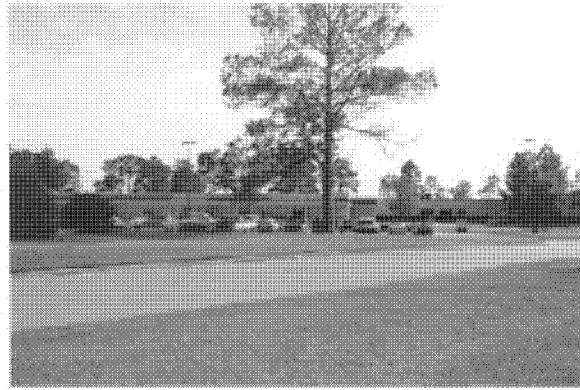
Resource No. 19011, Real Property No. 995
Vehicle Operations Administration



Resource No. 19012, Real Property No. 998
Traffic Management Facility



Resource No. 19013, Real Property No. 841
Base Warehouse Supply and Equipment



Resource No. 19014, Real Property No. 932
Base Warehouse Supply and Equipment



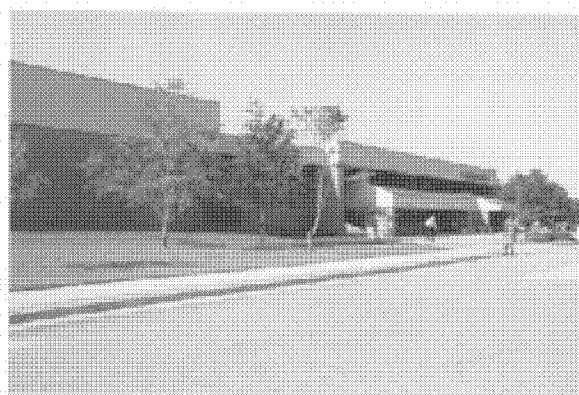
Resource No. 19015, Real Property No. 840
Arts and Crafts Center



Resource No. 19016, Real Property No. 843
Base Package Store



Resource No. 19017, Real Property No. 904
Public Shopping Center (Base Exchange)



Resource No. 19018, Real Property No. 902
Commissary Store



Resource No. 19019, Real Property No. 552
Precision Measurement Equipment Laboratory



Resource No. 19020, Real Property No. 570
Permanent Party Airman's Dormitory



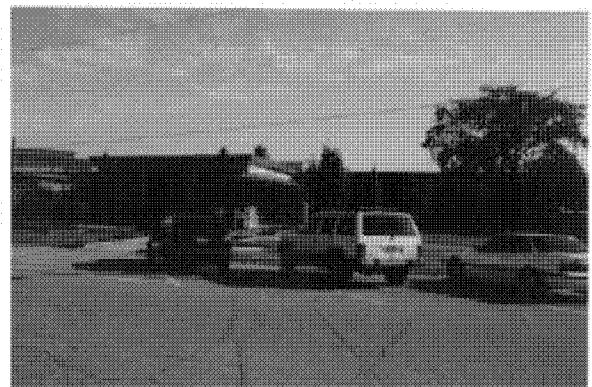
Resource No. 19021, Real Property No. 568
Miscellaneous Recreation Building (Baseball Field)



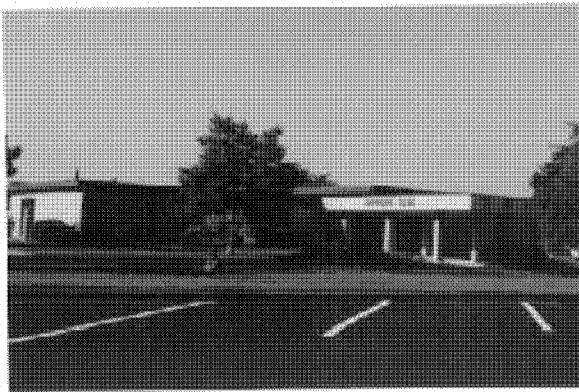
Resource No. 19022, Real Property No. 583
Bowling Center



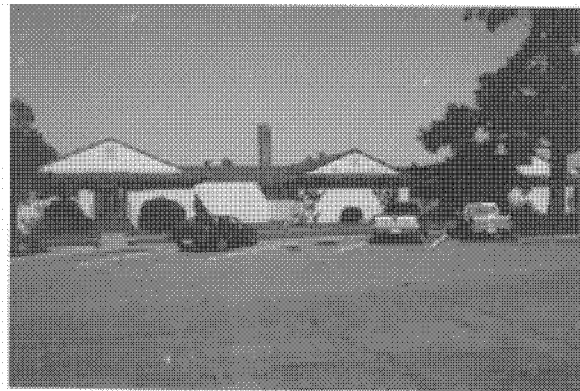
Resource No. 19023, Real Property No. 134
Central Post Office



Resource No. 19024, Real Property No. 571
Detached Airman's Dining Hall



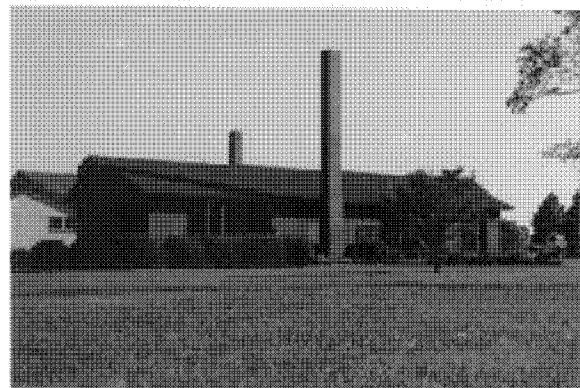
Resource No. 19025, Real Property No. 901
Officer's Open Mess



Resource No. 19026, Real Property No. 103
Recreation Library



Resource No. 19027, Real Property No. 104
Child Care Center



Resource No. 19028, Real Property No. 119
Family Housing Management Office



Resource No. 19029, Real Property No. 108
Base Theater



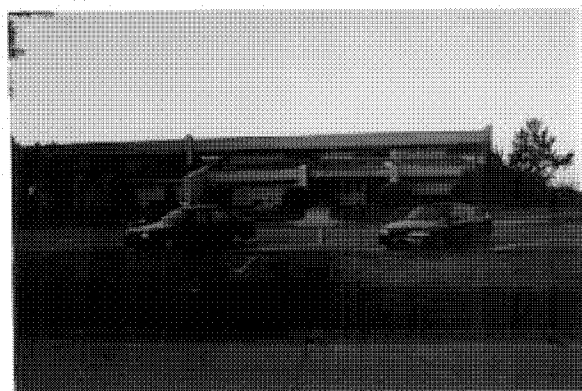
Resource No. 19030, Real Property 585
Field Training Facility



Resource No. 19033, Real Property No. 320
Transient Lodging Support Building



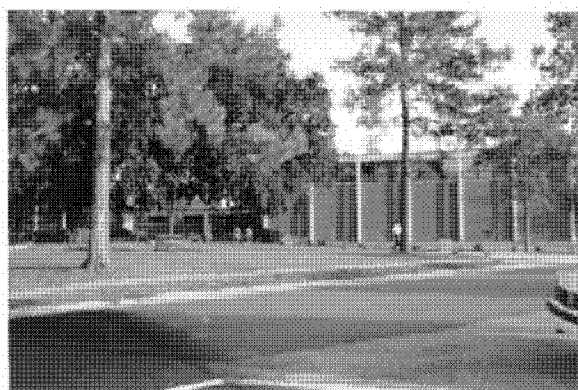
Resource No. 19034, Real Property No. 322
Permanent Party Airman's Dormitory



Resource No. 19035, Real Property No. 207
Child Care Center



Resource No. 19036, Real Property No. 324
Permanent Party Airman's Dormitory



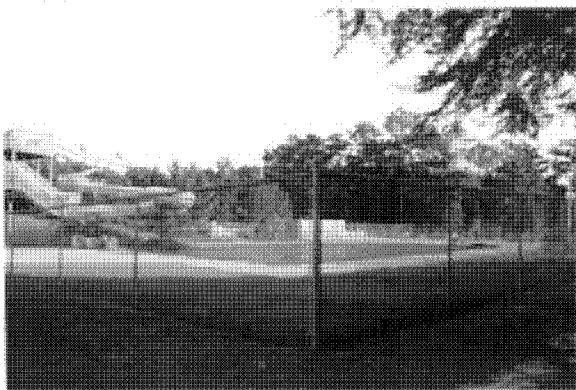
Resource No. 19037, Real Property No. 400
Gymnasium



Resource No. 19038, Real Property No. 328
Base Personnel Office



Resource No. 19039, Real Property No. 330
Education Center



Resource No. 19040, Real Property No. 211
Consolidated Swimming Pool



Resource No. 19041, Real Property No. 900
Composite Medical



Resource No. 19043, Real Property 206
Southeastern Federal Credit Union



Resource No. 19044, Real Property No. 913
Water Supply Building



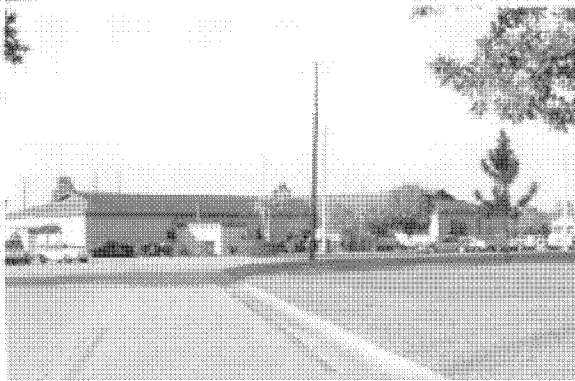
Resource No. 19045, Real Property No. 909
Material Services



Resource No. 19046, Real Property No. 150
Branch Bank



Resource No. 19048, Real Property No. 701
Maintenance Hangar



Resource No. 19049, Real Property No. 739
Weapons System Maintenance Management
Facility



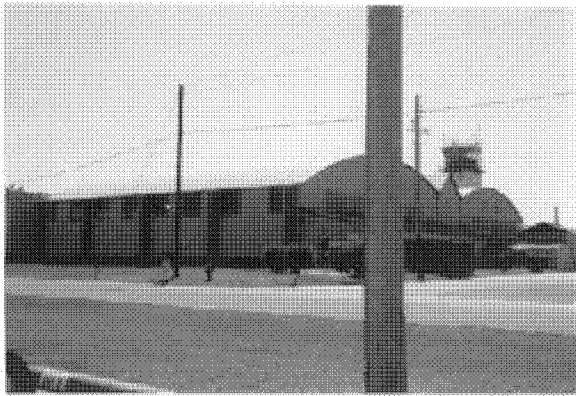
Resource No. 19052, Real Property No. 662
Wing Headquarters (Mobility Center)



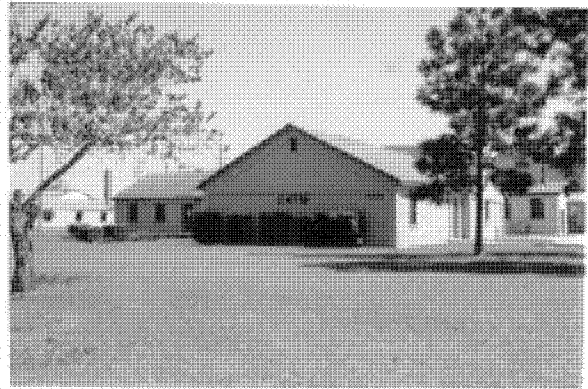
Resource No. 19053, Real Property No. 658
Maintenance Hangar



Resource No. 19054, Real Property 608
Group Headquarters



Resource No. 19055, Real Property No. 609
Maintenance Hangar



Resource No. 19056, Real Property No. 610
Combat Arms Training Maintenance Building



Resource No. 19057, Real Property No. 668
Control Tower



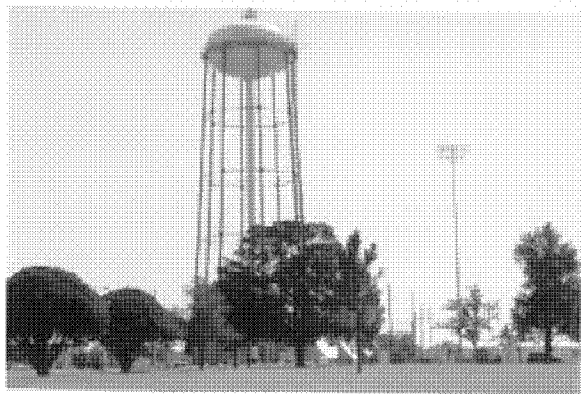
Resource No. 19059, Real Property No. 621
Fire Station



Resource No. 19060, Real Property No. 665
Explosive Ordinance Disposal



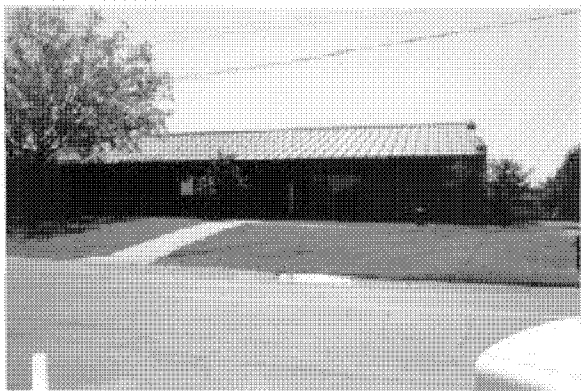
Resource No. 19061, Real Property No. 617
Security Police Operations



Resource No. 19062, Real Property No. 618
Water Tank Storage



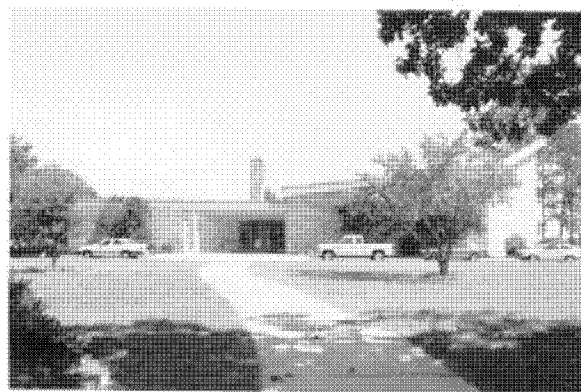
Resource No. 19063, Real Property No. 451
Disaster Preparedness



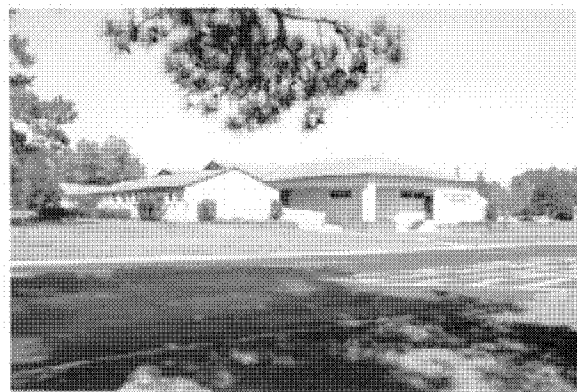
Resource No. 19064, Real Property No. 452
Navigation Aid Shop



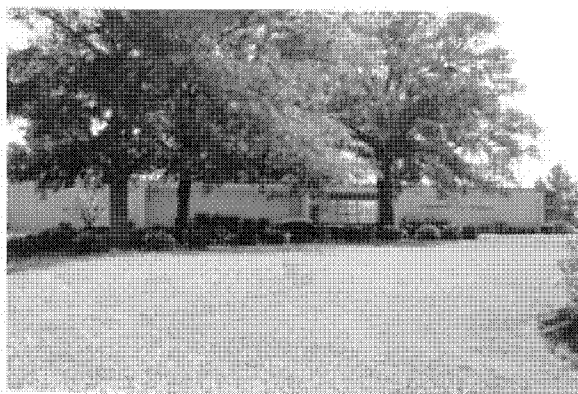
Resource No. 19065, Real Property No. 67
Meteorological Set C-Band Radar



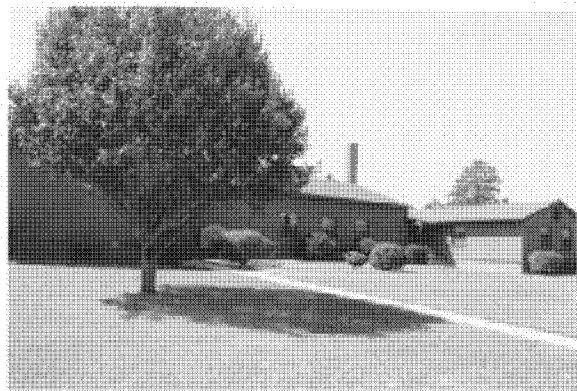
Resource No. 19066, Real Property No. 110
Chapel Center



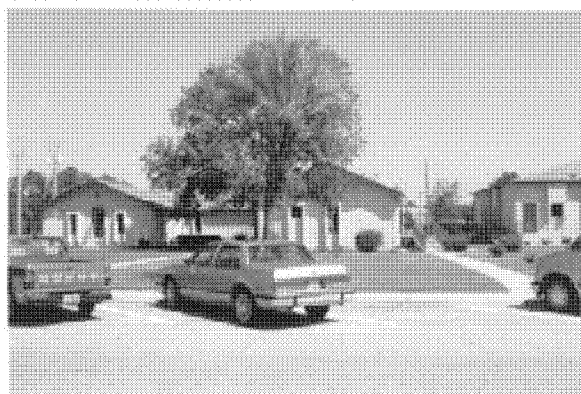
Resource No. 19067, Real Property No. 112
Wing Headquarters



Resource No. 19068, Real Property No. 109
Communication Facility



Resource No. 19069, Real Property No. 102
Wing Headquarters



Resource No. 19070, Real Property No. 118
Family Support Center



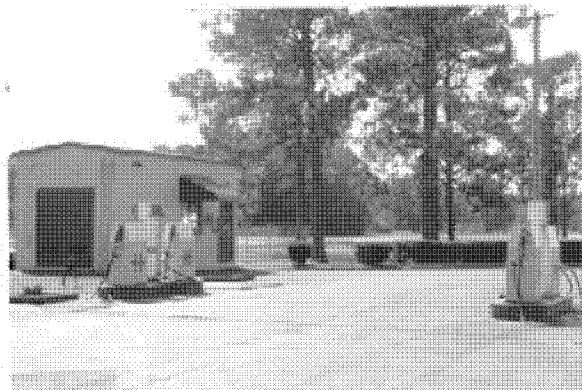
Resource No. 19071, Real Property No. 113
Group Headquarters (Public Affairs)



Resource No. 19072, Real Property No. 979
Housing Supply and Storage Facility



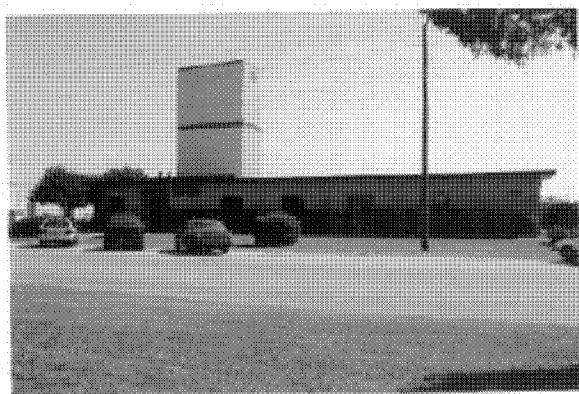
Resource No. 19073, Real Property No. 926
Traffic Check House



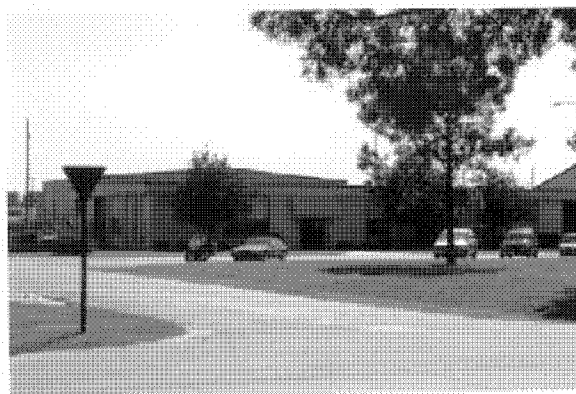
Resource No. 19074, Real Property No. 931
Vehicle Fuel Station



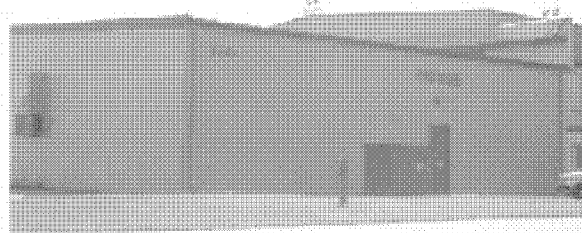
Resource No. 19075, Real Property No. 934
Base Supply and Equipment Warehouse



Resource No. 19076, Real Property No. 753
Survival Equipment Shop



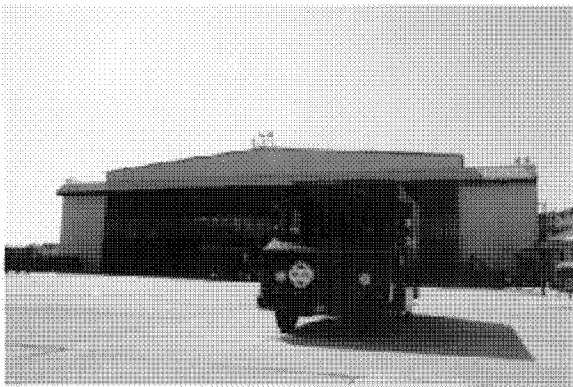
Resource No. 19077, Real Property No. 754
Troop Subsistence Warehouse



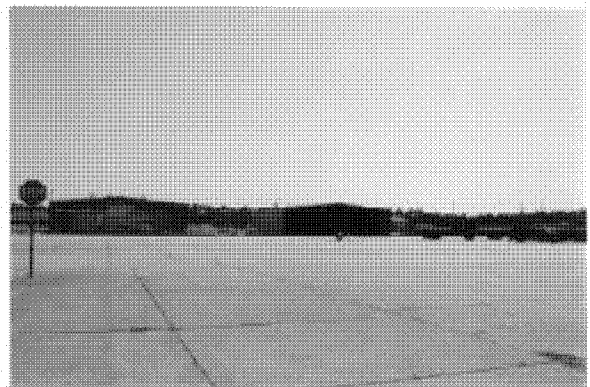
Resource No. 19078, Real Property No. 719
General Purpose Aircraft Shop (Egress)



Resource No. 19079, Real Property No. 758
Jet Engine Inspection Maintenance Shop



Resource No. 19080, Real Property No. 718
Maintenance Hangar



Resource Nos. 19081 and 19082, Real Property
Nos. 741 and 744, Aircraft Corrosion Control



Resource No. 19083, Real Property No. 702
Base Supply and Equipment Warehouse



Resource No. 19084, Real Property No. 785
General Purpose Aircraft Shop



Resource No. 19085, Real Property No. 780
Avionics Shop



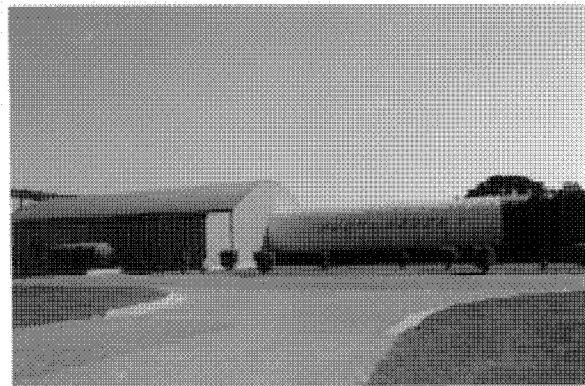
Resource No. 19086, Real Property No. 708
Weapon and Release System Shop



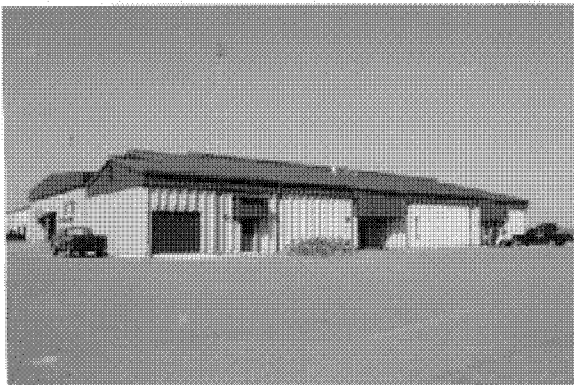
Resource Nos. 19087, 19088, 19089, 19090, 19091, Real Property Nos. 770, 775, 773, 778, 774
Small Aircraft Maintenance Docks and Base Supply and Equipment Warehouses



Resource No. 19092, Real Property No. 788
Fuel Systems Maintenance Dock



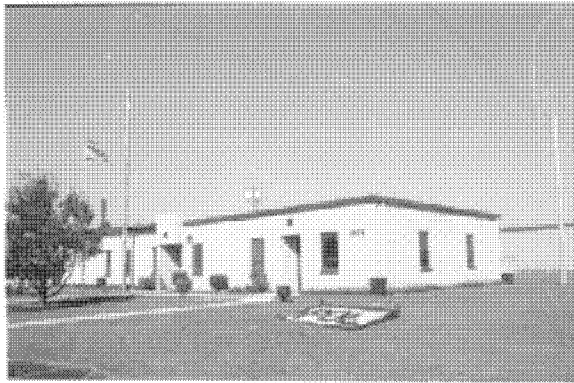
Resource No. 19093, Real Property No. 4127
Power Check with Suppressor Pad (Hush House 1)



Resource No. 19094, Real Property No. 772
Aircraft Maintenance Organizational Shop



Resource No. 19095, Real Property No. 769
Refueling Maintenance Shop



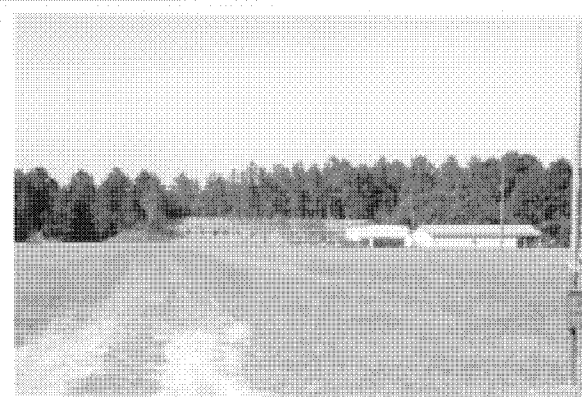
Resource No. 19096, Real Property No. 722
Petroleum Operations Building



Resource No. 19097, Real Property No. 725
Munitions Maintenance Administration



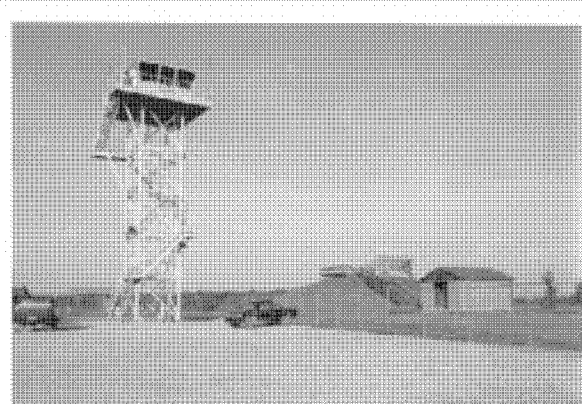
Resource No. 19098, Real Property No. (none)
Mission Lake Recreational Area



Resource No. 19099, Real Property No. 1314
Range Target Storage and Repair



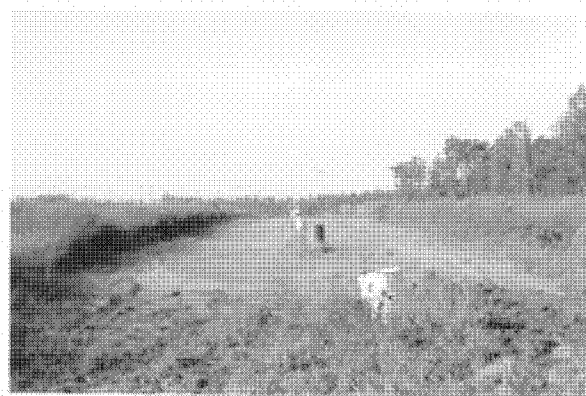
Resource Nos. 19100 and 19101, Real Property
Nos. 10 and 2, Cantonment Building and Control
Tower (Grand Bay Bombing Range)



Resource Nos. 19101 and 19102, Real Property
Nos. 2 and 12, Control Tower and Viewing
Stand (Grand Bay Bombing Range)



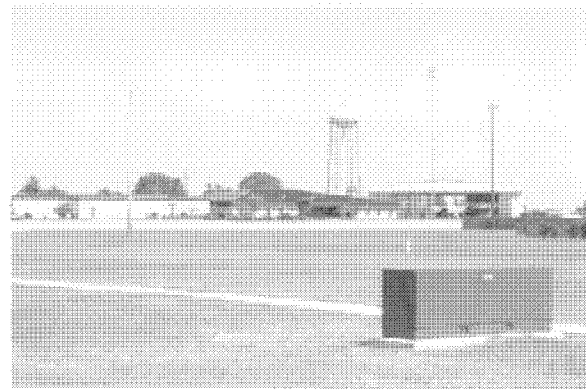
Resource No. 19103, Real Property No. (unknown), Maintenance Building (Grand Bay Bombing Range)



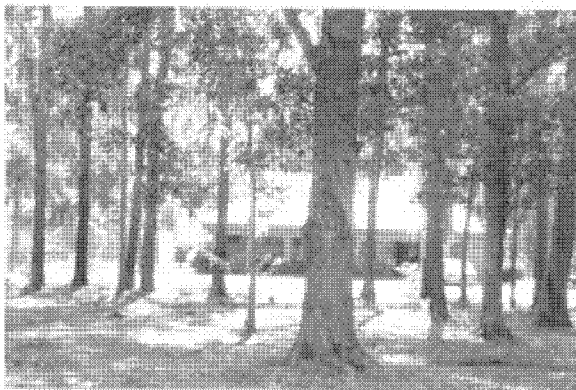
Resource No. 19104, Real Property No. (unknown), Strafing Target Run (Grand Bay Bombing Range)



Resource No. 19105, Real Property No. 1 Flank Tower (Grand Bay Bombing Range)



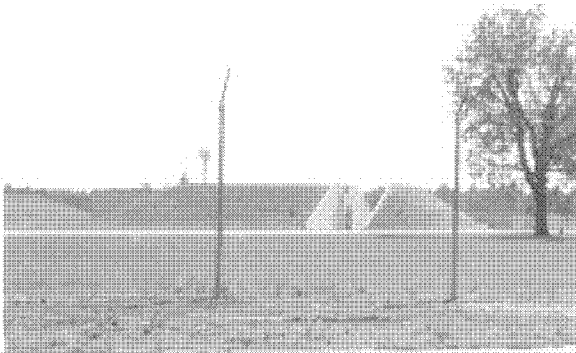
Resource Nos. 19106 and 19107, Real Property Nos. 704 and 706, Squadron Operations and Group Headquarters



Resource No. 19108, Real Property No. 1708 Canine Security Police Kennel



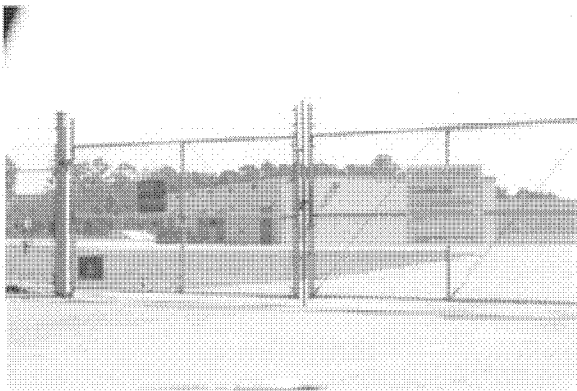
Resource Nos. 19109 and 19111, Real Property Nos. 1115 and 1104, Rocket Check Assembly Storage and Segregated Magazine Storage



Resource No. 19110, Real Property No. 1106
Storage Igloo



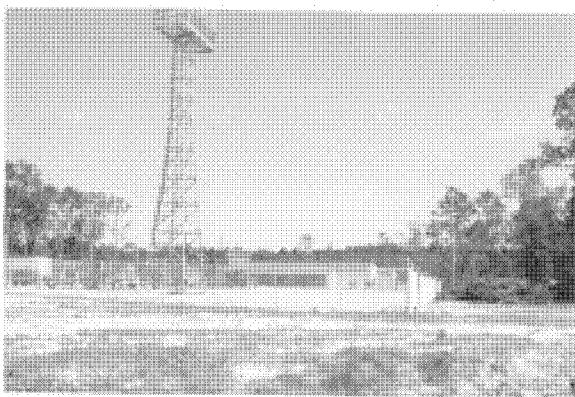
Resource Nos. 19112 and 19113, Real Property
Nos. 1109 and 1100, Conventional Munitions
Shop and Storage Igloo



Resource No. 19114, Real Property No. 1102
Above Ground Magazine Storage



Resource No. 19115, Real Property No. 1501
Receiver Communication



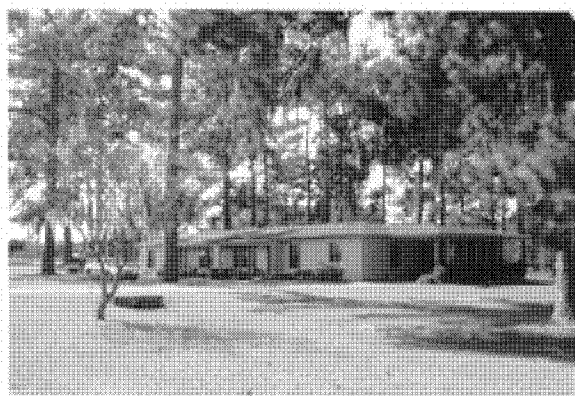
Resource No. 19116, Real Property No.
(unknown), 71st Air Controller Squadron



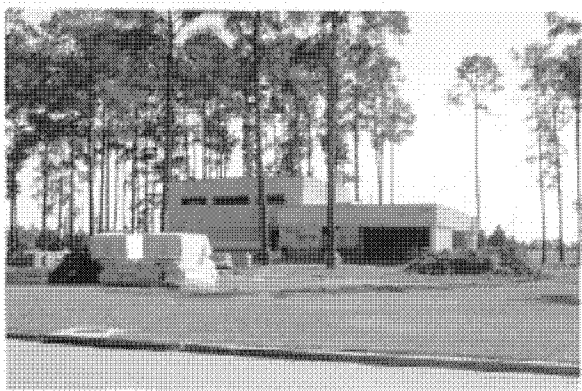
Resource No. 19117, Real Property No. 1500
Security Police Operations



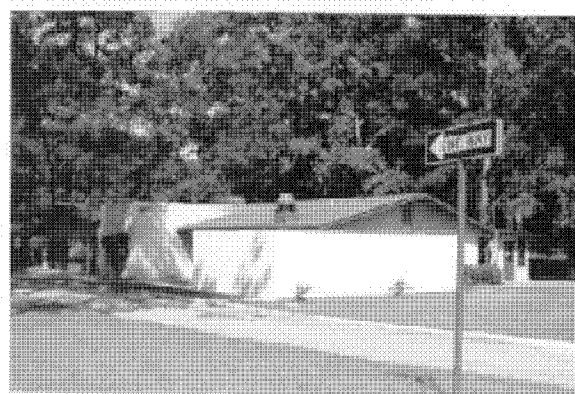
Resource No. 19118, Real Property No. (unknown), Water Tower



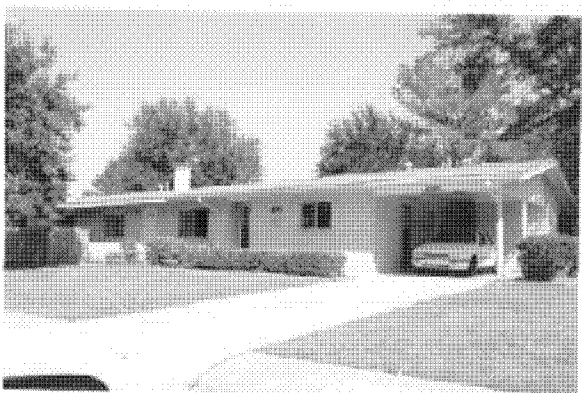
Resource No. 19119, Real Property No. 253
Family Housing Appr. 1950-1969



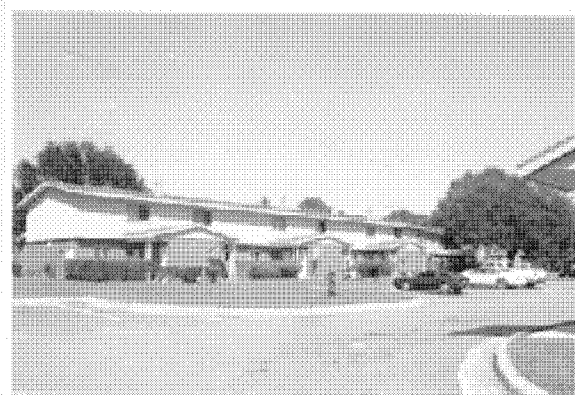
Resource No. 19120, Real Property No. 1804
Youth Center



Resource No. 19121, Real Property No. 1806
Golf Clubhouse and Equipment



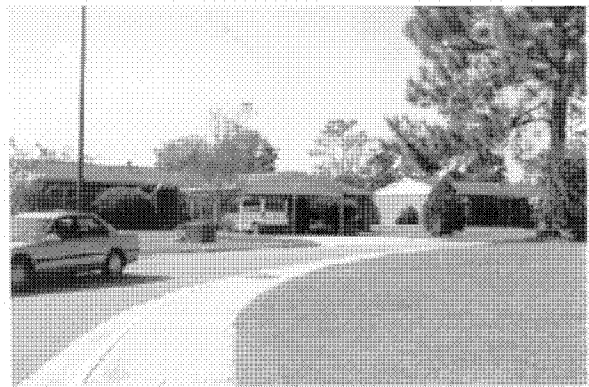
Resource No. 19122, Real Property No. 1627
Family Housing Appr. 1950-1969



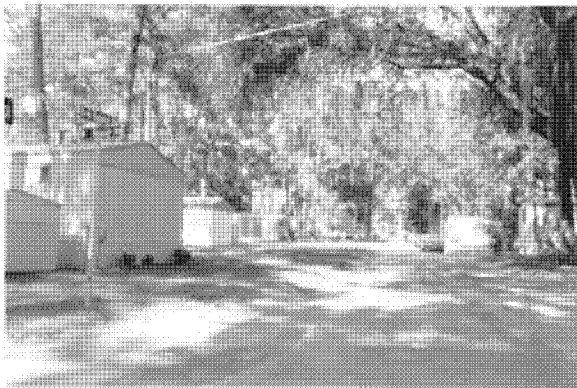
Resource No. 19123, Real Property No. 1623
Family Housing Appr. 1950-1969



Resource No. 19124, Real Property No. 1609
Family Housing Appr. 1950-1969



Resource No. 19125, Real Property No. 1647
Family Housing Appr. 1970A



Resource No. 19126, Real Property No.
(unknown), Trailer Park



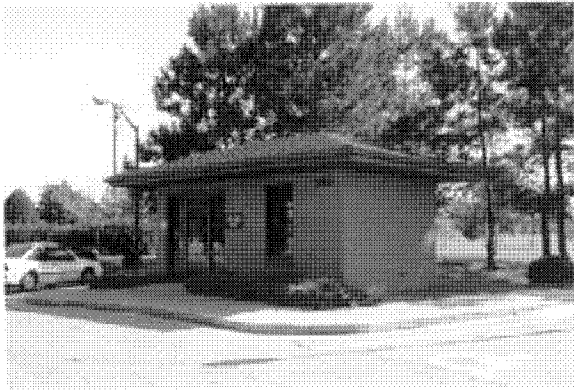
Resource No. 19127, Real Property No. 1004
Waste Treatment Building



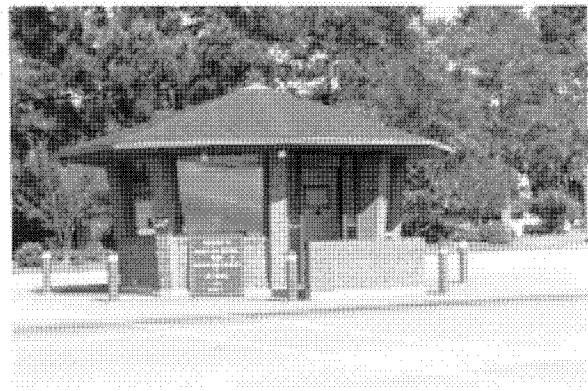
Resource No. 19128, Real Property No. 1222
Base Engineering Maintenance Shop



Resource No. 19129, Real Property No. 1216
RAPCON Center



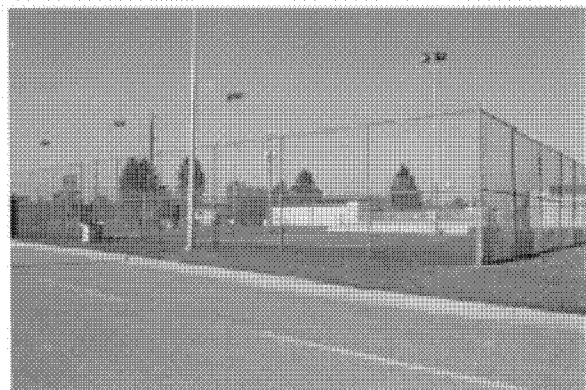
Resource No. 19130, Real Property No. 924
Security Police Identification Control



Resource No. 19131, Real Property No. 925
Traffic Check House



Resource No. 19132, Real Property No. (none)
Entrance Sign



Resource No. 19133, Real Property No.
(unknown), Tennis Courts



Resource No. 19134, Real Property No. 566
Swimmer's Bath House



Resource No. 19135, Real Property No. 454
Data Processing Installation

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT MOODY AFB

Resource Number: 19136

Property Description: Wing History Office Archives and Collections; located in 347th Wing Headquarters Building (Quality Center)

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 7248 Robbins Road

Base Map Date: 9/30/93

Base Map Building Number: inside 743

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: Many of the items, documents, photos, and records may be unique resources pertaining to the history of this base. The collection also includes historic aerial photographs at various times.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 1

Temporal Phase Relationship: 4

Level of Importance: 1

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 14

Comments on Threats: This collection contains a wide variety of materials dating to all periods of the base. It is under no threat and it is in good organization and condition.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: These files, documents, and photographs are in good condition and are fairly well organized. The collection should be properly stewarded.

Object Condition: Being Preserved

Record/Document Category: Various histories, photo and slide collections, etc

Year of Document: various

Period of Association: various

Comments on Condition: In relatively good condition and organization. Photos and slides could be further organized

Resource Number: 19137

Property Description: Architectural Files stored with Civil Engineering
Architectural Office

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 3485 Georgia Street

Base Map Date: 9/30/93

Base Map Building Number: inside 918

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: Files include unique drawings of base buildings and other facilities dating from the original construction of the base through all subsequent modifications. The collection also includes aerial photographs of the base.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats: This collection contains a wide variety of drawings and plans associated with all buildings and facilities dated to original construction and including modifications. There is no threat to the collection and the files are well maintained and organized.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: This collection should be cared for and eventually curated when deemed no longer useful to the engineers and architects on base.

Object Condition: Being Preserved

Record/Document Category: Architectural Drawing

Year of Document: Various

Period of Association: Various

Comments on Condition: Drawings should be preserved and curated if deemed no longer useful to base planners and engineers

**APPENDIX E:
ADDITIONAL RESOURCES**

**INVENTORY OF DOCUMENTARY COLLECTION
(RESOURCE NO. 19136, LOCATED IN REAL PROPERTY NO. 743)**

File Cabinets:

- 347th Wing Histories 1975-1988 (Unclassified): 1 File Cabinet
- 347th Wing Histories (Classified): 2 File Cabinets
- Active Files: 1 File Cabinet

Drawers No. 1 and No. 2 (Top)
Administrative Files
Historical Research and References

Drawer No. 3
Photo Archives
Photos of aircraft, people and activities dating from 1940-1990s.
Slide collection of various facilities, recent vintage.
4 x 5 negatives of construction, awards, aircraft, celebrity visits, ceremonies, open houses, crash sites.
Slide collection of activities, awards, personnel, aircraft, exercises etc. dating to 1970s to 1990s.

Drawer No. 4
Photo collection of 1960s awards and personnel.
70th FS T-shirt
Training Wing Flags
3550th PTW Histories 1970-1993
1981 Appearance Review photo journal

Drawer No. 5
Service Club scrapbooks ca. 1959
3550th PTW Histories 1970-1993
1981 Appearance Review photo journal

- Assorted Data: 1 File Cabinet

Drawer No. 1 (Top)

Seven scrap books dating 1958-1959, 1960-1961, 1972, 1973, 1975, 1977, 1980, and 1987 containing photos and newsclippings of people, places, activities, and awards.

Two manila envelopes dated 1962 and 1972-1975 containing photos and newsclippings of base activities.

Six aerial photographs of the base dating to 1966 from various angles and perspectives.

Drawer No. 2

Aerial Photographs dating to ca. 1955, 1969, 1970, 1972, 1975
1940s copies of base layout map

Drawer No. 3

38th TFW History 1973-1975

3550th PTW Histories 1970-1993

1981 Appearance Review photo journal

Drawer No. 5

Service Club scrapbooks ca. 1959

3550th PTW Histories 1970-1993

1981 Appearance Review photo journal

Assorted Holdings on Shelves:

- Training group yearbooks 1958-1971
 - Set of USAF publications on base history
 - Declassified wing histories and "FOUO" documents
-

**INVENTORY OF DOCUMENTARY COLLECTION
(RESOURCE NO. 19137, LOCATED IN REAL PROPERTY NO. 918)**

184 Flat File Drawers:

- 97 files regarding individual buildings labelled by real property number, includes plans and modifications to real properties.
 - 40 files of general themes (i.e. base parking, railroads, roads, lighting, aprons and taxiways, etc.), contains plans and as-built drawings spanning 1940s-1990s on mylar, vellum, and sailcloth.
 - 25 project files labelled according to individual planners or draftspersons.
 - 12 files associated with current design projects.
 - 7 Master Plan drawing files.
 - 1 Old Master Plan drawing file.
 - 1 miscellaneous file including mylar, paper, and cloth drawings dating to 1941.
 - 1 file labelled Old Archives Dead File which contains 1940s vintage maps and plans of buildings.
 - Aerial photographs: a selection of 1950s and 1960s black-and-white base photographs and several infrared aerial photographs.
-

APPENDIX F:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Moody AFB and provide research materials for this study:

Mr. Robert Makowski
Natural and Cultural Resource Manager
347th CES
3485 Georgia Street
Moody AFB, Georgia 31699
(912) 333-3612

Ms. Gloria Luke
Real Property Officer
347th CES
3485 Georgia Street
Moody AFB, Georgia 31699
(912) 333-3612

Mr. Carlton Crenshaw
Chief of Engineers
347th CES
3485 Georgia Street
Moody AFB, Georgia 31699
(912) 333-3612

Sgt Tamara Cabutu
CE Drafting Office
347th CES
3485 Georgia Street
Moody AFB, Georgia 31699
(912) 333-3612

Mr. Robert Jefferson
Community Planner
347th CES
3485 Georgia Street
Moody AFB, Georgia 31699
(912) 333-3612

TSgt M. Tidwell
347th Wing Historian
7248 Robbins Road
Moody AFB, Georgia 31699
(912) 333-4143

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-21: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT MOUNTAIN HOME AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
Lori E. Rhodes
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. conducted a cultural resource inventory at Mountain Home Air Force Base, Idaho, between August 26 and 31, 1994 to ascertain extant Cold War resources important to the base, its history, and its Cold War mission. The inventory was conducted as part of the Air Combat Command Cold War Study, under the ongoing Department of Defense Legacy Program. Environmental scientists James Lowe and Lori Rhodes were welcomed by Robert Dews, the point of contact from the Environmental Office. Following a discussion concerning objectives and needs for completing the base inventory, the Mariah team was given an orientation tour of the base by Brandon Smith of the Environmental Office. A variety of repositories were inventoried at Mountain Home Air Force Base: the Wing History Office, the Public Affairs Office, the Civil Engineering Office and the Drafting Department, the Real Estate Office, and the Environmental Office. A photographic reconnaissance of the base was conducted to inventory Cold War resources as well as representative architecture on the base.

The Mariah team selected two buildings to further document and evaluate: the Bomber Alert Facility and the Over the Horizon Backscatter Facility. These facilities represent United States Air Force alert posture and deterrence capability during the Cold War era at Mountain Home Air Force Base. The Wing Historian's Office Files, Public Affairs Base Newspaper Collection, and Civil Engineering's Documentary Collection were also evaluated for their illustration of base development throughout the Cold War.

Recommendations for the Base Newspaper Collection and Documentary Collection include stewardship, further documentation, and conservation. Stewardship alone is recommended for the Office Files. The Bomber Alert Facility is recommended as eligible to the National Register of Historic Places, with stewardship and further documentation the recommended actions. The Over the Horizon Backscatter Facility is also recommended as eligible for NRHP listing; stewardship and further documentation are recommended.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AGE	- Air Ground Equipment
ARC	- Air Resupply and Communications
AREFS	- Air Refueling Squadron
BMG	- Bombardment Group
BMW	- Bombardment Wing
BS	- Bomb Squadron
CRS	- Component Repair Squadron
DoD	- Department of Defense
ECRS	- Electronic Combat Range Squadron
ECS	- Electronic Combat Squadron
EMS	- Equipment Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
ICBM	- Intercontinental Ballistic Missile
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
MATS	- Military Air Transport Service
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
ORI	- Operation Readiness Inspection
OTH-B	- Over the Horizon Backscatter
POL	- Petroleum, Oils, and Lubricants
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SAW	- Strategic Aerospace Wing
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SMS	- Strategic Missile Squadron
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TFS	- Tactical Fighter Squadron
TFTS	- Tactical Fighter Training Squadron
TFW	- Tactical Fighter Wing
TRW	- Tactical Reconnaissance Wing

LIST OF ACRONYMS (Continued)

USAF - United States Air Force
WRSK - War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

GLOSSARY (Continued)

Over the Horizon Backscatter - one of two principal radar techniques for locating and identifying airborne objects. Unlike the limited line-of-sight radar, which is restricted by the curvature of the earth, OTH-B radar has a comparatively long range and can detect objects flying beyond the horizon. OTH-B radar is used for a variety of purposes, including detection of enemy attack and missile test flights.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	17
4.0 METHODOLOGY	24
4.1 INVENTORY	24
4.2 EVALUATION OF IMPORTANT RESOURCES	25
4.2.1 Documentation	25
4.2.2 Evaluation of Importance	25
4.2.2.1 Cold War Context	25
4.2.2.2 NRHP Criteria	26
4.2.2.3 Exceptional Importance	27
4.2.3 Evaluation of Integrity	27
4.2.4 Priority Matrix	28
4.2.5 Resource Organization	29
4.3 BASE SPECIFIC METHODS	29
5.0 RECONNAISSANCE INVENTORY RESULTS	31
6.0 EVALUATION RESULTS	32
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	32
6.1.1 Documentation	32
6.1.1.1 Office Files	32
6.1.1.2 Base Newspaper Collection	34
6.1.1.3 Documentary Collection	34
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	34

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1 Alert Facilities	34
6.2.1.1 Bomber Alert Facility	34
6.3 MATERIEL DEVELOPMENT FACILITIES	35
6.4 TRAINING FACILITIES	36
6.5 INTELLIGENCE FACILITIES	36
6.5.1 Radar	36
6.5.1.1 OTH-B Facility	36
7.0 UNDOCUMENTED RESOURCES	38
8.0 FUTURE THREATS TO RESOURCES	40
9.0 PRELIMINARY RECOMMENDATIONS	41
9.1 NRHP ELIGIBILITY	41
9.1.1 Evaluation and Determination of NRHP Eligibility	41
9.1.2 Implications of NRHP Eligibility	43
9.2 EVALUATED RESOURCE RECOMMENDATIONS	45
9.2.1 Office Files	45
9.2.2 Base Newspaper Collection	47
9.2.3 Documentary Collection	47
9.2.4 Bomber Alert Facility	47
9.2.5 OTH-B Facility	48
10.0 REFERENCES CITED	49
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Mountain Home Air Force Base	5
Figure 2.2 Mountain Home Air Force Base Layout	7
Figure 2.3 Standard Tactical Air Command Base Layout	8
Figure 2.4 Mountain Home Air Force Base Land Use Diagram	11
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	12
Figure 3.1 Mountain Home Air Force Base, 1943-1950	18
Figure 3.2 Mountain Home Air Force Base, 1950-1960	20
Figure 3.3 Mountain Home Air Force Base, 1960-1980	22
Figure 3.4 Mountain Home Air Force Base, 1980-1990	23

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	33
Table 6.2 Evaluated Resource Prioritization by Priority Rank	33
Table 9.1 Recommendations for Evaluated Resources	46

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

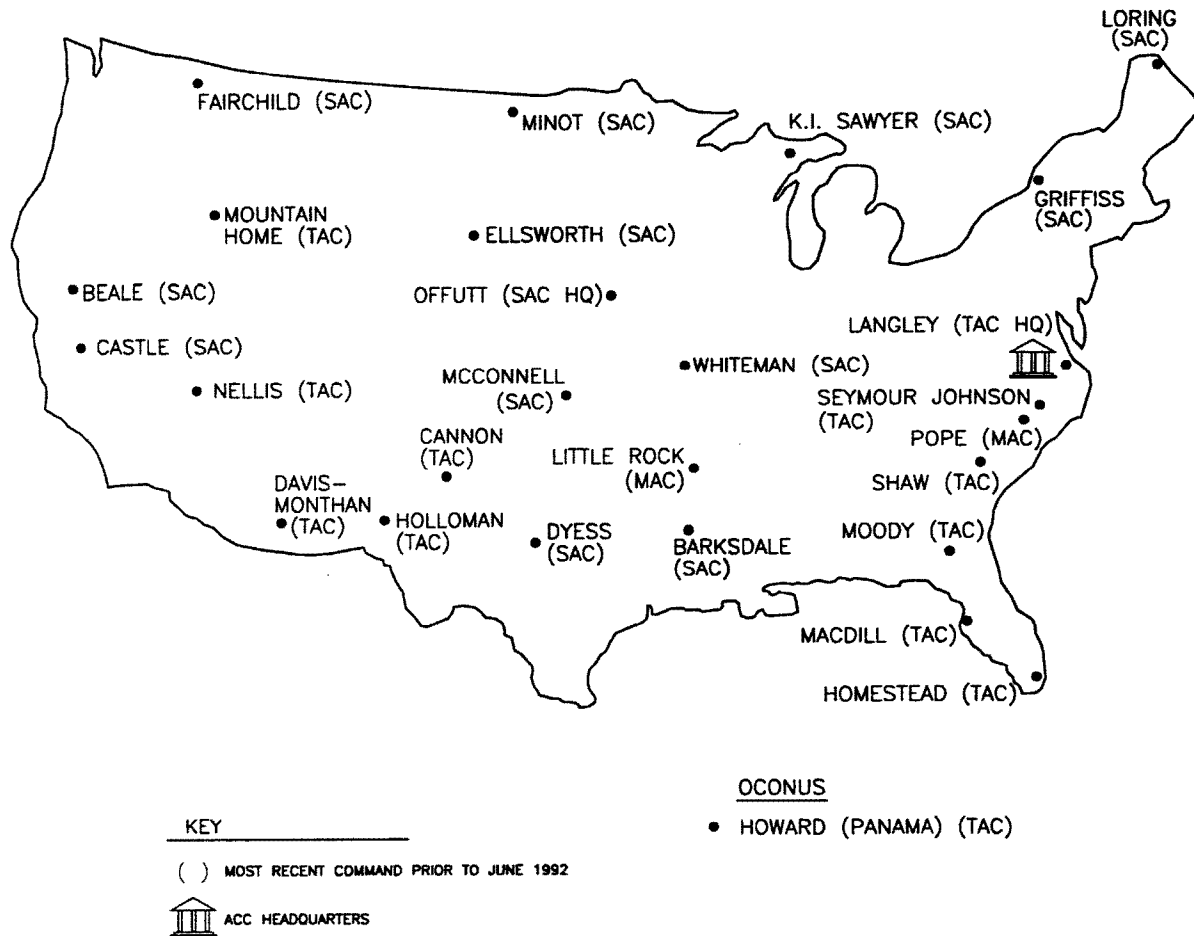
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: COLDWAR\MTHOME\US_MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Mountain Home Air Force Base (AFB). Mountain Home AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

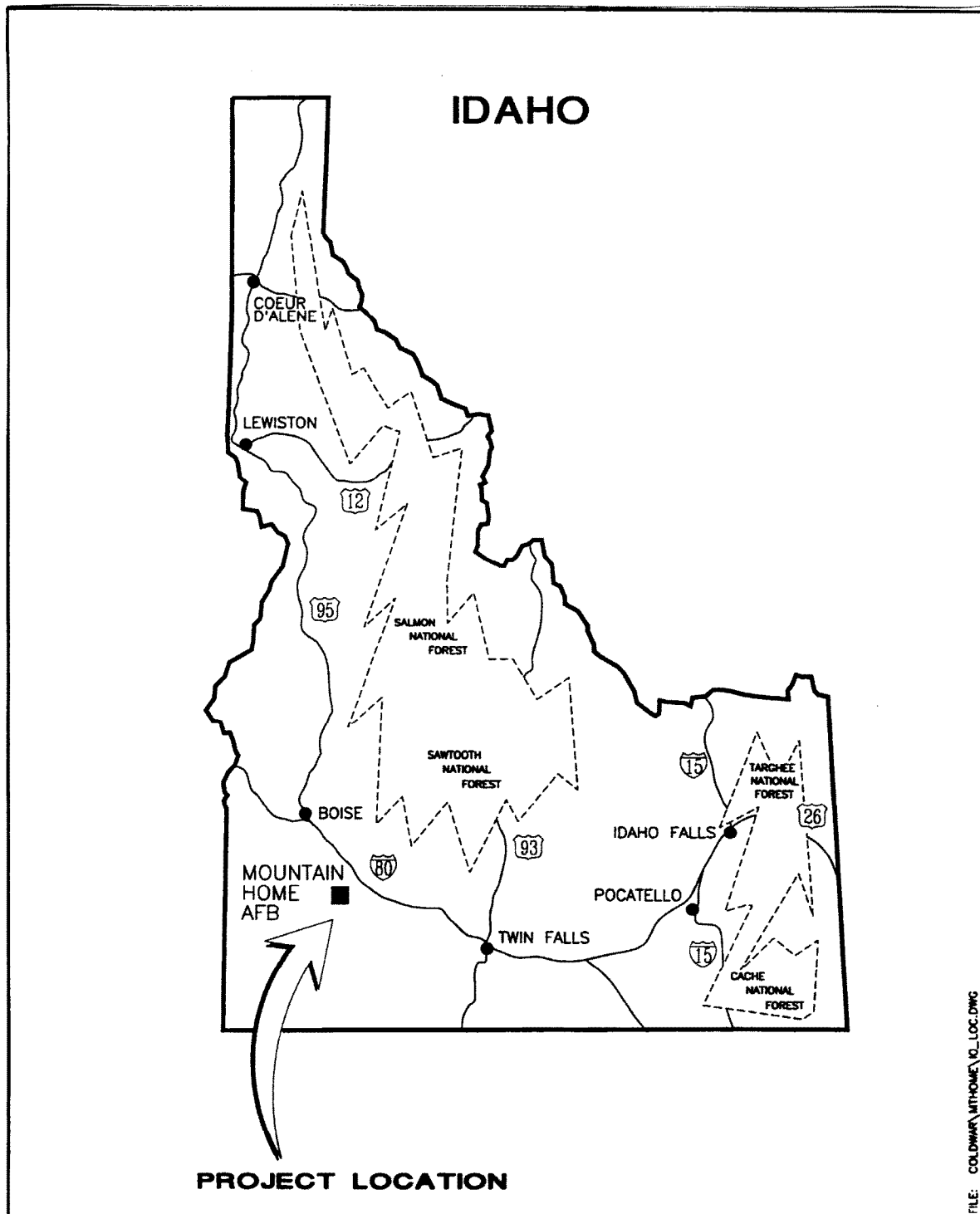
2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The host unit at Mountain Home AFB is the 366th Wing. Known as the 366th Tactical Fighter Wing (TFW) prior to the creation of ACC, its current mission is "to develop, maintain, and train combat air crews for worldwide mobility by using a composite wing concept of coordinated weaponry" (Oak Ridge National Laboratory 1994:8). Squadrons that make up this composite wing include the 22nd Air Refueling Squadron (AREFS) with KC-135 *Stratotankers*, the 389th Tactical Fighter Training Squadron (TFTS), the 390th Electronic Combat Squadron (ECS), the 391st Tactical Fighter Squadron (TFS) using F-15 *Eagle* and F-16 *Fighting Falcon* aircraft, and the 34th Bomb Squadron (BS) utilizing the B-1B *Lancer* bomber (Wing History Office 1994:20-21).

2.2 GEOGRAPHIC DESCRIPTION

Mountain Home AFB consists of approximately 6,700 acres (2,711 ha) located 50 mi (80 km) south of Boise and 10 mi (16 km) west of Mountain Home in Elmore County, Idaho (Figure 2.1). The base is situated on the Mountain Home Plateau at an average elevation of 3,000 ft (914 m) above mean sea level. The Snake River, approximately 2 mi (3 km) south of the base, borders the plateau on its southern and southwestern boundary; a series of intermittent streams are found on the plateau that drain to this river. The plateau is bordered on the north and east by a small mountain range known as the Bennett Hills. The region around the base is a rolling upland plain consisting of wind blown sediments utilized for cattle grazing and limited agriculture. Overall, the area is representative of a high, northern desert environment with flora and fauna characteristic of the Sonoran Desert life zone (Oak Ridge National Laboratory 1994:7-8; Real Estate Office 1988:2; Woodward-Clyde 1992:2-1;



FILE: COLDWATER\MTHOME\10_LOC.DWG

Figure 2.1 Location of Mountain Home Air Force Base.

2.3 CURRENT BASE LAYOUT

Mountain Home AFB (Figure 2.2) resembles the standard TAC base layout (Figure 2.3) with few exceptions. The 13,500 ft main instrument runway, associated taxiways, and parking aprons are oriented northwest/southeast, bisecting the base into two sections - one northeast of the runway, the other southwest. Virtually all buildings and facilities are located northeast of the runway.

The main gate and visitor center are located on the northern perimeter of the main base, northwest of the hospital. Family housing units, airmen's dormitories, and officer's housing are all located in the northeastern quadrant of the base, north of the runway and south of the main gate and hospital. The base elementary school is centrally located within the housing area.

The mission oriented buildings are located northeast of the runway and adjacent to the taxiways and parking aprons for the full length of the flight line. Wing Headquarters and the base command post are centrally located between the flight line and the housing area. The firefighting training area is located at the southeastern end of the mission area and northwest of the alert apron.

A mixture of community and industrial buildings and facilities is centrally located north of the mission buildings. Recreational facilities and the base chapel are also located within this area. The base golf course is situated on the eastern side of the base, south of the housing area and north of the alert apron. The weapons storage area is located on the extreme northern side of the base, near the northeastern end of the parking apron.

The sewage treatment facility and lagoons are found near the northern end of the section of the base southwest of the runway. The landfill area is in the extreme southwestern corner of the base, south of the sewage treatment facility. A training area is also located in the southwestern section of the base, south of the control tower and along the extreme southern perimeter of the base.

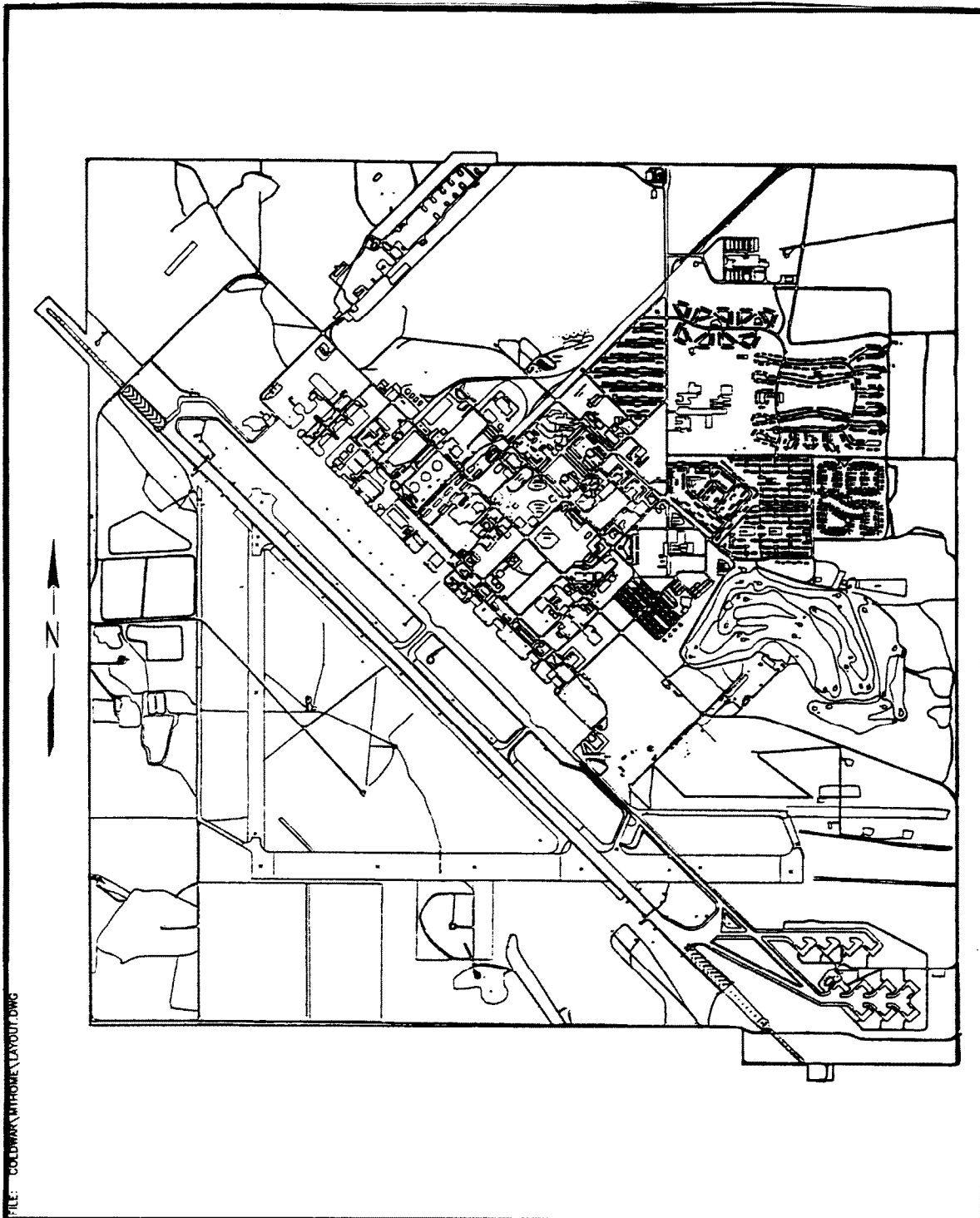


Figure 2.2 Mountain Home Air Force Base Layout.

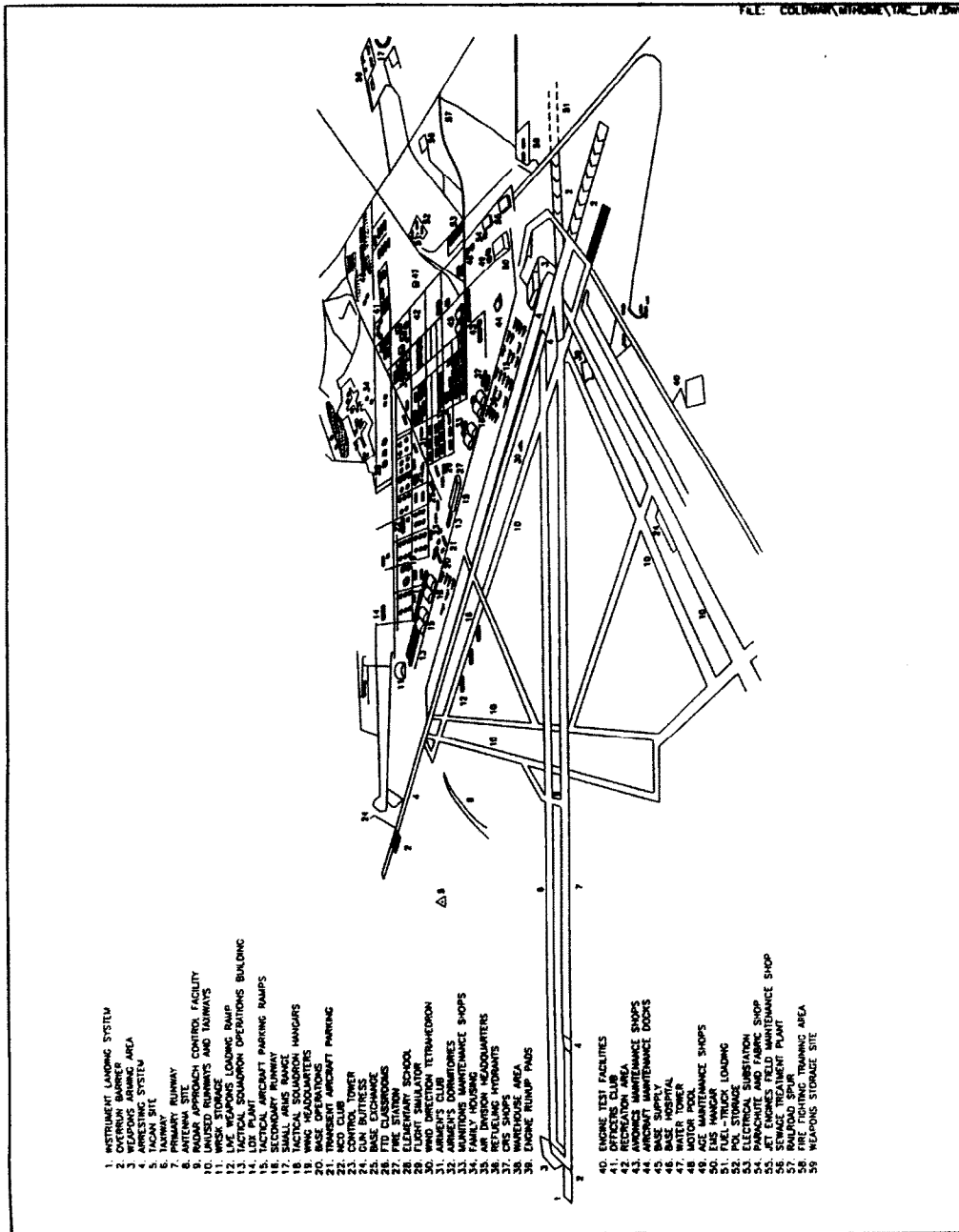


Figure 2.3 Standard Tactical Air Command Base Layout.

Deviations from the standard TAC layout include the locations of the engine test stands and the flight control tower. The two engine test stands are located on opposite ends of the runway adjacent to the parking apron and mission buildings. In the standard TAC layout, they are found away from the runways and the developed part of the base. The flight control tower is located on the undeveloped side of the main runway at Mountain Home AFB; on the standard diagram it is located among the mission buildings. Finally, because this base was previously under Strategic Air Command (SAC), it has an alert facility and apron, located in the southeastern corner of the base on the extreme southeastern end of the runway, and a command post and weapons storage area. The standard TAC diagram does not show these facilities.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but

provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Mountain Home AFB (Figure 2.4) is similar to the standard TAC land use diagram (Figure 2.5) with few exceptions. The 13,500 ft main instrument runway bisects the base into two sections: one northeast of the runway, the other southwest. Virtually all buildings and facilities are located northeast of the runway.

Family housing units and officer's housing are located in the northeastern corner of the base, farthest from the runway, and next to a recreation area. The mission oriented buildings (hangars and base operations) are located north of the runway adjacent to the taxiways and parking aprons for the length of the flight line. The area between the mission and family housing areas is occupied with unaccompanied housing, base support, community, and recreation developments. Industrial areas are located to one end of the main base development.

Differences between this base and the standard TAC base diagram include the location of the flight control tower on the side of the runway opposite the mission buildings. The location of training and industrial areas on the southwestern portion of the base also differs from the standard diagram, which shows no facilities on the side of the runway opposite main base development.

Because of Mountain Home AFB's earlier history as a SAC base, it has some land use areas not shown on the standard TAC diagram. These areas include an alert facility, command post, and weapon and warhead storage area.

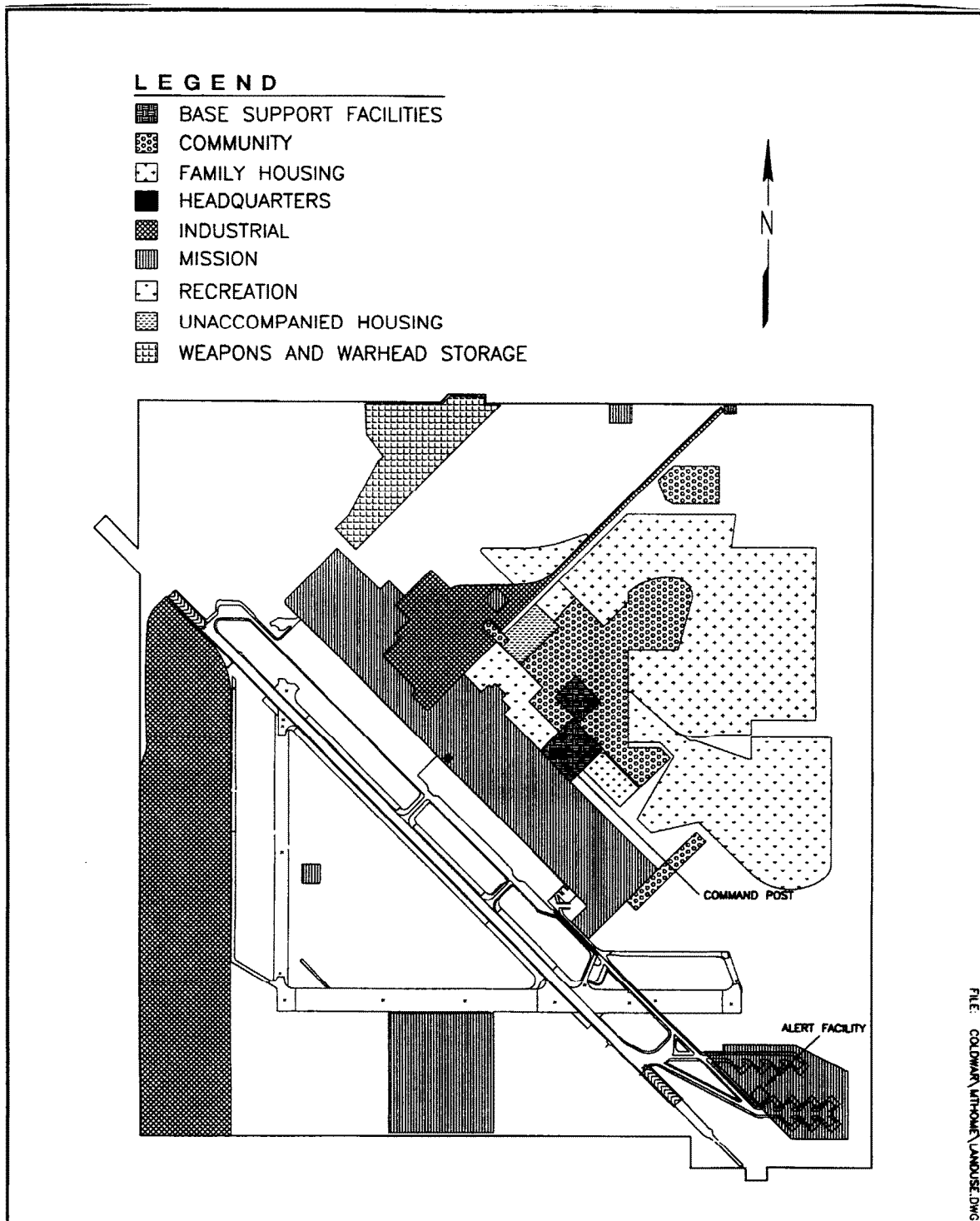


Figure 2.4 Mountain Home Air Force Base Land Use Diagram.

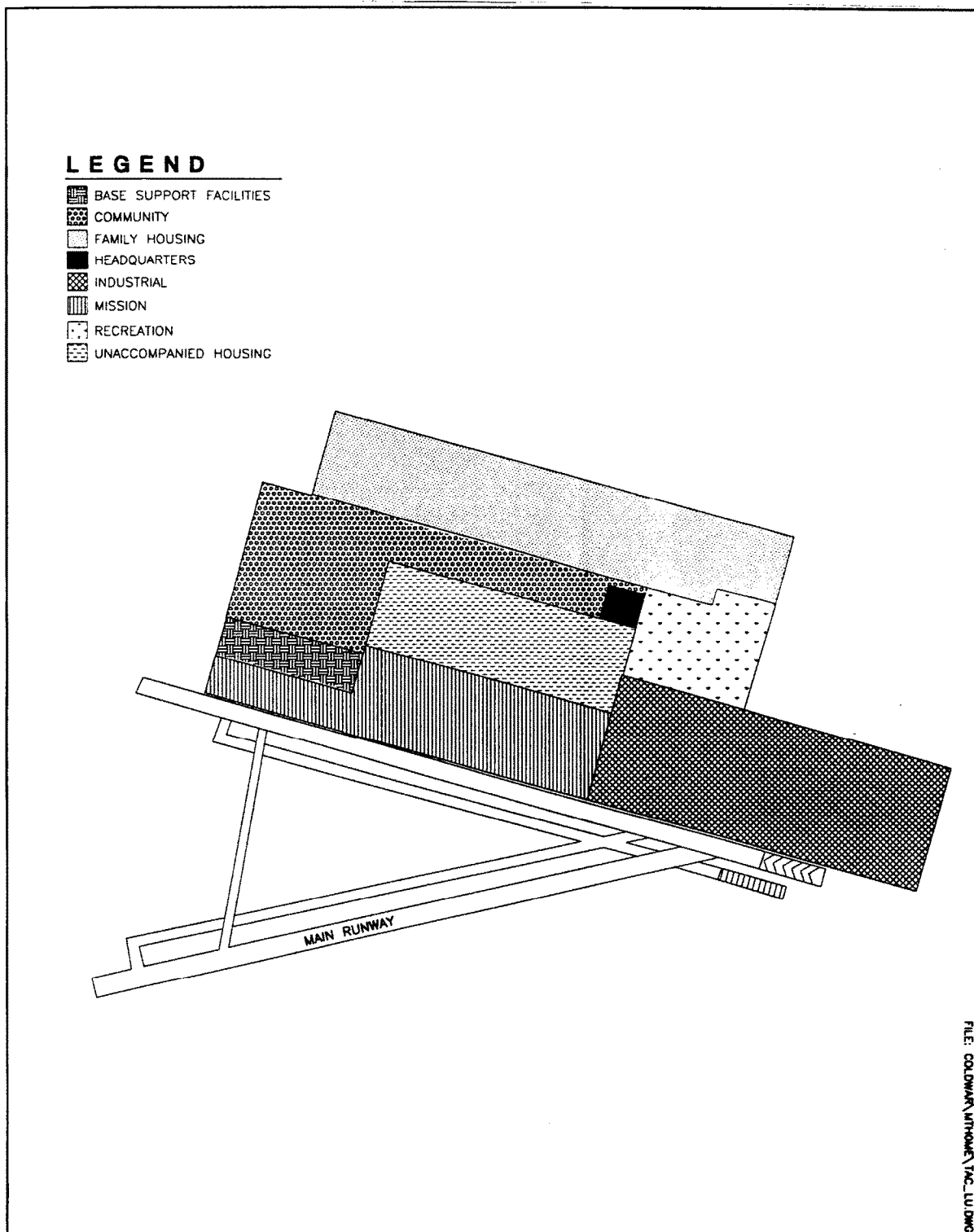


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

During the early years of World War II, the Army needed bases to train aircrews for combat. This necessity was the catalyst for the evaluation and construction of what would become Mountain Home AFB. A site near Jerome, Idaho was considered first. However, the cost of construction on land already partially developed proved to be too high, and the site could not be built as quickly as on undeveloped land. The present site of Mountain Home AFB was undeveloped at the time and the terrain was relatively flat, factors that would greatly reduced the cost and the time required to construct an operational base (Blue 1988:1; Public Affairs Office 1982:1; Wing History Office 1994:1). Public land at the site was temporarily withdrawn for construction in April 1943, and a permanent withdrawal was effected by Public Land Order 987 in 1954 (Real Estate Office 1988:17).

Construction of Mountain Home Army Air Base commenced November 30, 1942 with plans for three operational runways on land totaling 5,760 acres. Initial base construction was completed by the Army Corps of Engineers and the firm of J.A. Tertling and Sons of Boise, Idaho on August 21, 1943. The base was officially opened on August 7, 1943 and renamed Mountain Home Army Air Field on December 2, 1943 (Mueller 1989:427,430; Wing History Office 1994:1-2).

Throughout World War II, the mission at the new base was to train air groups and individual crews for combat. The 470th Bombardment Group (BMG) was activated at the base in May 1943 to train flight crews for the B-24 bomber and to deploy them for combat. However, the 470th BMG instead remained at the base to train other units for combat and assumed base host responsibilities. Host responsibility for operations at the base were transferred to the 20th Base Headquarters and Air Base Squadron in November 1943, and the 20th continued the training of aircrews for combat readiness. Responsibility for the base changed hands in April 1944, when

the 213th Army Air Forces Base Unit replaced the 20th. Until August 1945 and the end of the war, the base continued to train aircrews as aircraft technology replaced the B-24 with the shortlived B-32, followed by the B-29 *Superfortress*. After the end of the war, training at the base was discontinued, the base was temporarily deactivated October 5, 1945, and its status reverted to that of a sub-base of Gowen Field in Boise, Idaho (Mueller 1989:431; Public Affairs Office 1982:3-5; Wing History Office 1994:2-4).

Following the creation of an independent Air Force in 1947, the name of the base was changed to Mountain Home AFB, though the base remained on inactive status (Mueller 1989:427,431; Wing History Office 1994:4). SAC assumed control of the base in December 1948, activating the base under the 311th Air Division, Reconnaissance; host responsibilities passed at this time to the 4205th Air Base Group. The base was again deactivated eight months later in August 1949.

The base was finally reactivated on a permanent basis February 1, 1951, when control of the base passed from SAC to the Military Air Transport Service (MATS). Base host responsibilities for the base were assigned to the 1701st Air Transport Wing. Three separate air resupply and communications wings (ARC) trained at Mountain Home AFB for deployment overseas during the next three years, which spanned United States involvement in the Korean conflict (Mueller 1989:431; Real Estate Office 1988:14; Wing History Office 1994:4-5). These wings "trained in psychological warfare, covert operations, and other forms of unconventional warfare" (Wing History Office 1994:5).

SAC assumed control of the base once again on May 1, 1953, and the ARC wings departed from the base. The arrival of SAC was the beginning of a long period of stability at Mountain Home AFB. Operating the B-29 bomber and KB-29 refueling aircraft, the 9th Bombardment Wing (BMW) was assigned host responsibilities at Mountain Home AFB. In September 1954, the 9th BMW began the transition to the B-47 *Stratojet* bomber and the KC-97 tanker. The deterrence capability of the 9th BMW was augmented in the early 1960s with the construction of three

Titan I intercontinental ballistic missile (ICBM) sites in the area. When completed, the sites were controlled by the 569th Strategic Missile Squadron (SMS) assigned to the 9th BMW. In preparation for the addition of missiles to its bomber force, the 9th BMW was redesignated the 9th Strategic Aerospace Wing (SAW) in April 1962. Its routine was altered briefly in 1962, when the wing temporarily dispersed its aircraft to other bases around the United States during the Cuban Missile Crisis (Blue 1988:1; Mueller 1989:430; Public Affairs Office 1982:8; Wing History Office 1994:5).

The 9th SAW sustained its Cold War mission of deterrence until the mid-1960s. The missile sites were deactivated in June 1965 (Mueller 1989:430-431; Wing History Office 1994:5). During this same time frame, the United States Air Force (USAF) was retiring the aging B-47. The 9th SAW was reassigned to Beale AFB, California, to function as a reconnaissance wing. As part of the planned B-47 phaseout, control of the base was assumed by TAC on January 1, 1966, with host responsibilities going to the 67th Tactical Reconnaissance Wing (TRW). The 9th SAW remained until June 1966 to retire its tankers and bombers before relocating to Beale AFB (Mueller 1989:431; Public Affairs Office 1982:8; Wing History Office 1994:5-6).

Host responsibilities changed hands twice between 1966 and 1972. The 67th TRW conducted reconnaissance operations in RF-4C *Phantom* aircraft and trained replacement crews for overseas assignments. The unit became responsible for the training of tactical fighters with the June 1968 addition of a squadron of F-4D aircraft. The F-4D force and the 67th TRW were reassigned to Bergstrom AFB in May 1971, and the 347th TFW, utilizing the F-111 aircraft, was assigned to the base and became the host unit. The 347th TFW consisted of two squadrons, the 389th and the 391st TFS. The following year, the 347th was inactivated, but all personnel and equipment remained at Mountain Home AFB. Stationed at an air base in Takhli, Thailand, the 366th TFW returned to the United States from duty in Southeast Asia in October 1972 with the 390th TFS and absorbed the equipment, assets, and host responsibilities of the 347th. The day to day

operations at the base remained unchanged during this reorganization (Real Estate Office 1988:15; Wing History Office 1994:6,18; 1972:1,23).

Upon its arrival at Mountain Home AFB, the mission of the 366th TFW was to "execute tactical fighter missions to destroy enemy military forces, supplies, equipment, communications, systems and installations, with nuclear or conventional weapons and engage and destroy enemy aircraft in either an offensive or defensive role by visual interception, airborne radar, or air control and warning systems" (Wilson 1982; Wing History Office 1972:24).

The 388th ECS was activated in 1981 to fly the EF-111A, a modified version of the F-111. The mission of this squadron was to support United States military operations by providing electronic countermeasures to protect strike forces from enemy radar detection. The supply of F-111 sent out for conversion was taken from the other squadrons of the 366th TFW. This resulted in the deactivation of the 390th TFS in 1982 due to a shortage of tactical aircraft in the wing. Shortly afterward, the 388th ECS was deactivated and the 390th was reactivated in its place, assuming the ECS mission (Blue 1988). The mission of the 366th TFW remained the same during this decade, but was augmented to provide training for these F-111 and EF-111 aircrews (Wilson 1982:1). This was done by designating the 389th squadron as a TFTS.

In the late 1980s, a tenant organization, Detachment 1 of the Northwest Air Defense Sector, occupied a new building constructed on base to house the Over the Horizon Backscatter (OTH-B) radar facility. This facility was utilized within the sector's air defense network to locate, identify, and provide warning of aircraft or missiles approaching United States airspace (Real Estate Office 1988:149).

Operations at the base continued unchanged throughout the late 1980s. The mission of the 366th TFW, with the 389th TFTS, 390th ECS, and the 391st TFS, remained the same: to maintain its peacetime role of training aircrews and, if necessary, to fulfill its combat mission if called upon in a crisis situation (Blue 1989:6; Wing History Office 1994:7). The 389th TFS, now converted

to a TFTS, conducted its sole function of aircrew training. In 1985, the 392nd Electronic Combat Range Squadron (ECRS) was assigned to the base to provide electronic threat simulation support to Mountain Home AFB and to other bases and ranges, including those overseas (Real Estate Office 1988:143-144; Wing History Office 1994:113). In 1991, the base was chosen to become the home of the USAF's air intervention composite wing. Mountain Home AFB began receiving F-15 and F-16 aircraft. In 1992, the 22nd AREFS, with the KC-135 tankers, and the 34th BS, from Ellsworth AFB, were added, rounding out the composite wing with the B-52G. Also during this year, the base was assumed under command of ACC, and the 366th TFW became the 366th Wing. In February 1994, the B-1B was added to the wing's arsenal, replacing the B-52G (Wing History Office 1994:8).

Important to the mission of the 366th Wing are the bombing exercises conducted by aircraft from Mountain Home AFB at Saylor Creek Gunnery Range located 20 mi southeast of the base in Owyhee County, Idaho. Established in 1944 by the Army Corps of Engineers, the range became part of Mountain Home's property inventory in 1954 by Public Land Order No. 1027 (Public Affairs Office 1982:2; Real Estate Office 1988:3,18,143). Saylor Creek encompasses approximately 110,000 acres of land. Approximately 97,000 acres are leased for grazing, with the remaining 13,000 acres utilized exclusively by the USAF for exercises that include "air-to-ground weapons deliveries and tactical reconnaissance procedures" (Real Estate Office 1988:3,143).

3.2 BASE DEVELOPMENT

The Army needed bases to train aircrews for combat during the early years of World War II. Construction of the initial base at Mountain Home began November 30, 1942 and ended in August 1943. Completed facilities included three runways with taxiways and aprons, support facilities, maintenance hangars, an engineering building, a headquarters building, and administration facilities (Figure 3.1). In the late 1940s, classroom buildings, a theater, a dining hall, barracks, a hospital, warehouses, power and water plants, and fuel storage facilities were

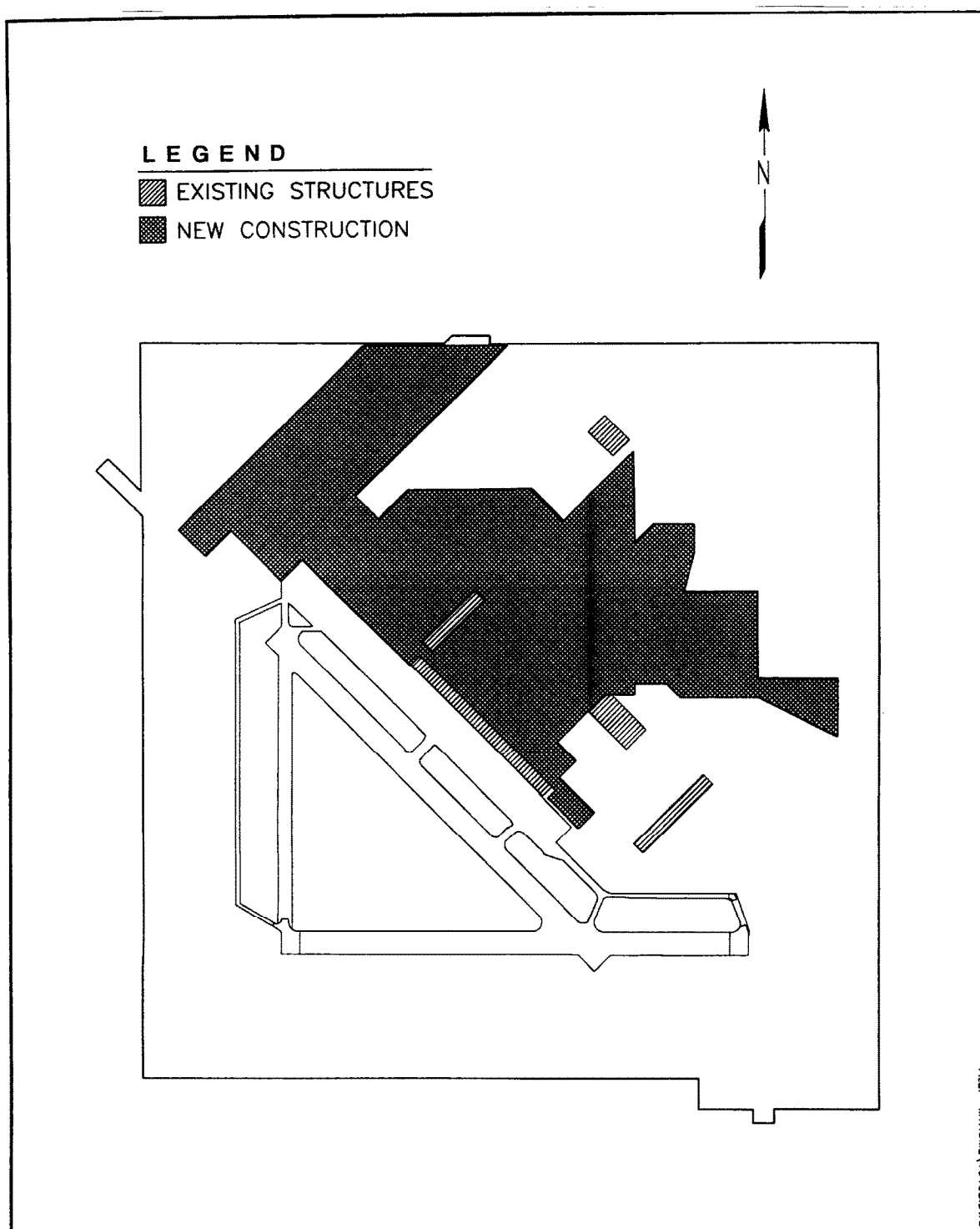


Figure 3.1 Mountain Home Air Force Base, 1943-1950.

constructed (Public Affairs Office 1982:2; Wing History Office 1994:1). During the brief occupation of the base by SAC, buildings and flight control and communications facilities were readied for strategic reconnaissance operations in 1949.

The activation of MATS in February 1951 precipitated further construction in 1951 and 1952 to renovate the base. During this time, a warehouse, fire station, fuel storage tank, and 400-unit family housing project were completed (Figure 3.2). SAC returned to the base in 1953, and, during the same year, runways, utilities, and various buildings for B-29 operations were completed (Mueller 1989:430; Public Affairs Office 1982:6,8). Following SAC's return to Mountain Home AFB, construction and expansion proceeded during the decade. The 10,000 ft northwest-southeast runway was extended 2,000 ft to accommodate the B-47 in December 1954. In April 1954, nine permanent airmen's barracks were completed. Available family housing units on base were increased with the construction of a 500-unit Wherry housing project during 1954-1955, and a 270-unit Capehart project completed in 1959. A new base hospital was completed in 1958 to care for the increased base population.

Further improvements and new construction occurred between the mid-1950s and 1960 (Figure 3.2). New facilities included shops for aircraft maintenance, armament, and electronics, a parachute building, a cold storage plant, field lighting, and storage facilities for fuel and ammunition. The SAC alert apron and facility were completed in 1960.

Progress in missile development led to further construction at Mountain Home AFB during the early 1960s. Three Titan I missile complexes were built in the vicinity of the base, each capable of launching three Titan I ICBM missiles. The complexes were completed and activated by April 1962; but after a short period of standing alert, these complexes were deactivated in June 1965 and the property sold to private landowners.

In preparation for the arrival of TAC, construction and renovation of facilities for RF-4C operations were completed between 1964 and 1965. The base golf course dates between the late

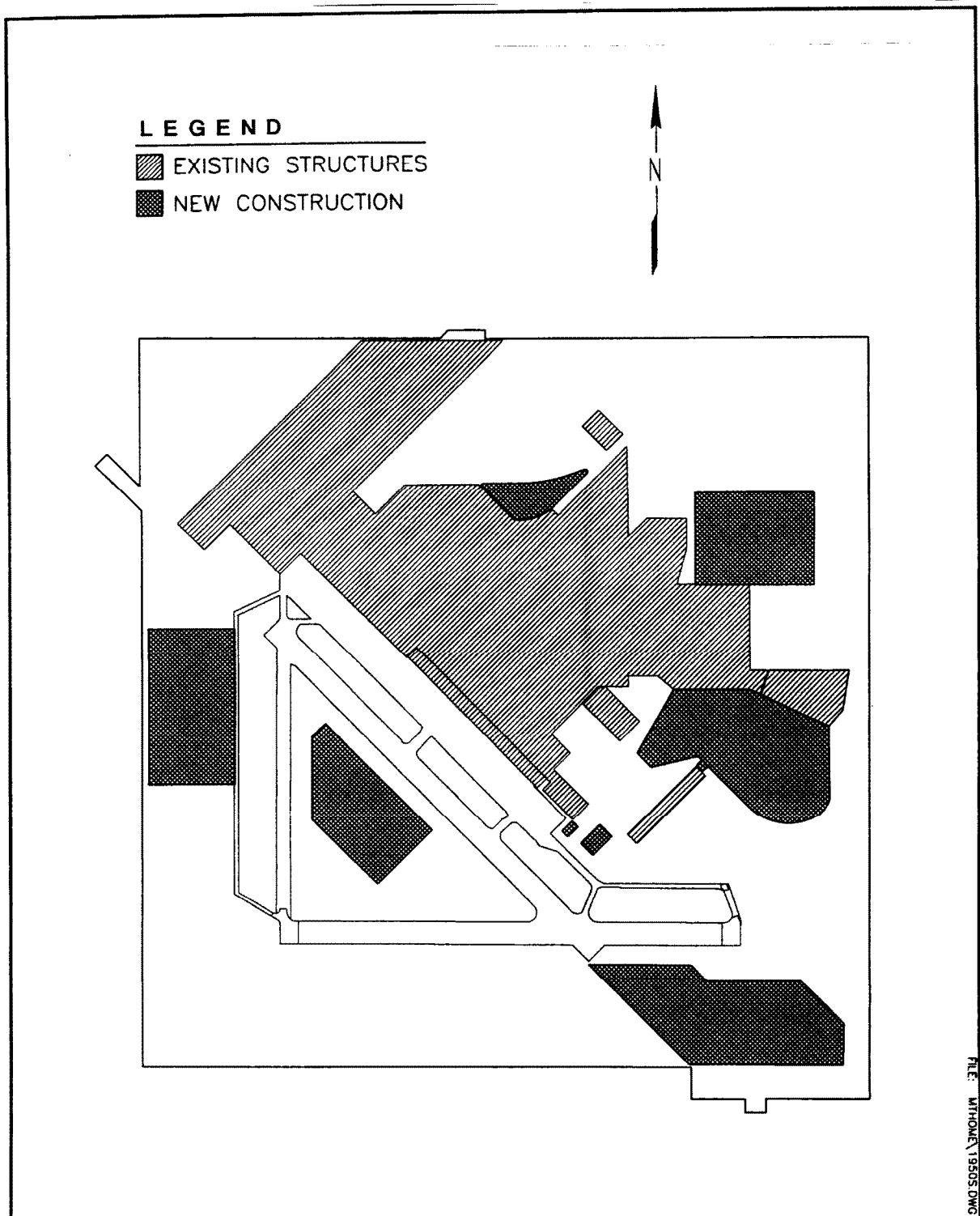


Figure 3.2 Mountain Home Air Force Base, 1950-1960.

1950s and early 1960s (Figures 3.2 and 3.3). Prior to the arrival of the 366th TFW, a 226-unit family housing project was finished in December 1971 (Figure 3.3). Further construction included two F-111 flight simulators commissioned in 1974 and 1977. An enlisted men's dormitory for 194 men, and a noncommissioned officer (NCO) club were completed in 1978.

New construction and renovation projects continued during the 1980s to meet the needs of the base and provide the best working and living conditions for base personnel. A new hospital and Wing Headquarters building were completed in 1989 (Figure 3.4). One of the most important buildings constructed during the late 1980s was the OTH-B radar facility completed in 1988. This building was used through the end of the Cold War in conjunction with operations conducted by the Northwest Air Defense Sector.

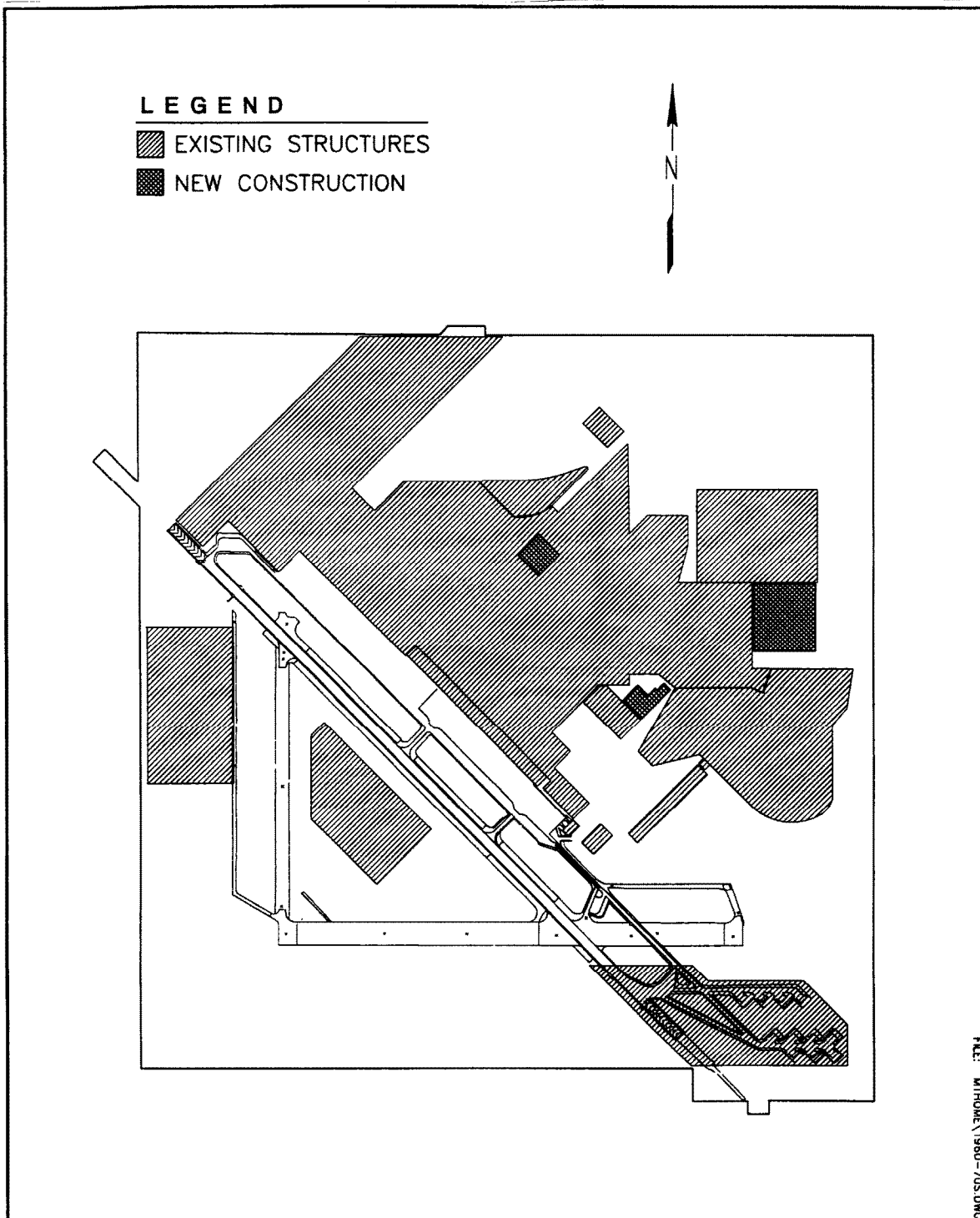


Figure 3.3 Mountain Home Air Force Base, 1960-1980.

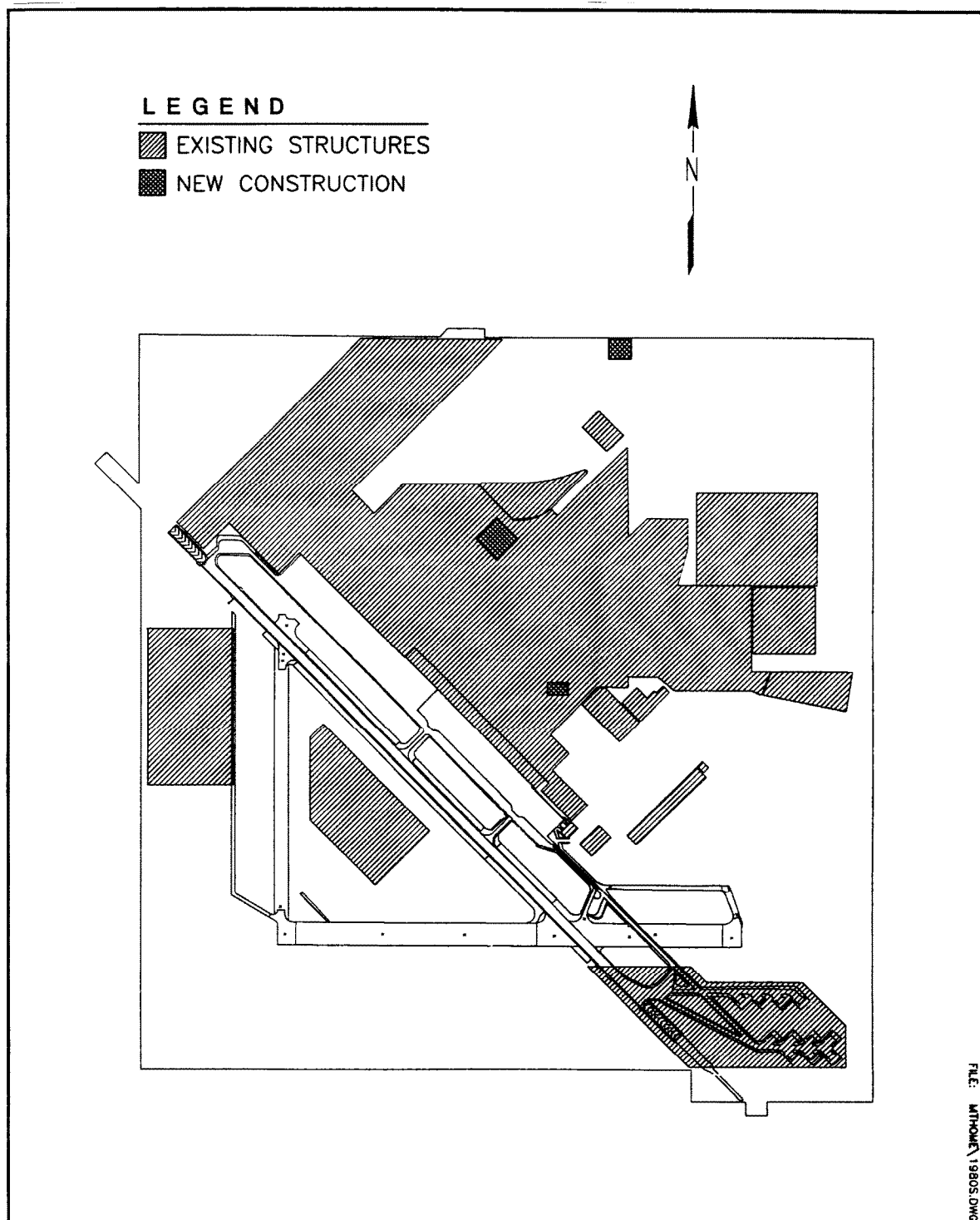


Figure 3.4 Mountain Home Air Force Base, 1980-1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Mountain Home AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Mountain Home AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Mountain Home AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the

importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Mountain Home AFB, the Mariah field team met with Robert Dews, the Natural/Cultural Resource Coordinator at the base. An orientation tour of the base followed a discussion outlining the team's needs and objectives. The team began their research on base with photography to inventory Cold War properties and representative architecture on base. This included photographs in secured areas along the flight line with an escort from the Public Affairs Office.

The Wing History Office supplied Wing histories that augmented base historical information provided by the Public Affairs Office. These histories were examined to identify the mission at Mountain Home AFB and to link the base to significant events that occurred during the Cold War era as discussed in the historic context written for the study (Lewis et al. 1995). The drawing files in the Drafting Department of the Civil Engineering Office were inventoried and decade maps were selected to reference base development. The Drafting Department also supplied the Mariah team with base layout maps on computer discs, as well as current hard copies of base maps. Property cards from the Real Estate Office provided information pertinent

to the resources chosen to be further documented and evaluated for their Cold War significance. The Environmental Office provided reports that were helpful in establishing the geographic nature of the base. Finally, informal interviews were conducted with two members of the environmental staff and a NCO from the intelligence and planning building.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Mountain Home AFB, 135 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Five resources were evaluated at Mountain Home AFB, two of them falling under the DoD category of real property and three under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to either of the evaluated buildings could not be secured. In these instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Office Files (Resource No. 15133, Located in Real Property No. 512)

This collection is located in the Wing Historian's Office at Wing Headquarters. It consists of microfilm copies of wing histories from 1953-1987 and hard copies from 1988-1992. These histories provide valuable information and insight into the activities of the 366th TFW from 1953-1992, and about the individual bases where it was assigned. Specifically, the histories from 1972-1992 provide information regarding the development of Mountain Home AFB during the Cold War era and the role of the wing in major Cold War events.

These histories are stored in a secured area in the Wing History Office, so the threat to this resource is low. They are also on file at the USAF Historical Research Center at Maxwell AFB, Alabama.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Office Files	15133	None	RecDoc/Obj	14
Documentation	Base Newspaper Collection	15134	None	RecDoc/Obj	13
Documentation	Documentary Collection	15135	None	RecDoc/Obj	16
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	15001	291	Real/Bldg	21
Intelligence Facilities					
Radar Sites	OTH-B Facility	15059	2215	Real/Bldg	16

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
21	15001	291	Bomber Alert Facility
16	15059	2215	OTH-B Facility
16	15135	None	Documentary Collection
14	15133	None	Office Files
13	15134	None	Base Newspaper Collection

6.1.1.2 Base Newspaper Collection (Resource No. 15134, Located in Real Property No. 512)

This collection is located in the Public Affairs Office at Wing Headquarters. It is a complete collection of the base newspaper for the time period 1966-1992, and includes one copy of a 1943 edition. The collection provides substantial information concerning activities and development at Mountain Home AFB during the Cold War era. This collection is currently stored in file cabinets and is deteriorating due to improper curation. The newspapers are yellowed, brittle, and, in some cases, torn.

6.1.1.3 Documentary Collection (Resource No. 15135, Located in Real Property No. 1300)

This documentary collection is located in a vault in the Civil Engineering Office and includes architectural drawings and photographs. The drawings represent most buildings extant on base, as well as utilities, landscapes, runways, Saylor Creek Bombing Range, and base master plans. Drawings are extant dating back to 1943 and span all four phases of the Cold War era. Included in the collection are mylar, linen, sepia, vellum, and blueprint drawings. The photograph collection includes aerial photographs and large-format black and white photographs. This documentary collection is significant for its illustration of base development throughout the Cold War era.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS**6.2.1 Alert Facilities****6.2.1.1 Bomber Alert Facility** (Resource No. 15001, Real Property No. 291)

The Bomber Alert Facility, built in 1960, is a permanent, 32,997 square foot building, constructed primarily of reinforced concrete. Located at the extreme southeastern end of the runway between the taxiway and the alert apron, the two story building is characterized by

ramped entrances found on all four sides of its exterior and a sloped earthen berm extending up the four sides of the building to cover its first story. This facility was constructed for SAC alert crews of the 9th BMW stationed at Mountain Home AFB. It was designed to house crews standing alert duty and to facilitate rapid egress from the building to aircraft parked on the adjacent alert apron during an emergency situation or Operational Readiness Inspection (ORI). Since TAC assumed command at Mountain Home AFB in 1966, this facility has been utilized as TAC Squadron Operations, Headquarters Air Base Group, and as a NCO Professional Military Education Center. This facility is no longer in continuous use; however, it is used periodically for temporary duty air crews stationed at Mountain Home AFB.

The exterior integrity of the alert building is intact, with berms and tunnels. As access was not secured to the building, interior integrity was not visually assessed. During the past 28 years of use as an operations building, a headquarters, and an education center, major renovations may have occurred. Therefore, interior integrity is questionable.

This facility is exceptionally important to Mountain Home AFB's Cold War mission and history, and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995). This facility was used for this purpose during Phases II and III of the Cold War and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Mountain Home AFB.

6.4 TRAINING FACILITIES

None were evaluated at Mountain Home AFB.

6.5 INTELLIGENCE FACILITIES

6.5.1 Radar

6.5.1.1 OTH-B Facility (Resource No. 15059, Real Property No. 2215)

This radar facility, built in 1988, is a permanent, 55,455 square foot building, constructed primarily of concrete masonry materials. Centrally located approximately four blocks northeast of the flight line, the facility is a large, three story, rectangular shaped building, characterized by a tall, barbed wire fence at the entrance and two dish-antennas located near the northwestern end of the building. This facility was utilized at the end of the Cold War era as a state of the art radar and communications center linked to the Northwest Air Defense Sector. The building is currently used for the Operations, Plans, and Intelligence offices of the 366th Wing.

The exterior integrity of the building remains intact. Access to the building was not secured, thus visual assessment of interior integrity was not possible. Based on the real property card, the building has undergone some minor interior modifications to accommodate the three wing offices. However, the OTH-B equipment and computers are still intact within the building (personal communication, Ronald Stonebreaker, December 15, 1994). This is due to a USAF decision that while the radar system is shut down, the equipment and building will remain intact should it be necessary to have the system go back on-line on short notice. Therefore, interior integrity of the building is intact.

This exceptionally important facility was specifically designed and constructed to house the OTH-B radar technology that played an important role in protecting United States airspace by

providing the Northwest sector with the capability for locating and identifying aircraft and missiles at a great distance. By identifying a hostile attack at a greater distance, this radar improved the survivability of the continental forces, thus strengthening the United States deterrence position. This facility was used for this purpose during Phase IV of the Cold War and meets NRHP criterion (a).

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Mountain Home AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Mountain Home AFB. These resources should be investigated further for a more comprehensive analyses.

Mariah team members inquired about the potential for historic properties at Saylor Creek Gunnery Range located 20 mi (32 km) southeast of Mountain Home AFB in Owyhee County, Idaho. Base personnel from the Wing History Office and the Environmental Office informed the Mariah team that properties extant at Saylor Creek include maintenance buildings, range management offices, and two towers for scoring accuracy (personal communication, Brandon Smith, August 26, 1994; personal communication, Airman Larin Hennesey, August 30, 1994). Based on prior inventories at other AFBs, these types of resources are not considered significant within the context of this study. The decision was made by the Mariah field team not to visit Saylor Creek.

The Wing History Office has a photograph collection that is currently in the possession of a private consulting firm to be returned at a later date. Photograph topics include base construction and base commanders. This collection should be assessed in the future for its value and importance in relation to the Cold War and activities at Mountain Home AFB.

This base contains buildings that are greater than 50 years in age, but that were not evaluated due to the lack of significance within the base Cold War context. An example is the base chapel, built in 1943 and located one block from the mission area. This building is scheduled for removal or possible destruction in the near future. It is recommended that this building be

evaluated for eligibility to the NRHP prior to implementation of any plans that will affect building integrity.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Mountain Home AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

No historic preservation plan has been implemented at Mountain Home AFB, and there are no immediate plans for one in the near future.

The threat to the Bomber Alert Facility and the OTH-B Facility appears to be low as both of these buildings are currently in use. The Office Files and the Documentary Collection are stored in secure areas, thus any threat to these resources is also low. The Base Newspaper Collection, however, is in a state of benign neglect, resulting in newspapers that are yellowed, brittle, and, in some cases, torn. Immediate conservation of this resource is recommended.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Mountain Home AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Mountain Home AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Mountain Home AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is

intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Mountain Home AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Office Files (Resource No. 15133, Located in Real Property No. 512)

The collection of histories is in good condition and is stored in a secure area. Copies of the histories are also on file at the USAF Historical Research Center at Maxwell AFB, Alabama. Therefore, stewardship of the collection at Mountain Home AFB is recommended.

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
15001	291	Bomber Alert Facility		*	*	*		Potentially NRHP eligible now. NRHP eligible now.
15059	2215	OTH-B Facility		*	*	*		
Record or Document - Object								
15133	None	Office Files		*				
15134	None	Base Newspaper Collection		*		*	*	
15135	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Base Newspaper Collection (Resource No. 15134, Located in Real Property No. 512)

This collection of base newspapers spans 1966-1992, and includes one copy of a 1943 edition. The collection is currently deteriorating due to improper curation, with the newspapers yellowed, brittle, and torn. It is recommended that the collection be inventoried and copied onto microfilm. It is further recommended that the base retain the microfilm for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Documentary Collection (Resource No. 15135, Located in Real Property No. 1300)

This collection of drawings and photographs is organized and stored in a secure room. However, the resource is continually used by base engineers, resulting in wear on the drawings. It is recommended that the collection be completely inventoried and copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.4 Bomber Alert Facility (Resource No. 15001, Real Property No. 291)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. However, the integrity of the building may have been compromised during almost three decades of use as an operations, headquarters, and education center. Therefore, this building is recommended as potentially eligible to the NRHP. Further documentation, to determine the level of integrity and to explore NRHP eligibility, is recommended. Stewardship of the building to retain its current level of integrity is recommended in the interim during this evaluation.

9.2.5 OTH-B Facility (Resource No. 15059, Real Property No. 2215)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase IV. It meets NRHP criterion (a) based on its role in protecting U.S. airspace and increasing the survivability of the continental forces. The integrity of the building and its features is intact due to a decision to have the facility kept in a continuous ready-to-operate condition. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate the resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Blue, D.L.

- 1988 *History of the 366th Tactical Fighter Wing, 1 July-31 December 1988*. On file, Wing History Office, Mountain Home Air Force Base, Idaho.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.
-

Oak Ridge National Laboratory

- 1994 *Environmental Compliance Assessment and Management Program (ECAMP) Environmental Findings Final Report for Mountain Home Air Force Base and Saylor Creek Air Force Range Idaho*. Submitted to Headquarters Air Combat Command by Oak Ridge National Laboratory, managed by Martin Marietta Energy Systems, Inc. Langely Air Force Base, Virginia.

Public Affairs Office

- 1982 *History of Mountain Home AFB, Idaho*. On file, Public Affairs Office, Mountain Home Air Force Base, Idaho.

Real Estate Office

- 1988 *Mountain Home AFB, Idaho, Real Property Survey*. On file, Real Estate Office, Mountain Home Air Force Base, Idaho.

United States Air Force

- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

Wilson, C. SSgt.

- 1982 *History of the 366th Tactical Fighter Wing, Mountain Home Air Force Base, Idaho, 1 April-30 June 1982, vol. 11*. On file, Wing History Office, Mountain Home Air Force Base, Idaho.

Wing History Office

- 1972 *366th Wing History, November 1, through December 31, 1972*. (Title page is missing). Microfilm Reel No. 64. On file, Wing History Office, Mountain Home Air Force Base, Idaho.
- 1994 *From Richmond to Mountain Home: A Historical Review of the 366th Wing and its Components*. On file, Wing History Office, Mountain Home Air Force Base, Idaho.

Woodward-Clyde

- 1992 *Installation Restoration Program, Operable Unit No. 3 Remedial Investigation/Feasibility Study*. On file, Environmental Office, Mountain Home Air Force Base, Idaho. Woodward-Clyde, Omaha, Nebraska.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	15001	291	Bomber Alert Facility	1960
	15004	1795	Range Warning System Communications - Electronics Shop	1987
	15005	201	Small Aircraft Maintenance Dock (389th Fighter Squadron)	1943
	15006	204	Small Aircraft Maintenance Dock (Falcon Country)	1943
	15007	205	Small Aircraft Maintenance Dock	1943
	15008	208	Small Aircraft Maintenance Dock (Transient Alert)	1943
	15009	261	Fire Station	1953
	15010	262	Base Operations	1955
	15011	211	Small Aircraft Maintenance Dock (Maintenance Training)	1943
	15012	1222	Non-Destructive Inspection Shop (NDI)	1972
	15013	1224	General Purpose Aircraft Shop	1954
	15015	1361	Warehousing Supply and Equipment Base	1965
	15016	1365	Aircraft Maintenance Organizational Shop (Bold Tigers)	1984
	15017	1329	Small Aircraft Maintenance Dock	1955
	15018	1332	Fuel System Maintenance Dock	1955
	15019	1335	Aircraft Corrosion Control	1970
	15020	1364	Squadron Operations (Wild Tigers)	1971
	15021	1363	Squadron Operations (Wild Boars)	1971
	15022	232,234, 237	Training Aid Shops (Painted Camouflage Buildings)	1978-1980
	15023	278	Squadron Operations (389th Fighter Squadron)	1988
	15024	277	Aircraft Maintenance Organizational Shop (with Model F-16 Static Display)	1957
	15025	273	Aircraft Maintenance Organizational Shop	1957
	15026	611	Base Chapel 2 (Freedom Chapel)	1943
	15027	603	MWR Supply and NAF Central Supply	1943
	15028	315	Range Warning System Communications-Electronics Shop	1989
	15029	512	Wing Headquarters (Contracting)	1989
	15030	610	Communication Facility	1955
	15031	516	Family Support Center	1953
	15032	840	Flight Simulator Training	1974
	15033	272	Squadron Operations (22nd Air Refueling Squadron)	1957
	15035	800	AFOSI Building	1958
	15036	263	Survival Equipment Shop (366th Wing Gunfighters)	1953
	15037	900	Radar Approach Control Center (RAPCON)	1960
	15038	1008	Security Police Central Control	1988
	15039	1212	Housing Supplies and Storage Facility	1943

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	15040	1225	Jet Engine Inspection & Maintenance Shop	1973
	15042	1328	Heating Facility Building	1955
	15043	1352-1354	Base Hazardous Storage/Vehicle Maintenance Shop/Base Engineer Pavement & Grounds Facility	1962
	15044	1325	Base Supplies & Equipment Warehouse	1953
	15045	1390	Combat Arms Training Maintenance Building (Small Arms Range)	1982
	15046	1330	Aircraft Corrosion Control	1955
	15047	1300	Base Engineering Administration	1959
	15048	1206	Special Operations (Self Help)	1943
	15049	1207	Base Engineer Covered Storage	1943
	15050	1203	Base Cold Storage	1943
	15051	1100	Vehicle Maintenance Shop	1960
	15053	2370	Indoor Swimming Pool	1958
	15054	2371	Gymnasium	1960
	15055	1201	Cafe-Snack Bar Exchange (Burger King)	1988
	15056	2304	Service Station Exchange	1955
	15057	2207	Thrift Shop	1958
	15058	2209	Automotive Hobby Shop	1981
	15059	2215	OTH-B Facility (Over the Horizon Backscatter)	1988
	15060	1320, 1322	Base Supply & Equipment Warehouse (DRMO-Defense Reutilization Mobilization Office)	1967/1961
	15061	2201	Locomotive Shop & Shelter	1943
	15062	2604	Visiting Officer's Quarters	1954
	15064	1340	Conventional Munitions Shop	1961
	15065	1013	Special Operations (366th Security Police)	1953
	15066	927	PME Lab	1974
	15068	923	Radar Approach Control Center	1969
	15069	2413	Clothing Store (Post Office)	1954
	15070	1610	Field Training Facility	1984
	15071	1612	Exchange Sales Store	1954
	15072	2607	Exchange Sales Store (Main Building)	1955
	15073	1613	Base Theatre	1955
	15074	2620	Bank Branch	Unknown
	15075	2621	Federal Credit Union	Unknown
	15076	2610	Store/Commissary	1974
	15077	2630	Exchange Sales Store (Shoppette Class Six)	1987
	15078	1506	Group Headquarters (366th Ops SPT Squadron)	1953
	15079	1501	Group Headquarters ("The Vault")	1959
	15080	2606	Chapel Center (Liberty Chapel)	1954
	15081	510	Data Processing Installation	1983

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	15082	1820, 1821	Riding Stables	1956
	15084	1799	Stray Animal Kennel	1986
	15085	8	Family Housing Appropriated PFY 50 (Eagles View)	1948
	15086	44	Family Housing Appropriated PFY 50 (Eagles View)	1948
	15087	195	NCO Open Mess (Enlisted Club)	1978
	15088	101, 105	Child Care Center	1981/1987
	15089	2623	Child Care Center	1976
	15091	180	Family Support Center	1957
	15092	2605	Officer's Open Mess (Officer's Club)	1954
	15093	2601	NCO Professional Military Education Center (PME Center)	1954
	15094	2426	Education Center	1954
	15095	2427	Base Library	1954
	15096	2618	Recreation Center	1961
	15097	2408	Weapons System Maintenance Management Facility (Logistics Group)	1954
	15098	2310	Airman's Dormitory	1971
	15099	2308	Airman's Dormitory	1975
	15100	2315	Airman's Dormitory (361st Fighter Squadron)	1975
	15101	2320	Airman's Dormitory	1988
	15102	2806	Arts & Crafts Center	1943
	15103	2805	Bowling Center	1970
	15105	2222	Rod & Gun Club (Skeet Range)	1974
	15106	4519	Capehart Family Housing (Woodland Groves)	1959
	15107	None	Middle School	Unknown
	15108	None	Elementary School	Unknown
	15109	2830	Youth Center	1977
	15110	2800	Miscellaneous Recreational Building	1985
	15111	4818	Family Housing Appropriated 50-69 (Dunes)	1971
	15112	6000	Composite Medical (Base Hospital)	1989
	15113	7001, 7000	Traffic Check House (Entrance Gate)	1988/1962
	15114	4701	Capehart Family Housing (Presidential Acres)	1962
	15115	4663	Capehart Family Housing (Presidential Acres, Officer's Housing)	1962
	15116	4757	Capehart Family Housing (Presidential Acres)	1962
	15117	4759	Capehart Family Housing (Presidential Acres)	1962
	15118	4632	Capehart Family Housing (Presidential Acres)	1962
	15119	4343	Wherry Family Housing (Oasis)	1956
	15120	5302	Manufactured Family Housing (Desert Vista)	1969
	15121	4109	Golf Club House & Equipment	1974
	15122	4460	Capehart Family Housing (Gunfighter Manor)	1959

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	15123	4473	Capehart Family Housing (Gunfighter Manor)	1959
	15131	3600	Control Tower	1988
Real Property - Landscape				
	15034	None	Softball Field	Unknown
	15083	1805, 1807	Team Leadership Reaction Course, Outdoor Program Facilities	1943
	15090	15012	Softball Field (Hamlett Field)	1963
	15104	2202	Family Campground	1972
	15127	None	Landscape in Intersection near Sagebrush Hotel (Falcon & ? streets)	Unknown
Real Property - Object				
	15124	None	Static Display/F-100 Aircraft	
	15125	None	Static Display/F-86 Aircraft	
	15126	181	366th Wing-Gunfighter/ Sign near Static Display Park	
	15128	None	Railroad Engine (USAF)	
	15129	4590	Static Display/F-111 Aircraft near Entrance Gate	
	15130	None	Static Display/F-4 Aircraft	
Real Property - Structure				
	15002	270	Power Check with Sprinkler Pad (Hush House)	1988
	15003	267,268	Fireman Training Facility	1974
	15014	1359, 1360	Aircraft Support Equipment Shop and Storage Facilities	Unknown
	15041	1314-1316	Jet Fuel Storage Tanks	1973
	15052	1407	Water Tower	Unknown
	15063	None	Weapons Storage Area	Unknown
	15067	1015	Canine Special Kennel (Military Working Dogs)	1982
	15132	3522	Area Search Radar	Unknown
Record or Document - Object				
	15133	None	Office Files	1942-1992
	15134	None	Base Newspaper Collection	
	15135	None	Documentary Collection	Various

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

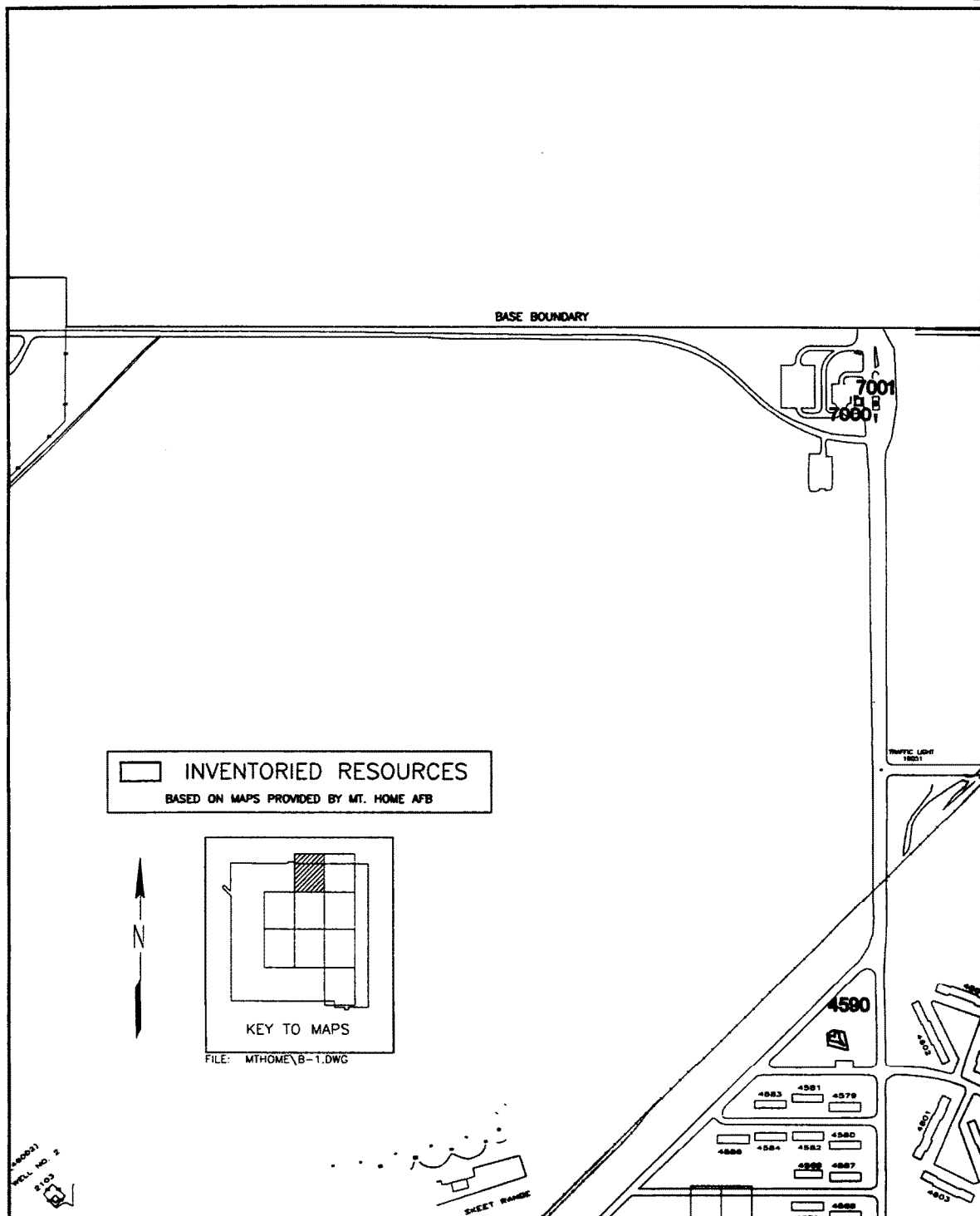


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 9).

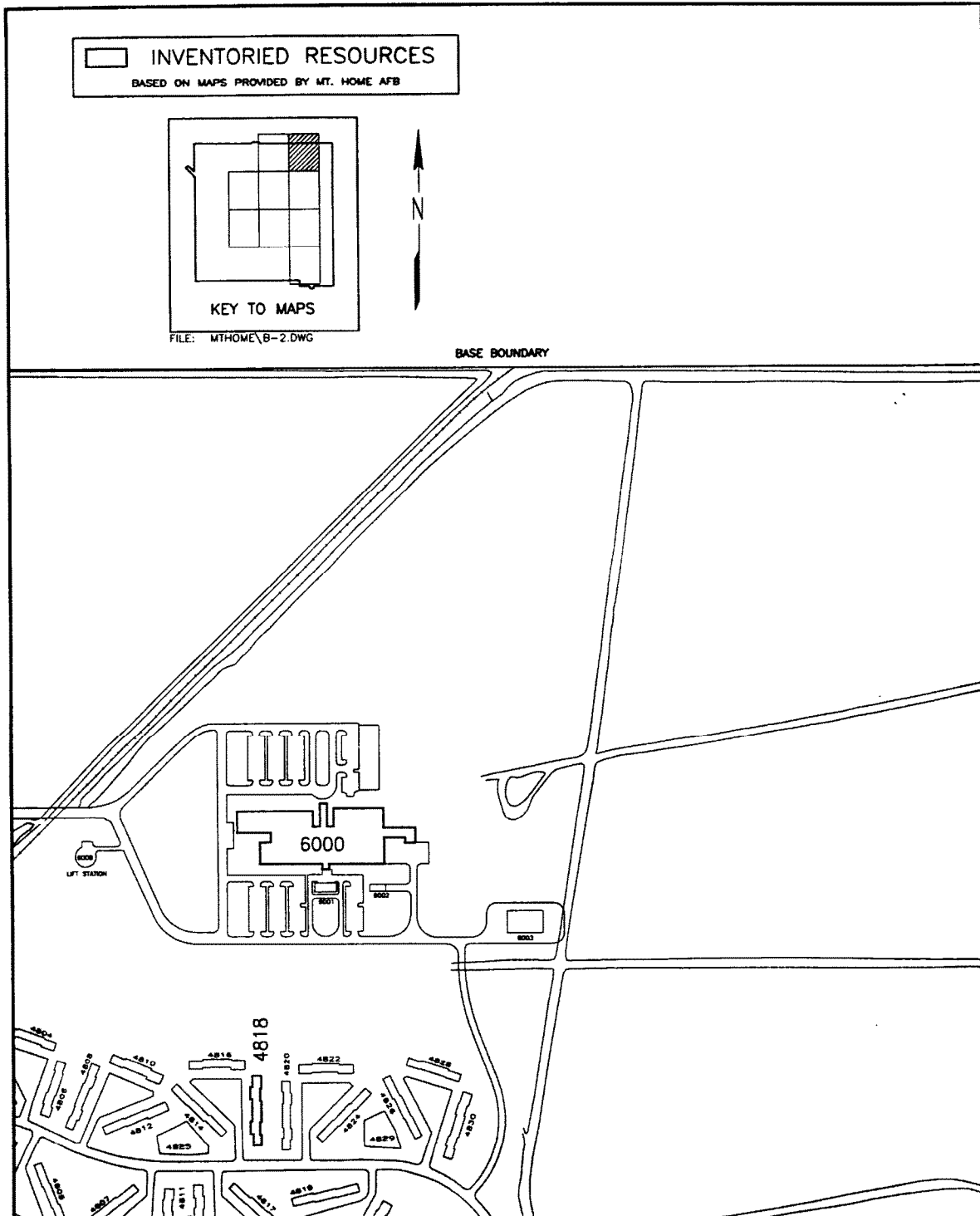


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 9).

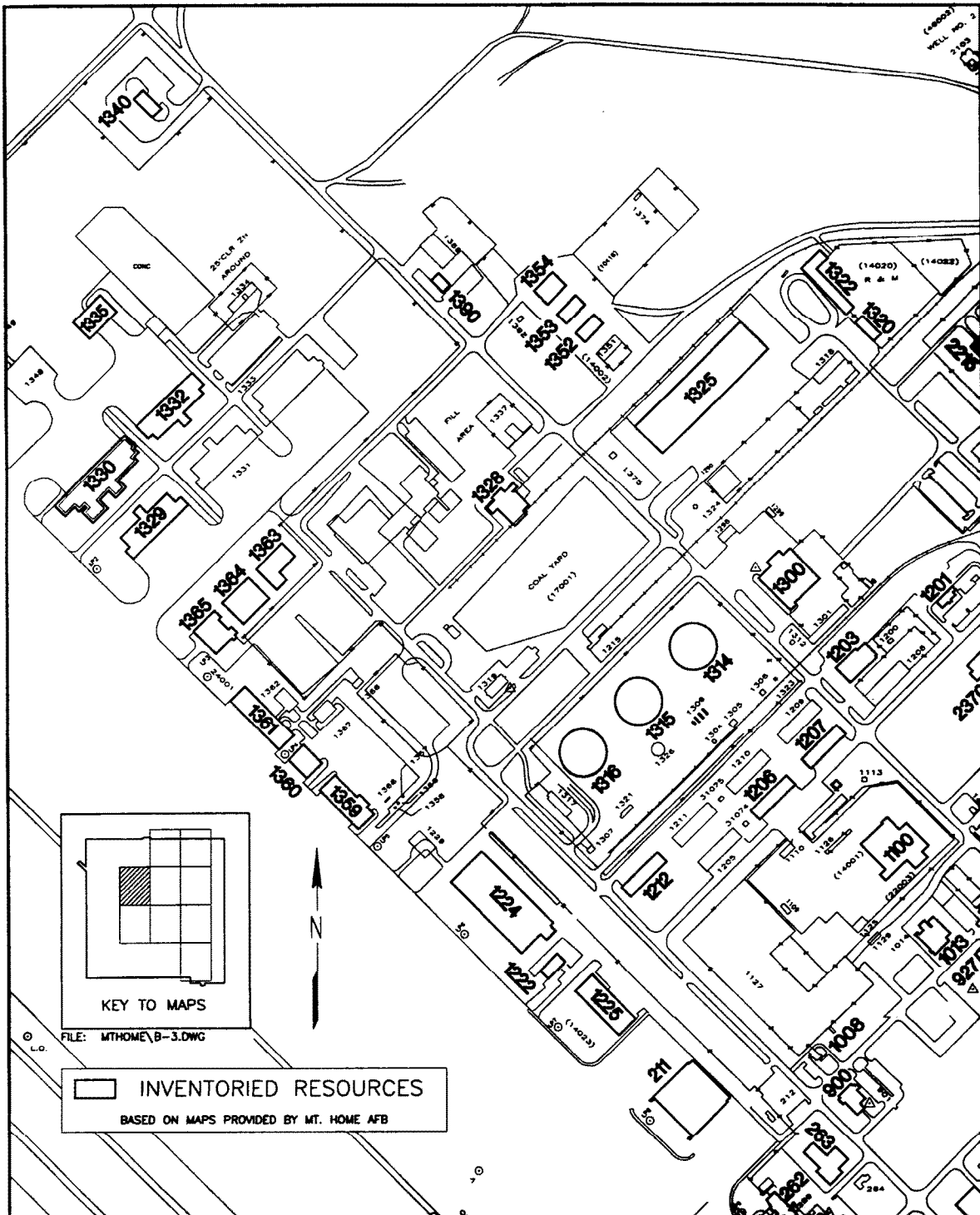


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 9).

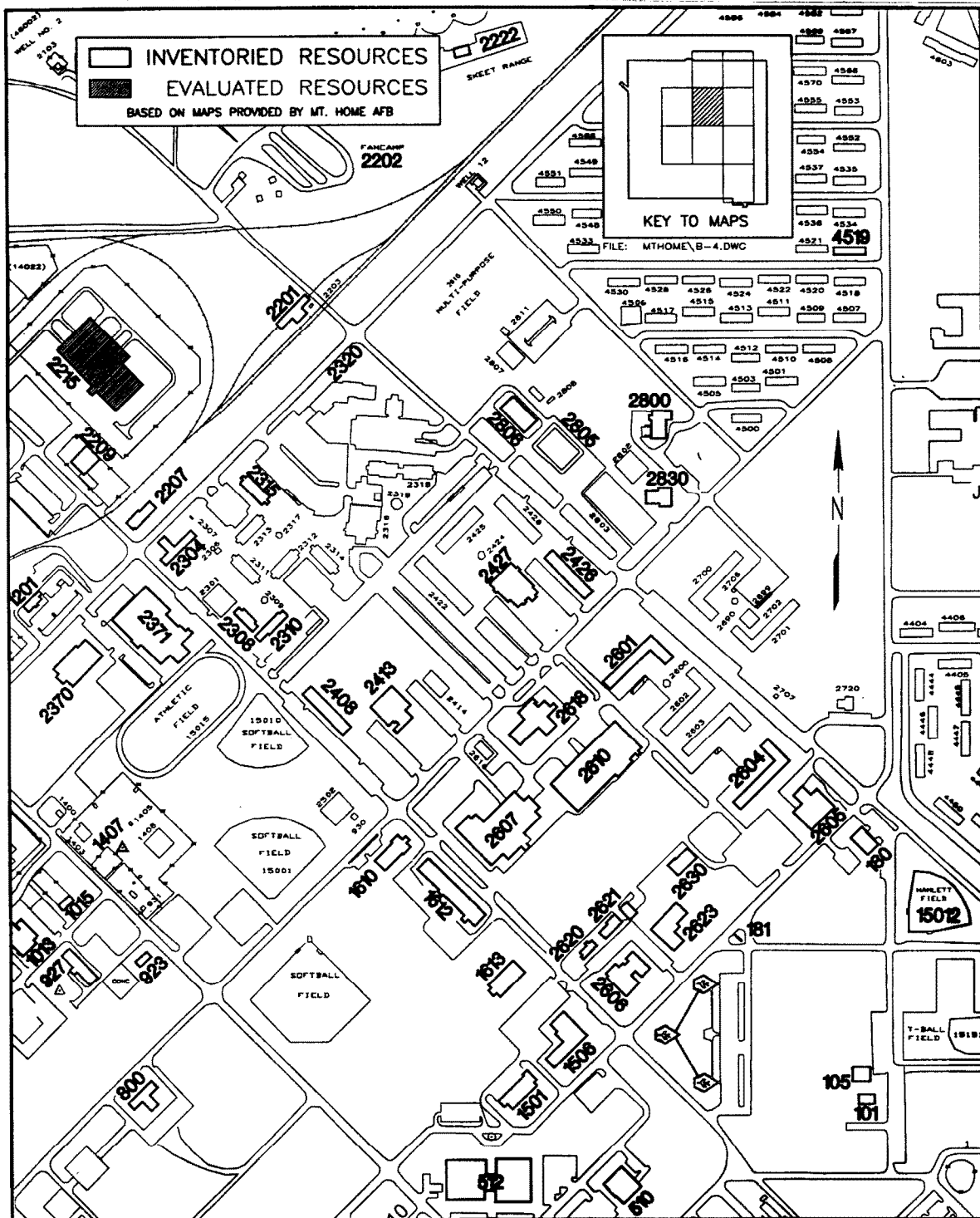
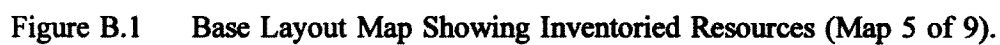


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 9).



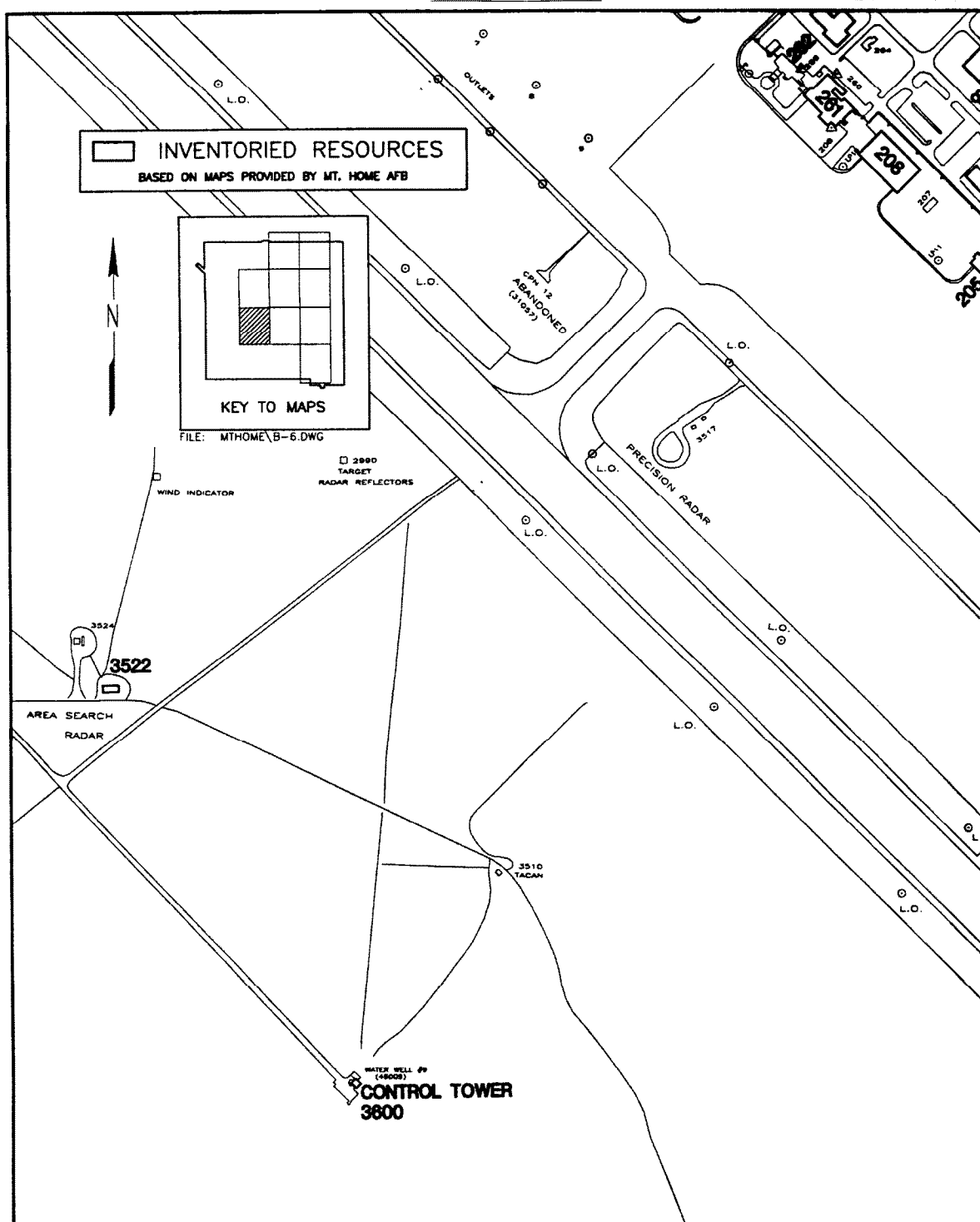


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 9).

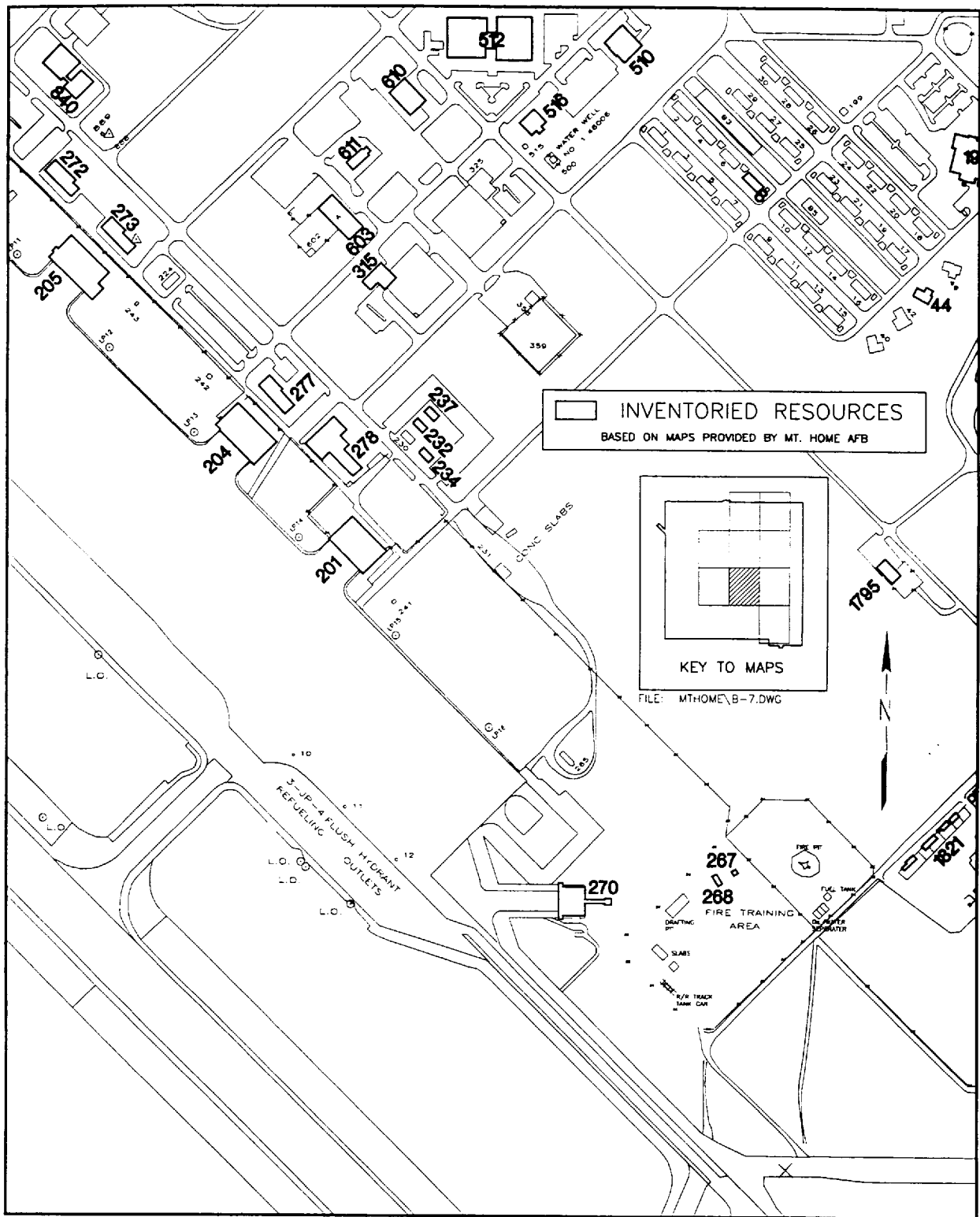


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 9).

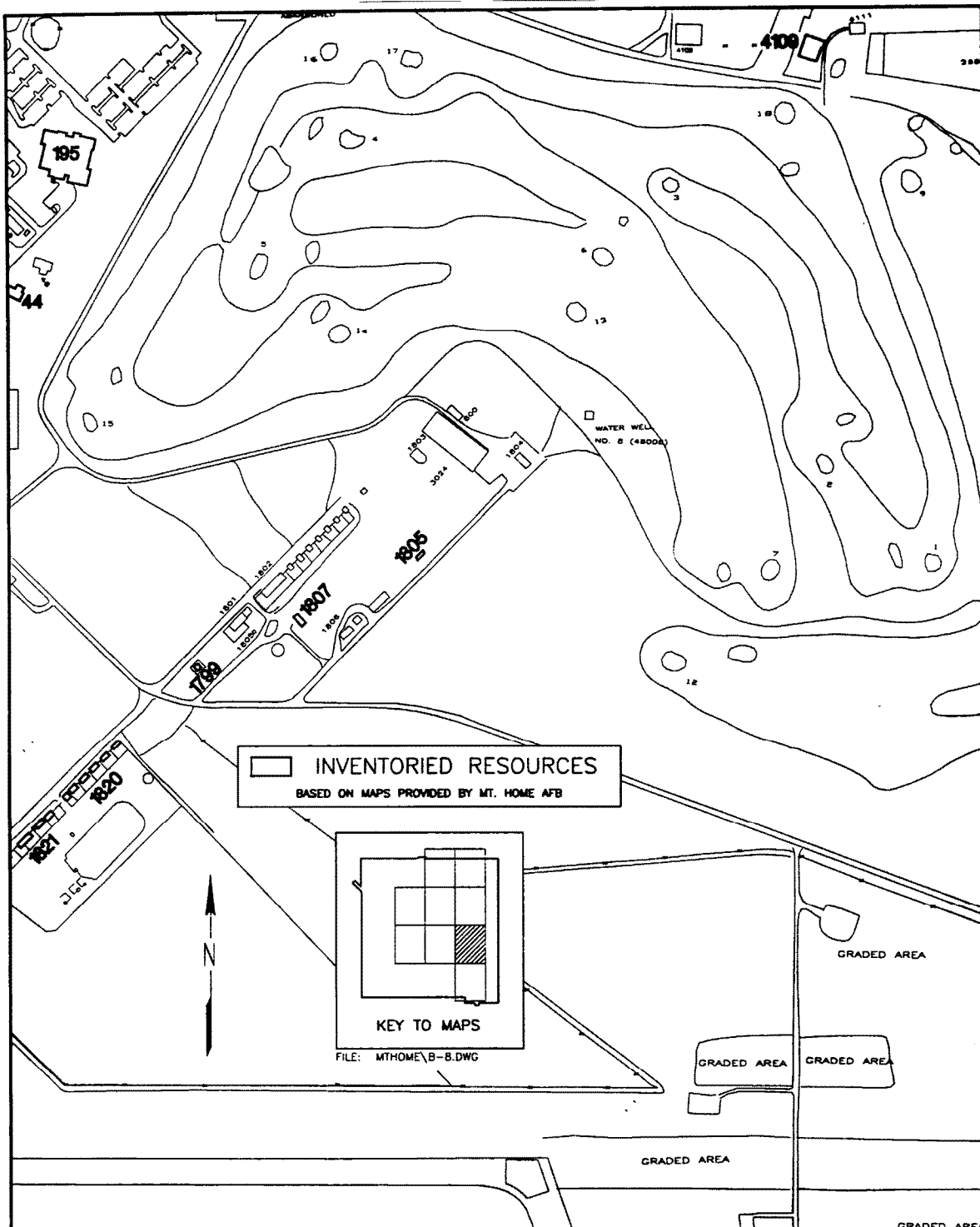


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 9).

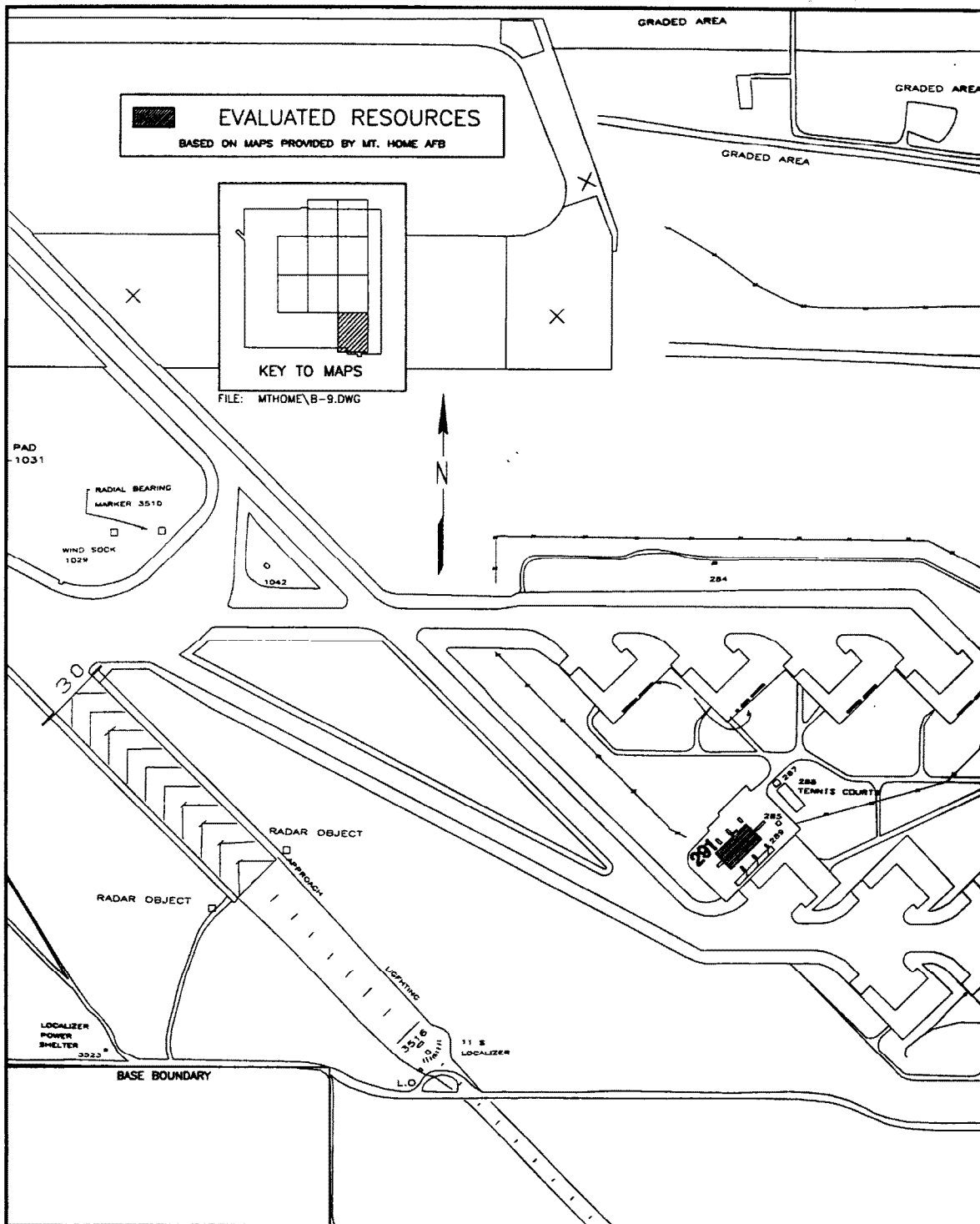


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 9).

APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



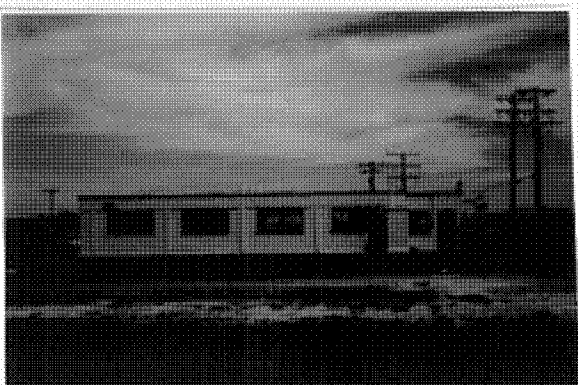
Resource No. 15001, Real Property No. 291,
NCO Professional Military Education Center
(Alert Facility)



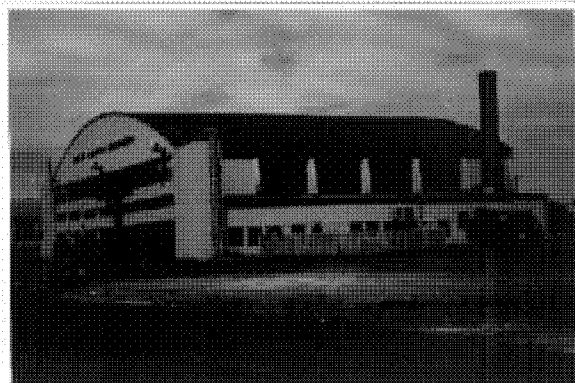
Resource No. 15002, Real Property No. 270,
Power Check with Sprinkler Pad (Hush House)



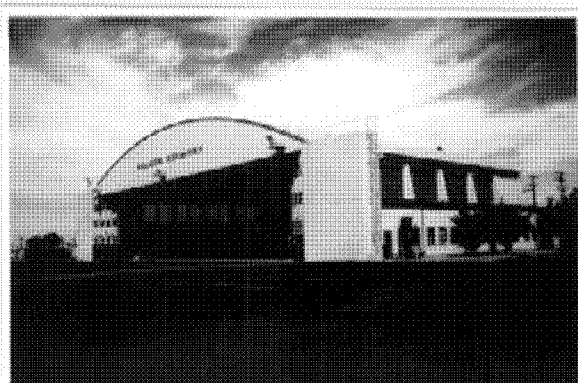
Resource No. 15003, Real Property Nos. 267
and 268, Fireman Training Facility



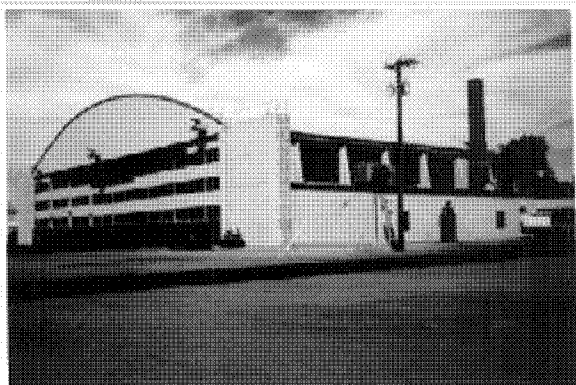
Resource No. 15004, Real Property No. 1795,
Range Warning System Communications-
Electronics Shop



Resource No. 15005, Real Property No. 201,
Small Aircraft Maintenance Dock (389th Fighter
Squadron)



Resource No. 15006, Real Property No. 204,
Small Aircraft Maintenance Dock (Falcon
County)



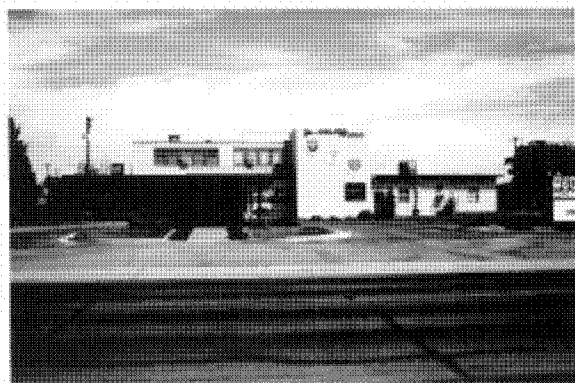
Resource No. 15007, Real Property No. 205,
Small Aircraft Maintenance Dock



Resource No. 15008, Real Property No. 208,
Small Aircraft Maintenance Dock (Transient
Alert)



Resource No. 15009, Real Property No. 261,
Fire Station



Resource No. 15010, Real Property No. 262,
Base Operations



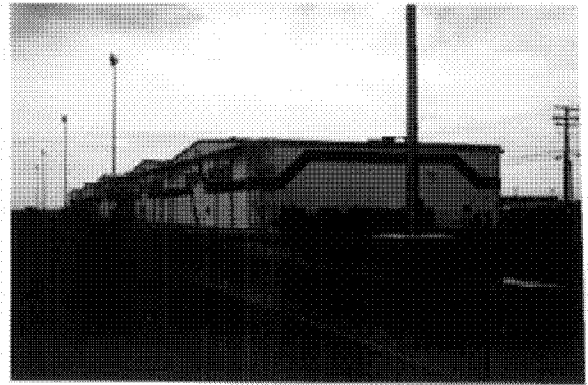
Resource No. 15011, Real Property No. 211,
Small Aircraft Maintenance Dock (Maintenance
Training)



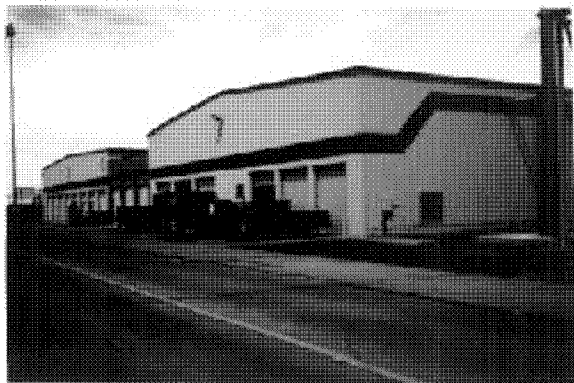
Resource No. 15012, Real Property No. 1222,
Non-Destructive Inspection Shop (NDI)



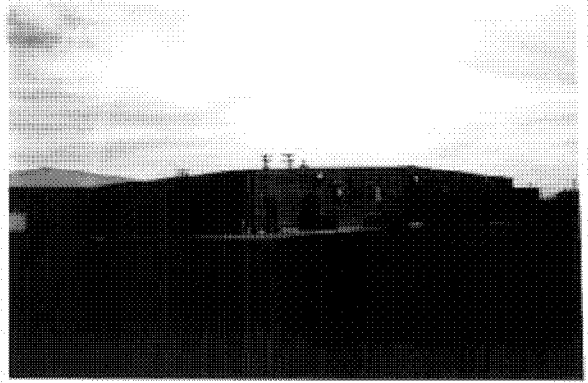
Resource No. 15013, Real Property No. 1224,
General Purpose Aircraft Shop



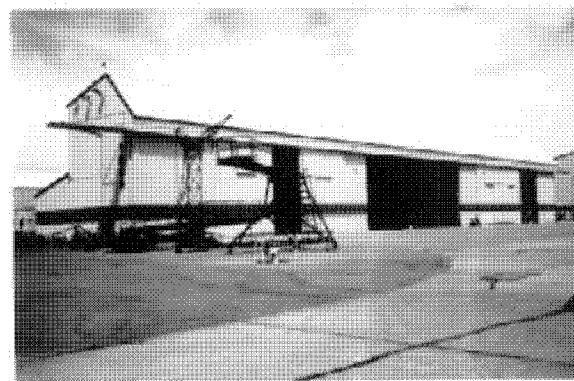
Resource No. 15014, Real Property No. 1359
and 1360, Aircraft Support Equipment Shop and
Storage Facilities



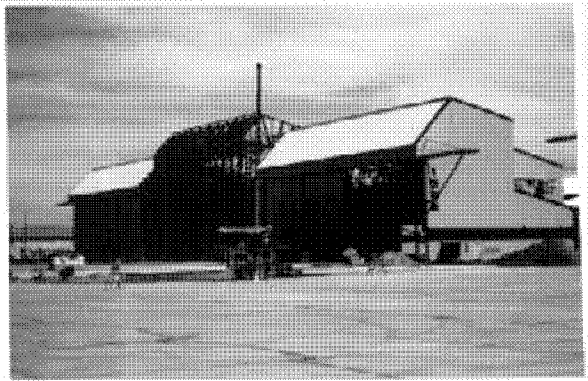
Resource No. 15015, Real Property No. 1361,
Warehousing Supply and Equipment Base



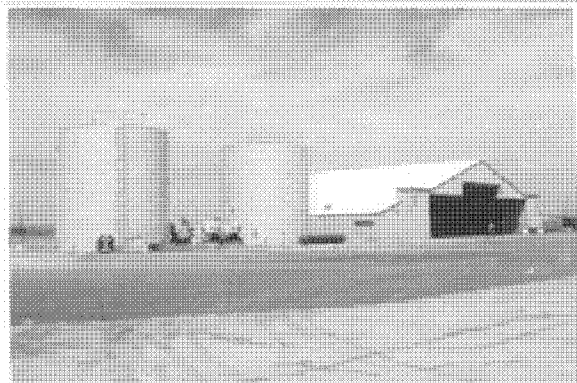
Resource No. 15016, Real Property No. 1365,
Aircraft Maintenance Organizational Shop (Bold
Tigers)



Resource No. 15017, Real Property No. 1329,
Small Aircraft Maintenance Dock



Resource No. 15018, Real Property No. 1332,
Fuel System Maintenance Dock



Resource No. 15019, Real Property No. 1335,
Aircraft Corrosion Control



Resource No. 15020, Real Property No. 1364,
Squadron Operations (Wild Tigers)



Resource No. 15021, Real Property No. 1363,
Squadron Operations (Wild Boars)



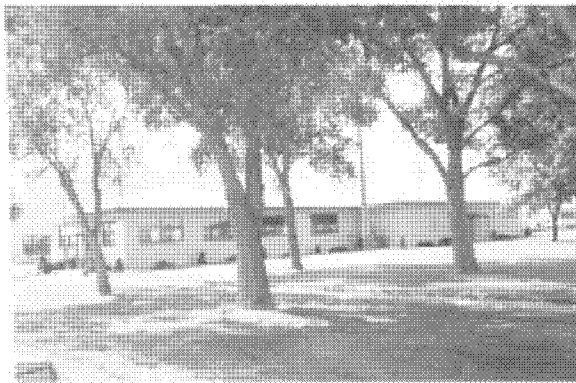
Resource No. 15022, Real Property Nos. 232,
234, and 237, Training Aid Shops (Painted
Camouflage Buildings)



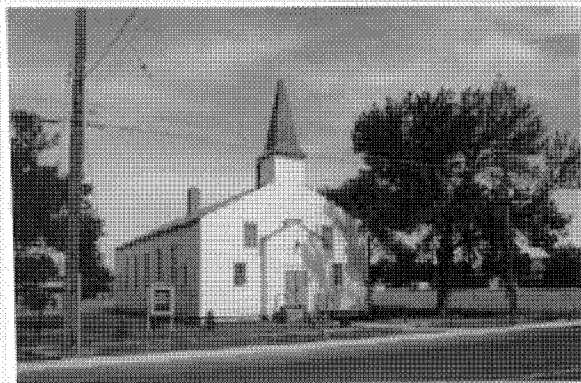
Resource No. 15023, Real Property No. 278,
Squadron Operations (389th Fighter Squadron)



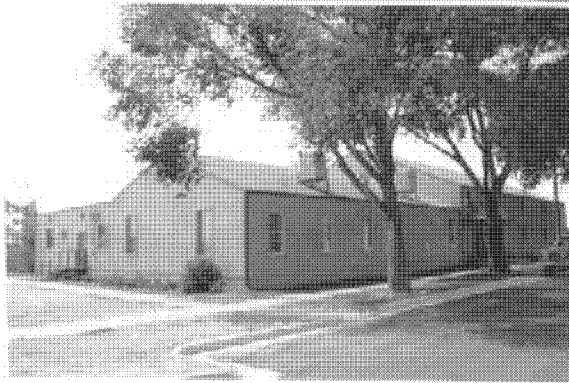
Resource No. 15024, Real Property No. 277,
Aircraft Maintenance Organizational Shop



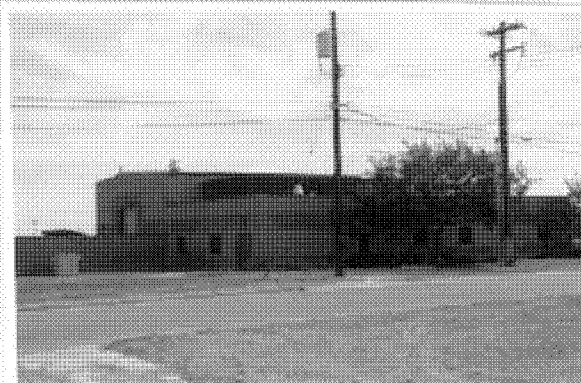
Resource No. 15025, Real Property No. 273,
Aircraft Maintenance Organizational Shop



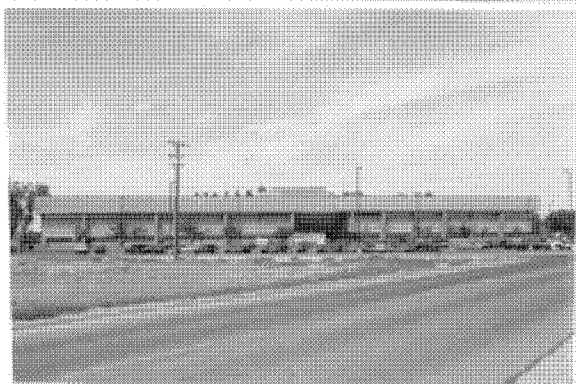
Resource No. 15026, Real Property No. 611,
Base Chapel 2 (Freedom Chapel)



Resource No. 15027, Real Property No. 603,
MWR Supply and NAF Central Supply



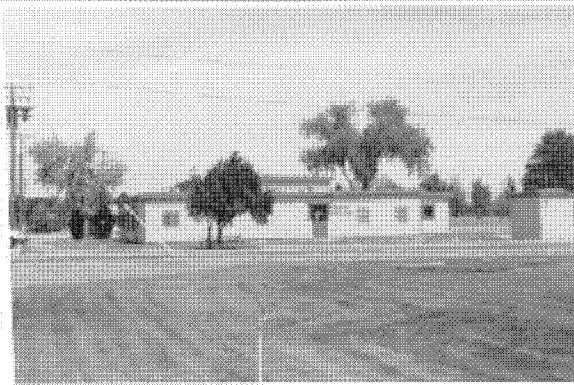
Resource No. 15028, Real Property No. 315,
Range Warning System Communications-
Electronics Shop



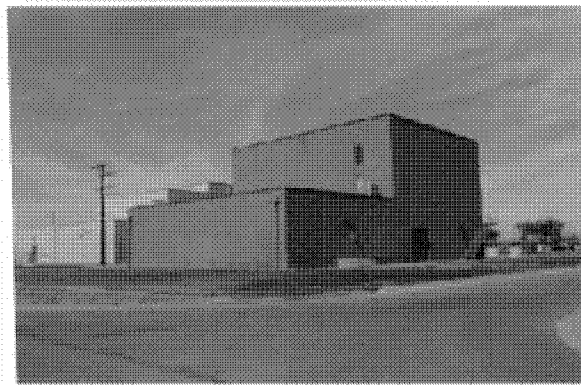
Resource No. 15029, Real Property No. 512,
Wing Headquarters (Contracting)



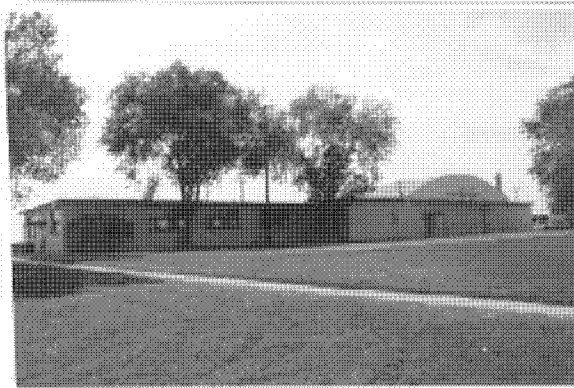
Resource No. 15030, Real Property No. 610,
Communications Facility



Resource No. 15031, Real Property No. 516,
Family Support Center



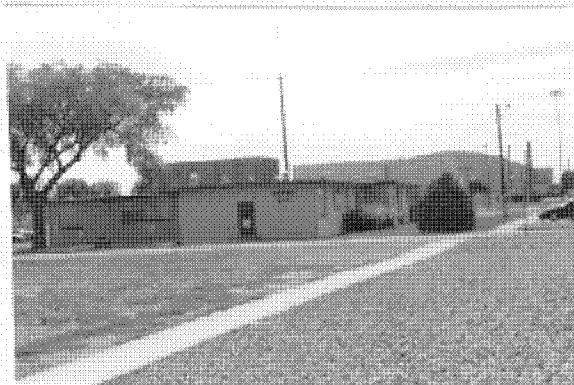
Resource No. 15032, Real Property No. 840,
Flight Simulator Training



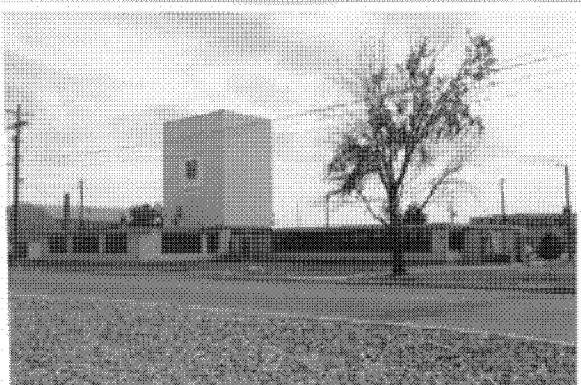
Resource No. 15033, Real Property No. 272,
Squadron Operations (22nd Air Refueling
Squadron)



Resource No. 15034, Real Property No. (none),
Softball Field



Resource No. 15035, Real Property No. 800,
AFOSI Building



Resource No. 15036, Real Property No. 263,
Survival Equipment Shop (366th Wing
Gunfighters)



Resource No. 15037, Real Property No. 900,
Radar Approach Control Center



Resource No. 15038, Real Property No. 1008,
Security Police Central Control



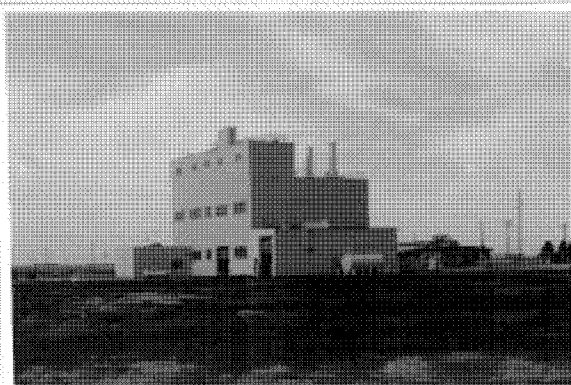
Resource No. 15039, Real Property No. 1212,
Housing Supplies and Storage Facility



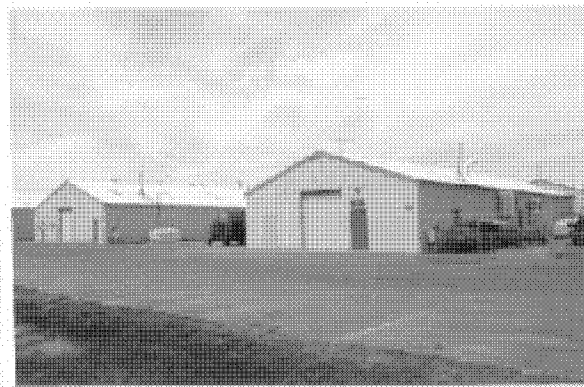
Resource No. 15040, Real Property No. 1225,
Jet Engine Inspection and Maintenance Shop



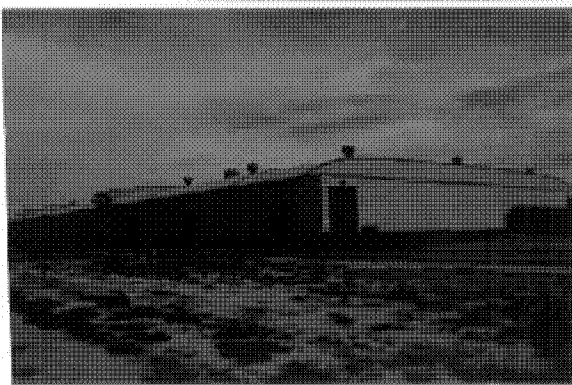
Resource No. 15041, Real Property Nos. 1314,
1315, and 1316, Jet Fuel Storage Tanks



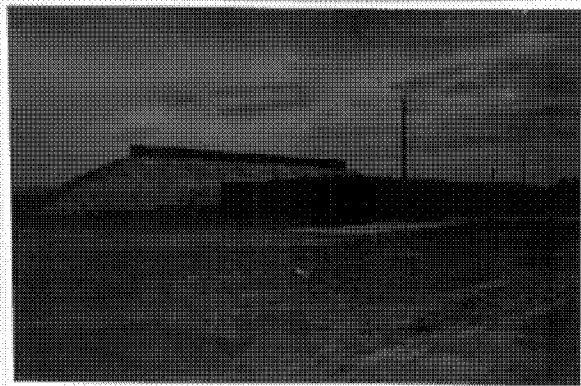
Resource No. 15042, Real Property No. 1328,
Heating Facility Building



Resource No. 15043, Real Property Nos. 1352, 1353, and 1354, Base Hazardous Storage/Vehicle Maintenance Shop/Base Engineer Pavement and Grounds Facility



Resource No. 15044, Real Property No. 1325, Base Supplies and Equipment Warehouse



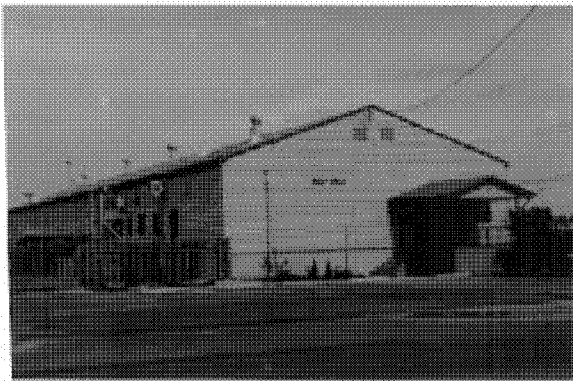
Resource No. 15045, Real Property No. 1390, Combat Arms Training Maintenance Building (Small Arms Range)



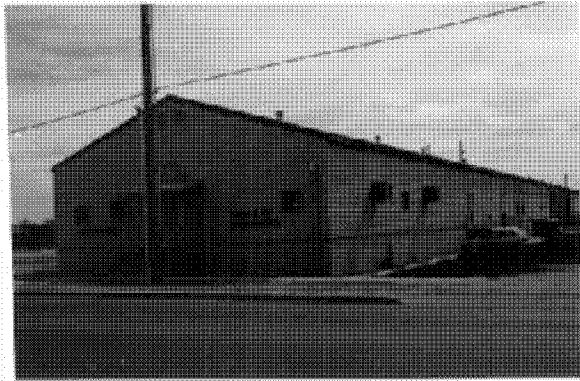
Resource No. 15046, Real Property No. 1330, Aircraft Corrosion Control



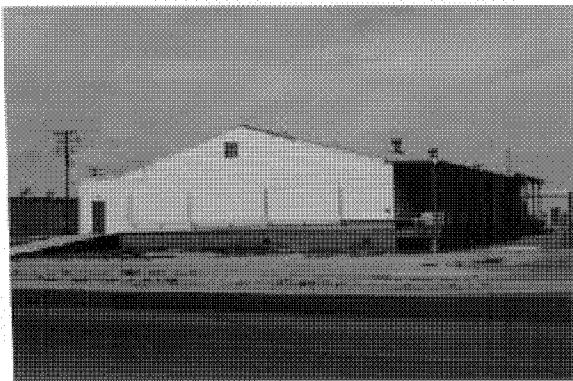
Resource No. 15047, Real Property No. 1300, Base Engineering Administration



Resource No. 15048, Real Property No. 1206,
Special Operations (Self Help)



Resource No. 15049, Real Property No. 1207,
Base Engineer Covered Storage



Resource No. 15050, Real Property No. 1203,
Base Cold Storage



Resource No. 15051, Real Property No. 1100,
Vehicle Maintenance Shop



Resource No. 15052, Real Property No. 1407,
Water Tower



Resource No. 15053, Real Property No. 2370,
Indoor Swimming Pool



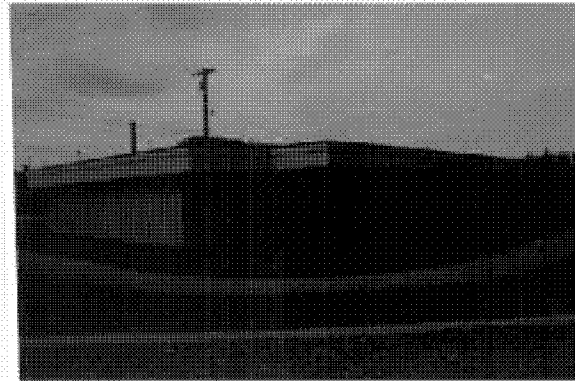
Resource No. 15054, Real Property No. 2371,
Gymnasium



Resource No. 15055, Real Property No. 1201,
Cafe-Snack Bar Exchange (Burger King)



Resource No. 15056, Real Property No. 2304,
Service Station Exchange



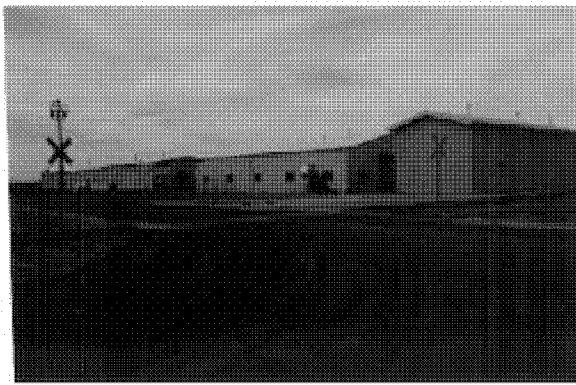
Resource No. 15057, Real Property No. 2207,
Thrift Shop



Resource No. 15058, Real Property No. 2209,
Automotive Hobby Shop



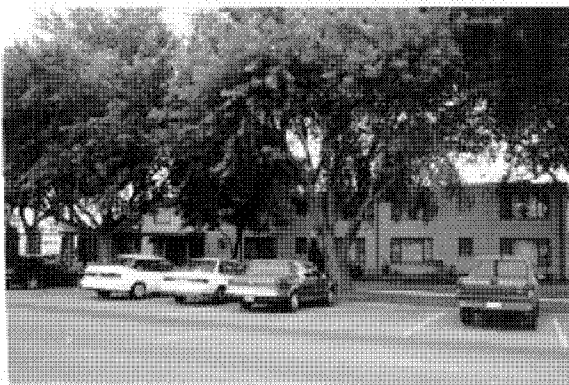
Resource No. 15059, Real Property No. 2215,
Group Headquarters (OTH-B)



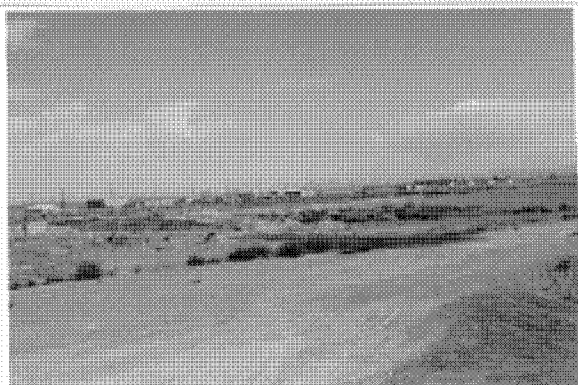
Resource No. 15060, Real Property Nos. 1320 and 1322, Base Supply and Equipment Warehouse



Resource No. 15061, Real Property No. 2201, Locomotive Shop and Shelter



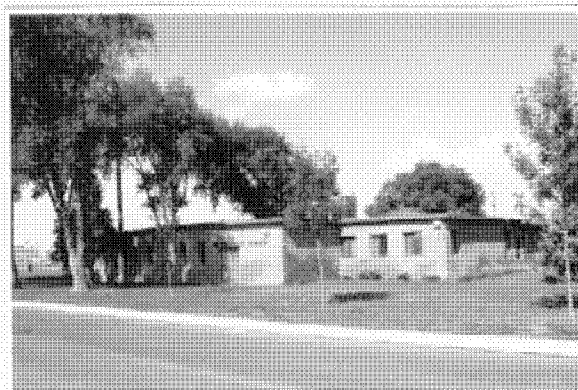
Resource 15062, Real Property No. 2604, Visiting Officer's Quarters (Sagebrush Hotel)



Resource No. 15063, Real Property No. (none), Weapons Storage Area



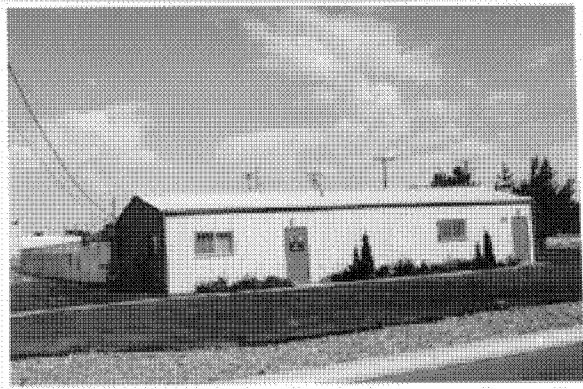
Resource No. 15064, Real Property No. 1340, Conventional Munitions Shop



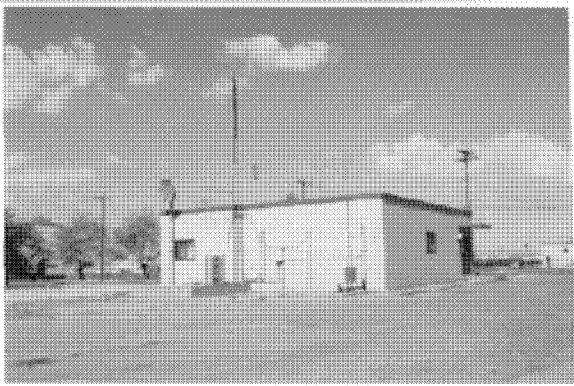
Resource No. 15065, Real Property No. 1013, Special Operations (366th Security Police)



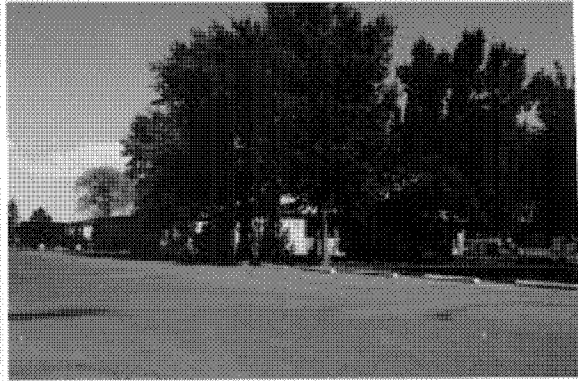
Resource No. 15066, Real Property No. 927,
PME Lab



Resource No. 15067, Real Property No. 1015,
Canine Special Kennel (Military Working Dogs)



Resource No. 15068, Real Property No. 923,
Radar Approach Control Center



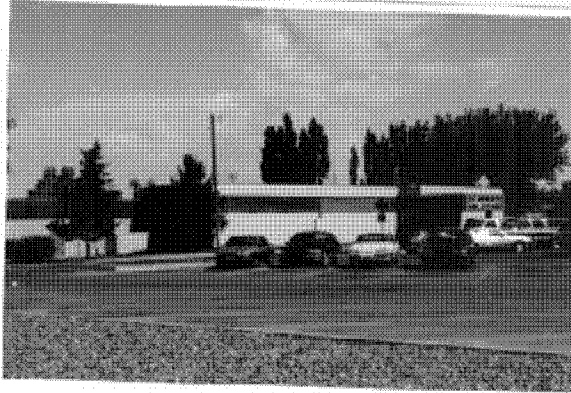
Resource No. 15069, Real Property No. 2413,
Clothing Store (Post Office)



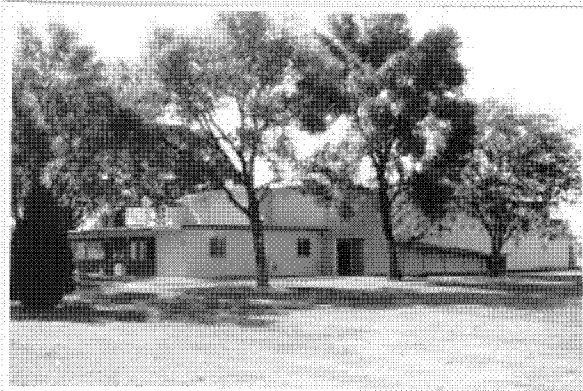
Resource No. 15070, Real Property No. 1610,
Field Training Facility



Resource No. 15071, Real Property No. 1612,
Exchange Sales Store



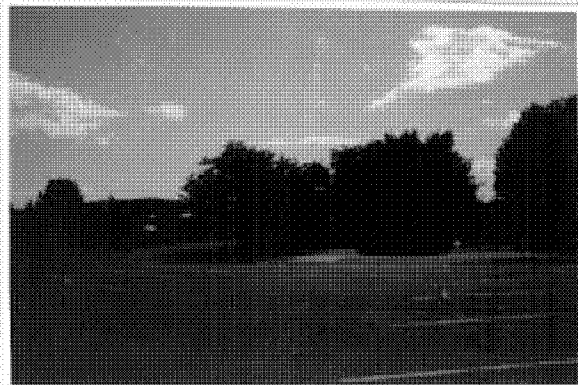
Resource No. 15072, Real Property No. 2607,
Exchange Sales Store (Main Building)



Resource No. 15073, Real Property No. 1613,
Base Theater



Resource No. 15074, Real Property No. 2620,
Bank Branch



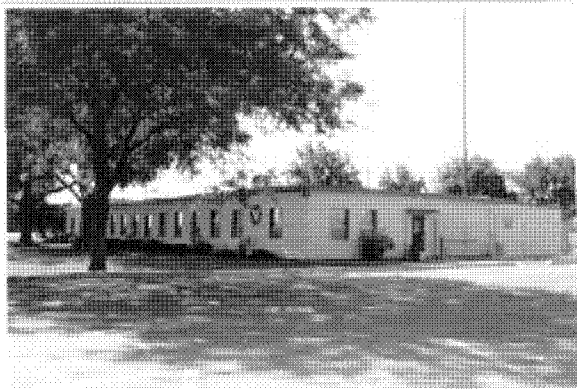
Resource No. 15075, Real Property No. 2621,
Federal Credit Union



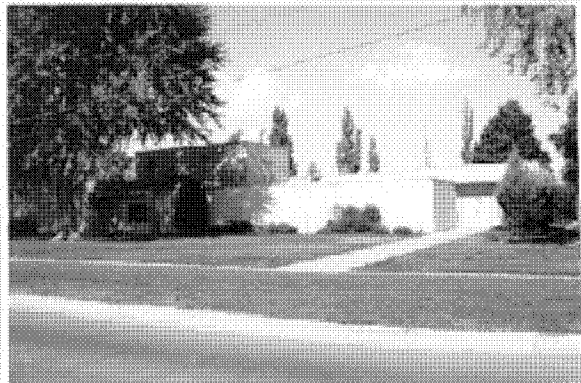
Resource No. 15076, Real Property No. 2610,
Store/Commissary



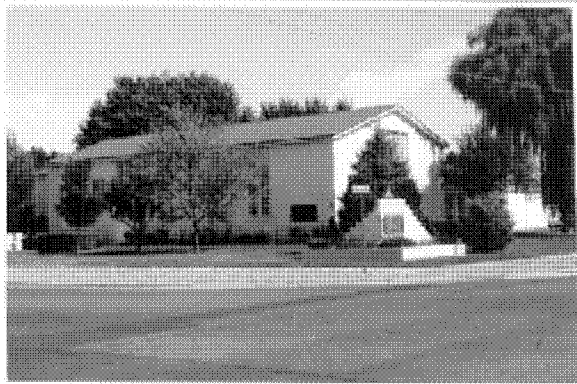
Resource No. 15077, Real Property No. 2630,
Exchange Sales Store (Shoppette Class Six)



Resource No. 15078, Real Property 1506,
Group Headquarters (366th Ops SPT Squadron)



Resource No. 15079, Real Property No. 1501,
Group Headquarters ("The Vault")



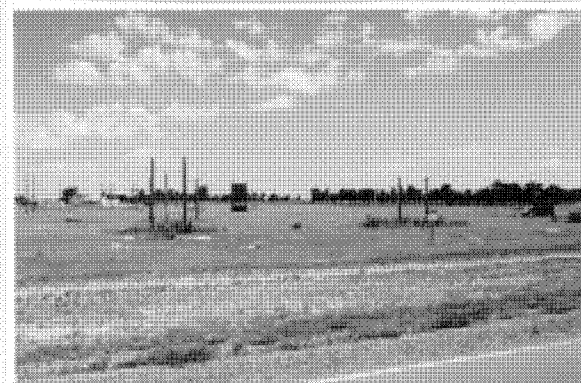
Resource No. 15080, Real Property No. 2606,
Chapel Center (Liberty Chapel)



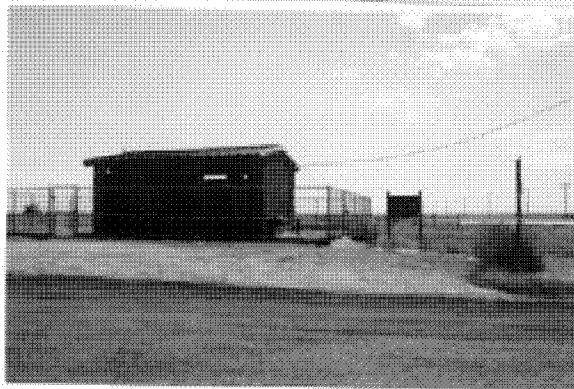
Resource No. 15081, Real Property No. 510,
Data Processing Installation



Resource No. 15082, Real Property Nos. 1820
and 1821, Riding Stables



Resource No. 15083, Real Property Nos. 1805
and 1807, Team Leadership Reaction Course
Outdoor Program Facilities



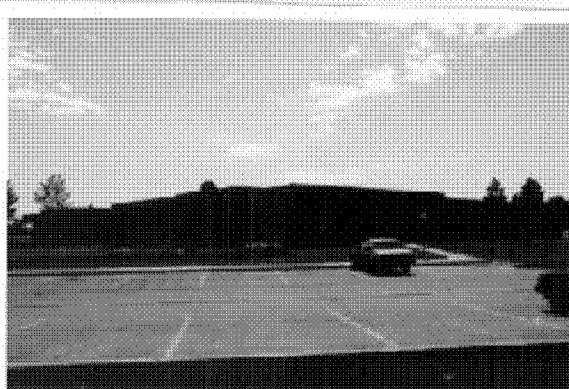
Resource No. 15084, Real Property No. 1799,
Stray Animal Kennel



Resource No. 15085, Real Property No. 8,
Family Housing Appr. FY 1950 (Eagles View)



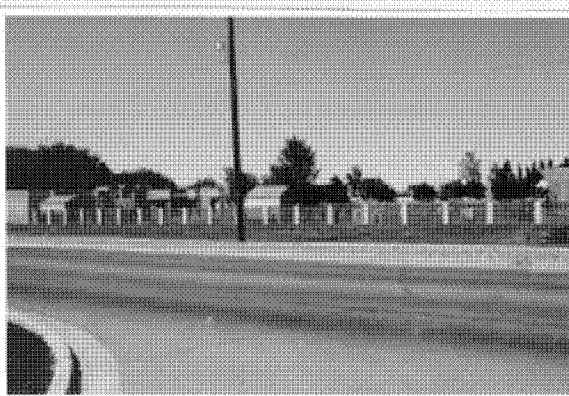
Resource No. 15086, Real Property No. 44,
Family Housing Appr. FY 1950 (Eagle View)



Resource No. 15087, Real Property No. 195,
NCO Open Mess (Enlisted Club)



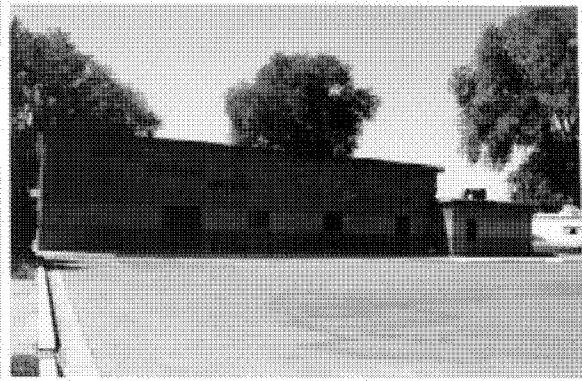
Resource No. 15088, Real Property Nos. 101
and 105, Child Care Center



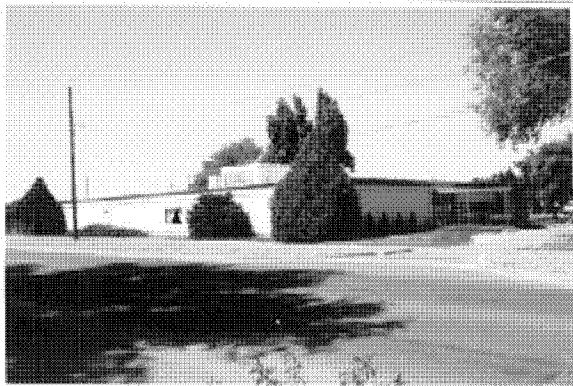
Resource No. 15089, Real Property No. 2623,
Child Care Center



Resource No. 15090, Real Property No. 15012,
Softball Field (Hamlett Field)



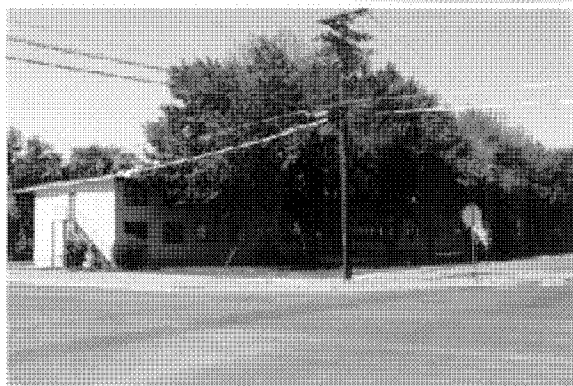
Resource No. 15091, Real Property No. 180,
Family Support Center



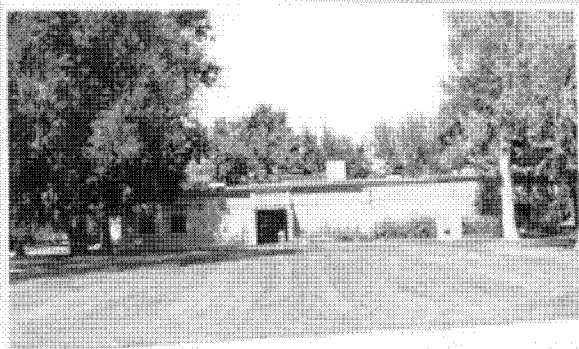
Resource No. 15092, Real Property No. 2605,
Officer's Open Mess (Officer's Club)



Resource No. 15093, Real Property No. 2601,
NCO Professional Military Education Center
(PME Center)



Resource No. 15094, Real Property No. 2426,
Education Center



Resource No. 15095, Real Property No. 2427,
Base Library



Resource No. 15096, Real Property No. 2618,
Recreation Center



Resource No. 15097, Real Property No. 2408,
Weapons System Maintenance Management
Facility (Logistics Group)



Resource No. 15098, Real Property No. 2310,
Airman's Dormitory



Resource No. 15099, Real Property No. 2308,
Airman's Dormitory



Resource No. 15100, Real Property No. 2315,
Airman's Dormitory (361st Fighter Squadron)



Resource No. 15101, Real Property No. 2320,
Airman's Dormitory



Resource No. 15102, Real Property No. 2806,
Arts and Crafts Center



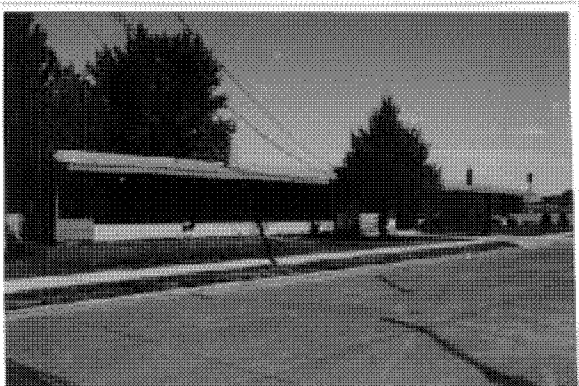
Resource No. 15103, Real Property No. 2805,
Bowling Center



Resource No. 15104, Real Property No. 2202,
Family Campground



Resource No. 15105, Real Property No. 2222,
Rod and Gun Club (Skeet Range)



Resource No. 15106, Real Property No. 4519,
Capehart Family Housing (Woodland Groves)



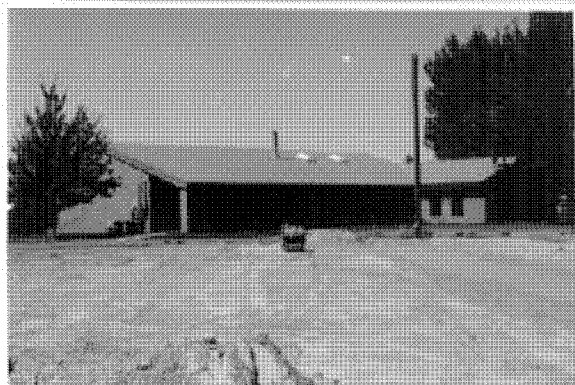
Resource No. 15107, Real Property No.
(unknown), Middle School



Resource No. 15108, Real Property No. (unknown), Elementary School



Resource No. 15109, Real Property No. 2830, Youth Center



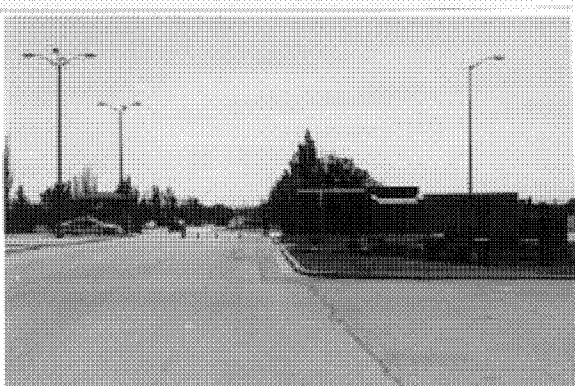
Resource No. 15110, Real Property No. 2800, Miscellaneous Recreational Building



Resource No. 15111, Real Property No. 4818, Family Housing Appr. 1950-1969 (Dunes)



Resource No. 15112, Real Property No. 6000, Composite Medical (Base Hospital)



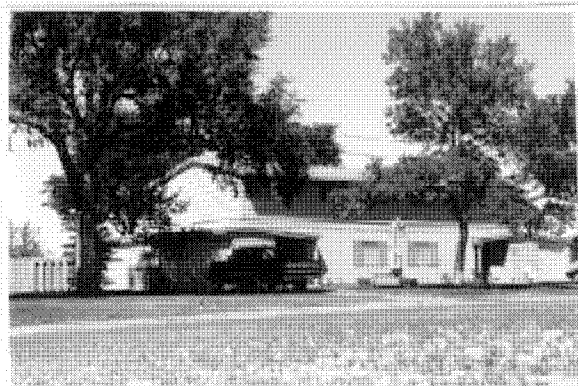
Resource No. 15113, Real Property Nos. 7001, 7000, Traffic Check House (Entrance Gate)



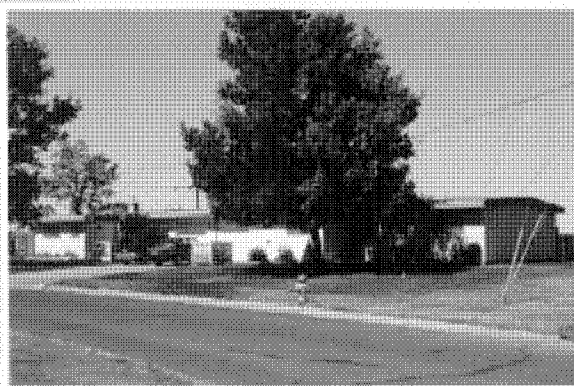
Resource No. 15114, Real Property No. 4701, Capehart Family Housing (Presidential Acres "Yard of the Month")



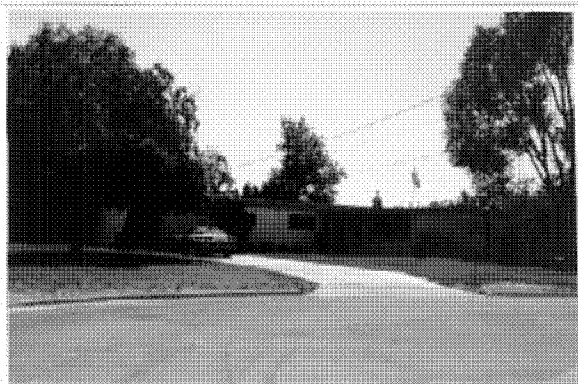
Resource No. 15115, Real Property No. 4663, Capehart Family Housing (Presidential Acres, Officer's Housing)



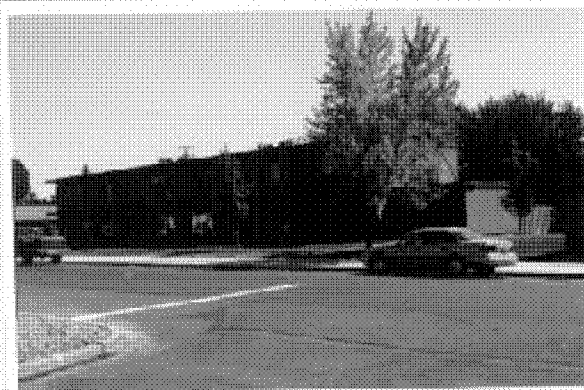
Resource No. 15116, Real Property No. 4757, Capehart Housing (Presidential Acres)



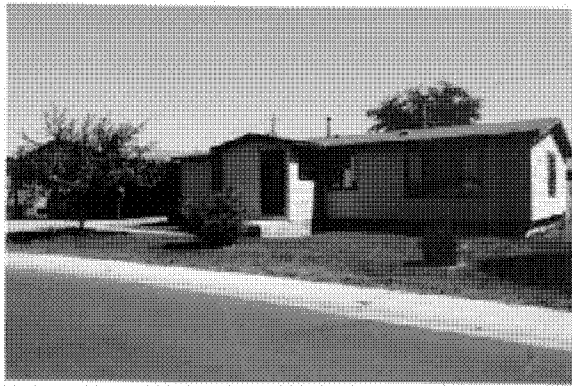
Resource No. 15117, Real Property No. 4759, Capehart Family Housing (Presidential Acres)



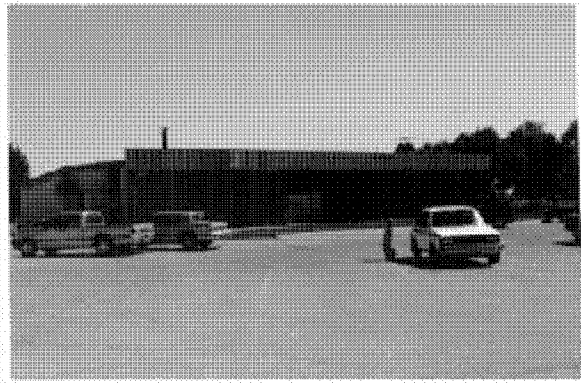
Resource No. 15118, Real Property No. 4632, Capehart Family Housing (Presidential Acres)



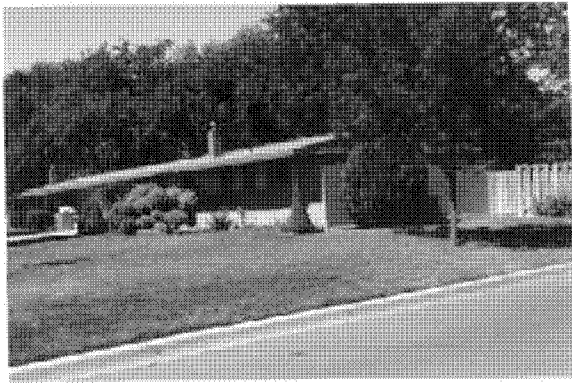
Resource No. 15119, Real Property No. 4343, Wherry Family Housing (Oasis)



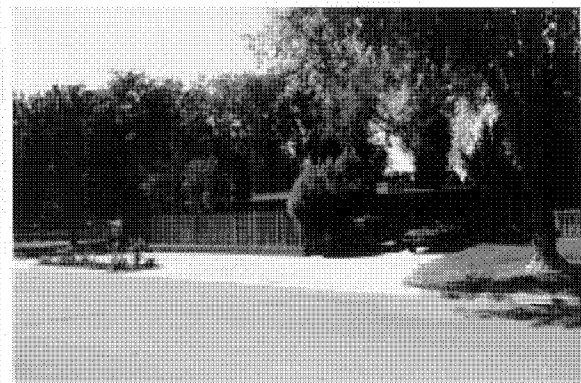
Resource No. 15120, Real Property No. 5302,
Manufactured Family Housing (Desert Vista)



Resource No. 15121, Real Property No. 4109,
Golf Club House and Equipment



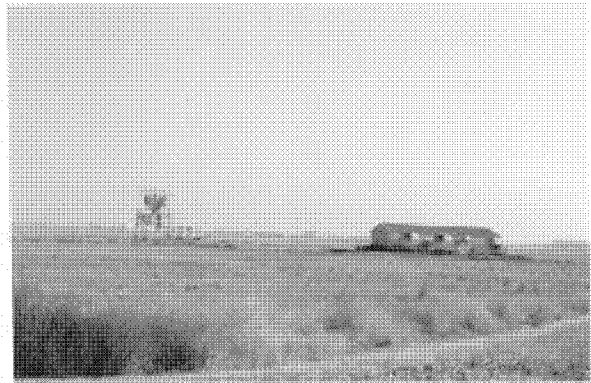
Resource No. 15122, Real Property No. 4460,
Capehart Family Housing (Gunfighter Manor)



Resource No. 15123, Real Property No. 4473,
Capehart Family Housing (Gunfighter Manor)



Resource No. 15131, Real Property No. 3600,
Control Tower



Resource No. 15132, Real Property No. 3522,
Area Search Radar

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT MOUNTAIN HOME AFB

Resource Number: 15001

Property Description: NCO Professional Military Education Center (old Alert Facility)

Associated Property: 15135-1980s project maps

Non-Inventoried Association:

Sub-installation:

Address: 12 Liberator Street

Base Map Date: 9/3/92

Base Map Building Number: 291

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Bomber Alert Facility

Statement of Significance: This facility was specially constructed in 1960 for SAC Alert Crews stationed at Mountain Home AFB. It was designed to house alert crews and facilitate rapid egress from the building to the flight line during an emergency situation or Operational Readiness Inspection (ORI). The specially designed ramped entrances and exits make this building architecturally significant.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 21

Comments on Threats: This facility is no longer in continuous use. It is used for visiting air crews.

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management:

Importance: Exceptional

Eligibility: Potential

Height: 20
Square Footage: 32997
Original Planned Duration: Permanent
Existing Use: This facility is used periodically for transient air crews.
Other Use/Dates: TAC Squadron Operations, Headquarters Air Base Group, and NCO Education Center.
Comments on Use:
Primary Building Materials: Poured Concrete
Character Defining Features: This building is characterized by its ramped entrances found around its exterior along with an earthen berm.

Resource Number: 15059

Property Description: Headquarters Group
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: 1050 Desert Street
Base Map Date: 9/3/92
Base Map Building Number: 2215

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence: Radar Sites
Property Type: OTH-B Facility

Statement of Significance: This facility was utilized at the end of the Cold War era as a state of the art radar and communications center linked with the Northwest Air Defense Sector (NWADS). The facility utilized Over the Horizon Backscatter technology (OTH-B) that was important in providing the Air Force the capability to locate unidentified aircraft at a great distance.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	3
Temporal Phase Relationship:	1
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Exceptionally significant and NRHP eligible.

Importance: Exceptional
Eligibility: Eligible

Height: 30
Square Footage: 55455
Original Planned Duration: Permanent
Existing Use: Not known
Other Use/Dates:
Comments on Use:
Primary Building Materials: Concrete Masonry Unit
Character Defining Features: Barbed wire fence at entrance, and two communication dish/antennas located near one corner of the building

Resource Number: 15133

Property Description: Wing History Collection
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: Liberator Street
Base Map Date: 9/3/92
Base Map Building Number: inside 512

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Office Files

Statement of Significance: These Wing Histories provide valuable information concerning the activities of the 366th Tactical Fighter Wing from 1942-1992, and about the individual bases where they were assigned. The histories from 1972-1992 can provide additional information about Mountain Home Air Force Base.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 2
Level of Importance: 2
Percent Historic Fabric: 1
Severity of Threats: 1
Total Score for Priority Matrix: 14
Comments on Threats: The Wing Histories on file at the Wing Historian's Office consist of microfilm copies of the histories from 1942-1987. Hard copies are available from 1988-1992.

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: No
Preservation/Conservation/Repair: No
Comments on Resource Management: These histories are on file at the USAF history Center at Maxwell AFB, Alabama.

Object Condition: Being Preserved
Record/Document Category: Report
Year of Document: Various
Period of Association: 1942-1992

Resource Number: 15134

Property Description: Base Newspaper Collection
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address: Liberator Street
Base Map Date: 9/3/92
Base Map Building Number: inside 512

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Base Newspaper Collection

Statement of Significance: This collection of base newspapers can provide supplemental information concerning activities at Mountain Home AFB between 1966-1992.

Cold War Relationship-Nat'l. Recognition: 2
Theme Relationship: 1
Temporal Phase Relationship: 2
Level of Importance: 1
Percent Historic Fabric: 4
Severity of Threats: 3
Total Score for Priority Matrix: 13
Comments on Threats: This newspaper collection, although stored in file cabinets, is deteriorating due to improper curation. It is recommended that steps be taken to microfilm existing copies and proper storage of originals be implemented.

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: Yes
Preservation/Conservation/Repair: Yes
Comments on Resource Management:

Object Condition: In Storage/Benign Neglect
Record/Document Category: Newspaper Collection
Year of Document: Various
Period of Association: 1943 (Copy), 1966-1994
Comments on Condition: This collection is in serious need of proper curation.

Resource Number: 15135

Property Description: Architectural Drawing Files located in vault in CE drawing room consist of 8 banks of flat files (total of 215 drawers). The majority of the real property architectural files are organized in drawers by a numerical sequence (i.e., MH400 [MH for Mt. Home] is fuels, MH500 is roads, etc.). Individual drawers may contain project plans and drawings for several buildings with maps arranged by the decade the project was undertaken. On top of the left row of banks are several rolled maps lying loose including brown folders (contents not examined), a map tube titled site location layouts, and a large role labeled Grasmere. A wooden cabinet with slots for rolled maps is also on top of the banks. Old utility (electrical, roads-grounds-sidewalks, railroads-golf courses, steam distribution system), airfield, and ordnance facility drawings on sepia, linen, mylar, vellum, and blueprint are included in labeled slots. Unlabeled slots include several rolls of old base layouts from 1955-1984 (a 1966 shows entire base and alert facility), 1984 mylar Travel and Work Zone maps, a mylar Hazardous Substance grid map, county maps, a CE Weapons Mobility map, a map of Spill Containment Areas, several 7.5' topographic maps including base area and Snake River plain, and one slot with mylars of Saylor Creek.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date:

Base Map Building Number: inside 1300

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: The significance of these drawing files lies in the information they contain regarding important properties on Mountain Home AFB.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16

Comments on Threats: Architectural drawing files are in a protected room adjacent to the drafting area. The collections are well organized and quite complete, although the system varies somewhat from other observed bases.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management:

Record/Document Category: Architectural Drawings

Year of Document:

Period of Association: 1940s to 1980s, spanning Cold War Phases I-IV

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture and provide research materials.

Robert Dews
Natural/Cultural Resource Coordinator
366 CES/CEV
1100 Liberator Street
Mountain Home AFB, Idaho 83648
(208) 828-6351

Gina Johnson
Environmental Public Affairs Officer
366 CES/CEV
1100 Liberator Street
Mountain Home AFB, Idaho 83648
(208) 828-6351

Brandon Smith
Environmental Protection Specialist
366 CES/CEV
1100 Liberator Street
Mountain Home AFB, Idaho 83648
(208) 828-6351

SSgt Dennis Pittman
Flight Development Specialist
366 CES
1030 Liberator Street
Mountain Home AFB, Idaho 83648
(208) 828-6344

TSgt Albert Lewis
Wing Historian
366 WG/HO
335 Gunfighter Avenue
Mountain Home AFB, Idaho 83648
(208) 828-6318

SrA Sonja Rushton
Editor/Base Newspaper
366 WG/PA
335 Gunfighter Avenue
Mountain Home AFB, Idaho 83648
(208) 828-6800

TSgt Douglas Pippin
Intelligence Planning/Operations
360 Gunfighter Avenue
Mountain Home AFB, Idaho 83648
(208) 828-2693

SSgt Troy Prine
Chief of Internal Information
366 WG/PA
335 Gunfighter Avenue
Mountain Home AFB, Idaho 83648
(208) 828-6800

TSgt Dougan
Facility Security Officer
366 CS/SCCS
365 3rd Avenue, Building 510
Mountain Home AFB, Idaho 83648
(208) 828-6776

Lucille Hampton/Donna Walker
Real Estate Officer
366 CES/CERR
1030 Liberator Street
Mountain Home AFB, Idaho 83648
(208) 828-6306

Ronald Stonebreaker
General Engineer/Architect
366 CES/CECM
1030 Liberator Street
Mountain Home AFB, Idaho 83648
(208) 828-6344

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team while at the base. They were identified as people possessing extensive knowledge of Mountain Home AFB's history and Cold War context.

Brandon Smith, Environmental Protection Specialist, August 26, 1994

TSgt Douglas Pippin, Intelligence Planning/Operations, August 30, 1994

Bob Dews, Natural/Cultural Resource Coordinator, August 31, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-22: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT NELLIS AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
Lori E. Rhodes
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Nellis Air Force Base and Cuddeback Gunnery Range were inventoried for Cold War resources by James A. Lowe, Lori E. Rhodes, and Scott W. Kamber of Mariah Associates, Inc., between May 24 and June 7, 1994, and June 8, 1995, as part of the Air Combat Command Cold War Study under the ongoing Department of Defense Legacy Program. Information was gathered at the base from the Weapons and Tactics Center Historian, Wing Historian, Cultural and Natural Resources staff, Drawing Room staff, and at the Civil Engineering, Real Property, and Public Affairs Offices. On-site inspections were also conducted. During this research and inventory, property types were identified and photographed.

A significant amount of material culture was identified as relating to the Cold War era, and thus to the scope of this study, most involving important training activities. As a result, 10 resources on the base were further documented and evaluated as important within the base Cold War context.

Recommendations for these resources include further documentation, stewardship, and National Register eligibility for the Command Center (Real Property No. 620), Maintenance Hangar (Real Property No. 292), RED FLAG Facility (Real Property No. 201), Weapons School (Real Property No. 282), and the Threat Facility Collection (located in Real Property No. 470). Further documentation, stewardship, and conservation are recommended for four Documentary Collections and one Photograph Collection.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AFR	- Air Force Range
AGE	- Air Ground Equipment
ARDC	- Air Research and Development Command
ATC	- Air Training Command
BLM	- Bureau of Land Management
CCTW	- Combat Crew Training Wing
CES	- Civil Engineering Squadron
CRS	- Component Repair Squadron
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
FMS	- Field Missile Squadron
FTD	- Field Training Detachment
FWW	- Fighter Weapons Wing
GR	- Gunnery Range
HABS	- Historic American Buildings Survey
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCNUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TFW	- Tactical Fighter Wing
TFWC	- Tactical Fighter Weapons Center
TR&D	- Test, Research, and Development
USAF	- United States Air Force
WRSK	- War Readiness Spares Kit
WTC	- Weapons and Tactics Center

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Capehart Housing Act - passed in 1955 as an amendment to the National Housing Act. It authorized the use of quarters allowances to pay off Wherry housing mortgages. Construction of new houses was set at 46,500 units at 88 bases. Construction was begun on 9,000 units by 1957.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

GLOSSARY (Continued)

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	8
3.0 HISTORICAL OVERVIEW	12
3.1 BASE HISTORY AND COLD WAR CONTEXT	12
3.1.1 Nellis AFB	12
3.1.2 Auxiliary Air Fields and Ranges	20
3.1.3 Cuddeback GR	22
3.2 BASE DEVELOPMENT	23
4.0 METHODOLOGY	30
4.1 INVENTORY	30
4.2 EVALUATION OF IMPORTANT RESOURCES	31
4.2.1 Documentation	31
4.2.2 Evaluation of Importance	31
4.2.2.1 Cold War Context	31
4.2.2.2 NRHP Criteria	32
4.2.2.3 Exceptional Importance	33
4.2.3 Evaluation of Integrity	33
4.2.4 Priority Matrix	34
4.2.5 Resource Organization	35
4.3 BASE SPECIFIC METHODS	35
5.0 RECONNAISSANCE INVENTORY RESULTS	37
6.0 EVALUATION RESULTS	38
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	38
6.1.1 Base and Command Centers	38
6.1.1.1 Command Center	38

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.1.2 Documentation	42
6.1.2.1 Documentary Collection	42
6.1.2.2 Documentary Collection	43
6.1.2.3 Documentary Collection	44
6.1.2.4 Documentary Collection	45
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	46
6.2.1 Documentation	46
6.2.1.1 Photograph Collection	46
6.2.2 Maintenance Hangars/Docks	47
6.2.2.1 Maintenance Hangar	47
6.3 MATERIEL DEVELOPMENT FACILITIES	48
6.4 TRAINING FACILITIES	48
6.4.1 Combat Training	48
6.4.1.1 RED FLAG Facility	48
6.4.1.2 Threat Facility Collection	49
6.4.1.3 Weapons School	51
6.5 INTELLIGENCE FACILITIES	51
7.0 UNDOCUMENTED RESOURCES	52
8.0 FUTURE THREATS TO RESOURCES	53
9.0 PRELIMINARY RECOMMENDATIONS	54
9.1 NRHP ELIGIBILITY	54
9.1.1 Evaluation and Determination of NRHP Eligibility	54
9.1.2 Implications of NRHP Eligibility	56
9.2 EVALUATED RESOURCE RECOMMENDATIONS	58
9.2.1 Command Center	58
9.2.2 Documentary Collection	60
9.2.3 Documentary Collection	60
9.2.4 Documentary Collection	60
9.2.5 Documentary Collection	61
9.2.6 Photograph Collection	61
9.2.7 Maintenance Hangar	61
9.2.8 RED FLAG Facility	62
9.2.9 Threat Facility Collection	62
9.2.10 Weapons School	62
10.0 REFERENCES CITED	64

TABLE OF CONTENTS (Continued)

APPENDIX A: RECONNAISSANCE INVENTORY

APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES

APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

APPENDIX E: EXTANT SOURCES OF INFORMATION

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Nellis Air Force Base	5
Figure 2.2 Standard Tactical Air Command Base Layout	7
Figure 2.3 Nellis Air Force Base Land Use Diagram	10
Figure 2.4 Standard Tactical Air Command Base Land Use Diagram	11
Figure 3.1 Nellis Air Force Base, 1940s	24
Figure 3.2 Nellis Air Force Base, 1950s	26
Figure 3.3 Nellis Air Force Base, 1960 to present	27

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	39
Table 6.2 Evaluated Resource Prioritization by Priority Rank	40
Table 9.1 Recommendations for Evaluated Resources	59

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

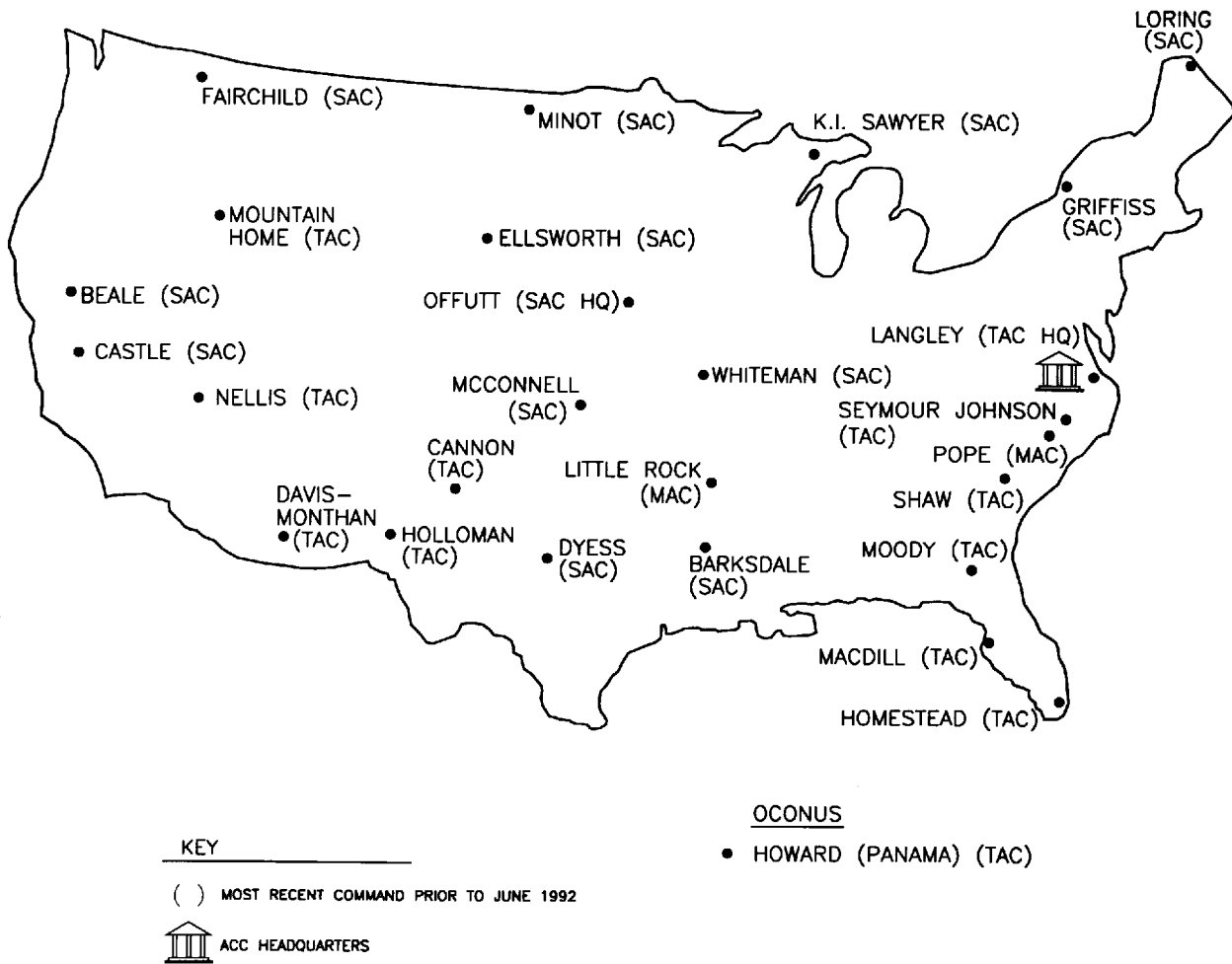
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\NELLIS\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Nellis Air Force Base (AFB) and the associated Cuddeback Gunnery Range (GR). Nellis AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Units at Nellis AFB today maintain training for composite strike forces that include every type of aircraft in the United States Air Force (USAF) inventory, as well as air and ground units of the Army, Navy and Marine Corps, and air units from allied nations. The Weapons and Tactics Center (WTC) is responsible for graduate-level weapons training for mission-ready aircrews throughout the worldwide combat air forces. The base also conducts operational testing and tactical development and evaluation using modern weapons systems that equip United States combat air forces. The operational element of the center is the 57th Wing. Major units of the wing include the 57th Operations Group, 57th Test Group, 57th Logistics Group, U.S. Air Force Weapons School, U.S. Air Force Demonstration Squadron (the Thunderbirds), U.S. Air Force Combat Rescue School, and the 66th Rescue Squadron.

2.2 GEOGRAPHIC DESCRIPTION

Nellis AFB is located within the Basin and Range physiographic province in the northeastern portion of the Las Vegas Valley. The base is found in the southeastern corner of the state of Nevada, approximately 8 mi (12.9 km) northeast of the city of Las Vegas in Clark County (Figure 2.1). The base itself encompasses 11,496 acres (4,652 ha). The total land area covered by Nellis AFB and its restricted ranges is more than 4,742 mi² (12,280 km²). An additional 7,700 mi² (19,941 km²) of airspace north and east of the restricted ranges is available for military flight operations. The climate in the area surrounding Nellis AFB is typical of the southwestern portion of the Basin and Range province, with hot temperatures and little moisture due to the valley's proximity to the rain shadow of the mountain ranges to the west.

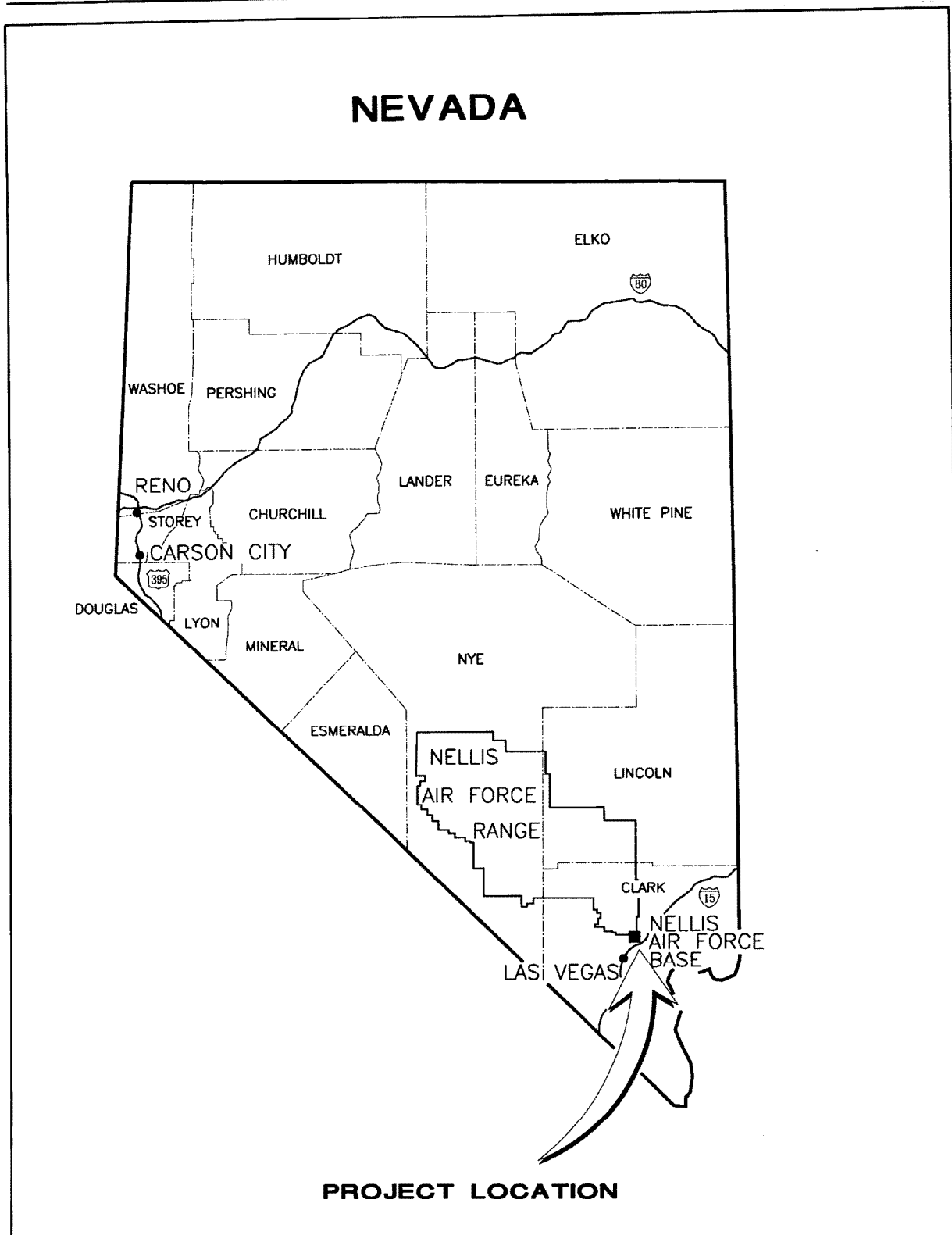


Figure 2.1 Location of Nellis Air Force Base.

Cuddeback GR is located approximately 30 miles north of Victorville in southern California, about 7 mi east of Highway 395. The range consists of 7,564 acres spread across 11 sections of land, a portion of which is located on the dry Cuddeback Lake bed.

2.3 CURRENT BASE LAYOUT

The 18 mi² (46 km²) of Nellis AFB land are divided into three areas: Area I contains the main base; Area II includes the Munitions Storage Area; and Area III consists of Manch Manor housing and an industrial area. The main base occupying Area I is bounded on the north by U.S. Highway 91/93 (Las Vegas Boulevard), on the west by Nellis Boulevard, on the south by private development, and on the east by Hollywood Boulevard, which is surrounded by open space at the base of the Sunrise and Frenchman mountains. Other boundaries are generally defined by a perimeter road.

The main entrance to Area I (Main Gate) is located at the intersection of Las Vegas Boulevard and Craig Road. A second entrance, the Hollywood Gate, is located across the runway along the eastern edge of Area I. The main area of base buildings occupies an extensive portion of the overall base property between U.S. Highway 91/93 and the primary runway, which is aligned northeast-southwest. This alignment varies from the typical TAC fighter home base (Figure 2.2), in which the secondary runway abuts the flight line and the primary runway is an offshoot, beginning at one end of the flight line then running at a tangent away from the main base. Aircraft operations and maintenance facilities line the flight line east of Tyndall Avenue, with certain areas devoted to specialized training buildings. Near the northern end of the flight line is the Weapons School and training maintenance hangars. The RED FLAG training group hangars are located near the southern end of the runway with the actual administrative building just across Tyndall. Also located on the western side of Tyndall, near the center of the flight line, is the Threat Facility academic exhibit building.

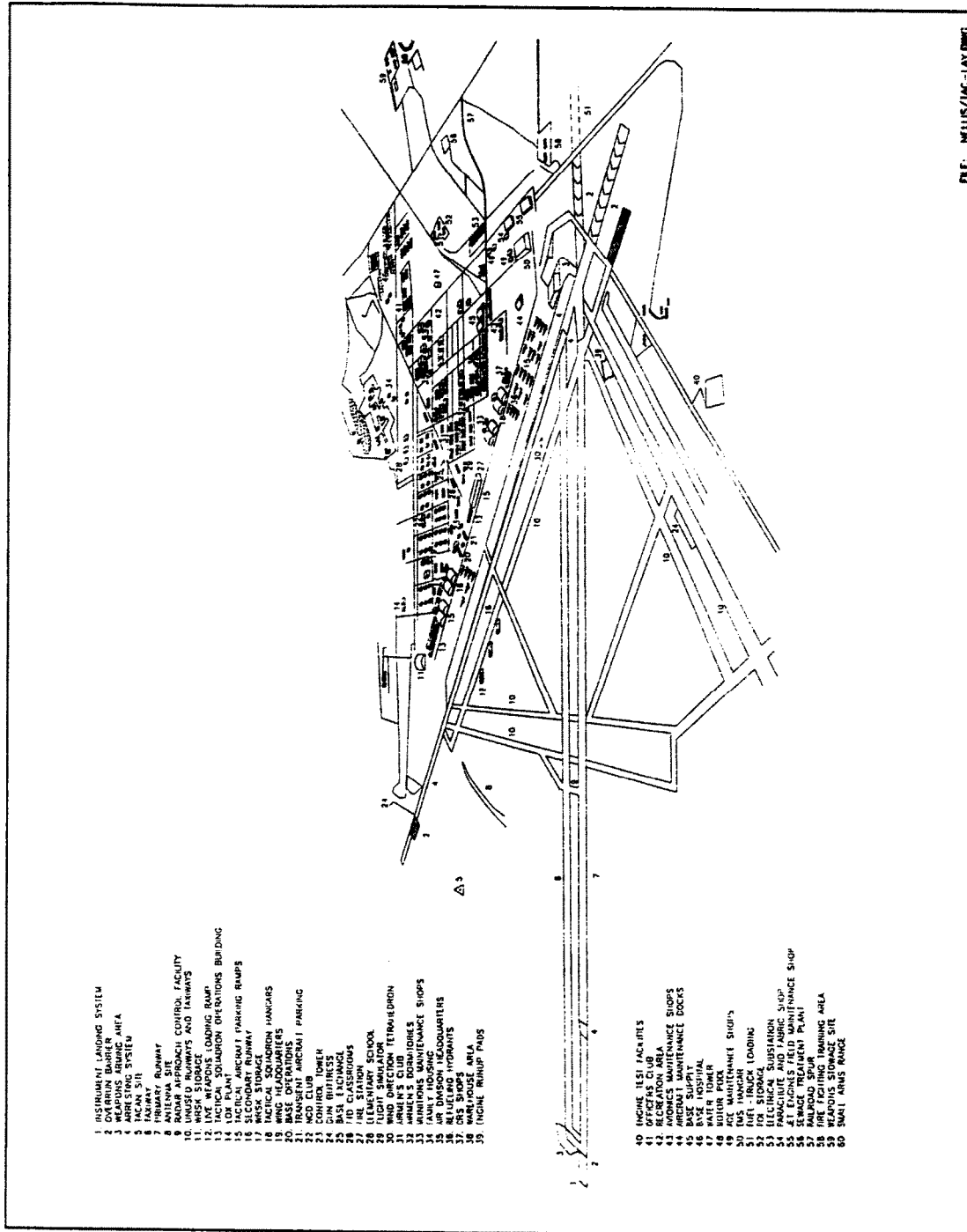


Figure 2.2 Standard Tactical Air Command Base Layout.

The remaining lands occupied by Nellis AFB in Area I are traversed by taxiways, secondary roads, and, at either end of the primary runway, clear zones where no development may occur. The periphery of Area I adjacent to the perimeter road is lined by housing (primarily mobile home parks), the golf course, and ancillary facilities such as the sanitary landfill and fire training areas. The typical TAC fighter base exhibits fewer ancillary buildings in these peripheral zones, perhaps because of the situation of the primary runway through these areas.

Area II is located over a mile to the northeast of the main base and is primarily accessed from Area I via Forrestal Boulevard off of Highway 91/93. Nestled between Sunrise Mountain and a range of foothills, the majority of Area II is defined by an exterior maintenance road and security fence system. Interior fences segregate portions of the munitions storage area from the remainder of Area II, which houses the Red Horse engineering administrative buildings as well as a federal prison facility.

Area III is just northwest of Area I, the two being separated only by Las Vegas Boulevard. Area III is bounded by Craig Road on the south and Range Road on the east, the latter connecting Areas I and III and also providing access to the small arms rifle range. The North Gate, flanked by a tank farm and substation, is located at the intersection of U.S. Highway 91/93 and Range Road. Additional tank farms, the Caffarelli Court mobile home complex, and a hazardous waste storage area are located further north along Range Road in Area III.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

The main base (Area I) land use at Nellis AFB (Figure 2.3) is not entirely analogous to the standard plan TAC base (Figure 2.4). First, the headquarters, or Base Operations building, at Nellis AFB is located at the extreme northeastern end of the primary runway; in the standard plan, it is situated away from the flight line among community, recreation, and housing areas. In addition, mission buildings occupy virtually the entire length of the flight line at Nellis AFB, this area on the standard plan is shared by both mission and industrial facilities. Industrial buildings at Nellis AFB are widely dispersed with some located near the northern end of the flight line and others located in Areas II and III. Base Support buildings also are widely dispersed within Area I at Nellis AFB. Housing locations are similar, being separated from the main flight line area in both cases. Recreational areas at Nellis AFB are dispersed, with one large area adjacent to the mission buildings at the southern end of the flight line. The community area separates the family housing areas from the mission activities, a characteristic which is partially true for the standard TAC base plan. Overall, the primary differences between Nellis AFB and the standard plan seem attributable to the development of areas on the southern side of the Nellis AFB airfield and the expansion of base facilities into Areas II and III.

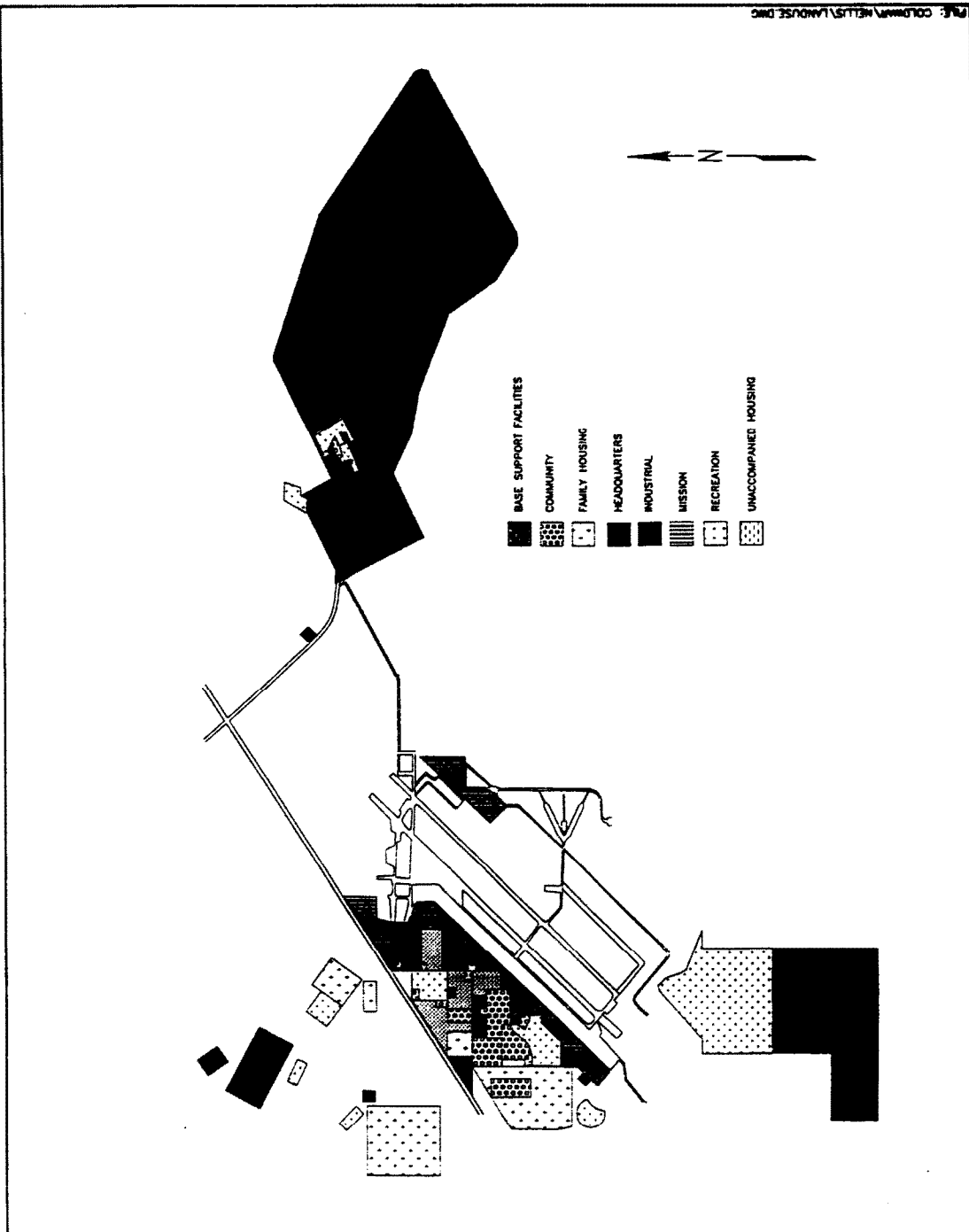


Figure 2.3 Nellis Air Force Base Land Use Diagram.

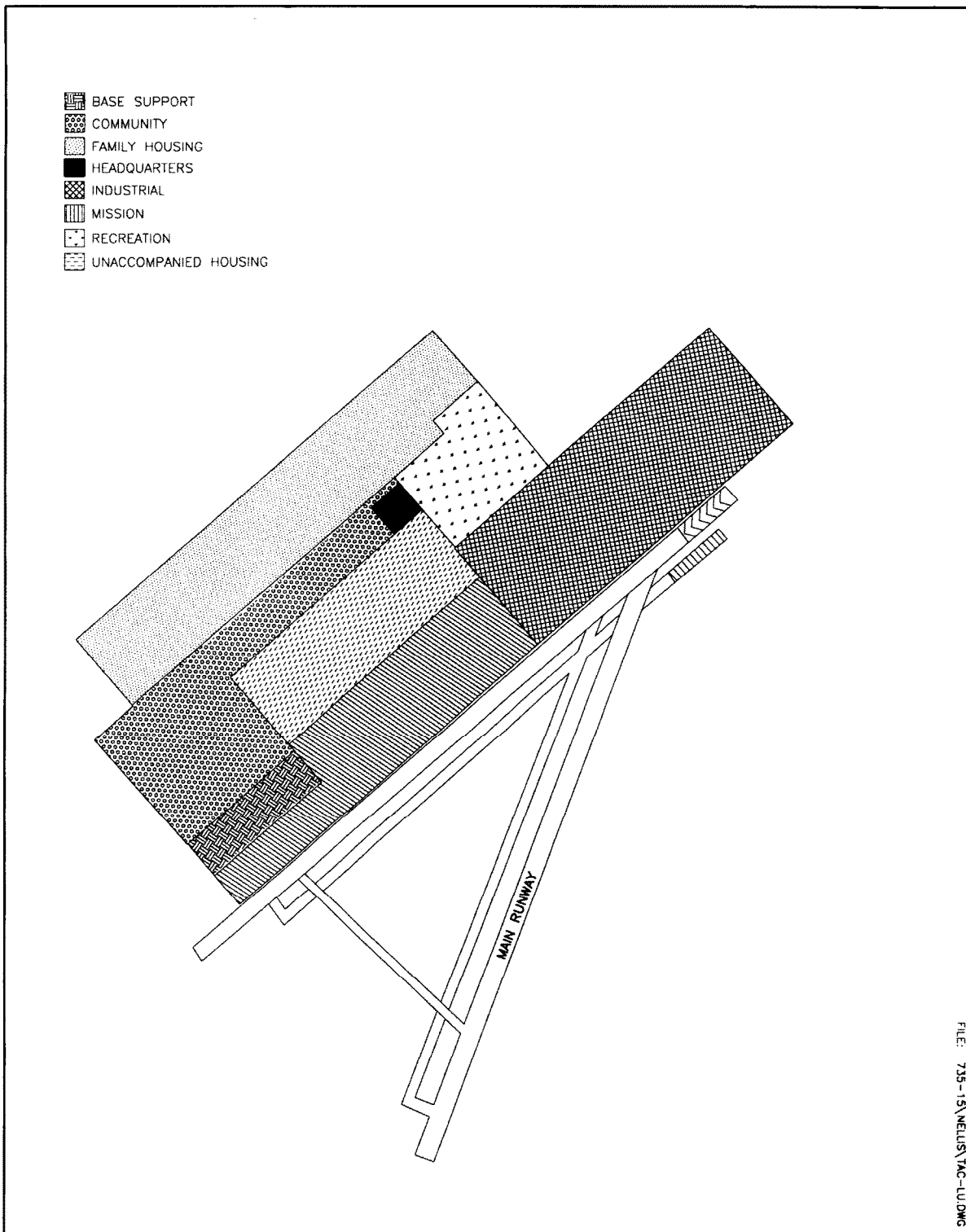


Figure 2.4 Standard Tactical Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

3.1.1 Nellis AFB

The origins of Nellis AFB date to 1926 when Western Air Express (later Western Air Lines) opened an air field from which it operated an airmail and passenger service between Salt Lake City, Las Vegas, and Los Angeles. Western Air Express constructed four dirt runways, a water well, and a main operations building on the future site of Nellis AFB, located 8 mi (13 km) north of Las Vegas in southern Nevada. By 1940, this air field served the only commercial airline for the city of Las Vegas (Nellis AFB 1993:16; Office of History 1993:54-55; USAF 1972a; Wing Historian's Office 1993:5).

President Roosevelt expanded national defense in 1936 by creating the Army air program. The new U.S. Army Air Corps recommended that several new combat bases be established, and that they be located far enough in the interior of the United States that enemy aircraft would have difficulty locating them. In determining appropriate sites in the West for the new bases, one potential site in Nevada was chosen north of Las Vegas near Tonopah. This site would later become one of Nellis AFB's bombing ranges.

The Army Air Corps had formulated a plan in 1939 that would produce combat ready tactical groups in two years. As the number of projected combat groups increased, it was declared by General Henry "Hap" Arnold that combat units would require both local practice ranges and larger ranges for aerial gunnery and bombing exercises (Office of History 1993:54). In October 1940, President Roosevelt, with Executive Order 8578, created the Las Vegas Bombing and Gunnery Range, located to the north and northwest of Las Vegas and the current base. This particular range would later become Nellis Air Force Range (AFR) (USAF 1972b; War Department 1946:9).

Because most of the acreage of the ranges set aside in the West was public domain, mining, grazing, and homestead claims had to be adjudicated. This process delayed the use of the land until late 1941, and the Army Air Corps looked elsewhere to locate potential sites for future installations. The Western Air Express air field drew attention as a desirable location. Major David M. Schlatter arrived at the Western air field on October 1, 1940 under orders to locate an ideal site for an aerial gunnery school. From his previous surveys, he decided that the Western Air Express site was ideal for the gunnery school (Office of History 1993:54-55). The Army Air Corps selected the site for the Air Corps Gunnery School, Las Vegas, in December 1940. The Army and the Las Vegas Chamber of Commerce mutually agreed that the City of Las Vegas would simultaneously develop the air field as a municipal airport (Office of History 1993:55-56).

Construction of the school proceeded through 1941. The buildings consisted mostly of temporary, wood-frame structures. The Air Corps Gunnery School, Las Vegas, was officially established June 11, 1941. However, on September 15, 1941, the facility was renamed Las Vegas Airfield. The new municipal airport was designated McCarran Field in honor of the Nevada senator (Hinds 1976:5-7; Mueller 1989:439).

The air field was renamed Las Vegas Army Gunnery School in 1942, and was finally designated Las Vegas Army Airfield in April 1943. The advent of World War II shifted emphasis in gunnery training from ground gunnery training to aerial gunnery instruction, and facilities were expanded to keep pace with the wartime demand. The air field graduated 600 gunnery students and 215 co-pilots every five weeks during the height of World War II. During the latter part of the war, the air field also became the site for primary and advanced pilot training. The airfield population peaked in 1945 with over 11,000 officers and enlisted personnel, of which 4,700 were students (Hays 1968:84; Office of History 1993:56-57; Wing Historian's Office 1993:5-6).

Las Vegas Army Airfield served as a separation center for returning servicemen following the surrender of Japan in August 1945. Although several plans were proposed between 1945 and 1946 for keeping the air field operational, it was deactivated January 31, 1947. The air field

served as a standby field for about two years, until reactivation in January 1949 (Hinds 1976:22-23,26; Office of History 1993:57).

The world geopolitical situation was still uncertain following the end of World War II, especially during 1947-1948 with the unrest in the Balkan region and the Berlin Blockade in Germany, and the United States needed its military airpower. Las Vegas Army Airfield still retained those characteristics that had made it desirable before World War II, but the newly established USAF did not want to reactivate the airfield with joint use by a civilian airport. Air Force officials asked city officials to relocate McCarran Field, and the City of Las Vegas, wishing to keep the military facility in the area, passed a \$750,000 bond issue to construct a new separate airport (Hinds 1976:24-25; Office of History 1993:58).

The newly reactivated Las Vegas AFB became the home of Air Training Command's (ATC) 3595th Pilot Training Wing for advanced single engine training. The 3595th Air Base Group was the host unit at the base. This training drew attention to the need for a formal school on weaponry principles and techniques. The USAF Aircraft Gunnery School was established at the base in May 1949, and eventually developed into the present-day USAF Fighter Weapons School. The emphasis on state-of-the-art training in a variety of exercises with continually advancing technology allowed the base to play a significant role in USAF strategy throughout the remainder of the Cold War (Hinds 1976:26-28; Wing Historian's Office 1993:6).

The base was renamed Nellis AFB on April 30, 1950 in honor of First Lieutenant William H. Nellis. A Nevada resident from Searchlight, Nellis was a member of the 513th Fighter Squadron when he was killed on his 70th mission in Europe over Bastogne, Belgium in 1944 (Hinds 1976:30; Mueller 1989:439; Office of History 1993:58).

The outbreak of the Korean War focused the mission at Nellis AFB on fighter gunnery training (Hinds 1976:29). Virtually every pilot who flew missions in Korea received final training at Nellis AFB. Due to the greater numbers of modern enemy aircraft found in Korea, the training at

the base increasingly emphasized air-to-air missions with less emphasis on air-to-ground training. Following the cease-fire in 1953, the mission at Nellis AFB evolved from furnishing pilots for immediate front line duty to a peacetime role with greater focus on quality training, flying safety, and sound management techniques (Hays 1968:85-86; Hinds 1976:36,39,41; Office of History 1993:58).

Two programs at Nellis AFB played an integral role in advanced USAF training programs during the mid-1950s: the Combat Crew Training School and the completion of fighter pilot training, and the Fighter Weapons School, which trained instructor pilots and managers to supervise fighter weapons programs. Personnel and facilities at Nellis AFB were also called upon to conduct Fighter Weapons and Gunnery Meets among USAF units to hone skills learned in the classroom and in the air (Hinds 1976:55; Office of History 1993:78).

Nellis AFB acquired the prestigious Air Demonstration Squadron (Thunderbirds) on June 1, 1956. They were designated the 3595th Air Demonstration Flight and assigned to the 3595th Combat Crew Training Wing (CCTW) (Hinds 1976:56). The Thunderbirds are still an active squadron at Nellis AFB. They perform "precision aerial demonstrations throughout the world to reflect the professional skill and capability of the United States Air Force" (Wing Historian's Office 1993:1). During a national emergency, the Thunderbirds are very capable of making the transition from exhibition to active combat if necessary.

The Air Force transferred Nellis AFB and the Fighter Weapons School to TAC on July 1, 1958, and the 3595th host wing was redesignated as the 4520th CCTW (Tactical Fighter) and its assigned units were also redesignated. The Thunderbirds were redesignated as the 4520th Air Demonstration Flight, and, in October 1960, they were designated a squadron. The 12th Air Force gained operational control of the base and, late in 1958, the F-105 *Thunderchief* became the primary mission aircraft (Hinds 1976:63-64; Office of History 1993:59).

The mission at Nellis AFB was augmented with its redesignation to TAC. In addition to its original training mission, Nellis AFB was now to "provide support facilities and training as required for tactical unit rotational training and to train for and maintain an air defense capability . . ." (Hinds 1976:65). ATC, now a tenant at the base, maintained a test, research, and development (TR&D) branch at Nellis AFB, and TAC established a similar program in February 1959. This latter TR&D program "assisted in the development of all fighter weapons systems used by TAC" (Office of History 1993:60).

During the Cuban Missile Crisis in 1962, the 4520th CCTW provided TAC with 22 F-105s and approximately 100,000 pounds of equipment between October 21 and December 17 to assist in preventing the establishment of hostile missile bases in Cuba (Hinds 1976:90-91).

The mission of the 4520th CCTW and TR&D remained the same during the early 1960s. However, the entire training program was overhauled and the whole base structure at Nellis AFB was reorganized in 1965. The war in Southeast Asia served as the catalyst for this reorganization (Hinds 1976:102). The Fighter Weapons School was reorganized late in 1965 because the Combat Analysis Division was moved from TAC Headquarters to the Fighter Weapons School at Nellis AFB. The school became a named unit on January 1, 1966 (Hinds 1976:102-03; O'Burke 1965:5).

Planning for the Wild Weasel Training program, to be conducted by the 561st Fighter Squadron, was initiated in April 1966 and classes began in June. "Wild Weasels," in specially modified F-105s and F-4s, were trained to eliminate enemy surface-to-air missiles with air-to-surface missiles by homing in on the defender's radar system. This program was very effective in Vietnam. Although transferred from Nellis AFB in 1975, the 561st was reassigned to Nellis AFB February 1, 1993, and is the oldest operational "Wild Weasel" unit still active (Office of History 1993:37,87; Wing Historian's Office 1993:2).

TAC in the early 1960s required faster and more comprehensive responses from tactical mission areas to meet the growing demands of the conflict in Southeast Asia. Therefore, TAC established and organized various centers which provided operational expertise and resources.

Project Sand Dune, a programming plan for the 4520th CCTW, reflected a strategy of flexible response (part of the new Kennedy strategic policy) that required multiple global warfare options for non-nuclear limited warfare such as that going on in Vietnam. On September 1, 1966, TAC programming plan 2066 (based on the concepts outlined in Sand Dune) organized and established the Tactical Fighter Weapons Center (TFWC) at Nellis AFB (Mueller 1989:442; O'Burke 1966:6-7; Office of History 1993:8-9,14). At Nellis AFB, the center utilized existing resources controlled by the 4520th CCTW, especially the Fighter Weapons School (O'Burke 1966:9; Office of History 1993:6,8). The center was the key institution and command unit at Nellis AFB during the remainder of the Cold War period following 1966.

The commander in charge of the steering committee that produced the plan, Brigadier General Frank Everest, succinctly stated that "The importance of this program cannot be over-emphasized: it is directly in support of the TAC mission and directly related to the war in Southeast Asia" (O'Burke 1966:6-7; Office of History 1993:8). The choice of Nellis AFB to receive the TFWC was appropriate for a base that had been known as the home of the fighter pilot since the Korean War.

With the inception of TFWC, Nellis AFB became a multi-wing base. The 4520th CCTW relinquished its position as the highest echelon of command at the base, and TFWC assumed that role. The 4520th Air Demonstration Squadron (Thunderbirds), the 4520th CCTW, and the 4525th Fighter Weapons Wing (FWW) were all assigned to TFWC, and the 4525th FWW took over the Fighter Weapons School.

The 4520th Combat Support Group became the host unit to "operate and maintain Nellis AFB in support of the USAF Tactical Fighter Weapons Center and assigned or attached organizations" (O'Burke 1966:1-3,11-12). In addition,

The Center became the central authoritative agency fully knowledgeable in the employment of USAF tactical fighter forces worldwide. The Center commander reported directly to the Commander Tactical Air Command for the conduct of all assigned test operations . . . (Hays 1968:87; Office of History 1993:14-16).

The 474th Tactical Fighter Wing (TFW) was assigned to the TFWC at Nellis AFB in January 1968 and assumed base host responsibilities, and the 4520th CCTW was discontinued.

The 57th FWW was assigned to the TFWC October 15, 1969. On February 1, 1970, the base was officially reorganized. Responsibility for the base was transferred from the 474th TFW back to the TFWC and the 57th FWW. This restored the base structure to much the same alignment as that in 1966-1968 (Hinds 1970:3-4). The 57th FWW assumed base host responsibilities, and is currently the host unit at Nellis AFB. The 474th TFW was deactivated 30 September 1989, as part of the Base Realignment and Closure Act (Office of History 1993:27).

Nellis AFB began to host realistic combat exercises during the mid-1970s to prepare air and ground forces from all the U.S. military services and Allied/NATO countries for real war should the situation arise. These exercises, called RED FLAG, originated from the realization, through the Vietnam War, that USAF pilots lacked realistic combat training. A study of loss rates indicated that a pilot's survivability rate increased significantly after 10 combat sorties. From this bloody "lesson learned," the Air Force and TFWC established RED FLAG. "This . . . exercise provides a pilot with his first ten . . . sorties in the most realistic combat flying training environment anywhere in the world" (Office of History 1993:10-11). The first RED FLAG exercise was conducted in November 1975 (Mueller 1989:442).

The TFWC and the 57th FWW controlled all flying operations at Nellis AFB, including the RED FLAG training exercises. These exercises duplicated predicted combat situations by pitting blue

forces against red forces and utilizing a variety of simulated Soviet air-to-air and ground-to-air threats coupled with real and simulated ground targets to accomplish the goal of a realistic combat scenario (Nellis AFB 1993:7-8; Shoemaker 1981:12). These exercises are currently coordinated by the 414th Training Squadron at Nellis AFB.

The 554th Operations Support Wing was activated and assigned to TFWC on March 1, 1980, to assist in these exercises (Office of History 1993:24). The 554th Support Group "provides logistics and support functions for Nellis and Indian Springs Air Force Auxiliary Field" (Nellis AFB 1992). Within the 554th Support Group is the 554th Range Squadron which "develops, operates, and maintains all range facilities and threat simulators to provide a realistic combat environment for aircrew training and testing" (Nellis AFB 1992; 1993:10-11). The 547th Adversary Threat Squadron continues to provide

intelligence support to the USAF Weapons and Tactic Center; provides intelligence on adversary threat capabilities to support tactics analysis, test and evaluation, instructional functions and training exercises . . . ; continually evaluates and defines the threat to combat air forces focusing on foreign tactics employment; and develops threat training programs of instruction for aircrews, intelligence and support personnel (Nellis AFB 1993).

Nellis AFB continued to provide TAC with the best fighter pilots, proven weapons systems, and refined warfare tactics during the 1980s. The facilities at Nellis AFB provided training and coursework by proficient instructors; pilots then utilized that knowledge in realistic war exercises staged at the ranges near Nellis AFB to perfect the tactics and doctrine espoused by TAC. Since the Vietnam conflict, the training programs at Nellis AFB have distinctly shifted away from combat crew training toward the more advanced fighter weapons instructor and electronic warfare courses. During the military buildup of the Reagan years, Nellis AFB was responsible for the activation and readiness of the first F-117A *Stealth* fighter unit. These exercises were conducted over the ranges controlled by Nellis AFB. As of June 5, 1992, following the reorganization of the USAF, the creation of ACC, and the assignment of Nellis AFB to this new command, the TFWC was renamed the WTC. However, the flight and combat training mission of the WTC remained the same.

3.1.2 Auxiliary Air Fields and Ranges

The Nellis Range Complex, also known as the Nellis Bombing and Gunnery Range, consists of approximately 3,000,000 acres (1,214,100 ha) of land set aside exclusively for military use. The origins of the complex date to October 29, 1940, when President Roosevelt signed Executive Order 8578 creating the Las Vegas Bombing and Gunnery Range (Office of History 1993:54; USAF 1972b). On August 25, 1941, a federal judge condemned 983,040 acres (397,836 ha) of land in Nye County and signed an order giving possession to the United States for a five year period. This tract of land was named the Tonopah Bombing Range. These two tracts of land were the beginning of the current Nellis Range Complex. In September 1941, President Roosevelt issued Executive Order 8954 that set aside 68,533 acres (27,735 ha) of public domain for machine gun ranges just 10 days before the American entry into World War II (Hinds 1976:10; Office of History 1993:63). Roosevelt issued Executive Order 9019 on January 12, 1942, amending the acreage withdrawn for military use to 3,200,000 acres (1,295,040 ha). Since 1942, the Nellis Ranges have undergone a series of executive orders, public land orders, and civil suits. These legal actions combined have dealt with local grazing issues, the wild horse refuge, the Desert Game Range and mountain sheep habitat, additional land sought by the Atomic Energy Commission (now the Department of Energy) for the Nevada Test Site, and other land exchanges too numerous to mention in this report (USAF 1972b). Control of the ranges was transferred to the TFWC to support its mission, which included pilot training, weapons delivery, and war exercises.

The air field at Indian Springs, located 48 mi (77 km) north of Las Vegas and just off U.S. Highway 95, dates to World War II. In January 1942, a training camp was established at Indian Springs to facilitate air-to-air gunnery practice on the Tonopah Range. Three dirt runways and nearby dry lake beds created such a dust problem that the camp was abandoned in March. In July 1942, construction of buildings, roads, runways, taxiways, and utilities began, and the Indian Springs sub-post was completed in February 1943 (Hinds 1976: 9,15-16; Nellis AFB 1993:17;

USAF 1972c). With the end of the war in 1945 and the cessation of air-to-air training, the sub-post was deactivated in December 1945 (Hinds 1976:23-24).

Indian Springs AFB was reactivated by the 3595th Installations Squadron during the Korean War in October 1950. Its mission was "to provide adequate ranges and facilities for the training of Fighter Gunnery Students" (Hinds 1976:31; Office of History 1993:72; USAF 1972c). The base had grown to 1,652 acres (668 ha) by March 1952 and was busy training crews in air-to-air tactics. The base was transferred from ATC to Air Research and Development Command (ARDC) in July 1952, but ATC remained in control of the Tonopah Range. The base was then transferred from ARDC to TAC in April 1961 and was redesignated as an auxiliary field April 1, 1964 (USAF 1972c; 1994:5). The mission of Indian Springs Auxiliary Air Field during the 1970s and 1980s under the 57th Combat Support Squadron was the construction and maintenance of targets, maintenance of roads, and cleanup of the range areas. Currently it serves in other capacities as well: as an emergency airfield for aircraft with malfunctioning high explosive ordnance; as a practice field for the Thunderbirds; as a training base for aircraft to alleviate congestion at Nellis AFB; as a support field for RED FLAG exercises; and as a support field for the current USAF Desert Warfare Training Center (USAF 1972c; 1994:9). Indian Springs Auxiliary Air Field played an important role during the Cold War era in supporting the training mission at Nellis AFB.

Area II is primarily a munitions storage facility consisting of over 100 storage igloos (USAF 1972a). The area is also home to the 57th Maintenance Squadron, which provides munitions handling in support of the combat mission, the 896th Aviation Depot Squadron, and the 820th Red Horse Civil Engineering Squadron (CES). A minimum security federal prison also occupies the premises under agreement with the Air Force (Nellis AFB 1993:17).

Area II was known as Lake Mead Base until 1969 and functioned as a munitions storage area for the U.S. Navy. During the early 1950s, this area originally consisted of 15,014 acres (6,076 ha). It was permitted from the Bureau of Land Management (BLM) to the Army Corps of Engineers

and utilized by the Defense Atomic Support Agency. Because defense agencies could not hold real property, the Navy carried the property on its inventory. Between 1954-1956, 6,999 acres (2,832 ha) were no longer required and this acreage was relinquished to the Department of the Interior leaving 8,015 acres (3,244 ha). Lake Mead Base was transferred to the Air Force by permit September 30, 1969. Although permits have been renewed by the BLM to the Air Force, the permitting process is on-going between the BLM and the Corps of Engineers (USAF 1991:1-3).

3.1.3 Cuddeback GR

Cuddeback GR was originally established by the U.S. Army in the 1940s as an artillery training range. Records are unclear when the property was turned over to George AFB, but it appears sometime in the 1950s. The USAF and Navy utilized Cuddeback GR as an air to ground GR for pilot proficiency training. Pilots trained at dropping a wide variety of practice ordnance including conventional and nuclear weapons. A description of the training ordnance that was used at Cuddeback GR can be found in USAF 1992.

The only documented use of the dry Cuddeback Lake bed is a letter agreement dated September 1961 between Edwards AFB Flight Test Center and George AFB to designate the dry lake bed as an emergency landing strip for the X-15 project. Documents indicate that landing markers were erected but there are no records that the lake bed was ever used for that purpose (USAF 1992).

In 1982, the Cuddeback GR was officially deactivated and has not been maintained or monitored since that time. Control of the range was transferred to Nellis AFB in approximately 1993 after George AFB was closed. Because of significant concerns about trespassing, vandalism, and public safety, Nellis AFB authorized the razing and removal of all existing buildings and structures, including the water well and underground storage tanks, from Cuddeback GR in 1994. Due to the long history of bombing and gunnery practice at the range, a significant amount of

ordnance still exists at the target portion of the range. The Air Force does not currently plan to utilize the range and Nellis AFB personnel are evaluating what actions are required to return control of the property to the Bureau of Land Management. However, due to the extensive amount of munitions located at the range, the high estimated cost to decontaminate the range, and the documented presence of the endangered Desert Tortoise at the range, there are no immediate plans for any new actions at the Cuddeback GR.

3.2 BASE DEVELOPMENT

Construction activity throughout the years tried to keep pace with the expansion related to World War II, Korea, and the increased importance of Nellis AFB as a training base for fighter pilots (Figure 3.1). The first construction by the Merrill Corporation consisted of 173 temporary, frame clapboard buildings. These included, among others: barracks, supply rooms, mess facilities, administration buildings, a fire station, guard house, post exchange, theater, warehouse, clinic, post office, chapel, and the training and operations buildings. Other firms were contracted to complete electrical systems, runway lighting, a repair hangar, and the clearing, grading and paving of runways. The Peabody Construction Company constructed the original 500 ft (152 m) runway by September 1941. As was the case with most World War II construction, the buildings were of temporary design, and "the idea that the installation might be needed on a permanent basis never occurred to anyone" (Hinds 1976:6-7).

Construction at the base continued during 1942-1944. Fifty-three additional barracks were constructed for cadets, enlisted men, and officers. Numerous other buildings were built as well to further the operational status of the base: mess halls, post headquarters, operations building, post exchanges, motor repair shop, an armament maintenance building, and additions to the base hospital (Hinds 1976:16).

Congress passed the Wherry-Spence Act in August 1949; this helped to alleviate the housing shortage as well as to upgrade the quality of housing for married personnel (Armstrong

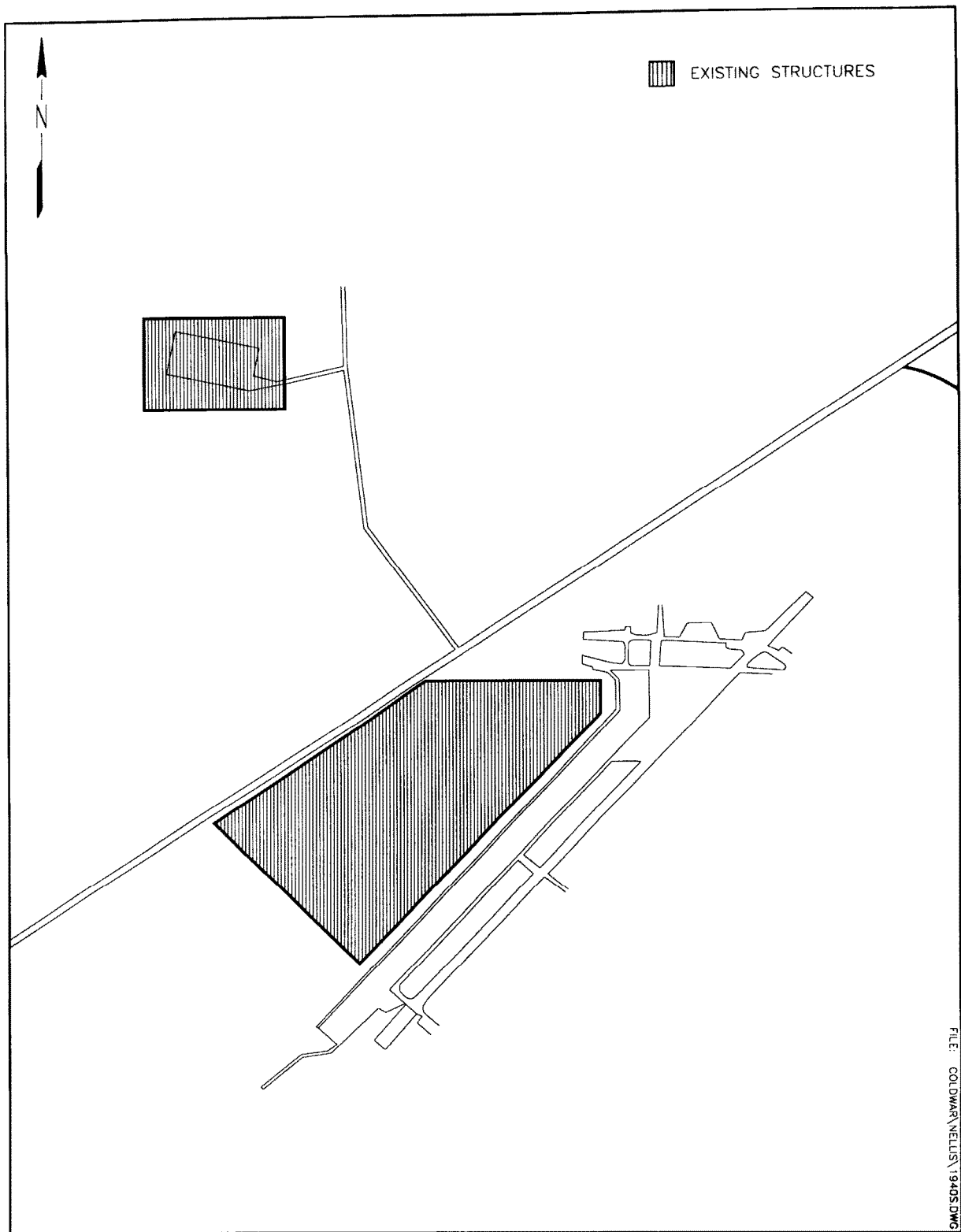


Figure 3.1 Nellis Air Force Base, 1940s.

1976:630-31). The Nellis housing project (currently Nellis Terrace) was approved under the auspices of the Wherry Act, and 400 units were completed by early 1952 at an average cost of \$10,000 each (Figure 3.2). Although an additional 400 Wherry homes were completed by 1954, the base did not actually gain possession of the 800 houses from the contractor until 1958 (Hinds 1976:32,47,68; Mueller 1989:442; USAF 1972a). Additional 1954 construction on the base included two 1,000 ft (304 m) extensions to the runways and three new taxiways, communications and navigational facilities, and two maintenance hangars (Hinds 1976:46-47; Mueller 1989:442).

Construction continued apace during 1955-1956. A laundry, squadron operations building, parachute shop, officers' mess, and additions to the commissary were completed in 1955. Three squadron operations buildings, two maintenance hangars, a cold storage building, five senior officers' quarters, and a golf driving range were completed in 1956. A contract was awarded in March 1956 for an additional 395 housing units to be built adjacent to the base (Hinds 1976:53,58).

Congress passed the Capehart Amendment to the National Housing Act in August 1955; this act permitted the expansion of Wherry housing. Construction of further government housing at Nellis AFB commenced 21 August 1958, and 200 units were completed 12 February 1960. This housing complex, located in Area III, was dedicated Manch Manor in honor of Lt. Colonel Jacob E. Manch who was killed in a 1958 plane crash. All the streets in the complex were named after deceased officers and airmen who had died in the line of duty (Armstrong 1976:633; Hinds 1976:69; Mueller 1989:442).

Extensive construction projects were conducted between 1960-1965 and focused primarily on eliminating "a living monument to the World War II camp building program" and transforming Nellis AFB into a modern air base (Hinds 1976:82) (Figure 3.3). A jet engine inspection and repair shop was completed in 1960, and plans were finalized for a new base hospital and chapel.

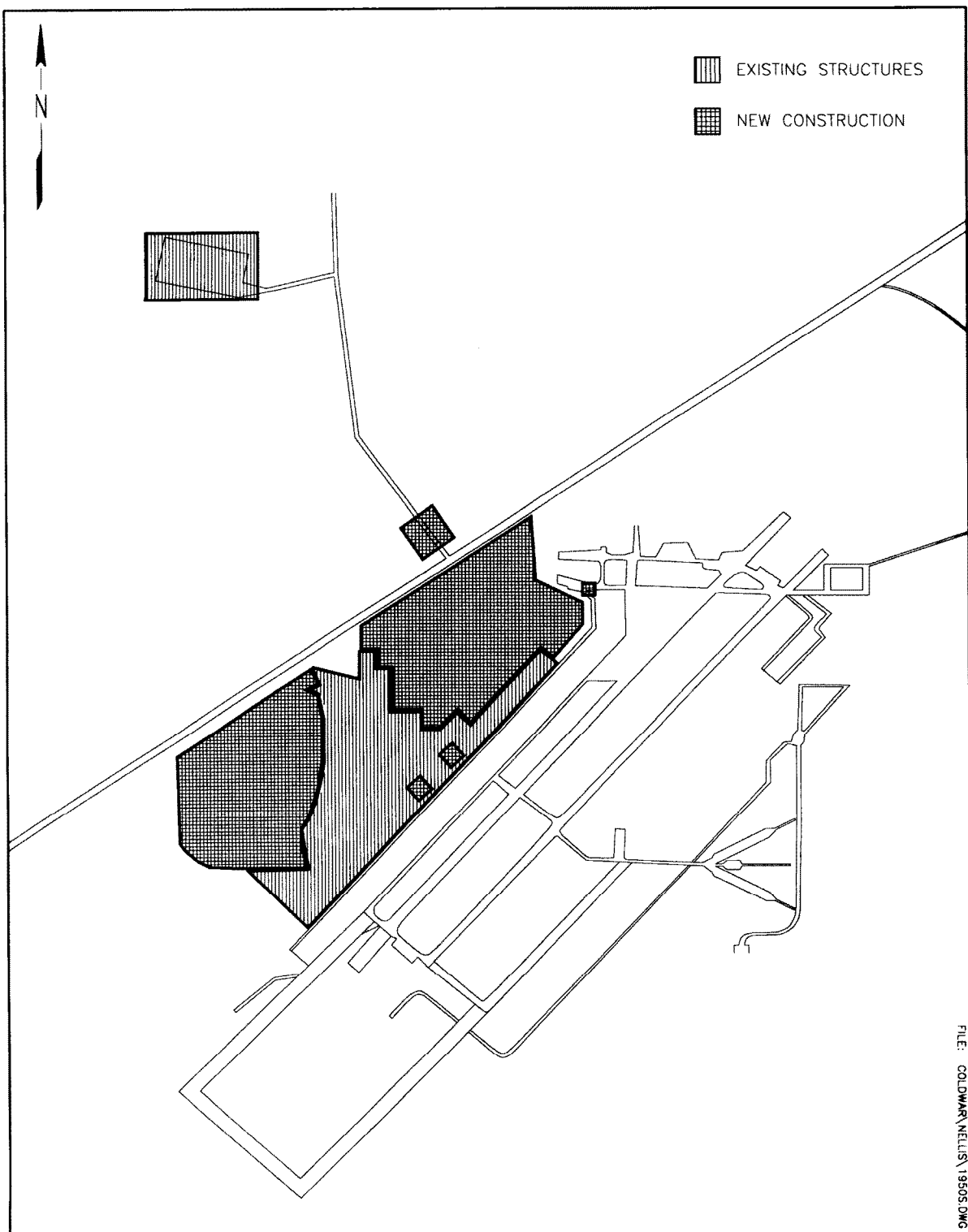


Figure 3.2 Nellis Air Force Base, 1950s.

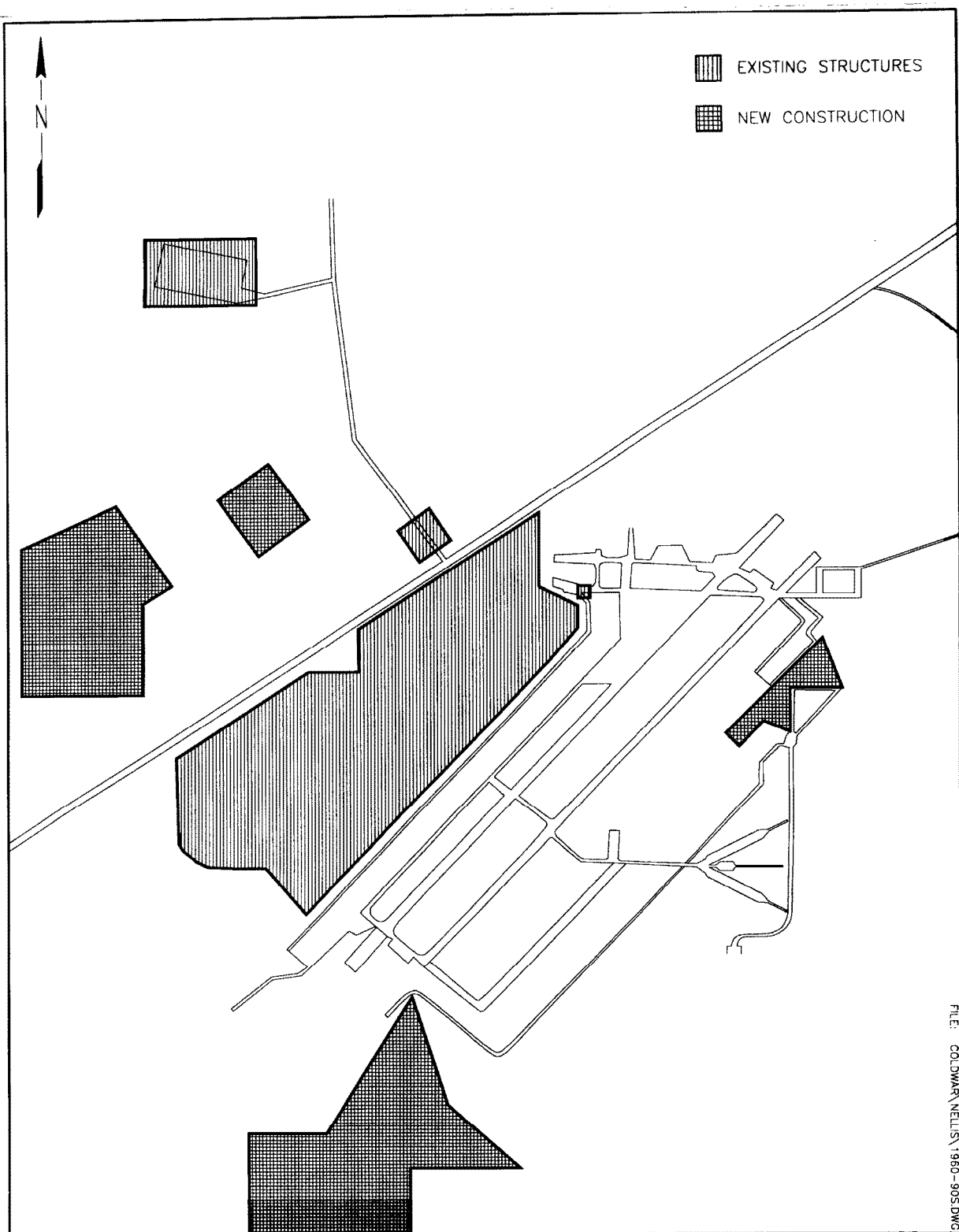


Figure 3.3 Nellis Air Force Base, 1960 to present.

A TAC Intelligence School, Radar Prediction Center, and a F-105 Diagnostic Center were established the following year (Hinds 1976:82-83).

In 1962, two enlisted men's barracks, a dining hall, and ammunition and auto maintenance buildings were completed. The first half of 1963 witnessed the completion of base storage facilities, a combat operations center, airmen's dining hall, recreation workshop, gymnasium, a supply and equipment warehouse, and swimming pools. The base chapel was completed in April 1963. Buildings and facilities completed during the last half of 1963 included: a new control tower that replaced the vintage World War II tower, a fire station, four aircraft weapons calibration shelters, eight aircraft maintenance docks, a helicopter pad, an addition to the parachute and dingy repair shop, and base ammunition storage and small arms storage buildings. Work commenced on the new base hospital in 1963, and it was completed in May 1965 (Hinds 1976:92-93; Mueller 1989:442; Office of History 1993:86).

Construction continued at Nellis AFB as the old buildings and facilities gave way to the new. Between 1964-1966, the Apex obstruction light annex, shops, warehouses, an electrical power station building, and base service station were completed. A bowling alley, commissary building, and nine-hole golf course were also completed during this time frame (Hinds 1976:94; Office of History 1993:15).

Construction at Nellis proceeded into the 1970s. The TFWC was under construction in 1969 and dedicated 8 December 1972, in honor of Major Joseph W. Howard. A new, 21,000 ft² (1,981 m²) gymnasium was completed earlier the same year (Office of History 1993:18-19). Other projects completed by 1972 or proposed for completion in 1973 included an aircraft parking apron, new control tower, and avionics shop. Planned construction for fiscal year 1973 included: an airmen's dormitory, an air conditioned airmen's dining hall, sewage treatment and disposal facility, an addition to the service club, and family housing. The additional nine-hole golf course and clubhouse improvements were also completed in March 1972 (USAF 1972a). In 1974, the new Nellis Recreation Center and base pool were opened to base personnel and families, and

construction began on dormitories near the main gate that would accommodate over 300 people. In 1978, a contract was awarded to build a new base commissary (Office of History 1993:20,23).

New buildings and facilities continued to be proposed and built at Nellis AFB during the last decade of the Cold War. The Range Control Center was completed March 1981. The new RED FLAG facility began operations in July of 1984. The new Fighter Weapons School building was completed in August 1984 which nearly doubled the available classroom space. The base library was also opened in the renovated Base Recreation Center in 1984 (Office of History 1993:24-25).

Construction continued unabated at Nellis AFB into the 1990s and is on-going at present. The new officers' club was completed and officially opened March 9, 1990, and the new Nellis Air Traffic Control Tower began operations October 6 the same year. The Nellis Federal Prison Camp, located in Area II, was dedicated December 12, 1990. The old dormitories were renovated to accommodate prisoners and provide for administrative functions (Office of History 1993:27-28).

Prior to deactivation, Cuddeback GR was composed of two concrete block buildings that were used for sleeping quarters, officers' space, kitchen, and common areas for the personnel who operated and maintained the range. There were also three prefabricated metal buildings used for vehicle maintenance and as a fire station. Three range towers used for spotting targets, a water well, and a small asphalt runway were also present. All of these buildings and structures have since been razed and removed. According to available records, no buildings or structures were ever constructed on the dry lake bed portion of the Cuddeback GR.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Nellis AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Nellis AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Nellis AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

The Mariah field team arrived at Nellis AFB on May 24, 1994 and met with point of contact Mr. Eric Watkins of the Natural and Cultural Resources office. The team was informed that their visit began during a period of training exercises, thus scheduling during the first week would be difficult. The team discussed the Cold War project with Mr. Watkins and Mr. Jim Pedrick and set a proposed itinerary for the visit, which included a visit to Areas II and III. Information on previous surveys at the base was gathered. The team then visited Dr. Cate Wilman, WTC Historian, and informed her of project methodology and goals. Dr. Wilman assisted the team with understanding the base history and operations, then referred the team to the Public Affairs Office where they briefly explained their project to Sgt J.C. Marcom, Public Affairs Officer, and collected brochures describing the base. Sgt Marcom set a time with the team to tour the flightline in the secured areas and photograph representative and important properties.

The team spent the afternoon of May 24 visiting the other offices on base where information would be gathered. They met with Stan Fuller in the Civil Engineering drawing room and briefly perused the engineering drawing files to estimate the time needed to record them. The team then

met with Judy Pace and Joe Lepore, Real Property Specialists in the Real Property Office to discuss scheduling for accessing real property cards. These two offices were visited intermittently by the team between May 24 and June 7, to record records/documents and to gather information from property cards and maps for the evaluated resources. The remainder of the first day on base was spent taking photos of inventoried resources in unsecured base areas.

On May 25, Mr. Pedrick escorted the team to Areas II and III. At the latter, photographs were completed. Area II, however, required additional security escorts because a portion of that area has been converted to a federal prison facility. A tour for Area II was rescheduled for May 31, and photographs in that area were completed on that day. On May 26, Sgt Marcom escorted the team on the tour of the flight line in secured areas. Photographs were taken to document the range of flight line resources. He also assisted with a brief base tour, identifying the resources outside the flight line that he believed could contribute to our Cold War study. Photographs of examples of property types and important resources outside the flight line were taken without an escort for the remainder of the day.

After sending security information through the appropriate channels, the team toured the Threat Facility on June 1, as part of a larger group tour of U.S. Marines. Other facilities visited included the Thunderbird Hangar and Museum and Dr. Cate Wilman's office, where an intensive inventory of WTC historical information was completed. The base visit ended on June 7, with the team taking a few additional photographs of some of the evaluated resources.

On June 7, 1995, Scott W. Kamber of Mariah conducted a review at Nellis AFB of all available records concerning the Cuddeback GR. On June 8, he was escorted to Cuddeback GR for reconnaissance by Mr. Roger Christensen, Hazardous Waste Compliance Specialist at Nellis AFB in charge of the decontamination project at the range.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Nellis AFB and Cuddeback GR, 194 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Ten resources were evaluated at Nellis AFB, five of them falling under the DoD category of real property and five under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Base and Command Centers

6.1.1.1 Command Center (Resource No. 6001, Real Property No. 620)

The WTC Headquarters accommodates the staff offices of the various organizations that comprise the WTC. The WTC is one of three remaining Command Centers in the United States responsible for localized, specific mission areas vital to the Air Force. These centers were established during the 1960s to meet the growing demands of overseas conflicts during that portion of the Cold War period. The WTC was formerly named the TFWC between its inception and the reorganization of the Air Force in 1992 under ACC.

The WTC Headquarters is a permanent, three-story building constructed in 1969 entirely of reinforced concrete with a built-up roof. Original square footage was 21,560 (2,003 m²) with an immediate addition of 10,836 ft² (1,006 m²), for a total square footage of 32,396 (3,009 m²). The

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Base and Command Centers	Command Center	6001	620	Real/Bldg	19
Documentation	Documentary Collection	6188	None	RecDoc/Obj	17
Documentation	Documentary Collection	6189	None	RecDoc/Obj	18
Documentation	Documentary Collection	6191	None	RecDoc/Obj	17
Documentation	Documentary Collection	6196	None	RecDoc/Obj	14
Combat Weapons and Support Systems					
Documentation	Photograph Collection	6190	None	RecDoc/Obj	19
Maintenance Docks/Hangars	Maintenance Hangar	6051	292	Real/Bldg	20
Training Facilities					
Combat Training	RED FLAG Facility	6066	201	Real/Bldg	18
Combat Training	Threat Facility Collection	6072	None	Real/Obj	21
Combat Training	Weapons School	6130	282	Real/Bldg	17

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
21	6072	None	Threat Facility Collection
20	6051	292	Maintenance Hangar
19	6001	620	Command Center
19	6190	None	Photograph Collection
18	6066	201	RED FLAG Facility
18	6189	None	Documentary Collection
17	6130	282	Weapons School
17	6188	None	Documentary Collection
17	6191	None	Documentary Collection
14	6196	None	Documentary Collection

building is clearly identified by a large exterior sign, and landscaping includes a series of groomed trees and a relatively large front yard area. A circular drive allows direct access to the front door of the building. Exterior stairways are on either end of the building, and a bomb shelter is located subsurface. The headquarters building, located near the main base entrance, has housed the WTC since its construction, just three years after the Command Center's inception.

The headquarters building exhibits intact external integrity. Access to all of the building was not obtained, thus visual assessment of the entire building's interior integrity was not possible. However, the real property card for the building indicates that no major renovations have occurred, and the building has been used only for the WTC since it was constructed, thus interior integrity is also determined to be intact.

This Command Center is exceptionally important to the base and national Cold War contexts. It exemplifies the flight and combat training mission of the base and the importance of fighter capability to the nation during the Korean and Vietnam Wars, and for any future war in Southeast Asia. The Center provided the nation's premier flight and combat training, and provided this training not only to all four branches of the U.S. military, but also to pilots of other friendly nations. The importance of this building is exhibited in its combined characteristics, such as reinforced concrete construction, a bomb shelter, and formal landscaping, typical of a significant administration center during the Cold War period. The WTC Headquarters fulfilled this exceptional role during Phases III and IV of the Cold War era, and meets NRHP criterion (a).

6.1.2 Documentation**6.1.2.1 Documentary Collection** (Resource No. 6188, Located in Real Property No. 812)

This documentary collection is located in the Civil Engineering drawing room, which is secured, and contains two cabinets of flat files with a total of 20 drawers. This collection includes numerous historical maps, original base master layouts, and construction and utility project maps of Nellis AFB, Indian Springs Auxiliary Air Field, and other related facilities. The maps and drawings are of paper, linen, mylar, vellum, and blue line. Topographic maps, aerial photographs, Government Land Office maps, standard photographs, and archaeological survey maps are present as well.

The flat file collections span the decades from the 1940s to 1990s, including all the Cold War periods, and provide information on several topics. Some of the maps in the flat files that are most pertinent to the Cold War period include the following: (1) maps that immediately pre-date the Cold War including a 1943 Government Land Office map and a 1943 Air Force Flexible Gunnery School Fire Reporting Telephone/Ruby Globe locational map for "Las Vegas Airport;" (2) maps from Phase I, including miscellaneous base surveys from 1945, original utility plans from the 1940s-1950s on linen and paper, and a 1949 Indian Springs layout; (3) maps from Phase II, including a 1953 ordnance storage map, a 1955 Las Vegas Bombing & Gunnery Range map, a 1957 map of Tonopah Air Force Station, and a map dated June 9, 1959 titled "USAF Special World Aeronautical Chart" that covers southern Nevada, southern California, southwestern Utah, northwestern Arizona, and Mexico and has Lake Mead 405-S labeled; (4) maps from Phase III, including a 1967 Nellis AFB master plan, a 1969 base map, and a 1973 mylar range operation map; and (5) a set of 80, 1"=100' scale aerial photographs of the base and surrounding facilities (some are processed and others are large negatives).

In addition to the flat files, the drawing room contains cabinets with individual building specifications in hanging files, all of which are locked. There are 23 cabinets total: 19 are

arranged by real property number, two are labeled "Master Plan Files" and contain utility mylars from at least the 1980s, another is labeled "Area II", and the last includes master plans for projects by fiscal year from 1987-1993. In the corner of the room are a few rolled maps in wooden floor cabinets, the most significant being a roll of original ink on linen utility plans from 1944-1945.

These files include numerous maps and photographs that are a valuable source of information regarding base development and history. In general, the resources are kept in a secure, climate controlled room. The older, more fragile ones are not being preserved separately, and some have been torn through use.

6.1.2.2 Documentary Collection (Resource No. 6189, Located in Real Property No. 812)

The Real Property Office, located in the Civil Engineering building, maintains a collection of historical resources. These include books, maps, photographs, aerial photographs, and brochures pertaining to Nellis AFB and its associated facilities. Some of those that are most relevant to the Cold War period include the following: (1) data for Phase I, including Historical Property Surveys such as a 1946 Analysis of Existing Facilities in a master planning document for Las Vegas Army Airfield, a 1951 map for a Preliminary Master Plan for Nellis AFB, and Installation Survey Reports for Nellis AFB, Nellis AFR, and Indian Springs detailing history and mission; (2) data for Phase II, including a 1957 Real Property Study; (3) data for Phase III, including a Base Civil Engineering Information Brochure by TAC in 1970 and base maps from 1977-1982; (4) data for Phase IV, including a Real Property Study from 1986 with base maps and aerial photographs in an appendix.

These historical resources offer valuable data regarding base development, particularly for the earliest Cold War phases. They are also useful as a resource for evaluating real property. The collections are carefully preserved by the office staff, but the fact that they are not in a truly secured area increases the chance for inadvertent damage or removal.

6.1.2.3 Documentary Collection (Resource No. 6191, Located in Real Property No. 620)

A documentary collection is maintained in the secured WTC Historian's office in the WTC Headquarters building. This collection includes photographs, newspapers, oral histories, video tapes, maps, histories, guidebooks, posters, banners and flags (one for the Fighter Weapons Center and one for the 443rd Tactical Training Group), and certificates of merit.

One drawer contains various black and white and color photographs, slides, and negatives that document commemorative ceremonies with personnel and aircraft. Aerial photographs depict such activities as RED FLAG exercises and illustrate Indian Springs. There are 23 bound volumes of slides, which depict Nellis AFB, the 474th and 57th Wings, aircraft, and MAPLE FLAG, RED FLAG, and GUNSMOKE exercises. Another album contains photographs of Indian Springs and the Nevada Test Site. These volumes also contain black and white 8 x 10 inch photographs of early officers from the 1950s. There are three boxes of miscellaneous photographs, one box of dry mounted photographs, and loose dry mounted photographs of bombing range/test sites and landing strips in the desert. Finally, one large aerial of Nellis AFB from 1964 is maintained.

A collection of various newspapers is also kept by the historian. The collection includes the base newspaper, which spans the years from 1959 to 1986. It also includes the 1952 to 1953 and the 1974 to 1986 *Nellis Bullseye* and the 1959 to 1973 *Nellis Century* newspapers.

Cassette tapes containing oral interviews, along with movie reels and video tapes, are also included in this documentary collection. A brief inventory revealed 31 tapes of interviews with 26 individuals, six movie reels, and videos of Desert Storm, Vietnam, and other combat footage. The true nature of this resource is undetermined, yet it could be of great value especially due to its nature as an irreplaceable data source. The interviews may contain insights into Cold War

issues from persons who experienced them directly. The movie reels and video tapes were most likely filmed during the Cold War.

The historian also maintains a historical collection in her office. The collection includes various histories, some of which contain photographs, letters, and newspaper clippings, and some base maps. Histories of most relevance to the Cold War study include early wing and unit histories from 1939 to the 1980s, several with photographs of Nellis AFB, personnel, and aircraft. Also important are approximately 54 bound volumes with various historical documents pertaining to Indian Springs, support groups, miscellaneous events, biographies, photographs of facilities, and Nellis AFB background. One bound volume of memorabilia regarding the Manch Manor Capehart Housing dedication of 1960 is maintained. Maps include three Disaster Preparedness maps, one of the main base for 1977 and two for 1985, one layout map of the entire base, and a second of Area II with its weapons storage bunkers.

This documentary collection of resources is important due to its illustration of base history and development, and its connection with WTC operations. The collection is located in a secured area and is well organized and maintained by the historian.

6.1.2.4 Documentary Collection (Resource No. 6196, Located in Real Property No. 7)

The 57th Wing Historian maintains a historical and memorial collection in his office, located in the 57th Wing Headquarters building. The historical collection consists of various histories, historical photographs, and maps, including wing histories from 1981-1989, a set of 13 framed photographs of various aircraft types, a 1948 aerial photograph of the base, and a more recent base master plan showing Area II.

The memorial collection consists of various banners, hats, patches, plaques, trophies, relics, and photographs, including a captured Russian rifle (from Vietcong) presented to the 429th Tactical Fighter Squadron in 1965, several awards from Korea, a large collection of various hats and

badges (some displayed on the office walls), plaques, framed and dry mounted photographs, and awards from 1981-1989. Outside the office are photographs of the Wing Commanders from 1969-1993, the 57th Fighter Squadron from 1940-1945, 57th Interceptor Group/Wing from 1946-1953 and 1960-1968, and 57th Weapons Wing 1969-1972, and five wall plaques with "ACC vision, quality, mission, style, and goals."

The resource is important due to its connection with the 57th Wing and mainly reflects wing activities during Phase IV of the Cold War period. The collection also illustrates the overall base role during the Cold War. The collection is being protected, and is well organized and in good condition.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Documentation

6.2.1.1 Photograph Collection (Resource No. 6190, Located in Real Property No. 812)

The Real Property Office, located in the Civil Engineering building (No. 812), maintains a collection of photographs of weapons storage facilities in Area II of Nellis AFB, taken in 1969. Buildings photographed include trash incinerators, warehouses, sheds, electrical stations, flammables, munitions bunkers, EVAC AMMO concrete bunkers, loading docks, a water tower, watch towers, flammables sheds, and observation posts.

These photographs provide valuable documentation of weapons facilities at Nellis AFB. They were taken during the height of use of the area for weapons storage during the Cold War. The exact nature of the weapons stored there is unclear. The photographs are particularly important because they document an area that is secured, even today. These photographs, however, are not stored in a secured area.

6.2.2 Maintenance Hangars/Docks

6.2.2.1 Maintenance Hangar (Resource No. 6051, Real Property No. 292)

This Maintenance Hangar supports aircraft maintenance, repair, and inspection activities for the Thunderbird Air Demonstration Squadron fleet. A portion of the hangar has been converted to a museum, housing Thunderbird memorabilia from 1953 to the present.

Built in 1942, the building exhibits a rounded roof and sliding solid doors. The hangar is a permanent building constructed of corrugated metal siding, walls, and roof, with a concrete floor and reinforced concrete foundation. Its square footage is 45,023 (4,182 m²), with no additions since its original construction apparent from the Real Property card. Renovations include the removal of metal rollup doors in 1960, numerous utility updates, and the addition of partitions in 1967. In general, the hangar has been well maintained and regularly repaired and improved since its construction. The exterior is distinctively painted white with red and blue accents and labeled with emblems for the Thunderbirds. At some point, the museum portion of the hangar must have been renovated to accommodate exhibits and tours, but the exact date is not apparent from the Real Property card. The hangar's original use was as a maintenance hangar, then utilization was changed to a shop for aircraft engine inspection and repair, then to a squadron operations building, then back to a maintenance hangar, all for the Thunderbird squadron.

Despite the renovations that have occurred in upgrading and maintain this hangar, no major renovations have occurred, according to the Real Property documentation. Therefore, external and internal integrity are determined to be intact.

The Thunderbirds are exceptionally important not only due to their prestige within the Air Force as an elite flying squadron; they also maintain the capability to be transitioned into active service in a national emergency. The Thunderbirds epitomize Nellis AFB's slogan "Home of the Fighter Pilot." Finally, the Thunderbirds travel throughout the world, performing precision flight

demonstrations, reflecting the world-class ability of the USAF to both allies and adversaries. This hangar is the only one at Nellis AFB that maintains a direct link with the squadron it supported through three decades of the Cold War. It performed this function through Phases II, III, and IV of the Cold War era and meets NRHP criterion (a).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Nellis AFB.

6.4 TRAINING FACILITIES

6.4.1 Combat Training

6.4.1.1 RED FLAG Facility (Resource No. 6066, Real Property No. 201)

This building is used as an operational building for RED FLAG training activities, planning, mission assessment debriefings, and administration. RED FLAG is a joint training squadron providing air power in direct support of the U.S. Army National Training Center in Fort Irwin, California. It is one in a series of advanced training programs that result in increased combat capability of the United States and Allied forces, and is operated by the WTC.

This permanent building, constructed in 1971 with 25,920 ft² (734 m²), has concrete masonry unit walls with a five-ply built up roof, on a concrete floor and foundation. In 1980, an audio control booth was added, and, in 1984, a significant construction addition of 47,216 ft² (1,337 m²) was added. Several utility renovations were undertaken through 1989, along with the construction of a concrete ramp, pads, and stoops. The current square footage is 73,136, (2,071 m²). The building is clearly marked with RED FLAG logos and signs.

The exterior integrity of the building is intact. Since the building has retained its original function, and the Real Property Office documentation indicates that the only additions made were to assist in the building's function, interior integrity is also determined to be intact.

The association of RED FLAG with the Cold War is exceptional, having been developed as a result of losses in Vietnam. To ensure improved readiness for future conflicts, RED FLAG provided pilots with the most realistic combat flying training, thereby increasing the success and survivability rates of U.S. and allied forces. The RED FLAG operations further strengthened Nellis AFB's distinction as the premier fighter training base and played an exceptionally important role in the preparation of U.S. and allied fighter forces. This facility, built to house RED FLAG operations, fulfilled this role during Phases III and IV of the Cold War era, and meets NRHP criterion (a).

6.4.1.2 Threat Facility Collection (Resource No. 6072, Located in Real Property No. 470)

The Threat Facility Collection, maintained by the 547th Adversary Threat Squadron, is located west of the flight line in the southern portion of the base. The collection provides simulated enemy technology and weaponry for realistic war training using captured, donated, and recreated display exhibits. Some of the collection dates to World War II; however, the majority is from the Cold War period. Portions of the collection are classified and were not available for assessment by the field team.

The facility complex consists of an entryway, exhibit hall, and auditorium in the main building, with exhibits including relics and memorial items, a Yemen flight suit, mounted aerial photographs depicting the development of the building, framed Soviet propaganda posters, framed information sheets on various enemy aircraft and tanks, numerous gun displays, and scaled aircraft models mounted on the wall that represent all Soviet aircraft between the 1950s and today.

The large weaponry is displayed in an adjacent outdoor enclosure and is generally organized by categories including anti-aircraft, surface to surface, air to surface, infantry fighting vehicles, strategic surface to air, armored vehicles and tanks, and radar devices. Aircraft are kept in an adjacent enclosed room. Each display is labeled with an informational sign. The majority of the large weaponry was used in Cold War period conflicts such as the Vietnam War; however, more recent material, such as that used in Desert Storm, is displayed as well.

The collection of items at the Threat Facility is used for training fighter pilots to prepare them for combat situations both in the United States and abroad. Though the objects are not removed from the facility and actually put to use, they are used as training aids, enabling the pilot to become familiar with weaponry and aircraft used by potential enemies. The integrity of the collection and the individual items within the collection remains intact.

The Threat Facility building itself, constructed of metal walls and roof with a concrete floor and foundation, was built in 1972 as a permanent building with a square footage of 7,700 (715 m²). Although the exact order of previous uses is unclear, it apparently functioned as a heavy equipment shop and vehicle maintenance shop prior to being chosen in 1976 to house the threat collections. At this point, the Real Property card describes the building as having been relocated and renumbered. Remarks on the card include "Butler Building, surplus B-58 shelter, moved to Nellis main base NE." After 1976, several improvements were made, including utility upgrades and expansions to accommodate exhibits, resulting in a current square footage of 17,321 (5,279 m²).

The Threat Facility Collection is exceptionally important to the base and national Cold War contexts for the role it plays within the fighter training complex at Nellis AFB and for the unique training experience it provides not only to USAF fighter pilots, but to pilots of all four branches of the military and to pilots from allied nations. Use of this collection improves the success and survivability of fighter forces during combat situations. This collection has performed this training mission during Phases III and IV of the Cold War era, and meets NRHP criterion (a).

6.4.1.3 Weapons School (Resource No. 6130, Real Property No. 282)

The Weapons School provides state-of-the-art training in weapons technology for squadron instructors. Built in 1969 as a permanent building, the original nomenclature for this building was as aircraft and weapons training. Currently, it is classified as a flight training classroom.

The school is a single story, concrete masonry building with exterior signage relating to its ACC mission and function. Remarks on the property card refer to a mechanical equipment yard, block wall, and concrete stoop and ramp. It is also noted that the building was dedicated "Waxman Hall" on June 12, 1969 after Major Saul Waxman. A large addition to the building's original square footage of 22,240 (2,066 m²) came in 1985 with the construction of an electric substation, compressed air plant, and other utility improvements resulting in the current square footage of 42,383 (3,937 m²). The building retains its exterior integrity. Although additions to the main building have been made, the real property card indicates no major renovations. As the building has retained the same function since being built, its interior integrity is determined to be intact.

The Weapons School is exceptionally important in that it epitomizes the fighter training role of Nellis AFB during the Cold War and played a major role in preparing all Air Force fighter squadrons for combat. It also trained pilots of the other military branches and pilots from allied nations. This school functioned in this role during Phases III and IV, and meets NRHP criterion (a).

6.5 INTELLIGENCE FACILITIES

None were evaluated at Nellis AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Nellis AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Nellis AFB. These resources should be investigated further for a more comprehensive analyses.

Almost all buildings and structures have been removed from Cuddeback GR. The only surface evidence that buildings once existed there is the presence of concrete foundations where the buildings once stood. Remaining structures and objects at the range include the asphalt runway, which is very short, narrow, and in serious disrepair, a few target vehicles, ordnance casings, and a barbed wire fence.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Nellis AFB revealed approximately 560 citations. Most of these are unit histories and special collections. More specific topics include the histories of various flight and combat training programs. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Nellis AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts is presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

The base is consistently updating its facilities, primarily through the demolition of old buildings and construction of new. No list was available that identified these buildings, thus it is currently unknown whether substantial modification or demolition is planned for any of the evaluated properties. During the base visit, the demolition of one of the last remaining World War II buildings was observed.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Nellis AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Nellis AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Nellis AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Nellis AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Command Center (Resource No. 6001, Real Property No. 620)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role in providing the premier flight and combat training to not only U.S. forces, but also to pilots of allied nations. The integrity of the building is determined to be intact based upon partial observation, the lack of documented major renovations, and use of the building as the WTC Headquarters since its construction. Therefore, this building is recommended as eligible to the NRHP.

Table 9.1 Recommendations for Evaluated Resources.

			Management Recommendations*					
Resource No.	Real Property No.	Property Type	No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	Comments
Real Property - Buildings								
6001	620	Command Center		*	*	*		NRHP eligible now.
6051	292	Maintenance Hangar		*	*	*		NRHP eligible now.
6066	201	RED FLAG Facility		*	*	*		NRHP eligible now.
6130	282	Weapons School		*	*	*		NRHP eligible now.
Real Property - Object								
6072	None	Threat Facility Collection		*	*	*		NRHP eligible now.
Record or Document - Object								
6188	None	Documentary Collection		*		*	*	
6189	None	Documentary Collection		*		*	*	
6190	None	Photograph Collection		*		*	*	
6191	None	Documentary Collection		*		*	*	
6196	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.2 Documentary Collection (Resource No. 6188, Located in Real Property No. 812)

This collection, consisting of maps, drawings, and photographs from all four Phases of the Cold War era, is stored in a secure area in the drawing room of Civil Engineering. The older items are stored with the newer, more frequently used ones, thus they are accessed regularly and subject to wear. It is recommended that this collection be inventoried and copied, with the copies going to the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Documentary Collection (Resource No. 6189, Located in Real Property No. 812)

This collection of books, maps, photographs, and brochures is treated carefully; however, it is not in a secure area and could easily be damaged. It is recommended that the collection be inventoried and copied. It is further recommended that the copies be retained by the base for its use and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.4 Documentary Collection (Resource No. 6191, Located in Real Property No. 620)

This collection of photographs, newspapers, oral histories, video tapes, maps, histories, and objects of memorabilia is located in a secure office, and is well organized and maintained by the historian. It is recommended that the memorabilia be retained by the historian for inventory and stewardship. It is recommended that the oral history tapes be transcribed to provide a hard-copy of the interviews' contents. Finally, it is recommended that the photographs, newspapers, oral histories, video tapes, maps, and histories be inventoried and copied, that the base retain the

copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.5 Documentary Collection (Resource No. 6196, Located in Real Property No. 7)

This collection of historical and memorial items is protected, well organized, and in good condition. It is recommended that the historic collection of histories, photographs, and maps, and the photographs in the memorial collection be inventoried and copied, with the copies retained by the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation. It is recommended that the remaining objects in the memorial collection be kept at the base, inventoried and stewarded by the wing historian.

9.2.6 Photograph Collection (Resource No. 6190, Located in Real Property No. 812)

This collection of photographs of the weapons storage facilities in Area II of Nellis AFB record facilities in active use during Phase III of the Cold War era. It is recommended that the collection be inventoried and copied, with the copies retained by the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation.

9.2.7 Maintenance Hangar (Resource No. 6051, Real Property No. 292)

The Thunderbird Maintenance Hangar is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criterion (a) based on its direct and continuous link to the Thunderbird elite flying squadron. The integrity of the building is determined to be intact based on the lack of documented major renovations and its continuous use as a hangar for the Thunderbird fleet. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.8 RED FLAG Facility (Resource No. 6066, Real Property No. 201)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its association with RED FLAG operations and the preparation of U.S. and allied fighter forces and on its role within Nellis AFB's fighter training complex. The integrity of the building is determined to be intact based upon partial observation, the lack of documented major renovations, and the use of the building for the same purpose since its construction. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.9 Threat Facility Collection (Resource No. 6072, Located in Real Property No. 470)

This collection is evaluated as exceptionally important to the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) due to its role in the advanced training mission conducted by Nellis AFB for U.S. military pilots and pilots from allied nations. The integrity of the collection is determined to be intact. Therefore, this collection is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the collection and further documentation to nominate this resource to the NRHP.

9.2.10 Weapons School (Resource No. 6130, Real Property No. 282)

This building is evaluated as exceptionally important to the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its direct association with the Weapons School and its role in the fighter combat training of pilots from the USAF, the other military branches, and allied nations. The integrity of the building is determined to be intact based upon the lack of documented major renovations and sole use of the building for the Weapons School. Therefore, this building is recommended as eligible to the NRHP.

Recommendations include stewardship to maintain the integrity of the building, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Armstrong, E. L., ed.

- 1976 *History of Public Works in the United States, 1776-1976*. American Public Works Association, Chicago, Illinois.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Hays, J. R.

- 1968 *History of the 474th Tactical Fighter Wing, Nellis Air Force Base, Nevada, 1 January through 30 June 1968*. Nellis Air Force Base, Nevada.

Hinds, J. R.

- 1970 *History of the USAF Tactical Fighter Weapons Center, 57th Fighter Weapons Wing, USAF Air Demonstration Squadron, 1 January 1970 - 30 June 1970*. Nellis Air Force Base, Nevada.

- 1976 *Epitome of the History of Nellis Air Force Base, 1940-1966*. United States Air Force Tactical Fighter Weapons Center, Nellis Air Force Base, Nevada.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982*. Office of Air Force History, United States Air Force, Washington, D.C.
-

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Nellis Air Force Base

- 1992 *554th Support Group/Fact Sheet*. On file at the Public Affairs Office, Nellis Air Force Base, Nevada.
- 1993 *Nellis Air Force Base, 1994*. Marcoa Publishing, Inc., San Diego, California.

O'Burke, R.

- 1965 *History of the 4520th Combat Crew Training Wing (Tactical Fighter), Twelfth Air Force, Tactical Air Command, 1 July through 31 December 1965*. Nellis Air Force Base, Nevada.
- 1966 *History of the United States Air Force Tactical Fighter Weapons Center, Twelfth Air Force, Tactical Air Command, 1 September through 31 December 1966*. Nellis Air Force Base, Nevada.

Office of History

- 1993 *Brief History of USAF Weapons and Tactics Center (Air Combat Command) and Nellis Air Force Base, Nevada*. Office of History, Weapons and Tactics Center, Nellis Air Force Base, Nevada.

Shoemaker, E. S.

- 1981 *History of the 57th Fighter Wing, Nellis Air Force Base, Nevada, 1 April 1981-30 June 1981*. Tactical Fighter Weapons Center, Nellis Air Force Base, Nevada.

United States Air Force

- 1972a *Installation Survey Report, Nellis Air Force Base*. On file at the Real Property Office, 558th Civil Engineering Squadron, Nellis Air Force Base, Nevada.
- 1972b *Installation Survey Report, Nellis Air Force Range*. On file at the Real Property Office, 558th Civil Engineering Squadron, Nellis Air Force Base, Nevada.
- 1972c *Installation Survey Report, Indian Springs Auxiliary Airfield*. On file at the Real Property Office, 558th Civil Engineering Squadron, Nellis Air Force Base, Nevada.
- 1991 *History of Area II, Formerly Known as Lake Mead Base*. On file at the Real Property Office, 558th Civil Engineering Squadron, Nellis Air Force Base, Nevada.
-

1992 Final Report, Informational Summary of U.S. Air Force Operations at Cuddeback Gunnery Range. 35th Civil Engineering Squadron, George Air Force Base, California.

1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations.* Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

1994 *Indian Springs Air Force Auxiliary Field, Nevada, Real Property Utilization Survey.* On file at the Real Property Office, 558th Civil Engineering Squadron, Nellis Air Force Base, Nevada.

War Department

1946 *Analysis of Existing Facilities for Master Planning, Las Vegas Army Air Field, Las Vegas, Nevada.* On file at the Real Property Office, 558th Civil Engineering Squadron, Nellis Air Force Base, Nevada.

Wing Historian's Office

1993 *Brief History of the 57th Wing (Air Combat Command) and Nellis Air Force Base.* 57th Wing Headquarters, Nellis Air Force Base, Nevada.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	6001	620	Command Center (WTC Headquarters)	1969
	6002	615	Base Chapel	1963
	6003	589	Data Processing Installation	1956
	6004	374	Bank Branch	1971
	6005	312	Base Library	1963
	6006	320	Post Office Center	1972
	6007	430	Exchange Service Outlet	1985
	6008	432	Gymnasium	1972
	6009	606	Exchange-Service Station	1964
	6010	603	Commissary & Thrift Shop	1958
	6011	604	Animal Clinic	1964
	6013	601, 602	Child Care Center and Annex	1986
	6014	625	Composite Medical Facility	1965
	6015	650	Family Housing Appr 50-69 (Major General's House)	1968
	6016	646	Family Housing Appr 50-6 (Colonel's House)	1957
	6017	536	Visiting Airman's Quarters	1958
	6018	588	Group Headquarters	1989
	6019	545	Visiting Officers' Quarters	1972
	6020	554	Officers' Open Mess	1990
	6021	745,775	Airman's Dormitory	1970
	6022	705	Recreation Center	1971
	6023	555	Community Center	1987
	6025	1028	Base Warehousing (Forms/Publications, A3)	1963
	6026	1015	Security Police Kennel Support Facility (A3)	1962
	6027	2990	Base Trailer Park (A3)	Unknown
	6028	1043, 1035	Non-AF Administration and Defense Reutilization Offices(A3)	1978
	6030	Unknown	Surplus Storage Warehousing(A3)	Unknown
	6031	1114	Data Processing Installation (A3)	1988
	6032	1100	Security Police Operations (A3)	1986
	6033	849, 850	Base Engineer's Covered Storage	1942
	6034	786	Airman's Dormitory	1990
	6035	899	Environmental Management Headquarters	1991
	6036	45	Technical Training Classroom (ACC Combat Aircrew)	1984
	6037	43	Environmental Health (Area Defense Counsel)	1985
	6038	20	Base Personnel Office	1976
	6039	18	Law Center (Staff Judge Advocate)	1981
	6040	7	57th Wing Headquarters	1989
	6041	11	57th Wing Headquarters Center	1989

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	6042	46	Audit Agency Headquarters	1987
	6043	47	Group Headquarters (MCM 3-1 Conference Center)	1969
	6044	6	Communications Facility	1953
	6045	2091	Aircraft Maintenance Organizational Shop	1985
	6048	2064	Control Tower	Unknown
	6049	None	Golf Course Clubhouse	Unknown
	6050	805	Base Operations	1939
	6051	292	Maintenance Hangar (Thunderbirds)	1942
	6052	290	Small Aircraft Maintenance Dock	1963
	6053	287	High-Bay Technical Training (Converted Hangar)	1942
	6054	283	Small Aircraft Maintenance Dock	1977
	6055	277	Fire Station	1963
	6056	270	Maintenance Hangar (Inspection Hangar)	1956
	6057	262	Aircraft Maintenance Organizational Shop	1954
	6058	256	Aircraft Corrosion Control	1961
	6059	252	High-Bay Technical Training (Converted Hangar)	1961
	6060	258	Squadron Operations (Maintenance Training)	1971
	6061	250	Squadron Operations (561st Fighter Squadron)	1971
	6062	245	Maintenance Hangar	1954
	6063	242	Squadron Operations (Air Warrior)	1971
	6064	239	Small Aircraft Maintenance Dock	1963
	6065	226	Small Aircraft Maintenance Dock (Red Flag)	1972
	6066	201	RED FLAG Facility	1971
	6067	232	General Purpose Aircraft Maintenance	1969
	6068	215	Air Force Security Service Operations	1985
	6069	1739	Runner's World Facility	1992
	6070	469	Training Aids Shop (Adversary Threat)	1990
	6071	200	Direction/Combat Center Facility (Range Control)	1981
	6073	236	Base Supplies & Equipment Warehouse	1969
	6074	462	Base Supplies & Equipment Warehouse (HazMat)	1969
	6076	839	Reproduction Plant	1955
	6077	840	Automotive Hobby Shop	1974
	6078	838	Housing Supplies-Storage Facility (Linens)	1961
	6079	836	Housing Supplies-Storage Facility (Furnishings)	1961
	6080	837	Vehicle Operations Administration	1955
	6081	827	Vehicle Operations Administration (Transportation)	1984
	6082	856	Petroleum Operations	1987
	6083	831	Vehicle Maintenance Shop	1954
	6084	848	Aircraft Maintenance Organizational Shop (Red Flag)	1989
	6085	858	Jet Engine Inspection & Maint. Shop (Propulsion)	1960
	6086	854	Refueling Vehicle Shop	1969
	6088	821	Aircraft Maintenance Organizational Shop	1988

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	6089	878	Squadron Operations (Test & Evaluation)	1985
	6090	809	Traffic Management Facility (Mobility)	1974
	6091	877	Air Force Headquarters	1986
	6092	882	Aircraft Maintenance Organizational Shop (Falcon)	1985
	6093	841	Base Cold Storage	1956
	6094	826	Base Supply Administration	1966
	6095	811	Base Supplies and Equipment Warehouse	1964
	6096	828	Air Force Office of Special Investigation	1969
	6097	843	Base Engineer Covered Storage (Facility)	1985
	6098	825	Base Engineer Administration	1988
	6099	822	Base Engineer Administration	1986
	6100	817	Base Engineer Administration	1943
	6101	812	New Civil Engineering Building	Unknown
	6102	350	Exchange Snack Bar (Burger King)	1987
	6103	610	Arts & Crafts Center	1953
	6104	362	Base Theater	1970
	6105	340	Exchange Sales Store (Base Exchange)	1971
	6106	595	Communications Facility	1968
	6107	696, 698	Main Gate Traffic Check House	1990
	6109	300	Bowling Center	1966
	6110	322	Credit Union	1971
	6111	428	Exchange-Administration Office	1969
	6112	425	Precision Measurement Equipment Lab	1969
	6113	434, 438	Swimming Pool and Bath House Complex	1974
	6114	447	Avionics Shop (Gold Flag)	1969
	6115	439	MWR Supply & NAF Central Storage	1992
	6116	451	Target Intelligence Training	1970
	6117	454	Clothing Store (Military)	1969
	6118	248	Aircraft Support Equipment Shop and Storage	1969
	6119	448	Avionics Shop (Pneudraulics)	1969
	6120	445	Avionics Shop	1970
	6121	260	General Purpose Aircraft Maintenance (Egress)	1969
	6122	443	Base Supplies & Equipment Warehouse (Shop)	1969
	6123	264	Weapons & Release Systems Shop (Armaments)	1971
	6124	328	Group Headquarters (Logistics)	1965
	6125	423	Avionics Shop (Component Repair Squadron)	1981
	6126	324	NCO Open Mess (Enlisted Club)	1966
	6127	124	Survival Equipment Shop	1955
	6128	118	Base Photo Lab	1966
	6129	122	Audiovisual Facility	1942
	6130	282	Flight Training Classroom (Weapons School)	1969

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	6131	102	Squadron Operations (Current Weapons & Training)	1974
	6132	44	Squadron Operations (Combat Rescue School)	1981
	6133	2	Special Operations (Security Police)	1982
	6134	780	Group Headquarters (Nellis Inn)	1985
	6136	552	Visiting Airman's Quarters (Union Plaza)	1981
	6137	567	Airman's Dining Halls (Mt. View Inn)	1963
	6150	Unknown	Enlisted Accompanied Housing (Manch Manor)	Unknown
	6151	Unknown	Youth Center In Enlisted Housing (Manch Manor)	Unknown
	6152	Unknown	Temporary Lodging Facility (Manch Manor)	Unknown
	6153	Unknown	New USAF/VA Hospital	1994
	6155	Unknown	Old Warehouse (A3)	Unknown
	6157	Unknown	Small Arms Range-Building (A3)	Unknown
	6162	Unknown	Wherry Housing-Nellis Terrace (53 McCarron)	Unknown
	6163	Unknown	Wherry Housing-Nellis Terrace (37 Luke Drive)	Unknown
	6167	10250	Federal Prison Facility (Old Chapel, A2)	Unknown
	6170	10124, 118	Red Horse Facilities (Storage and Maintenance, A2)	Unknown
	6171	10202	Federal Prison Facility (Dormitory, A2)	Unknown
	6172	10211	Base Engineer Admin. (Red Horse HQ) (A2)	Unknown
	6175	10203	Federal Prison Facility (Dormitory, A2)	Unknown
	6176	10204	Federal Prison Facility (Old Theatre, A2)	Unknown
	6177	10236	Gymnasium (A2)	Unknown
	6178	10207	Heating Facility Building (Boiler Plant, A2)	Unknown
	6179	10201	Federal Prison Facility (Dormitories & Offices, A2)	Unknown
	6180	10116	Vehicle Maintenance Shop (A2)	Unknown
	6181	10120, 121	Base Maintenance Shop and Base Storage Facility	Unknown
	6182	10220	Fire Station (A2)	Unknown
	6183	10108	Conventional Munitions Shop (A2)	Unknown
	6184	415	Aircraft Support Equipment Storage (Electronic	Unknown
	6185	98	Group Headquarters (Test Group)	Unknown
	6186	571	Group Headquarters (Services Squadron)	1988
	6187	586	Field Training Detachment Facility	1968
Real Property - Landscape				
	6012	None	Little League Park	Unknown
	6046	4500	Fire Training Area	Unknown
	6047	None	Base Overview	
	6075	None	"Nellis AFB" Rock Sign on U.S. Highway 91/93	Unknown
	6087	None	"Fuels" rockscape near Tanker Fleet	Unknown
	6135	2012, 2013	Sports Complex with New Pavilion	1953
	6140	None	Rockscape Beside Tank Farm "No Fishin'" (A3)	Unknown
	6154	None	Area III Overview (Old Bunkers & City in Distance)	

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	6156	None	Small Arms Range-Entrance (A3)	Unknown
	6168	None	Rockscape and Bunker (A2)	Unknown
Real Property - Object				
	6072	in 470	Threat Facility Collection	1976
	6108	None	Thunderbird Static Display at Main Gate	
	6141	None	Static Display-F-86 Sabrejet (Freedom Park)	
	6142	None	Static Display-F-111A (Freedom Park)	
	6143	None	Static Display-F-105G Thunderchief (Freedom Park)	
	6144	None	Static Display-F-100D Super Sabre (Freedom Park)	
	6145	None	Static Display-T-5E Tiger (Freedom Park)	
	6146	None	Static Display-F-4C Phantom (Freedom Park)	
	6147	None	Static Disp.-F-117A Stealth Fighter (Freedom Park)	
	6148	None	Nellis Welcome Sign Inside Main Gate	Unknown
	6149	None	Static Display-Thunderbird beside Welcome Sign	Unknown
	6159	None	Sign adjacent to Flight line-"Nellis Flight Line"	Unknown
	6160	None	Threat Facility-Welcome Mat	Unknown
	6161	None	Threat Facility-Ext. Static Display-Soviet Tank	
	6169	None	Entrance Sign to 820th Red Horse Squadron Area	Unknown
	6173	None	Red Horse Static Display Front of HQ (A2)	Unknown
	6174	in 1038	Gas Mask Sign on Disaster Preparedness Bldg. (A3)	Unknown
Real Property - Structure				
	6024	1055, 1054	Jet Fuel Storage (A3)	1954
	6029	1051	Jet Fuel Storage (A3)	1951
	6138	561	Water Tank Storage	1942
	6158	Unknown	Small Arms Range-Targets	Unknown
	6164	1045	Base Hazardous Storage (Old Weapons Bunker, A3)	1951
	6165	1048	Spare Inert Storage (Old Weapons Bunker, A3)	1954
	6166	1049	Base Hazardous Storage (Old Weapons Bunker, A3)	1954
Record or Document - Object				
	6188	in 812	Documentary Collection	
	6189	in 812	Documentary Collection	
	6190	in 812	Photograph Collection	
	6191	in 620	Documentary Collection	
	6196	in 7	Documentary Collection	

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

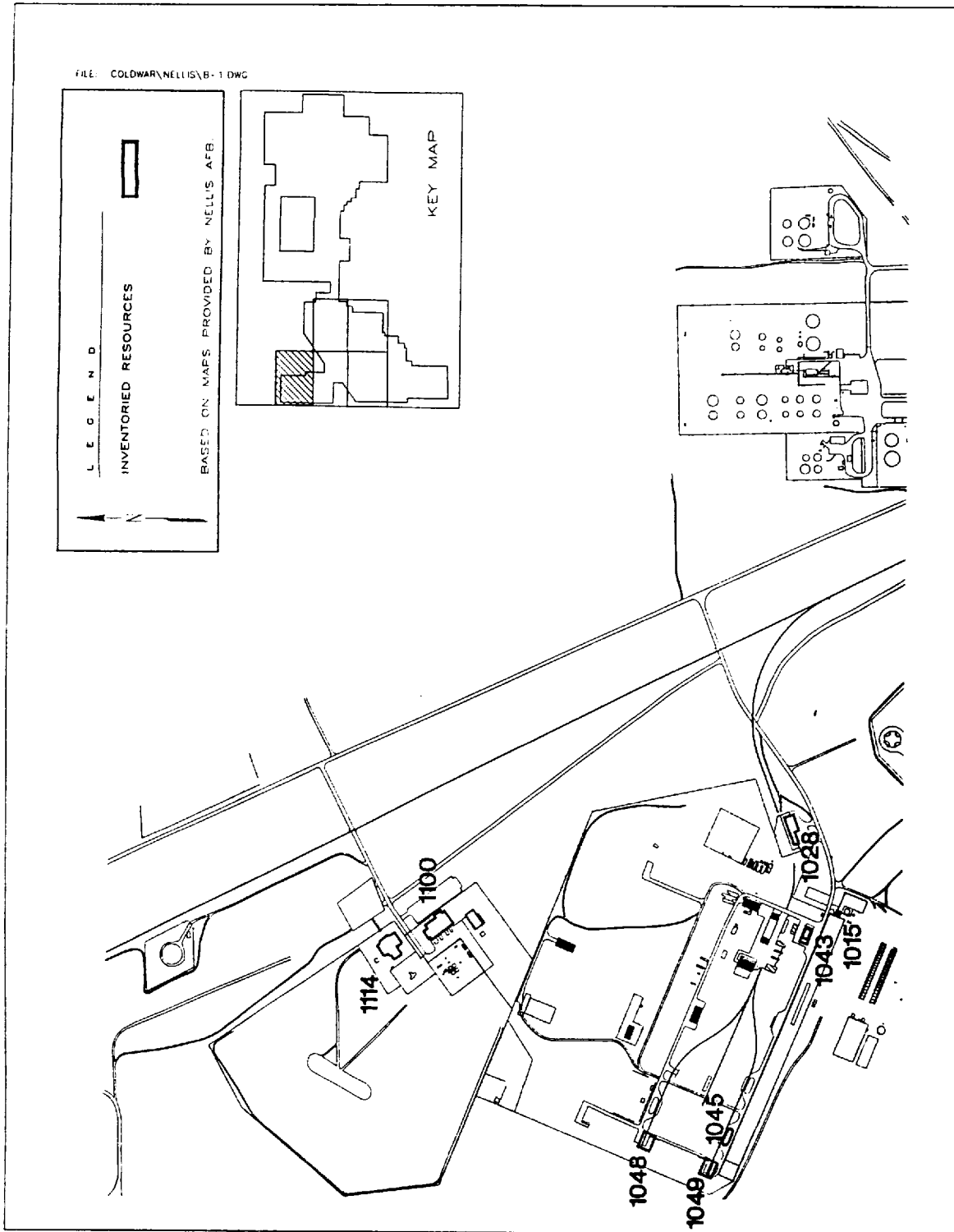


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 6).

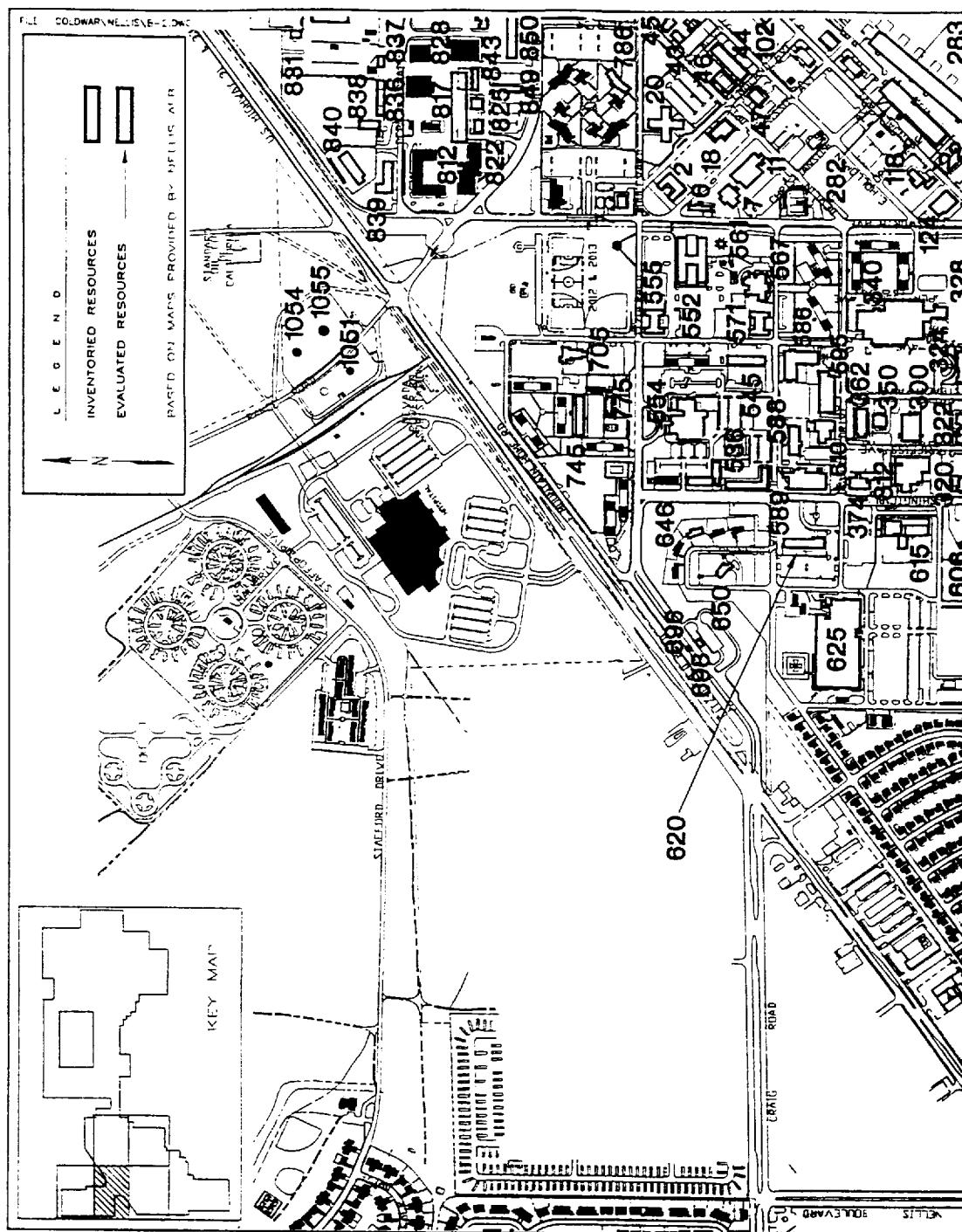


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 6).

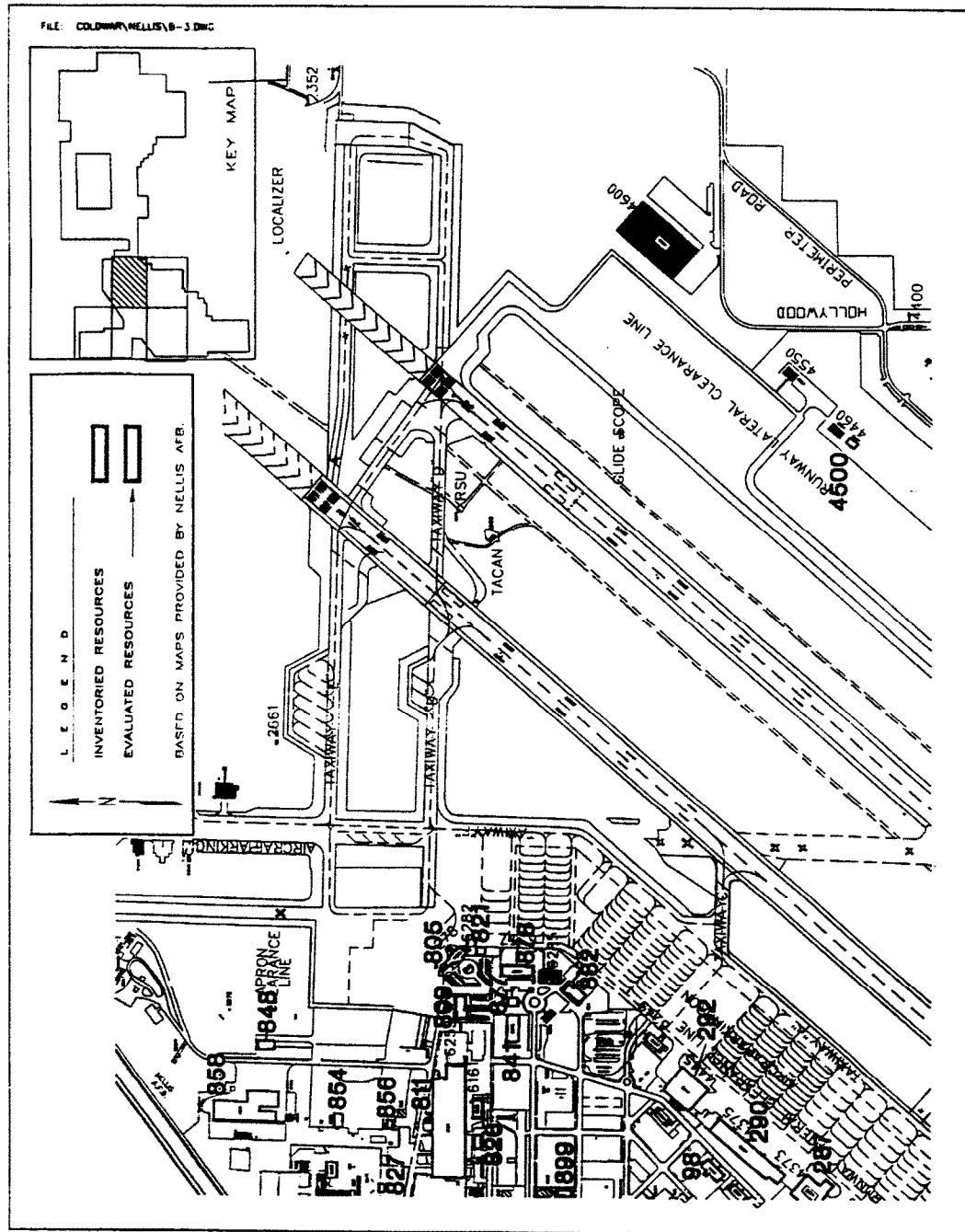


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 6).

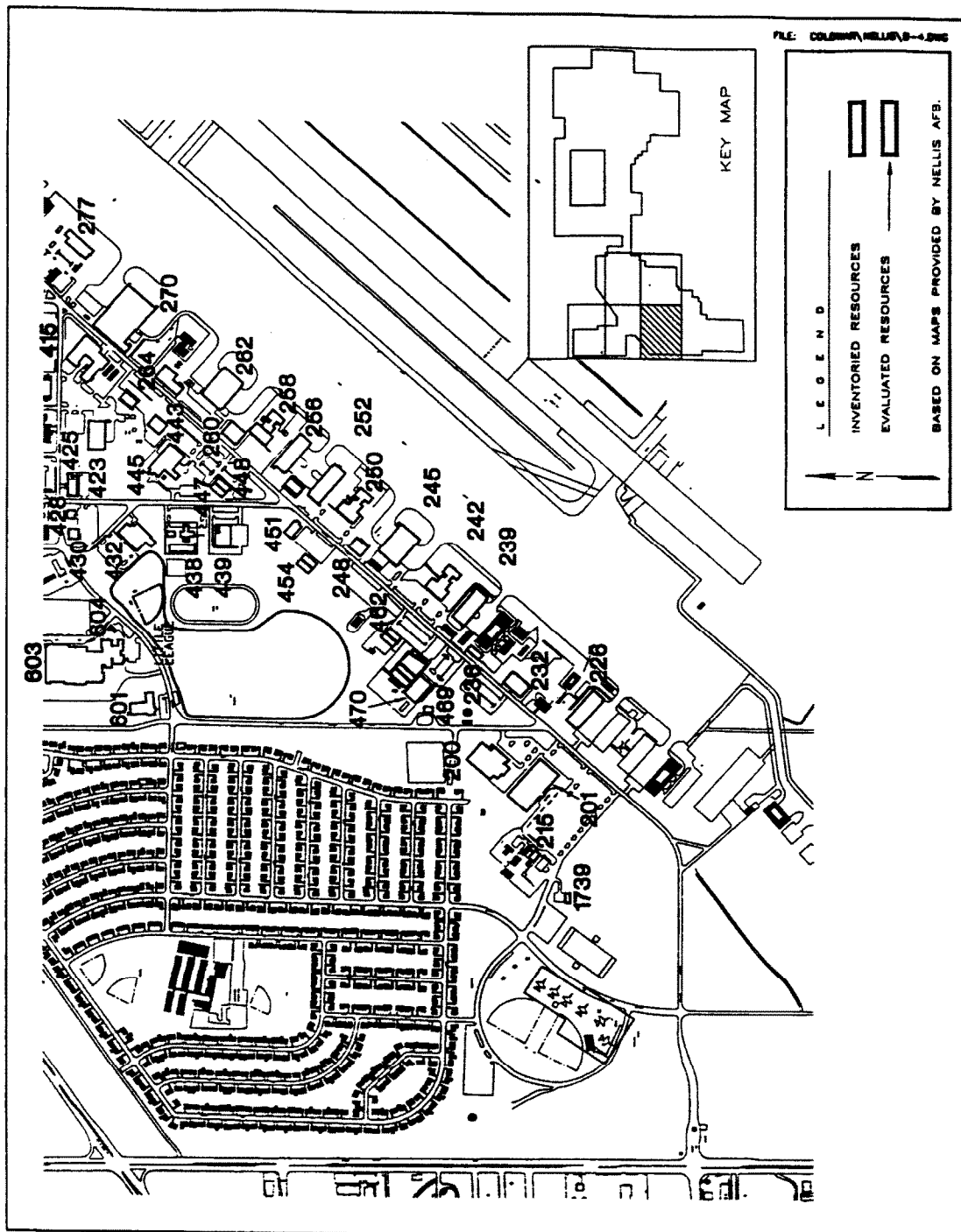


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 6).

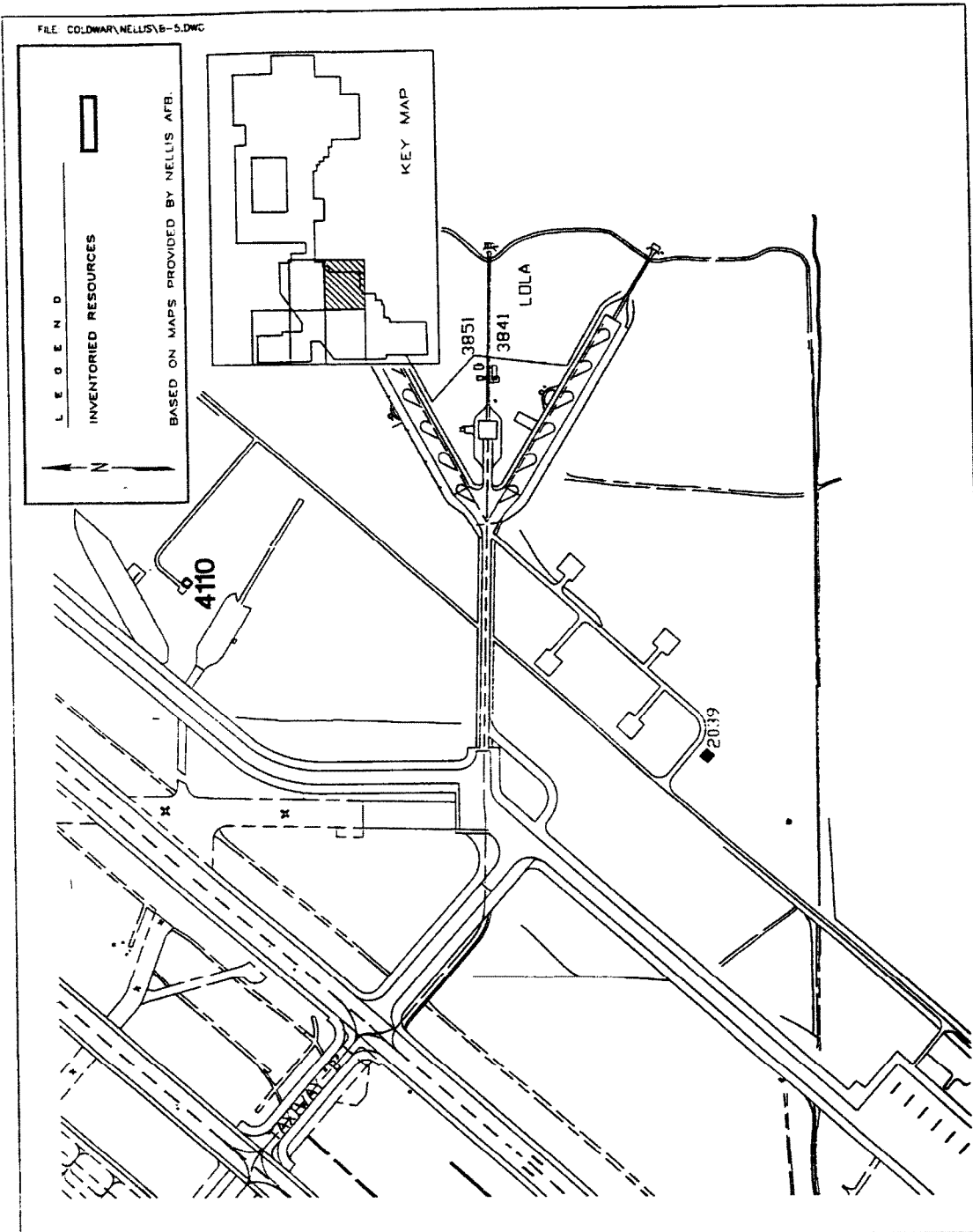


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 6).

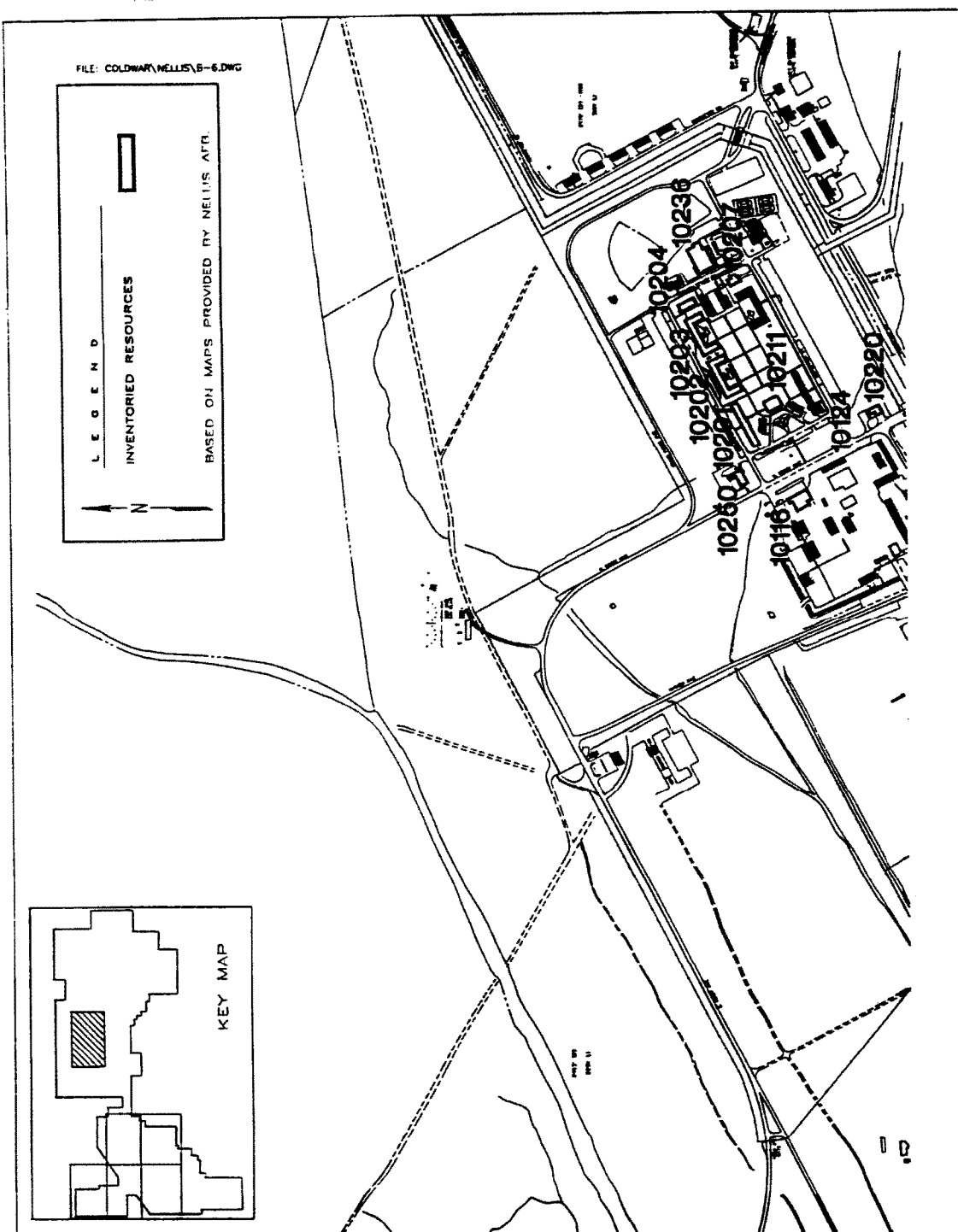
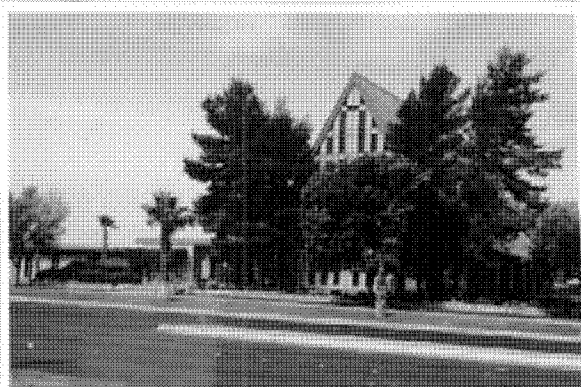


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 6).

APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 6001, Real Property No. 620,
WTC Headquarters



Resource No. 6002, Real Property No. 615,
Base Chapel



Resource No. 6003, Real Property No. 589,
Data Processing Installation



Resource No. 6004, Real Property No. 374,
Bank Branch



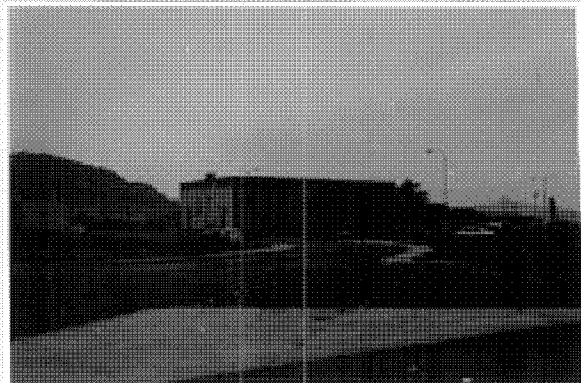
Resource No. 6005, Real Property No. 312,
Base Library



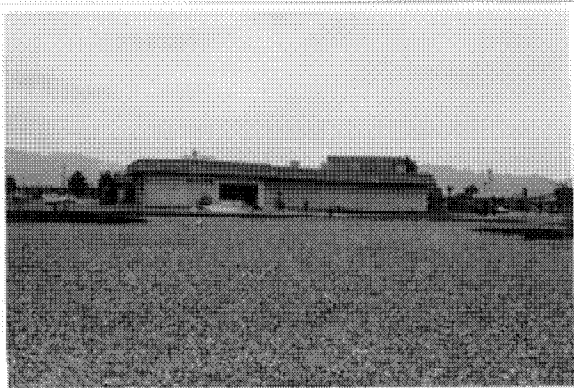
Resource No. 6006, Real Property No. 320,
Post Office Center



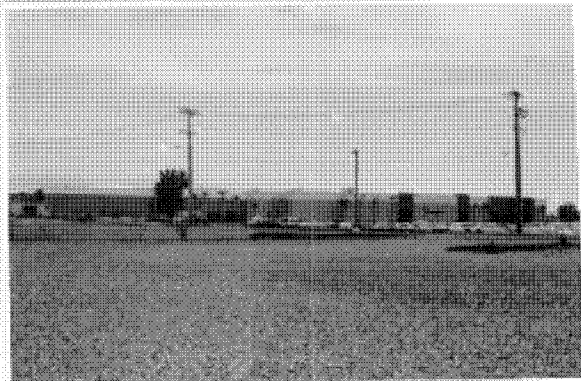
Resource No. 6007, Real Property No. 430,
Exchange Service Outlet



Resource No. 6008, Real Property No. 432,
Gymnasium



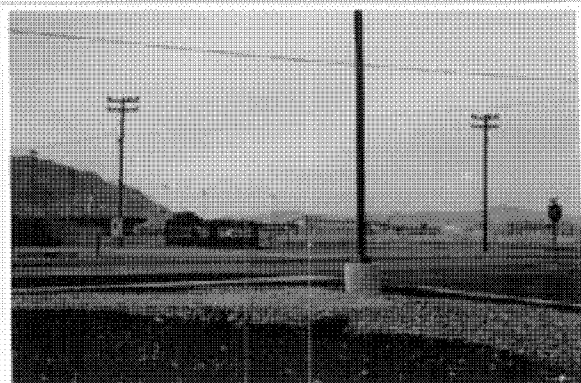
Resource No. 6009, Real Property No. 606,
Exchange-Service Station



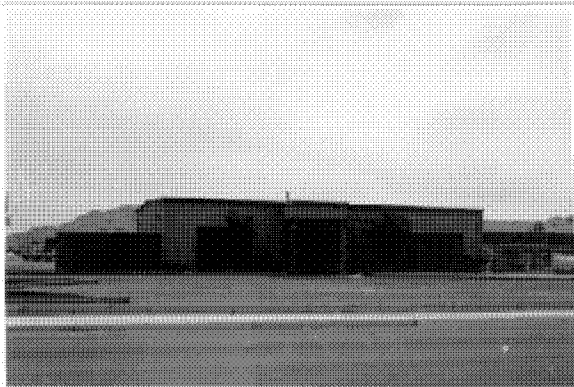
Resource No. 6010, Real Property No. 603,
Commissary and Thrift Shop



Resource No. 6011, Real Property No. 604,
Animal Clinic



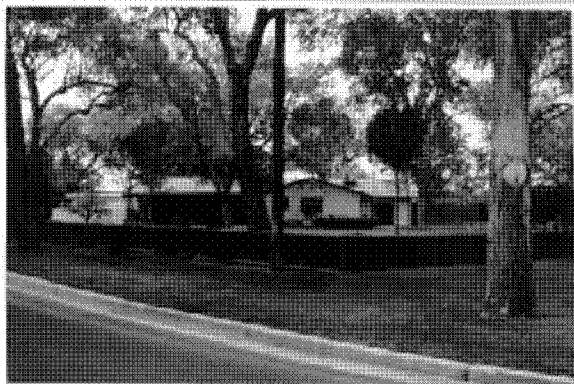
Resource No. 6012, Real Property No. (none),
Little League Park



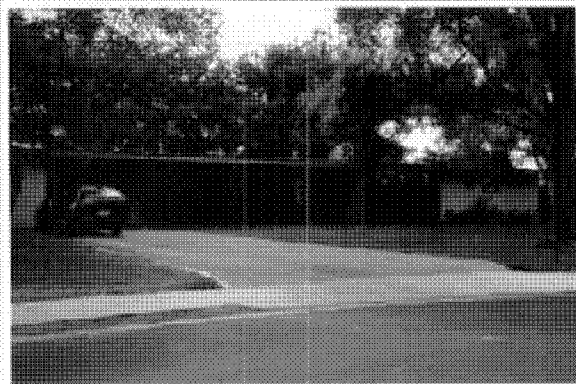
Resource No. 6013, Real Property Nos. 601 and 602, Child Care Center and Annex



Resource No. 6014, Real Property No. 625, Composite Medical Facility



Resource No. 6015, Real Property No. 650, Family Housing Appr. 1950-1969 (Major General's House)



Resource No. 6016, Real Property No. 646, Family Housing Appr. 1950-1969 (Colonel's House)



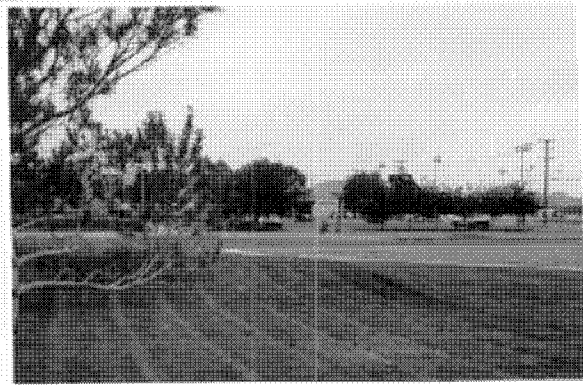
Resource No. 6017, Real Property No. 536, Visiting Airman's Quarters



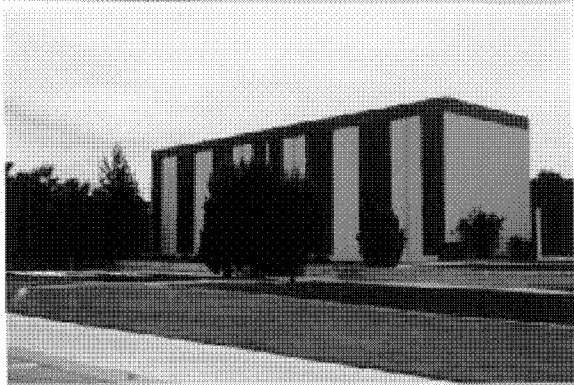
Resource No. 6018, Real Property No. 588, Group Headquarters



Resource No. 6019, Real Property No. 545,
Visiting Officer's Quarters



Resource No. 6020, Real Property No. 554,
Officer's Open Mess



Resource No. 6021, Real Property Nos. 745 and
775, Airman's Dormitory



Resource No. 6022, Real Property No. 705,
Recreation Center



Resource No. 6023, Real Property No. 555,
Community Center



Resource No. 6024, Real Property Nos. 1055
and 1054, Jet Fuel Storage (Area 3)



Resource No. 6025, Real Property No. 1028,
Base Warehousing (Area 3)



Resource No. 6026, Real Property No. 1015,
Security Police Kennel Support Facility (Area 3)



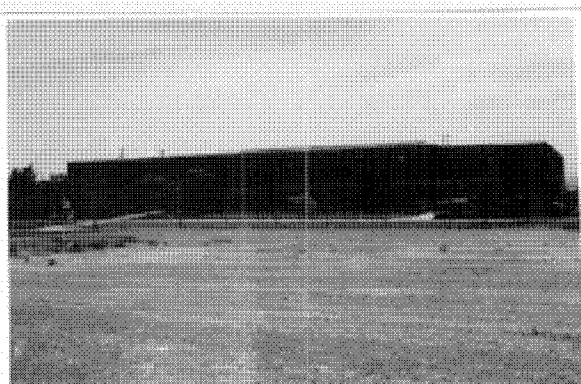
Resource No. 6027, Real Property No. 2990,
Base Trailer Park (Area 3)



Resource No. 6028, Real Property Nos. 1043
and 1035, Non-Air Force Administration and
Defence Reutilization Offices (Area 3)



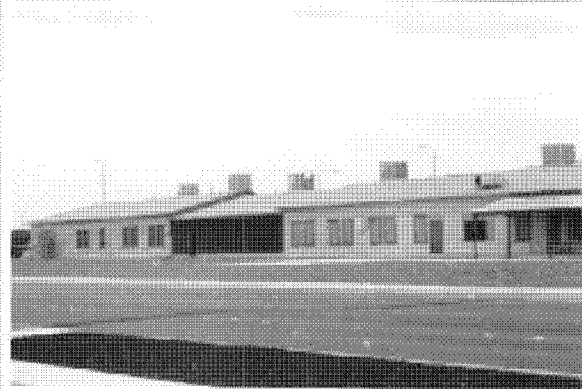
Resource No. 6030, Real Property No.
(unknown), Surplus Storage Warehouse (Area 3)



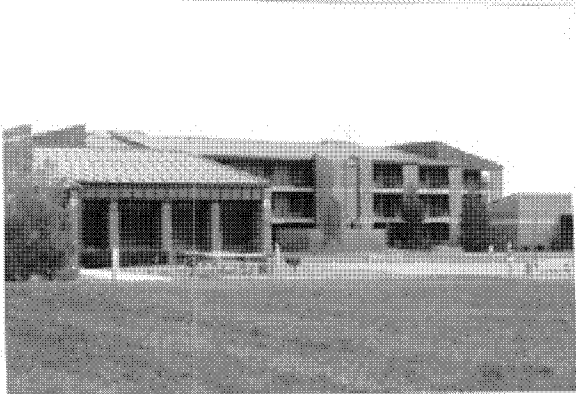
Resource No. 6031, Real Property No. 1114,
Data Processing Installation (Area 3)



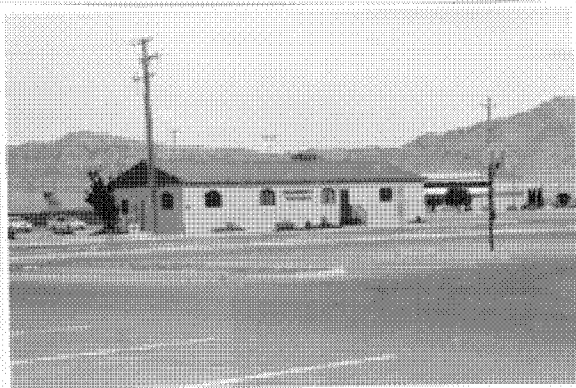
Resource No. 6032, Real Property No. 1100,
Security Police Operations (Area 3)



Resource No. 6033, Real Property No. 849 and
850, Base Engineer's Covered Storage



Resource No. 6034, Real Property No. 786,
Airman's Dormitory



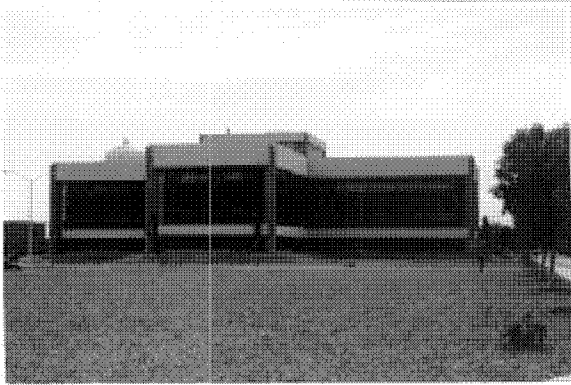
Resource No. 6035, Real Property No. 899,
Environmental Management Headquarters



Resource No. 6036, Real Property No. 45,
Technical Training Classroom (ACC Combat
Aircrew)



Resource No. 6037, Real Property No. 43,
Environmental Health (Area Defense Counsel)



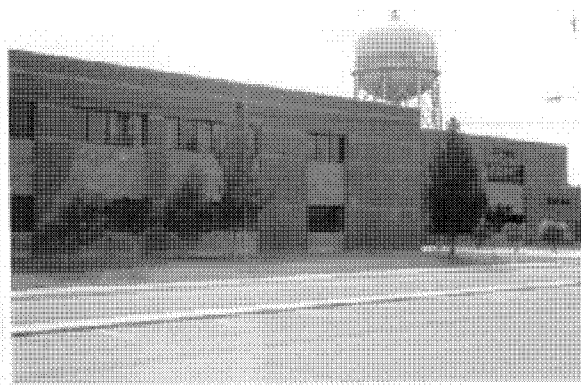
Resource No. 6038, Real Property No. 20,
Base Personnel Office



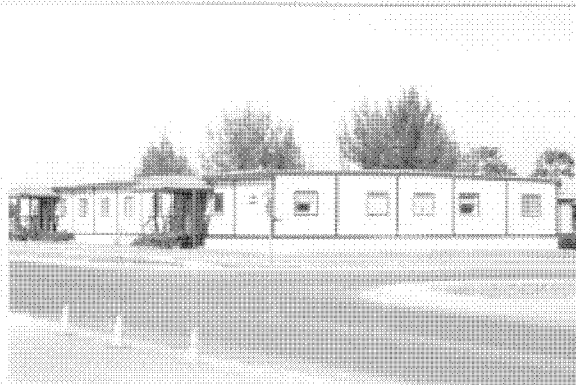
Resource No. 6039, Real Property No. 18,
Law Center (Staff Judge Advocate)



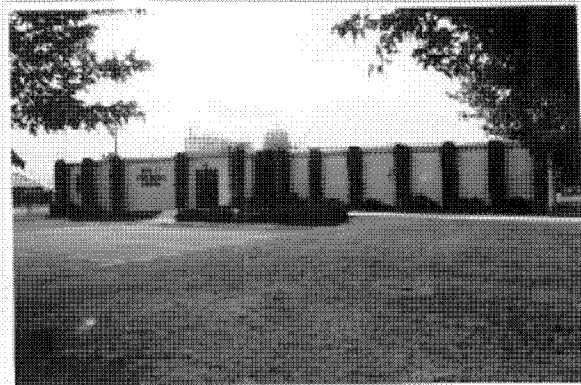
Resource No. 6040, Real Property No. 7,
57th Wing Headquarters



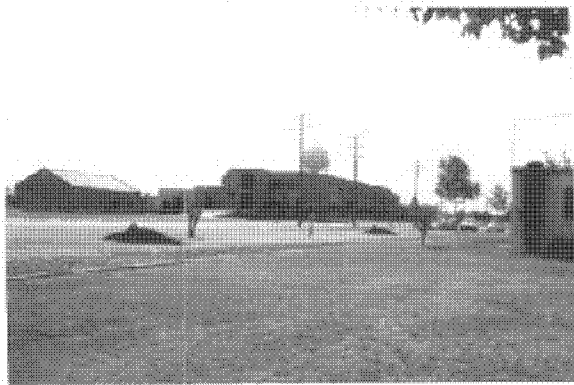
Resource No. 6041, Real Property No. 11,
57th Wing Headquarters Center



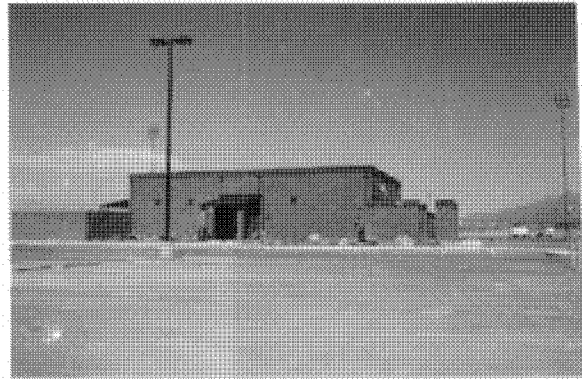
Resource No. 6042, Real Property No. 46,
Audit Agency Headquarters



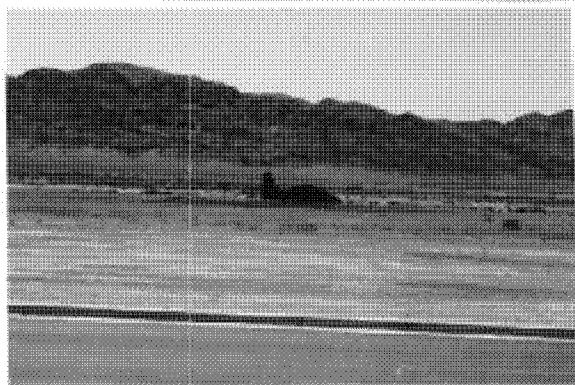
Resource No. 6043, Real Property No. 47,
Group Headquarters (MCM 3-1 Conference
Center)



Resource No. 6044, Real Property No. 6,
Communications Facility



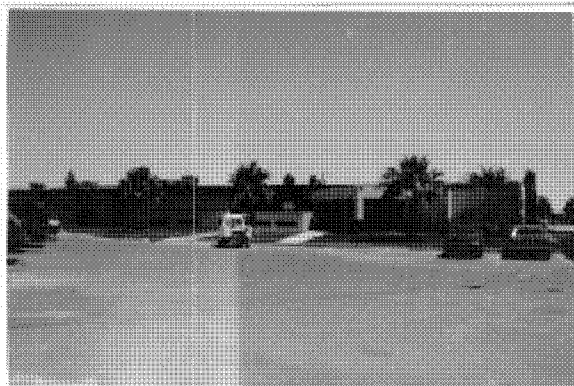
Resource No. 6045, Real Property No. 2091,
Aircraft Maintenance Organizational Shop



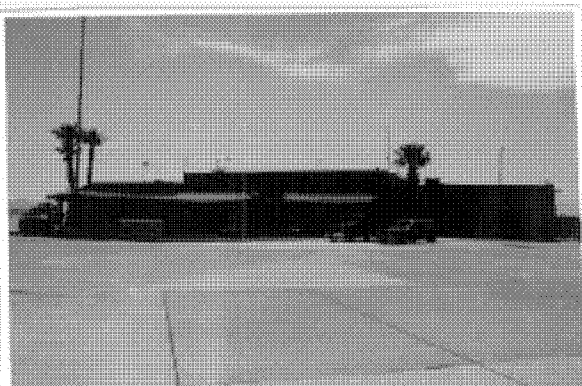
Resource No. 6046, Real Property No. 4500,
Fire Training Area



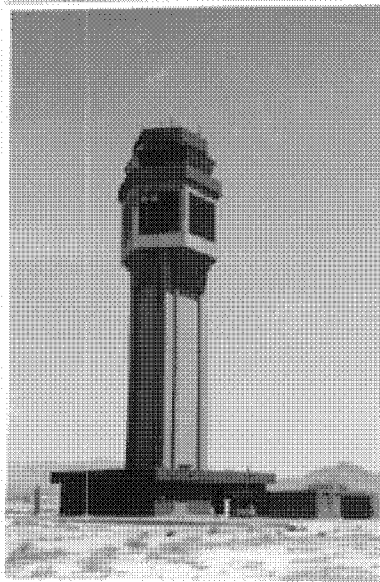
Resource No. 6047, Real Property No. (none),
Base Overview



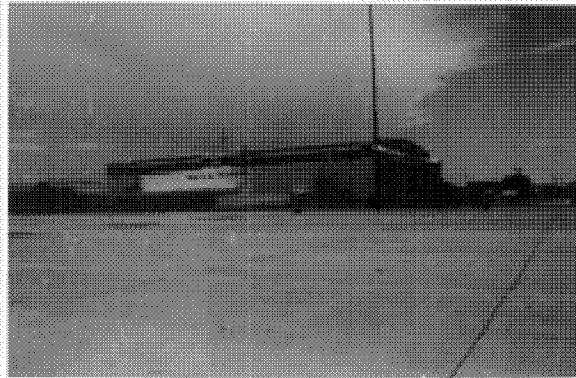
Resource No. 6049, Real Property No. (none),
Golf Course Overview



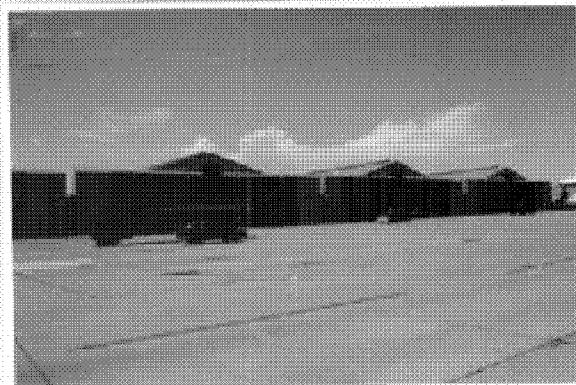
Resource No. 6050, Real Property No. 805,
Base Operations



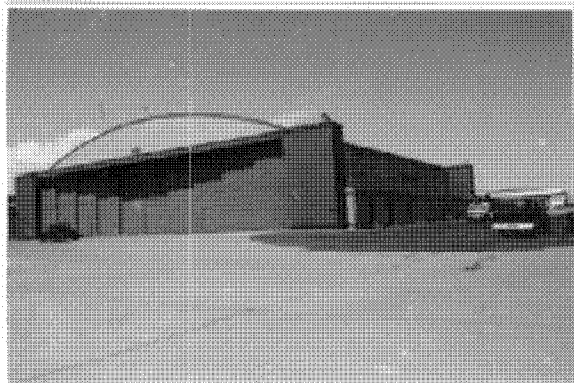
Resource No. 6048, Real Property No. 2064,
Control Tower



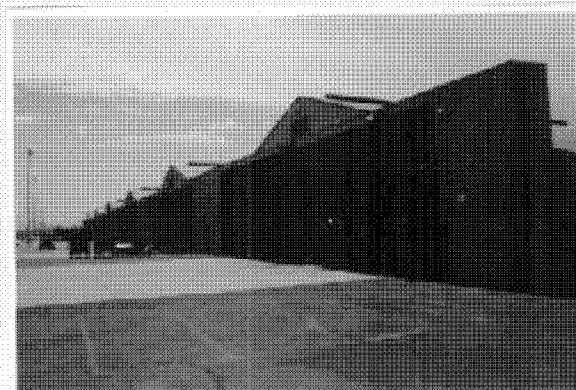
Resource No. 6051, Real Property No. 292,
Thunderbird Maintenance Hangar and Museum



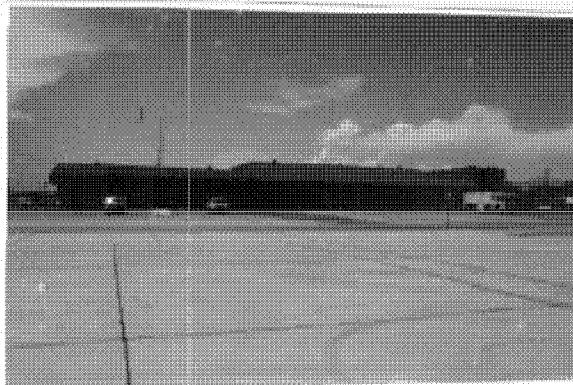
Resource No. 6052, Real Property No. 290,
Small Aircraft Maintenance Dock



Resource No. 6053, Real Property No. 287,
High-Bay Technical Training (Converted
Hangar)



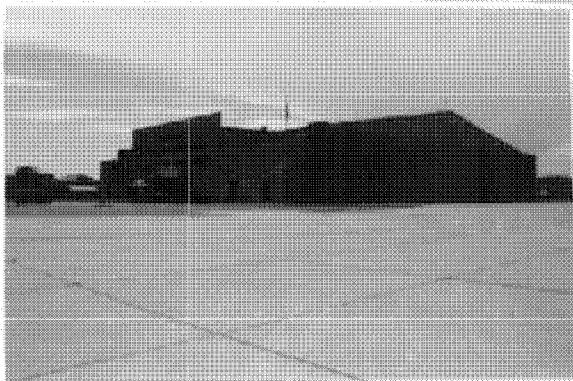
Resource No. 6054, Real Property No. 283,
Small Aircraft Maintenance Dock



Resource No. 6055, Real Property No. 277,
Fire Station



Resource No. 6056, Real Property No. 270,
Maintenance Hangar (Inspection Hangar)



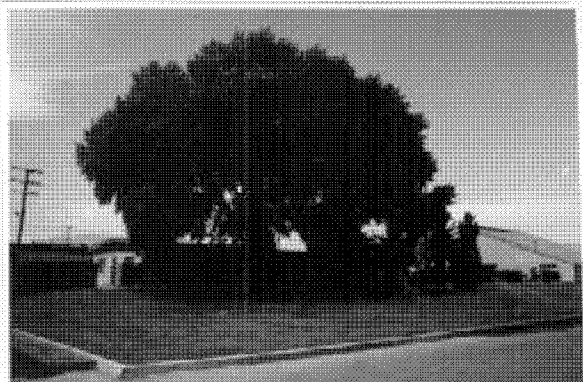
Resource 6057, Real Property No. 262,
Aircraft Maintenance Organizational Shop



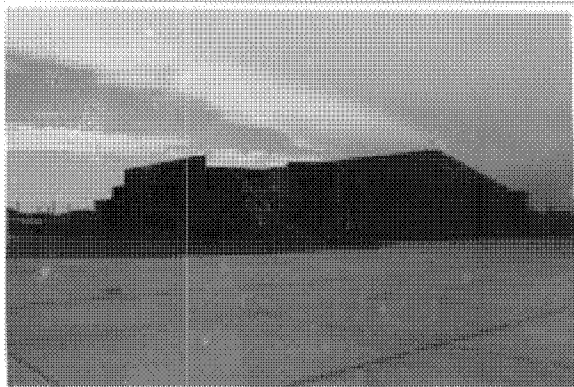
Resource Nos. 6058 and 6059, Real Property
Nos. 256 and 252, Aircraft Corrosion Control,
High-Bay Technical Training (Converted
Hangar)



Resource No. 6060, Real Property No. 258,
Squadron Operations (Maintenance Training)



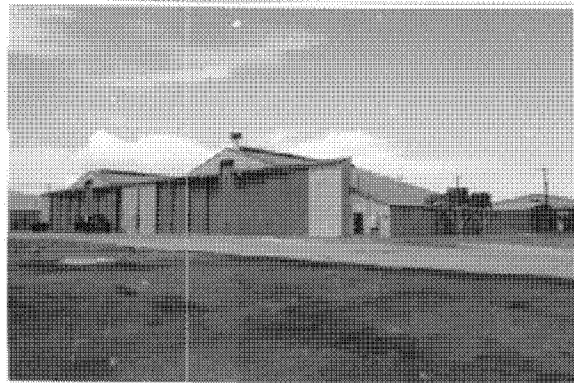
Resource No. 6061, Real Property No. 250,
Squadron Operations (561st Fighter Squadron)



Resource No. 6062, Real Property No. 245,
Maintenance Hangar



Resource No. 6063, Real Property No. 242,
Squadron Operations (Air Warrior)



Resource No. 6064, Real Property No. 239,
Small Aircraft Maintenance Dock



Resource No. 6065, Real Property No. 226,
Small Aircraft Maintenance Dock (Red Flag)



Resource No. 6066, Real Property No. 201,
Squadron Operations (Red Flag)



Resource No. 6067, Real Property No. 232,
General Purpose Aircraft Maintenance



Resource No. 6068, Real Property No. 215,
Air Force Security Service Operations



Resource No. 6069, Real Property No. 1739,
Runner's World Facility



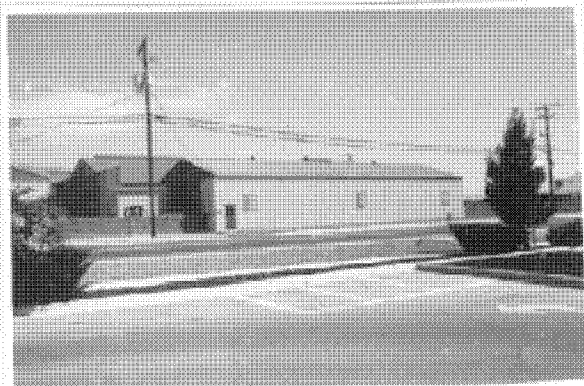
Resource No. 6070, Real Property No. 469,
Training Aids Shop (Adversary Threat)



Resource No. 6071, Real Property No. 200,
Direction/Combat Center Facility (Range
Control)



Resource No. 6072, Real Property No. 470,
Academic Exhibit Facility (The Threat Facility)



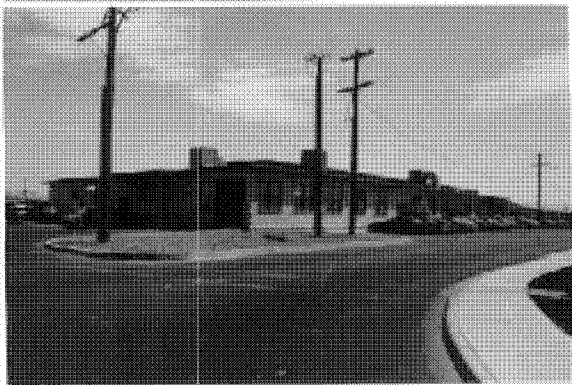
Resource No. 6073, Real Property No. 236,
Base Supplies and Equipment Warehouse



Resource No. 6074, Real Property No. 462,
Base Supplies and Equipment Warehouse
(HazMat)



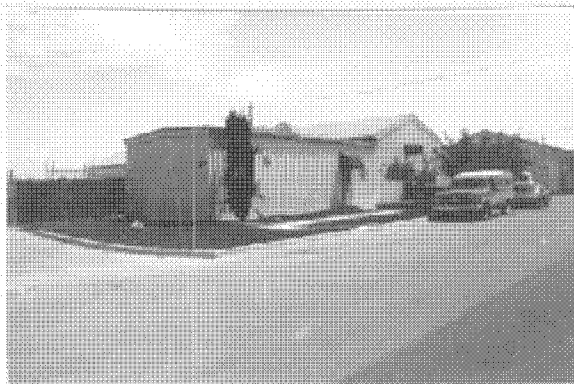
Resource No. 6075, Real Property No. (none),
"Nellis AFB" Rock Sign on U.S. Highway
91/93



Resource No. 6076, Real Property No. 839,
Reproduction Plant



Resource No. 6077, Real Property No. 840,
Automotive Hobby Shop



Resource No. 6078, Real Property No. 838,
Housing Supplies-Storage Facility (Linen
Exchange)



Resource No. 6079, Real Property No. 836,
Housing Supplies-Storage Facility (Furnishings)



Resource No. 6080, Real Property No. 837,
Vehicle Operations Administration



Resource No. 6081, Real Property No. 827,
Vehicle Operations Administration
(Transportation)



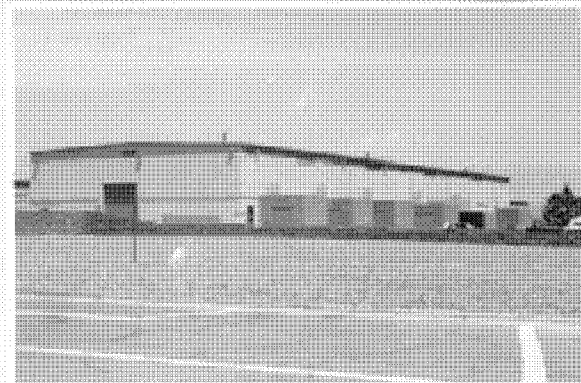
Resource No. 6082, Real Property No. 856,
Petroleum Operations



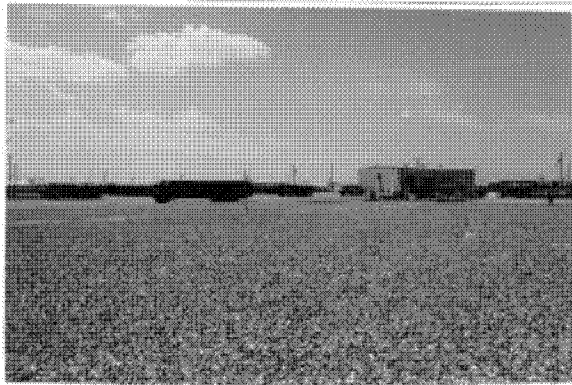
Resource No. 6083, Real Property No. 831,
Vehicle Maintenance Shop



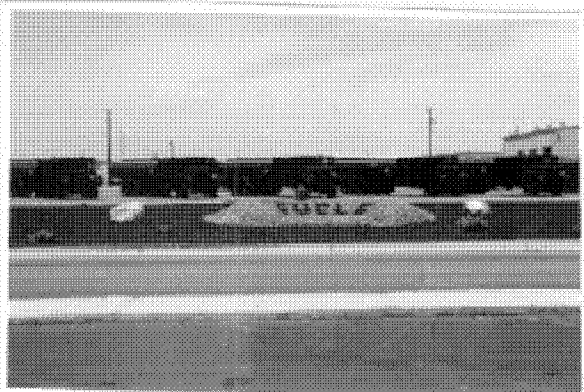
Resource No. 6084, Real Property No. 848,
Aircraft Maintenance Organizational Shop (Red
Flag)



Resource No. 6085, Real Property No. 858,
Jet Engine Inspection and Maintenance Shop
(Propulsion)



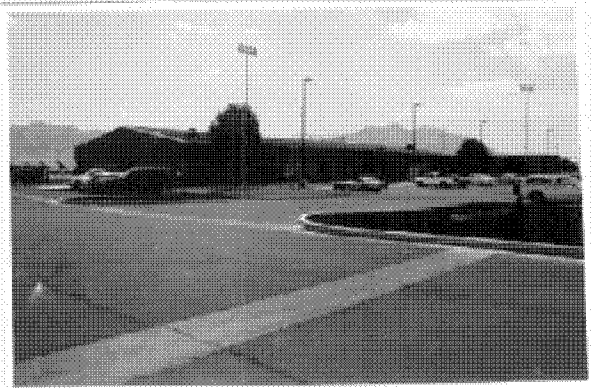
Resource No. 6086, Real Property No. 854,
Refueling Vehicle Shop



Resource No. 6087, Real Property No. (none),
"Fuels" rockscape near Tanker Fleet



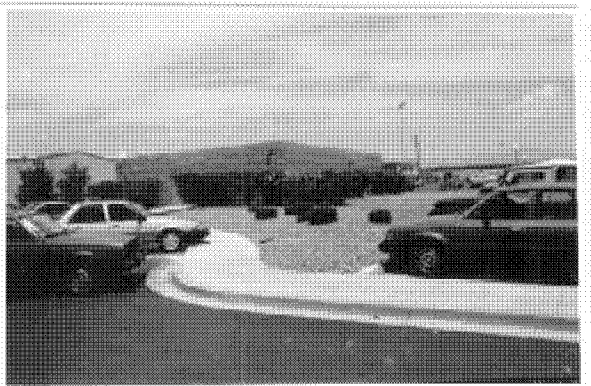
Resource No. 6088, Real Property No. 821,
Aircraft Maintenance Organizational Shop
(Transient)



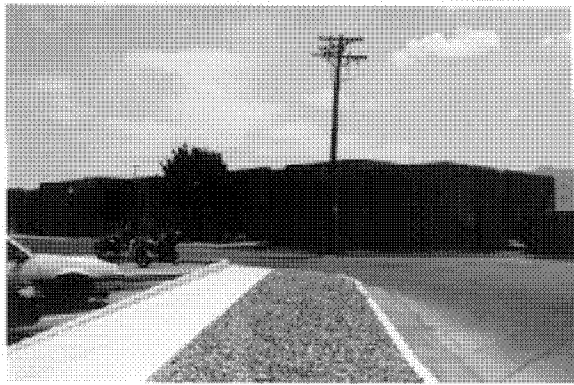
Resource No. 6089, Real Property No. 878,
Squadron Operations (Test and Evaluation)



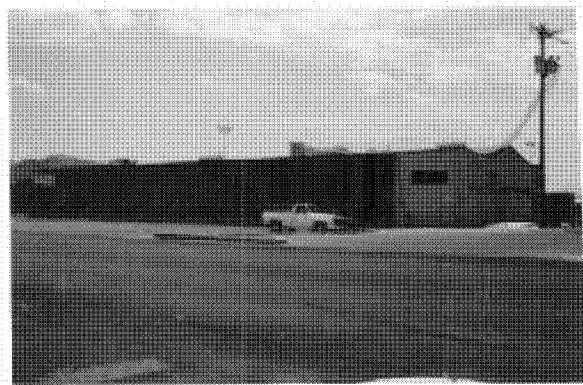
Resource No. 6090, Real Property No. 809,
Traffic Management Facility (Mobility)



Resource No. 6091, Real Property No. 877,
Air Force Headquarters



Resource No. 6092, Real Property No. 882,
Aircraft Maintenance Organizational Shop
(Falcon)



Resource No. 6093, Real Property No. 841,
Base Cold Storage



Resource No. 6094, Real Property No. 826,
Base Supply Administration



Resource No. 6095, Real Property No. 811,
Base Supplies and Equipment Warehouse



Resource No. 6096, Real Property No. 828,
Air Force Office of Special Investigation



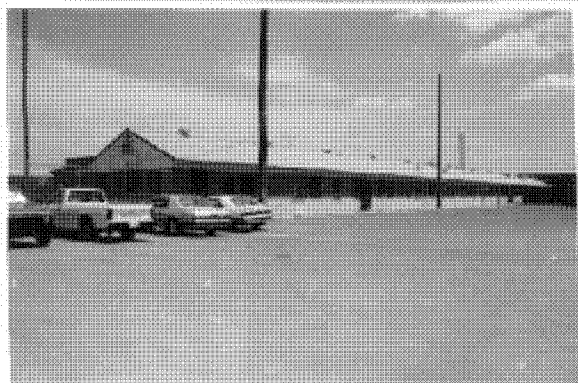
Resource No. 6097, Real Property No. 843,
Base Engineer Covered Storage (Facility
Improvements)



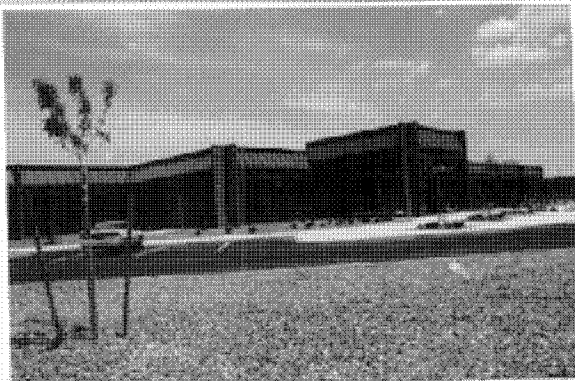
Resource No. 6098, Real Property No. 825,
Base Engineer Administration



Resource No. 6099, Real Property No. 822,
Base Engineer Administration



Resource No. 6100, Real Property No. 817,
Base Engineer Administration



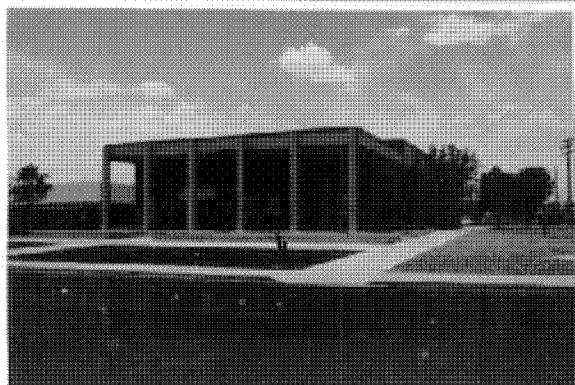
Resource No. 6101, Real Property No. 812,
New Civil Engineering Building



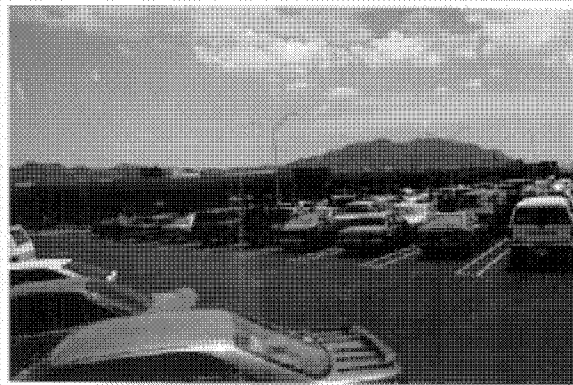
Resource No. 6102, Real Property No. 350,
Exchange Snack Bar (Burger King)



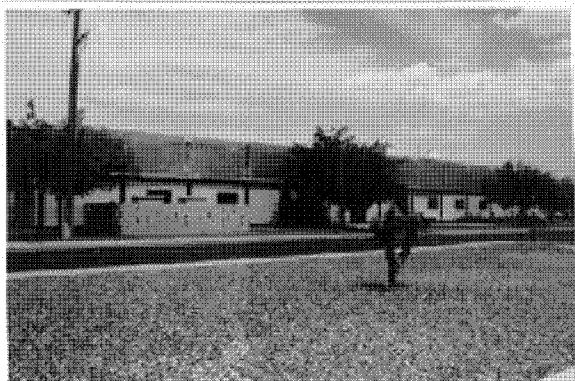
Resource No. 6103, Real Property No. 610,
Arts and Crafts Center



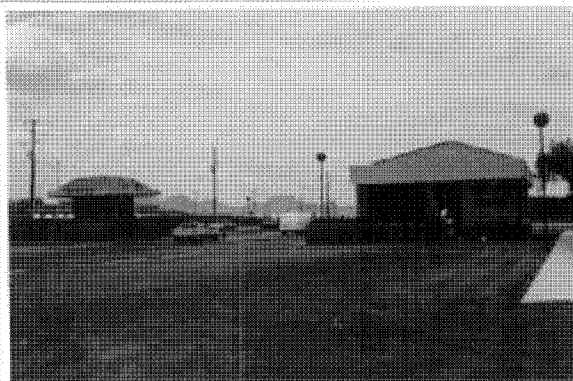
Resource No. 6104, Real Property No. 362,
Base Theater



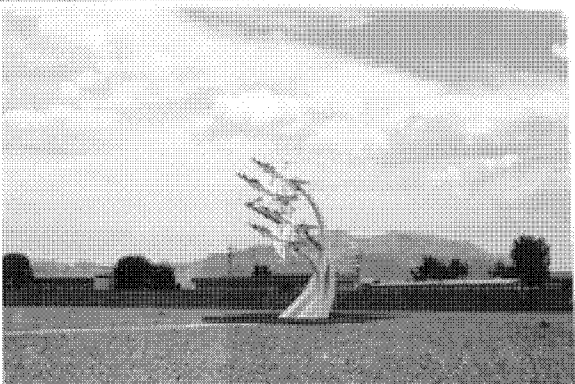
Resource No. 6105, Real Property No. 340,
Exchange Sales Store (Base Exchange)



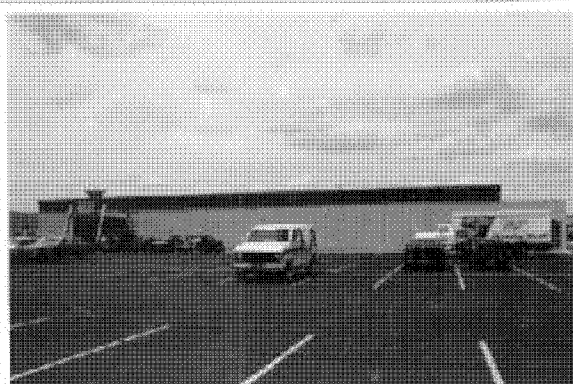
Resource No. 6106, Real Property No. 595,
Communications Facility



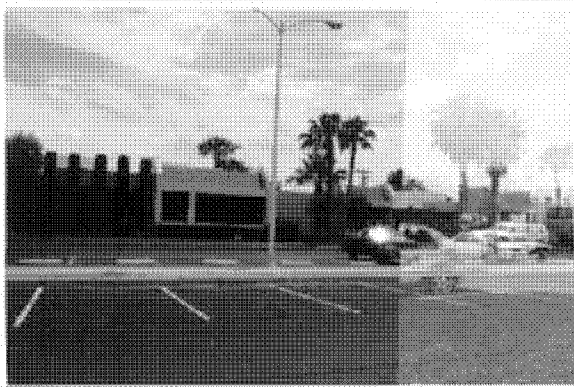
Resource No. 6107, Real Property Nos. 696 and
698, Main Gate Traffic Check House



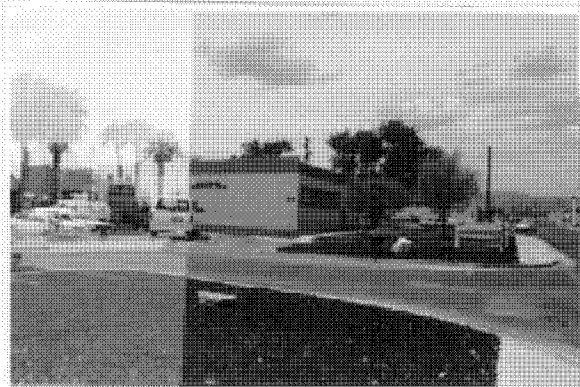
Resource No. 6108, Real Property No. (none),
Thunderbird Static Display at Main Gate



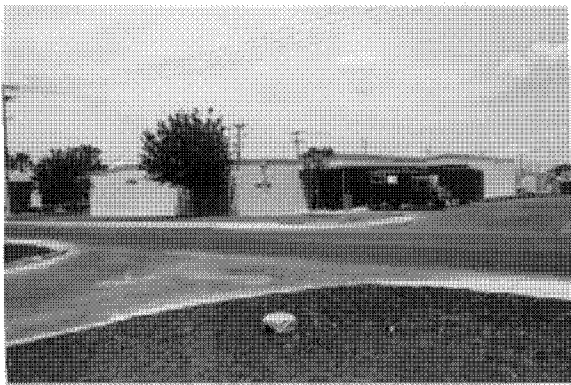
Resource No. 6109, Real Property No. 300,
Bowling Center



Resource No. 6110, Real Property No. 322,
Credit Union



Resource No. 6111, Real Property No. 428,
Exchange-Administration Office



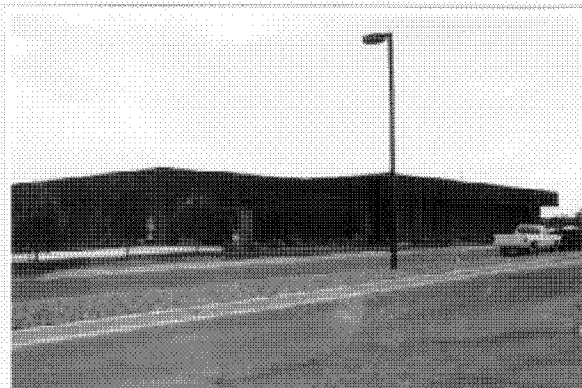
Resource No. 6112, Real Property No. 425,
Precision Measurement Equipment Lab



Resource No. 6113, Real Property No. 434 and
438, Swimming Pool and Bath House Complex



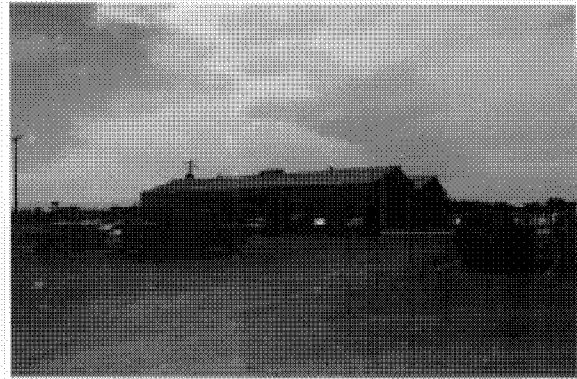
Resource No. 6114, Real Property No. 447,
Avionics Shop (Gold Flag)



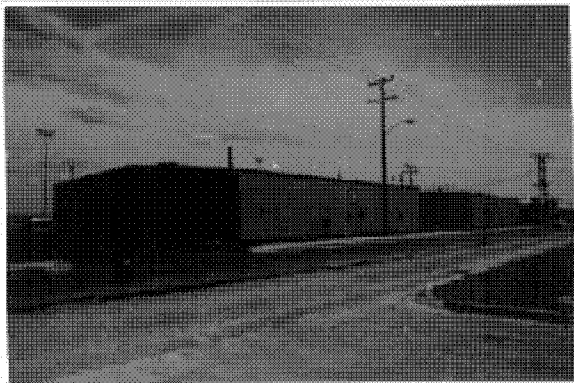
Resource No. 6115, Real Property No. 439,
MWR Supply and NAF Central Storage



Resource No. 6116, Real Property No. 451,
Target Intelligence Training



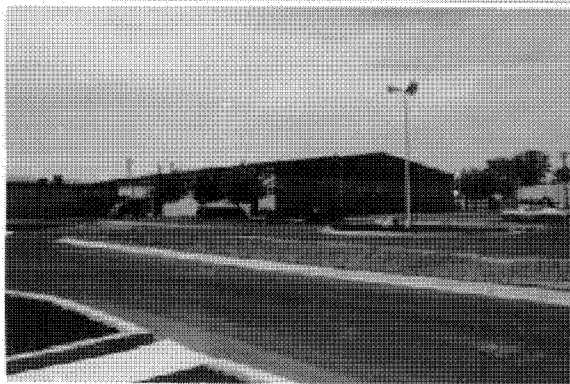
Resource No. 6117, Real Property No. 454,
Clothing Store (Military)



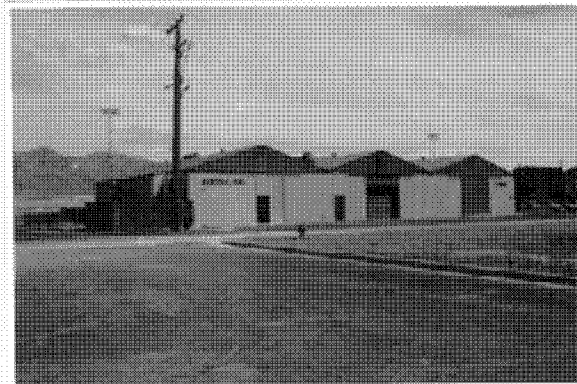
Resource No. 6118, Real Property No. 248,
Aircraft Support Equipment Shop and Storage
Facility



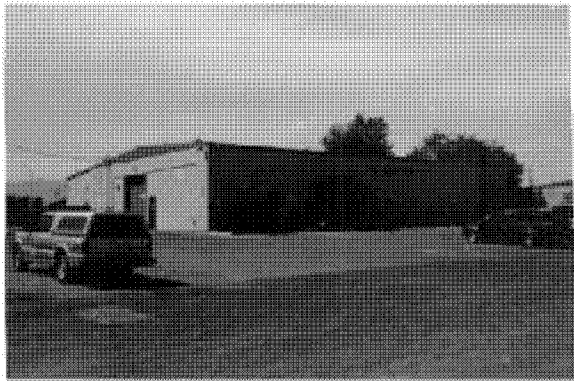
Resource No. 6119, Real Property No. 448,
Avionics Shop (Pneudraulics)



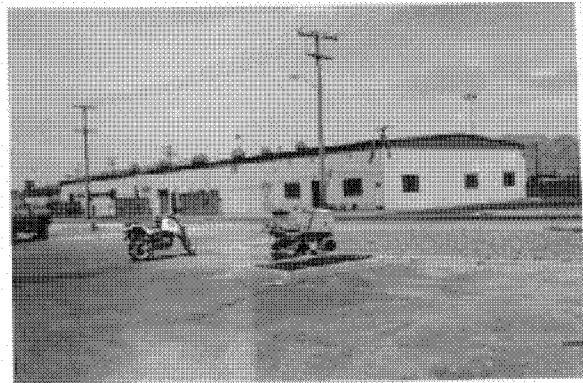
Resource No. 6120, Real Property No. 445,
Avionics Shop



Resource No. 6121, Real Property No. 260,
General Purpose Aircraft Maintenance (Egress)



Resource No. 6122, Real Property No. 443,
Base Supplies and Equipment Warehouse (Shop
Service)



Resource No. 6123, Real Property No. 264,
Weapons and Release Systems Shop
(Armaments)



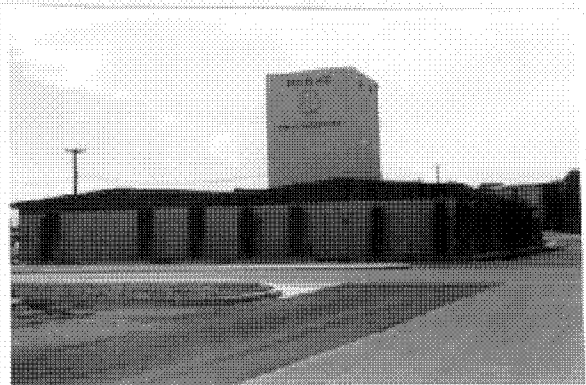
Resource No. 6124, Real Property No. 328,
Group Headquarters (Logistics)



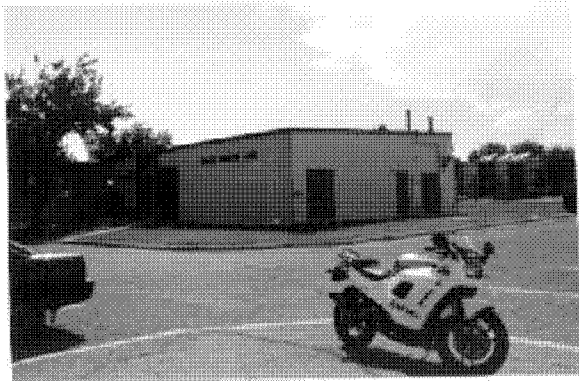
Resource No. 6125, Real Property No. 423,
Avionics Shop (Component Repair Squadron)



Resource No. 6126, Real Property No. 324,
NCO Open Mess (Enlisted Club)



Resource No. 6127, Real Property No. 124,
Survival Equipment Shop



Resource No. 6128, Real Property No. 118,
Base Photo Lab



Resource No. 6129, Real Property No. 122,
Audiovisual Facility



Resource No. 6130, Real Property No. 282,
Flight Training Classroom (Weapons School)



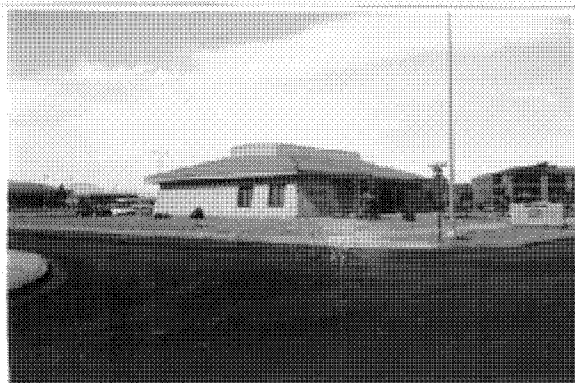
Resource No. 6131, Real Property No. 102,
Squadron Operations (Current Weapons and
Training)



Resource No. 6132, Real Property No. 44,
Squadron Operations (Combat Rescue School)



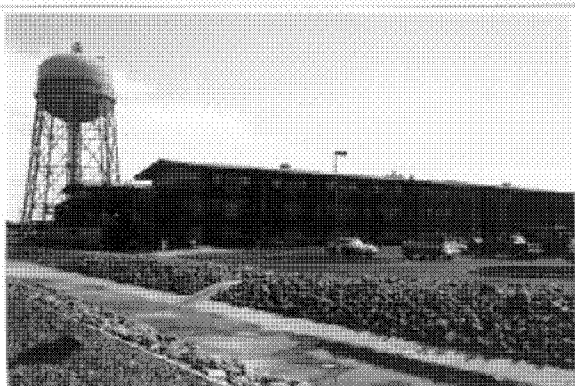
Resource No. 6133, Real Property No. 2,
Special Operations (Security Police)



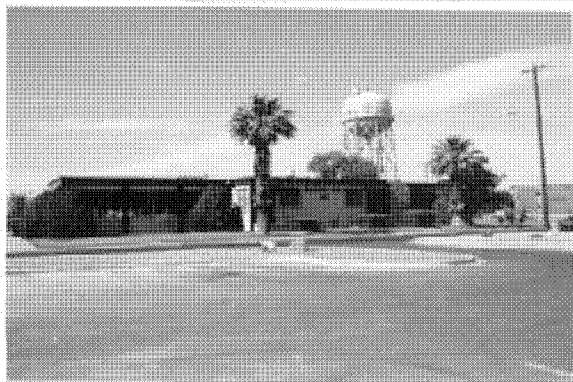
Resource No. 6134, Real Property No. 780,
Group Headquarters (Nellis Inn)



Resource No. 6135, Real Property Nos. 2012
and 2013, Sports Complex with New Pavilion



Resource No. 6136, Real Property No. 552,
Visiting Airman's Quarters (Union Plaza)



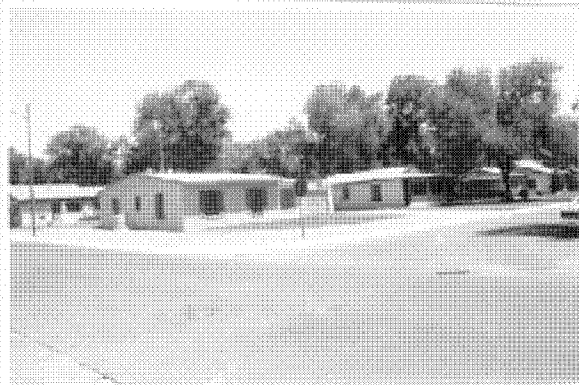
Resource No. 6137, Real Property No. 567,
Airman's Dining Hall (Mt. View Inn)



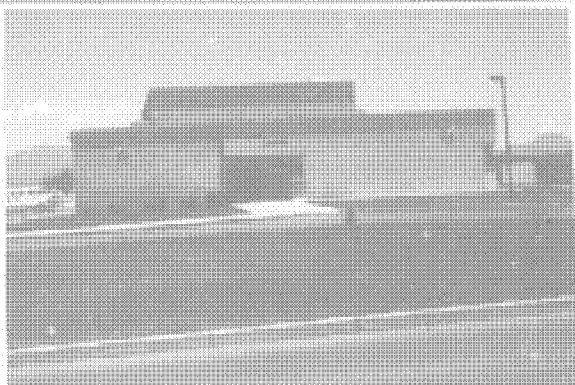
Resource No. 6138, Real Property No. 561,
Water Tank Storage



Resource No. 6139, Real Property No. (none), Freedom Park Static Aircraft Displays



Resource No. 6150, Real Property No. (unknown), Enlisted Accompanied Housing (Manch Manor)



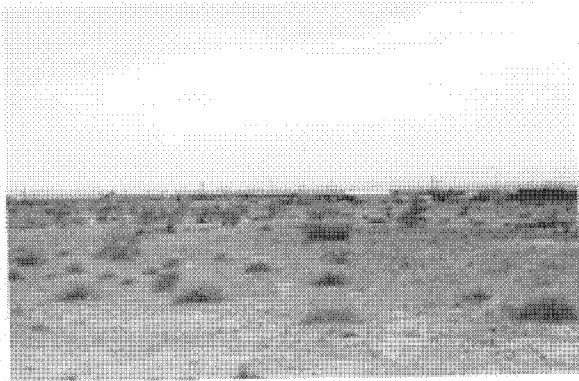
Resource No. 6151, Real Property No. (unknown), Youth Center In Enlisted Housing (Manch Manor)



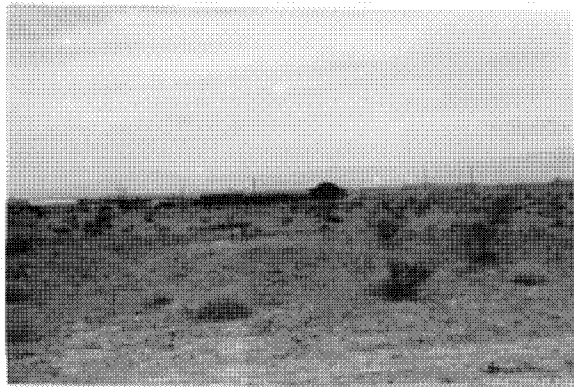
Resource No. 6152, Real Property No. (unknown), Temporary Lodging Facility (Manch Manor)



Resource No. 6153, Real Property No. (unknown), New USAF/VA Hospital



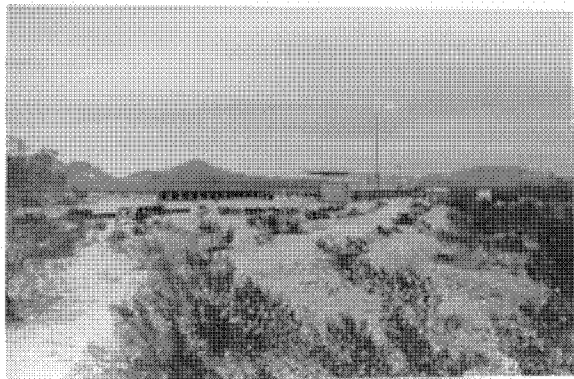
Resource No. 6154, Real Property No. (none), Area 3 Overview (Old Bunkers and City in Distance)



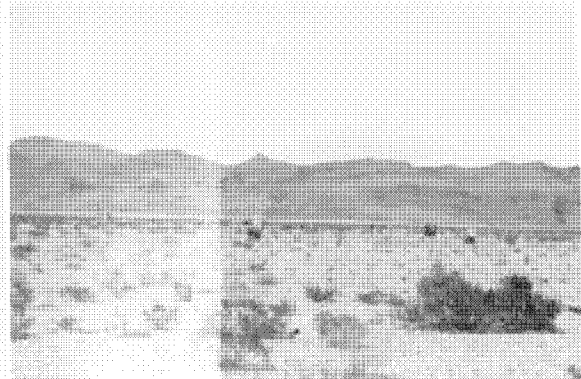
Resource No. 6155, Real Property No. (unknown), Old Warehouse (Area 3)



Resource No. 6156, Real Property No. (none), Small Arms Range-Entrance (Area 3)



Resource No. 6157, Real Property No. (unknown), Small Arms Range-Building (Area 3)



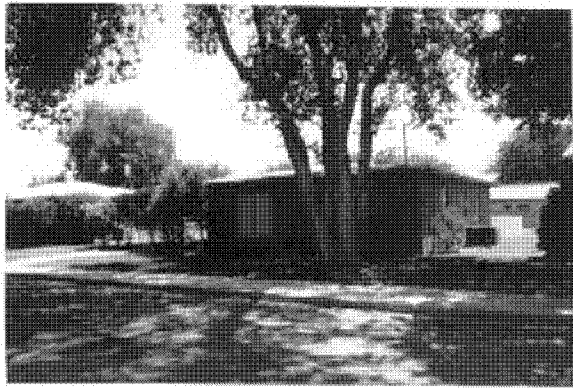
Resource No. 6158, Real Property No. (unknown), Small Arms Range-Targets



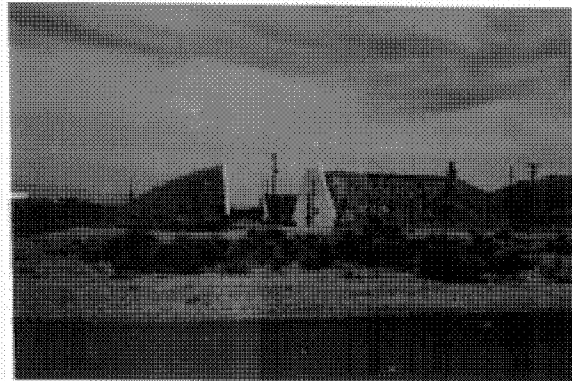
Resource No. 6159, Real Property No. (none), Sign Adjacent to Flightline-"Nellis Flight Line"



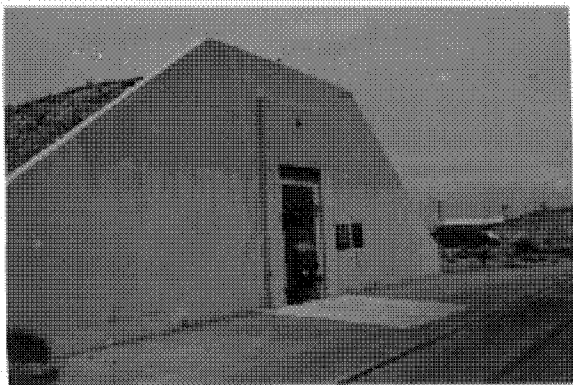
Resource No. 6162, Real Property No. (unknown), Wherry Housing-Nellis Terrace (53 McCarron)



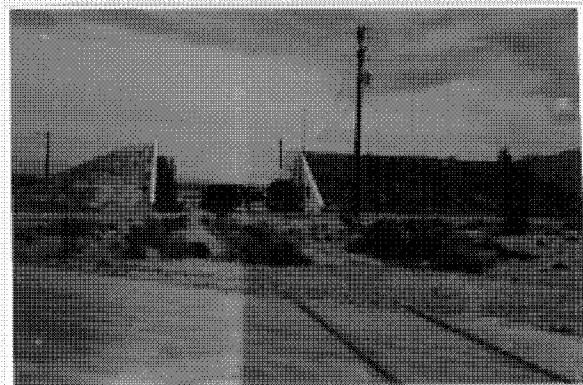
Resource No. 6163, Real Property No. (unknown), Wherry Housing-Nellis Terrace (37 Luke Drive)



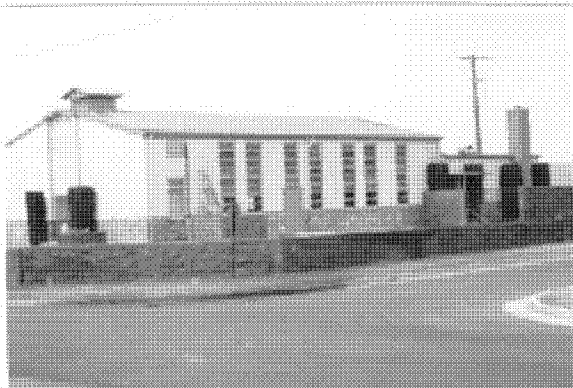
Resource No. 6164, Real Property No. 1045, Base Hazardous Storage (Old Weapons Bunker, Area 3)



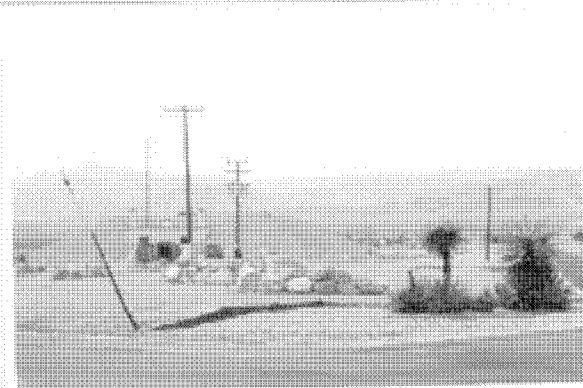
Resource No. 6165, Real Property No. 1048, Spare Inert Storage (Old Weapons Bunker, Area 3)



Resource No. 6166, Real Property No. 1049, Base Hazardous Storage (Old Weapons Bunker, Area 3)



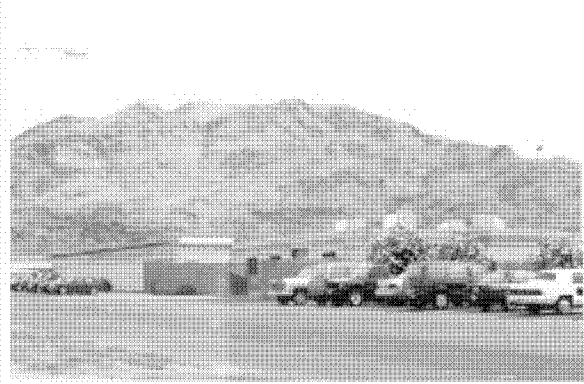
Resource No. 6167, Real Property No. 10250, Federal Prison Facility (Old Chapel, Area 2)



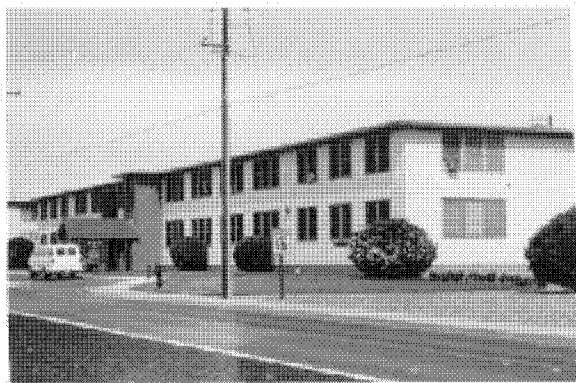
Resource No. 6168, Real Property No. (none), Rockscape and Bunker (Area 2)



Resource No. 6169, Real Property No. (none),
Entrance Sign to 820th Red Horse Squadron
Area



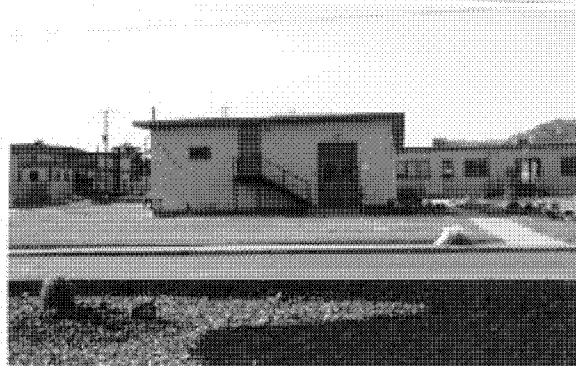
Resource No. 6170, Real Property Nos. 10124
and 10118, Red Horse Facilities (Storage and
Maintenance, Area 2)



Resource No. 6171, Real Property No. 10202,
Federal Prison Facility (Dormitory, Area 2)



Resource No. 6175, Real Property No. 10203,
Federal Prison Facility (Dormitory, Area 2)



Resource No. 6176, Real Property No. 10204,
Federal Prison Facility (Old Theatre, Area 2)



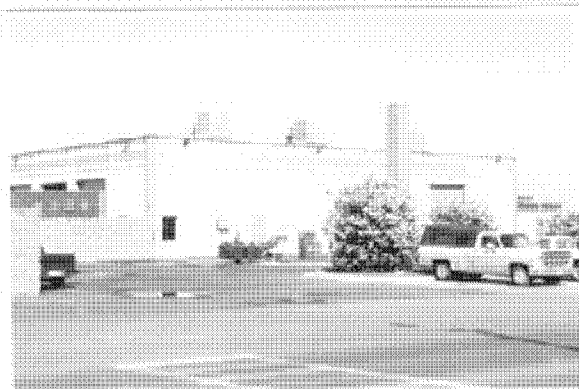
Resource No. 6177, Real Property No. 10236,
Gymnasium (Area 2)



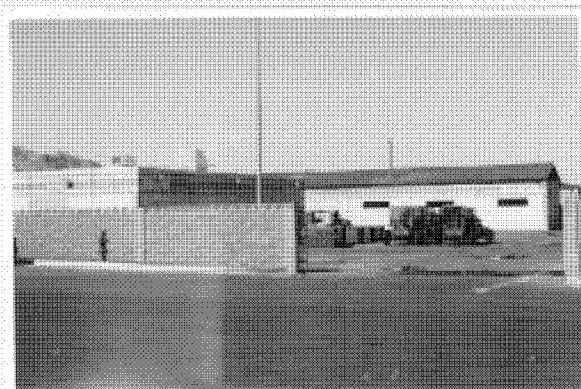
Resource No. 6178, Real Property No. 10207,
Heating Facility Building (Boiler Plant, Area 2)



Resource No. 6179, Real Property No. 10201,
Federal Prison Facility (Dormitories and
Offices, Area 2)



Resource No. 6180, Real Property No. 10116,
Vehicle Maintenance Shop (Area 2)



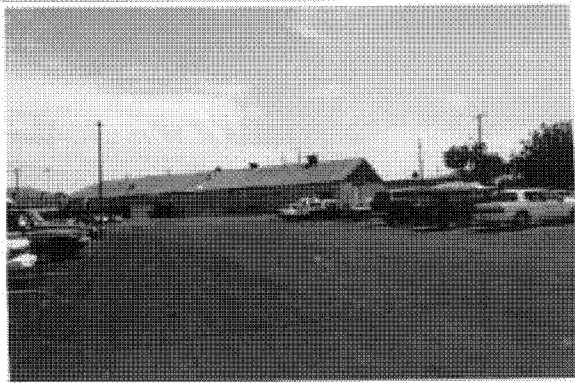
Resource No. 6181, Real Property No. 10120
and 10121, Base Maintenance Shop and Base
Storage Facility (Area 2)



Resource No. 6182, Real Property No. 10220,
Fire Station (Area 2)



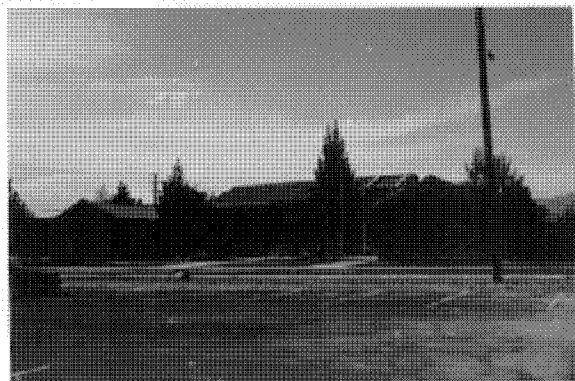
Resource No. 6183, Real Property No. 10108,
Conventional Munitions Shop (Area 2)



Resource No. 6184, Real Property No. 415,
Aircraft Support Equipment Storage (Electronic
Warfare)



Resource No. 6185, Real Property No. 98,
Group Headquarters (Test Group)



Resource No. 6186, Real Property No. 571,
Group Headquarters (Services Squadron)



Resource No. 6187, Real Property No. 586,
Field Training Detachment Facility

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT NELLIS AFB

Resource Number: 6001

Property Description: The Headquarters Center facility accomodates the staff offices of the various organizations that comprise the Weapons & Tactics Center (WTC).

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 4370 N. Washington Blvd.

Base Map Date: 2/10/93

Base Map Building Number: 620

Operational Support & Installations: Base and Command Centers

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Command Center

Statement of Significance: The Headquarters Center is the focal point for the WTC, one of three remaining centers in the U.S. that are responsible for localized, specific mission areas vital to the Air Force as a whole. These centers, including the WTC at Nellis, were established in the 1960s to meet the growing demands of the Southeast Asian conflict, an important event in the Cold War chronology.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: The center is in good condition, appears well-maintained, and is currently in use. The building does not meet the 50 year criterion for National Register listing, but it has exceptional significance, which would qualify it despite its age.

Importance: Exceptional

Eligibility: Eligible

Height: 30
Square Footage: 32396
Original Planned Duration: Permanent
Existing Use: Headquarters for WTC (Weapons and Tactics Center)
Other Use/Dates: None evident.
Comments on Use: Modification of communication port to operational status in 1970, and utility related improvement to 1989. Building construction and landscaping is typical of a significant administration center.
Primary Building Materials: Reinforced Concrete
Character Defining Features: Exterior signage and landscaping ("Bomb Shelter" sign noted near exterior stairs).

Resource Number: 6051

Property Description: This Maintenance Hangar supports aircraft maintenance, repair and inspection activities for the Thunderbird air demonstration squadron fleet. A portion of the hangar has been converted to a museum, housing Thunderbird memorabilia from 1956 to the present.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 4445 Tyndall Ave.

Base Map Date: 2/10/93

Base Map Building Number: 292

Operational Support & Installations:

Combat Weapons and Support Systems: Maintenance Docks/Hangars

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Maintenance Hangar

Statement of Significance: This hangar, built in 1942, meets the 50 year criterion for National Register listing and it has housed the Thunderbirds since 1956. This is the only hangar at Nellis that maintains a direct link with the squadron it supported during three decades of the Cold War. It thereby contributes to Nellis' role in the Cold War, and also epitomizes Nellis' base slogan, "Home of the Fighter Pilot".

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Based on our data, the Thunderbird Hangar and Museum appears to qualify for the National Register by meeting significance requirements as discussed above, and also by meeting the 50 year criterion. Further documentation, including an in-depth architectural analysis, is recommended to confirm eligibility. Stewardship is recommended in the interim, although threats appear low since the building is currently in use.

Importance: Exceptional
Eligibility Eligible
Height: 30
Square Footage: 45021
Original Planned Duration: Permanent
Existing Use: Thunderbird Hangar and Museum
Other Use/Dates: Original use as a maintenance hangar, field, then an aircraft engine inspection and repair shop, squadron operations, the back to a maintenance hangar. Date are unclear.
Comments on Use: Exterior is painted white with red and blue and has a large thunderbird name and emblem.
Primary Building Materials: Corrugated metal siding/concrete
Character Defining Features: Round roof and solid sliding doors.

Resource Number: 6066

Property Description: This Squadron Operations building is used as an operational building for Red Flag training activities. The building is used for planning mission assessment debriefings, and administration.

Associated Property: 6065 (bldg. #226 is maintenance dock that supports Red
Non-Inventoried Association: Maintenance docks (bldg. nos. 224 & 222) that support Red Flag, photographed and logged as a complex.

Sub-installation:

Address: 3662 Tyndall Ave.

Base Map Date: 2/10/93

Base Map Building Number: 201

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities: Combat Training

Material Development Facilities:

Intelligence:

Property Type: RED FLAG Facility

Statement of Significance: The Red Flag building is the focus for planning and administration for all Red Flag activities, which include realistic combat training (on the Nellis Range Complex) for all U.S. armed forces branches and for Allied nations. Red Flag is one in a series of advanced training programs that develops readiness to deter war or to fight and win any conflict. Results increase the combat capability of the armed forces in any future combat situation. Red Flag is operated by WTC and is associated with Phases III and IV of the Cold War.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	18
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Building is in good condition, appears well-maintained, and is actively used. It is exceptionally significant and thus is NRHP eligible.

Importance: Exceptional

Eligibility: Eligible

Height: 30
Square Footage: 73136
Original Planned Duration: Permanent
Existing Use: Squadron Operations for Red Flag
Other Use/Dates: None evident.
Comments on Use: Significant addition in 1984 did not change use -
apparently to assist Red Flag mission. Exterior
signage denoting Red Flag.
Primary Building Materials: Concrete Masonry Unit/Concrete

Resource Number: 6072

Property Description: The Threat Facility is used as a museum for the purpose of housing and placing on exhibit equipment of foreign origin that are used as training aids. Exhibits include memorial items. In entry way: 10 frames each on wall; in display case are hats, plaques, munitions, Soviet souvenirs in a jewelry case, money, Soviet uniform button, and 3 pens displayed, 2 with Lenins's force and 1 Lenin Statue; and Yemen flight suit on mannequin. In Main Hall: 6 aerial views of facility showing evaluation of The Threat Facility from 1976-91; 4 framed posters "Be ready at Your Post," "In the Guards Peace and Work," "Soviet Glory," and "Swear in Truth to the Country, the Party, the People," all depicting Soviet propoganda; 2 frames with information sheets on various enemy aircraft titled "This is the Threat;" Posters of tanks, 1915-1982; Guns and scale aircraft models, mostly of Soviet items. Actual weaponry displays are described in booklets and will not be repeated here. Exhibits include pre-Cold War items (WWII and other), although the major focus in on threats that were important during the Cold War and continuing today.

Associated Property:

Non-Inventoried Association: Adversary Threat training aids shop (bldg. 469/MAI 6070), adjacent to the Threat Facility, was photographed and logged.

Sub-installation:

Address: 3802 Tyndall Ave.

Base Map Date: 2/10/93

Base Map Building Number: 470

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities: Combat Training

Material Development Facilities:

Intelligence:

Property Type: Threat Facility Collection

Statement of Significance: The Threat Facility collection simulated enemy technology and weaponry for use in realistic war situations. The collection's significance lies in the captured, donated, and recreated exhibits it contains. The primary focus is on Soviet weapons technology.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	21

Comments on Threats: Percentage of historic fabric is calculated from the exhibits within the Threat Facility, which are the focus of the resource. The building itself has constantly been expanded since its function was changed to the Threat Facility in the mid 1970s. Therefore, the historic fabric of the building is at 26-50%.

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: The Threat Facility collection is kept in excellent condition.

Importance: Exceptional
Eligibility Eligible

Height: 20
Square Footage: 17321
Original Planned Duration: Permanent
Existing Use: Threat Facility Academic Exhibit Facility
Other Use/Dates: 1972-1976/ Heavy Equipment Shop and Vehicle Maintenance Shop
Comments on Use: According to the real property card, the building was constructed in 1972, and was relocated and renovated in 1976 (this is date completed on real property printout.) Additions to square footage and utility improvements have been made to enhance use as exhibit facility.
Primary Building Materials: Metal/Concrete
Character Defining Features: Concrete enclosure with partial metal roof adjacent to main building, to house large weaponry. Flat roof with few windows to protect exhibits.

Resource Number: 6130

Property Description: The Weapons School provides classroom space for flying training programs.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: 4269 Tyndall Ave.

Base Map Date: 2/10/93

Base Map Building Number: 282

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities: Combat Training

Material Development Facilities:

Intelligence:

Property Type: Weapons School

Statement of Significance: The Air Force recognizes the critical importance of the Weapons School to the readiness and combat capability of worldwide combat air forces. The school provides state of the art training in weapons technology and provides a pool of squadron instructors.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Significance is exceptional, and integrity appears to be intact. Recommended as eligible. Further documentation recommended to nominate, and stewardship recommended to retain integrity.

Importance: Exceptional

Eligibility: Eligible

Height: 10
Square Footage: 42383
Original Planned Duration: Permanent
Existing Use: Weapons School Flying Training Classroom
Other Use/Dates: Original use for aircraft and weapons training.
Comments on Use: Additions in square footage reflect utility improvements, not changes in utilization.
Primary Building Materials: Concrete Masonry Unit
Character Defining Features: Exterior signage. Architecture is typical of a one-story, classroom building.

Resource Number: 6188

Property Description: The Documentary Collection located in the Civil Engineering Drawing Room consist of 2 cabinets of flat files (20 drawers total), and 23 cabinets of individual building specifications. The cabinets with individual building specifications in hanging files include 19 cabinets that are arranged by real property (building) number, in many cases with very bad labels-some have labels upside down. All are locked. Appear to contain originals/mylars by building in hanging files. Two cabinets are labeled Master Plan Files (one open and unlocked contained utility mylars at least as early as the 1980s). One cabinet is labeled Area II buildings. The last is master plans for projects organized by FY (1987-1993). In the corner are a few rolled maps stored in wooden floor cabinets. One roll is 1944-1945 originals on linen-utilities. Others appear to be more recent mylars, topos with base housing, blue lines for demo, etc. Collection also includes enlarged aerial photos, building specifications, and building designs.

Associated Property:

Non-Inventoried Association: Civil Engineering Building 812

Sub-installation:

Address: 6020 Beale Ave.

Base Map Date: 2/10/93

Base Map Building Number: inside 812

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: The flat files in the Civil Engineering Office contain numerous base layouts and other maps related to Nellis, Lake Mead Base, and Indian Springs, many that span the Cold War period. They are a valuable source of information regarding base development and history. Information contained in the cabinets is valuable as a supplement for real property studies.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	17

Comments on Threats: In general, there are few threats to the files since they are kept in a secure, climate controlled room. It was noted that Nellis retains many older maps, dating to the early periods of the Cold War, so it does appear that they are regarded as important.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	Inventory and copy these items. Keep originals in permanent curatorial facility. Keep copies at base.

Object Condition:	Being Preserved
Record/Document Category:	Architectural Drawings and Photos
Year of Document:	Various
Period of Association:	All Cold War Phases-1940s to 1990s

Resource Number: 6189

Property Description: Historical data sources in Real Property Office. Historical Property Surveys include 1946 Analysis of Existing Facilities in a master planning document for Las Vegas Army Airfield; a 1957 Real Property Study includes: Roosevelt 1942 EO revoking land; 1951 map for Preliminary Master Plan for Nellis; various letters discussing the lands in original gunnery range; and a staff study of Desert Game Refuge around 1956; Base Civil Engineering Information Brochure by TAC in 1970; Installation Survey Report for EO 1940; Real Property Study 1986 includes aerial photos in appendix and base maps 1977-1982 with building numbers. Collection also includes maps, photographs, aerial photos, and brochures.

Associated Property: 6190-other photos in same office

Non-Inventoried Association: Civil Engineering Building 812

Sub-installation:

Address: 6020 Beale Ave.

Base Map Date: 2/10/93

Base Map Building Number: inside 812

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: The historical sources in the Real Property Office offer valuable data regarding base development for all phases of the Cold War.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 18

Comments on Threats: Although these references are well looked after by the real property office staff, they receive a moderate ranking for severity of threats since they are not in a truly secured area.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Inventory and copy collection. Keep copies at base, send originals to a curatorial facility for stewardship and conservation.

Object Condition: Being Preserved
Record/Document Category: Books, photos, brochure
Year of Document: Various
Period of Association: All Cold War Phases-1946 to 1986

Resource Number: 6190

Property Description: Three folders of photographs of weapons storage facilities in Area 2, taken in 1969, that are kept in the real property office. Buildings included are: trash incinerators (300-302), warehouses (303-304), small sheds (305-306), electrical stations (307), flammables (308-311), munitions bunkers (321-326, 402-404, 406, 410-414, 416, 1075), metal shed (407), EVAC AMMO concrete bunkers (408-409), metal sided large shed (417), loading docks (418), water tower (420), flammables shed (421), observation "pill box" (510), watch towers (1102-1103).

Associated Property: 6189-historical resources in same office

Non-Inventoried Association: Civil Engineering Building 812

Sub-installation:

Address: 6020 Beale Ave.

Base Map Date: 2/10/93

Base Map Building Number: inside 812

Operational Support & Installations:

Combat Weapons and Support Systems: Documentation

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Photograph Collection

Statement of Significance: These photographs provide valuable information about weapons facilities in Area 2 at Nellis. The photos were taken during the height of use of the area for weapons storage, a function which was Cold War related. The exact nature of the weapons stored there is unclear. The photos are particularly important as they document an area that is secured, even today.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 19

Comments on Threats: As with the historical documents in the Real Property office, a moderate threat is identified only because the photos are not stored in a secured area.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Inventory and copy the collection. Keep the copies at the base. Send the originals to a curatorial facility.

Resource Number: 6191

Property Description: Collection in WTC historian's office. Photos stored in various locations. Drawer of many b/w and color photos, slides, and negatives of personnel, aircraft, activities and ceremonies, and early base photos-some aerals. Some include a photo of commemorative plaque of Lt. Nellis, package of 554th Operations Support Wing, aerals of ranges-air strips-Red Flag exercises, aerals of Indian Springs 1971, 3 bound volumes of b/w 8 x 10s of early officers-1950s. On file cabinets are 3 boxes with misc. photos large and small, 1 box of dry mounted photos, 1 photo album of pictures and newspaper clippings:Indian Springs, Nevada Test Site, and firefighters. There are 23 bound volumes of slides, which include Nellis, 474th, 57th wing maintenance, aircraft, Maple Flag, Red Flag, and Gunsmoke exercises. On top of classified safes, large dry mounted photos of bombing range/test site and landing strips in desert; also 1 large aerial photo of Nellis 1964. Collection also includes a newspaper collection, cassette tapes of oral histories, movie reels and video tapes, historical documents, and letters. Historical artifacts include public affairs posters, banners/flags (one from the Fighter Weapons Center and one from 443rd Tactical Training Group), 3 large certificates of merit, guidebooks for change of command, miscellaneous guidebooks and photographs.

Associated Property: In WTC Headquarters (Building 620); MAI 6192-6195)

Non-Inventoried Association:

Sub-installation:

Address: 4370 N. Washington Blvd.

Base Map Date: 2/10/93

Base Map Building Number: inside 620

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: The photo archives in the WTC historian's office document the activities of the center and all of its operations (Red Flag, etc.). They are primarily associated with the latter phases of the Cold War, since the WTC did not come to Nellis until the 1960s.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1

Total Score for Priority Matrix: 17

Comments on Threats: The Center historian's office is secured and photos are well organized.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Inventory and copy resources. Transcribe oral histories. Keep copies at base; send originals to curatorial facility for curation.

Object Condition: Being Preserved

Record/Document Category: Photograph

Year of Document: Various

Period of Association: 1960s to 1990s (Cold War Phases III-IV, primarily

Resource Number: 6196

Property Description: Historical data sources in 57th Wing Historian's office include: classified wing histories; sanitized wing histories 1981-1989; maps of flightline and Red Horse area; standard collection of historical works from Office of History at Bolling AFB; photographs; and maps. Memorabilia includes captured Russian rifle from the Vietcong presented to the 429th Tactical Fighter Squadron in 1965; large collection of hats and badges; plaques; awards from Korea; box marked 474th of assorted photos and plaques; framed and dry-mounted photos; boxed new blue banner for 57th Fighters Weapons Wing; large poster, rolled, F-100 turbo engine; box of presidential photos; trophies, including various sports awards. On the walls outside the office are photographs of various commanders and squadrons, groups, and wings; and five wall plaques with ACC vision, quality, mission, style, and goals.

Associated Property: 57th Wing Headquarters building (Building No. 7); MAI
Non-Inventoried Association:
Sub-installation:
Address: 4430 Grissom
Base Map Date: 2/10/93
Base Map Building Number: inside 7

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Documentary Collection

Statement of Significance: The significance of this collection is primarily related to its relationship to the 57th Wing, and mainly reflects activities of the wing during the Phase IV of the Cold War period.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	4
Temporal Phase Relationship:	1
Level of Importance:	2
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	14

Comments on Threats: Collections are maintained in the Wing Historian's office which is secured.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	Inventory and copy collection. Keep copies at base. Send originals to curatorial facility.

Object Condition: Being Preserved
Record/Document Category: Books, photos, maps
Year of Document: Various
Period of Association: Collection is associated with Cold War Phase IV,
1981-1989, after the wing was reactivated.

APPENDIX E:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Nellis AFB, and to provide research materials for this study:

Mary Ann Cox
Chief of Real Estate
Real Property Officer
558 CES/CER
6048 McGouch Pkwy
Nellis AFB, Nevada 89191-7247
(702) 652-3302

SrA Kenneth Lewis
Wing Historian
57 Wing/HQ
4430 Grissom Avenue, Suite 206
Nellis AFB, Nevada 89191-6521
(702) 652-2801

Lila Edwards
Public Affairs
WTC/PA
4370 N. Washington BLVD, Suite 223
Nellis AFB, Nevada 89191-7078

Captain Foti
Drawing Room
Civil Engineering Office
558 CER/CERR
6048 McGouch Pkwy
Nellis AFB, Nevada 89191-7247
(702) 652-8442

Jim Patrick
Cultural Resources Management
WTC/EV
4553 Devlin Drive
Nellis AFB, Nevada 89191-5000
(702) 652-9367

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-23: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT OFFUTT AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Lori E. Rhodes
Patience Elizabeth Patterson
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

October 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Offutt Air Force Base was inventoried by Patience Elizabeth Patterson and Lori E. Rhodes of Mariah Associates, Inc., between July 6 and 19, 1994, as part of the Air Combat Command Cold War study. Information was gathered at the base from the United States Strategic Command Historian, the Wing Historian, the Chief of Cultural and Natural Resources and his staff, 55th Civil Engineering Squadron Drawing Room staff, and the Real Property Office personnel. On-site inspections were also conducted. During this research and inspection, property types were identified and then photographed.

A significant number of material culture resources were identified as relating to the Cold War era, and thus to the scope of this study. Most of these relate to the role of Offutt Air Force Base as Strategic Air Command headquarters during all phases of the Cold War period, as described in the historic context and methodology document produced for this project (Lewis et al. 1995).

Twenty resources on the base were more fully documented and evaluated as important to the base and national Cold War context. The most significant buildings evaluated are those related to Strategic Air Command Headquarters and the Commander in Chief, and to the Post-Attack Command & Control System and National Emergency Airborne Command Post operations, and to reconnaissance and communications survivability. One building, the Strategic Air Command Memorial Chapel, was identified as an important property reflecting the social aspects of the Cold War period. The Silver Creek low-frequency transmitter site, located off-base, was an additional focus of this study due to its significant role as a vital, survivable communication link for Strategic Air Command during the last two Cold War phases. Archival resources and memorabilia were evaluated as well, many of them associated with these significant resources.

Recommendations for treatment of these evaluated resources range from stewardship to nomination for listing on the National Register of Historic Places. Two resources are already listed on the National Register of Historic Places, six are recommended as eligible, and one is

recommended as potentially eligible. Five resources do not currently meet the eligibility requirements for listing on the National Register of Historic Places. These resources are recommended for re-evaluation when they meet the 50 year criterion. Stewardship is recommended for a collection of objects, and further documentation, stewardship, and conservation are recommended for the six documentary resources.

LIST OF ACRONYMS

ACC	-	Air Combat Command
ACCS	-	Airborne Command and Control Squadron
ACHP	-	Advisory Council on Historic Preservation
ACOM	-	United States Atlantic Command
AFB	-	Air Force Base
AFIA	-	Air Force Intelligence Agency
AFMC	-	Air Force Materiel Command
AFSPACECOM	-	Air Force Space Command
AGE	-	Air Ground Equipment
ALCS	-	Airborne Launch Control System
AMC	-	Air Mobility Command
AMMS	-	Airborne Missile Maintenance Squadron
AMS	-	Avionics Maintenance Squadron
CES	-	Civil Engineering Squadron
CINCSAC	-	Commander in Chief of Strategic Air Command
CINCSTRAT	-	Commander in Chief of the United States Strategic Command
CMAH	-	Commander in Chief Mobile Alternate Headquarters
DoD	-	Department of Defense
EMP	-	Electromagnetic Pulse
FMS	-	Field Maintenance Squadron
FTD	-	Field Training Detachment
GWC	-	Global Weather Central
HABS	-	Historic American Buildings Survey
ICBM	-	Intercontinental Ballistic Missile
JSTPS	-	Joint Strategic Target Planning Staff
MAC	-	Military Airlift Command
Mariah	-	Mariah Associates, Inc.
MMS	-	Munitions Maintenance Squadron
NCO	-	Non-Commissioned Officer
NEACP	-	National Emergency Airborne Command Post
NHPA	-	National Historic Preservation Act
NORAD	-	North American Aerospace Defense Command
NPS	-	National Park Service
NRHP	-	National Register of Historic Places
OCONUS	-	Off the Continental United States
OMS	-	Organizational Maintenance Squadron
PACCS	-	Post Attack Command and Control System
PAS	-	Primary Alerting System
PME	-	Precision Measurement Equipment
RAPCON	-	Radar Approach Control Center
SAAC	-	Strategic Analysis and Application Center

LIST OF ACRONYMS (Continued)

SAC	-	Strategic Air Command
SALT	-	Strategic Arms Limitation Treaty
SDI	-	Strategic Defense Initiative
SHPO	-	State Historic Preservation Officer
SIOP	-	Single Integrated Operational Plan
SLBM	-	Submarine Launched Ballistic Missile
START	-	Strategic Arms Reduction Talks
STRATCOM	-	United States Strategic Command
TAC	-	Tactical Air Command
USAAF	-	United States Army Air Force
USAF	-	United States Air Force
USAFE	-	United States Air Forces in Europe

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Berlin Airlift - when the Soviet Union blocked all routes into the city of Berlin in an attempt to take control of the city, the west responded by airlifting food and other supplies into the city.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Flexible Response - a military strategy adopted by President Kennedy whereby the type of response to enemy aggression is dependent upon the nature and seriousness of that aggression. Under this strategy, nuclear weapons are used for only two purposes: for deterrence and as a weapon of last resort.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Command Authority - the President and the Secretary of Defense, who are responsible for making final decisions about the use of U.S. nuclear weapons.

National Emergency Airborne Command Post - one of three National Military Command Centers that directly supports the National Command Authorities and the Joint Chiefs of Staff. In the event of a national emergency, this airborne command post provides a survivable means of executing National Command Authority war orders.

GLOSSARY (Continued)

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Post Attack Command and Control System - a system of airplanes that could serve as U.S. command posts should command centers on the ground become inoperable. These modified Boeing 707 aircraft were originally supervised by the Strategic Air Command. They are now under the control of U.S. Strategic Command.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Single Integrated Operational Plan - the top-secret U.S. plan for fighting a full-scale nuclear war. It is a comprehensive plan that takes into account all details for waging a nuclear war, and includes Great Britain's war plans. It was first developed during the Eisenhower administration, and is continually updated to keep abreast of changes in world politics and technology.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

GLOSSARY (Continued)

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	iii
GLOSSARY	v
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	5
2.4 BASE LAND USE	7
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	21
4.0 METHODOLOGY	30
4.1 INVENTORY	30
4.2 EVALUATION OF IMPORTANT RESOURCES	31
4.2.1 Documentation	31
4.2.2 Evaluation of Importance	31
4.2.2.1 Cold War Context	31
4.2.2.2 NRHP Criteria	32
4.2.2.3 Exceptional Importance	33
4.2.3 Evaluation of Integrity	33
4.2.4 Priority Matrix	34
4.2.5 Resource Organization	35
4.3 BASE SPECIFIC METHODS	35
5.0 RECONNAISSANCE INVENTORY RESULTS	37
6.0 EVALUATION RESULTS	38
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	38
6.1.1 Base and Command Centers	38
6.1.1.1 Major Command Headquarters	38
6.1.1.2 Major Command Headquarters	42
6.1.1.3 Major Command Post	43
6.1.2 Communications	44

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.1.2.1 Low Frequency Transmitter Complex	44
6.1.3 Documentation	45
6.1.3.1 Architectural Drawing Files	45
6.1.3.2 Documentary Collection	45
6.1.3.3 Documentary Collection	46
6.1.3.4 Photograph Collection	46
6.1.3.5 Office Files	47
6.1.3.6 Photograph Collection	47
6.1.4 Housing	48
6.1.4.1 Unaccompanied Housing	48
6.1.4.2 Commander Housing	49
6.1.5 Memorial	50
6.1.5.1 Memorial Chapel	50
6.1.5.2 Museum Collection	52
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	53
6.2.1 Alert Facilities	53
6.2.1.1 Command and Control Alert Facility	53
6.2.1.2 Command and Control Alert Facility	54
6.2.1.3 Command and Control Alert Facility	54
6.3 MATERIEL DEVELOPMENT FACILITIES	55
6.4 TRAINING FACILITIES	55
6.4.1 Flight Training	55
6.4.1.1 Flight Simulator	55
6.5 INTELLIGENCE FACILITIES	56
6.5.1 Communications	56
6.5.1.1 Satellite Communications Complex	56
6.5.2 Weather Reconnaissance	57
6.5.2.1 Global Weather Service	57
7.0 UNDOCUMENTED RESOURCES	58
8.0 FUTURE THREATS TO RESOURCES	59
9.0 PRELIMINARY RECOMMENDATIONS	60
9.1 NRHP ELIGIBILITY	60
9.1.1 Evaluation and Determination of NRHP Eligibility	60
9.1.2 Implications of NRHP Eligibility	62
9.2 EVALUATED RESOURCE RECOMMENDATIONS	63
9.2.1 Major Command Headquarters	66
9.2.2 Major Command Headquarters	67

TABLE OF CONTENTS (Continued)

	<u>Page</u>
9.2.3 Major Command Post	67
9.2.4 Low Frequency Transmitter Complex	68
9.2.5 Architectural Drawing Files	68
9.2.6 Documentary Collection	68
9.2.7 Documentary Collection	68
9.2.8 Photograph Collection	69
9.2.9 Office Files	69
9.2.10 Photograph Collection	69
9.2.11 Unaccompanied Housing	69
9.2.12 Commander Housing	70
9.2.13 Memorial Chapel	70
9.2.14 Museum Collection	70
9.2.15 Command and Control Alert Facility	70
9.2.16 Command and Control Alert Facility	71
9.2.17 Command and Control Alert Facility	71
9.2.18 Flight Simulator	71
9.2.19 Satellite Communications Complex	72
9.2.20 Global Weather Service	72
10.0 REFERENCES CITED	74
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Offutt Air Force Base.....	6
Figure 2.2 Standard Strategic Air Command Base Layout	8
Figure 2.3 Offutt Air Force Base Land Use Diagram.....	10
Figure 2.4 Standard Strategic Air Command Base Land Use Diagram	11
Figure 3.1 Offutt Air Force Base 1940s.....	22
Figure 3.2 Offutt Air Force Base 1950-1960.....	24
Figure 3.3 Offutt Air Force Base 1960-1970.....	26
Figure 3.4 Offutt Air Force Base 1970-1980.....	28
Figure 3.5 Offutt Air Force Base 1980-present	29

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	39
Table 6.2 Evaluated Resource Prioritization by Priority Rank	41
Table 9.1 Recommendations for Evaluated Resources	64

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

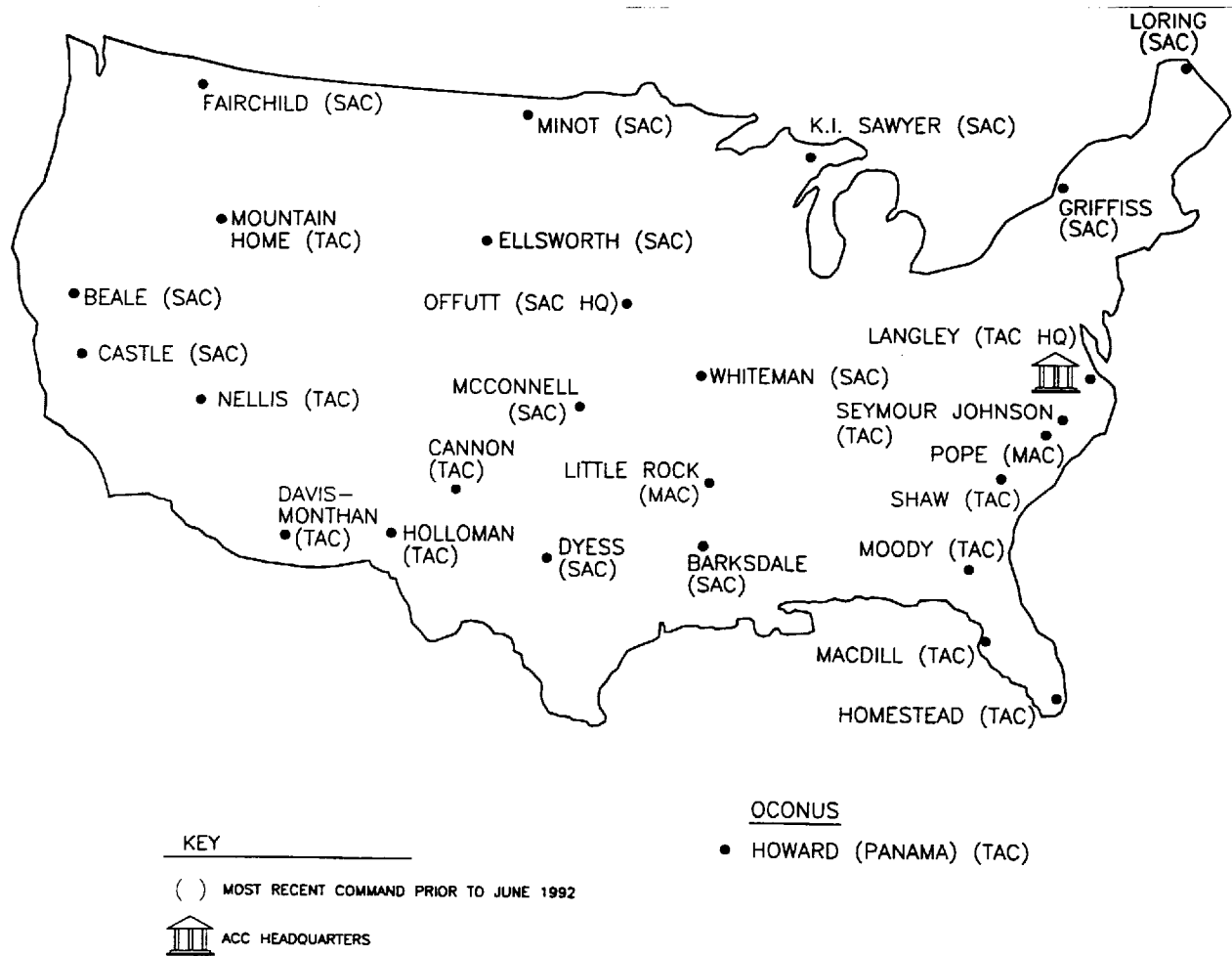
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\STANDARD\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Offutt Air Force Base (AFB). Offutt AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The 55th Wing is the host unit at Offutt AFB. The current mission of the 55th Wing of the ACC, under the 12th Air Force, is to conduct strategic reconnaissance on a global scale. The 2nd Airborne Command and Control Squadron (ACCS) operates, maintains, and supports the United States Strategic Command's (STRATCOM) airborne command post, the Post Attack Command and Control System (PACCS), commonly known as "Looking Glass." The 1st ACCS conducts airborne and ground alert operations in support of the National Emergency Airborne Command Post (NEACP) for the National Command Authorities. These squadrons provide personnel and aircraft capable of successfully accomplishing the PACCS mission or the NEACP mission, respectively. The 38th, 343rd, and the 45th Strategic Reconnaissance Squadrons at Offutt AFB fulfill the requirements of the National Emergency War Order as directed by proper command authority. The 55th Operations Squadron is tasked with the daily operations, maintenance, and training for the Commander in Chief of STRATCOM (CINCSTRAT) Mobile Alternate Headquarters (CMAH). When directed by CINCSTRAT, the 55th Operations Squadron becomes an integral part of the CMAH battle staff responsible for generation, deployment, communications, emergency actions, and support staff sustaining the STRATCOM during transition and post attack capability. Air Force Global Weather Central (GWC), another part of Offutt AFB, provides tailored meteorological information and data to major air commands, higher levels of the Department of Defense (DoD), and to all weather service units.

There are 34 tenant units, detachments, and operating locations on Offutt AFB. These are part of several major commands, including ACC, Air Force Space Command (AFSPACECOM), the Air Force Intelligence Agency (AFIA), Air Force Materiel Command (AFMC), and Air Mobility Command (AMC). Another major tenant on the base, STRATCOM, is a unified command. STRATCOM exists to deter a major military attack on the United States and its allies and, should deterrence fail, to retaliate. STRATCOM conducts operations worldwide through a joint-service

mix of the most sophisticated weapon systems available (United States Strategic Command 1994). Its staff is primarily made up of personnel from the Air Force and Navy. The headquarters of STRATCOM is located at Offutt AFB and the CINCSTRAT, a rotating position between the Air Force and Navy, is currently a Navy Admiral.

2.2 GEOGRAPHIC DESCRIPTION

Offutt AFB is located in the rolling hills of the Central Lowlands of the north central United States. It is located in eastern Nebraska, approximately 7 mi (11 km) south of downtown Omaha, and adjacent to the city of Bellevue in Sarpy County, Nebraska (Figure 2.1). As of 1991, Offutt AFB had under its jurisdiction 4,060 acres (1,643 ha) on and off the installation, and there were eight off-base sites in operation (United States Air Force [USAF] 1991). As of 1994, some of the Communication Annexes have been or are in the process of being deactivated. Elkhorn Communications Annex No. 2 is located approximately 35 mi (56 km) northwest of the base. It is comprised of 372 acres (151 ha) and is operational at this time. Deactivated annexes include the Hastings Radar Bomb Scoring Site and its attendant family housing, which consists of 55 acres (22 ha) located 165 mi (265 km) southwest of Offutt AFB, and the Silver Creek Communication Annex No. 4, located 110 mi (177 km) west of Offutt AFB and including approximately 375 acres (152 ha).

2.3 CURRENT BASE LAYOUT

Offutt AFB is bounded on the west by U.S. Highway 75, although a housing extension exists west of this highway along Capehart Road). The southern boundary is Offutt Creek, and the Missouri Pacific Railroad runs adjacent to the base to both the west and south. The eastern boundary generally abuts a wooded area. These boundaries are defined by a perimeter road (Gemini Boulevard). The northern boundary is adjacent to a residential area of Omaha. The main base area occupies the southern portion of the overall base area, with a smaller cluster of primary buildings in the northwestern quadrant. This positioning of important base buildings

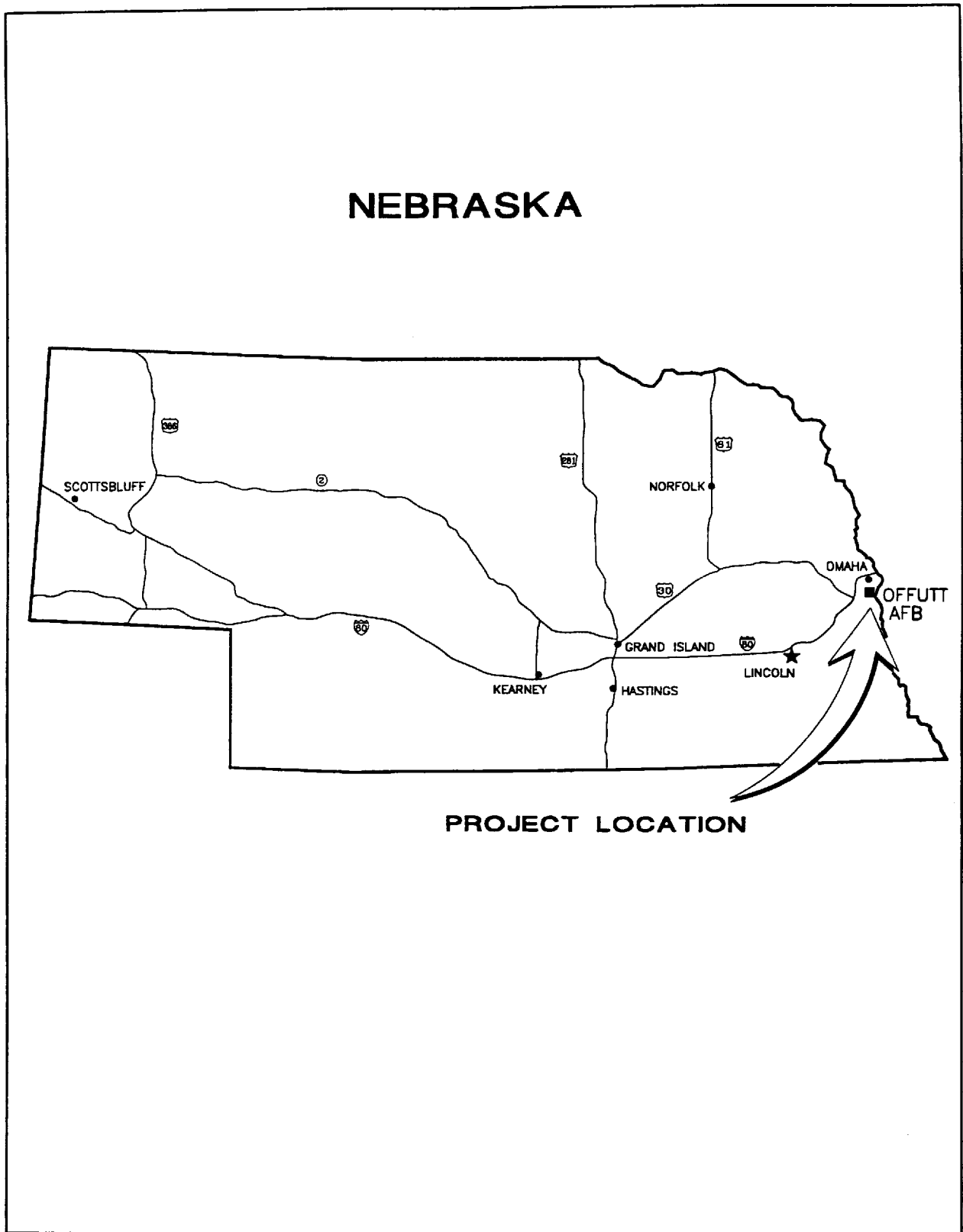


Figure 2.1 Location of Offutt Air Force Base.

varies from the typical SAC fighter home base (Figure 2.2), where one side of the primary runway is utilized almost exclusively.

The primary runway at Offutt AFB, aligned northwest-southeast, joins with the main base flight line on the northeast. A secondary runway runs perpendicular to the primary one, intersecting it just east of the northwestern building cluster. The SAC Museum is positioned at the northern extremity of this secondary runway. A third, closed runway runs north-south, bisecting the other two runways. This runway arrangement is not entirely unlike the standard layout, where secondary runways running in similar configurations exist at one end of the primary runway.

The remaining base lands include Offutt Lake, located near the southeastern corner of the base, and a few clear zones where generally no development is to occur, although some existing buildings fall within these zones. Ancillary facilities such as an obstacle course, the working dog kennels, and the small arms range are located south of Gemini Boulevard.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

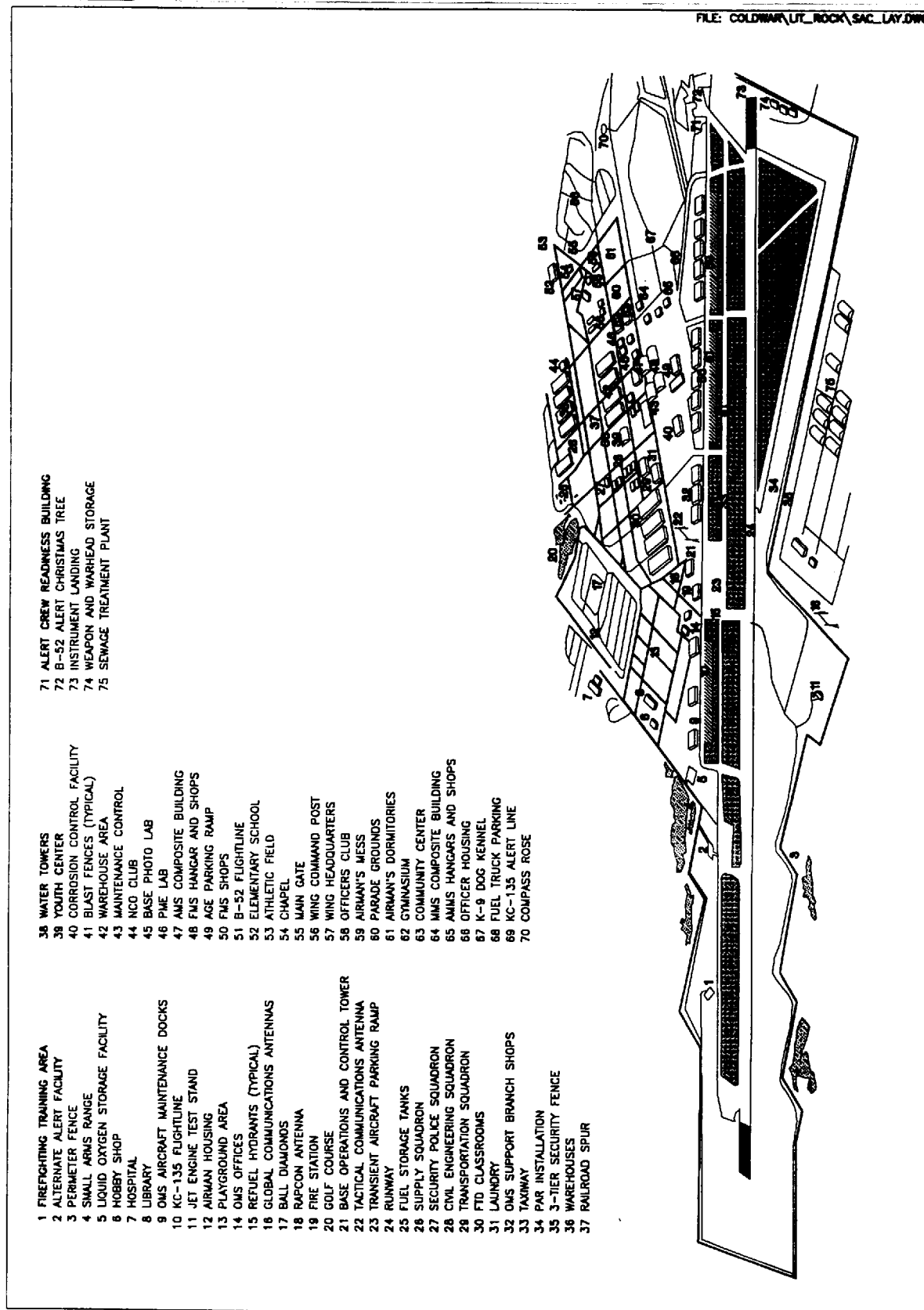


Figure 2.2 Standard Strategic Air Command Base Layout.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Overall, Offutt AFB (Figure 2.3) exhibits an alternative land use plan to the standard SAC land use configuration (Figure 2.4), although there are some similarities. Similar to the standard plan, the current land use configuration of the main base at Offutt AFB includes mission buildings which run parallel to the flight line and the primary runway. Maintenance docks are located directly on the apron. Support buildings, such as propulsion and avionics, are located adjacent to the mission area. Community, recreation, and housing areas are generally located on the edge of the base, away from the flight line. Industrial areas on both plans are located on the outskirts of base development. Interestingly, the location of the Command Post in the standard plan corresponds to the location of the STRATCOM Command Post at Offutt AFB.

The plans are more different than similar. In terms of land use areas, there are two main areas of base support facilities at Offutt AFB, one at the northern end of the runway and including the Martin Bomber Building and the Law Center (old SAC Command Post), and one near the southern end of the runway adjacent to the NEACP and PACCS operations areas. Only one main base support area is identified in the standard plan. Community areas are relatively sparse at Offutt AFB and are interspersed within other base areas whereas the standard plan includes a large, central area devoted to community buildings. Family housing at Offutt AFB deviates from the standard plan in that housing is nearer the runway and mission areas, although it is still

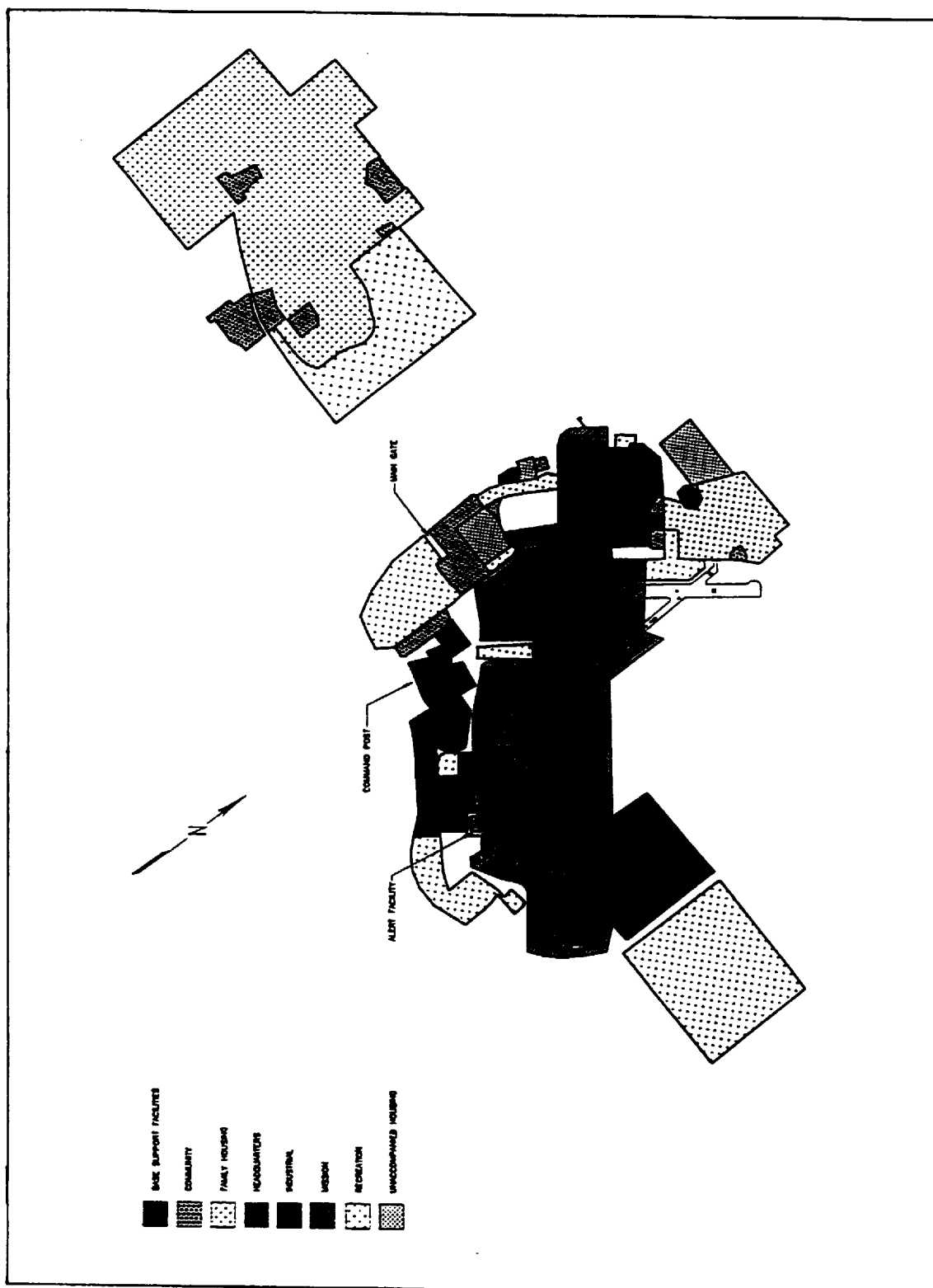


Figure 2.3 Offutt Air Force Base Land Use Diagram.

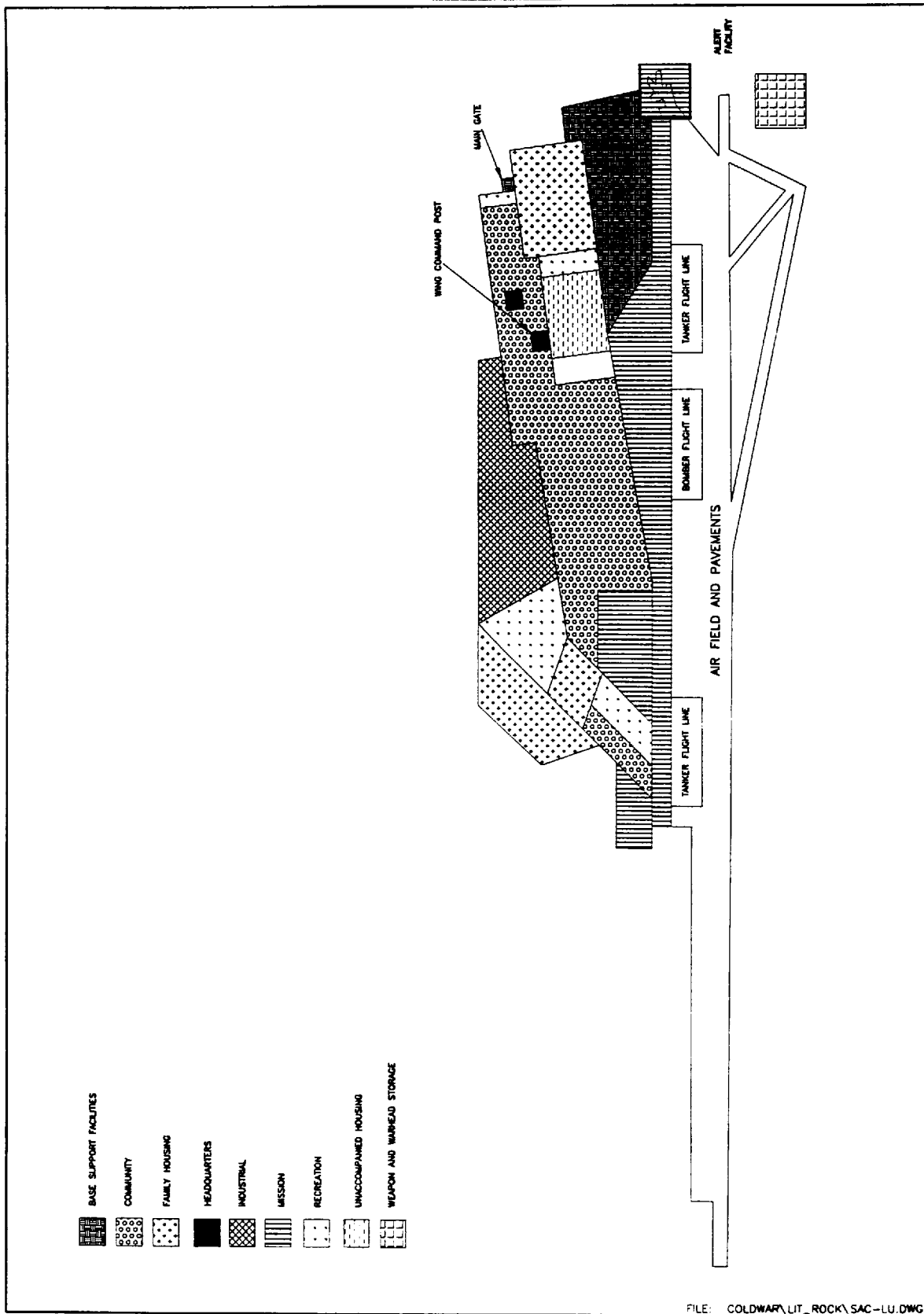


Figure 2.4 Standard Strategic Air Command Base Land Use Diagram.

separated from the flight line by community buildings, recreation, and base support areas. Weapons storage areas are lacking at Offutt AFB. Off the base and across U.S. Highway 75, is a base development that contains only family housing, community, and recreation areas. Locating land use areas off-base is another deviation from the standard plan.

The significant variation in the two plans is likely related to Offutt AFB's previous mission as SAC headquarters. Instead of being built around the typical bomber alert facility, with a flight line area and tanker flight line areas, Offutt AFB was arranged to accommodate the more specified missions of the PACCS and NEACP operations. These two operations occupied their own portions of the overall mission area, with the NEACP hangar, squadron operations, and support buildings at the extreme southern end of the runway and the PACCS facilities located further north. Neither of these alert areas was far from the SAC Command Post, located between the PACCS and NEACP operations areas and the rest of the base. The noncombat nature of this base resulted in the lack of a weapons storage area, thus Offutt AFB was able to develop on both sides of the runway. The lack of a weapons storage area and concomitant development on both sides of the runway are the most obvious deviation of this base plan from the standard SAC base land use plan.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Offutt AFB history begins in 1888 when Congress authorized the construction of an Army post near Omaha, Nebraska (USAF 1991:3). The post was named Fort Crook in honor of Major General George Crook, a prominent Civil War figure and famed Indian fighter. Construction of the Officers' Quarters and other barracks began in 1891. By 1896, construction of Fort Crook was completed, including the main barracks across the parade field, now Real Property Nos. 40 and 49, and the guard house, now Real Property No. 42, and used for Security Police Operations. The first occupants of Fort Crook upon its completion in 1896 were the members of the 22nd U.S. Army Infantry. They were veterans of rugged duty in the Dakotas. In 1898, with the advent of the Spanish American War, Fort Crook became a recruiting center and way station for Army troops on their way to Cuba and the Philippines (DoD 1972:12).

The first aviation unit, the 61st Balloon Company, arrived at the Fort just prior to World War I. After entry of the United States into World War I in April 1917, Fort Crook became a training center for balloonists (DoD 1972:13). A 260 acre (105 ha) corn field, formerly leased to a farmer, was plowed, leveled, and seeded to provide a landing strip for military and government planes on cross-country flights so they could land for refueling. In May of 1924, the unnamed landing field was officially designated by the War Department as Offutt Field in honor of 1st Lt. Jarvis Jennes Offutt. Lt. Offutt, Omaha's first air casualty in World War I, lost his life in 1918 while flying with the Royal Air Force in France (Ryon n.d.). The main use for Offutt Field during the mid-1920s was as a stop-over and refueling point for United States mail planes that flew between Chicago, Cheyenne, and other cities. Between the two World Wars, Offutt Field was also a training center for thousands of reservists (Muir Planning Corporation 1986:1-7,1-8).

The first military use of air power was to allow observation of the battles being waged on the ground. Gradually, the airborne observers became fighters and bombers (Yenne 1985:37-40).

American military leaders of the time held traditional views of combat and war and would not accept the value of strategic air power. Immediately after World War I, this value was proven to them by Brigadier General Billy Mitchell, who was court-martialed in 1925 for his outspoken beliefs (Yenne 1985:40-41).

With the beginning of World War II in 1939, allies of the United States in Europe and Asia were in need of war materials, especially combat aircraft. Those demands began a change in the U.S. aircraft industry as the United States realized its weakness in air power. The decisive and humiliating air attack on Pearl Harbor by the Japanese propelled the United States into the war with great vigor and resolve. It also compelled the U.S. military to recognize the validity of Billy Mitchell's conviction regarding the value of strategic air power. These factors brought about a major transformation in the aircraft industry.

The War Department decided that the government would build two new plants for bomber and fighter assembly. They also decided that those plants should be built in the interior of the country at least 200 mi (322 km) from the borders. In February of 1941, the United States government and the Glenn L. Martin Company signed a contract for the construction and operation of one of the aircraft assembly plants at Fort Crook. The bomber assembly plant was the design work of famous industrial architect Albert Kahn. He was known for his strikingly novel approach to factory design, especially for assembly-line plants such as his Ford Motor Company plants in the Detroit area (Gowans 1992:228-229). The Martin-Nebraska Company built an assembly plant (the current Martin Bomber Building), a Personnel building (Real Property No. 302), an aircraft modification center (the current Real Property No. 321 remains), several runways, and six large hangars. The assembly plant became operational on January 1, 1942 and eventually produced 1,585 B-26C Marauder light bombers and first retooled and then produced 531 B-29 Superfortress bombers. At the peak of production in November of 1943, there were 15,000 people on Martin's payroll at the plant. The last B-29 rolled off the line in September 1945 (Muir Planning Corp 1986:1-8).

Fort Crook, Offutt Field, and the Martin-Nebraska Company all played a part in the national strategy to eliminate the need to invade the Japanese home islands and thus save two million Allied lives, moreover to keep Russia out of Japan after the war. The strategy (code named the Manhattan Project) at the highest levels of government was to develop a nuclear weapon. In the fall of 1944, the Martin-Nebraska Company was asked to design a carrier capable of hauling a special bomb. Plant engineers worked seven days a week for six weeks to complete the design of the new B-29 bomber. Colonel P.W. Tibbetts, Jr., future pilot of the *Enola Gay*, brought a facsimile of the real bomb for trial installation. The Martin-Nebraska Company assembled 20 of these specially designed planes. Two of these specially engineered B-29s, the *Enola Gay* and *Bock's Car*, took part in the bombing of Hiroshima and Nagasaki on August 6 and 9, 1945, and in World War II's subsequent ending (USAF 1988:10; Yenne 1985:52-55).

In 1946, following the war, Fort Crook was turned over to the United States Army Air Force (USAAF) and renamed Offutt Field. The 2nd Army Air Force Headquarters was moved to Offutt Field, and the base again became a training center for air reserve units (Muir Planning Corporation 1986:1-8).

Recognizing post-World War II changes in military organization supports understanding of the next phase of Offutt AFB's history. In March of 1946, the Continental Air Forces of the USAAF were divided into three separate components: Tactical Air Command (TAC), Military Airlift Command (MAC), and SAC (Lewis et al. 1995). This division was the first step toward the creation of an independent Air Force. SAC's first headquarters was the old Continental Air Forces Headquarters at Bolling Field in Washington, D.C. When General George Kenney arrived to take official command of SAC on October 15, 1946, the headquarters was moved to Andrews Field, Maryland (Yenne 1985:57-59).

The National Defense Act, passed in July 1947, created the office of the Secretary of Defense, the Joint Chiefs of Staff, the National Security Council, the Central Intelligence Agency, and on September 18, 1947, the United States Air Force (Lewis et al. 1995). On January 13, 1948,

Offutt Field officially became Offutt AFB. At one minute after midnight on November 9, 1948, SAC headquarters was permanently established at Offutt AFB, Nebraska. With the establishment of SAC headquarters, the squadrons of the 3902nd Air Base Wing, whose mission was to support the command headquarters, were relocated to Offutt AFB. From this point on, the histories of Offutt AFB and SAC are inextricably intertwined.

General Curtis Emerson LeMay became the Commander in Chief of SAC (CINCSAC) on October 15, 1948. His previous record was an impressive one: he had presided over the defeat of the Japanese in World War II as commander of the 21st Bomber Command, had been the commander of United States Air Forces in Europe (USAFE), and had organized the Berlin Airlift (Yenne 1985:63). His influence on SAC and therefore on Offutt AFB was no less impressive. He arrived at Offutt AFB with an understanding acquired in Berlin of the roots of the Cold War and that these tensions would escalate for the next 40 years.

With the demobilization of the military forces after the war, LeMay found SAC to be in a demoralized and less-than-combat-ready state. He was determined to build a command from his headquarters at Offutt AFB that could meet the challenge of its global mission, which was the capability to mount a strategic air offensive anywhere, anytime (Yenne 1985:63-66). This mission became increasingly vital as the Cold War intensified.

With the advent of the Korean War in 1950, the Cold War became multifaceted. The Soviet Union was one direct focus of concern but there were other, indirect foci as well, such as China. SAC had been experimenting at Offutt AFB and other bases for several years with in-flight re-fueling as a means of extending the range of its aircraft. KB-29 tankers (converted B-29 bombers) were flown in combat in Korea to refuel RF-80s and RB-45s.

Construction of the new SAC Headquarters at Offutt AFB commenced in 1955. In that same year, SAC acquired a portion of Scribner State Airport, Scribner, Nebraska, to establish an Ionospheric Sounding Station. The Scribner Site or Offutt Communications Annex No. 3 is

located approximately 70 miles northwest of Offutt AFB on Nebraska State Highway 91. For some time prior to 1957, when SAC headquarters moved into its new building with its underground command post, the 30th Communications Squadron out of Offutt AFB was busily engaged in activities at the Scribner site. Although constructed and known to the public as an Ionospheric Sounding Station, it was a closely guarded secret that this was the alternate SAC Command Post (USAF 1972a:10-11). Scribner was the transmitting site for a High Frequency Single Side Band radio System supporting the command post and its world-wide command control communications. In 1991, the site went to an unmanned status as technological advances allowed for the installation of an automated system.

General LeMay ended his tenure at Offutt AFB as CINCSAC on July 1, 1957. His legacy was a state-of-the-art equipped command ready to execute its global mission. He turned over command of a larger and much improved force to General Thomas S. Power, who would see SAC into a new era of ballistic missiles, supersonic bombers, and reconnaissance aircraft (Yenne 1985:73-74).

The SAC Headquarters and Command Center at Offutt AFB was replete with multiple fail-safe devices and back-up systems. These all reflected the worst case scenario for nuclear war. When it opened, it contained 422,459 ft² (39,246 m²) of floor space. There were seven floors: three above ground, a basement, and a three-story underground. The underground was specifically designed with a 24 inches (61 cm) thick base, 24 inches (61 cm) thick walls and two 10 inches (25 cm) thick intermediate floors made of reinforced concrete. The roof varied from 24 to 36 inches (61 to 91 cm) thick (SAC 1977). A special wing was added to the headquarters just to house computer equipment for the missile force. The Command Center was housed in the three-story underground, and included supporting communications and computer equipment, personnel from the Joint Strategic Target Planning Staff (JSTPS), and intelligence, logistics, and operations activities.

A unique feature of the SAC underground complex was that it could be self-contained in time of war. After the large steel blast doors were sealed, access was through an alternate entrance decontamination unit. This, in conjunction with the underground emergency power system, rations, and artesian wells, allowed for extended, continuous operation without outside support. The Command Post was impervious to almost everything except a direct hit. The Commander in Chief and his battle staff members had designated positions in the command center and the Primary Alerting System (PAS), and dedicated telephone circuits enabled the SAC controller to speak directly to approximately 200 operating locations throughout the world, including all of the underground missile launch control centers. Through this "Red Phone" system, each SAC base received coded messages giving notice of an actual or practice alert.

Several detection and warning systems throughout the United States and Canada provided the CINCSAC with both Intercontinental Ballistic Missiles (ICBMs) and submarine launched ballistic missiles (SLBMs) attack warning. This information was processed at the command center through high-speed computers for display on 16 ft (5 m) high screens and video screens at the warning system controller's position. These detection systems, along with summary information and attack assessment from North American Aerospace Defense Command (NORAD), permitted the CINCSAC to protect his force pending any Presidential decisions (only the President can order nuclear strikes).

During Kennedy's presidency, 1961-1963, his defense strategy of "Flexible Response" required an increase in conventional forces and a change in nuclear weapons focus from a reliance on strategic bombers to a larger missile capacity (Lewis et al. 1995). This massive military build-up required a better command and control system to control fire-power, and ultimately caused the development and operation of PACCS.

The underground Command Post, despite its advanced technology, could not survive a direct missile hit. In the event that the SAC Command Post was disabled, control of the SAC force was passed to one of several alternate ground command posts or to an airborne command post, which

was in the air 24 hours daily (USAF 1986). To meet this objective, SAC developed and put into operation the PACCS airborne command post code-named "Looking Glass." The PACCS command posts, of which there are five, are EC-135 aircraft. These aircraft are assigned to the 2nd ACCS of the 55th Wing at Offutt AFB. Prior to the deactivation of SAC, the airborne command post had on board the same type of command (a SAC general officer) and battle staff that were in the SAC underground command post: it "mirrored" the SAC command post. These airborne command posts were completely equipped to take control of SAC's nuclear forces and execute the Single Integrated Operational Plan (SIOP) at the direction of the National Command Authority. The Airborne Launch Control System (ALCS) would permit the PACCS command post to control the entire Minuteman fleet if any or all of the ground launch control centers were out of action. These airborne command aircraft flew on constant alert status, 24 hours a day from 3 March 1961 through 1991 (Lewis et al. 1995; 55th Wing Headquarters 1994). The fact that PACCS was as effective in 1991 as it was in 1961 underscores the vision and commitment of those who designed and put the system in operation. The PACCS is now used by STRATCOM as its airborne command post.

In the fall of 1962, the Soviets attempted to deploy missiles in Cuba. Perhaps at no other time had the Cold War reached such a fevered pitch as it did that fall when Kennedy brought the United States to its most potent defense posture ever (Lewis et al. 1995). The SAC underground command post at Offutt AFB placed all aircraft on full alert, the bombers were armed with nuclear weapons, and SAC's missile squadrons were configured to accept their final targeting instructions. The Soviet ships altered their course at the last minute, and a potential nuclear battle was averted (Lewis et al. 1995).

In 1969, SAC Headquarters brought into operation a survivable low frequency communications system at Communications Annex No. 4 near Silver Creek, Nebraska, approximately 110 mi (177 km) west of Offutt AFB. Its mission was to provide essential control communications in support of SAC emergency operations before, during, and after a nuclear attack (USAF 1972b:3-12).

As Offutt AFB was responsible for the PACCS airborne command post, it also was responsible for the airborne command post of the Joint Chiefs of Staff and the National Command Authorities. The NEACP (pronounced "knee-cap"), code-named "Nightwatch," and commonly referred to as the "Doomsday Plane," was introduced in 1974 and is operated by the 1st ACCS at Offutt AFB. The NEACP is situated in modified Boeing 747 aircraft with the designation E-4B. There are four aircraft which have this designation and fly "tours of duty" (55th Wing Headquarters 1994). NEACP is the airborne command post of the National Command Authority (the President), the Secretary of Defense, and the Joint Chiefs of Staff. This redundant level of command, control, and communications operated at the highest level of authority. Looking Glass was SAC's redundant command and control center in the air. Lewis et al. (1995) illustrate the chain of command where these two aspects of PACCS are concerned. A large hangar and support facility for NEACP was completed at Offutt AFB in 1979.

In 1984, SAC established plans to construct a new command center and upgrade its operations. The new two-story completely subterranean structure was joined to the old SAC command center. Electromagnetic pulse (EMP) protection was provided for critical command, control, and communications equipment and supporting utilities. An EMP is a brief, intense electromagnetic field generated by a nuclear blast in the atmosphere. It can propagate for thousands of kilometers with a peak strength of 50,000 volts per meter, causing severe damage to sensitive electronic equipment. Serious disruptions to the nation's ability to communicate and loss of command and control functions made protective measures against EMP imperative. One protective measure is metal shielding for electronic components. This allowed the CINCSAC to continuously exercise command over SAC forces, even in the disturbed electromagnetic environment which would follow a high altitude nuclear burst. The new underground command facility was completed in 1989. As SAC completed its new and improved version of the famed command post so that it could continue to provide a deterrent to nuclear attack, the Eastern European countries were beginning to disassociate themselves from the Soviet Union.

In June 1992, SAC, TAC, and MAC were dissolved and ACC was activated. As a former SAC base, Offutt AFB is now under the command of ACC, which is the air component of the United States Atlantic Command (ACOM).

Real Property No. 500, once the headquarters and command post for SAC, is currently the headquarters for STRATCOM and its attendant organizations. STRATCOM is a unified command that consolidates Air Force and Navy strategic forces for deterrence of, and retaliatory strike against, the use of nuclear, chemical, or biological weapons (Canan 1994:26; United States Strategic Command 1994). As a unified command, STRATCOM does not own or maintain any installations or weapons systems; these are kept by the services themselves. It does control the PACCS and NEACP airborne command posts. However, when a strategic situation arises, STRATCOM assumes control over these forces including ICBMs, SLBMs, and bomber, tanker, and reconnaissance aircraft.

3.2 BASE DEVELOPMENT

The development of Offutt AFB is preceded by a long military history that reaches back to the late 1880s. Land was first purchased in 1889 and construction was begun on Fort Crook in 1891. The fort was completed in 1896. Officers' quarters and main barracks, now Real Property Nos. 40 and 49, and the guard house, now Real Property No. 42 and called the Security Police Operations building, still stand today. They surround a parade ground and are included in the Fort Crook Historic District which was listed on the NRHP in December 1976 (Muir Planning Corporation 1986). Quarters 16 has always been the Post Commander's Quarters. When SAC was moved to Offutt AFB, it became the residence of the CINCSAC, and it is now the residence of the CINCSTRAT. The buildings which date prior to the Cold War era are located in the central portion of the base and are incorporated within the 1940s development period (Figure 3.1).

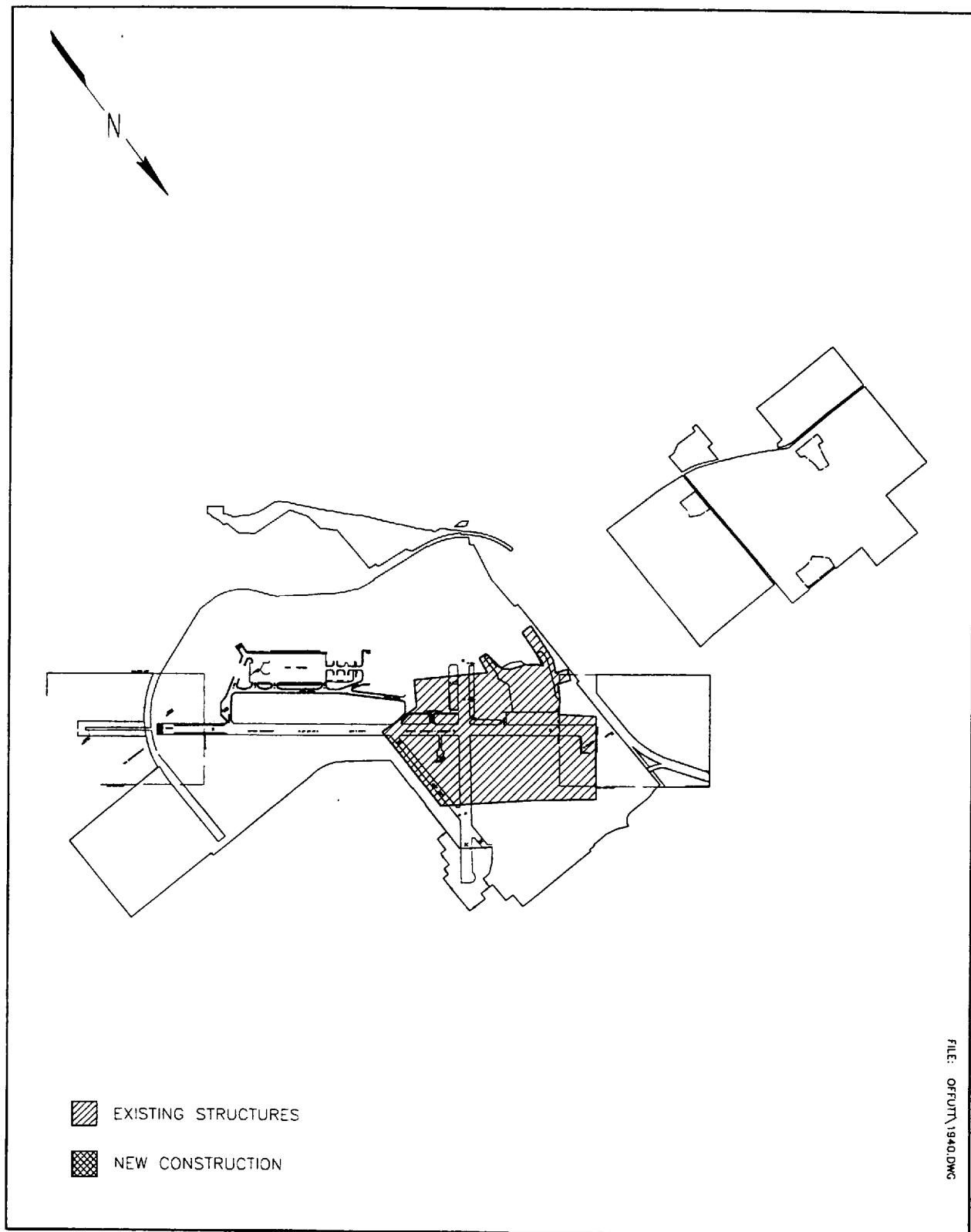


Figure 3.1 Offutt Air Force Base 1940s.

The 1940s was one of the periods of greatest expansion for Fort Crook and Offutt Field due to the need to produce combat aircraft for the United States and its allies. The Martin-Nebraska Company constructed an aircraft assembly plant in 1941 (Real Property No. 301, the Martin Bomber Building). Administrative buildings were completed in 1941 (Real Property No. 302); two huge aircraft modification buildings were completed in 1943 (Real Property No. 321 remains); and several runways and six large hangars were also built in 1943 (Real Property No. 306) (DoD 1972).

With the outbreak of the Korean War in the 1950s, Offutt AFB was the scene of many construction projects (Figure 3.2). Six hundred forty-three Wherry housing units were built in 1952 on the northern boundary of the base. These units were badly needed to keep up with expansion as more men and women were assigned to SAC headquarters to handle the added responsibility.

General LeMay took a personal interest in the welfare of his troops. One of his projects was the construction in 1953 and 1954 of the first "SAC-type" dormitories for enlisted personnel (Real Property Nos. 416 and 417). These were a far cry from the World War II-style open barracks with cots and metal lockers lined up on each side of the building. The LeMay barracks featured two-person rooms with connecting baths and centrally located lounges on each floor. The dormitories were built of prefabricated steel units laid on concrete slabs. They were virtually fireproof and cost less per person housed than the old style barracks (Ryon n.d.).

In 1955 Offutt's instrument runway was lengthened to 9,620 ft (2,932 m) and widened to 300 ft (91 m). It was upgraded to concrete to accommodate larger aircraft such as the fully loaded KC-135 refueling aircraft (DoD 1972). Construction of SAC's new headquarters (Real Property Nos. 500 and 501) began in 1955 and was completed in 1957. It is located near the southern boundary of the base. In 1956, the Base Chapel (Real Property No. 463) was completed. It was dedicated as the SAC Memorial Chapel and stained glass windows were installed in 1960. It is located at the southwestern end of the Parade Ground. In the late 1950s, a 187 acre (76 ha) lake

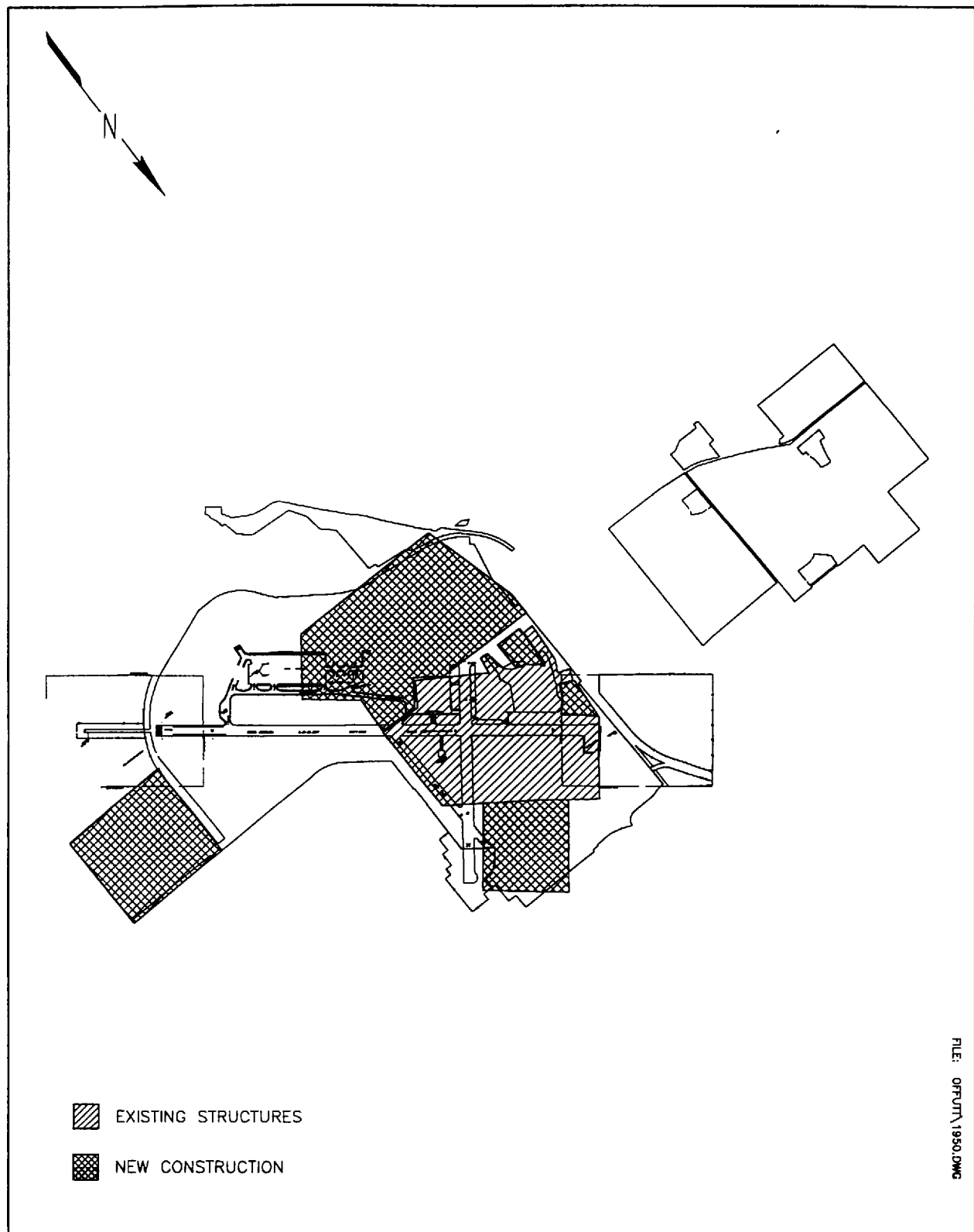


Figure 3.2 Offutt Air Force Base 1950-1960.

with a marina, pavilion, picnic area, and playground were created at the eastern edge of the base (SAC 1977). To the southeastern side of the Instrument Runway, several maintenance hangars were built in 1959 to accommodate the KC-135s, the aerial re-fueling aircraft for which SAC had assumed responsibility. Offutt AFB was also the site of three Atlas D missile launch areas. The construction of these areas took place between April 1959 and July 1960. These sites were disposed of in 1968-1970 (U.S. Army Corps of Engineers 1960).

In 1960, there was a shortage of base housing. In 1961, additional unaccompanied housing was completed. It was located to the west of Wherry housing and to the north of the Martin Bomber Building. To alleviate the family housing shortage, 783 (317 ha) acres were purchased approximately 1 mi (1.6 km) west of the main base area (Figure 3.3). Over 2,000 Capehart Housing units were constructed in 1962. In addition, the area also has basic community services such as a cinema, youth center, chapel, swimming pool, service station, and shoppette. There are three schools which are on federally owned land but are operated by the City of Bellevue School District. There is also an 18-hole golf course located to the east of the Capehart area. In 1965, the Ehrling Bergquist Hospital was completed. It is situated adjacent to the Capehart Housing area west of the main base area (USAF 1991). Also constructed in the 1960s was a nine-hole golf course at the southwestern boundary of the main base, close to Papillion Creek, as well as other construction and additions. H Wing was added to SAC Headquarters in 1964. Additional storage tanks and pump stations were added in the southern portion of the base. Finally, a munitions storage and disposal area was completed on the eastern side of the base just north of the southeastern end of the instrument runway (55th Civil Engineering Squadron 1994).

In 1971, the instrument runway was again lengthened to accommodate the largest aircraft possible. This was in direct association with the NEACP mission of SAC. Another mission-related facility completed during the 1970s was the 105 ft (32 m) control tower located to the north of the instrument runway, just off the north/south taxiway (DoD 1972). In the mid-1970s, between 1973 and 1976, the base commissary, service station, library, and other community

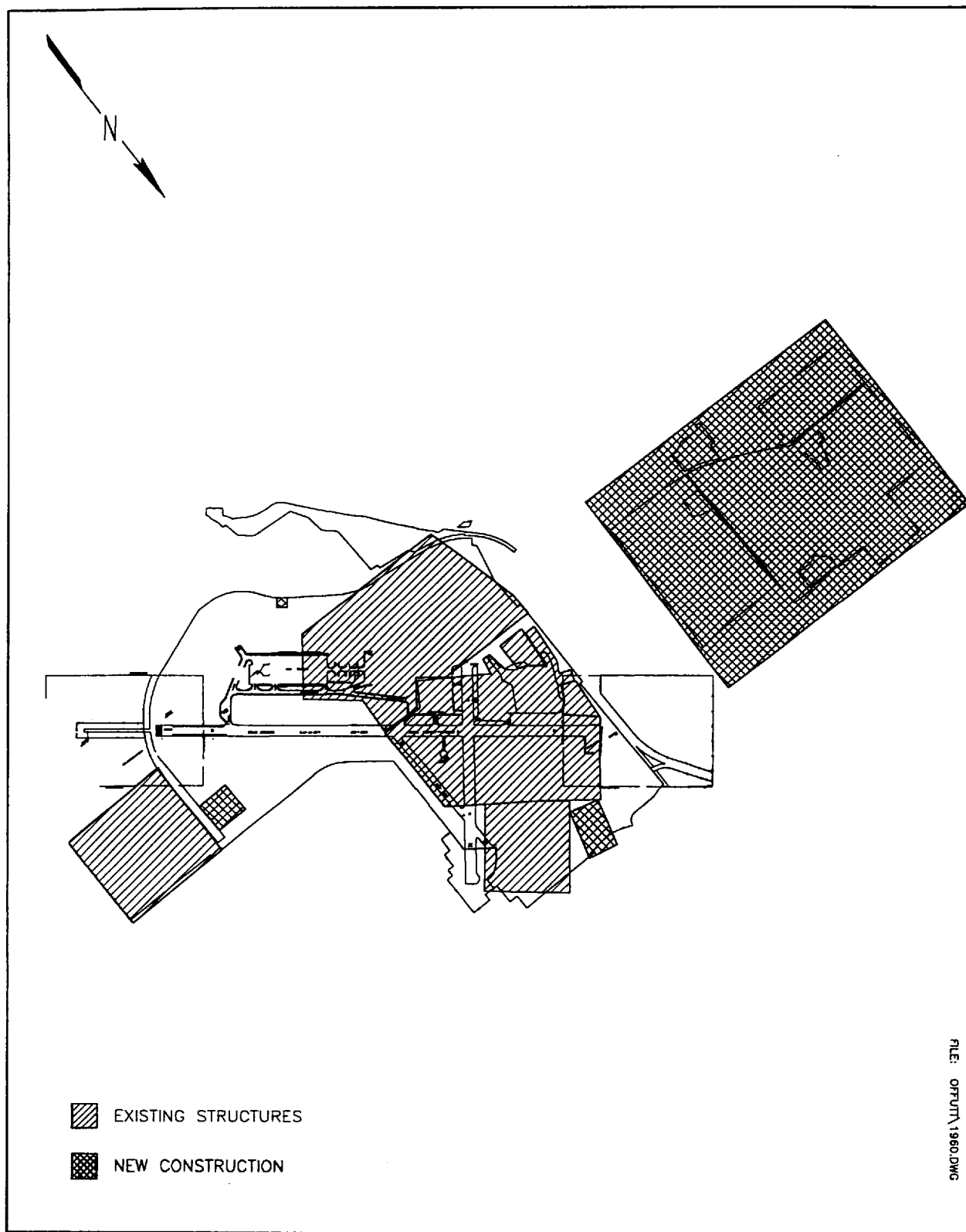


Figure 3.3 Offutt Air Force Base 1960-1970.

facilities were completed on the western side of the base, just north of the nine-hole golf course (Figure 3.4).

In 1959, CINCSAC authorized the SAC Aerospace Museum to perpetuate the history of the aircraft used by SAC. In 1972, the State of Nebraska leased 43 acres (17.2 ha) of land on the northeastern portion of the close runway and constructed a building to house the museum. The lease is for 50 years, and terms include an agreement by the state that the museum will operated as a SAC historical facility only (DoD 1972) (Figure 3.4).

Of importance to the PACCS and NEACP missions of SAC were the operations and alert facilities for those units of the 55th Strategic Reconnaissance Wing. Real Property Nos. 464 and 524 were completed in 1975 and 1979 respectively (Figure 3.4).

During the 1980s, there were at least two major missions, NEACP and reconnaissance, which required additional facilities (Figure 3.5). A large maintenance hangar and support facility for the NEACP mission was completed in 1981. This building houses support and maintenance facilities for the E-4B aircraft and the 1st ACCS. The hangar is located just to the south of the southern end of the instrument runway. The other SAC mission which has seen a need for construction and development is the photo reconnaissance and intelligence functions. These are housed in the Strategic Analysis and Application Center (SAAC), Real Property No. 515, which was completed in 1988. This facility contains classified equipment and materials involved with the processing, analysis, and assessment of intelligence data for use in support of the SIOP development and contingency planning. This is now called the Strategic Joint Intelligence Center. It is located adjacent to Real Property No. 500 (USAF 1991).

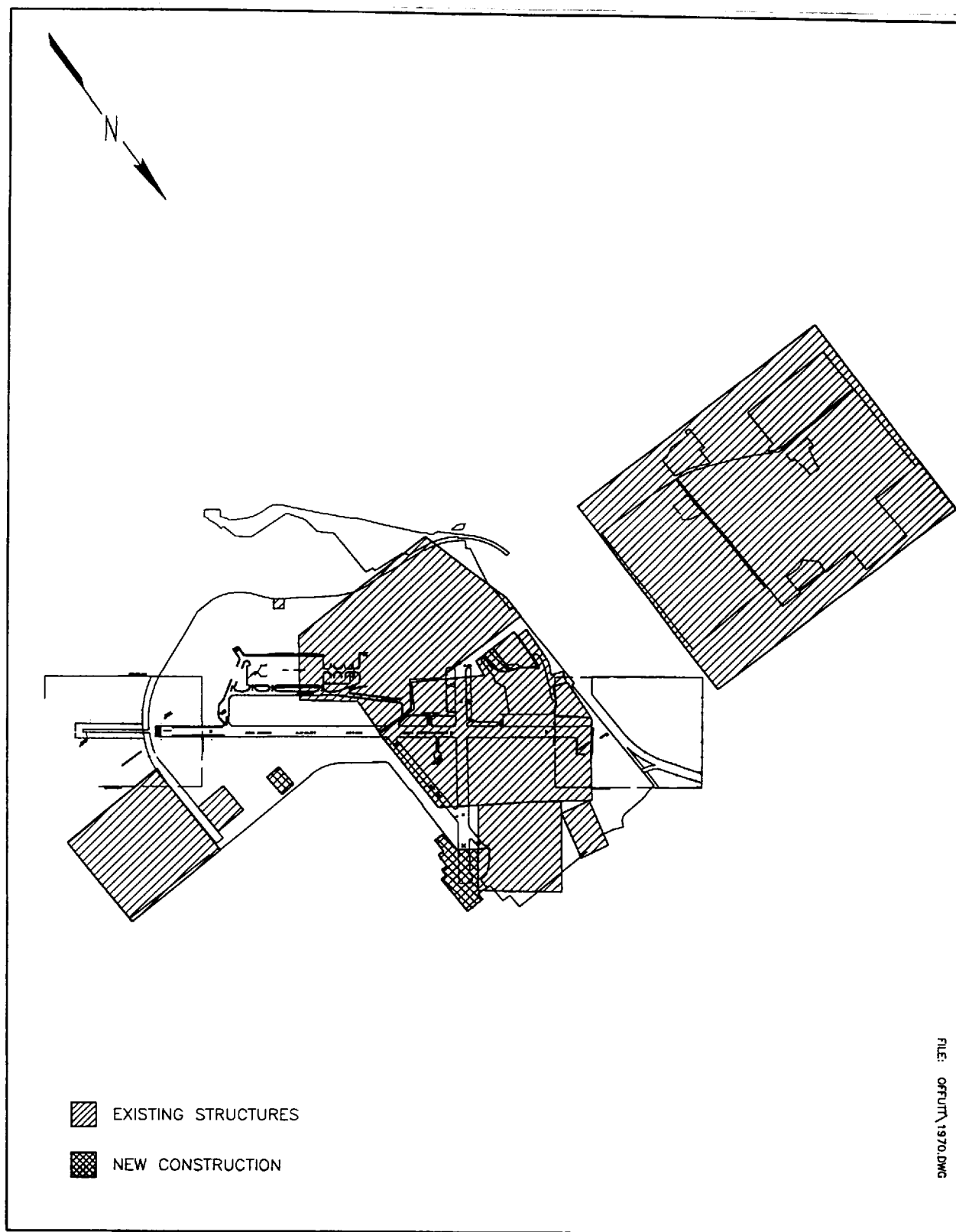


Figure 3.4 Offutt Air Force Base 1970-1980.

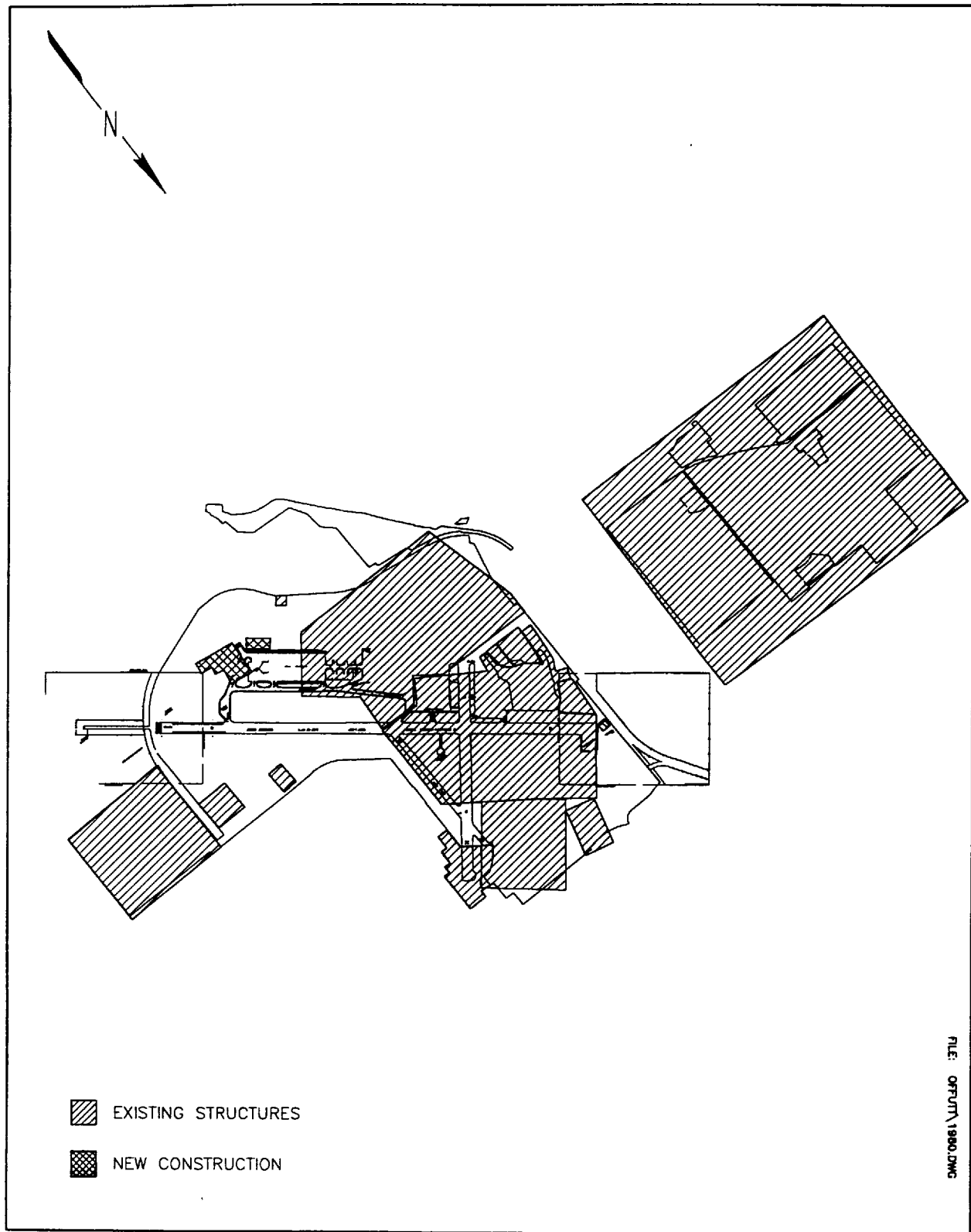


Figure 3.5 Offutt Air Force Base 1980-present.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Offutt AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Offutt AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Offutt AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

The Mariah field team arrived at Offutt AFB on July 6, 1994 and proceeded immediately to an introductory meeting with the point of contact Gene Svensen, Chief of the Cultural/Natural Resource Element of Civil Engineering. Mr. Svensen scheduled an in-brief with Colonel Paulson (55 SUG/CC). In addition to the Mariah team, Mr. Svensen, and Colonel Paulson, those attending included: Joni Gilkerson, Robert Hurst, and Greg Miller, representing the Nebraska State Historical Society; Joseph Murphey of the United States Army Corps of Engineers; Dave Homan and Gordon Dix of the Civil Engineering Squadron (CES); and Mike Sibley, Wing Historian. The meeting focused on the team's strategy and the project goals as compared with other on-going base cultural resource investigations.

The field team spent the afternoon of July 6 on a base tour with Mr. Svensen and Mr. Murphey. As a result, initial properties to be evaluated were identified and, on July 7, property card data for these buildings were gathered from the Real Property office with the assistance of Vicki Padilla, Mike Rix, and Gordon Dix. Mr. Svensen and the Real Property office assisted the team in arranging a tour of Silver Creek installation. Joseph Murphey toured specific areas of the base

with Nebraska State Historical Society representatives, after which he met with the field team to share his findings regarding important resources and plans for future historic districts. On July 8, the team, accompanied by Mr. Murphey, met with Dr. Parks, the STRATCOM Historian, to discuss the study and general Cold War issues. Dr. Parks then escorted the group on a tour of the STRATCOM (formerly SAC) Headquarters and Command Post (Real Property Nos. 500 and 501). The afternoon was spent inventorying architectural files in the 55th CES drawing room, with special attention paid to documentation for the properties to be evaluated.

On July 12, work resumed at the Real Property Office and the drawing room, each of which were visited occasionally during the remainder of the fieldwork. An inventory of Mr. Svensen's photo archives was completed on July 12, and work in the 55th Wing Historian's Office was begun. On July 13, Mr. Svensen obtained a letter authorizing the team to take photographs on base, and a second tour of the interiors of Real Property Nos. 500 and 501 was accomplished. Certain elements of the interior that had been identified by Mr. Murphey during the initial visit were photographed. General exterior photographs of base buildings were taken between July 13-15, with the NEACP area photographed on July 13 and interior photographs of the SAC Memorial Chapel taken on July 15. Inventory of the Wing Historian's Office was completed on July 15. On July 16, the team visited the Silver Creek installation. The SAC Museum was inventoried on July 17.

The last two days of the visit, July 18 and 19, were spent consolidating final details, including attempting to locate additional information pertinent to the Silver Creek installation. Mr. Svensen scheduled an out-brief for the afternoon of July 19. In addition to Mr. Svensen and the team, Colonel McPherson and Colonel Cook were present, as were many of the attendees from the in-brief, including Mr. Hurst, Mr. Sibley, Mr. Wright, and Mr. Dix. The team presented the results of their study, discussed the evaluated properties, and answered questions regarding the study and their preliminary recommendations.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Offutt AFB, 119 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Twenty resources were evaluated at Offutt AFB, 14 of them falling under the DoD category of real property (13 buildings and one group of objects) and six under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Base and Command Centers

6.1.1.1 Major Command Headquarters (Resource No. 7004, Real Property No. 302)

This Major Command Headquarters, currently a wing headquarters/law center, is located within a complex of support and administration buildings near the Martin Bomber Building. It is also known as SAC building "A," the first SAC headquarters at Offutt AFB. This permanent building is four stories high, brick, and has a rounded window on the western side of the ground floor near the building entrance. Constructed in 1941, the building has square footage of 20,763. It is a distinguished example of the work of architect Albert Kahn.

This building originally functioned as the personnel building for the Aircraft Manufacturing and Assembly Plant, later renamed the Martin Bomber Plant, which was commissioned to develop aircraft specifically designed to transport the atomic bomb during the transition from

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup Property Type		Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Base and Command Centers	Major Command Headquarters	7004	302	Real/Bldg	20
Base and Command Centers	Major Command Headquarters	7011	500	Real/Bldg	19
Base and Command Centers	Major Command Post	7012	501	Real/Bldg	20
Communications	Low Frequency Transmitter Complex	7066	None	Real/Bldg	22
Documentation	Architectural Drawing Files	7094	None	RecDoc/Obj	16
Documentation	Documentary Collection	7095	None	RecDoc/Obj	16
Documentation	Documentary Collection	7096	None	RecDoc/Obj	15
Documentation	Photograph Collection	7097	None	RecDoc/Obj	16
Documentation	Office Files	7098	None	RecDoc/Obj	17
Documentation	Photograph Collection	7100	None	RecDoc/Obj	18
Housing	Unaccompanied Housing	7006	416/417	Real/Bldg	14
Housing	Commander Housing	7015	16	Real/Bldg	18
Memorial	Memorial Chapel	7008	463	Real/Bldg	16
Memorial	Museum Collection	7099	None	Real/Obj	17
Combat Weapons and Support Systems					
Alert Facilities	Command and Control Alert Facility	7002	40	Real/Bldg	16
Alert Facilities	Command and Control Alert Facility	7009	464	Real/Bldg	19
Alert Facilities	Command and Control Alert Facility	7028	524	Real/Bldg	19
Training Facilities					
Flight Training	Flight Simulator	7007	453	Real/Bldg	16

Table 6.1 (Continued).

Air Force Group and Subgroup Property Type		Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Intelligence Facilities					
Communications	Satellite Communications Complex	7014	542/566 /598	Real/Bldg	16
	Weather Reconnaissance		301		
		7003		Real/Bldg	14

* Scale ranges from 1 to 24

World War II to the Cold War period. In 1948, after the base had been turned over to the Air Force, the building became the SAC command headquarters and continued in this function until the new command facility was completed in 1957. It therefore maintains two significant associations, the first as a support building for the Martin Bomber Plant and the second, and more direct association, as the first SAC headquarters at Offutt AFB. The building housed General Curtis LeMay's office during this early phase of the Cold War, and it is believed that his office occupied the ground floor space with the rounded window. It was from this office that LeMay began to turn SAC into the nation's instrument of nuclear deterrence.

The building appears to retain its exterior integrity, with character-defining features such as the rounded window still intact. This assessment is based on observations of the building's exterior as compared with early photographs of the building. Since no major renovations or major changes in use are indicated on the real property card for this building, the integrity of the interior is determined to also be intact.

This former SAC headquarters is evaluated as exceptionally important to the base and national Cold War contexts. It was used during Phases I and II for two significant roles, and meets NRHP criterion (a).

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
22	7066	None	Low Frequency Transmitter Complex
20	7004	302	Major Command Headquarters
20	7012	501	Major Command Post
19	7009	464	Command and Control Alert Facility
19	7011	500	Major Command Headquarters
19	7028	524	Command and Control Alert Facility
18	7015	16	Commander Housing
18	7100	None	Photograph Collection
17	7098	None	Office Files
17	7099	None	Museum Collection
16	7002	40	Command and Control Alert Facility
16	7007	453	Flight Simulator
16	7008	463	Memorial Chapel
16	7014	542/566/598	Satellite Communications Complex
16	7094	None	Architectural Drawing Files
16	7095	None	Documentary Collection
16	7097	None	Photograph Collection
15	7096	None	Documentary Collection
14	7003	301	Global Weather Service
14	7006	416/417	Unaccompanied Housing

6.1.1.2 Major Command Headquarters (Resource No. 7011, Real Property No. 500)

This building, currently STRATCOM Headquarters, served as the SAC Headquarters from 1957 until the creation of STRATCOM in 1992. This permanent building is four stories high, constructed of reinforced concrete and masonry, and has a current square footage of 627,231. The SAC Theater (Real Property No. 502) was added in 1992 as part of this building. The capacity of the headquarters as originally designed was 360,003 ft² (109,729 m²) and was considered the largest Midwest office building of its time. In 1960, construction of a basement resulted in an increase in square footage to 417,023. More recently, this square footage was again increased with the addition of office space from the old underground SAC Command Post (Real Property No. 501).

Although the building has experienced several adjustments in square footage, the current above ground portion retains much of its exterior and interior integrity. Character-defining features such as two static missile displays in the front grounds, along with various interior objects and decor such as the SAC seal in the floor of the entrance hallway, remain intact. Some exterior alterations, including the replacement of the original 1950s metal window frames, have only slightly compromised the building's historic fabric.

Referred to by some as the "Pentagon of the West," the headquarters building played a vital role in command and control during the majority of the Cold War period. In this building, global information was assembled that enabled the CINCSAC to maintain control of most of the nation's nuclear arsenal. The headquarters building is evaluated as exceptionally important within the base and national Cold War contexts. It was used in this significant role during Phases II through IV, and meets NRHP criterion (a).

6.1.1.3 Major Command Post (Resource No. 7012, Real Property No. 501)

This building served as the underground SAC Command Post from 1957 until the creation of STRATCOM in 1992. This permanent building is three stories deep and constructed of reinforced, water-proof hardened concrete that is shielded against electromagnetic pulse. Its exact square footage is confusing, since portions of the building have been transferred for use as office space to the above-ground headquarters (Real Property No. 500). A new addition was constructed in 1992 that functions as the current STRATCOM underground command post. The real property printout lists the current square footage at 160,303. The capacity of Real Property No. 501 as originally designed was 116,814 ft² (10,852 m²). It was originally used as Headquarters Command Operational, later as Command Headquarters, and finally as Headquarters Major Command. Several additions have been made to the building; however direct correlation between these additions and changes in building use are not evident.

Interior characteristics defining the building's Cold War use include four sets of blast doors, a decontamination room/wing, and a poppet valve system to control outside airflow. However, the old "big board" screen has been dismantled and, along with the rest of the old command post, entirely converted to office space. Thus, although some Cold War features remain, the building's integrity is definitely questionable.

The underground command post served as the nerve center for SAC during the majority of the Cold War period. The command post essentially remained on alert for 31 years, and during periods of defensive posture when tensions were particularly high, functioned as the center for all SAC command and control through dissemination of strategy. The former SAC underground post is considered an exceptionally important property within the base and national Cold War contexts. It served this during Phases II through IV, and meets NRHP criterion (a).

6.1.2 Communications

6.1.2.1 Low Frequency Transmitter Complex (Resource No. 7066)

Silver Creek, the Low Frequency Transmitter Complex, consists of a low frequency transmitting tower and an associated semi-subterranean building, both built in 1968. Built in 1988, an above-ground dormitory located some distance from the tower completes the installation. The complex became operational as a survivable low frequency communication system, operating with 110,000 watts, in 1969, and continued in operation until June 1, 1994. The tower itself, constructed of steel frame and reinforced concrete, is 1,240 ft (378 m) high. It is surrounded by ground radials, each 1,800 ft (548.6 m) long with a 10 ft (3 m) grounding rod at each end. Inside the semisubterranean building is a 25 x 25 x 30 ft (7.6 x 7.6 x 9 m) copper room containing the 17 ft (5 m) diameter helix, a copper loading coil for the antenna. The antenna produces a very strong electro-magnetic field. The transmitter appears to be intact, although no longer in use. Some dismantling of interior components has occurred, and the operation staff has been significantly reduced. However, the tower is still standing.

This complex embodies the basic Cold War theme of survivability, acting as a vital communication link between the National Command Authority and the United States Strategic forces by providing a totally interactive communication system including the airborne control, SAC underground command post, and other critical commands such as the Navy and Pentagon. Although SAC maintained several high frequency backup systems, this was the final backup. In operation during Phases III and IV of the Cold War period, the complex is hardened against electromagnetic pulse, thus ensuring survivability and enabling the National Emergency War Order to be relayed before, during, and after an attack. Only one other transmitter site of its kind was functional during the Cold War period, and that site, in California, has been dismantled. Silver Creek is thus considered an exceptionally important property within the base and national Cold War contexts, and meets NRHP criterion (a).

6.1.3 Documentation

6.1.3.1 Architectural Drawing Files (Resource No. 7094, Located in Real Property No. 301)

The architectural drawing files are located in the Martin Bomber Building in the 55th CES drawing vault adjacent to the drafting area. The drawing files include 10 full banks and two partial banks of flat files for a total of 275 drawers. The flat files contain Record Drawings (as-builts) and project files for all real property on base. Drawings consist of a variety of types, including original ink on linen, vellum, mylar, and sepia. Banks 1-9 are ordered by real property number (1 through 9947), banks 10 and 12 are project specific, and bank 11 includes drawings of ancillary communication facilities such as Scribner, Elkhorn, Silver Creek, and Hastings. The drawing files span the decades from the 1930s to the 1990s, including all the Cold War periods, and provide information on several topics including original building construction and base development through project implementation. They contain information regarding base properties recommended by this report as eligible or potentially eligible to the NRHP. Currently the files are kept in a secure room, and are well organized and complete.

6.1.3.2 Documentary Collection (Resource No. 7095, Located in Real Property No. 301)

A collection of historical documents is located in the Martin Bomber Building in the 55th CES drafting area. The collection is stored in a flat file, bank 14 drawer 10, marked "Historical and Base Photos." The flat file contains numerous historical maps, photos, and architectural project drawings. Maps include historical base layouts and master plans. Photos include aerials of base and transmitter locations and large format negatives of Fort Crook. Drawings include old utility plans for the base. Also included is a 1958 expansion study for SAC at Offutt AFB. The collection spans the decades from the 1940s to the 1990s, including all the Cold War periods, and provides information on several topics related to base history, including information on resources recommended by this report as eligible or potentially eligible to the NRHP. The

collection is kept in a secured area and efforts have been made to isolate the historic items from those accessed on a daily basis.

6.1.3.3 Documentary Collection (Resource No. 7096, Located in Real Property No. 301)

A collection of historical documents is located in the Martin Bomber Building in the Real Property office. The collection includes one bank of 10 flat files that contain numerous historic maps and architectural drawings. Documents pertinent to this study include those that show jurisdiction/ownership; utility plans for Hastings, Scribner, and other annex master plans; real estate base layouts from 1960-1986; 1966 and 1986 SAC comprehensive plans; a 1957 topographic map of Offutt Military Reservation; floor plans for building 301; base plan maps for 1966 and 1986; future land use maps showing constraints/opportunities; and a 1986 Disaster Preparedness Map. The collection spans the decades from the 1940s to the 1990s, including all the Cold War periods, and provides information on several topics related to base history, including information on resources recommended by this report as eligible or potentially eligible to the NRHP. The resources are currently kept in a secured area along with the working real property files.

6.1.3.4 Photograph Collection (Resource No. 7097, Located in Real Property No. 301)

A collection of photographs documenting the base and the Martin Bomber Building is located in the Martin Bomber Building in the 55th CES Environmental Office. The collection includes one flat file marked "Photos" which contains approximately 30 photographs of the construction of the Martin Bomber Building and approximately 150 aerial photographs and negatives of various sizes of the base. The photo collection spans the decades from the 1940s to the 1990s, including all the Cold War periods, and provides information on several topics related to base development and to construction of a building significant within the Cold War and other contexts. The aerial photographs represent a relatively complete collection that is extremely valuable and irreplaceable. The collection is currently kept in a private office and is well organized and maintained.

6.1.3.5 Office Files (Resource No. 7098, Located in Real Property No. 458)

The historical files in the 55th Wing Historian's office include unclassified documents that are pertinent to several of the resources identified by this report as important within the base and national Cold War contexts. The files include two drawers of hanging folders, each folder specific to a facility and organized by real property number. These folders contain historical details available from newspapers, pamphlets, and events that elaborate on each building's history. Of particular note is documentation on the Martin Bomber Plant, SAC Headquarters building, SAC Museum, NEACP facilities, and the Scribner Communication site. Based on the Files Maintenance and Disposition Plan, it appears that the Classified Historical Archives also include information related to the Cold War, yet which may not be as readily tied to real property as are the unclassified files. The files span the decades from the 1940s to the 1990s, including all the Cold War periods, and provide information on several topics including original building construction and base history. The files are currently kept in the secured Wing Historian's Office and are well organized and maintained.

6.1.3.6 Photograph Collection (Resource No. 7100, Located in Real Property No. 301)

A collection of black and white 3 x 5 inch photographs and negatives documenting the Silver Creek installation is maintained in the 55th CES/Environmental Office. The photographs were taken in 1994, prior to dismantling of certain installation components. Specifically depicted resources include the following: transmitting tower; copper room-saturable reactor (10 photographs); miscellaneous facilities including the barracks room, kitchen, day room, maintenance area, dormitory, and transmitter in operations room; power production area with sign "ACC Power" (5 photographs); sign of "Detachment 1 55th GCSS (ACC) Silver Creek, NE;" plaque of "Detachment 1 Silver Creek, NE;" and sign "power AMPS of 100 total kw." The significance of this collection lies in the information it provides regarding the exceptionally important Silver Creek installation. It provides a photographic record of the installation prior to its partial dismantling.

6.1.4 Housing**6.1.4.1 Unaccompanied Housing** (Resource No. 7006, Real Property Nos. 416 and 417)

Two adjacent metal dormitories, originally known as "Ellsworth Hall" (Real Property No. 416) and "Loring Hall" (Real Property No. 417), were dedicated by CINCSAC General Curtis LeMay in 1951 as the "SAC Airman's Dormitories." The new dormitory design stressed comfort, convenience, and practicality. Real Property No. 416, which was converted to Wing Headquarters in 1992, currently has no function. Real Property No. 417 was converted to a Base Covered Storage Facility in 1991 and continues in that function.

Constructed in 1953-1954, each dormitory is three stories high plus a basement, with a square footage of 22,870. The capacity of Real Property No. 416 was 122 people and of No. 417 was 132. Both dormitories are constructed in classic 1950s style with steel panel modules, reinforced concrete, and exposed exterior stairwells. Until the past year, these dormitories had experienced few interior or exterior renovations despite changes in use. Since then, some dismantling prior to demolition on Real Property No. 416 has resulted in compromises to this building's exterior integrity. Real Property No. 417 maintains its integrity. Design plans for the demolition of both buildings have been completed and this action is proposed for the near future.

Although not exceptional, these dormitories are directly associated with General Curtis E. LeMay, a major figure in SAC's and Offutt AFB's roles during the first two phases of the Cold War period. Commissioned and dedicated in a formal ceremony by LeMay, the dorms embodied concepts such as increased privacy that he felt were important to the success of the "new" Air Force. The dormitories are important to the base's Cold War context due to their association with LeMay. These buildings served as dormitories during Phases II through III, and meet NRHP criterion (a).

6.1.4.2 Commander Housing (Resource No. 7015, Real Property No. 16)

Commonly known as "Quarters 16," this permanent building is located at the northern end of General's Row, adjacent to the parade ground. It has always functioned as living quarters for resident commanders: first, following its original construction in 1896, for the commanding officer of Fort Crook, then, after 1948, for the CINCSAC. General George C. Kenney, who served in the CINCSAC position during the transitional years from 1946-1948, is the only CINCSAC not to reside in Quarters 16. Since 1948, when Curtis LeMay began his tenure as CINCSAC, all SAC commanding officers have resided in this building, which today is occupied by the STRATCOM commander.

Quarters 16 is one of 20 residences built between 1881-1886, on then Officer's Row for Fort Crook. Other facilities, including the Officer's Mess and Club, main barracks, and guard house, were also built during this period of initial construction. This Victorian style officer's quarters was constructed with pressed brick walls set on a limestone block foundation. Walls range in thickness from approximately 20 inches (50.8 cm) at the base to 16-18 inches (40.6-45.7 cm) at the top of the house. With two floors, an attic, and 7,600 ft² (706 m²), Quarters 16 is the only single residence house on General's Row. An early newspaper description characterizes the residence as a simple set with three rooms, a ballroom, and a kitchen on the first floor, and two bedrooms and a bathroom in the attic.

Cold War character defining elements of Quarters 16 that are significant include a fallout shelter, which was installed in the basement in 1962 during the tenure of General Thomas S. Power. According to the record drawings of the basement floor plan for Quarters 16, a rectangular storage closet, centrally located in the basement and sharing a central interior 9 inches (22 cm) thick brick insection support wall and the exterior east building wall, was modified to accommodate the fallout shelter. Essentially, the closet space was extended across the full length of the basement floor by the installation of an 8 inches (20 cm)) thick brick insection wall. The space created was 19 ft 10 inches (6 m) by 3 ft 8 inches (1 m). Quarters 16 physically reflects the

Cold War mentality with the presence of the fallout shelter, as well as with the installation of special telephone lines for communication between the CINCSAC and other command centers.

The building retains exterior integrity based on observations and comparisons with early photographs. However, some photographs in base collections appear to indicate substantial remodeling to the interior, thus the integrity may have been effected.

This building is evaluated as exceptionally important for its association with the commanders of SAC. It served this function for all four phases of the Cold War, and meets NRHP criterion (b).

6.1.5 Memorial

6.1.5.1 Memorial Chapel (Resource No. 7008, Real Property No. 463)

Nowhere on Offutt AFB is the portrayal of the Cold War summarized more succinctly than in the SAC Memorial Chapel, built in 1956. The SAC Memorial Chapel is located along the southwestern edge of the parade ground. Originally designated the Base Chapel, this permanent building's function was changed to Center Chapel at an unknown date. Its original square footage was 7,684, the addition of an educational wing in 1960 made its total 11,560 ft²; however, it is unclear if this upgrade coincided with the change in utilization. The chapel is constructed of concrete block, brick, and reinforced concrete, and is described in a 1960 magazine article as an attractive brick building with a stylized metal spire, whose sanctuary seats approximately 300 people.

The building retains a high degree of both interior and exterior integrity. Current characteristics of the SAC Memorial Chapel significant to the Cold War period include the unique assemblage of stained glass windows adorning the sanctuary, a Klaxon alarm system for the NEACP squadron at the front, and two pews in the back labeled "Alert Crews Only."

In 1958, at the suggestion of CINCSAC General Thomas S. Power, a program was initiated to memorialize in stained glass windows SAC combat crew personnel who were killed in the performance of their flying mission for the cause of world peace (Skinner 1960). The project of choosing the window design and funding construction was begun in 1958. Personnel within the command itself donated generously for the windows and their installation.

In 1959, a design was selected and contributions for the main window were additionally utilized to fund the installation of stained glass in the remaining windows of the chapel, identifying the four Air Forces and the 72 Divisions and Wings in SAC. The windows were dedicated in May 1960, with CINCSAC General Power announcing that the chapel had been renamed the "Strategic Air Command Memorial Chapel."

The main stained glass window, known as the SAC Memorial Window, is located on the west side of sanctuary, adjacent to the altar. Measuring 12 x 15 ft (3.6 x 4.6 m), it symbolizes the dedication of the SAC combat crewman to his job of keeping the peace through deterrence. Design elements represent his family, aircraft, a world map, and the upward curve of a jet or rocket trail to the sky, surrounded by a golden light.

Also dedicated in the 1960 ceremony were the 2nd, 8th, 15th, and 16th Air Force Windows as well as the North Window. The 2nd Air Force Window includes a range of mountains representing the Northwest Air District it defends, an outline of Korea symbolizing its achievements in the Korean War, a B-47 signifying assignment of these planes to the 2nd Air Force, and a representation of Operation "Fox Peter One"-an accomplishment of the 2nd which was the first mass jet fighter flight over the Pacific using inflight refueling. The 8th Air Force, also called the "Atomic Air Force," was the first unit capable of delivering an atomic bomb. Its window includes an outline of Korea to illustrate mobility during the Korean conflict; an outline of France to commemorate the 8th's first mission; representation of a mushroom cloud to illustrate the 8th Air Force participation in the 1948 atomic test on Eniwetok ("Operation Sandstone"); and an image of the B-50 "Lucky Lady II" to commemorate the first non-stop

around-the-world flight in 1949. The 15th Air Force window elements include the outlines of Kansas and Germany with planes overhead to depict rapid deployment; the destruction of the German Air Force in 1943; outlines of North and South Korea to symbolize the three units' participation in the "Korean Police Action;" and an illustration of a B-47 to commemorate the non-stop record to the United Kingdom set by the 15th. The 16th Air Force window illustrates the famous "Red Telephone" at SAC headquarters, a symbol of the primary mission of the 16th to maintain instant global alert-readiness. Other elements include outlines of Iceland and French Morocco to illustrate the 16th as the first overseas air force; an outline of Spain overlain with a depiction of the 480 mi (772 km) pipeline that was built especially to fuel SAC aircraft; and depictions of the radar screen and radarscope with the B-47 to illustrate monitoring of reflex operations of SAC units in North Africa.

The North Window features the words of the Air Force Hymn along with other stylistic elements. Six additional windows, installed in 1973, include two large windows on the west side of the sanctuary with SAC insignias and other commemorative windows in the vestibule and adjacent educational facility.

The SAC Memorial Chapel is an exceptionally important property as it relates to social aspects within the base and national Cold War contexts. The customized stained glass windows embody SAC ideals and missions, such as national defense and deterrence, and commemorates strategic, technological, and command achievements. Other significant features include the NEACP alert klaxon and two pews reserved for alert crews. This building has served in this function during Phases II through IV of the Cold War, and meets NRHP criterion (a).

6.1.5.2 Museum Collection (Resource No. 7099, Located in Real Property No. 458)

The Heritage Room is a memorial exhibit located in the 55th Wing Headquarters. It is adjacent to and maintained by the 55th Wing Historian's office. The display includes numerous memorial items related to SAC and the 55th Wing, the most relevant to the Cold War study being a K-18A

reconnaissance camera; SAC insignia and plaques; plane hardware such as bomb sights, altimeters, radarscope and gun cameras; B-47E sextant, headsets, and gauges; E-4 scrapbooks; and a retrofit pictorial history of E-4A to E-4B 1981-1985. Other items are in the Wing Historian's possession but are not currently displayed.

Like other museum collections, the Heritage Room collection is important in an educational and memorial sense. This particular collection focuses on important events related to SAC. The objects appear well maintained and are in a secured room.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Command and Control Alert Facility (Resource No. 7002, Real Property No. 40)

This building was constructed in 1894, during the same building phase at Fort Crook as Quarters 16. Located across the parade ground from General's Row, it was originally part of one large barracks, divided into sections A through H, although now Real Property Nos. 40 (A, B, C, and D) and 49 (E, F, G, and H) have been separated. Real Property No. 40 is brick, Victorian in style, and has four stories including a basement for a total of 57,156 ft² (5,309 m²). The building's relationship to the Cold War is its 1977 designation as a crew readiness facility, which entailed some remodeling to accommodate the squadron operations and alert crew. In 1979, it was redesignated by a SAC directive as Headquarters Major Command.

The interior of the building may physically reflect the alert function; however, some remodeling did occur in conjunction with the functional redesignation in 1979, thus interior integrity is questionable. The building's exterior, however, does appear to retain its integrity based on observations and comparisons with early photographs of the building.

This building's exceptional importance within the Cold War base context lies in its function as a crew readiness facility during Phase III of the Cold War. These crews included NEACP, Looking Glass, or both, and the building apparently functioned for crew readiness for three years. It exemplifies the concept of survivability and the need to respond immediately to any Soviet attack threat. This building served this function during Phase III of the Cold War and meets NRHP criterion (a).

6.2.1.2 Command and Control Alert Facility (Resource No. 7009, Real Property No. 464)

This building is the operations building for Looking Glass crew readiness, training activities, planning, mission assessment debriefings, and administration. Looking Glass is the airborne auxiliary command post that currently mirrors the capabilities of the STRATCOM ground command post. During the Cold War, Looking Glass was a primary component in support of SAC's strategy of survivability. This building supported Looking Glass operations during Phases III and IV of the Cold War era. This alert facility is evaluated as exceptionally important to the base and national Cold War contexts. This building meets NRHP criteria (a) and (c).

This permanent building, constructed in 1974 of concrete masonry units, is 23,248 ft² square. In 1977, an E-4 project alarms system was installed and, in 1992, a low frequency radio transmitter was added. The building retains its exterior integrity with ancillary defining characteristics, including adjacent parking areas and tennis courts reserved for alert crews only, still intact. Since no major renovations or changes in use are indicated on the real property card for this building, the building's interior integrity is also determined to be intact.

6.2.1.3 Command and Control Alert Facility (Resource No. 7028, Real Property No. 524)

This permanent building, constructed in 1979 of concrete masonry units, is 45,732 ft² (13,939 m²), and is used as an operational building for the NEACP mission undertaken by the 1st ACCS. This building supported NEACP operations during the later phases of the Cold War

period (III and IV), and continues to support them under the command of STRATCOM. A brief assessment of the building's exterior indicated no obvious compromises to its integrity. Real property documentation indicates that the building has undergone no notable renovations or changes in use since its construction. Thus it is determined that the interior possesses intact integrity.

The building functioned for crew readiness, training activities, planning, mission assessment debriefings, and administration. NEACP is the airborne operation serving the National Command Authority. Enabling the President, Joint Chiefs, and other lines of authority to implement the National Emergency War Order, NEACP was a primary component in the broad Cold War strategy of survivability. This building is evaluated as exceptionally important within the base and national Cold War contexts. It meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Offutt AFB.

6.4 TRAINING FACILITIES

6.4.1 Flight Training

6.4.1.1 Flight Simulator (Resource No. 7007, Real Property No. 453)

This flight simulator building is located near the NEACP operations area and provides a specified training function for Looking Glass and NEACP operations. Constructed in 1978 of concrete, this permanent building is two stories high, has no windows, and is 3,025 ft² (281 m²). This flight simulator served as a training facility for the ALCS, which permitted Looking Glass aircraft to control the entire Minuteman fleet if any or all of the ground launch control centers were put out of action during Phases III and IV of the Cold War period. Thus, this simulator

contributed to the survivability of the SAC command and control system. The flight simulator building is evaluated as important to the base and national Cold War contexts, and meets NRHP criterion (a).

No major renovations or changes in use of this building are evident on the real property card, thus it is determined that interior integrity is intact. The exterior also retains its integrity, with no compromises to its historic fabric evident.

6.5 INTELLIGENCE FACILITIES

6.5.1 Communications

6.5.1.1 Satellite Communications Complex (Resource No. 7014, Real Property Nos. 542, 566, and 598)

The satellite communications complex at Offutt AFB consists of a main building (Real Property No. 598) built in 1985, a second building (Real Property No. 542) built in 1977, and a large satellite dish (Real Property No. 566) built in 1978. The main building is constructed of concrete masonry and has 10,311 ft² (957 m²).

The individual buildings in the complex retain their integrity, with no major alterations apparent. The real property cards do not indicate major renovations or changes in use to any buildings in the complex, thus interior integrity is determined to be intact.

At the same time it served a reconnaissance function for strategic missions of the 55th Wing, this facility also undoubtedly served a significant function in global data gathering related to intelligence and weather conditions. Its important Cold War association is as a vital component in strategy decisions made by SAC Headquarters and DoD during Phases III and IV of the Cold War period. It meets NRHP criterion (a).

6.5.2 Weather Reconnaissance

6.5.2.1 Global Weather Service (Resource No. 7003, Real Property No. 301)

Built in 1941, the Martin Bomber Building houses the 55th CES, Real Property Office, and GWC, in addition to numerous other offices such as the Education Services, Wood Craft Shop, Bowling Alley, and several industrial services. The building's original function was as an assembly plant for bombers used in World War II including the *Enola Gay* and *Bock's Car*. In 1960, it was dedicated to Glen L. Martin, and was officially named the Martin Bomber Building in 1992. The building is constructed of concrete and steel with a reinforced concrete floor. Architectural, character-defining features of note include wooden bricks which currently comprise much of the ground floor's surface. The GWC is located on the bottom floor of the Martin Bomber Building.

The building's exterior retains its integrity. Real Property documentation indicates that it has undergone major renovations associated with the transition from a bomber assembly plant to a multi-use office complex; these may have resulted in adverse effects to integrity. The integrity of the GWC portion of the building was not assessed as access was not secured. However, as the GWC continues its original function, interior integrity is determined to be intact.

Although Real Property No. 301 operated as a bomber aircraft manufacturing plant during World War II, the addition of weather reconnaissance capability through the Air Force GWC links the building to the Cold War. GWC provided weather data at a global scale directly to SAC Command for use in strategic decision-making. Thus, the GWC played a direct role in establishing military strategy to be used during the Cold War. The building is evaluated as important within the base and national Cold War contexts. It fulfilled its role during Phases III through IV, and meets NRHP criterion (a).

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the types of Cold War resources extant on Offutt AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Offutt AFB. These resources should be investigated further for a more comprehensive analyses.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Offutt AFB revealed approximately 150 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Offutt AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

There are known threats to evaluated resources at this time. The FY96-01 Military Construction Program Priority List contains only one evaluated resource, Real Property Nos. 416 and 417, the prefabricated steel "LeMay dormitories." These buildings have been scheduled for demolition. The 55th CES is awaiting the release of funds for this project to proceed as all necessary plans have been filed (55th Civil Engineering Squadron 1994).

One other evaluated resource which is presently being impacted by deactivation and dismantling is the Silver Creek Site, or Offutt Communication Annex No. 4. Although this communications facility is presently being dismantled, it has been documented as a resource having exceptional significance and therefore eligibility for the NRHP. The mission and some of its components remain classified and therefore must be dealt with in other studies.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Offutt AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Offutt AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Offutt AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Offutt AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Building								
7002	40	Command and Control Alert Facility		*				Located within an NRHP district.
7003	301	Global Weather Service		*		*		NRHP eligible in the future.
7004	302	Major Command Headquarters		*	*	*		NRHP eligible now.
7006	416/417	Unaccompanied Housing		*		*		NRHP eligible in the future.
7007	453	Flight Simulator		*		*		NRHP eligible in the future.
7008	463	Memorial Chapel		*	*	*		NRHP eligible now.
7009	464	Command and Control Alert Facility		*	*	*		NRHP eligible now.
7011	500	Major Command Headquarters		*	*	*		NRHP eligible now.
7012	501	Major Command Post		*	*	*		Potentially NRHP eligible now.
7014	542/566 /598	Satellite Communications Complex		*		*		NRHP eligible in the future.
7015	16	Commander Housing		*				Located within an NRHP district.
7028	524	Command and Control Alert Facility		*	*	*		NRHP eligible now.
7066	None	Low Frequency Transmitter Complex		*	*	*		NRHP eligible now.

Table 9.1 (Continued).

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Object								
7099	None	Museum Collection		*				
Record/Document - Object								
7094	None	Architectural Drawing Files		*			*	
7095	None	Documentary Collection		*		*	*	
7096	None	Documentary Collection		*		*	*	
7097	None	Photograph Collection		*			*	
7098	None	Office Files		*				
7100	None	Photograph Collection		*			*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

Consideration should be made to establishing a National Historic District to include the main base at Offutt AFB. This installation has a continuous history of military use from its establishment as Fort Crook through to the present day. During the Cold War era, it expanded and developed along with SAC. The buildings currently on the base illustrate this historical development. There are buildings that were initially constructed for use by Fort Crook that are still in use today, and there are buildings from every phase of the Cold War. A National Historic District would recognize the importance of these buildings, and would aid in preservation through stewardship, while still allowing viable on-going use.

9.2.1 Major Command Headquarters (Resource No. 7004, Real Property No. 302)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases I and II. It meets NRHP criterion (a) based on its roles as a support

building for the Martin Bomber Plant and as the first SAC headquarters. The integrity of the building is determined to be intact based upon partial observation, comparison with early photographs, and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Further documentation is recommended to nominate the resource to the NRHP, and stewardship is also recommended to retain the building's current level of integrity.

9.2.2 Major Command Headquarters (Resource No. 7011, Real Property No. 500)

The building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criterion (a) based on its role as the SAC headquarters during most of the Cold War. The integrity of the building is intact as only minor renovations have occurred. Therefore, this building is recommended as eligible to the NRHP. Further documentation is recommended to nominate this resource to the NRHP, and stewardship is recommended to maintain the current level of integrity.

9.2.3 Major Command Post (Resource No. 7012, Real Property No. 501)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase II through IV. It meets NRHP criterion (a) based on its role as the SAC Command Post during most of the Cold War. The integrity of the building has been compromised, with only a few features remaining that exemplify the building's role during the Cold War. Therefore, this building is recommended as potentially eligible to the NRHP. Further documentation to determine the level of integrity and to explore NRHP eligibility is recommended. Stewardship is also recommended in the interim during this evaluation to retain the current level of integrity.

9.2.4 Low Frequency Transmitter Complex (Resource No. 7066)

This facility is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role as a survivable means of communication. The integrity of the facility is intact, but is threatened by plans for dismantling. Therefore, this facility is recommended for nomination of the resource to the NRHP. Stewardship of the facility is recommended until this nomination can be completed.

9.2.5 Architectural Drawing Files (Resource No. 7094, Located in Real Property No. 301)

This collection of drawing files is kept in a secure area and is well organized. It is recommended that the collection be copied, with the copies staying at the base and the originals sent to a permanent curatorial facility for stewardship and conservation.

9.2.6 Documentary Collection (Resource No. 7095, Located in Real Property No. 301)

This collection of historical maps, photos, and architectural drawings has been stored in a secure area in a drawer separate from items that are accessed on a daily basis. It is recommended that this collection be inventoried and copied. It is further recommended that the base retain the copies for its use, and the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.7 Documentary Collection (Resource No. 7096, Located in Real Property No. 301)

This collection of architectural drawings and maps has been stored in a secure area and is kept with the other Real Property Office working files. It is recommended that the collection be inventoried and copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.8 Photograph Collection (Resource No. 7097, Located in Real Property No. 301)

This collection of photographs is stored in a private office and is well organized and maintained. It is recommended that copies of these photographs be retained by the base. It is further recommended that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.9 Office Files (Resource No. 7098, Located in Real Property No. 458)

This collection of files is currently maintained and organized by the Wing Historian. It is recommended that this degree of stewardship continue.

9.2.10 Photograph Collection (Resource No. 7100, Located in Real Property No. 301)

The collection of photographs is currently kept in the CES Environmental Office. It is recommended that copies of these photographs be retained by the base for its use. It is further recommended that the originals be sent to a permanent curatorial facility for stewardship and conservation.

9.2.11 Unaccompanied Housing (Resource No. 7006, Real Property Nos. 416 and 417)

These dormitories are evaluated as important within the base Cold War context during Phases II through III. They meet NRHP criterion (a) due to their association with LeMay and his concept of a new Air Force. Real Property No. 416 has already been subject to adverse effects to integrity, thus it is recommended as ineligible to the NRHP. No further work is recommended for No. 416. No. 417, although it retains its integrity, does not meet the 50 year criterion for eligibility to the NRHP, nor is it considered exceptionally significant. Therefore, No. 417 is also recommended as ineligible to the NRHP. Further recommendations for No. 417 include

stewardship to retain its current level of integrity, and when it meets the 50 year criterion, further documentation to re-evaluate this property for eligibility.

9.2.12 Commander Housing (Resource No. 7015, Real Property No. 16)

This building is evaluated as exceptionally important within the base and national Cold War contexts during all four phases of the Cold War. It meets NRHP criterion (b) due to its association with the commanders of SAC. This building is currently included within an existing National Register District, therefore, continued stewardship is recommended.

9.2.13 Memorial Chapel (Resource No. 7008, Real Property No. 463)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criterion (b) based on its association with SAC and its history. The building retains a high degree of integrity. Therefore, the building is recommended as eligible to the NRHP. Further recommendation include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.14 Museum Collection (Resource No. 7009, Located in Real Property No. 458)

This collection of objects relating to SAC and the 55th Wing is currently well maintained and is located in a secure area. Continued stewardship of the collection is recommended.

9.2.15 Command and Control Alert Facility (Resource No. 7002, Real Property No. 40)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phase III. It meets NRHP criterion (a) based on its role in deterrence through rapid

deployment. This building is currently included within an existing National Register District, therefore, continued stewardship is recommended.

9.2.16 Command and Control Alert Facility (Resource No. 7009, Real Property No. 464)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criteria (a) and (c) based on its role in sustaining survivable command, control, and communications links and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact based upon observations and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.17 Command and Control Alert Facility (Resource No. 7028, Real Property No. 524)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criteria (a) and (c) based on its role in sustaining survivable command, control, and communications links and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact based upon observations and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.18 Flight Simulator (Resource No. 7007, Real Property No. 453)

This building is evaluated as important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role in maintaining the survivability of

command, control, and communications. The integrity of the building is intact based on observation and the lack of documented renovations. However, the building neither meets the 50 year criterion, nor is considered to be exceptional in importance. Therefore, the building is recommended as ineligible to the NRHP. Recommendations include stewardship to maintain the building's current level of integrity, and further documentation when the building meets the 50 year criterion to re-evaluate it for eligibility.

9.2.19 Satellite Communications Complex (Resource No. 7014, Real Property No. 542, 566, and 598)

This complex is evaluated as important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role in reconnaissance and the development of strategic decisions. The integrity of the complex is intact based on observation and the lack of documented renovations. However, the complex neither meets the 50 year criterion, nor is considered to be exceptional in importance. Therefore, the complex is recommended as ineligible to the NRHP. Recommendations include stewardship to maintain the complex's current level of integrity, and further documentation when the building meets the 50 year criterion to re-evaluate it for eligibility.

9.2.20 Global Weather Service (Resource No. 7003, Real Property No. 301)

The Global Weather Service is evaluated as important within the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role in providing information integral to strategic decision making. Its integrity is determined to be intact based upon observation and the continuance of its original functions. However, the GWC neither meets the 50 year criterion, nor is considered to be exceptional in importance. Therefore, this resource is recommended as ineligible to the NRHP. Recommendations include stewardship to maintain the GWC's current level of integrity, and further documentation when the resource meets the 50 year criterion to re-evaluate it for eligibility. Of course, the Martin Bomber

Building may be eligible under the context of World War II, however, that evaluation is beyond the scope of this study.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Canan, J. W.

- 1994 The New Order in Omaha. *Air Force and Space Digest*. Air Force Association. March Issue, pp:26-29.

Department of Defense

- 1972 *Executive Order 11508 Installation Survey Report, Offutt Air Force Base, Omaha, Nebraska*. Office, Assistant Secretary of Defense for Installations and Logistics.
- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

55th Civil Engineering Squadron

- 1994 MCP Priority List, FY96-01 (Excluding Environmental). Planning Office, 55th Civil Engineering Squadron, Martin Bomber Building, Offutt Air Force Base, Nebraska.

55th Wing Headquarters

- 1994 Wing History Files. Wing Historian's Office, 55th Headquarters, Offutt Air Force Base, Nebraska.

Gowans, A.

- 1992 *Styles and Types of North American Architecture: Social Function and Cultural Expression*. Harper Collins Publishers, New York.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.
-

Muir Planning Corporation

- 1986 *Offutt Air Force Base, Nebraska, Base Comprehensive Plan*. Prepared for Offutt Air Force Base, Nebraska. MCP, Colorado Springs.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Ryon, TSgt T.

- n.d. History of Offutt Air Force Base, Nebraska. Manuscript on file in 55th Wing History Office, Offutt Air Force Base, Nebraska.

Skinner, R. M.

- 1960 SAC's Combat Crewmen Memorialized in Stained Glass. *Air Force and Space Digest*. Air Force Association.

Strategic Air Command

- 1977 *Strategic Air Command Background*. Directorate of Information, Offutt Air Force Base, Nebraska.

United States Air Force

- 1972a *Executive Order 11508 Installation Survey Report, Offutt Communications Annex No. 3., Scribner Communications Site*. Office, Assistant Secretary of the Air Force (Manpower, Reserve Affairs and Installations).
- 1972b *Executive Order 11508 Installation Survey Report, Offutt Communications Annex No. 4., Silver Creek Communications Site*. Office, Assistant Secretary of the Air Force (Manpower, Reserve Affairs and Installations).
- 1986 *Fact Sheet: SAC Underground Command Center, 86-9*. Office of Public Affairs, Offutt Air Force Base, Nebraska.
- 1988 *Installation Survey Report, Offutt Air Force Base, Bellevue, NE*. Office, Assistant Secretary of the Air Force (Readiness Support).
- 1991 *Installation Survey Report, Offutt Air Force Base, NE*. Executive Order 12512. Office, Assistant Secretary of the Air Force (Manpower, Reserve Affairs and Installations).
-

1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations.* Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

United States Army Corps of Engineers

1960 *History of Atlas Missile Base Construction, Offutt AFB.* U.S. Army Corps of Engineers, Omaha District, Nebraska.

United States Strategic Command

1994 *Fact Sheet: United States Strategic Command.* Strategic Command, Offutt Air Force Base, Nebraska.

Yenne, B.

1985 *SAC, A Primer of Modern Strategic Airpower.* Presidio Press, Novato, CA.

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	7001	29	Base Operations	1925
	7002	40	Command & Control Alert Facility	1894
	7003	301	Global Weather Service	1941
	7004	302	Major Command Headquarters	1941
	7005	306	Fire Station (with Old Control Tower)	1943
	7006	416/417	Unaccompanied Housing	1953/1954
	7007	453	Flight Simulator Training	1978
	7008	463	Memorial Chapel	1956
	7009	464	Command and Control Alert Facility	1974
	7010	493	Medium Aircraft Maintenance Dock	1959
	7011	500	Major Command Headquarters	1957
	7012	501	Major Command Post	1957
	7013	565	Large Aircraft Maintenance Dock (NEACP [E-4] Hangar)	1981
	7014	542/566 /598	Satellite Communications Complex	1977, 1978, 1987
	7015	16	Commander Housing	1896
	7016	382	Exchange Cafeteria Snack Bar (Burger King)	1992
	7017	305	Gymnasium (Frady Fitness Center-Audio Visual)	1942
	7020	313	Family Housing Management Office	1941
	7023	321	Offutt Field House (Warrior Fitness Center)	1943
	7024	456	Communication Facility (Bolton Hall-1853 Comm. Squadron)	1987
	7026	457	Large Aircraft Maintenance Dock (Bennie L. Davis Maintenance)	1986
	7027	492/491	Medium Aircraft Maintenance Dock/Fuel System Maintenance Dock	1959
	7028	524	Command & Control Alert Facility	1979
	7029	499	Alert Facility (New)	1994
	7030	686	Crew Readiness Visitation Center	1989
	7031	458	Group Headquarters (55th Wing)	1986
	7032	497	Squadron Operations (Reconnaissance Squadron-43 SRS)	1959
	7033	585	Petroleum Operations Building (POL)	1986
	7034	541	Air Force Headquarters (Defense Courier Service)	1986
	7035	685	Family Visitation Center (New)	1994
	7036	563	Small Arms Range System	1970
	7037	514	Precision Measurement Equipment Lab	1986
	7038	540	MWR Supply and Non-Appropriated Fund Central Storage (Equipment Rental)	1960
	7039	436	Visiting Airman Quarters (O'Malley Inn)	1987

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	7040	432	Visiting Officer's Quarters (Malmstrom Inn)	1954
	7041	515	Reconnaissance Photo Laboratory (STRATCOM Joint Intelligence Center)	1988
	7042	443	Rod & Gun Club	1983
	7043	560	Security Police Canine Kennel	1976
	7044	578	Air Force Security Service Operations (97th Intelligence Squadron-6949 ESS)	1977
	7045	519/518	Air Conditioning Plant/Electrical Power Station Buildings	1971-1973
	7046	407	Headquarters Major Command (3908 Contracting)	1952
	7048	462	Officers' Open Mess (The Officers' Club)	1956
	7049	505/520	Security Police Center/Traffic Check House	1988/1987
	7051	165	Exchange Sales Store	1969
	7052	107	Commissary Store	1976
	7053	162	Exchange Service Outlet (Mini Mall)	1970
	7054	106/137	Base Package Store/Post Office	1983/1973
	7055	388	Exchange Service Station	1963
	7056	525	Environmental Health	1959
	7057	402	Permanent Party Airman's Dormitory (McCoy Inn)	1952
	7058	73	Library (Thomas S. Powers Library)	1977
	7059	147	Bank of Bellevue	Unknown
	7060	163	Animal Clinic	1974
	7061	113	NCO Open Mess	1928
	7062	121	Airman's Swimming Pool	1923
	7063	42	Correction Facility	1894
	7066	Unknown	Low Frequency Transmitter Complex	1968
	7067	338/344	Traffic Check House & Visitor's Center (Kenney Gate Entrance with state flags)	1988
	7068	513	Squadron Operations (STRATCOM Underground Entrance)	1963
	7069	549	Control Tower	1974
	7070	307	Non-AF Administration Office (Mobile Communication Node for STRATCOM)	1942
	7071	None	SAC Museum	1972
	7072	41	Group Headquarters - 55th Communications Group	1942
	7073	418	Recreation Center	1954
	7076	713	Wherry Housing	1952
	7077	786	Wherry Housing	1952
	7078	324	Permanent Party Airman's Dorm (Whiteman Hall)	1961
	7079	365	Permanent Party Airman's Dorm	1987

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	7080	353/354 /355/319 /320/315	Satellite Communication Ground Terminal	1977-1981
	7081	323	Group Headquarters (55th Support Group Headquarters)	1942
	7082	789	Possible Communication Center	Unknown
	7084	361	Branch Exchange (Shoppette)	1978
	7085	363	Arts & Crafts Center	1977
	7086	4000	Medical Complex	1965
	7087	1226	Base Chapel 2 (Capehart Chapel)	1962
	7088	1108	Capehart Housing (2604 26th St. & Forbes)	1960
	7089	1145	Capehart Housing (2455 Vandenberg & 28th)	1960
	7090	Unknown	Peter Sarpy School (Capehart Housing)	Unknown
	7091	Unknown	Fort Crook School (Capehart Housing)	Unknown
	7092	Unknown	LeMay Elementary School	Unknown
	7093	6067/6086/6085	Housing Appropriation FY70A (Pease & 28th)	1975
	7101	Inside 301 (Basement)	Base Supply Store	Unknown
	7102	Inside 301 (Basement)	Interior Hallways	1941
	7103	Inside 301 (Basement)	Freight Office	Unknown
	7104	Inside 301 (Basement)	55 MSSQ/MSIR Records Management Staging Area	Unknown
	7105	Inside 301 (Basement)	Wood Block Floor (beside Staging Area)	1941
	7106	Inside 301 (Basement)	Barber Shop	Unknown
	7107	Inside 301 (Basement)	6th Space Operations Squadron	Unknown
	7108	Inside 301 (Basement)	Hazardous Materials Storage	Unknown
	7109	Inside 301 (Basement)	55th Supply Squadron	Unknown
	7110	Inside 301 (Basement)	Education Center	Unknown
	7111	Inside 301 (Basement)	Peacekeeper Lanes (Bowling Alley)	Unknown
	7112	Inside 301 (Basement)	American District Telegraph Co.	Unknown
	7113	Inside 301 (Basement)	Wood Craft Shop	Unknown

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	7114	Inside 301 (1st Floor)	55th Supply Squadron / Coffee Shop	Unknown
	7115	Inside 301 (1st Floor)	Data Processing Center	Unknown
	7116	Inside 301 (1st Floor)	Air Force Global Weather Central	Unknown
	7117	Inside 301 (1st Floor)	Fightin' Fifty-Fifth Engineers	Unknown
	7118	Inside 301 (1st Floor)	Interior Roof and Hallways	1941
	7119	Inside 301 (1st Floor)	"Best in ACC" Fightin' 55th Transporters 1992	Unknown
Real Property - Landscape				
	7018	80	Parade Ground and Pavillion	1894
	7050	None	Green 6 of Golf Course	1960s
	7064	294/295	Airpark (KC-135 & B-52) at Kenney Gate-Main Entrance	Unknown
	7083	371	Base Cemetery	1888
Real Property - Object				
	7021	None	Photograph SAC Underground Command Late 1950s (On Wall Of Corridor 2B-Building 500)	1950s
	7022	None	LeMay Memorial Case In Theatre Exhibit Hall	Unknown
	7047	473	Static Display-B-17 F	1990
	7074	None	Nightwatch Ave./Looking Glass Ave. Street Signs	Unknown
	7099	None	Museum Collection	1950-1980
Real Property - Structure				
	7019	509	Missile Display (Front of STRATCOM Headquarters)	1959
	7025	465/550 /580	Tank Farm (Heating Fuel Oil and Jet Fuel Storage) & Sign	1961-1986
	7065	Unknown	Silver Creek Transmitting Tower	Unknown
Personal Property - Object				
	7075	None	"Our Lady of the Runways" Shrine at St. Mary's Church of Bellevue (Off Base Near SAC Museum)	1950s
Record or Document - Object				
	7094	None	Architectural Drawing Files	1930-1990
	7095	None	Documentary Collection	
	7096	None	Documentary Collection	1957-1986
	7097	None	Photograph Collection	1950-1980
	7098	None	Office Files	1950-1980
	7100	None	Photograph Collection	1994

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

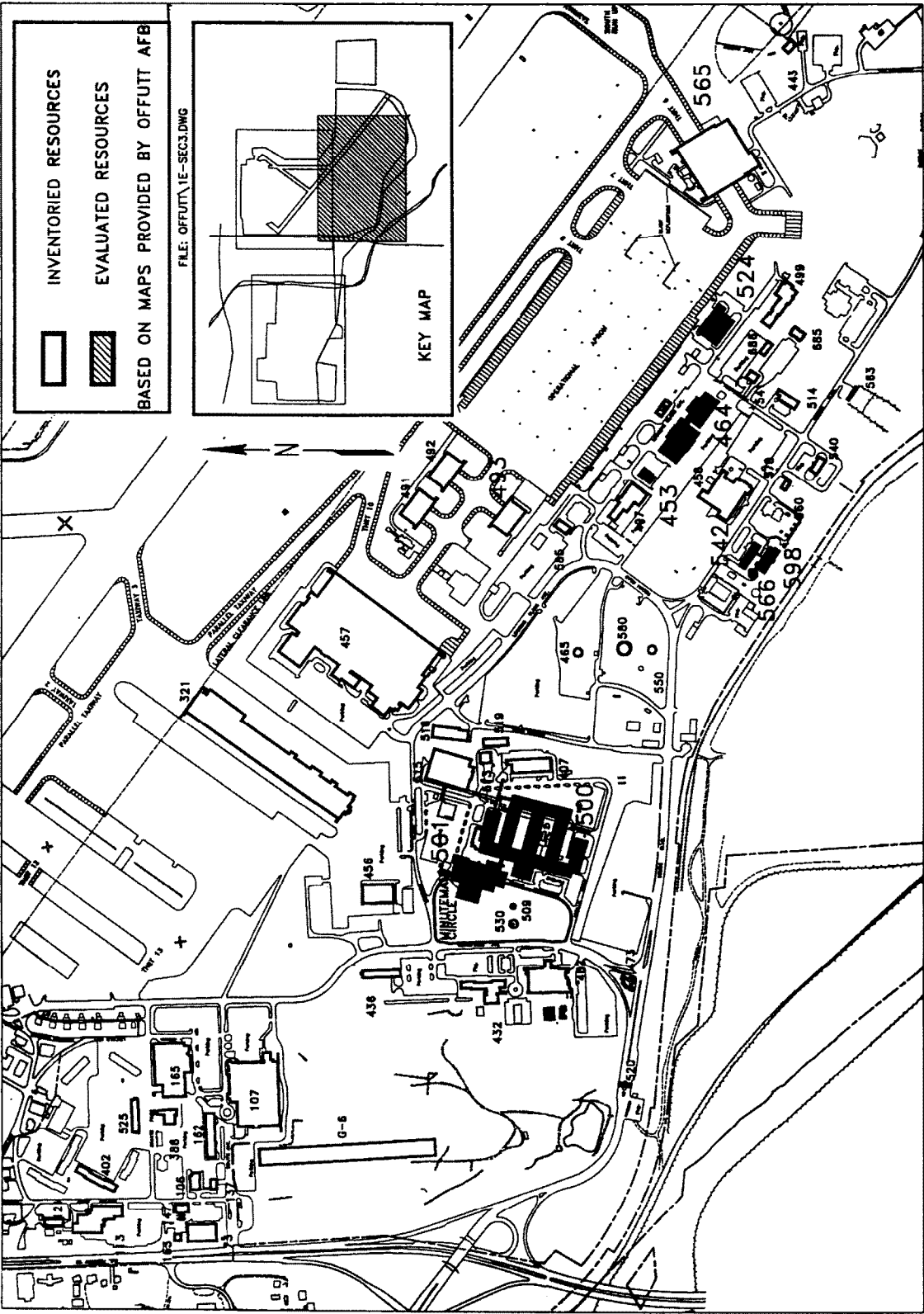


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 1 of 3).

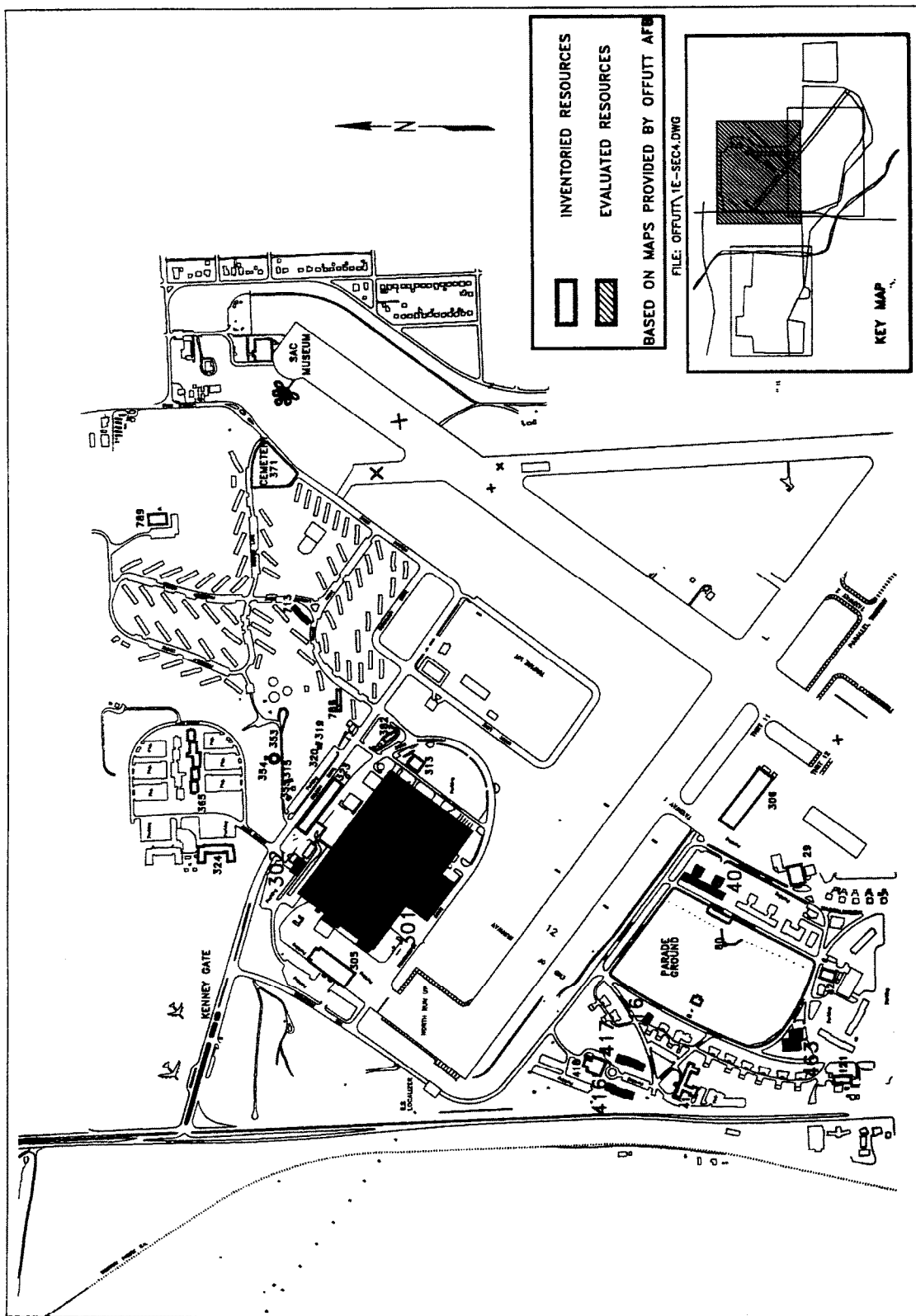


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 2 of 3).

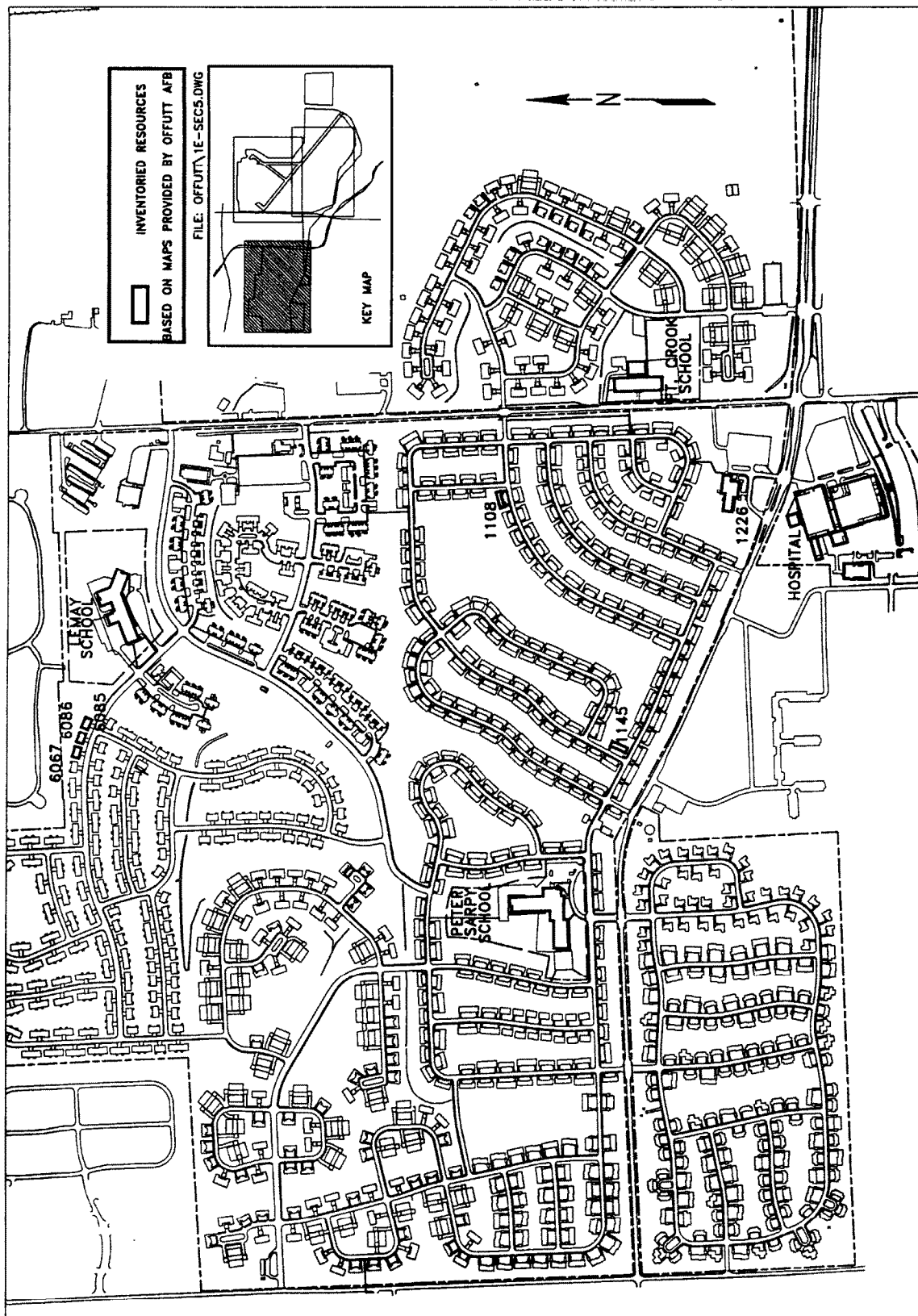
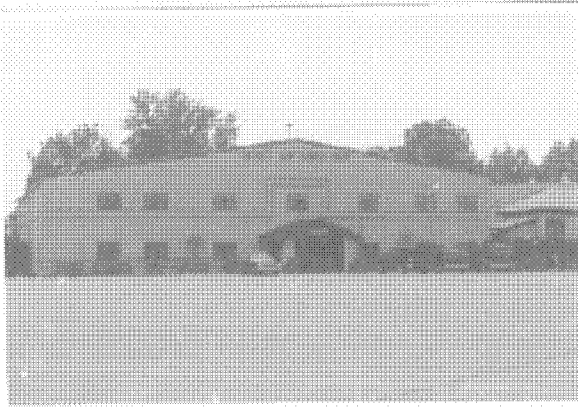
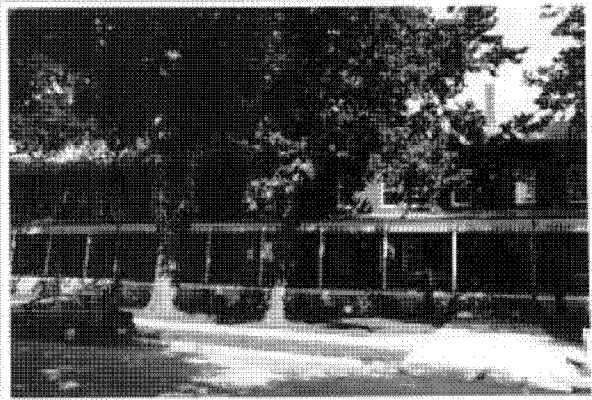


Figure B.1 Base Layout Maps Showing Inventoried Resources (Map 3 of 3).

APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 7001, Real Property No. 29
Base Operations



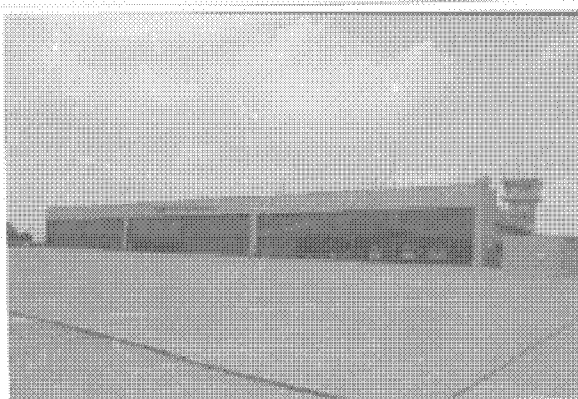
Resource No. 7002, Real Property No. 40
Squadron Operations (Old Crew Readiness
Facility)



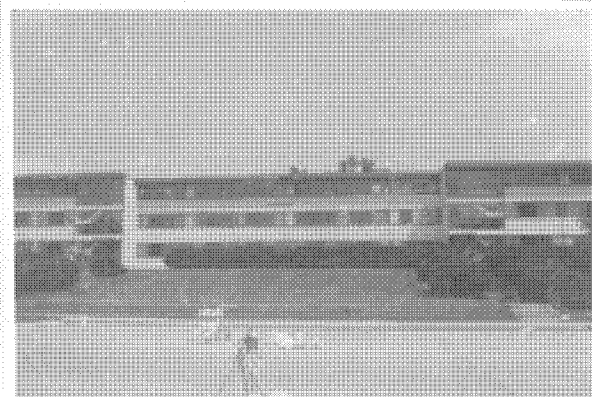
Resource No. 7003, Real Property No. 301
Warehousing Supplies & Equipment Base
(Martin Bomber Building)



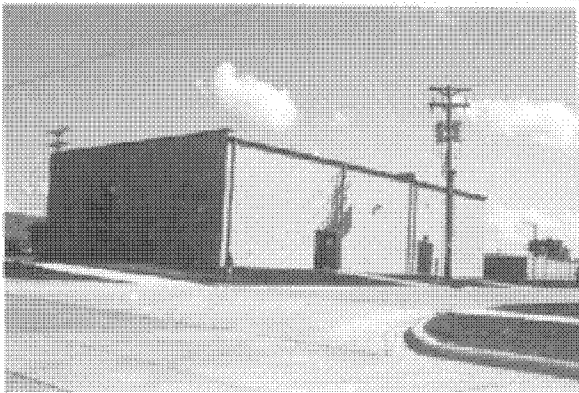
Resource No. 7004, Real Property No. 302
Law Building (Former SAC Command HQ)



Resource No. 7005, Real Property No. 306
Fire Station



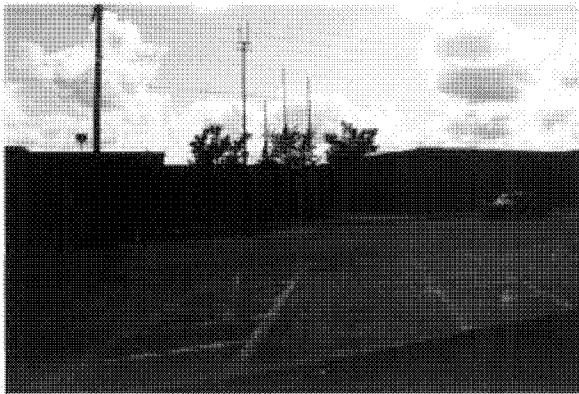
Resource No. 7006, Real Property Nos. 416 and
417, Base Covered Storage Facility (LeMay's
Metal Dorms)



Resource No. 7007, Real Property No. 453
Flight Simulator Training



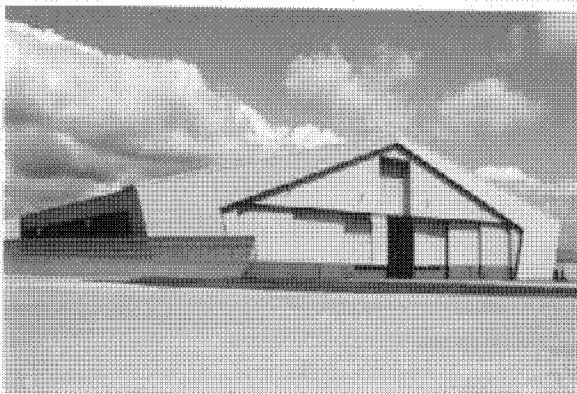
Resource No. 7008, Real Property No. 463
SAC Memorial Chapel



Resource No. 7009, Real Property No. 464
Squadron Operations (Looking Glass Operations)



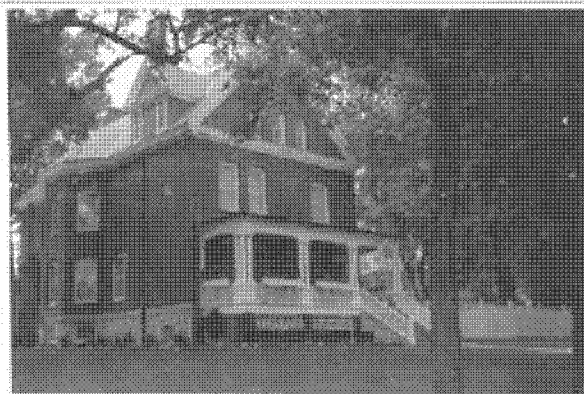
Resource No. 7011, Real Property No. 500
STRATCOM Headquarters



Resource No. 7013, Real Property No. 565
Large Aircraft Maintenance Dock



Resource No. 7014, Real Property Nos. 542,
566, and 598, Satellite Communications Ground
Terminals



Resource No. 7015, Real Property No. 16
Family Housing Appr. FY 1950 (LeMay's
residence)



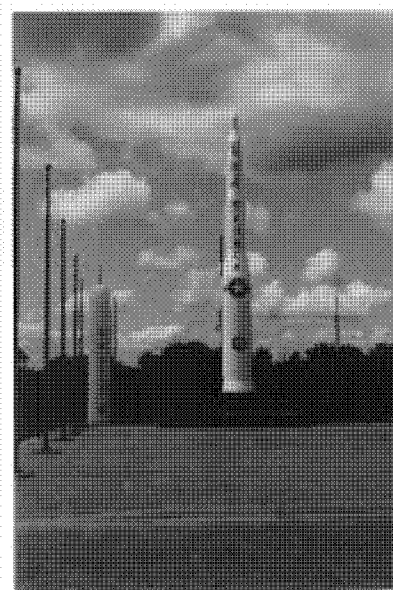
Resource No. 7016, Real Property No. 382
Exchange Cafeteria Snack Bar (Burger King)



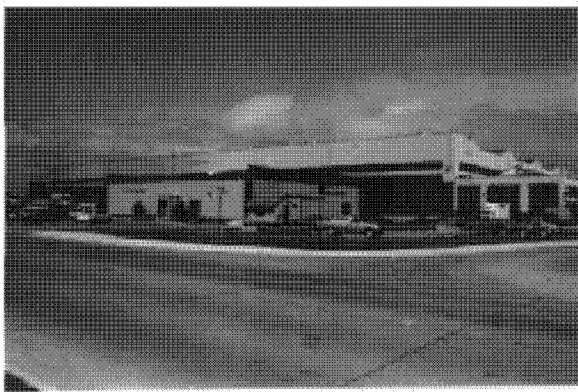
Resource No. 7017, Real Property No. 305
Gymnasium



Resource No. 7018, Real Property No. 80
Parade Ground and Pavillion



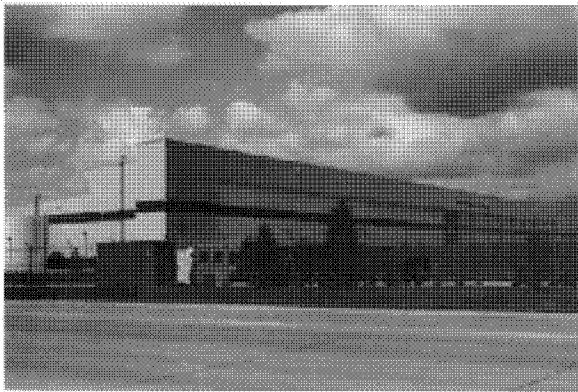
Resource No. 7019, Real Property No. 509
Missile Display (Front of STRATCOM
Headquarters)



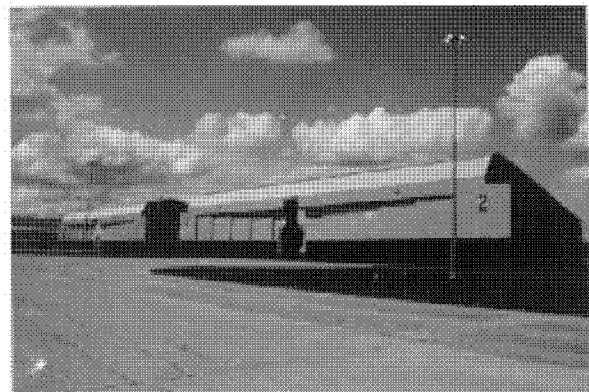
Resource No. 7020, Real Property No. 313
Family Housing Management Office



Resource No. 7023, Real Property No. 321
Offutt Field House (Warrior Fitness Center)



Resource No. 7026, Real Property No. 457
Large Aircraft Maintenance Dock



Resource No. 7027, Real Property No. 492 and
491 Medium Aircraft Maintenance Dock and
Fuel System Maintenance Dock



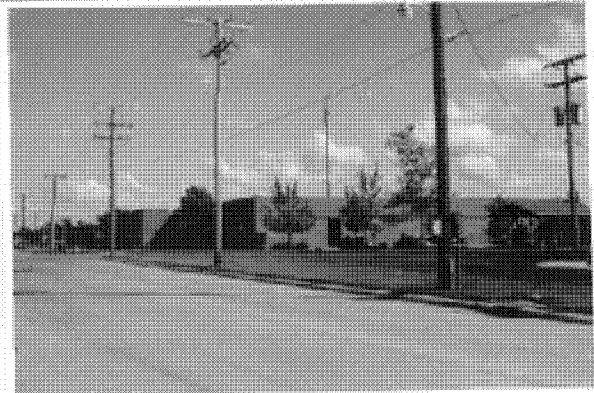
Resource No. 7028, Real Property No. 524
Crew Readiness (NEACP)



Resource No. 7029, Real Property No. 499
Alert Facility (New)



Resource No. 7030, Real Property No. 686
Crew Readiness Visitation Center



Resource No. 7031, Real Property No. 458
Group Headquarters (55th Wing)



Resource No. 7032, Real Property No. 497
Squadron Operations



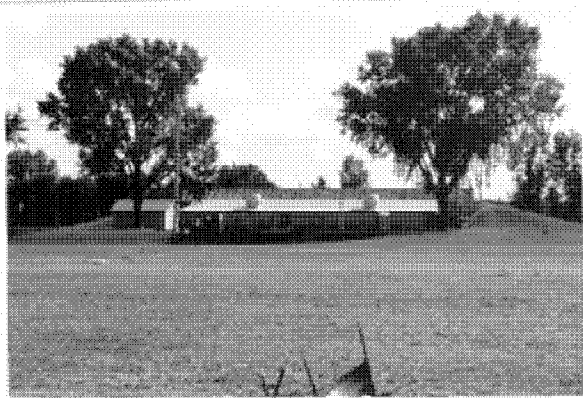
Resource No. 7033, Real Property No. 585
Petroleum Operations Building



Resource No. 7034, Real Property No. 541
Air Force Headquarters (Defense Courier
Service)



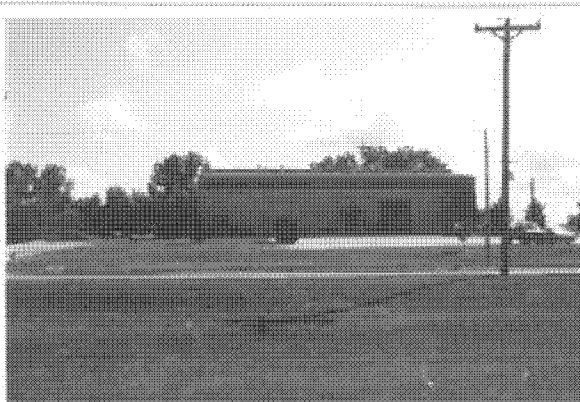
Resource No. 7035, Real Property No. 685
Family Visitation Center (New)



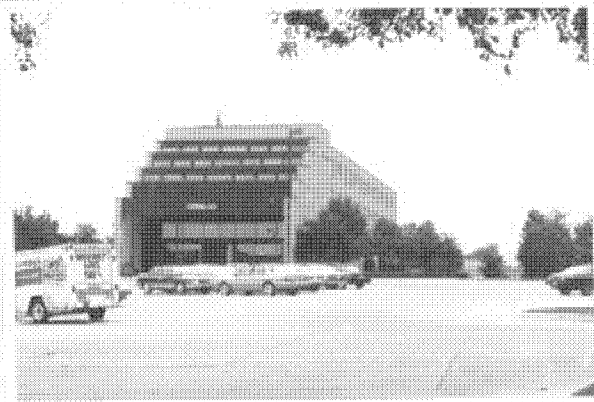
Resource No. 7036, Real Property No. 563
Small Arms Range System



Resource No. 7037, Real Property No. 514
Precision Measurement Equipment Lab



Resource No. 7038, Real Property No. 540
MWR Supply and NAF Central Storage



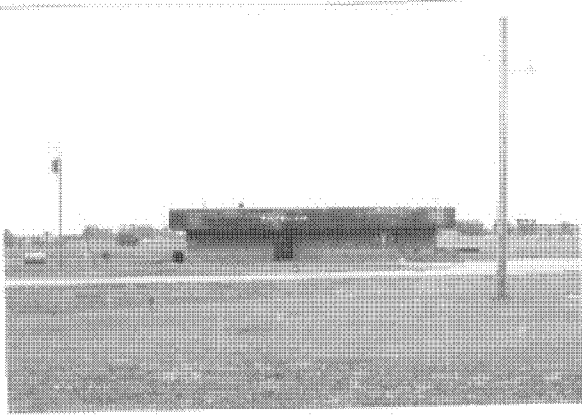
Resource No. 7039, Real Property No. 436
Visiting Airman's Quarters



Resource No. 7040, Real Property No. 432
Visiting Officer's Quarters



Resource No. 7041, Real Property No. 515
Reconnaissance Photo Laboratory (STRATCOM
Joint Intelligence Center)



Resource No. 7042, Real Property No. 443
Rod & Gun Club



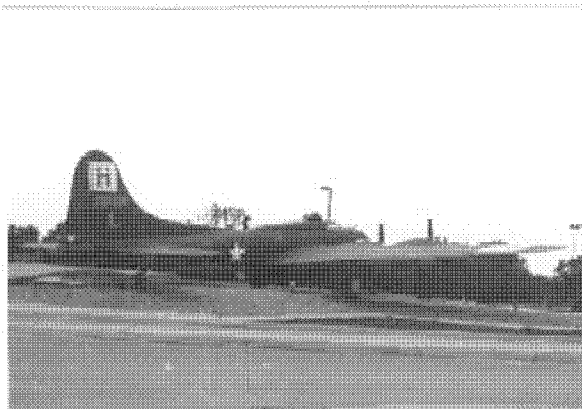
Resource No. 7043, Real Property No. 560
Security Police Kennel



Resource No. 7044, Real Property No. 578
Air Force Security Service Operations



Resource No. 7045 and 7046, Real Property Nos.
519, 518, and 407, Air Conditioning Plant and
Electrical Power Station Buildings and Major
Command Headquarters



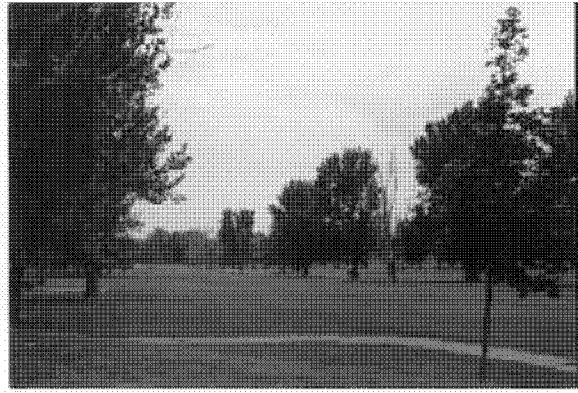
Resource No. 7047, Real Property No. 473
Static Display (B-17F)



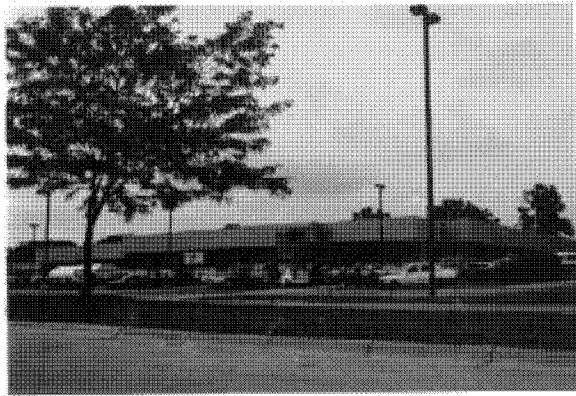
Resource No. 7048, Real Property No. 462
Officer's Open Mess (The Officer's Club)



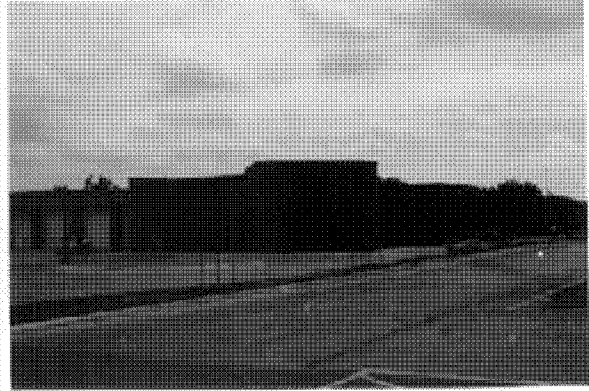
Resource No. 7049, Real Property Nos. 505 and 520 Security Police Center and Traffic Check House



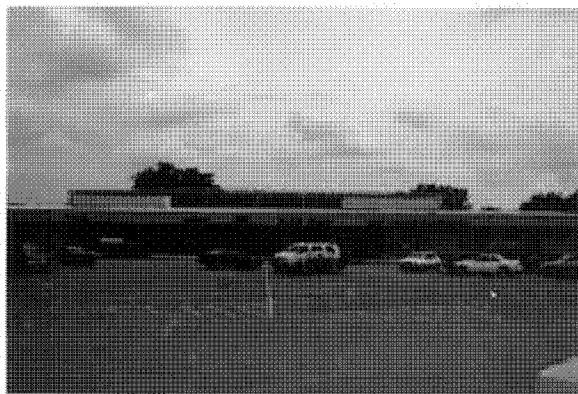
Resource No. 7050, Real Property No. (none) Green 6 of Golf Course



Resource No. 7051, Real Property No. 165 Exchange Sales Store



Resource No. 7052, Real Property No. 107 Commissary Store



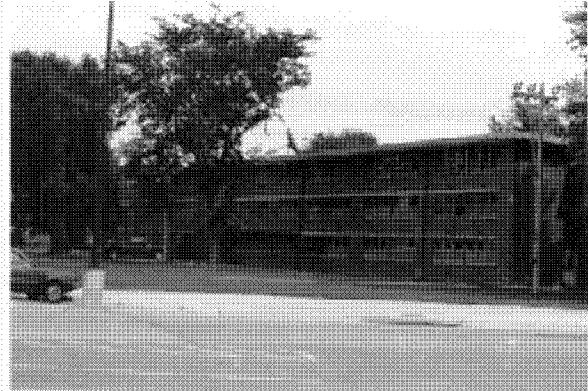
Resource No. 7053, Real Property No. 162 Exchange Service Outlet (Mini Mall)



Resource No. 7054, Real Property Nos. 106 and 137 Base Package Store and Post Office



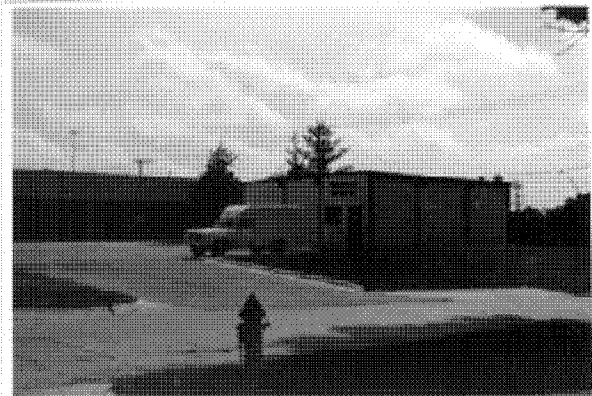
Resource No. 7055, Real Property No. 388
Exchange Service Station



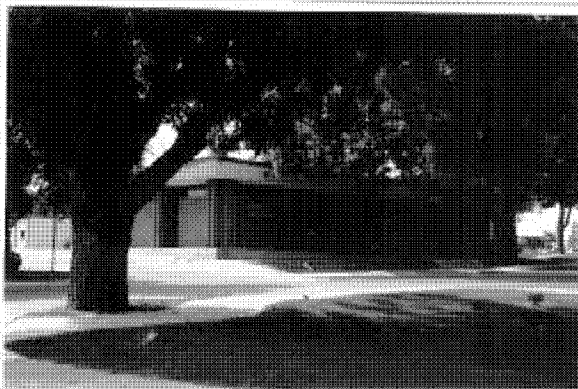
Resource No. 7056, Real Property No. 525
Environmental Health



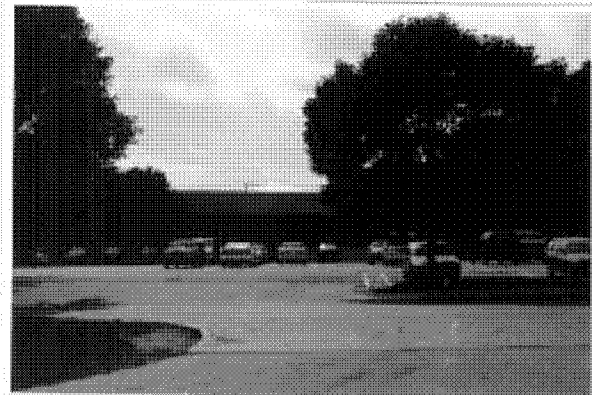
Resource No. 7057, Real Property No. 402
Permanent Party Airman's Dormitory



Resource No. 7058, Real Property No. 73
Library



Resource No. 7059, Real Property No. 147
Bank of Bellevue



Resource No. 7060, Real Property No. 163
Animal Clinic



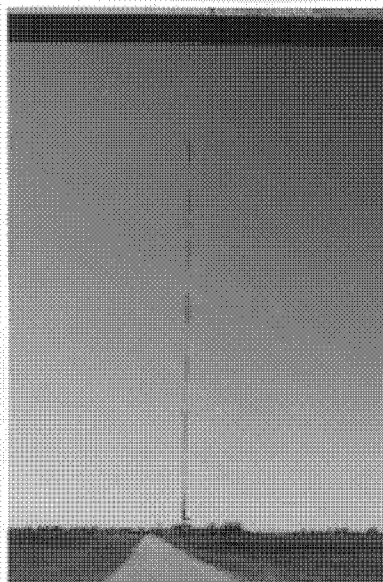
Resource No. 7061, Real Property No. 113
NCO Open Mess



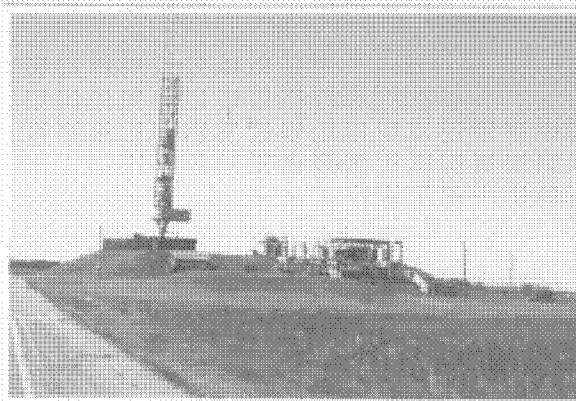
Resource No. 7062, Real Property No. 121
Airman Swimming Pool



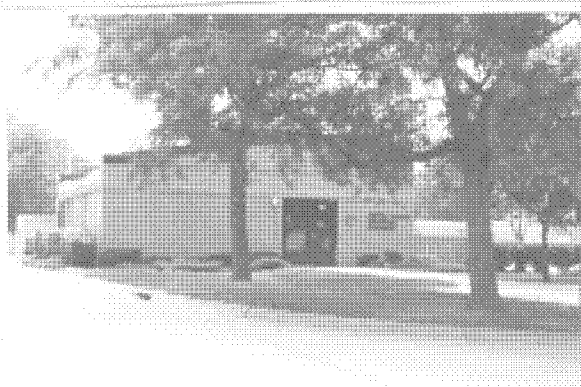
Resource No. 7063, Real Property No. 42
Correction Facility



Resource No. 7065, Real Property No.
(unknown), Silver Creek Transmitting Tower



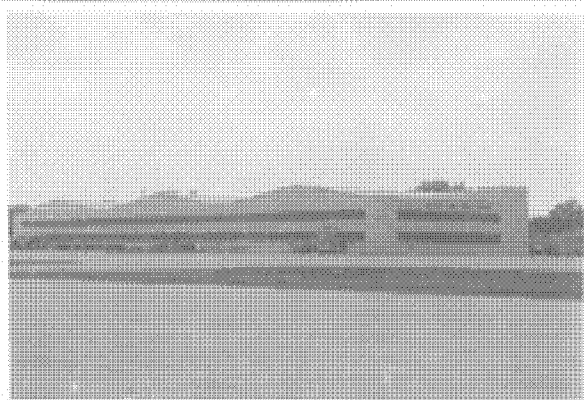
Resource No. 7066, Real Property No. (none)
Silver Creek Installation



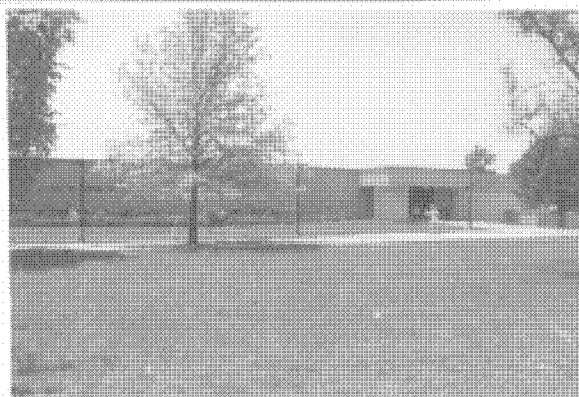
Resource No. 7068, Real Property No. 513
Squadron Operations (STRATCOM Underground
Entrance)



Resource No. 7069, Real Property No. 549
Control Tower



Resource No. 7070, Real Property No. 307
Non-AF Administration Office (Mobile
Communication Node for STRATCOM)



Resource No. 7071, Real Property No. (none)
SAC Museum



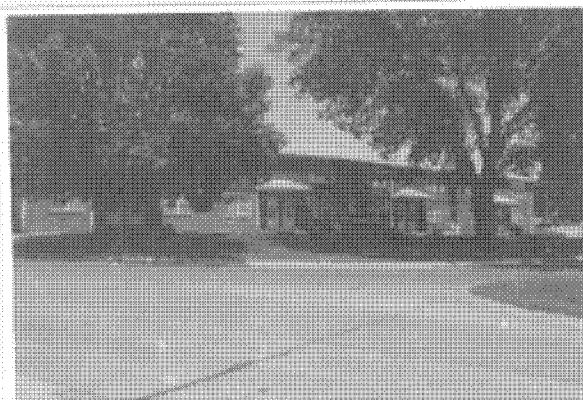
Resource No. 7072, Real Property No. 41
Group Headquarters



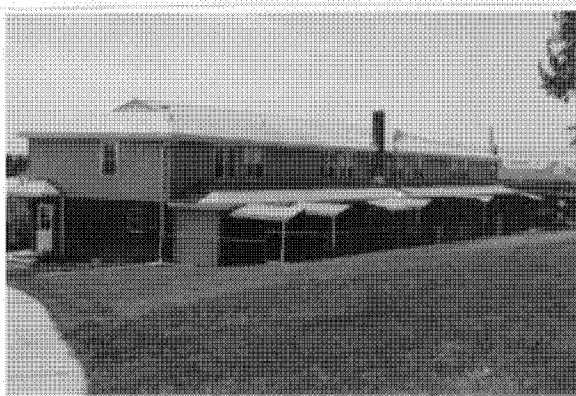
Resource No. 7073, Real Property No. 418
Recreation Center



Resource No. 7075, Real Property No. (none)
"Our Lady of the Runways" Shrine at St. Mary's
Church of Bellevue



Resource No. 7076, Real Property No. 713
Wherry Housing



Resource No. 7077, Real Property No. 786
Wherry Housing



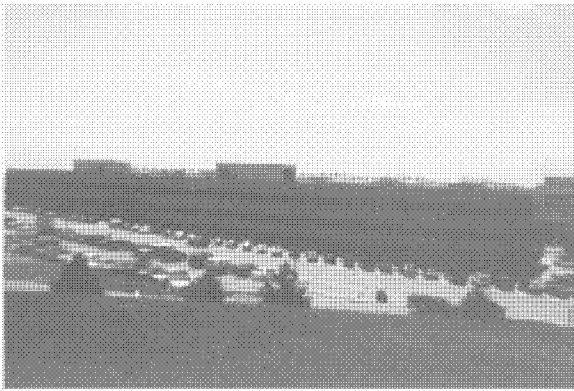
Resource No. 7078, Real Property No. 324
Permanent Party Airman's Dorm



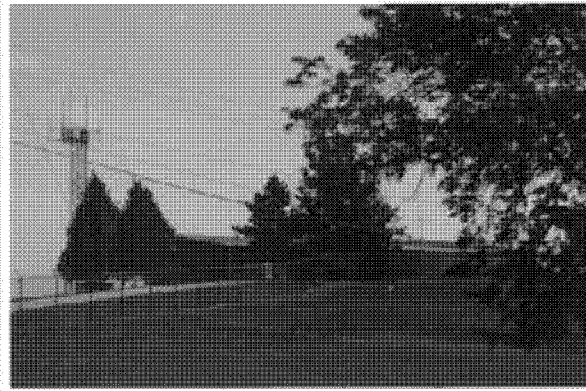
Resource No. 7079, Real Property No. 365
Permanent Party Airman's Dorm



Resource No. 7080, Real Property No. 353, 354,
355, 319, 320 and 315 Satellite Communication
Ground Terminal



Resource No. 7081, Real Property No. 323
Group Headquarters



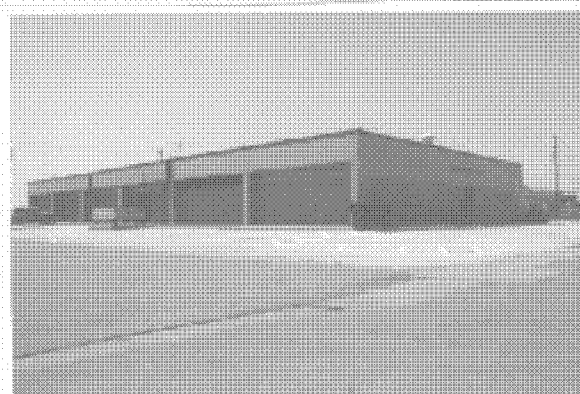
Resource No. 7082, Real Property No. 789
Possible Communication Center



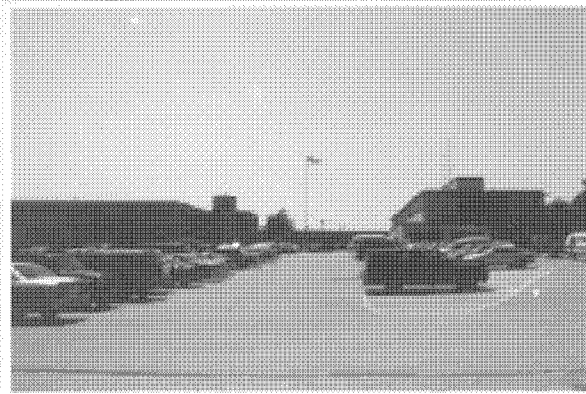
Resource No. 7083, Real Property No. 371
Base Cemetery



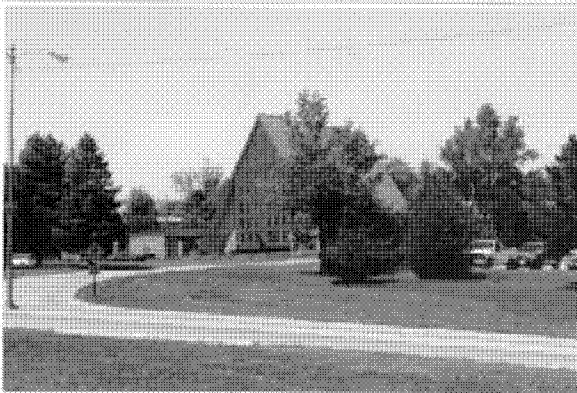
Resource No. 7084, Real Property No. 361
Branch Exchange (Shoppette)



Resource No. 7085, Real Property No. 363
Arts & Crafts Center



Resource No. 7086, Real Property No. 4000
Medical Complex



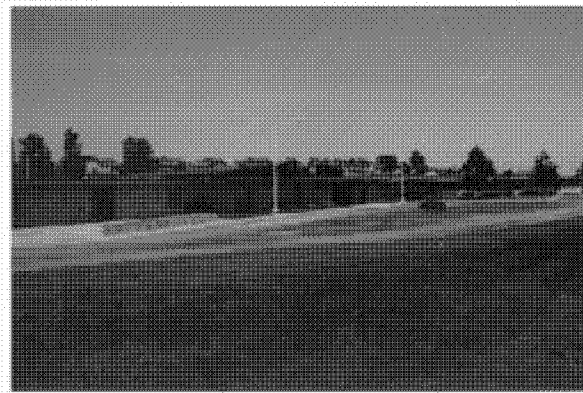
Resource No. 7087, Real Property No. 1226
Base Chapel 2 (Capehart Chapel)



Resource No. 7090, Real Property No.
(unknown), Peter Sarpy School



Resource No. 7091, Real Property No.
(unknown), Fort Crook School



Resource No. 7092, Real Property No.
(unknown), LeMay Elementary School



Resource No. 7093, Real Property Nos. 6067,
6086 and 6085, Housing Appropriation FY
1970A (Pease & 28th)

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT OFFUTT AFB

Resource Number: 7002

Property Description: Squadron Operations (Old Crew Readiness Facility)

Associated Property: 7094-Bank 1 Drawers 17-20

Non-Inventoried Association:

Sub-installation:

Address: 101 Washington Square

Base Map Date: 12/1/90

Base Map Building Number: 40

Operational Support & Installations:

Combat Weapons and Support Systems: Alert Facilities

Training Facilities:

Material Development Facilities:

Intelligence :

Property Type: Command and Control Alert Facility

Statement of Significance: Located in an existng NRHP district, this building's significance within the Cold War base context lies in its' formal designation as a crew readiness facility during Phase III of the Cold War. It was remodeled to accomodate alert crews, perhaps of NEACP, Looking Glass, or both, and apparently remained active as such until the end of the phase.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 3

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: No

Preservation/Conservation/Repair: No

Comments on Resource Management: The Crew Readiness facility is evaluated as significant within the base Cold War context as described in the significance statement above. Built in 1894, the building is in an existing National Register District. Continued stewardship is recommended.

Importance: Exceptional

Eligibility: Listed

Height: 30
Square Footage: 57156
Original Planned Duration: Permanent
Existing Use: Squadron Operations
Other Use/Dates: 1894 original construction as dormitory (barracks), with Section B continuing in this function. 1977-designated Crew Readiness facility and was remodeled to accommodate Squadron Operations and Alert Crew. 1979-redesignated to HQ MAJ COMM per SAC letter. 1992-redesignated WG COMM.
Comments on Use: Building has 4 floors including the basement. The entire complex originally was divided into 8 sections. Today, four sections (A, B, C, D) comprise Building 40 while sections E, F, G, and H have since become Building 49. Real Property folder contains 1 b/w 8 x 10 (date unknown); 6 b/w 5 x 6 photos (date unknown); 1 1951 photo side view; and 2 color polaroids from 1990.
Primary Building Materials: Brick

Resource Number: 7003

Property Description: Martin Bomber Building
Associated Property: 7094-Drawings from 1942 through future projects in 28
Non-Inventoried Association:
Sub-installation:
Address: 106 Peacekeeper Dr.
Base Map Date: 12/1/90
Base Map Building Number: 301

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence: Weather Reconnaissance
Property Type: Global Weather Service

Statement of Significance: Although it operated as a bomber aircraft manufacturing plant during WWII, this building also became a factor in policy and technology during the transition between the traditional war and the Cold War. Specifically, the War Department commissioned engineers at the plant to design a plane for the distinct purpose of atomic weapons delivery. During later Cold War period phases, the addition of weather reconnaissance capability linked the building directly to the SAC command as it provided weather data at a global scale for use in strategic decision-making.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	3
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	2
Severity of Threats:	1
Total Score for Priority Matrix:	14
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	The Martin Bomber Building is evaluated as significant within the base Cold War context, as described in the significance statement above. The building meets the 50 year criterion, and thus appears to be potentially eligible for immediate National Register listing. Further documentation to assess integrity is recommended to confirm this assessment. Stewardship is recommended in the interim. The Martin Bomber Building would qualify as a contributing element in a historic district nomination that is being considered under the theme

of Cold War/SAC.

Importance: Important

Eligibility: Future

Height: 50

Square Footage: 1488710

Original Planned Duration: Permanent

Existing Use: Multiple-building houses the 55th Civil Engineering Squadron, Real Property office, and Global Weather Service as well as numerous other offices such as the Education Services, Wood Craft Shop, Bowling Alley, and several industrial services.

Other Use/Dates: Original function was as an assembly plant for bombers used in World War II, including the Enola Gay and Bock's Car. Around 1960 it was dedicated to Glen L. Martin, and was officially named the Martin Bomber Building in 1992.

Comments on Use: Also called SAC Building "D" or "Assembly Plant". Original designed capacity was 936320 sq ft. In 1956, improvements increased building capacity to 1,523,270. Current capacity is 1,488,710 with 2 floors. Real Property folder contains 12 b/w 8 x 10 photos of east, west, and south sides of exterior; photos and negatives of the First Floor and Basement interiors, "Areas of Responsibility".

Primary Building Materials: Concrete & steel, reinforced concrete floor.

Character Defining Features: Although not directly Cold War related, architectural features of note include reinforced concrete floor with wooden bricks over much of floor surface, even today. "Butterfly" roof monitors.

Resource Number: 7004

Property Description: Law Center
Associated Property: 7094-Drawings with final revisions as constructed Jun
Non-Inventoried Association:
Sub-installation:
Address: 711 Nelson Dr.
Base Map Date: 12/1/90
Base Map Building Number: 302

Operational Support & Installations: Base and Command Centers
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Major Command Headquarters

Statement of Significance: The first significant association (1941-1945) of this resource is its' operation as the personnel building for the Martin Bomber Plant, the primary Cold War role of which was the development of aircraft specifically designed to transport the atomic bomb. The building maintains an additional and more direct Cold War association as it served as SAC Headquarters between 1948-1957, housing Curtis LeMay's office during this early phase of the Cold War.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	The Wing Headquarters/Law Center (former SAC Headquarters) is evaluated as significant within the base Cold War context, as described in the significance statement above. The building meets the 50 year criterion, and thus appears to be potentially eligible for immediate National Register listing. Further documentation to assess integrity is recommended. Stewardship is recommended in the interim.

Importance: Exceptional
Eligibility: Eligible

Height: 40
Square Footage: 20763
Original Planned Duration: Permanent
Existing Use: Wing Headquarters "Law Center"
Other Use/Dates: 1941-originally served as the personnel building for the Aircraft Manufacturing and Assembly Plant when the base was Fort Crook. 1946-Fort Crook turned over to Air Force. 1951-building was the SAC Command Headquarters until 1957 when SAC moved to its new facility.
Comments on Use: Also called SAC building "A" or old Strategic Air Command Headquarters. Real Property folder includes 1 b/w 4 x 5 photo dated 1951 with exterior sign "Command Building"; 1 b/w 8 x 10 of the entrance of building 302.
Primary Building Materials: Brick
Character Defining Features: Rounded window on west side near building entrance is allegedly where LeMay's office was during period of building's use as SAC Command Building.

Resource Number: 7006

Property Description: Metal Dorms
Associated Property: 7094-Bank 5 Drawer 4
Non-Inventoried Association:
Sub-installation:
Address: 106/101 Lincoln Hwy
Base Map Date: 12/1/90
Base Map Building Number: 416/417

Operational Support & Installations: Housing
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Unaccompanied Housing

Statement of Significance: These dorms are directly associated with Curtis LeMay, a major figure in the role of SAC and Offutt AFB during the first two phases of the Cold War period. Commissioned and dedicated in a formal ceremony by LeMay, the dorms embodied concepts, such as increased privacy, comfort, and convenience, that he felt were important in the success of personnel morale and thus the mission of SAC.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	1
Temporal Phase Relationship:	3
Level of Importance:	2
Percent Historic Fabric:	2
Severity of Threats:	4
Total Score for Priority Matrix:	14
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	These dormitories commissioned by LeMay do not meet the 50 year criterion for National Register listing, nor are they considered exceptionally significant within the Cold War context. Still, they are apparently significant to the base due to their association with LeMay and perhaps due to their architectural attributes. If these dorms were 50 years of age, it is likely that they would be considered eligible for the National Register based on these associations. Design plans for their demolition have been completed, and this action is proposed for the near future. It is recommended that further documentation of building 417 be undertaken when it meets the 50 year criterion to re-evaluate it for

NRHP eligibility. Stewardship is also recommended to retain its current level of integrity.

Importance: Important

Eligibility: Future

Height: 30

Square Footage: 22870

Original Planned Duration: Permanent

Existing Use: 416 is Wing Headquarters/417 is Base Covered Storage Facility

Other Use/Dates: 416-original use as WAF Dormitory. 1972-utilization change to AMN Dormitory (capacity 122), then to current use in 1992. 417-original use as WAF dormitory. 1972-utilization change to AMN dormitory (capacity 132), then change to current use in 1991.

Comments on Use: Also known as "Ellsworth Hall" (416) and "Loring Hall" (417). Photos in Real Property folders for each building include 1 large b/w close up with no date, 1 b/w 1963, and 1 color polaroid 1991.

Primary Building Materials: Steel panel & reinforced concrete

Character Defining Features: Classic 50s style of modular construction/metal panels, exposed exterior stairwells.

Resource Number: 7007

Property Description: Flight Simulator Training
Associated Property: 7094-Bank 5 Drawer 9
Non-Inventoried Association:
Sub-installation:
Address: 207 Looking Glass Ave.
Base Map Date: 12/1/90
Base Map Building Number: 453

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities: Flight Training
Material Development Facilities:
Intelligence:
Property Type: Flight Simulator

Statement of Significance: The significance of this building lies in its' specified training function for Looking Glass, and perhaps NEACP operations, during Phases III and IV of the Cold War period. It served as a training facility for the Airborne Launch Control System (ALCS), which would permit Looking Glass to control the entire Minuteman fleet if any or all of the ground launch control centers were put out of action.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	3
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	This Flight Simulator Training building is not yet 50 years of age and does not appear to be exceptionally significant within the Cold War context. However, it is significant as a training facility for the Airborne Launch Control System (ALCS). Stewardship is recommended for the building until it reaches the 50 year threshold, at which time further documentation for formal National Register evaluation is recommended.

Importance: Important
Eligibility: Future

Height: 20
Square Footage: 3025
Original Planned Duration: Permanent
Existing Use: Flight Simulator Training
Other Use/Dates: None
Comments on Use: Real Property folder contains 1 b/w close-up photo with no date. Also in file (1988) is a note "Through HQ SAC/DOMM-6091, Boeing Aircraft has 270 sq ft in facility 453".
Primary Building Materials: Concrete
Character Defining Features: No windows.

Resource Number: 7008

Property Description: SAC Chapel
Associated Property: 7094-Bank 5 Drawer 18
Non-Inventoried Association:
Sub-installation:
Address: 301 Lincoln Hway
Base Map Date: 12/1/90
Base Map Building Number: 463

Operational Support & Installations: Memorial
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Memorial Chapel

Statement of Significance: The SAC chapel is significant in the social aspects of the Cold War context primarily in that its' custom designed stained glass windows specifically embody SAC ideals and mission, such as national defense, deterrence, and commemoration of other strategic, technological, and command aspects. Other significant features include an E-4 alert klaxon in the front and two reserved "Alert Crew" pews in the back of the sanctuary.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	1
Temporal Phase Relationship:	3
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	The SAC Chapel is considered an exceptionally significant property within the base and national Cold War context, as described in the significance statement above. Further documentation, to include complete recording and archival research, is recommended to nominate this resource to the NRHP. Stewardship is also recommended.

Importance: Exceptional
Eligibility: Eligible

Height: 25
Square Footage: 11560
Original Planned Duration: Permanent
Existing Use: SAC Chapel
Other Use/Dates: 1956-original use is Base Chapel, then function changed to Center Chapel at unknown date.
Comments on Use: Original square footage was 7684, with an addition in 1960 of an educational wing, making total 11560. It is unclear if this coincides with the change in use to a Center Chapel.
Primary Building Materials: Concrete block & brick, reinforced concrete
Character Defining Features: Stained glass windows epitomizing Cold War themes including the red phone, nuclear mushroom cloud, bomber pilot, and SAC insignia. Windows were installed in 1960 and in 1973. Interior Klaxon alarm system support for E-4 (NEACP) at side front of sanctuary. Installed 1977. Two pews in back labelled "Alert Crews Only."

Resource Number: 7009

Property Description: Looking Glass Operations
Associated Property: 7094
Non-Inventoried Association:
Sub-installation:
Address: 201 Looking Glass Ave.
Base Map Date: 12/1/90
Base Map Building Number: 464

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Command and Control Alert Facility

Statement of Significance: This building served as the primary control center for Looking Glass, a military, airborne operation to mirror the capabilities of the SAC Ground Command Post, thus ensuring survivability. Looking Glass was a primary component in support of SAC's broad Cold War mission under PACCS (Post Attach Command Control System).

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 2
Level of Importance: 4
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 19
Comments on Threats:

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: The Looking Glass operations facility is considered an exceptionally significant property within the base and national Cold War context, as described in the significance statement above. Further documentation to assess integrity is recommended. Immediate National Register listing is recommended even though the property is not yet 50 years of age. Stewardship is recommended in the interim.

Importance: Exceptional
Eligibility: Eligible

Height: 10
Square Footage: 23248
Original Planned Duration: Permanent
Existing Use: Squadron Operations and Crew Readiness for "Looking Glass" operations.
Other Use/Dates: None
Comments on Use: E4 project alarms system installed in 1977. 1992-low frequency radio transmitter installed.
Primary Building Materials: Concrete Masonry Unit
Character Defining Features: Alert Crew parking areas and tennis courts for alert crews only located across the street.

Resource Number: 7011

Property Description: STRATCOM Headquarters
Associated Property: 7094-Bank 6 Drawers 6-20, Bank 7 Drawers 1-15
Non-Inventoried Association:
Sub-installation:
Address: 901 SAC Blvd.
Base Map Date: 12/1/90
Base Map Building Number: 500

Operational Support & Installations: Base and Command Centers
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Major Command Headquarters

Statement of Significance: Referred to by some as "the Pentagon of the West," this headquarters building played a vital role in command and control during the majority of the Cold War (Phases II through IV). In this headquarters, global information was assembled that enabled the CINCSAC to maintain control of the entire SAC nuclear arsenal.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	3
Severity of Threats:	1
Total Score for Priority Matrix:	19
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	The STRATCOM Headquarters (former SAC headquarters) is considered an exceptionally significant property within the base and national Cold War context, as described in the significance statement above. Further documentation, to include complete recording and archival research, is recommended to nominate it to the NRHP. Immediate National Register listing is recommended even though the property is not yet 50 years of age. Stewardship is recommended in the

interim.

Importance: Exceptional
Eligibility: Eligible

(Building

Height: 40
Square Footage: 627231
Original Planned Duration: Permanent
Existing Use: STRATCOM Headquarters. The SAC Theatre
502) became part of this building in 1992.
Other Use/Dates: 1957-original use as SAC Headquarters until
STRATCOM was formed in 1992.
Comments on Use: Original design capacity of 360003 sq ft.
1960-basement constructed and resulting square
footage was 417023. Today, new STRATCOM
Command Post
and office space from old Underground Command Post
(building 501) makes current square footage 627231.
At time of construction the building was considered
the Midwest's largest office building.
Primary Building Materials: Reinforced Concrete & Masonry
Character Defining Features: Static missile display in front. Interior includes
various objects/decor such as SAC seal color
tesselated in floor of entrance hallway.

Resource Number: 7012

Property Description: SAC Underground Command Post
Associated Property: 7094-Bank 6 Drawers 6-20, Bank 7 Drawers 1-15
Non-Inventoried Association:
Sub-installation:
Address: Under 901 SAC Blvd.
Base Map Date: 12/1/90
Base Map Building Number: 501

Operational Support & Installations: Base and Command Centers
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Major Command Post

Statement of Significance: The underground command post served as the nerve center for SAC during the majority of the Cold War period (Phases II through IV). The command post essentially remained on alert for 31 years, functioning as the center for all command and control through dissemination of strategy during periods of defensive posture when tensions were particularly high.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 3
Level of Importance: 4
Percent Historic Fabric: 1
Severity of Threats: 4
Total Score for Priority Matrix: 20
Comments on Threats:

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No

Comments on Resource Management: The former SAC underground post is considered an exceptionally significant property within the base and national Cold War context, as described in the significance statement above. However, the integrity of the property has been severely compromised. Further documentation to assess integrity is recommended in order to explore National Register potential, even though the property is not yet 50 years of age. Stewardship of any remaining significant features, such as the blast doors, poppet valves, and decontamination chambers is recommended until further work can be accomplished.

Importance: Exceptional
Eligibility: Potential

Height: 30

Square Footage: 160303

Original Planned Duration: Permanent

Existing Use: Overall function currently is a Unified Headquarters. The portion of the building that was the Old Underground Command Post has been combined with aboveground Headquarters (500) and is used for office space. Newly added portion functions as the current Underground Command Post. The old portion also includes Global Weather.

Other Use/Dates: 1957-original use as Headquarters Command Operational, later Command Headquarters, then Headquarters Major Command, and today Headquarters Unified.

Comments on Use: Several additions have been made to building although direct correspondence with utilization changes is not evident. Original square footage was 116814, with an inventory adjustment in 1962 making total 131427. 1962-internal improvements in Control Room including clocks and large screen installation. 1963-more interior remodeling, emergency lights, etc. 1964-temporary square footage addition of 134,078, which was then subtracted and added to building 500; permanent addition of 6750 make total 138177. 1966-sound proof A room. 1967-install red blinking light in Room 116. 1968-underground addition makes total 139075. 1981-administrative adjustment to 140325. 1992-pick up tunnel as civilian walkway & traffic check house (now 141949), then pick up USAF Command Post (total 160303).

Primary Building Materials: Reinforced concrete (water-proofed)

Character Defining Features: Four sets of blast doors, decontamination room/wing, poppet valves. Although reminiscent of the "big board" the large screen in the New Underground Command Post has only been in use since 1992. The old feature has been dismantled and, along with the rest of the old command post, has been entirely converted to office space and is no longer a character defining feature of this building within the context of the Cold War study.

Resource Number: 7014

Property Description: Satellite Communications Complex which includes the main building (598) built in 1985, a second building behind it (542) built in 1977, and a large dish (566) built in 1978. The building/structure data presented in the database refers to 598 since it is the main operational facility and bears the sign "Satellite Communications". Facilities 542 and 566 are further discussed in the Offutt base report.

Associated Property: 7094-Bank 8 Drawers 3 (542), 9 (566), & 10 (598)

Non-Inventoried Association:

Sub-installation:

Address: 311 Gemini Blvd.

Base Map Date: 12/1/90

Base Map Building Number: 598, 566, 542

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence: Communications

Property Type: Satellite Communications Complex

Statement of Significance: This facility undoubtedly served a significant function in global data gathering related to intelligence, weather conditions, etc. while also serving a reconnaissance function for strategic missions of the 55th Wing. Its' Cold War association is as a vital component supporting SAC and DOD during Phases III and IV or the Cod War period.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 3

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: This satellite communication complex is not yet 50 years of age and does not appear to be exceptionally significant within the Cold War context. However, it is significant as a support facility related to Looking Glass and NEACP operations and thus to the base Cold War context. Stewardship is recommended for the building until it reaches the 50 year threshold, at which time further documentation for formal National Register evaluation is recommended.

Importance: Important

Eligibility: Future

Height: 15

Square Footage: 10311

Original Planned Duration: Permanent

Existing Use: Satellite Communication Ground Terminal (Main
Satellite Building in Complex)

Other Use/Dates: None

Comments on Use: Facility addition in 1987 added to original square
footage (10231) to get current total (10311). Real
Property folder contains a color polaroid from 1991.

Primary Building Materials: Concrete Masonry Unit

Resource Number: 7015

Property Description: Quarters 16
Associated Property: 7094-Bank 1 Drawer 3
Non-Inventoried Association:
Sub-installation:
Address: Custer Drive
Base Map Date: 12/1/90
Base Map Building Number: 16

Operational Support & Installations: Housing
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Commander Housing

Statement of Significance: Located in an existing NRHP district, this building was originally constructed as the residence of the commander for Ft. Crook, and serves the same function today. During the Cold War period, only General Kenney (CINCSAC from 1946-48) did not reside here. The building physically reflects the Cold War mentality in the presence of a bomb shelter built by CINCSAC Powers, and the installation of special telephone lines for communication of the CINCSAC with other important command centers.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	4
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	3
Severity of Threats:	1
Total Score for Priority Matrix:	18
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	No
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Quarters 16 is evaluated as significant within the base Cold War context as described in the significance statement above. Built in 1896, the building is in an existing National Register District. Continued stewardship is recommended.

Importance: Exceptional
Eligibility: Listed

Height: 30
Square Footage: 7600
Original Planned Duration: Permanent
Existing Use: STRATCOM Commander Quarters
Other Use/Dates: 1896-original use apparently as living quarters for Ft. Crook, turned over to Air Force in 1946. It became used as Quarters for Commander (CINC) of SAC in 1948. 1948-1957-General Curtis E. LeMay, as CINC, lived in these quarters.
Comments on Use: 1962-during tenure of General Power as CINC, a fallout shelter was installed in the basement.
Primary Building Materials: Brick & Stone
Character Defining Features: Fallout shelter in basement constructed in 1962 by removing a closet wall and installing a cinder block wall the length of the other, older brick wall. Doorways were at either end of the 3'8" wide space.

Resource Number: 7028

Property Description: NEACP Operations
Associated Property: 7094-Bank 8 Drawers 5-8 (filed with 565 & 531)
Non-Inventoried Association:
Sub-installation:
Address: 102 Looking Glass Ave.
Base Map Date: 12/1/90
Base Map Building Number: 524

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Command and Control Alert Facility

Statement of Significance: This building served as the primary control center for NEACP, an airborne operation for the National Command Authority. NEACP was a primary component in support of the nation's broad Cold War mission of PACCS (Post Attack Command Control System), enabling the President, Joint Chiefs, and other lines of authority to implement the Emergency War Order (EWO), thus ensuring survivability.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 2
Level of Importance: 4
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 19
Comments on Threats:

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: The NEACP alert facility is considered an exceptionally significant property within the base and national Cold War context, as described in the significance statement above. Further documentation to assess integrity is recommended. Immediate National Register listing is recommended even though the property is not yet 50 years of age. Stewardship is recommended in the interim.

Importance: Exceptional
Eligibility: Eligible

Height: 20
Square Footage: 45732
Original Planned Duration: Permanent
Existing Use: Crew Readiness for 1st ACCS (1st Airborne Command Control Squadron) to support NEACP (E4) operations.
Other Use/Dates: None
Comments on Use:
Primary Building Materials: Concrete Masonry Unit

Resource Number: 7066

Property Description: Silver Creek Transmitting Tower & Installation, which includes a semi-subterranean facility below and adjacent to the tower (both built in 1968) and an above ground dormitory away from it (built 1988). The building/structure data contained in the database are specific to the tower and transmitter complex. The entire installation, including the dormitory, is further discussed in the Offutt base report.

Associated Property: 7094-Bank 11 Drawers 3, 5, and 8-9

Non-Inventoried Association:

Sub-installation: Silver Creek, NE

Address:

Base Map Date: 12/1/90

Base Map Building Number: None

Operational Support & Installations: Communications

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Low Frequency Transmitter Complex

Statement of Significance: This installation embodies the basic Cold War theme of survivability, acting as a totally interactive communication system between commands (airborne control, the SCA underground command post, etc.). In operation during Phases III and IV of the Cold War period, the facility performed functions for the Navy, Pentagon, and other commands in addition to SAC. It was EMP hardened, thus ensuring survivability to enable the EWO to be relayed before, during, and after an attack. It was a vital communication link between the National Command Authority (NCA) and the US Strategic Forces. Only one other transmitter site of its' kind was functional during the Cold War period, and that site has been dismantled.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	2
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	4
Total Score for Priority Matrix:	22
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Silver Creek is considered an exceptionally significant property within the Cold War context, as described in the significance statement above. However, the facility is slated for immediate dismantling, thus its integrity is severely threatened. Further documentation, to include complete and formal recording of remaining elements and archival reasearch, is recommended in order to explore National Register potential, even through the property is not yet 50 years of age. Stewardship on any remaining significant features, such as the tower itself and the copper room, is recommended until this further work can be accomplished.

Importance: Exceptional

Eligibility: Eligible

Height: 1240

Square Footage: 7735

Original Planned Duration:

Existing Use: Being dismantled

Other Use/Dates: Facility became operational as a survivable low frequency communication system (110000 watt) (SLFCS) in 1969 and operated as such until June 1 1994.

Comments on Use: At the time of our visit the transmitter was still basically intact but no longer in use. Some dismantling of interior components had occurred and the operation staff was significantly reduced, but the tower was still standing.

Primary Building Materials: Steel Frame & Reinforced Concrete

Character Defining Features: Tower itself at 1240 ft high and ground radials every degree (each is 1800 ft long with a 10 foot grounding rod at the end). Inside the semi-subterranean building is a 25 ft x 25 ft x 30 ft copper room containing the 17 ft helix, a copper loading coil for the antenna. The antenna produces a very strong electro-magnetic field.

Resource Number: 7094

Property Description: Architectural Drawing Files in 55th CES Drawing Room consist of 10 full banks and 2 partial banks of flat files (total of 275 drawers). Banks 1-9 are ordered by real property facility number (1 through 9947), with bank 9 being a partial bank. Banks 10 & 12 are Project Specific including Utility (5 drawers), Golf (2), Capehart (18) in Bank 10 and Utility (5), Fences-Landscaping-Grounds (5), Airfields (7), Signs-Parking lots-Sidewalks (2), and Roads (6) in Bank 12. Bank 11 is also a partial bank and includes the ancillary communication facilities as follows: Scribner (Drawers 1-2), Scribner, Elkhorn, Silver Creek, Hastings (Drawer 3), Elkhorn (Drawers 4-5), Hastings (Drawers 6-7), Silver Creek (Drawers 8-9), and Communications (Drawer 10). In general, the flat files contain Record Drawings (as-builts) and Project Files for all real property on base. Drawings consist of a variety of types, including original ink on linen, vellum, mylar, and sepia.

Associated Property: Various; Inside 301

Non-Inventoried Association: Various

Sub-installation:

Address:

Base Map Date: 12/1/90

Base Map Building Number: inside 301

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Architectural Drawing Files

Statement of Significance: The significance of these drawing files lies in the information they contain regarding important properties on Offutt AFB. Of particular note are files with architectural details of exceptionally significant properties such as the STRATCOM (formerly SAC) headquarters, the SAC Chapel, Quarters 16, and the NEACP and Looking Glass facilities.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats: Architectural drawing files are in a protected room adjacent to the drafting area. The collections are well organized and quite complete, with entire Record Drawing sets extant. Threats are viewed as low as long as this degree of attention to the resource continues.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	No
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	It is recommended that copies be kept on base, and originals be sent to a curatorial facility.

Object Condition:	Being Preserved
Record/Document Category:	Architectural Drawing
Year of Document:	Various
Period of Association:	1930s-1990s, spanning Cold War Phases I-IV

Resource Number: 7095

Property Description: Historical Documentation in Flat File (Bank 14 Drawer 10) in 55th CES Drafting area. File is marked "Historical and Base Photos" and includes numerous historic maps, photos, and architectural project drawings. Maps include: SAC Base Regional Maps (1962); Preliminary Master Plan for Offutt Field, Ft. Crook, 1947; 1952 Offutt AFB General Maaster Plan with hard cover (16 x 22); 1958 & 1966 Master Plans; and a 1976 Community Center Complex Master Plan. Photos include the following: cardboard folder with black tape on sides hand-labeled "PHOTOS" containing 25-30 large format b/w aerials of base and transmitter locations; cardboard folder with blue tape on sides hand-labeled "PHOTOS" containing 20 large format b/w aerials of base; 3 large format negatives of Ft. Crook 1894 (2) and Ft. Crook ca. 1900; 150-200 b/w photos of the aftermath of a fire on base at an unidentified building; 3 packages of b/w photos and negatives (4 x 6); package of negatives of base (9 x 12). Drawings include: Domestic and Sprinkler Line 1946; Plan for Weapons carrier truck with sprinkler system; Mead-Elkhorn drawings for plumbing; and drawings for a Community Center in 1982. Also included is a 1958 Offutt AFB "Expansion Study for SAC by Bartholomew-Durham-Michael A/E of Omaha-St. Louis.

Associated Property: Various; Inside 301-in same office with MAI 7094

Non-Inventoried Association: Various

Sub-installation:

Address:

Base Map Date: 12/1/90

Base Map Building Number: inside 301

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: The significance of these files lies in the historical information they contain regarding the history of the base during all phases of the Cold War period.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16

Comments on Threats: Efforts have been made to isolate these historic items, and if this situation continues, the level of threats is viewed as low.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: It is recommended that copies be kept on base, and the originals be sent to a curatorial facility.

Object Condition: Being Preserved

Record/Document Category: Maps, photos, architectural drawings

Year of Document: Various

Period of Association: Phases I-IV of Cold War

Resource Number: 7096

Property Description: Historical Documentation in Flat Files in Real Property Office, including 1 bank with 10 drawers. Those pertinent to this study include: Drawer 5, marked "Legal", which contains maps geared toward showing jurisdiction/ownership. Specific contents include blue line utility plans, blue line surveys 1959-1979 by Sarpy County surveyors, blue line copies of off-Base facility master plans (most from 1969) including Hastings and Scribner, boundary and perimeter strip blue lines, real estate base layouts from 1960-1986, 1966 and 1986 SAC comprehensive plans, and a 1957 topographic type map of "Offutt Military Reservation" . Drawers 6-7 contain floor plans by facility number and Drawer 8 contains floor plans of 301. Drawer 10 contains miscellaneous maps including: Base Plans for 1966 and 1986 with colored areas designating flight related properties (runways, alert trailers, etc.); existing & future land use maps showing constraints/opportunities--Long Range Plans--from 1986; Capehart "playground" probably from 1960s; land utilization & development plans from 1966; an old map (1960s?) with Gate & Locks data showing "radar hill" near 301 (facility numbers 250 etc.); and a 1986 Disaster Preparedness Map.

Associated Property: Various; Inside 301

Non-Inventoried Association: Various

Sub-installation:

Address:

Base Map Date: 12/1/90

Base Map Building Number: inside 301

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Map Files

Statement of Significance: The significance of these maps lies in the historical information they contain regarding base development during all phases of the Cold War period.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 2

Temporal Phase Relationship: 3

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 15

Comments on Threats: The flat files are maintained in the working real property files (i.e., other drawers in this bank include personal and active flat files) thus it appears that threats are low.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	It is recommended that copies be kept on base, and that the originals be sent to a permanent curatorial facility.
Record/Document Category:	Maps, photos
Year of Document:	Various
Period of Association:	Phases I-IV of Cold War

Resource Number: 7097

Property Description: Photo archives in 55th CES/Environmental office. Drawer 8, a flat file marked "Photos", includes the following: 33 b/w 8 x 10 photos of Martin Bomber Building construction; about 150 aerial photos and negatives of varied sizes (large format), ages (1950s-1980s), and altitudes; various blue lines of projects--dates unknown.

Associated Property: 301; Inside 301-in same office as MAI 7100

Non-Inventoried Association: Base

Sub-installation:

Address:

Base Map Date: 12/1/90

Base Map Building Number: inside 301

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Photograph Collection

Statement of Significance: The significance of this collection lies in the information it contains regarding base development in general during all phases of the Cold War period and in particular, as documentation of the construction of a building significant within Cold War and other contexts. Ther aerial photographs represent a relatively complete collection of an extremely valuable and irreplaceable resource.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 2

Temporal Phase Relationship: 4

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats: The photos are well organized and maintained in a personal office, therefore threats are ranked as low.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: No

Preservation/Conservation/Repair: Yes

Comments on Resource Management: It is recommended that copies be kept on base, and that the originals be sent to a curatorial facility.

Object Condition: Being Preserved

Record/Document Category: Photograph

Year of Document: Various

Period of Association: Phases I-IV of Cold War

Resource Number: 7098

Property Description: Historical Archives in 55th Wing Historian's Office. Unclassified Archives (Item Number 15 on the Files Maintenance and Disposition Plan) include the following files that may be pertinent to the Cold War study: Letters of historic value (15-1); Ft. Crook/Offutt History (15-2-15-7); Martin Bomber Plant (15-8); Offutt AFB and HQ SAC background (15-10); Offutt AFB history (15-11); transfer of Ft. Crook to Offutt AFB (15-14); transfer of Offutt AFB ADC to SAC (15-15); Facilities, documents, and blue prints (15-16) including SAC HQ Building 500, SAC Museum, National Emergency Airborne Support Facilities (NEACP), Chapels, Dedications of B-52 and B-17, and Scribner Communication Site; Offutt AFB Aircraft (15-17); Units/Organizations Assigned (15-19); SAC Info Kit (15-20). Based on the Files Maintenance and Disposition Plan list, it appears that the Classified Historical Archives (Item Number 17) might also include information related to the Cold War, yet not as pertinent to the current real property focused study as the unclassified files. The Classified Archives were not inventoried, but are mentioned as additional resources in the Offutt base report.

Associated Property: Various; Inside 458-affiliated with same office as MA

Non-Inventoried Association: Various

Sub-installation:

Address:

Base Map Date: 12/1/90

Base Map Building Number: inside 450

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Office Files

Statement of Significance: The significance of this historical documentation lies in the information it contains regarding the base history in general as well as specific important base properties. Of particular note are files with historical details of exceptionally significant properties such as the STRATCOM (formerly SAC) headquarters - above and underground, the SAC Chapel, Quarters 16, etc.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	17

Comments on Threats: Files are well organized and maintained in the Wing Historian's secured office, therefore threats are ranked as low.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: No

Preservation/Conservation/Repair: No

Comments on Resource Management: Maintain level of stewardship

Object Condition: Being Preserved

Record/Document Category: Photos, literature

Year of Document: Various

Period of Association: Phases I-IV of Cold War

Resource Number: 7099

Property Description: Heritage Room adjacent to and maintained by 55th Wing Historian's office. The Heritage Room displays numerous memorial items related to SAC and the 55th Wing, although other items are in the Wing Historian's possession but not currently on display. The displayed collection includes the following general and SAC related items: mannequins with flight suit and Army Air Corps uniform; K-18A Reconnaissance Camera; Ensignia and plaques of SAC; aircraft photos; plane hardware such as bomb sights, altimeters, Radarscope and gun cameras, B-47E Sextant, headsets, and gauges; propellers from planes; a German Luftwaffe hat; E-4 scrapbooks; retrofit pictorial history of E-4A to E-4B 1981-1985; scrapbooks of the 343rd Fighter Squadron WWII, 343rd Strategic Reconnaissance Squadron; and the 38th SRS Hellcats Strategic Reconnaissance Squadron. Items specifically related to the 55th Strategic Reconnaissance Wing include: plane models of B-17, photos and plaques, scrapbooks, patches and uniforms, a picture of the 55th Wing people with General Norman Schwarkopf, and the 55th FG - "Pursuit to Defend"

Associated Property: Inside 458-affiliated with same office as MAI 7098

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 12/1/90

Base Map Building Number: inside 458

Operational Support & Installations: Memorial

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Museum Collection

Statement of Significance: The significance of this historical assemblage lies in its' association with important events related to SAC.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	3
Temporal Phase Relationship:	2
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	17
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	No
Preservation/Conservation/Repair:	No
Comments on Resource Management:	Memorial objects are maintained in a secured room adjacent to the Wing Historian's office, therefore threats are ranked as low. Continued care of the collection is recommended.
Construction Materials of Object:	Various
Year of Manufacture:	Various
Object Condition:	Being Preserved

Resource Number: 7100

Property Description: Silver Creek photos maintained in 55th CES/Environmental office (Gene Svenson's office) . Photos were taken prior to dismantling of installation and tower and include about 32 b/w 3 x 5 photos and negatives. Depicted are the following: a plaque of Detachment 1 Silver Ck, NE; a sign of Detachment 1 55th GCSS (ACC) Silver CK NE; the transmitter tower; the copper room saturable reactor (about 10 photos); miscellaneous facilities including the barracks room, kitchen, day room, dorm, maintenance area, power AMPS of 100 total kw, transmitter in operations room, and the power production area (5 photos), one of "ACC Power".

Associated Property: MAI 7066; Inside 301-in same office as MAI 7097

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 12/1/90

Base Map Building Number: inside 301

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Photograph Collection

Statement of Significance: The significance of this photo collection lies in the information it provides regarding the exceptionally significant Silver Creek installation. The collection is extremely valuable in providing a photographic record of the installation prior to any dismantling, some of which has already occurred. Unless more in-depth study is performed, this could be the most complete collection of such documentation in existence.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 18

Comments on Threats: Photos are well maintained by Mr. Svenson and the threat ranking is therefore low.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: No

Preservation/Conservation/Repair: Yes

Comments on Resource Management: It is recommended that copies be kept by the base,

and the originals be sent to a curatorial facility.

Object Condition: Being Preserved
Record/Document Category: Photograph
Year of Document: 1990s

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Offutt AFB, and to provide research materials for this study:

Gene Svenson
Chief of the Cultural/Natural Resources Element
55 CES/CEVN
19 MBB
106 Peacekeeper Drive, Suite 2N3
Offutt AFB, NE 68113-4019

Mike Rix
Chief of Drafting
55 CES/CEEED
19 MBB
106 Peacekeeper Drive, Suite 2N3
Offutt AFB, NE 68113-4019

Jim Kaiser
Chief of Engineers
55 CES/CEEP
MBB19
106 Peacekeeper Drive, Suite 2N3
Offutt AFB, NE 68113-4019

SrA Clifford Sibley
Wing Historian
55 WG/HO
205 Looking Glass
Offutt AFB, NE 68113-3130

Gordon Dix
Real Estate Officer
55 CES/CERR
106 Peacekeeper Drive, Suite 2N3
Offutt AFB, NE 68113-4019

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Offutt AFB history and Cold War context.

Dr. Parks, STRATCOM Historian, July 8, 1994

Dr. Todd White, STRATCOM Historian, July 18, 1994

SrA Clifford Sibley, Wing Historian, July 5-20, 1994

Gordon Dix, Real Estate Officer, July 5-20, 1994

MSgt Terry K. Harland, Detachment 1 Chief, Silver Creek, July 16, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-24: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT POPE AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
John A. Evaskovich
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. conducted a cultural resource inventory at Pope Air Force Base, North Carolina, between September 19 and 23, 1994, to ascertain extant Cold War resources important to the base, its history, and Cold War context as part of the Air Combat Command Cold War Study under the ongoing Department of Defense Legacy Program. As part of the inventory, environmental scientists James Lowe and John Evaskovich surveyed a variety of base repositories for research materials pertaining to the base's Cold War history. Repositories included the Wing History Office, Public Affairs Office, Civil Engineering Office and Drafting Department, Real Estate Office, and Environmental Office. Also, interviews were conducted with personnel long affiliated with the base to better understand the relationship of specific base properties to the Cold War era. Finally, a photographic reconnaissance of the base was conducted to document Cold War properties as well as representative architecture on the base.

Based on the information gathered, the field team chose three resources for further documentation and evaluation based on their Cold War importance. These resources include the former United States Air Force Tactical Airlift Center, a Documentary Collection in the Civil Engineering Office, and a Photograph Collection in the Environmental Office. Further documentation, stewardship, and conservation are recommended for the latter two resources. As the first resource is already listed on the National Register of Historic Places, continued stewardship is recommended.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AGE	- Air Ground Equipment
AWADS	- Adverse Weather Aerial Delivery System
CRS	- Component Repair Squadron
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
LAPES	- Low Altitude Parachute Extraction System
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCNUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TALC	- Tactical Airlift Center
TAW	- Tactical Airlift Wing
TCW	- Troop Carrier Wing
USAF	- United States Air Force
WRSK	- War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	13
3.1 BASE HISTORY AND COLD WAR CONTEXT	13
3.2 BASE DEVELOPMENT	18
4.0 METHODOLOGY	23
4.1 INVENTORY	23
4.2 EVALUATION OF IMPORTANT RESOURCES	24
4.2.1 Documentation	24
4.2.2 Evaluation of Importance	24
4.2.2.1 Cold War Context	24
4.2.2.2 NRHP Criteria	25
4.2.2.3 Exceptional Importance	26
4.2.3 Evaluation of Integrity	26
4.2.4 Priority Matrix	27
4.2.5 Resource Organization	28
4.3 BASE SPECIFIC METHODS	28
5.0 RECONNAISSANCE INVENTORY RESULTS	30
6.0 EVALUATION RESULTS	31
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	31
6.1.1 Documentation	31
6.1.1.1 Documentary Collection	31
6.1.1.2 Photograph Collection	33
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	33

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.3 MATERIEL DEVELOPMENT FACILITIES	33
6.3.1 Research Labs.....	33
6.3.1.1 USAF TALC	33
6.4 TRAINING FACILITIES.....	34
6.5 INTELLIGENCE FACILITIES.....	34
7.0 UNDOCUMENTED RESOURCES	35
8.0 FUTURE THREATS TO RESOURCES	36
9.0 PRELIMINARY RECOMMENDATIONS	37
9.1 NRHP ELIGIBILITY	37
9.1.1 Evaluation and Determination of NRHP Eligibility.....	37
9.1.2 Implications of NRHP Eligibility.....	39
9.2 EVALUATED RESOURCE RECOMMENDATIONS	41
9.2.1 Documentary Collection.....	41
9.2.2 Photograph Collection.....	43
9.2.3 USAF TALC	43
10.0 REFERENCES CITED	44
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Pope Air Force Base	5
Figure 2.2 Pope Air Force Base Layout	7
Figure 2.3 Standard Tactical Air Command Base Layout	8
Figure 2.4 Pope Air Force Base Land Use Diagram	10
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	11
Figure 3.1 Pope Air Force Base, 1950-1960	20
Figure 3.2 Pope Air Force Base, 1960-1980	21
Figure 3.3 Pope Air Force Base, 1980-1990	22

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	32
Table 6.2 Evaluated Resource Prioritization by Priority Rank	32
Table 9.1 Recommendations for Evaluated Resources	42

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

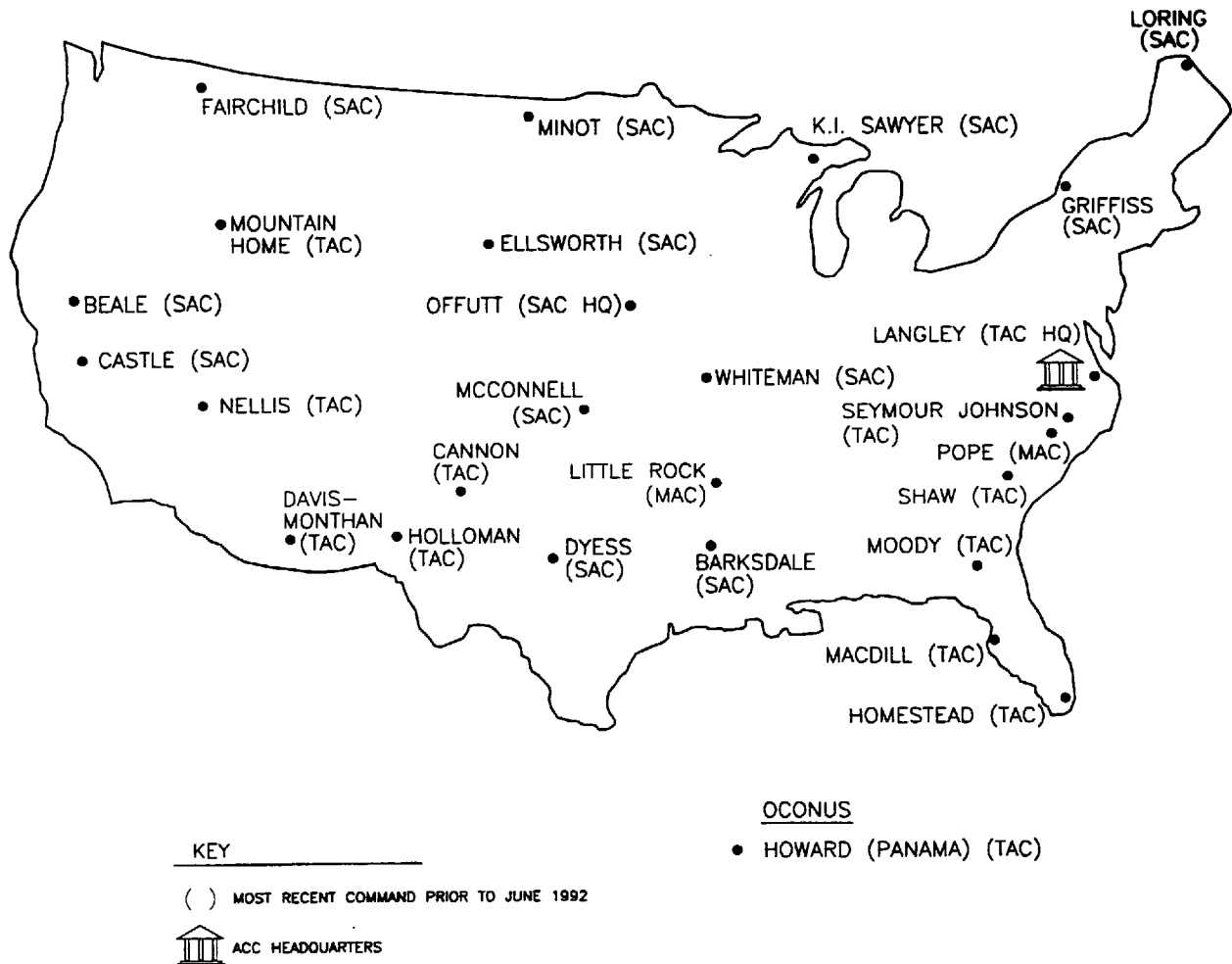
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



M:\COLDWAR\POPE\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Pope Air Force Base (AFB). Pope AFB, a former Military Airlift Command (MAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The 23rd Wing at Pope AFB is a composite wing responsible for "deploying a self-sustaining war fighting package anywhere in the world at a moments notice . . ." (Public Affairs Office 1994:11). The composite wing consists of the 2nd and 41st Airlift Squadrons utilizing the C-130 *Hercules* transport, the 74th Fighter Squadron with the F-16 *Falcon* fighter aircraft, and the 75th Fighter Squadron with the A/OA-10 *Thunderbolt II* attack aircraft. With these four squadrons, the 23rd Wing provides the United States Army with the airlift capabilities and air support that allow Fort Bragg's XVIII Airborne Corps and 82nd Airborne Division to "organize, equip, and train for global airlift and air power operations" (Pope AFB 1993:1-10).

2.2 GEOGRAPHIC DESCRIPTION

Pope AFB consists of approximately 1,869 acres (756 ha) of land located southwest of the Little River and 10 mi (16 km) northwest of Fayetteville, North Carolina in Cumberland County (Figure 2.1). It is bordered on the south, west, and north by the Army's Fort Bragg Military Reservation. The base is situated in the Sandhills Subprovince of the Coastal Plain Physiographic Province and is characterized by rounded hills that consist of loose to fairly well consolidated sand. Elevations on base range from 280 ft (85 m) above mean sea level near the southern boundary to 170 ft (52 m) at the northern boundary. Vegetation on the base consists primarily of loblolly and longleaf pine, scrub oak, and wiregrass (Civil Engineering Office 1993:2-2, 2-4; United States Air Force [USAF] 1994:1,8,10; United States Army Corps of Engineers 1993:3).

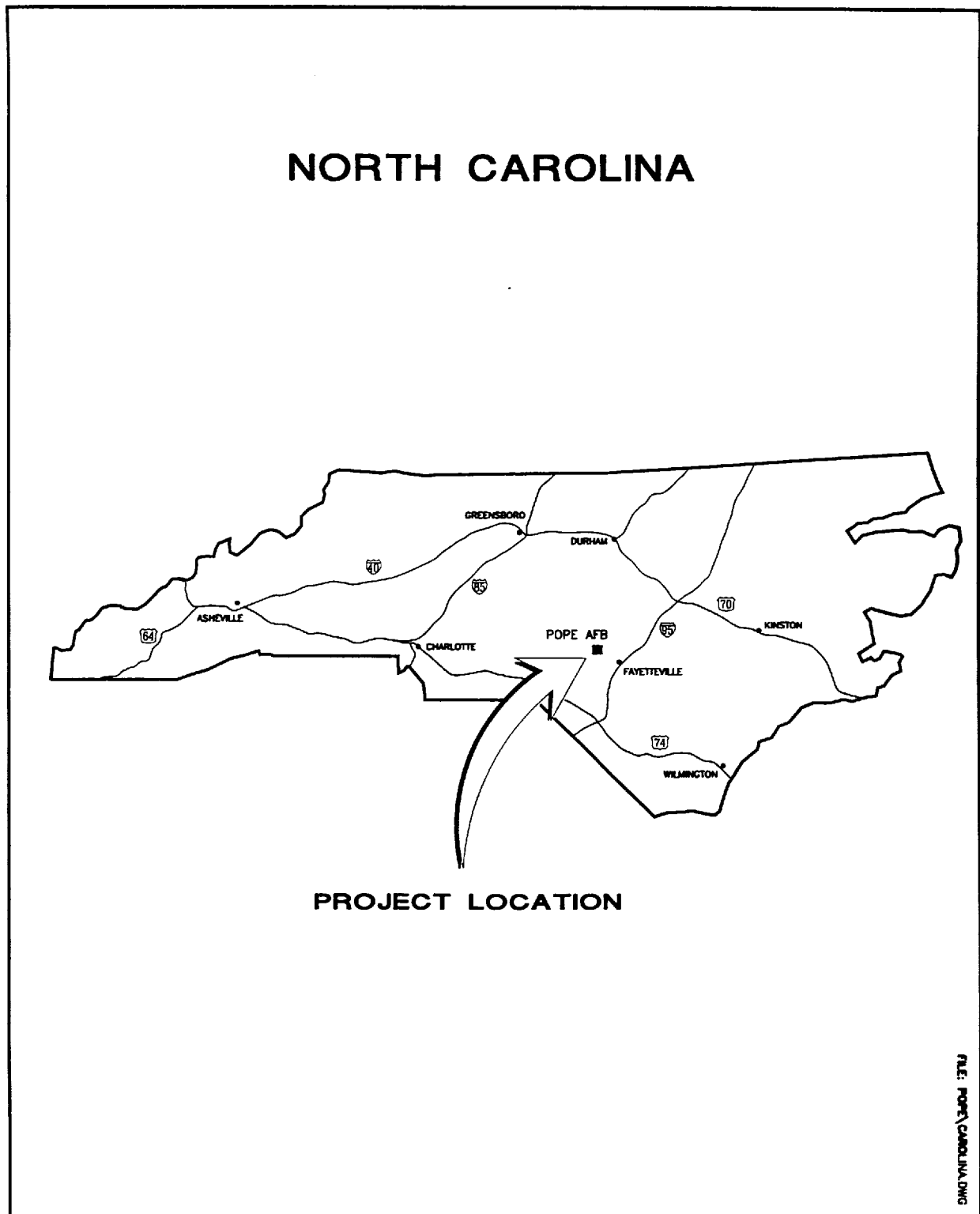


Figure 2.1 Location of Pope Air Force Base.

2.3 CURRENT BASE LAYOUT

Although Tactical Air Command (TAC) was the major command at Pope AFB from 1950 until 1974, the layout of Pope AFB (Figure 2.2) bears little resemblance to the standard TAC base Layout (Figure 2.3). It is hypothesized that the base did not develop along the lines of the standard TAC base due to two reasons: that portions of the base were built before and during World War II, and that the primary mission at Pope AFB throughout its history was the airlifting of troops and materiel, rather than the usual TAC mission of providing combat fighter forces.

The most pronounced difference between the Pope AFB and standard TAC layouts is the relationship of the base to the runway and parking aprons. The TAC layout has almost the entire base situated along one side of the runway. The main instrument runway at Pope AFB is oriented northeast-southeast and bisects the base into two distinct development sections. These sections are on both sides of the runway, and development does not extend along the length of the runway on either side. The southeastern development section follows only the northeastern third of the runway, with most of the development extending southeast away from the runway. The northwestern section of development is completely set back from the runway by a large parking apron used for parking, loading, and deploying of cargo and airlift aircraft. Buildings are positioned along this parking apron and at both ends. Headquarters for airlift operations is located at the southwestern end of this parking apron and is the focal point for airlift operations. The mission facilities related to the maintenance of airlift and fighter aircraft and base operations are located at the northeastern end of this parking apron.

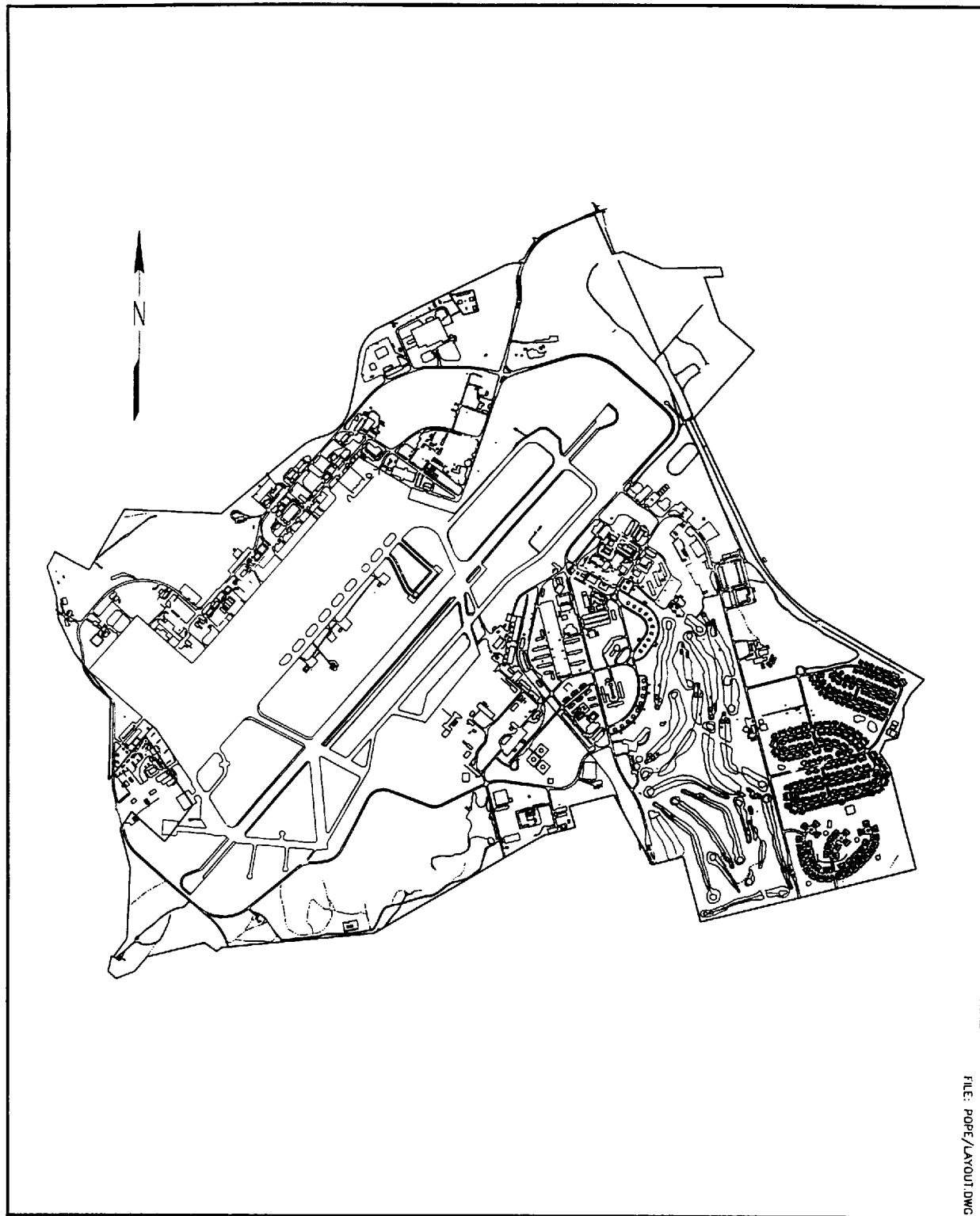


Figure 2.2 Pope Air Force Base Layout.

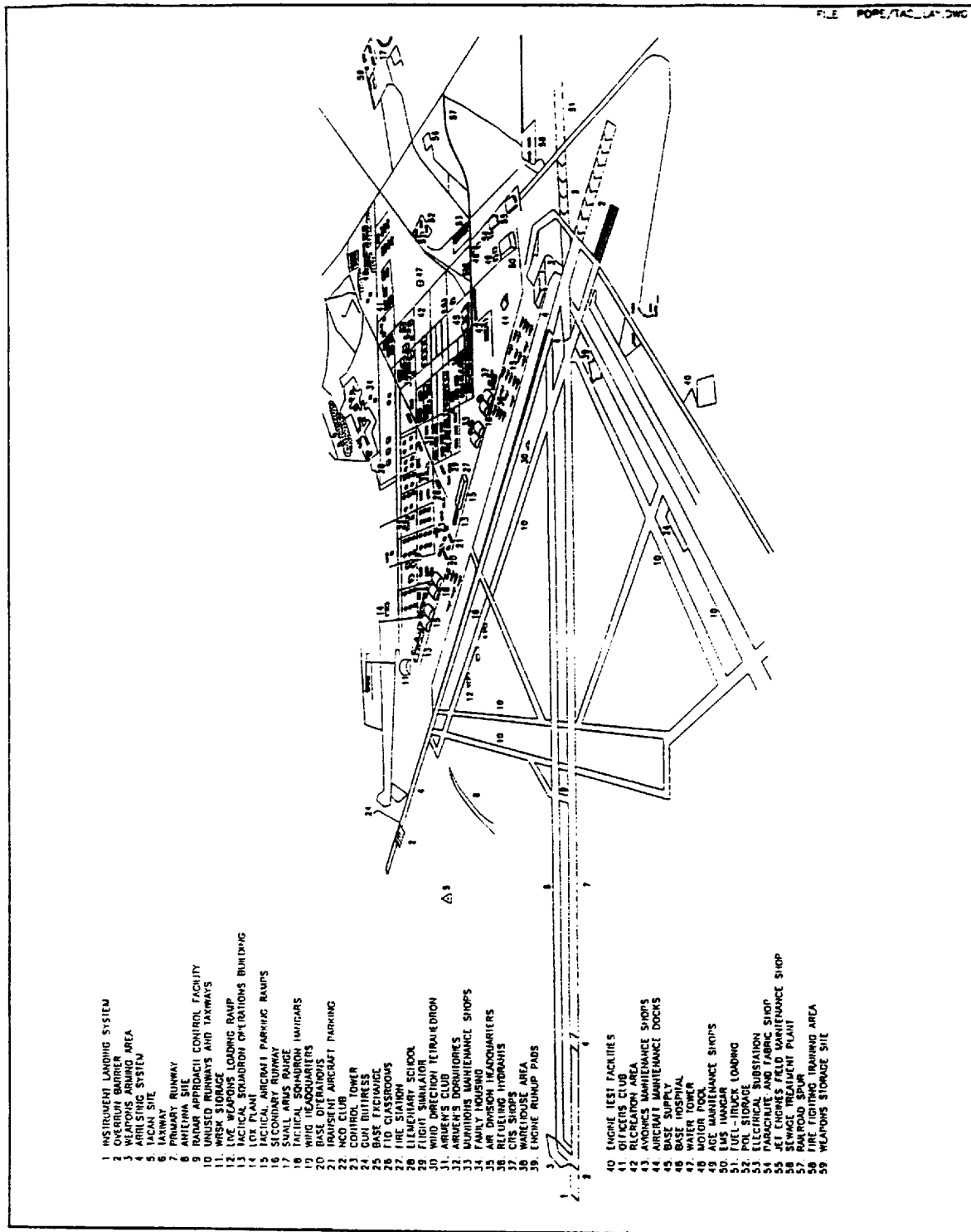


Figure 2.3 Standard Tactical Air Command Base Layout.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Because of the major differences in basic layout between Pope AFB and a standard TAC base, the land use patterns at Pope AFB (Figure 2.4) at first appear not to conform to standard TAC patterns (Figure 2.5). However, although there are differences between the two, there are also similarities.

The differences between the two land use diagrams include the placement of most of the mission areas around a large parking apron in the northwestern section of the base rather than in the southeastern section along with the other land use areas as in the standard diagram. Also, the

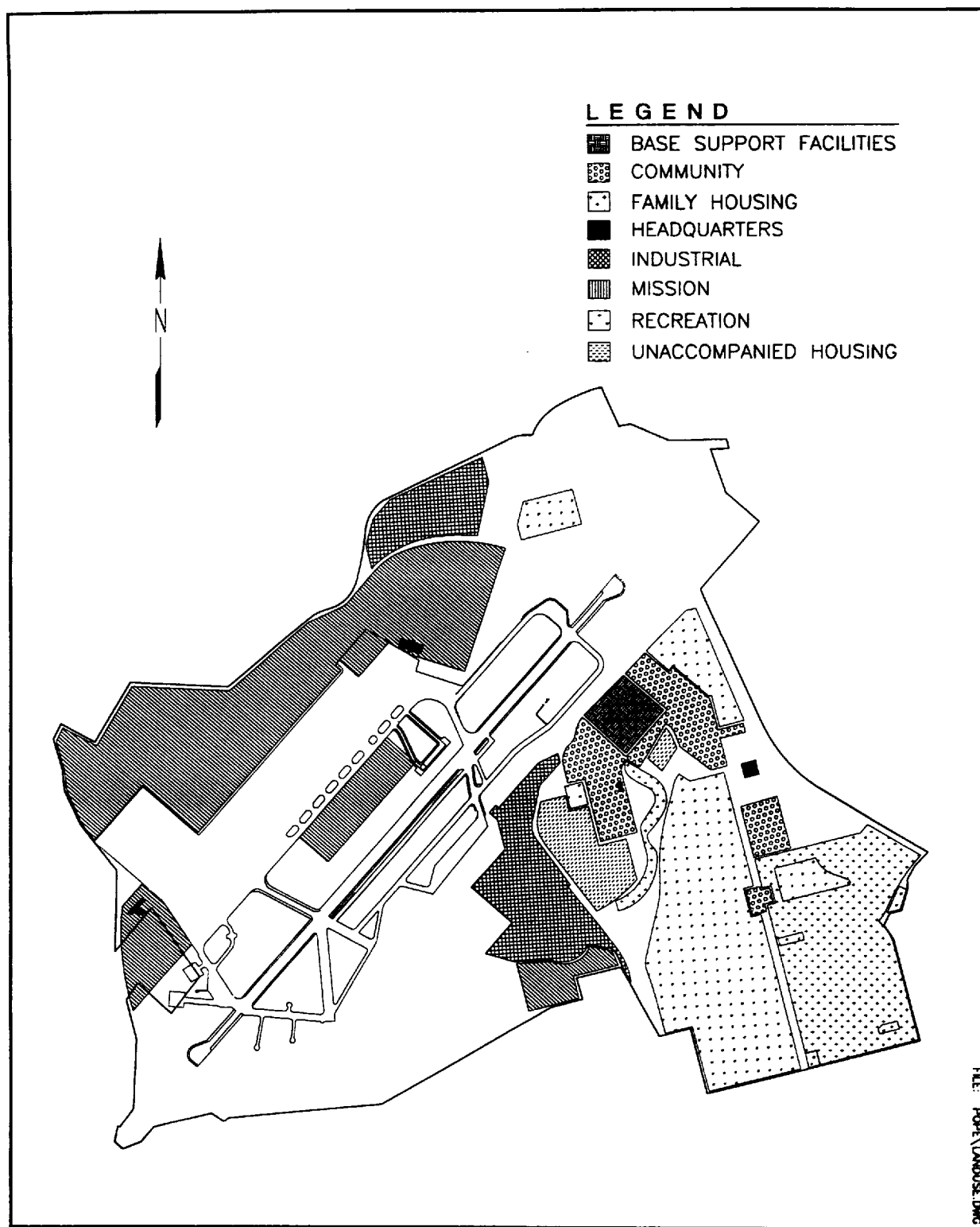


Figure 2.4 Pope Air Force Base Land Use Diagram.

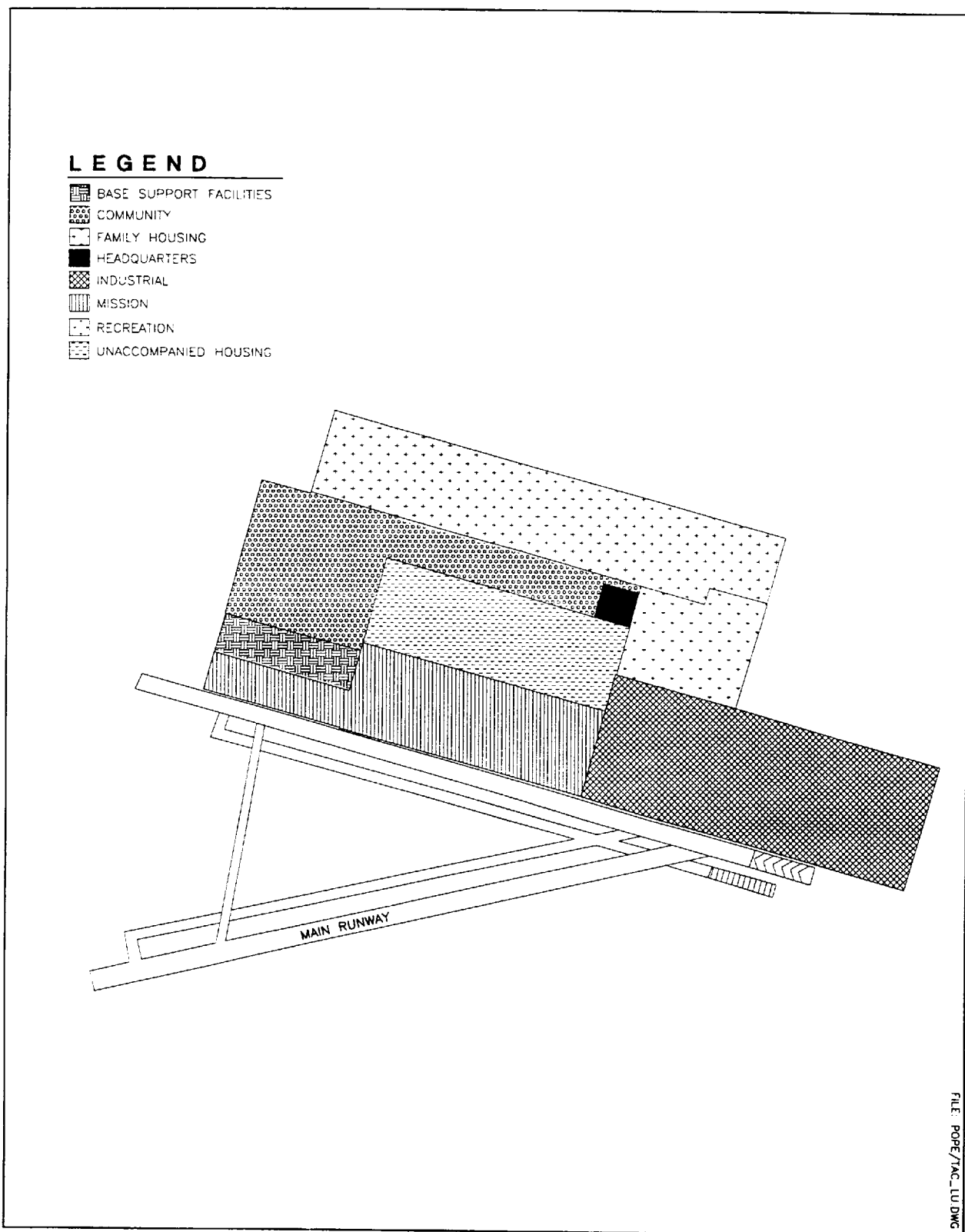


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

mission areas are positioned to surround the parking apron instead of laid out along the length of the flight line as shown in the standard diagram. Finally, the location of an industrial area and a recreation area on the northwestern side of the runway differs from the standard.

Although the various land use areas at Pope AFB are not spread out along the flight line as in the standard diagram, the spatial relationships between the areas in the southeastern section are very similar to the standard diagram. The industrial area is located along the flight line and family housing is found farthest from the flight line. In between these two areas is a conglomeration of base support, community, unaccompanied housing, and recreation facilities. This is the same land use pattern found in the standard TAC diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Pope AFB is one of the oldest installations in the Air Force. Throughout most of the Cold War, it was affiliated with Fort Bragg, providing airlift and air support to the United States Army. Because of its unique relationship with Fort Bragg it has been said that, "there is no other base like Pope AFB . . . it is the airlift center of the world" (personal communication, David Davenport, September 22, 1994).

The origins of Pope AFB coincide with the creation of Camp Bragg (now Fort Bragg), North Carolina during World War I. This Army military reservation was created by an executive order in September 1918, pursuant to an act of Congress dated July 2, 1917. The site of Pope AFB was initially purchased by the federal government for use as an accompanying air field for the camp. The Army Air Service commanded the Camp Bragg Flying Field. It was renamed Pope Field on April 1, 1919 in honor of Lt Harley H. Pope, who was killed in an airplane crash while searching for potential landing sites for an airmail route in the region. Lt Pope was commander of the 276th Aero Squadron stationed at Pope Field when he was killed January 7, 1919 (Civil Engineering Office 1946:1, Section II; Drucker and Jackson 1987; Mueller 1989:482; Public Affairs Office 1969:1).

During the late 1920s, Pope Field participated in experimental aerial bombardment exercises that proved beneficial to the United States military during World War II. In December 1927, Major Carl Spaatz and his bomber squadron successfully destroyed a bridge on the Pee Dee River 70 mi (112 km) west of Fayetteville, North Carolina. This demonstrated the feasibility of destroying permanent structures with aerial bombardment to achieve a wartime objective (Civil Engineering Office 1971:2; Drucker and Jackson 1987; Public Affairs Office 1969:1; 1994:6).

Army Air Force took command of Pope Field on June 21, 1941 and renamed it Pope Army Air Field. The base's primary mission, troop carrier and cargo airlift, began with the arrival of the new command, and endured and expanded throughout Pope AFB's Cold War history. Throughout World War II, Pope Army Air Field functioned primarily as a troop carrier training installation. Air maneuvers, mock aircraft engagements, and simulated bombing practice prepared the squadrons for live action, and air and ground crews trained with Army airborne units from Fort Bragg for airborne and aerial resupply missions. These activities culminated in the first paratroop drop in the Western Hemisphere. Army Air Force units trained at Pope Army Air Field were then transferred to the diverse theaters of the war (Civil Engineering Office 1971:2-3; Mueller 1989:482-483; Public Affairs Office 1969:2; 1993:1).

The command at Pope Army Air Field changed several times during and following World War II. First Air Force took control of the field in July 1942, followed shortly thereafter by First Troop Carrier Command in October 1942. Continental Air Forces took control of the field in April 1945. This command was redesignated Strategic Air Command (SAC) in March 1946. SAC assumed control of the newly renamed Pope AFB in December 1948 and remained until December 1, 1950, when TAC began its long tenure at Pope AFB (Civil Engineering Office 1971:3; Lewis et al. 1995; Mueller 1989:482-483; Public Affairs Office 1969:2).

Pope AFB acquired the headquarters of the Ninth Air Force in August 1950 as the fighter-bomber and photo reconnaissance element of TAC. The Ninth Air Force remained at Pope AFB until October 1954 when it moved to Shaw AFB, South Carolina. In September 1954, the 464th Troop Carrier Wing (TCW) became the host unit at Pope AFB with the mission to transport "troops, equipment, and supplies into combat by parachute and airlanding, and resupply such forces until they are withdrawn or supplied by other means" (Public Affairs Office 1969:5) The arrival of the 464th TCW precipitated a period of major expansion of base facilities to accommodate the unit's C-119 *Flying Boxcar* aircraft and TAC fighter squadrons (Mueller 1989:482,484,485; Public Affairs Office 1969:2; 1993:1).

Aircraft upgrade was the primary focus at Pope AFB during the late 1950s and 1960s. C-119s were replaced in 1958 with the C-123 *Provider*, which in turn was replaced by the C-130 *Hercules* in 1963. The arrival of the C-130 expanded the 464th TCW's tactical airlift capability by offering increased payload capacity and the unique ability to operate from short, unimproved airstrips. The C-130 also gave the wing global accessibility, enabling it to transport United States Strike Command paratroopers and equipment to any location around the world (Public Affairs Office 1969:2-3; 1993:1). During the early 1960s, units from the 464th TCW perfected a dramatic aerial delivery system for use in situations where precise delivery was imperative and no runway was available. The low altitude parachute extraction system (LAPES) was battle-tested in countless missions in Southeast Asia during the Vietnam conflict (Louis 1989:4). With the increased involvement of the United States in the Vietnam conflict came the need for larger numbers of aircrews. Thus, the 464th TCW took on an additional mission of aircrew replacement training.

The 464th TCW was involved in many conflicts around the world during the 1960s. The 464th TCW airlifted men and materiel deployed to Florida during the Cuban Missile Crisis of 1962. In 1964, the wing airlifted Belgian paratroopers into rebel-held territory in the Republic of the Congo to evacuate hostages and refugees. Pope AFB and the 464th TCW participated in one of the largest airlift operations in history during the 1965 hostilities in the Dominican Republic (Lewis et al. 1995). In 1968, the wing participated in the attempt to resupply marines at Khe Sahn in Vietnam.

To keep pace with the rapid technological developments in aircraft, the USAF Tactical Airlift Center (TALC) was established at Pope AFB in 1966 "to develop and test new innovations in tactical airlift concepts" (Civil Engineering Office 1971:4). The wing was redesignated the 464th Tactical Airlift Wing (TAW) on May 1, 1967. In 1967 and 1968, the 464th TAW airlifted troops from Fort Bragg to the midwest to quell domestic rioting in Detroit and Chicago. In 1969, the largest military aircraft ever built, the C-5 *Galaxy*, was incorporated into the Pope AFB and Fort Bragg inventory and greatly expanded the amount of troops, equipment, and supplies that could be

airlifted during strategic airlift operations. In June 1971, when the Air Force consolidated its specialized centers at Eglin AFB, Florida, TALC activities ceased at Pope AFB (Civil Engineering Office 1971:4-5; Mueller 1989:482; Public Affairs Office 1969:2-4,42; 1993:1).

The 464th TAW was deactivated in August 1971, and the 317th TAW, a senior airlift unit with a prestigious background dating from World War II, was reactivated in its place. During the next year, the mission of the 317th TAW involved the "command and staff supervision of tactical airlift squadrons and assigned support units engaged in providing tactical airlift support for airborne forces and other personnel [,] equipment, supplies, and aero-medical evacuation of patients within the theater of operations" (Hildebrandt 1972:1). In addition to a mission that was similar to other TAWs, the 317th was also "involved more frequently in the development, refinement, and application of joint airborne procedures because of its proximity to U.S. Army airborne elements at adjacent Fort Bragg. The wing also . . . [was] involved in the planning phase of operations which primarily involve participants from other airlift organizations" (Hildebrandt 1972:2).

The Adverse Weather Aerial Delivery System (AWADS), an important addition to the operational capability of the C-130, had been initiated by the 464th TAW and was completed in 1972. By May 1972, the 317th TAW had proven the practicality of the system for use in a combat environment. AWADS provided aircrews with a sophisticated radar that allowed airdrops without visual ground reference points. This technology facilitated accurate airdrops during adverse weather conditions and at night and this greatly expanded the operational capabilities for airlift operations. The 317th TAW was the only operational airlift unit equipped with AWADS (Louis 1989:4; Public Affairs Office 1993:2; Rogers 1975:6-7).

The command at Pope AFB was changed from TAC to MAC in 1974. However, both the designation and the mission of the 317th TAW remained much the same. The Air Force established the USAF Airlift Center at Pope AFB on December 1, 1975. The center's primary objective was to provide "centralized expertise on all aspects of airlift operations and [serve] as

the focal point for the development, testing, and evaluation of new equipment, tactics, and doctrine for the airlift forces" (Pope AFB 1993:1-12; Public Affairs Office 1993:2; 1994:10). It developed and evaluated new equipment and operations for both strategic and tactical airlift.

The 317th TAW used troops and equipment for both military and civilian missions. In late 1979, the 317th TAW airlifted personnel and hostages to safety from Iran. In 1983, the wing used 18 C-130 aircraft to airdrop and land elite Army Rangers onto a runway at Point Salinas, Grenada for the invasion there. The 317th TAW airlifted troops and supplies to Honduras in 1987 and Panama in 1989 (Civil Engineering Office 1971:4-5; Public Affairs Office 1969:3-4; 1993:2). Also, in 1989, the wing provided relief to U. S. citizens stricken by Hurricane Hugo (Civil Engineering Office 1971:3-4; Public Affairs Office 1969:3-4; 1993:1-2).

At the end of the Cold War, the mission of the 317th TAW remained essentially unchanged, though in 1988 it was redesignated the 317th Airlift Wing. It "provided airlift of troops, cargo, military equipment, passengers, mail, along with aeromedical airlift to and from areas requiring such airlift" (Louis 1989:1). To maintain a constant state of readiness, "MAC maintained a worldwide airlift system of aircraft, maintenance units, air terminals, and supplies essential for movement of troops and their equipment across oceans and within combat theaters." (Louis 1989:1). The 317th Airlift Wing, like its predecessors, maintained a significant portion of its operational airlift support capabilities for use by the Army's 18th Airborne Corps and the 82nd Airborne Division. In addition, the 317th airlifted Special Forces units at Fort Bragg when necessary (Louis 1989:2). During Operations Desert Shield and Desert Storm, the 317th Airlift Wing transported more than 40,000 combat troops and 65 million pounds of cargo to the Arabian Peninsula.

Pope AFB underwent many changes during the first few years of the 1990s. In June 1992, the base was transferred from MAC to ACC, the 317th Airlift Wing was deactivated, and the 23rd Wing was activated in its place. The 23rd Wing assumed the 317th wing's mission of organizing, equipping, and training for global airlift and air power operations. In support of the USAF Airlift

Center, which was renamed the USAF Mobility Center in June 1992, the wing was also involved in the development, testing, and assessment of new airlift and air power techniques and equipment to achieve global reach and global power as defined by ACC (Pope AFB 1993:1-10, 1-12; Public Affairs Office 1993:3; 1994:10-11). The 23rd Wing brought with it the 75th Fighter Squadron.

In 1993, the 23rd Wing was designated a composite combat wing. As a result of the Base Realignment and Closure Act, Pope AFB received a squadron of A/OA-10 aircraft. That same year, the 74th Fighter Squadron was activated under the 23rd Wing, bringing with it the F-16 aircraft. Together with the C-130s already at the base, these aircraft fulfill the requirements of the composite wing. In the fall of 1993, the USAF Mobility Center relocated to Charleston AFB, South Carolina.

3.2 BASE DEVELOPMENT

Buildings and structures extant on Pope AFB represent three periods of major expansion: the first occurred during the Great Depression in the early 1930s, the second during World War II, and the third between 1954 and the 1960s. The first permanent buildings at Pope Field were six barracks built of brick and constructed between 1927 and 1931. In 1933 and 1934, under the Emergency Relief and Construction Act of 1932, other permanent buildings were built on base, including one balloon hangar, a double aircraft hangar, a headquarters building, a fire station, nine single officer's quarters, and 12 non-commissioned officer's quarters. With the exception of the six barracks and the balloon hangar, all of these buildings are extant and listed on the NRHP. Other permanent buildings constructed between 1932 and 1940 included a base chapel, theater, hospital, ordnance shops, commissary, and additional officer's housing (Civil Engineering Office 1946:2, Section I; 5, Section II; Drucker and Jackson 1987; Public Affairs Office 1993:1; 1994:6). The completion of paved runways in 1940 facilitated the troop carrier airlift training conducted on base during World War II. Temporary billeting facilities were constructed during

the early years of the war for air crews in training (Civil Engineering Office 1946:5-6, Section II; 1971:2; Mueller 1989:482).

Between 1954 and 1956, the arrival of TAC and the increased size of airlift aircraft necessitated renewed construction activities at Pope AFB (Figure 3.1). The runways, taxiways, and parking aprons were redesigned and strengthened according to operational necessity and the 1956 directive from the USAF that all runways be constructed of reinforced concrete. Several small aircraft hangars, one large aircraft hangar, and airman's dormitories were constructed between 1956 and 1958.

Many World War II era temporary buildings were replaced with permanent buildings in 1963 (Figure 3.2). There were 280 family housing units constructed in the southeastern corner of the base in 1964 to alleviate the shortage of family housing. A new USAF Headquarters building was completed in 1967 for airlift operations, most likely in connection with the USAF TALC. The airlift center had occupied the top floor of the old wing headquarters prior to the construction of this new building. A new wing headquarters building was constructed in 1967 southeast of and near the older facility. Facilities and a taxiway extension were completed late in 1969 and early 1970 to accommodate the arrival of the C-5 *Galaxy* at Pope AFB. A base golf course was constructed sometime in the early to mid-1970s and the main clubhouse facility dates to 1972. A new control tower and an addition to the 1964 housing area were completed in 1975 (Mueller 1989:482).

The USAF Headquarters building underwent a large expansion in 1983, and, between 1987 and 1990, a large warehouse and supply complex was constructed north of base operations and southwest of the munitions storage area (Figure 3.3).

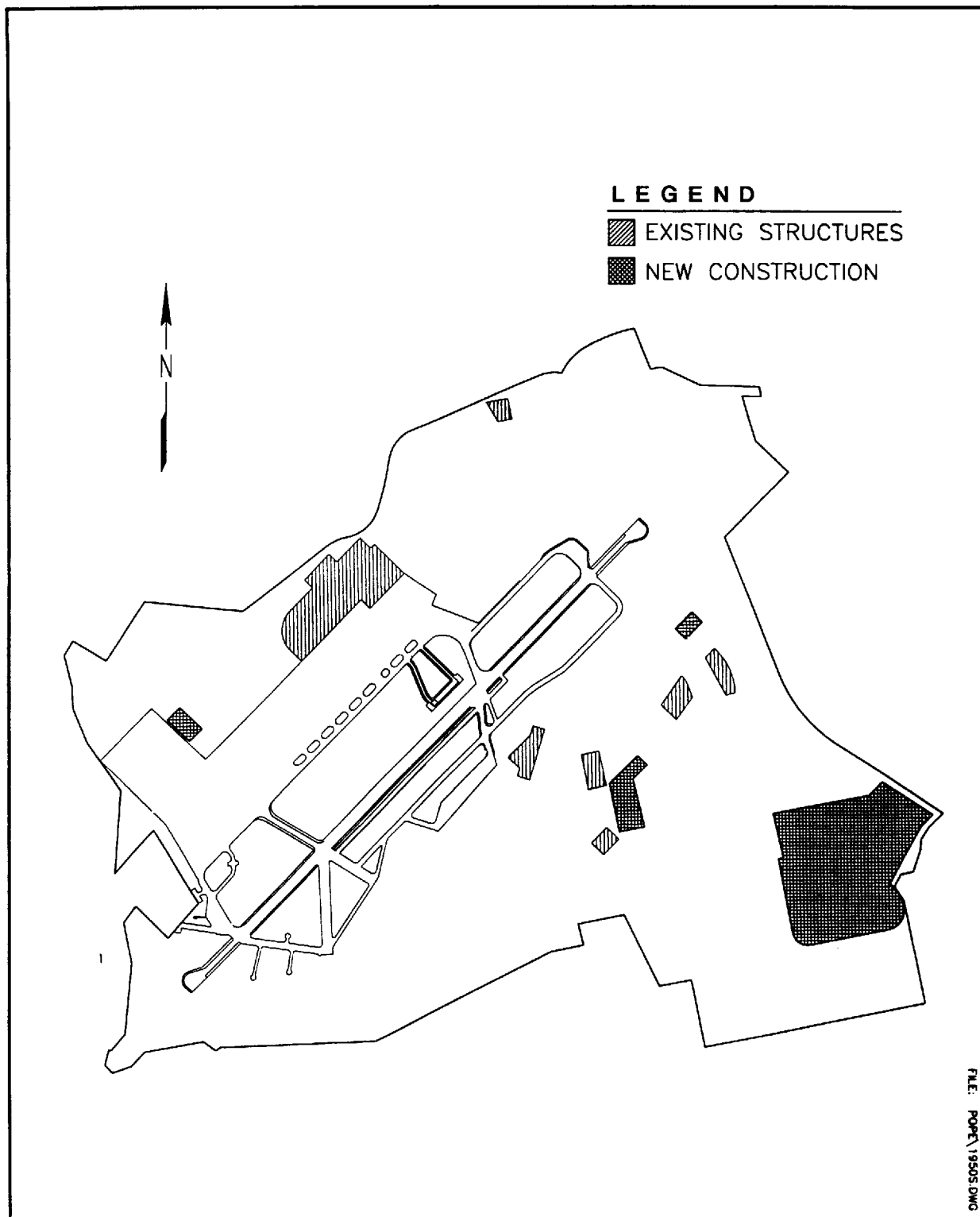


Figure 3.1 Pope Air Force Base, 1950-1960.

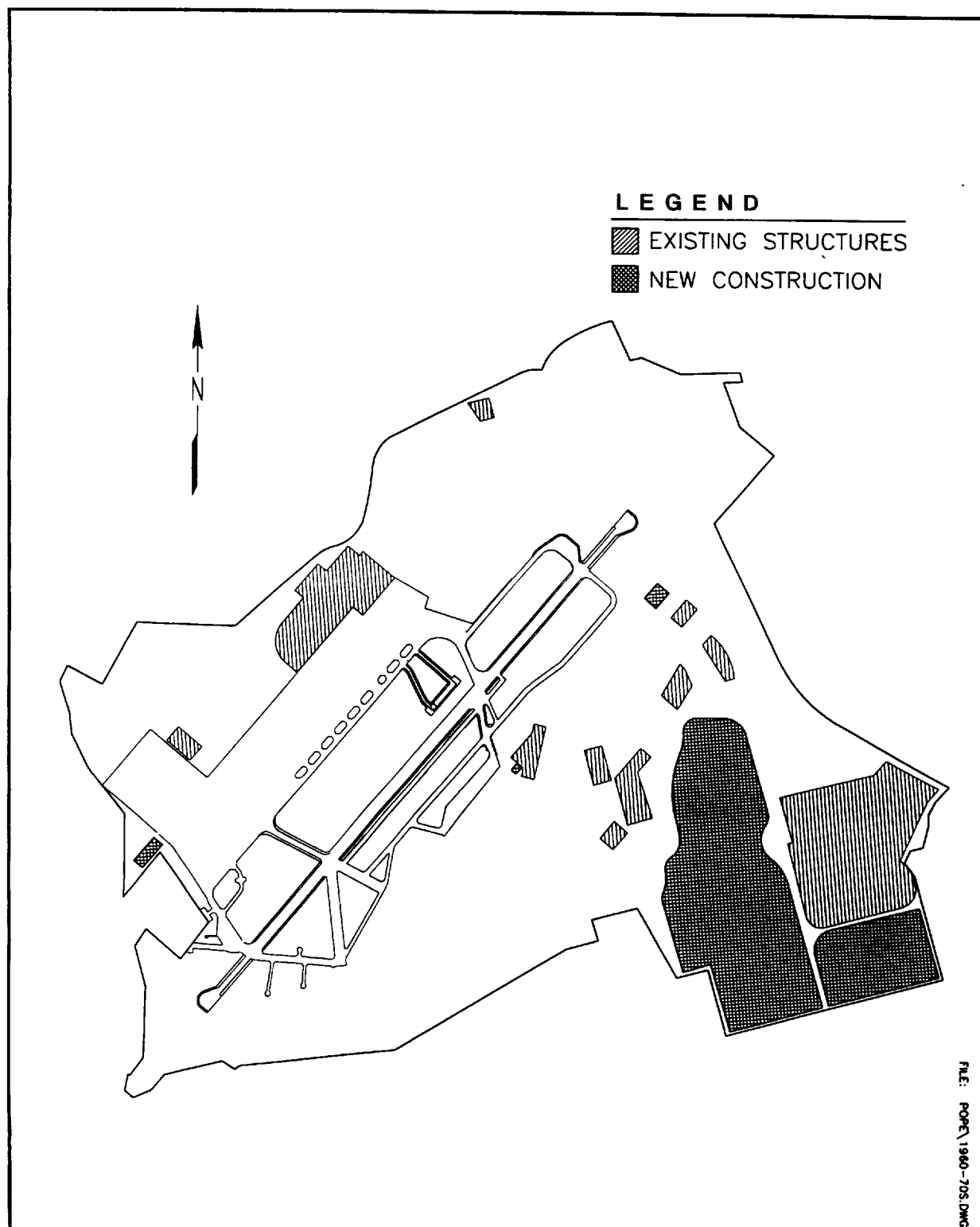


Figure 3.2 Pope Air Force Base, 1960-1980.

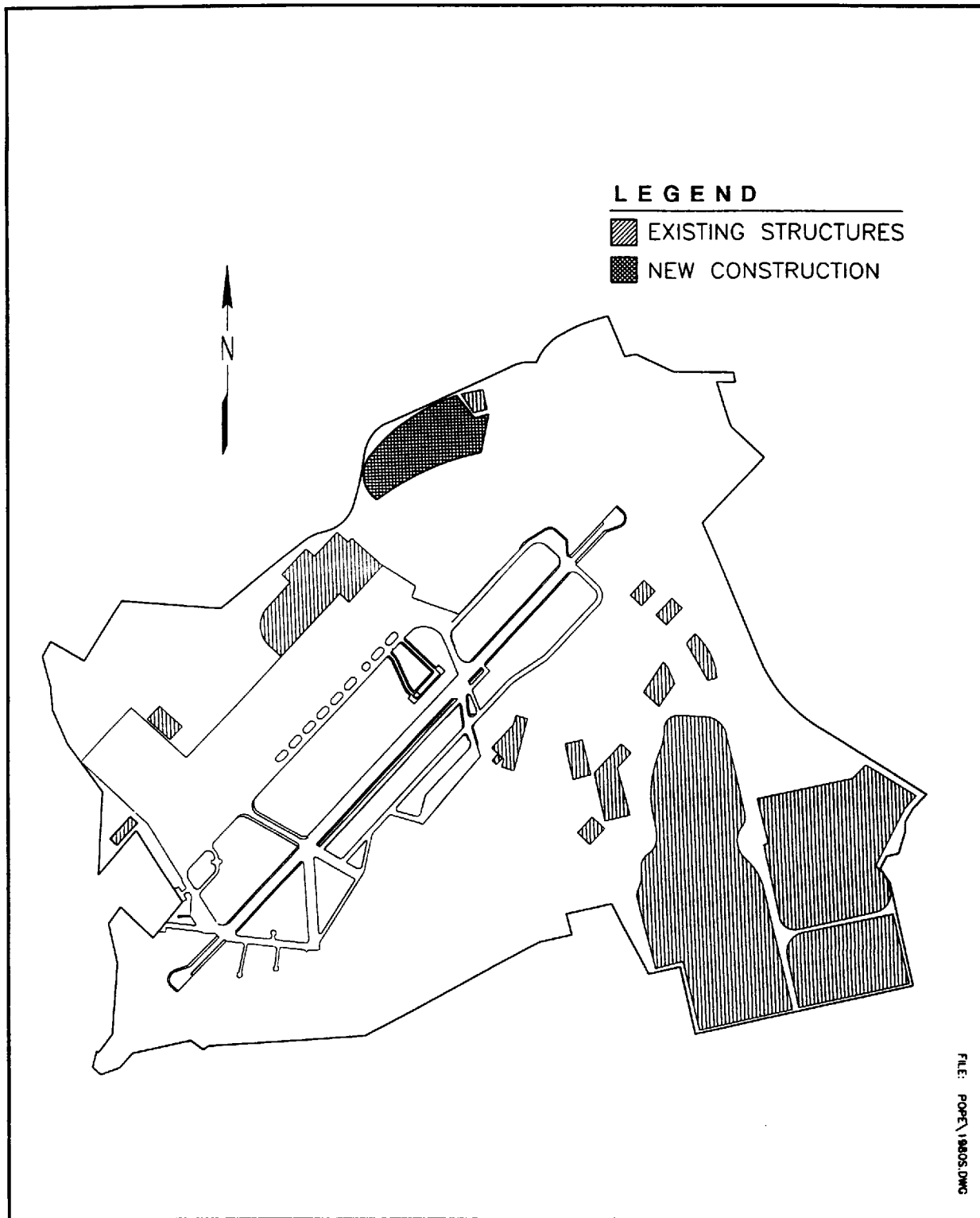


Figure 3.3 Pope Air Force Base, 1980-1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Pope AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Pope AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Pope AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of

historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF Interim Guidance (1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Pope AFB, the Mariah field team met the point of contact who arranged for an orientation tour of the base. This allowed the field team to become familiar with the base layout and the various extant Cold War resources. A photographic reconnaissance of the base was conducted to inventory Cold War properties and representative architecture on base.

Various departments on Pope AFB provided information useful to the study. The Wing History Office supplied wing histories to augment base historical information provided by the Public Affairs Office. This information was examined to determine the mission at Pope AFB and to link the base to significant events that occurred during the Cold War era. The Drafting Department of the Civil Engineering Office provided base layout maps on computer discs, current hard copies of base layout maps, and decade maps useful for depicting base development over the years. Property Cards from the Real Estate Office contained information pertinent to the resources chosen to be documented and evaluated for their Cold War significance. According to the Real Property Officer, the installation property reports that would normally be found in a base's Real Estate Office are kept at the Army installation as Fort Bragg owns the property

utilized by Pope AFB. These reports usually provide additional information useful for augmenting historical information found at other offices on base. The Environmental Office provided Installation Restoration Plans and cultural resource reports that discuss the base mission, history, geography, geology, flora, and fauna. Several informal interviews were conducted with personnel long affiliated with the base to better understand the relationship of specific base resources to the Cold War era.

Based on the information gathered and the photographic inventory of properties, resources determined to be important to the base's Cold War history were selected for documentation and evaluation.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Pope AFB, 107 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Three resources were evaluated at Pope AFB, one of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to the evaluated building could not be secured. In this instance, documentation describing any changes to the building was consulted to provide insight into the integrity of the building's interior.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 20102, Located in Real Property No. 280)

This collection of drawings and photographs is located in a vault area inside the Civil Engineering Office. The drawings represent most buildings extant on base as well as those that have been removed. Other subjects include utilities, housing, runways and repairs, topography, and landscape. The drawings are extant from 1931 to the present, and thus span all four temporal phases of the Cold War era. Some of the drawings are of buildings already on the NRHP. There are also several aerial photographs of the base located in this storage area. This collection is important in that it illustrates the development of the base throughout the Cold War, and provides detailed drawings of buildings that are listed on the NRHP and ones that have been demolished.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	20102	None	RecDoc/Obj	15
Documentation	Photograph Collection	20106	None	RecDoc/Obj	11
Materiel Development Facilities					
Research Labs	USAF TALC	20021	306	Real/Bldg	18

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
18	20021	306	USAF TALC
15	20102	None	Documentary Collection
11	20106	None	Photograph Collection

This collection is stored in a secure area and Civil Engineering personnel are currently in the process of creating an index of the collection. The drawings are often handled by base engineers, and many of the earlier drawings are damaged by age and use.

6.1.1.2 Photograph Collection (Resource No. 20106, Located in Real Property No. 280)

Located in the Environmental Office, this collection of photographs documents facilities and personnel at Pope AFB. There are approximately 185 8 x 10" black and white photographs in a bound notebook. There are also five 2.5 x 3' aerial photographs: three from 1977, one from 1971, and one from 1964. This collection is significant in that it records the development of the base and important base facilities and personnel during the Cold War era.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

None were evaluated at Pope AFB.

6.3 MATERIEL DEVELOPMENT FACILITIES

6.3.1 Research Labs

6.3.1.1 USAF TALC (Resource No. 20021, Real Property No. 306)

Real Property No. 306 was originally built in 1933 and is a permanent, 39,500 ft² building constructed primarily of steel with a stone facade. The Real Estate Office Property card and the NRHP nomination forms list the interior walls as being constructed of stucco and hollow tile masonry. Centrally located east of the runway and immediately west of the historic housing area, the building is four stories in height, roughly H-shaped in its perimeter boundary, and characterized most by its Georgian revival style of architecture and near-white stone/tile facade. Originally constructed as a barracks, the building became, in succession, the Wing Headquarters,

Combat Group Headquarters, and Command Post during World War II. During the Cold War, the building was Air Base Group Headquarters until 1967, when the new Wing Headquarters was built. It then housed planning and intelligence-gathering for implementing the primary airlift mission at Pope AFB. This resource also served as the USAF TALC, a facility that consistently revised and improved air lift potential in terms of troop and materiel delivery systems. This building is currently utilized for base administration and houses a variety of base support offices.

The exceptional importance of this facility to the base's Cold War context lies in its function as the USAF TALC. This headquarters/research facility served to consistently revise and improve USAF airlift potential in terms of troop and materiel delivery systems. These innovations were not limited to aircraft stationed at Pope AFB, but were applied nationwide to improve the functions of both TAC and MAC.

6.4 TRAINING FACILITIES

None were evaluated at Pope AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Pope AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Pope AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Pope AFB. These resources should be investigated further for a more comprehensive analyses.

The Wing History Office at Pope AFB has a collection of wing histories. These histories discuss the operations of the 317th TAW and may provide further insight into Cold War activities at Pope AFB. This office also has an incomplete collection of base newspapers (*Hercules Herald*) dating to 1969. These newspapers may provide further information concerning Cold War activities at Pope AFB. The newspaper collection is yellowing with age and is in need of proper curation and preservation.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Pope AFB revealed approximately 175 citations. Most of these are unit histories and special collections. More specific topics include the histories of various military and civilian airlift missions. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Pope AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

A cultural resource inventory was completed at Pope AFB by Carolina Archaeological Services in the late 1980s. This study resulted in the January 25, 1991 creation of a historic district at Pope AFB consisting of 29 family houses, the original Wing Headquarters (Real Property No. 306), the old Fire Station (Real Property No. 300), and a former Medical Dispensary (Real Property No. 302). One original hangar (Real Property No. 708), also included in the listing, is found outside the district boundaries. The buildings that comprise the district were determined to have a high degree of architectural integrity meeting the National Register requirements for Depression-era buildings (Drucker and Jackson 1987).

An archaeological investigation, completed on Pope AFB in 1984, identified minimal traces of Native American culture. The limited findings were probably due to the long period of disturbance associated with the many decades of construction activities at Pope AFB. It was determined that there were no significant Native American resources in the project area, and the State of North Carolina cleared the base for the planned construction activities (personal communication, Omega Weeks, September 19 and December 1, 1994).

Currently, development of a historic preservation plan for the base is planned.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Pope AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Pope AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Pope AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Pope AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 20102, Located in Real Property No. 280)

This collection of drawings and photographs has already undergone some damage due to age and regular use by base engineers. It is recommended that the collection be inventoried and copied, with the copies retained by the base for its use and the originals stored at a permanent curatorial facility for stewardship and conservation.

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
20021	306	USAF TALC		*				Building is currently listed on the NRHP.
Record or Document - Object								
20102	None	Documentary Collection		*		*	*	
20106	None	Photograph Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Photograph Collection (Resource No. 20106, Located in Real Property No. 280)

This collection of photographs is currently bound in a notebook and kept in the Environmental Office. It is recommended that the collection be inventoried and copied, with the copies retained by the base for its use and the originals stored in a permanent curatorial facility for stewardship and conservation.

9.2.3 USAF TALC (Resource No. 20021, Real Property No. 306)

This building is currently listed on the NRHP as part of the Pope AFB historic district, which is significant for its depression-era architecture. The building is also exceptionally important to the Cold War context of the base for its role in the research and development of airlift and airdrop technologies not only for the USAF but also for the U.S. Army. Continued stewardship of the resource is recommended.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Civil Engineering Office

- 1946 *Master Plan, Pope Field, Fort Bragg, N.C.: Analysis of Existing Facilities*. On file, Real Estate Office, Pope Air Force Base, North Carolina.
- 1971 *DOD/GSA Land Survey Brochure, Pope AFB, North Carolina*. On file, Real Estate Office, Pope Air Force Base, North Carolina.
- 1993 *Pope Air Force Base Installation Restoration Program: Phase II Remedial Investigation Report, Vol. I, Report Text*. On file, Civil Engineering Office, Pope Air Force Base, North Carolina.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Drucker, L. M., and S. H. Jackson

- 1987 Pope AFB Historic District Nomination, Carolina Archaeological Services. National Register of Historic Places Registration Form, United States Department of the Interior, National Park Service. On file, Environmental Office, Pope Air Force Base, North Carolina.

Hildebrandt, F. B.

- 1972 *History of the 317th Tactical Airlift Wing, Pope AFB, North Carolina, 1 October-31 December 1972*. On file, Wing History Office, Pope Air Force Base, North Carolina.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.
-

Louis, T.J. SSgt

1989 *History of the 317th Tactical Airlift Wing, 1 July-31 December 1989, Vol. 1.* On file, Wing History Office, Pope Air Force Base, North Carolina.

Mueller, R.

1989 *Air Force Bases: Active Air Force Bases Within the United States of America on 17 September 1982.* Vol. 1. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years.* National Register Bulletin 22. National Register Branch, National Park Service. Washington, D.C.

1991 *How to Apply the National Register Criteria for Evaluation (revised).* National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Pope Air Force Base

1993 *Management Action Plan, Pope Air Force Base, Fayetteville, North Carolina.* On file, Environmental Office, Pope Air Force Base, North Carolina.

Public Affairs Office

1969 *Pope Air Force Base, North Carolina: Fiftieth Anniversary, 1919-1969.* On file, Public Affairs Office, Pope Air Force Base, North Carolina.

1993 *Pope Air Force Base.* Fact Sheet on file, Public Affairs Office, Pope Air Force Base, North Carolina.

1994 *Pope Air Force Base: Base Guide and Telephone Directory.* Blake Publishing Company, Inc., San Diego, California. On file, Public Affairs Office, Pope Air Force Base, North Carolina.

Rogers, K. C.

1975 *History of the 317th Tactical Airlift Wing, Pope AFB, North Carolina, 1 October-31 December 1975.* On file, Wing History Office, Pope Air Force Base, North Carolina.

United States Air Force

1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations.* Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

1994 *Wetland Delineation for the Munitions Storage Complex Bridge, Road and Utilities Access Site, Pope Air Force Base, North Carolina.* On file, Civil Engineering Office, Pope Air Force Base, North Carolina.

United States Army Corps of Engineers

1993 *Phase I Cultural Resources Survey of the Bridge, Road, and Utilities Site for a Munitions Storage Area, Pope Air Force Base, North Carolina.* On file, Civil Engineering Office, Pope Air Force Base, North Carolina.

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	20002	None	Visitor Center	Unknown
	20003	115	Gate Guard House	1988
	20005	193	Golf Club House/ Equipment Storage	1972
	20006	236	Officer's Open Mess (Pope Club)	1952
	20007	204	Family Housing Appropriated (Officer's Housing, NRHP)	1933
	20008	235	Group Headquarters	1983
	20009	233	Visiting Officer's Quarters	1969
	20010	317	Base Chapel	1969
	20011	322	Family Housing Appropriated (NCO Housing, NRHP)	1933
	20012	283	Airman's Dormitory	1956
	20013	245	Visiting Officer's Quarters	1965
	20014	275	Base Engineering Administration	1942
	20015	276	Airman's Dormitory	1972
	20016	282	Airman's Dormitory	1969
	20017	241	Control Tower	1975
	20018	280	Base Engineering and Administration	1967
	20019	255	CAT Maintenance Building (Combat Arms)	1942
	20020	355	Thrift Shop	1956
	20021	306	USAF TALC (Fleming Hall, NRHP)	1933
	20022	308	Base Personnel Office	1984
	20023	309	Wing Headquarters (23rd Wing)	1967
	20025	289	Recreation Center	1956
	20026	315	Wing Headquarters (Comptroller)	1985
	20027	291	Swimmer's Bath House	1956
	20028	260	Dental Clinic	1984
	20029	300	Medical Storage (Old Fire Station, NHRP)	1934
	20030	344	Area Defense Council (NRHP)	1933
	20031	347	DPI-Communications Facility	1984
	20032	345	Housing Storage & Supply (Linen Supply)	1953
	20033	343	Family Garage (NHRP)	1933
	20034	346	Communications Facility	1964
	20035	399	Airman's Dormitory	1957
	20036	350	Airman's Dining Hall (Hercules Hall)	1955
	20037	372	Base Theater	1972
	20038	357	Pentagon Federal Credit Union	Unknown
	20039	359	First Citizen's Bank	Unknown
	20040	373	Recreation Library	1972
	20041	381	Commissary/Post Office	Unknown
	20042	378	Security Police Operations	1979
	20043	450	Vehicle Maintenance Shop (Car Wash)	1980
	20044	404	Bowling Center	1973

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	20045	402	Gymnasium	1965
	20046	400	Exchange Service Station	1960
	20047	401	Recreation Pavillion (Baseball Field)	1979
	20048	454	Hobby Shop/Automotive	1956
	20049	415	Base Package Store (Shoppette)	1984
	20050	430	NCO Open Mess (Temporary Haiti Invasion Command Center)	1975
	20051	None	Pope AFB Elementary School	Unknown
	20052	25	Child Care Center	1971
	20053	34	Family Housing Management Office	1988
	20054	1502	Family Housing Appropriated	1964
	20055	1504	Family Housing Appropriated	1964
	20056	1525	Youth Center	1966
	20057	1013	Family Housing Appropriated	1964
	20058	1712	Family Housing Appropriated	1976
	20070	900	Group Headquarters (23rd Operations Group)	1967
	20073	805	HYDR DL Building	1882
	20074	810	Petro Operations	1985
	20075	767	Aerial DLV Facility	1981
	20076	770	Reserve Forces Operational Training	1982
	20077	758	A/M Organizational Shop (624th Maintenance Squadron)	1976
	20078	754	A/M Organizational Shop (41st Air Feight Squadron)	1962
	20079	755	General Purpose Aircraft Shop	1962
	20080	759	A/SE Storage Facility	1962
	20081	744	Base Photo Lab	1966
	20082	742	Squadron Operations (41st Airlift Squadron)	1966
	20083	736	Maintenance Dock FL System (Nose Dock Hangar)	1958
	20084	738	Squadron Operations (2nd Airlift Squadron)	1956
	20085	737	Weapons Systems Management Facility	1964
	20086	731	General Purpose Aircraft Shop	1972
	20087	729	Avionics Shop	1962
	20088	739	PME Lab	1965
	20089	719	Survival Equipment Shop	1969
	20090	718	Squadron Operations (74th Fighter Squadron)	1956
	20091	716	Security Police Operations	1956
	20092	650	Aero Medical Storage Facility	1967
	20093	550	Vehicle Operations Administration (23rd Transportation Squadron)	1987
	20094	560	Base Supply Equipment Headquarters (23rd Logistics Group)	1985
	20095	574	Munitions Storage Magazine	1985
	20096	519	Squadron Operations (74th Fighter Squadron)	1985

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	20097	704	Miscellaneous Recreation Building (Fitness Center Annex)	1967
	20098	708	Maintenance Hangar (NRHP)	1933
	20099	712	Hangar (Pope AFB Insignia/Flying Tigers)	1956
	20100	715	Jet Engine Maintenance Shop	1965
	20101	722	Maintenance Dock (Nose Dock)	1958
	20103	191	Officer's Open Mess (Recreation Facility)	1943
	20104	137	Wing Headquarters (Combat Control School)	1971
	20107	757	General Purpose Aircraft Shop	1962
Real Property - Landscape				
	20024	None	Parade Ground	Unknown
Real Property - Object				
	20001	None	Main Gate Sign	N/A
	20004	None	P-40 War Hawk Aircraft Static Display	N/A
	20059	None	F-105 Thunderchief Aircraft Static Display	N/A
	20060	None	Memorial Statue (Harley Pope)	N/A
	20061	None	A-7 Corsair II Aircraft Static Display	N/A
	20062	None	A-10 Warthog Aircraft Static Display	N/A
	20063	None	C-123 Provider Aircraft Static Display	N/A
	20064	None	C-119 Flying Boxcar Aircraft Static Display	N/A
	20065	None	C-47 Aircraft Static Display	N/A
	20066	None	Memorial to Pope Aircrew (1992)	N/A
	20067	None	Memorial to Pope Aircrew (1987)	N/A
	20068	None	Memorial to Pope Aircrew (1978)	N/A
Real Property - Structure				
	20069	None	Aircraft Training Loading Device	N/A
	20071	None	High-Bay Technical Training	1990
	20072	800	Pump Station LF	1982
	20105	None	Fuel Storage Tank Farm	Unknown
Record or Document - Object				
	20102	None	Documentary Collection	N/A
	20106	None	Photograph Collection	N/A

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES



Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 8).

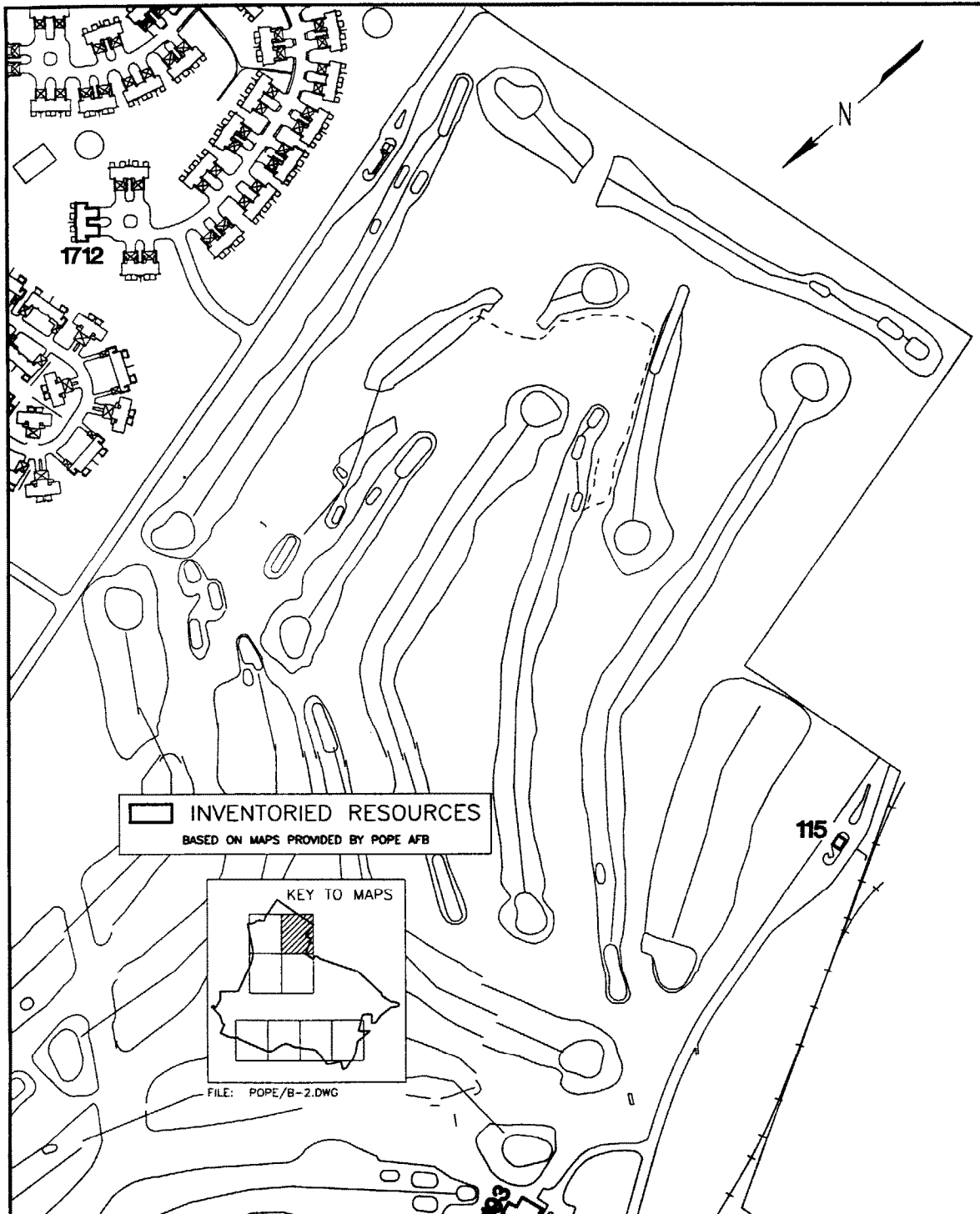


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 8).

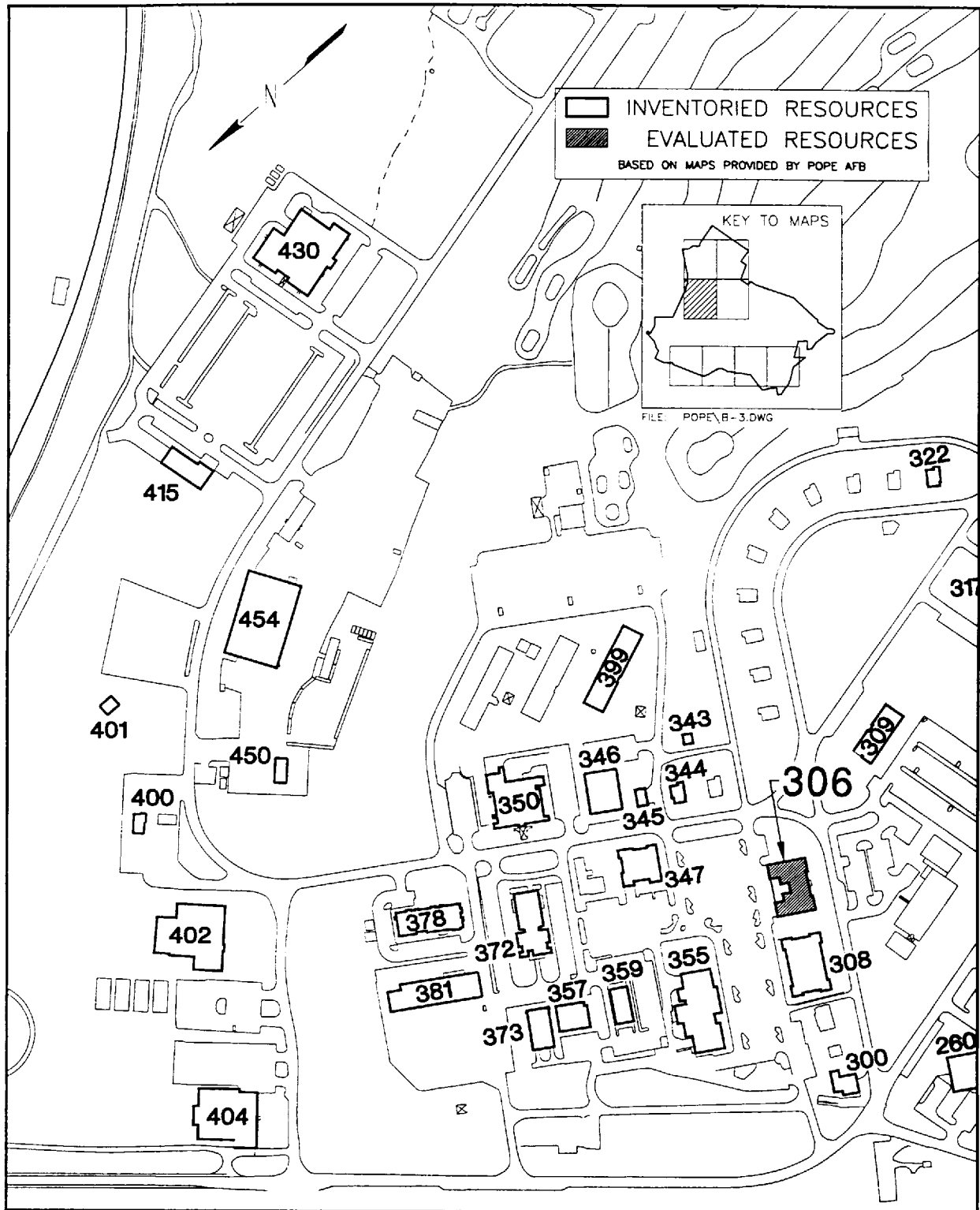


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 8).

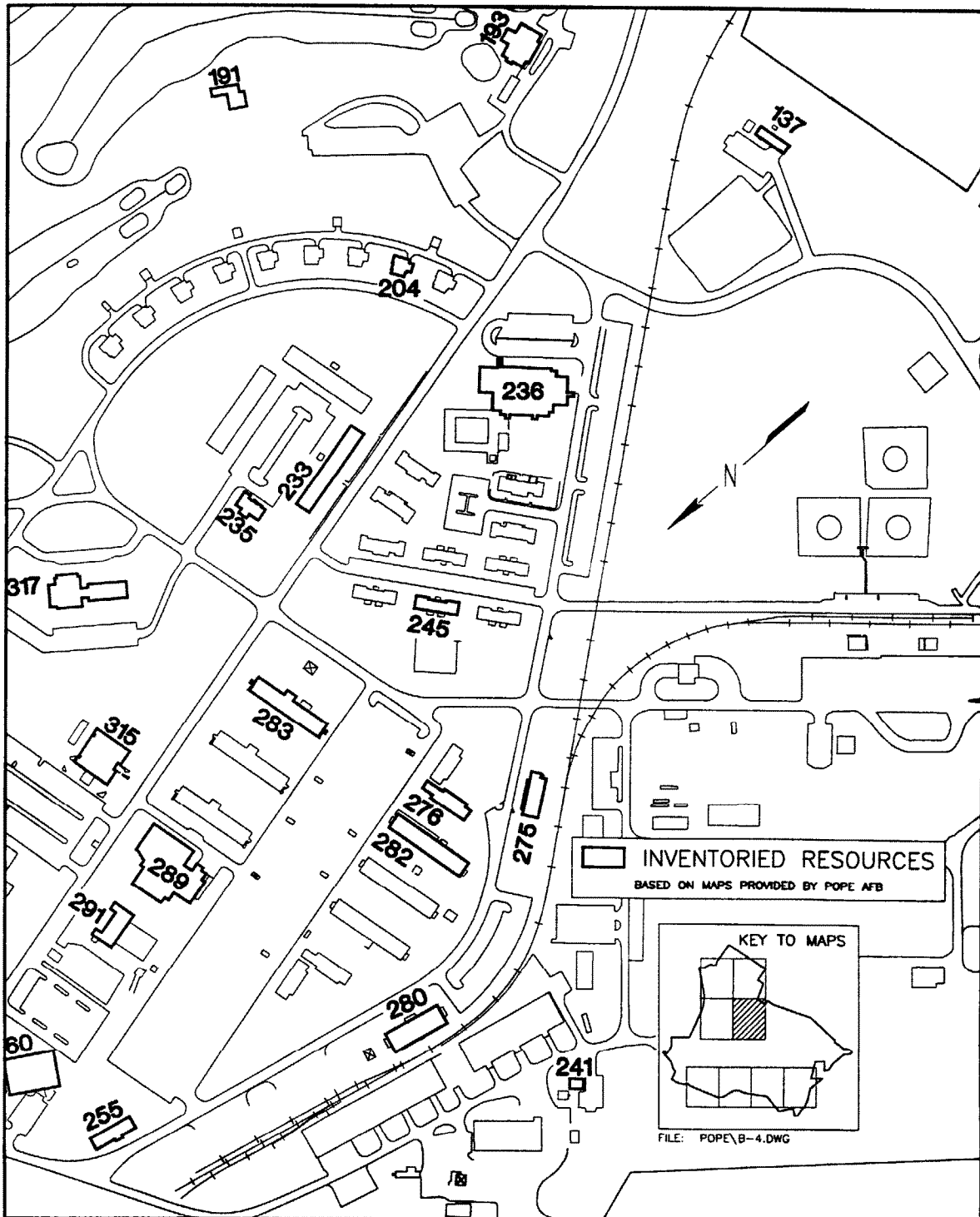


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 8).

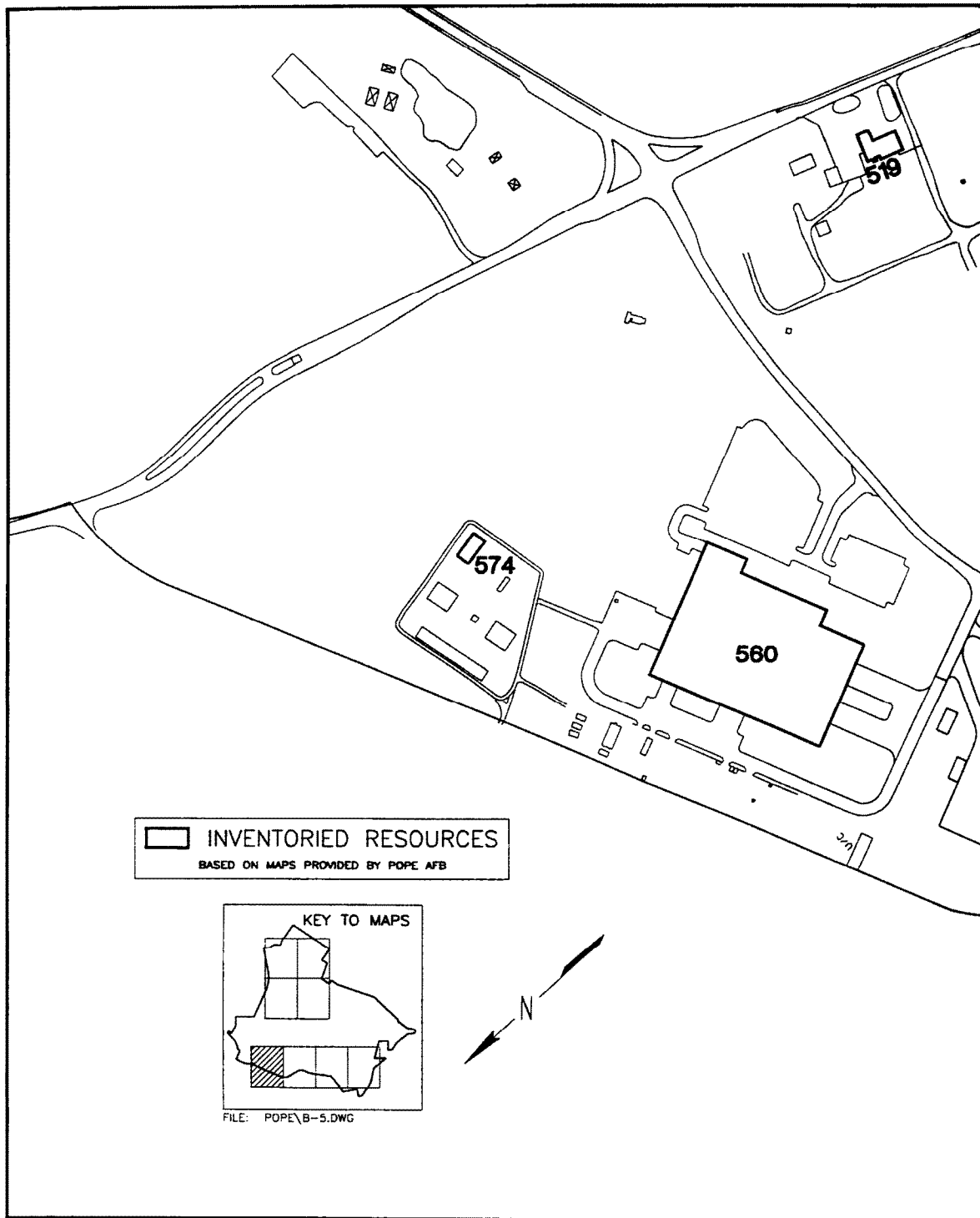


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 8).

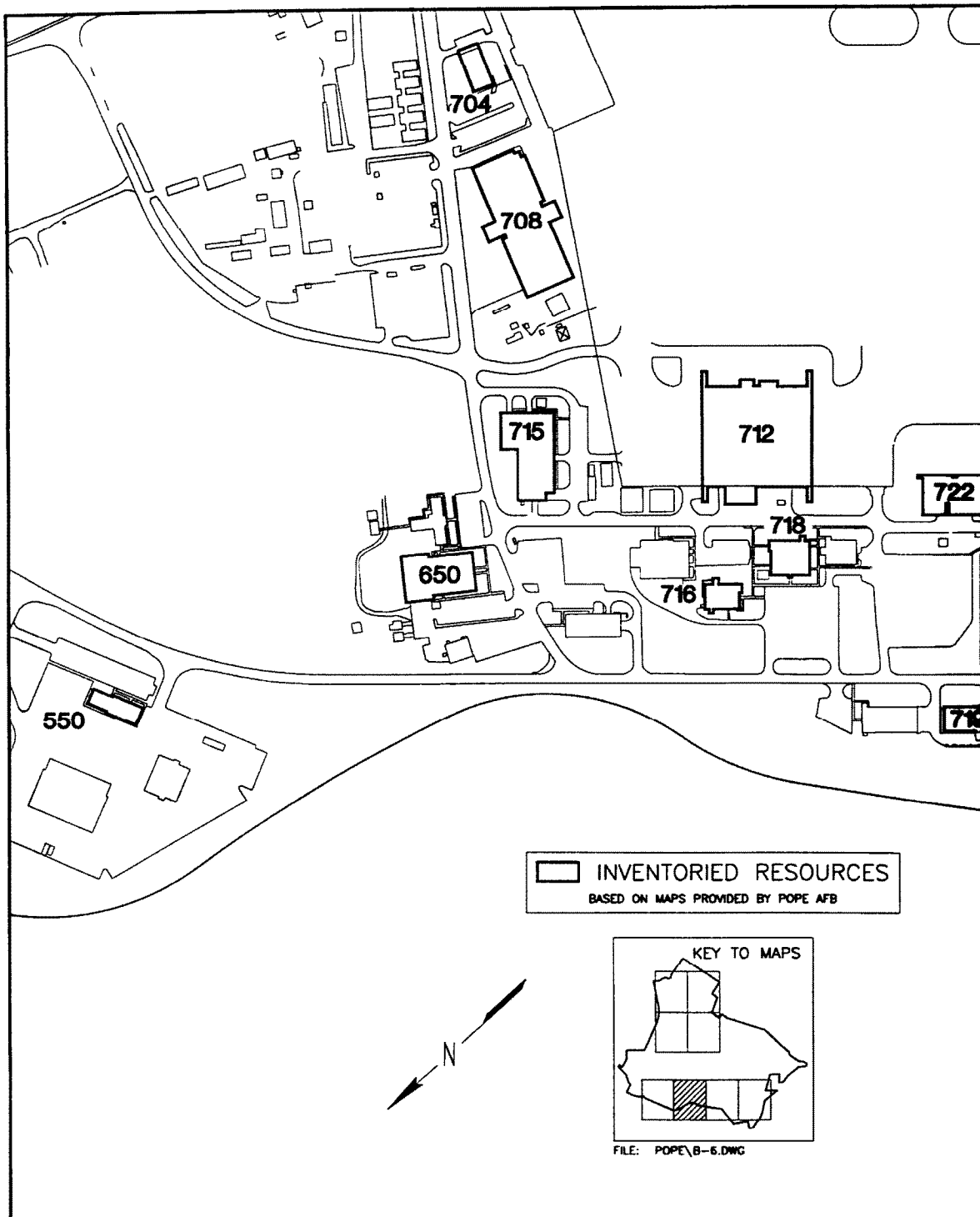


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 8).

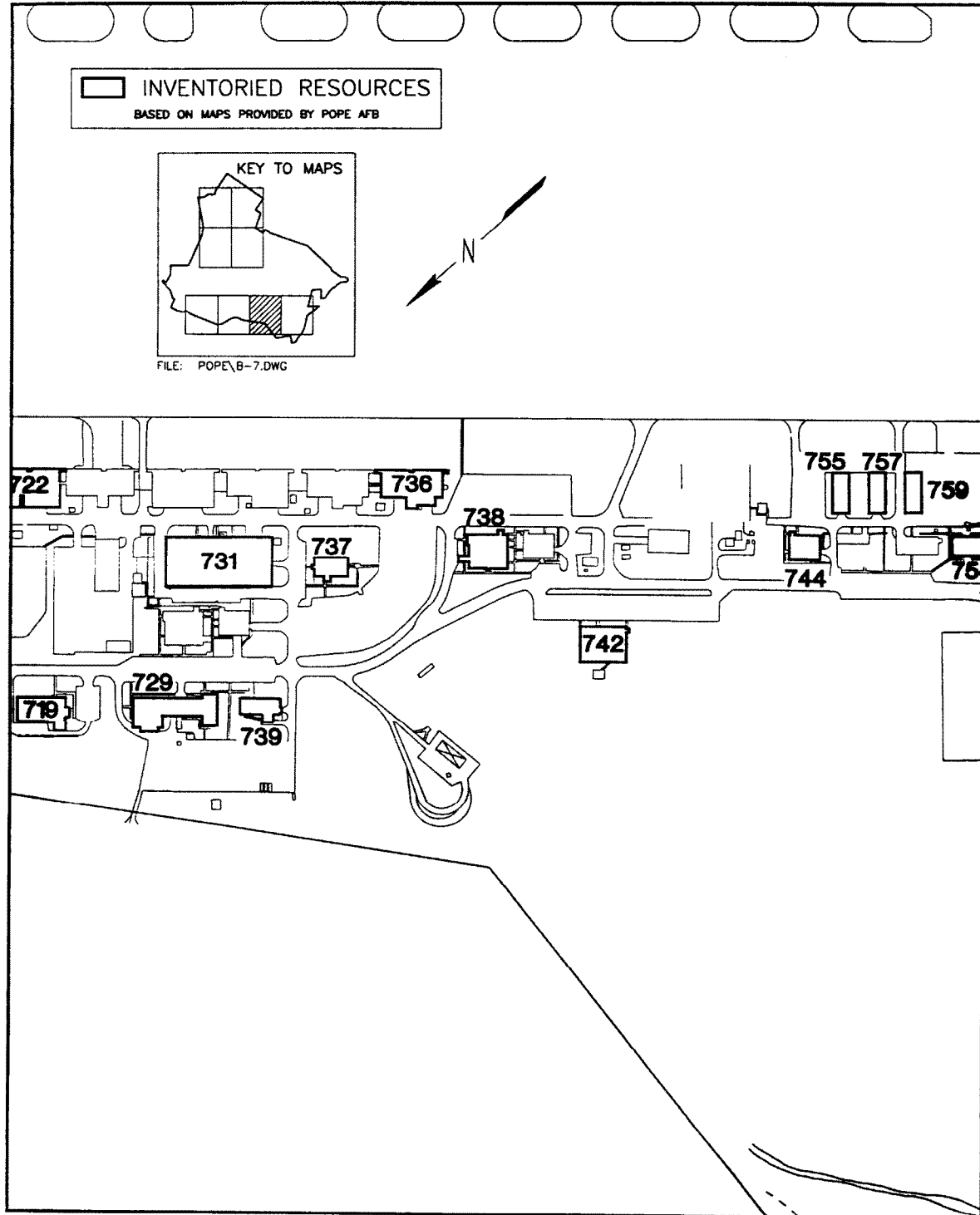


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 8).

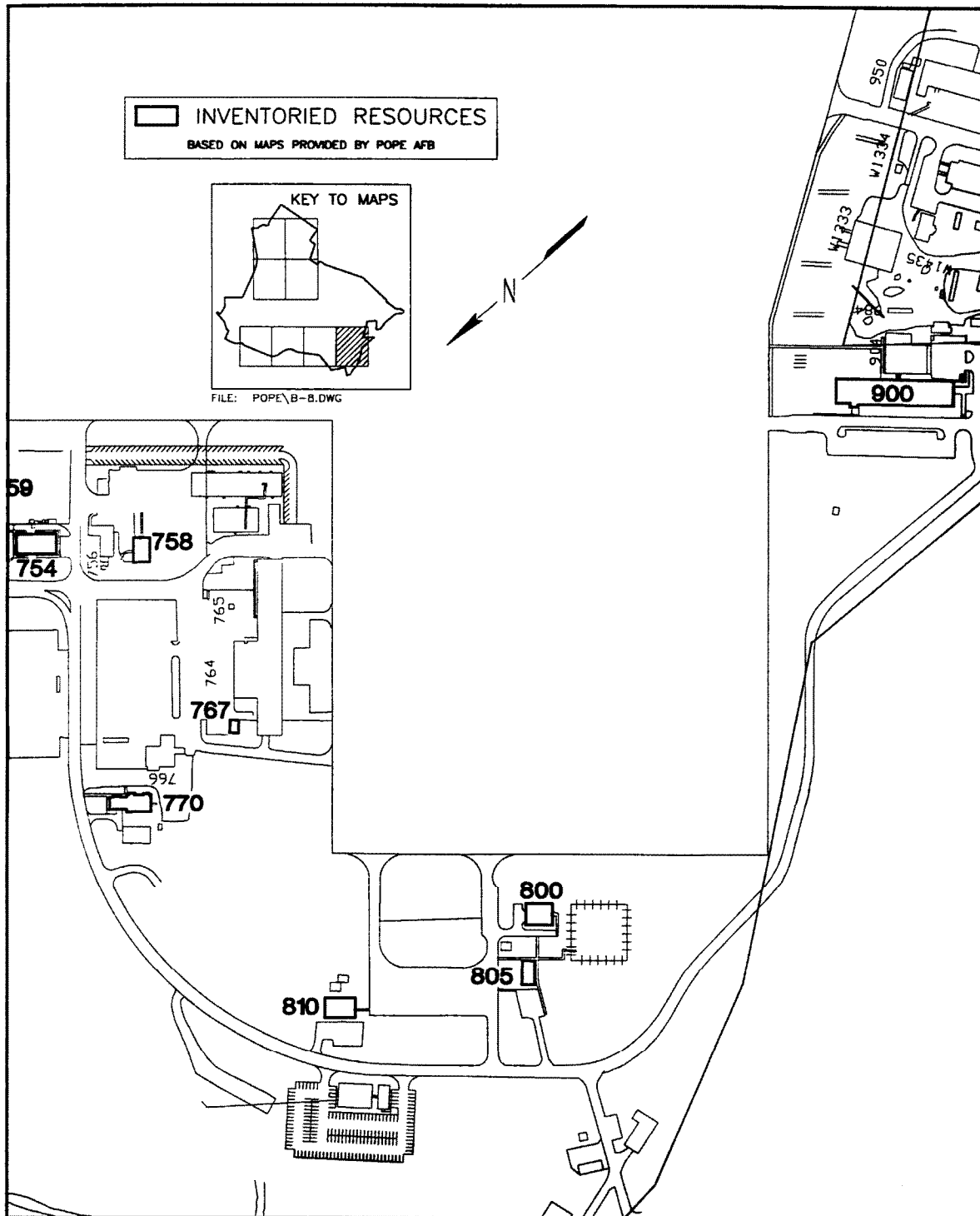
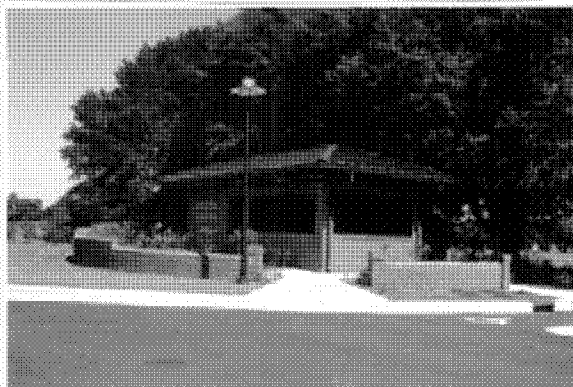


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 8).

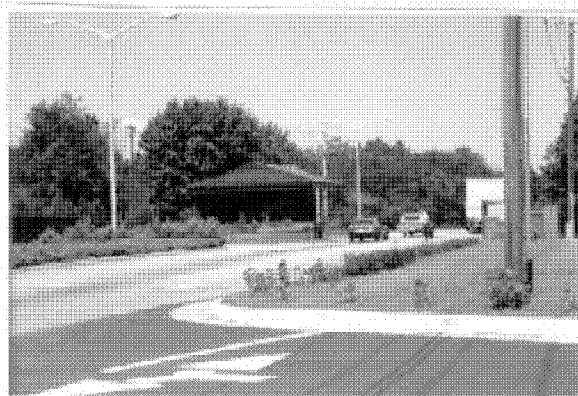
APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



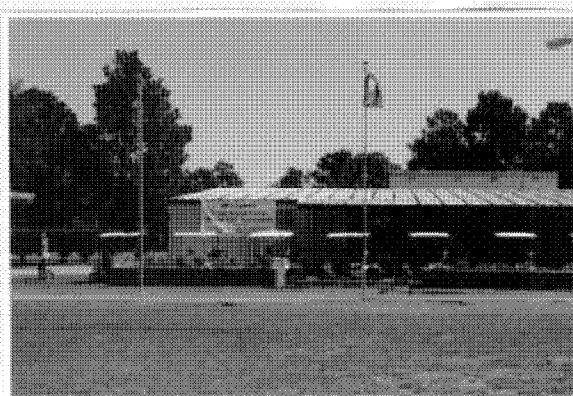
Resource No. 20001, Real Property No. (none)
Main Gate Sign



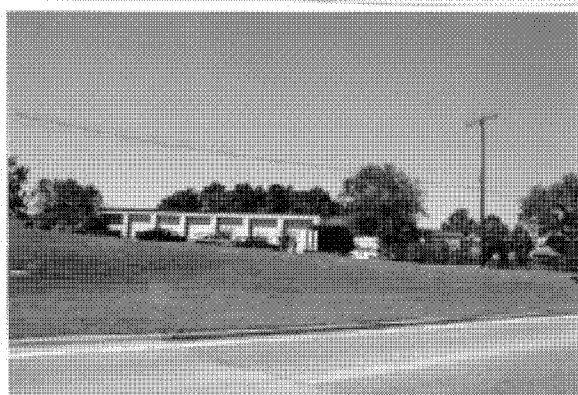
Resource No. 20002, Real Property No. (none)
Visitor Center



Resource No. 20003, Real Property No. 115
Gate Guard House



Resource No. 20005, Real Property No. 193
Golf Club House/Equipment Storage



Resource No. 20006, Real Property No. 236
Officer's Open Mess (Pope Club)



Resource No. 20007, Real Property No. 204
Family Housing Appropriated (Officer's
Housing, NRHP listed)



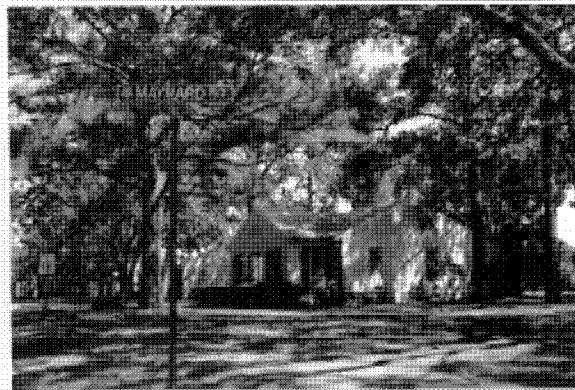
Resource No. 20008, Real Property No. 235
Group Headquarters



Resource No. 20009, Real Property No. 233
Visiting Officer's Quarters



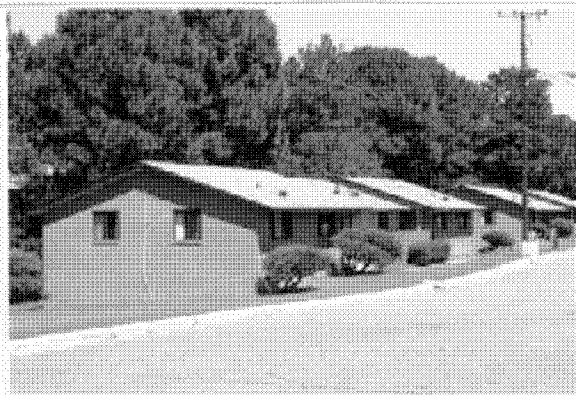
Resource No. 20010, Real Property No. 317
Base Chapel



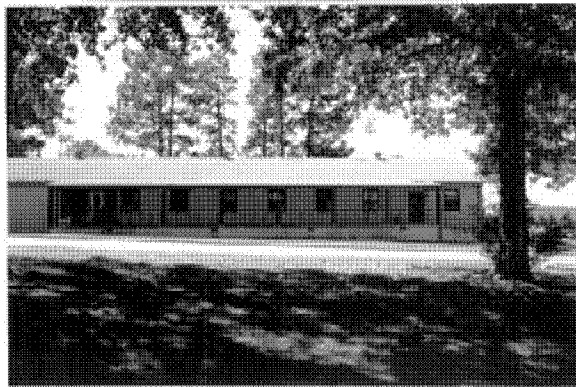
Resource No. 20011, Real Property No. 322
Family Housing (NCO Housing, NRHP listed)



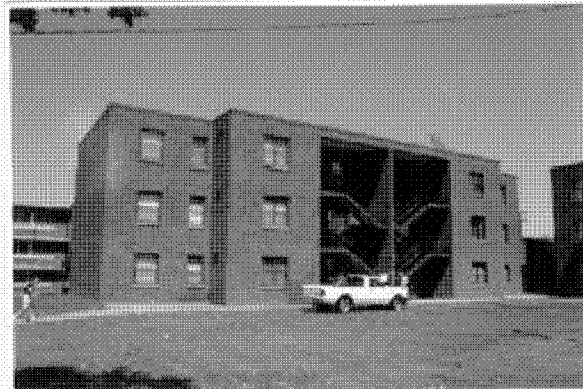
Resource No. 20012, Real Property No. 283
Airman's Dormitory



Resource No. 20013, Real Property No. 245
Visiting Officer's Quarters



Resource No. 20014, Real Property No. 275
Base Engineering Administration



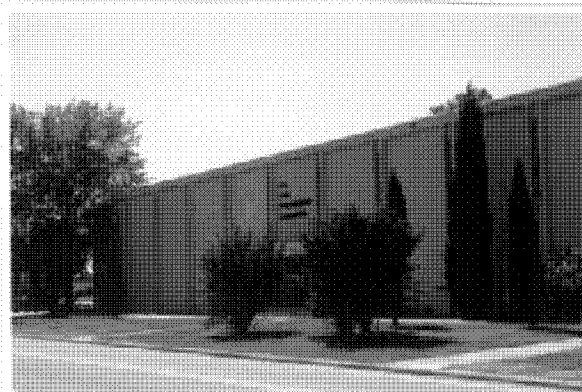
Resource No. 20015, Real Property No. 276
Airman's Dormitory



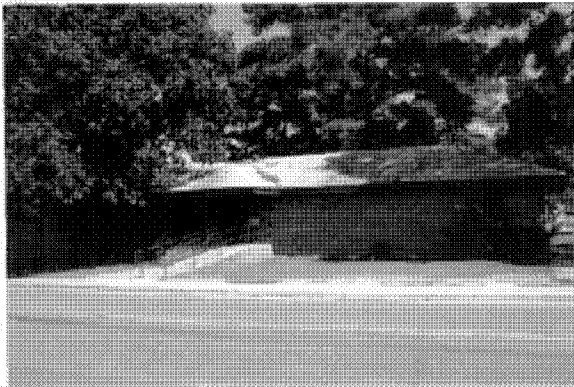
Resource No. 20016, Real Property No. 282
Airman's Dormitory



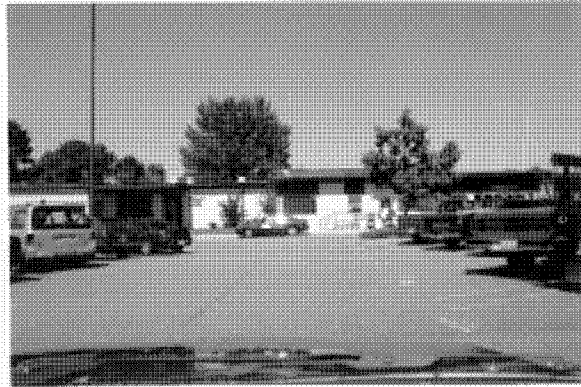
Resource No. 20017, Real Property No. 241
Control Tower



Resource No. 20018, Real Property No. 280
Base Engineering and Administration



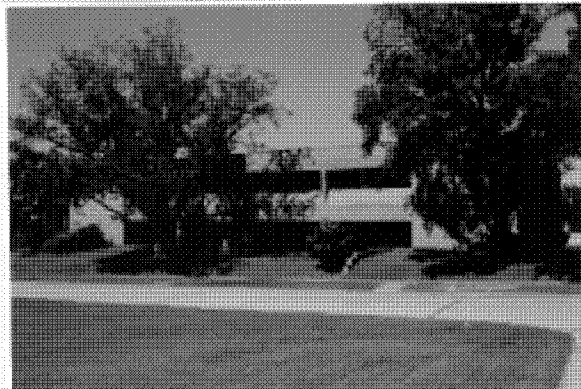
Resource No. 20019, Real Property No. 255
CAT Maintenance Building (Combat Arms)



Resource No. 20020, Real Property No. 355
Thrift Shop



Resource No. 20021, Real Property No. 306
Group Headquarters (Fleming Hall, NRHP listed)



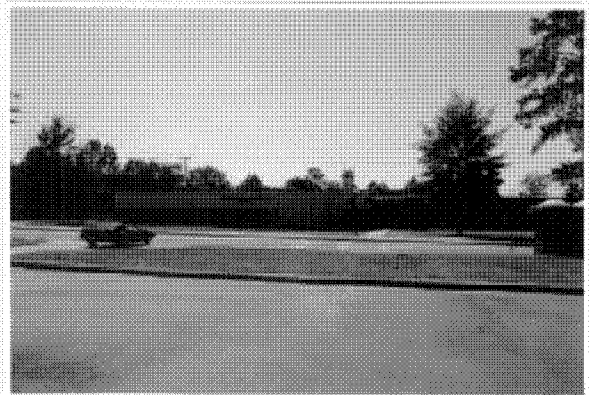
Resource No. 20022, Real Property No. 308
Base Personnel Office



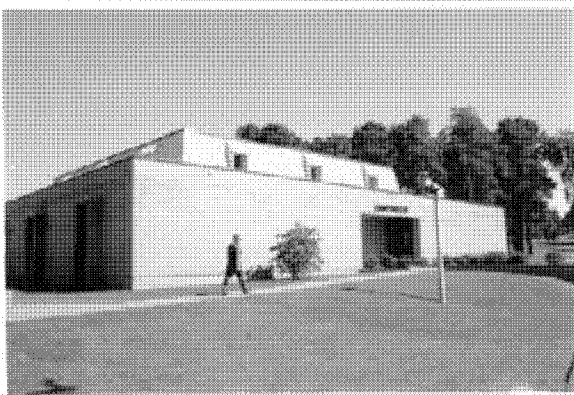
Resource No. 20023, Real Property No. 309
Wing Headquarters, 23rd Wing



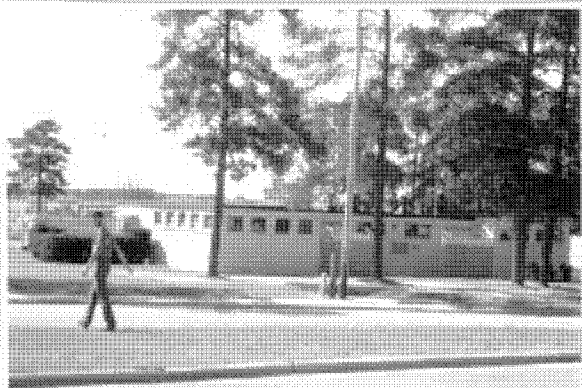
Resource No. 20024, Real Property No. (none)
Parade Ground



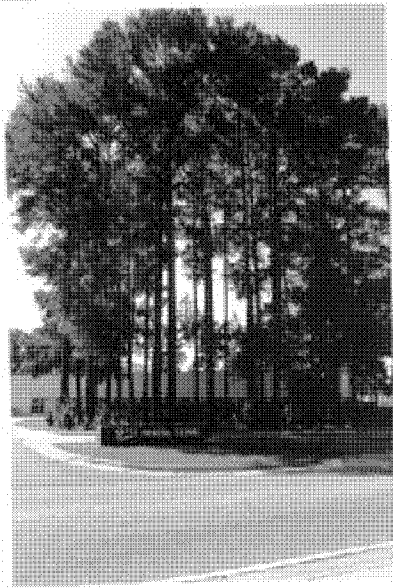
Resource No. 20025, Real Property No. 289
Recreation Center



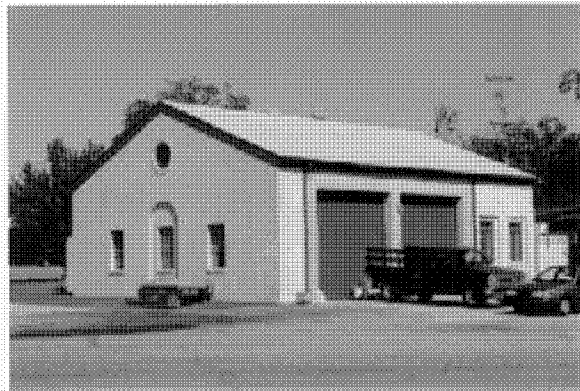
Resource No. 20026, Real Property No. 315
Wing Headquarters (Comptroller)



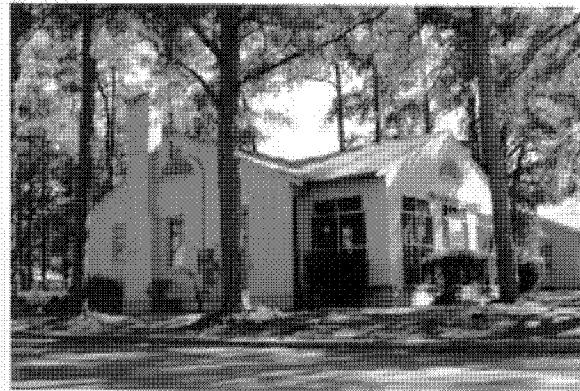
Resource No. 20027, Real Property No. 291
Swimmer's Bath House



Resource No. 20028, Real Property No. 260
Dental Clinic



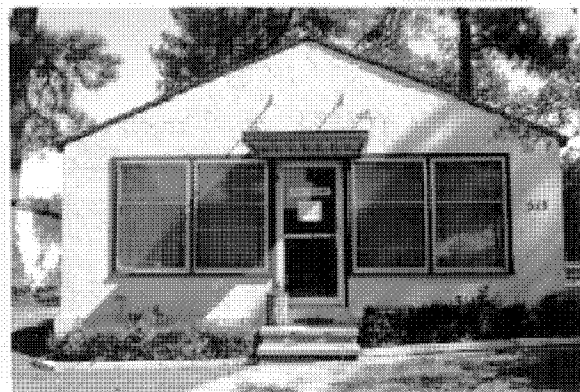
Resource No. 20029, Real Property No. 300
Medical Storage (Old Fire Station, NRHP listed)



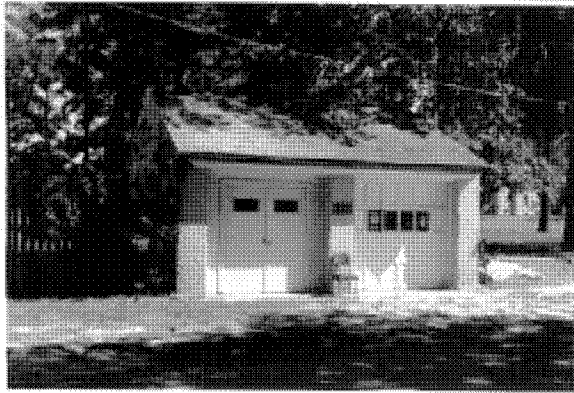
Resource No. 20030, Real Property No. 344
Area Defense Council (NRHP listed)



Resource No. 20031, Real Property No. 347
DPL-Communications Facility



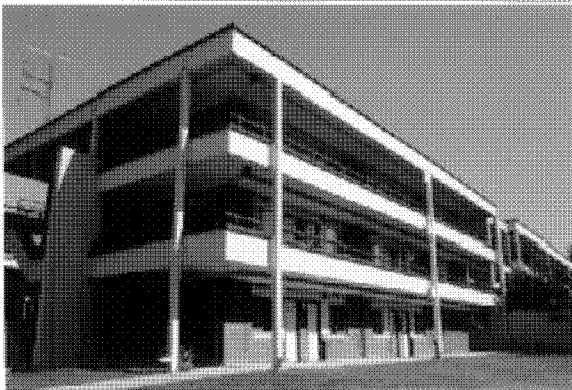
Resource No. 20032, Real Property No. 345
Housing Storage & Supply (Linen Supply)



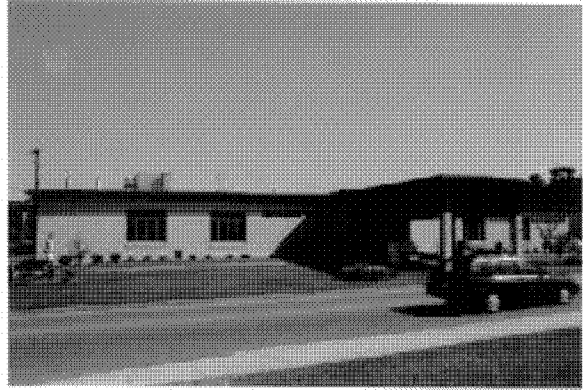
Resource No. 20033, Real Property No. 343
Family Garage (NRHP listed)



Resource No. 20034, Real Property No. 346
Communications Facility



Resource No. 20035, Real Property No. 399
Airman's Dormitory



Resource No. 20036, Real Property No. 350
Airman's Dining Hall (Hercules Hall)



Resource No. 20037, Real Property No. 372
Base Theater



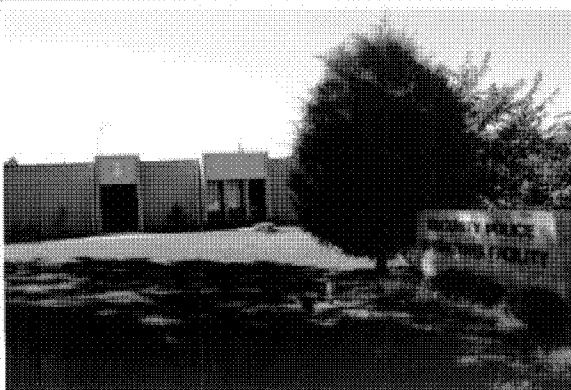
Resource No. 20039, Real Property No. 359
First Citizen's Bank



Resource No. 20040, Real Property No. 373
Recreation Library



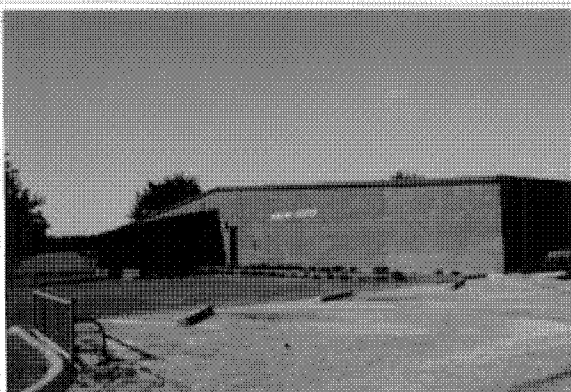
Resource No. 20041, Real Property No. 381
Commissary/Post Office



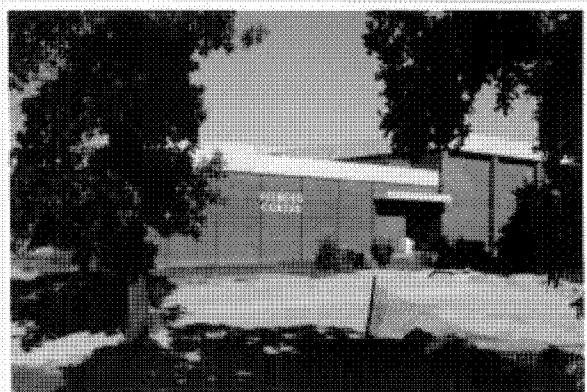
Resource No. 20042, Real Property No. 378
Security Police Operations



Resource No. 20043, Real Property No. 450
Vehicle Maintenance Shop (Car Wash)



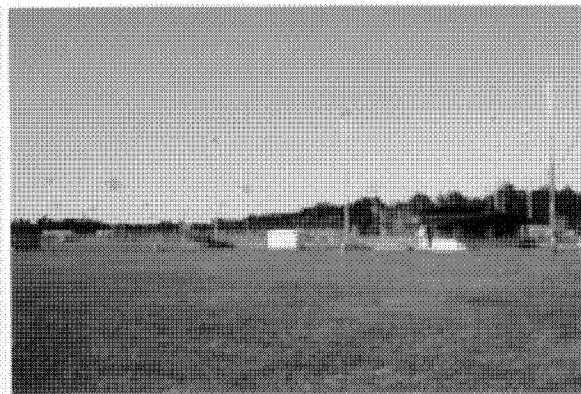
Resource No. 20044, Real Property No. 404
Bowling Center



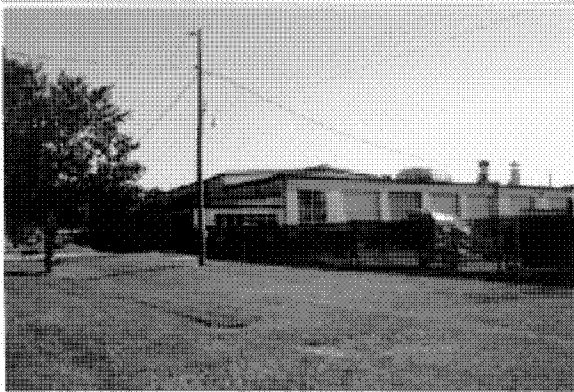
Resource No. 20045, Real Property No. 402
Gymnasium



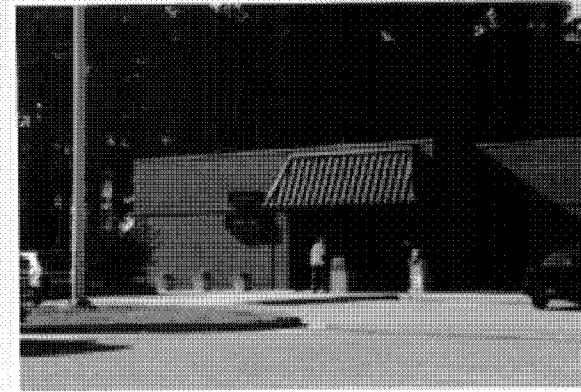
Resource No. 20046, Real Property No. 400
Exchange Service Station



Resource No. 20047, Real Property No. 401
Recreation Pavilion (Baseball Field)



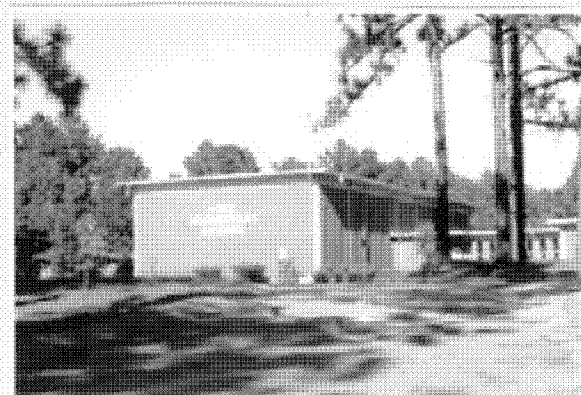
Resource No. 20048, Real Property No. 454
Hobby Shop/Automotive



Resource No. 20049, Real Property No. 415
Base Package Store (Shoppette)



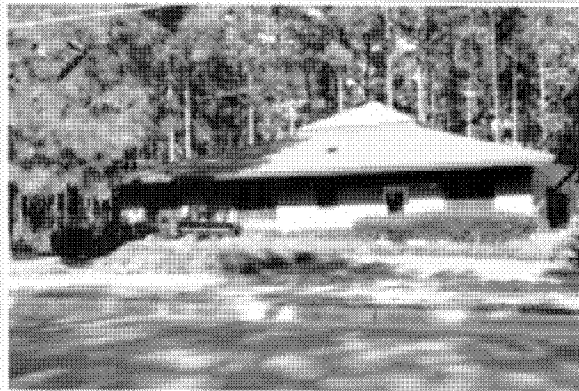
Resource No. 20050, Real Property No. 430
NCO Open Mess (Temporary Haiti Invasion
Command Center)



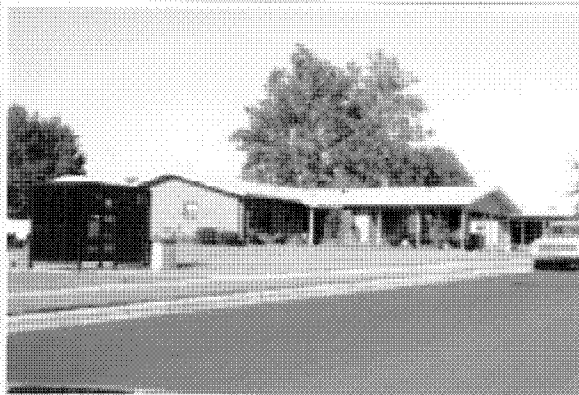
Resource No. 20051, Real Property No. (none)
Pope AFB Elementary School



Resource No. 20052, Real Property No. 25
Child Care Center



Resource No. 20053, Real Property No. 34
Family Housing Management Office



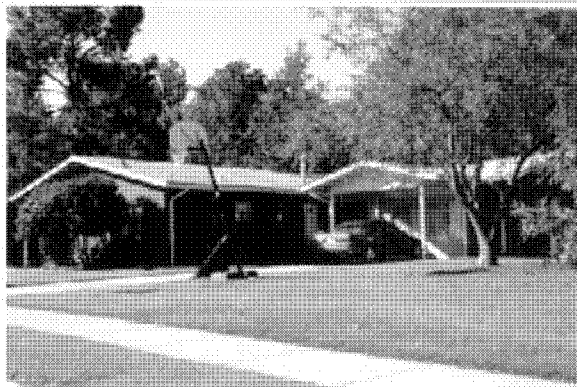
Resource No. 20054, Real Property No. 1502
Family Housing



Resource No. 20055, Real Property No. 1504
Family Housing



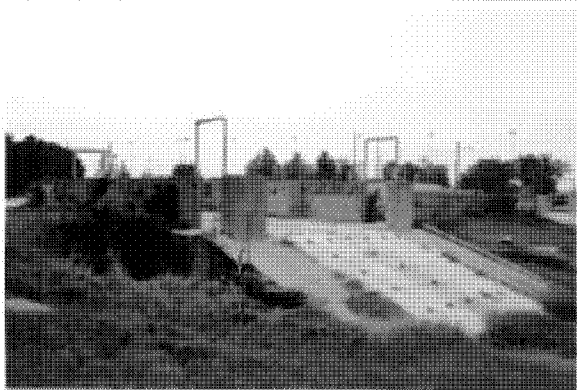
Resource No. 20056, Real Property No. 1525
Youth Center



Resource No. 20057, Real Property No. 1013
Family Housing



Resource No. 20058, Real Property No. 1712
Family Housing



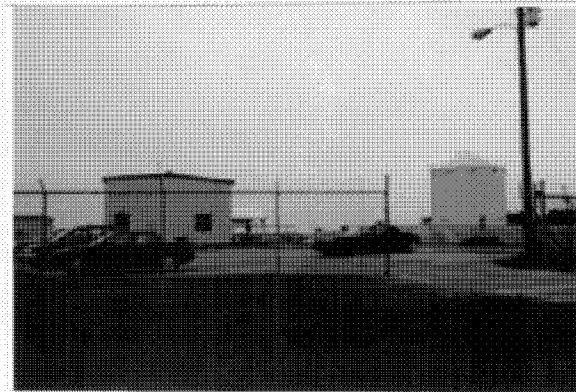
Resource No. 20069, Real Property No. (none)
Aircraft Training Loading Device



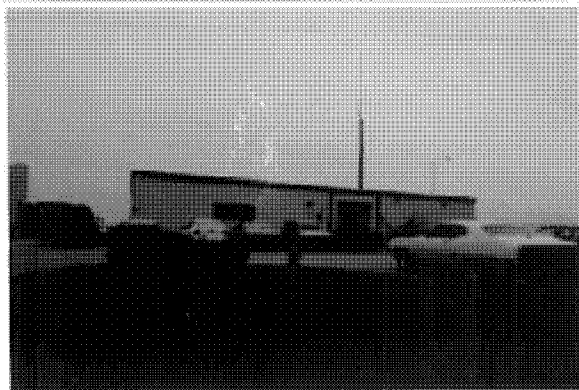
Resource No. 20070, Real Property No. 900
Group Headquarters (23rd Operations Group)



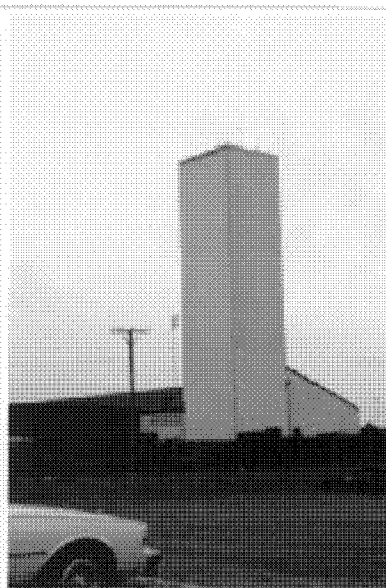
Resource No. 20071, Real Property No. 797
High-Bay Technical Training



Resource Nos. 20072-22073, Real Property Nos.
800 and 805, Pump Station LF and HYDR DL
Building



Resource No. 20074, Real Property No. 810
Petro Operations



Resource No. 20075, Real Property No. 767
Aerial DLV Facility



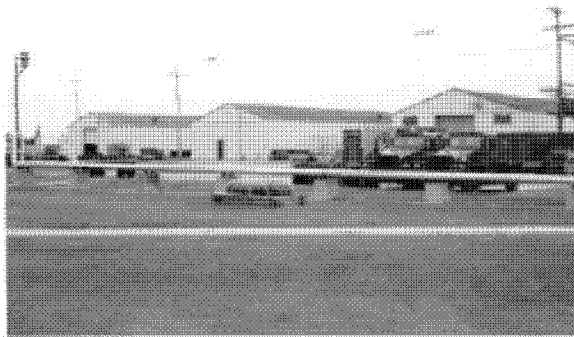
Resource No. 20076, Real Property No. 770
Reserve Forces Operational Training



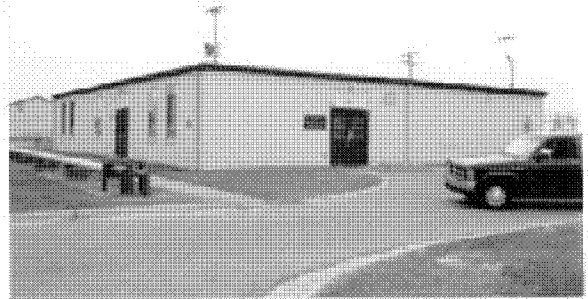
Resource No. 20077, Real Property No. 758
A/M Organizational Shop (624th Maintenance Squadron)



Resource No. 20078, Real Property No. 754
A/M Organizational Shop (41st Air Freight Squadron)



Resource Nos. 20079-20080 and 20107, Real Property Nos. 755, 759, and 757, General Purpose Aircraft Shops and A/SE Storage Facility



Resource No. 20081, Real Property No. 744
Base Photo Lab



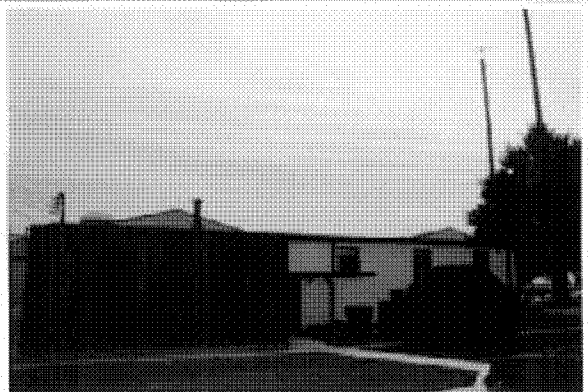
Resource No. 20082, Real Property No. 742
Squadron Operations (41st Airlift Squadron)



Resource No. 20083, Real Property No. 736
Maintenance Dock FI. System (Nose Dock Hangar)



Resource No. 20084, Real Property No. 738
Squadron Operations (2nd Airlift Squadron)



Resource No. 20085, Real Property No. 737
Weapons Systems Management Facility



Resource No. 20086, Real Property No. 731
General Purpose Aircraft Shop



Resource No. 20087, Real Property No. 729
Avionics Shop



Resource No. 20089, Real Property No. 719
Survival Equipment Shop



Resource No. 20090, Real Property No. 718
Squadron Operations (74th Fighter Squadron)



Resource No. 20091, Real Property No. 716
Security Police Operations



Resource No. 20092, Real Property No. 650
Aero Medical Storage Facility



Resource No. 20093, Real Property No. 550
Vehicle Operations Administration (23rd
Transportation Squadron)



Resource No. 20094, Real Property No. 560
Base Supply Equipment Headquarters (23rd
Logistics Group)



Resource No. 20095, Real Property No. 574
Munitions Storage Magazine



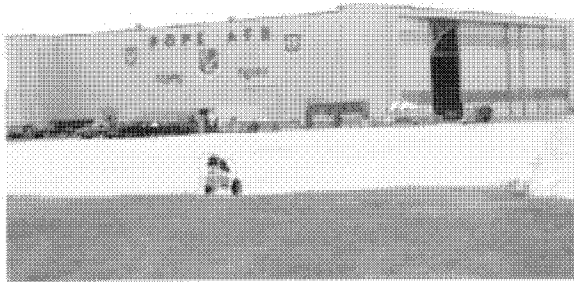
Resource No. 20096, Real Property No. 519
Squadron Operations (74th Fighter Squadron)



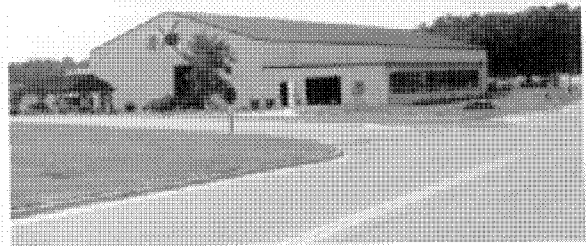
Resource No. 20097, Real Property No. 704
Miscellaneous Recreation Building (Fitness
Center Annex)



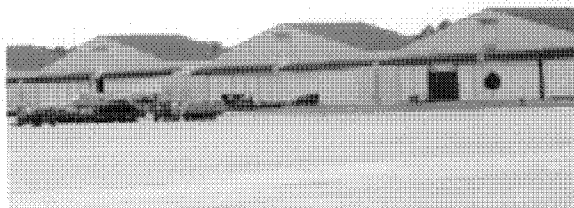
Resource No. 20098, Real Property No. 708
Maintenance Hangar (NRHP listed)



Resource No. 20099, Real Property No. 712
Hangar (Pope AFB Insignia/Flying Tigers)



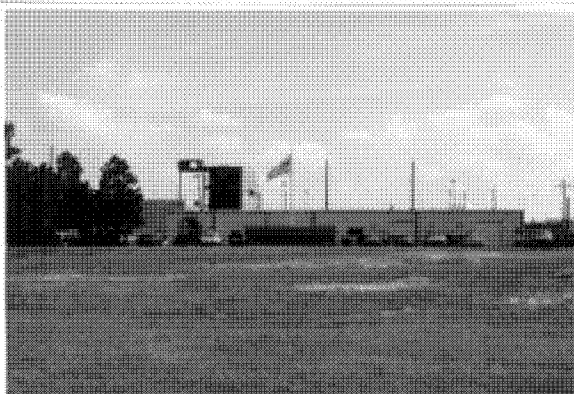
Resource No. 20100, Real Property No. 715
Jet Engine Maintenance Shop



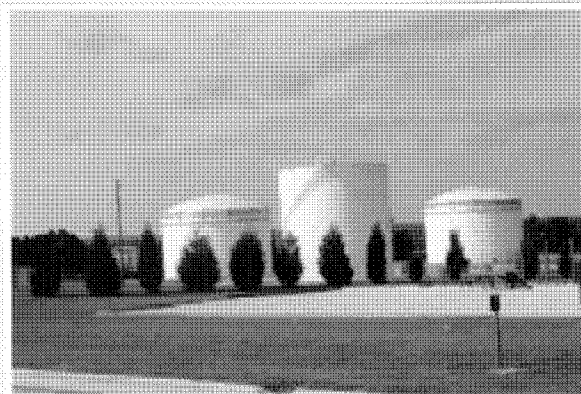
Resource No. 20101, Real Property No. 722
Maintenance Dock (Nose Dock)



Resource No. 20103, Real Property No. 191
Officer's Open Mess (Recreation Facility)



Resource No. 20104, Real Property No. 137
Wing Headquarters (Combat Control School)



Resource No. 20105, Real Property No. (none)
Fuel Storage Tank Farm

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT POPE AFB

Resource Number: 20021

Property Description: Headquarters Group
Associated Property: MAI Resource 20070 (Building 900)
Non-Inventoried Association:
Sub-installation:
Address: 374 Maynard Street
Base Map Date: 10/2/92
Base Map Building Number: 306

Operational Support & Installations:
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities: Research Laboratories
Intelligence
Property Type: USAF TALC

Statement of Significance: The Cold War function of Building 306 was, until 1967, the location of planning, intelligence-gathering, and implimentation of the primary mission of Pope AFB - to provide expedient air transport and logistical support for Fort Bragg Army Troops and their equipment to any location in the world. In addition, the resource served as the Tactical Airlift Center, a R&D facility concerned with improving troop and materiel delivery systems.

Cold War Relationship-Nat'l. Recognition: 3
Theme Relationship: 4
Temporal Phase Relationship: 3
Level of Importance: 3
Percent Historic Fabric: 4
Severity of Threats: 1
Total Score for Priority Matrix: 18

Comments on Threats: This resource served in its capacity as Headquarters Group until 1967 when operations were moved to Building 900. Building 306 was originally used as base barracks, Wing HQ, combat group HQ, and as a combat command post during WWII. It is currently used in base administration functions (eye clinic , base legal etc.) and is in excellent condition. It is listed on the NRHP and is part of the Pope AFB Historic District.

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: No
Preservation/Conservation/Repair: No

Comments on Resource Management: Building is listed on the NRHP and is in excellent condition.

Importance: Exceptional
Eligibility Listed

Height: 40

Square Footage: 39500

Original Planned Duration: Permanent

Existing Use: Base administration (eye clinic, legal clinic).

Other Use/Dates: Originally as barracks, during WWII as command center.

Comments on Use: Additional information required as to exact uses and periods. This data may be present in the HPP currently being prepared.

Primary Building Materials: Reinforced concrete

Character Defining Features: The building exemplifies the Georgian Revival style

Resource Number: 20102

Property Description: The drafting drawing files are located in a vault in CE drawing room. They consist of 85 drawers. The drawers are labelled numerically and the drawings represent most extant buildings on the base, plus those that have been removed. Topics include: master tabs, Utilities, Housing, Runways and Repairs, Topography, various building plans, Sewage, landscape, etc. What appears to be a complete set of plans is extant for Building 708 (hangar) in Drawer No. 36. Plans for barracks date to 1931 and 1932, in Drawer No. 19. Various aerial photos of different sizes are extant within this storage facility as well. Some of these drawings are related to buildings on the NRHP.

Associated Property: Various; Inside 280

Non-Inventoried Association: Various

Sub-installation:

Address: 23 CES 560 Interceptor Rd

Base Map Date: 10/30/90

Base Map Building Number: inside 280

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: These drawing files are important for documenting the NRHP properties on Pope AFB and for the other buildings on base as well.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 2

Temporal Phase Relationship: 3

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 2

Total Score for Priority Matrix: 15

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Some of these documents are related to buildings on the National Register. Other drawings date to the early 1930s and are in need of proper curation due to their fragile nature. An Index to the file is in progress. These drawings are in a secured area adjacent to the drafting room so threats to them are low. However, many of the oldest maps (1930s and 1940s) are in serious need of proper curation.

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: Various
Period of Association: 1932 - Present, spanning the entire Cold War era,
Phases I-IV

Resource Number: 20106

Property Description: Photo archive. This resource includes a collection of undated 8 x 10" photos in a loose leaf binder (n=185) and a loose collection (5) of various aerial photos dating from 1964, 1971, and 1977. These are located in the Installation Restoration office within the Environmental Flight of Civil Engineering. Mr. Bob Byrd (IRP) is the current custodian of this resource.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address: Civil Engineering 560 Inteceptor Street Pope AF

Base Map Date: 10/20/92

Base Map Building Number: inside 280

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Photograph Collection

Statement of Significance: This collection is of significance to Pope AFB's Cold War operations. The resource documents facilities and personnel throughout at least the last decades of the cold war.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	2
Temporal Phase Relationship:	1
Level of Importance:	1
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	11
Comments on Threats:	

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: This resource is stable. Additional research may be appropriate.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Photograph

Year of Document: various

Period of Association: various

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture and to provide research materials:

Lt Lance Avery
Community Planning/Drawing Room
23 CES
560 Interceptor Street
Pope AFB, North Carolina 28308
(910) 394-4194

Robert Byrd
Installation Restoration Manager
23 CES/CEV
560 Interceptor Street
Pope AFB, North Carolina 28308-2314
(910) 394-4397

Michael Carson
Base Visual Information Manager
3527 Surveyor Street
Pope AFB, North Carolina 28308-2092
(910) 394-2140

Major Russell Collins
Chief, Environmental Flight
23 CES/CEV
560 Interceptor Street
Pope AFB, North Carolina 28308
(910) 394-4397

David Davenport
Base Contract Photographer
Route 1, Box 136
Bunnlevel, North Carolina 28323
(910) 893-2604

MSgt Drohan
Public Affairs Officer
23 WG/PA
259 Maynard Street
Pope AFB, North Carolina 28308-2391
(910) 394-4183

Judith Greene
Real Property Officer
23 CES/CER
553 Thunderbolt Road, Suite C
Pope AFB, North Carolina 28308-2890
(910) 394-4098

MSgt Reuban Hall
23 WG/HO
259 Maynard Street, Suite G
Pope AFB, North Carolina 28308-2386
(910) 394-4647

Lt Neil Hauschild
Environmental/Cultural Resource Officer
23 CES/CEV
560 Interceptor Street
Pope AFB, North Carolina 28308-2314
(910) 394-4397

SrA Luwaune Netter
Community Planning/Drawing Room
23 CES
560 Interceptor Street
Pope AFB, North Carolina 28308
(910) 394-4194

Glen Prillman
Chief of Facilities, Planning, and Mobilization Division
XVIII Airborne Corps/Fort Bragg
Directorate of Public Works and Environment
Fort Bragg, North Carolina 28307-5000
(910) 396-5564

Bruce O. Somers
Deputy Base Civil Engineer
23 CES
560 Interceptor Street
Pope AFB, North Carolina 28308
(910) 394-2562

Omega P. Weeks
Compliance Chief
23 CES/CEV
560 Interceptor Street
Pope AFB, North Carolina 28308-2314
(910) 394-4397

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team while at the base. They were identified as people possessing extensive knowledge of Pope AFB history and Cold War context.

Lt Neil Hauschild, Environmental/Cultural Resource Officer, September 19, 1994

Judith Greene, Real Estate Officer, September 20, 1994

David Davenport, Base Contract Photographer, September 22, 1994

Bruce O. Somers, Deputy Base Civil Engineer, September 22, 1994

Omega P. Weeks, Compliance Chief, September 19 and December 1, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-26: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT SEYMOUR JOHNSON AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**James A. Lowe
John A. Evaskovich
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. conducted a cultural resource inventory at Seymour Johnson Air Force Base, North Carolina, between September 27 and October 5, 1994, to ascertain extant Cold War resources important to the base, its history, and Cold War mission as part of the Air Combat Command Cold War Study for the ongoing Department of Defense Legacy Program.

As part of the inventory, environmental scientists James A. Lowe and John A. Evaskovich surveyed a variety of repositories for research materials pertaining to the base's Cold War history. Repositories included the Wing History Office, Public Affairs Office, Civil Engineering Office and Drafting Department, Real Estate Office, and Environmental Office. Several interviews were conducted with personnel long affiliated with the base to better understand the relationship of specific base properties to the Cold War era. A photographic reconnaissance of the base was conducted to inventory Cold War properties as well as representative architecture on the base. The Mariah field team also visited the Dare County Bombing Range to document the relationship of the range to the mission at Seymour Johnson Air Force Base. While at the range, photographs were taken and interviews were conducted with range personnel.

Four resources were chosen for further documentation and evaluation: the Bomber/Tanker Alert Facility, the Fighter Alert Facility, and two Documentary Collections. The facilities represent the United States Air Force alert posture and deterrence capabilities indicative of the Cold War era at Seymour Johnson Air Force Base. Both facilities are recommended as eligible to the National Register of Historic Places. Stewardship and further documentation are also recommended. The Documentary Collections illustrate and record the effect of the Cold War on the base mission and development. It is recommended that these collections be inventoried and copied, with the originals curated in a permanent curatorial facility.

LIST OF ACRONYMS

ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
ADC	- Air Defense Command
AFB	- Air Force Base
AGE	- Air Ground Equipment
AMC	- Air Materiel Command
ANG	- Air National Guard
AREFG	- Air Refueling Group
AREFS	- Air Refueling Squadron
AREFW	- Air Refueling Wing
BMW	- Bombardment Wing
CCTW	- Combat Crew Training Wing
CONUS	- Continental United States
CRS	- Component Repair Squadron
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
FDW	- Fighter Day Wing
FIG	- Fighter Interceptor Group
FIS	- Fighter Interceptor Squadron
FTD	- Field Training Detachment
HABS	- Historic American Buildings Survey
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NAOC	- National Airborne Operations Command
NCO	- Noncommissioned Officer
NEACP	- National Emergency Airborne Command Post
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCNUS	- Off the Continental United States
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
SRAM	- Short Range Attack Missile
START	- Strategic Arms Reduction Talks
SW	- Strategic Wing
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TFS	- Tactical Fighter Squadron

LIST OF ACRONYMS (Continued)

TFW - Tactical Fighter Wing
USAF - United States Air Force
WAA - War Assets Administration
WPA - Works Progress Administration
WRSK - War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Capehart Housing Act - passed in 1955 as an amendment to the National Housing Act. It authorized the use of quarters allowances to pay off Wherry housing mortgages. Construction of new houses was set at 46,500 units at 88 bases. Construction was begun on 9,000 units by 1957.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

GLOSSARY (Continued)

NSC 68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the perceived goal of world domination by the Soviet Union.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	9
3.0 HISTORICAL OVERVIEW	14
3.1 BASE HISTORY AND COLD WAR CONTEXT	14
3.2 BASE DEVELOPMENT	21
4.0 METHODOLOGY	27
4.1 INVENTORY	27
4.2 EVALUATION OF IMPORTANT RESOURCES	28
4.2.1 Documentation	28
4.2.2 Evaluation of Importance	28
4.2.2.1 Cold War Context	28
4.2.2.2 NRHP Criteria	29
4.2.2.3 Exceptional Importance	30
4.2.3 Evaluation of Integrity	30
4.2.4 Priority Matrix	31
4.2.5 Resource Organization	32
4.3 BASE SPECIFIC METHODS	32
5.0 RECONNAISSANCE INVENTORY RESULTS	34
6.0 EVALUATION RESULTS	35
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	35
6.1.1 Documentation	35
6.1.1.1 Documentary Collection	35
6.1.1.2 Documentary Collection	37
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	37
6.2.1 Alert Facilities	37

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1.1 Fighter Alert Facility	37
6.2.1.2 Bomber/Tanker Alert Facility	38
6.3 MATERIEL DEVELOPMENT FACILITIES	39
6.4 TRAINING FACILITIES	39
6.5 INTELLIGENCE FACILITIES	40
7.0 UNDOCUMENTED RESOURCES	41
8.0 FUTURE THREATS TO RESOURCES	42
9.0 PRELIMINARY RECOMMENDATIONS	43
9.1 NRHP ELIGIBILITY	43
9.1.1 Evaluation and Determination of NRHP Eligibility.....	43
9.1.2 Implications of NRHP Eligibility.....	45
9.2 EVALUATED RESOURCE RECOMMENDATIONS	47
9.2.1 Documentary Collection.....	47
9.2.2 Documentary Collection.....	49
9.2.3 Fighter Alert Facility	49
9.2.4 Bomber/Tanker Alert Facility	49
10.0 REFERENCES CITED	51
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Seymour Johnson Air Force Base	5
Figure 2.2 Seymour Johnson Air Force Base Layout	7
Figure 2.3 Standard Tactical Air Command Base Layout	8
Figure 2.4 Seymour Johnson Air Force Base Land Use Diagram	11
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	12
Figure 3.1 Seymour Johnson Air Force Base, 1950 to 1960	22
Figure 3.2 Seymour Johnson Air Force Base, 1960 to 1970	24
Figure 3.3 Seymour Johnson Air Force Base, 1970 to 1980	25
Figure 3.4 Seymour Johnson Air Force Base, 1980 to 1990	26

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	36
Table 6.2 Evaluated Resource Prioritization by Priority Rank	36
Table 9.1 Recommendations for Evaluated Resources	48

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

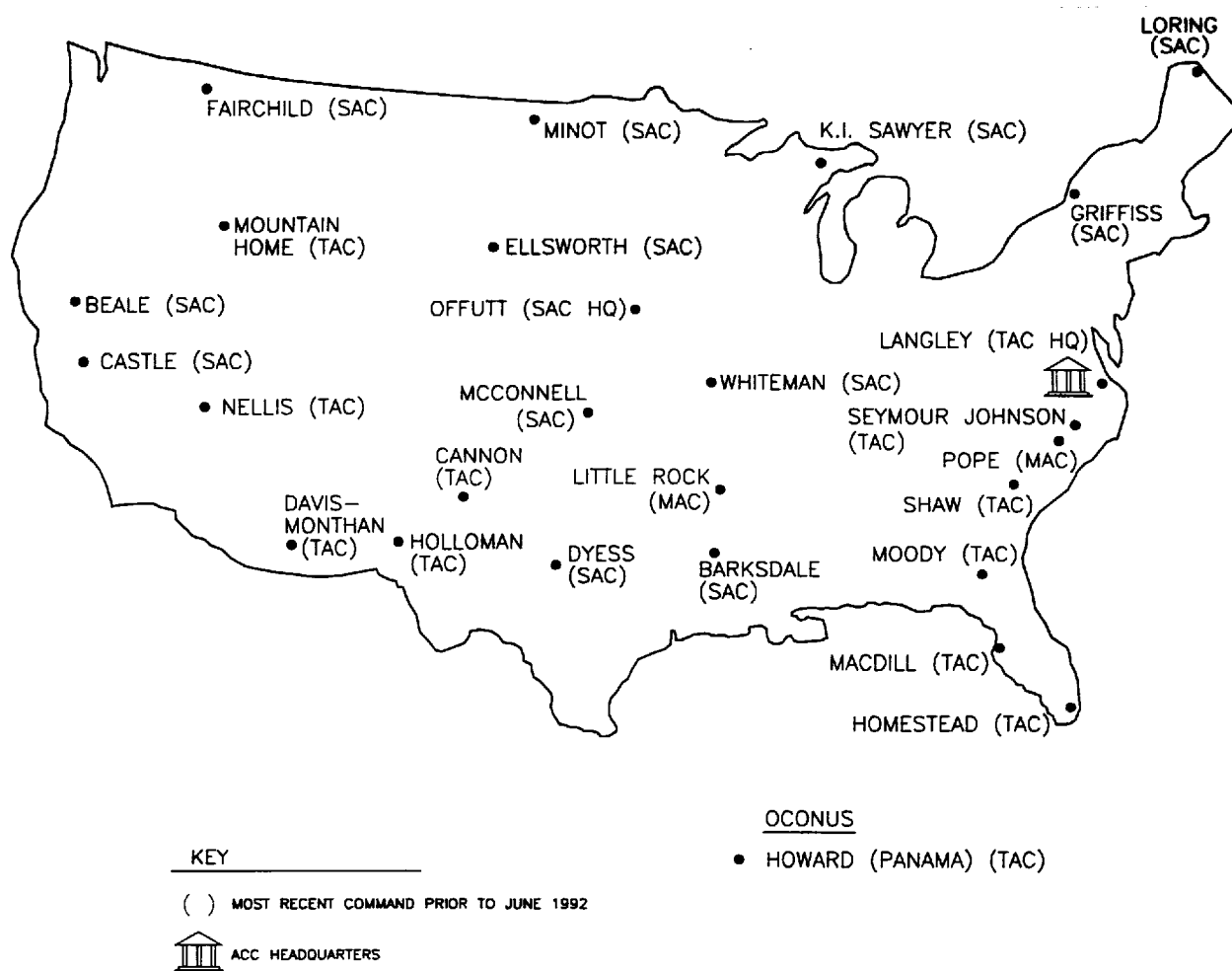
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILENAME: \COLDWAR\SEYMOUR\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Seymour Johnson Air Force Base (AFB). Seymour Johnson AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

At the end of the Cold War in 1989, the mission of the 4th Wing at Seymour Johnson AFB was to

execute directed tactical fighter missions designed to destroy enemy forces, supplies, equipment, communications systems and installations with nuclear (when equipped) or conventional weapons. . . [and]. . . Provide for training of combat aircrews and maintenance personnel. . . for support of tactical organizations worldwide (United States Air Force [USAF] 1989:9).

The 4th Wing became the first composite wing in the Air Force in April 1991, incorporating assets from Strategic Air Command (SAC) and TAC. The merging of two types of aircraft, each with a dual role, expanded the mission capability for the base commander. The F-15E *Strike Eagle* can penetrate deep into enemy territory and destroy ground targets, then fight its way back out. The KC-10 *Extender* tanker provides air refueling of military aircraft, and can also airlift supplies and personnel. These capabilities allow the 4th Wing to support air or ground warfare and "to accomplish the overall mission: Fly, Fight and Win!" (Public Affairs Office 1993a:4,21; Wing History Office 1992:1; 1993:1).

2.2 GEOGRAPHIC DESCRIPTION

Seymour Johnson AFB contains approximately 3,233 acres (1,308 ha) of fee-owned land with approximately 800 acres (323 ha) of easements within the city of Goldsboro in Wayne County, North Carolina (Figure 2.1) (USAF 1989:2). Located approximately 100 mi (161 km) east of the Atlantic Ocean, the base is situated within the Inner Coastal Plain section of the Atlantic Coastal Plain Physiographic Province. The region is characterized by a wide belt (70-100 mi [112-161 km]) of flat to gently rolling lowlands and mature streams extending from the tidewater boundary in the east, westward to the Fall Line. The base is bounded on the north by Stoney

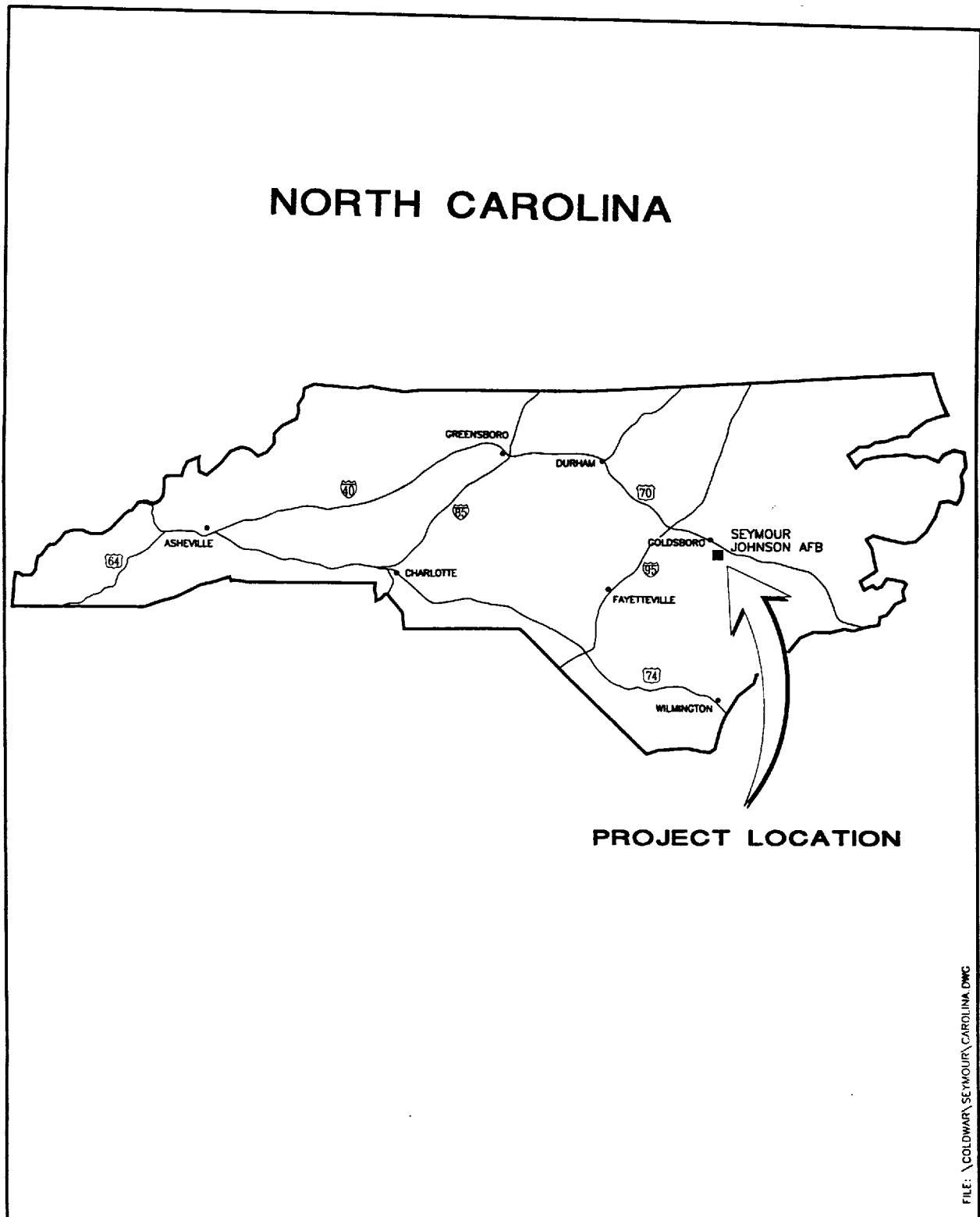


Figure 2.1 Location of Seymour Johnson Air Force Base.

Creek and on the west by the Neuse River. Elevations on base average between 50 and 110 ft (15 and 33 m) above mean sea level (Public Affairs Office 1993b:1; USAF 1972:1,5; 1975:3).

Seymour Johnson AFB also controls and maintains the Dare County Bombing Range. Located approximately 120 mi (193 km) northeast of the base in eastern North Carolina, the range contains approximately 46,600 acres (18,859 ha). The land is extremely marshy, with elevations ranging from 0 to 10 ft (0 to 3 m) above mean sea level. The region is intertwined with creek beds and contains large areas of peat bogs up to 20 ft (6 m) deep in places. Approximately 6,400 acres (2,590 ha) of this land has been cleared for actual use by the Air Force and the Navy (USAF 1972:1,26; USAF 1973:3-4).

2.3 CURRENT BASE LAYOUT

Seymour Johnson AFB (Figure 2.2) resembles the standard TAC base layout (Figure 2.3), but with exceptions. The 11,758 ft main instrument runway and associated taxiways are oriented east-west and form the southern boundary of the base. Virtually all buildings and facilities are located north of the runway. There are two main parking aprons other than the "christmas tree" alert apron. Neither is oriented to extend along the length of the runway, as in the standard layout, rather each is blocky in shape and extends away from the runway.

The mission oriented buildings and facilities are located north of the runway adjacent to the taxiways and parking aprons for the full length of the flight line, except where the golf course separates the eastern mission area of the flight line from the western mission area. Base operations and the control tower are centrally located along the flight line, and Wing Headquarters is situated east of the hospital area. All of these correspond to the TAC plan.

The main gate and visitor center are located in the extreme northeastern corner of the base. All family housing units, the base hospital, chapel, officer's club, and base billeting are located in the northeastern quadrant of the base. Airman's dormitories are centrally located north of the

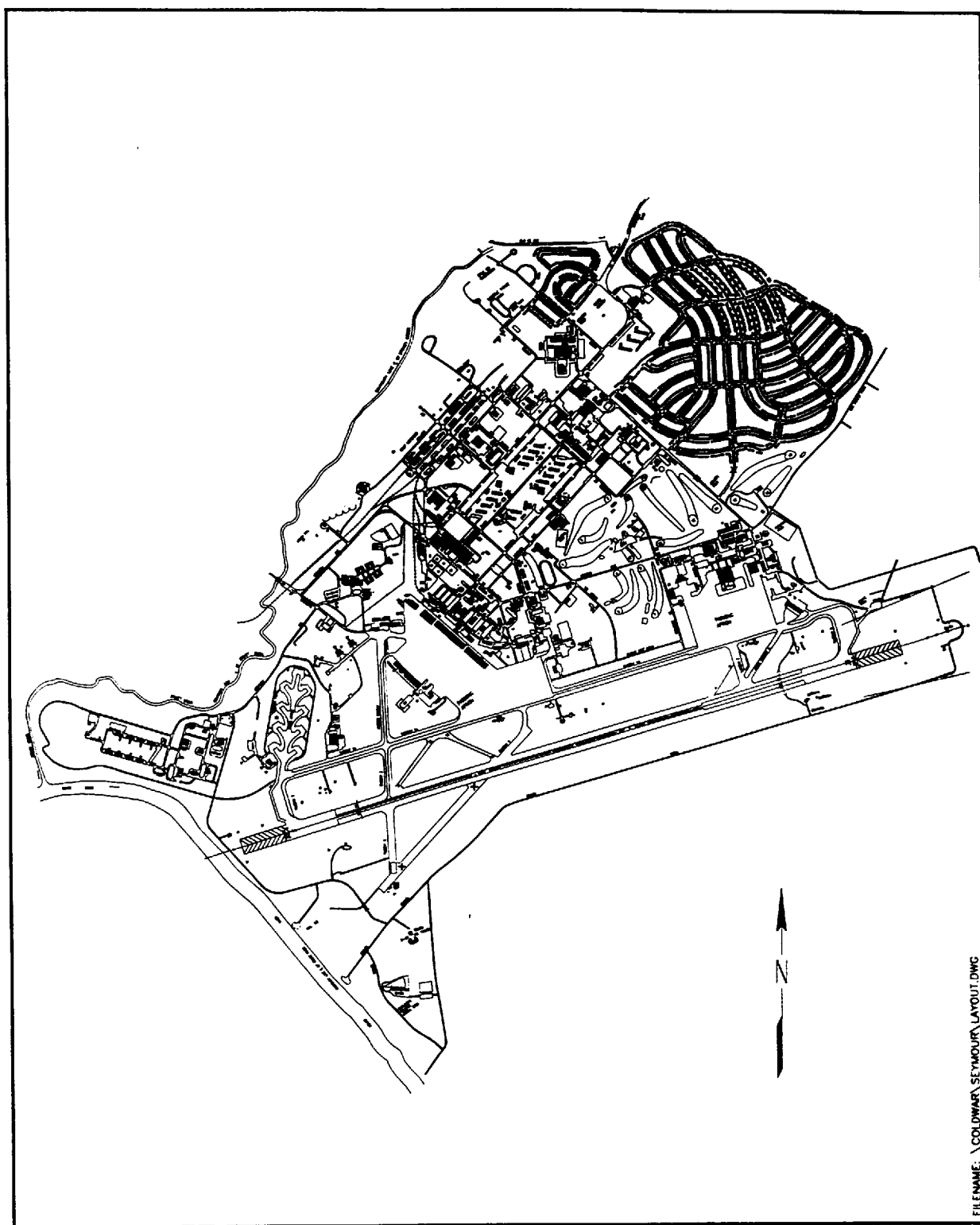


Figure 2.2 Seymour Johnson Air Force Base Layout.

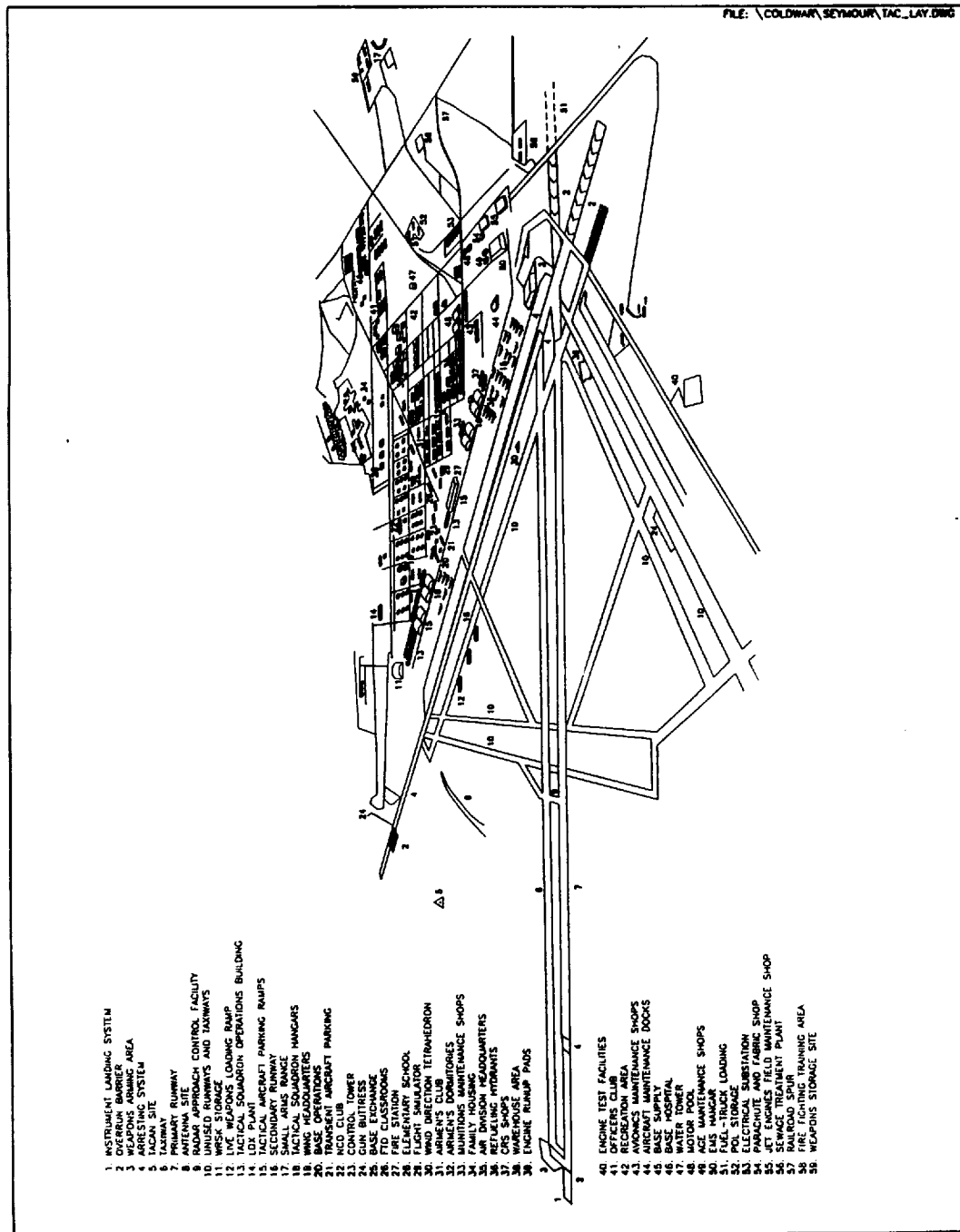


Figure 2.3 Standard Tactical Air Command Base Layout.

runway. This is in line with the standard TAC layout, except for the location of family housing, which in the standard layout is on the other side of the base.

The weapons storage area is located west of the alert facility on a peninsula formed by the confluence of Stoney Creek and the Neuse River and constitutes the northwestern corner of the base. The fire fighting training facility and the security police K-9 dog training kennel are centrally located along the northern perimeter, and the engine test stands are found on the western side of the base, northwest of the runway and east of the alert apron. All of these locations are deviations from the TAC standard layout. The presence of a "christmas tree" apron at the western end of the runway is also a deviation from the standard.

The entire southwestern section of the base, south of the western end of the runway, consists of a grenade range, a demolition range, and an explosive residue burial area. The placement of these areas away from the main base corresponds with the standard TAC layout. A federal prison complex was constructed on base in the late 1980s and is located northeast of the alert apron and south of the fire fighting training area. Although this facility is physically on base, it is a federal facility distinctly separate from Seymour Johnson AFB.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Because of the existence of the two non-standard parking aprons, the Seymour Johnson AFB land use diagram (Figure 2.4) at first glance appears not to resemble the standard TAC land use diagram (Figure 2.5). However, similarities as well as differences exist between the two diagrams.

In the Seymour Johnson AFB diagram, the mission areas are along the flight line and around the parking aprons. The industrial area is next to the mission area. The central part of the main base is a conglomeration of community, recreation, base support, and unaccompanied housing facilities. The part of the base farthest from the flight line is used for family housing. All of this is similar to the standard land use diagram.

Differences between the two diagrams are few. In the Seymour Johnson AFB diagram, headquarters facilities are in the mission areas along the flight line; in the standard, the headquarters are located in the central part of the main base. Mission areas located on the southern side of the flight line, opposite of the main base also differ from the standard, which has all development located on one side of the runway. Finally, because of Seymour Johnson AFB's history as a SAC bomber base, it has a bomber alert facility, "christmas tree" alert apron,

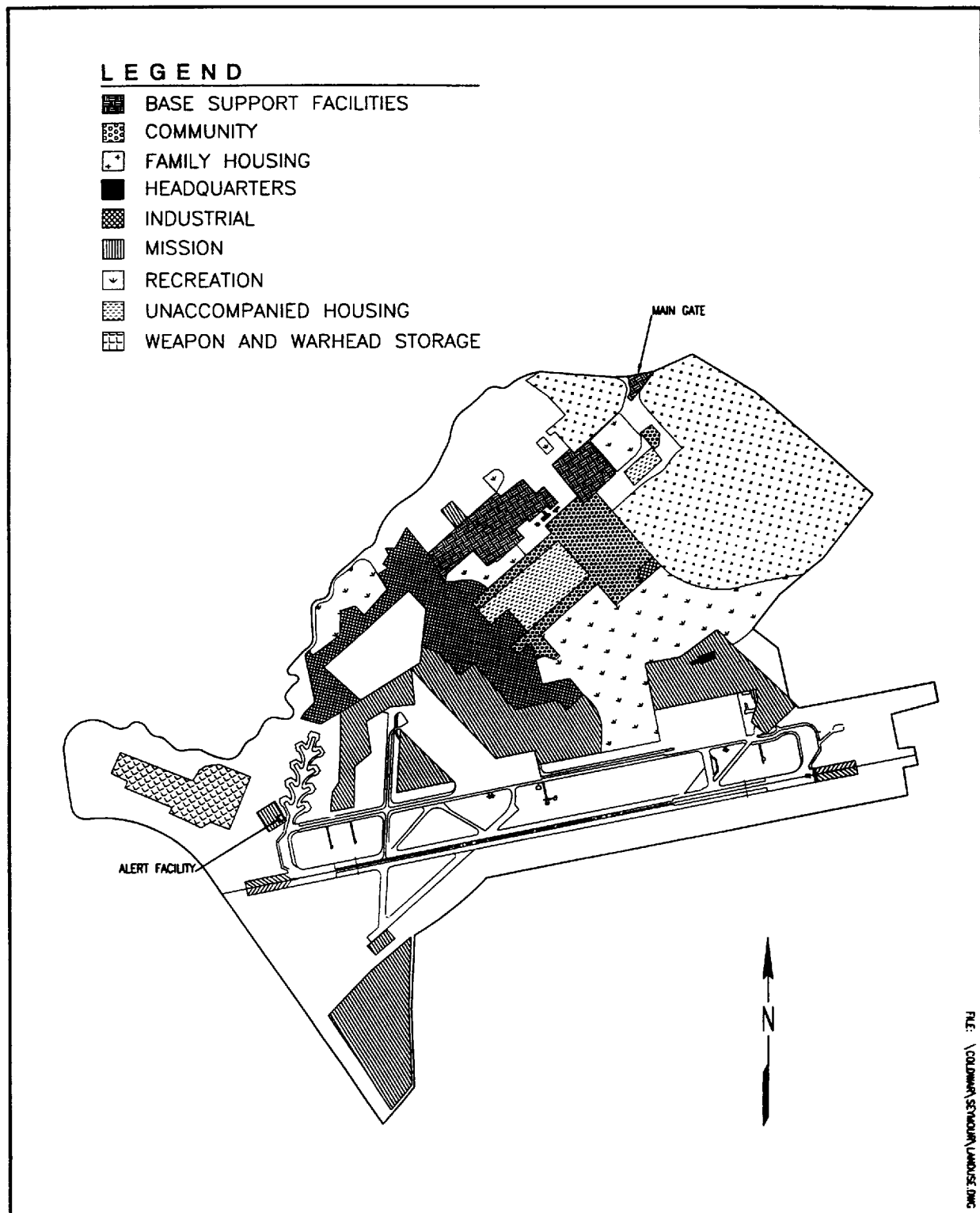


Figure 2.4 Seymour Johnson Air Force Base Land Use Diagram.

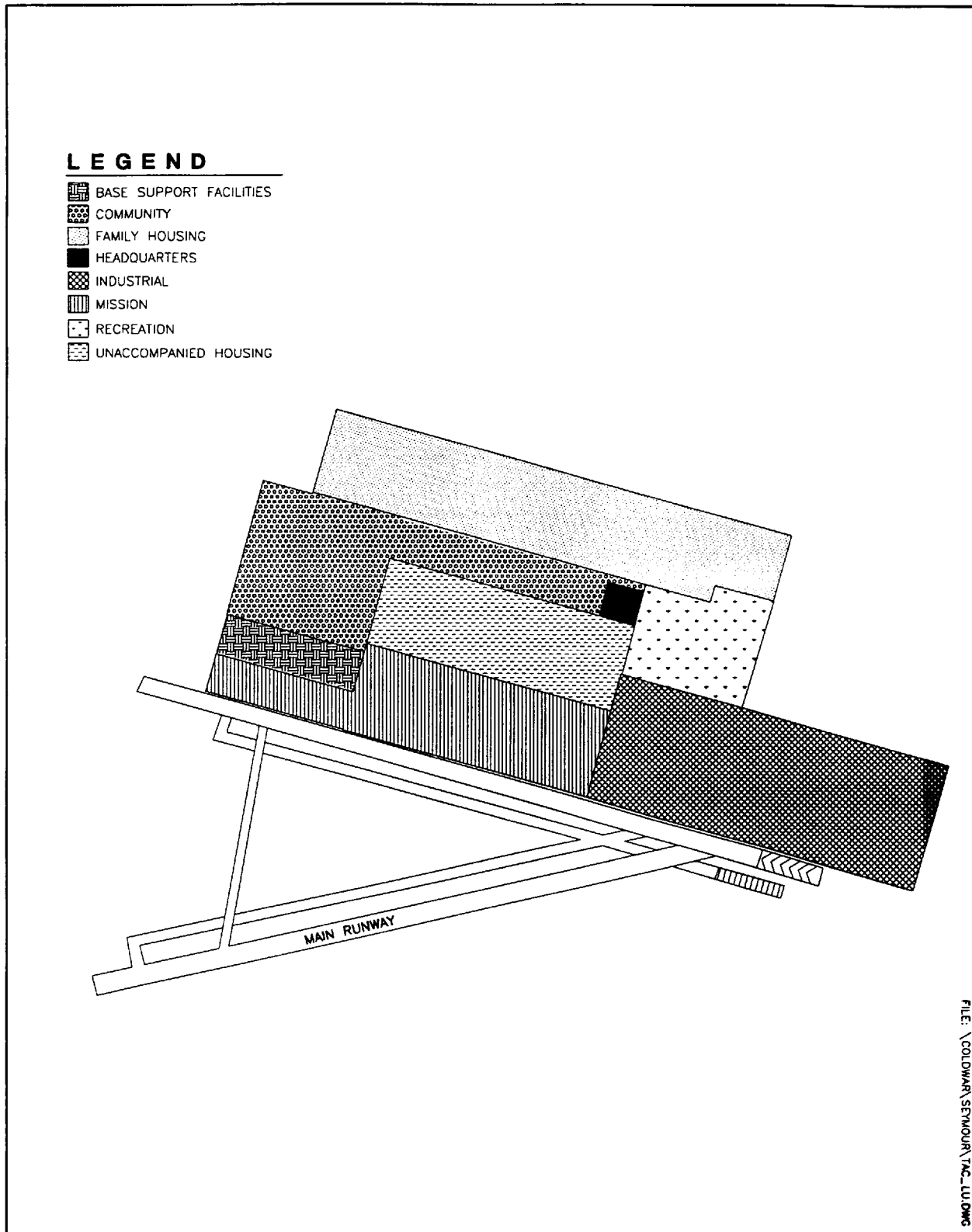


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

and a weapon and warhead storage area, none of which are included in the standard TAC diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Seymour Johnson AFB originated as a municipal airport to serve the city of Goldsboro prior to the entry of the United States into World War II. The city acquired the original tract of land to construct an airport under the auspices of the Civil Aeronautics Administration Program. However, the City of Goldsboro was notified in August 1940 by the Secretary of War that the airport project was considered important for military purposes. The municipal airport was completed under the Works Progress Administration (WPA) by December 1941 and designated Seymour Johnson Field one week before the December 7th attack on Pearl Harbor (Civil Engineering Office 1972; Wing History Office n.d.) The field was named after Navy Lt. Seymour Johnson of Goldsboro, North Carolina. He was a test pilot killed in a plane crash near Nordeck, Maryland, on March 5, 1941 (Mueller 1989:521; Public Affairs Office 1993a:2; USAF 1972:12).

Goldsboro leased the property to the federal government in April 1942, and federal authorities acquired an additional 2,226 acres as the nucleus for Seymour Johnson Field. Three intersecting runways were completed by late April, and construction of facilities was underway in May by Goldsboro contractor W. P. Lourimore. The field came under its first major command on June 12, 1942, when it was activated as Headquarters, Technical School under the Army Air Force Technical Training Command (Mueller 1989:521; Wing History Office 1957:4; n.d.)

The original mission of the Technical School at Seymour Johnson Field was the training of Army Air Force enlisted personnel in the inspection, maintenance, and repair of light and dive bombers. A second mission was added the following June 1943: the processing and preparing of officers and enlisted personnel for overseas duty. Training cadets to be technical officers in the Air Corp became the third mission of the field a few months later in September 1943, when the Aviation Cadet Pre-Technical School Program was activated. The October 1943 arrival of the 326th

Fighter Group added pilot training to the activities at Seymour Johnson Field. Following the April 1944 transfer to First Air Force, the primary mission at the field centered around training replacement pilots in P-47 aircraft (Wing History Office 1957:4; 1993:47).

Seymour Johnson Field became an Army Air Force separation center in September 1945, following the end of World War II. The field was deactivated in May 1946, and the Army Air Force turned it over to the War Assets Administration (WAA). The WAA deeded the property to the City of Goldsboro in 1949, and it functioned as a municipal airport with the various facilities leased to private interests. Between 1950 and 1953, Piedmont Airlines conducted regular flights into Seymour Johnson Field (Civil Engineering Office 1972; USAF 1989:6).

The expansion of the defense program during the early years of the Cold War led to the reactivation of the field. The federal government notified the City of Goldsboro that all private leases were to be cancelled and the U.S. government would take control of the field on January 1, 1953. Goldsboro deeded the property to the U.S. government on December 30, 1952 (Wing History Office n.d.; 1957:4). On January 1, 1953 the field was renamed Seymour Johnson AFB and assigned to TAC on inactive status (Mueller 1989:521; Wing History Office n.d.) The Army Corps of Engineers then began construction activities for reopening the base (Wing History Office 1993:47).

The Department of the Air Force transferred the base to Air Materiel Command (AMC) on November 24, 1953. However, because the base had a tactical requirement, AMC could not store vehicles and equipment, so it was reassigned to TAC on inactive status on January 6, 1954. President Eisenhower signed the bill that reactivated the base on July 31, 1954. A groundbreaking ceremony was conducted in March 1955 to rebuild the base for TAC use, and T.A. Loving and Company of Goldsboro began construction of dining halls and barracks (Mueller 1989:522; Wing History Office n.d.) Most of the major facilities at Seymour Johnson AFB were constructed between 1956 and 1959 and replaced all but 15 World War II buildings (USAF 1975:6; 1977:5).

Seymour Johnson AFB was finally reactivated on a permanent basis as a TAC base on April 1, 1956. The 83rd Fighter Day Wing (FDW) was assigned as the host unit in June 1956. Its immediate mission was to reach operational capacity while increasing its flying level and operational experience with the F-86 aircraft. Upon arrival of the 4th FDW in December 1957, the 83rd FDW was deactivated. The 4th FDW was renamed the 4th Tactical Fighter Wing (TFW) on July 8, 1958, and at that time consisted of the 333rd, 334th, 335th, and 336th Tactical Fighter Squadrons (TFS) (Holland 1957:ii,1; Public Affairs Office 1993a:2-3; USAF 1977:22; Wing History Office 1993:47).

Following the reactivation of the base as a TAC installation, three units became key tenants representing different commands within the Air Force. Air Defense Command (ADC) was assigned to the base in October 1956 along with the 482nd Fighter Interceptor Squadron (FIS) to protect the sovereignty of U.S. airspace. The 482nd FIS maintained alert duty between April 1956 and October 1965, utilizing the hangar at the eastern end of the runway as an alert facility following the hangar's construction in 1957 (personal communication, Gordon Harrall, October 3, 1994; Mueller 1989:524; USAF 1975:5-6; 1977:23).

Headquarters, 19th Air Force, although it was part of TAC, functioned separately from activities at Seymour Johnson AFB. Its primary purpose was to plan for contingencies and exercises worldwide as directed by the Commander of TAC as Air Component Commander under Atlantic Command/U.S. Readiness Command (USAF 1972:13-14; 1975:6; 1977:5,23).

On October 1, 1958 the 4241st Strategic Wing (SW), with its 911th Air Refueling Squadron (AREFS), was activated at Seymour Johnson AFB utilizing the B-52 *Stratofortress* bomber and KC-135 *Stratotanker*. The wing received the first tanker and B-52 in March and July of 1959 respectively, and the same year began using a new alert facility and alert apron. Shortly thereafter, this Wing became the first operational unit to receive the Hound Dog missile aboard the B-52. The 4241st SW was redesignated the 68th Bombardment Wing (BMW) in April 1963. Its mission was "to organize and train a force capable of immediate and sustained offensive

bombardment and air refueling operations in any part of the world" (USAF 1975:6-7; 1977:23,25; Wing History Office 1992:45; 1991:9). The 68th BMW received the Short Range Attack Missile (SRAM) during 1973-1974 to update and increase the striking power of the B-52s (personal communication, James Cunningham, October 10, 1994).

Seymour Johnson AFB fulfilled its Cold War role in the eastern United States as a multifaceted base capable of air interdiction, tactical air deployment, planning TAC strategy, and long-range bombardment and refueling. Seymour Johnson AFB was one of only a few bases to have representatives of all three combat commands stationed on base at one time, a distinction it retained until the deactivation of ADC in 1980 (USAF 1977:23).

During the 1962 Cuban Crisis, the 4th TFW was ordered to deploy all of its combat ready crews and aircraft to McCoy AFB, Florida, to participate in potential air operations in the event of hostilities between the United States and Soviet Union. The 4th TFW was in the middle of an aircraft modification program, and, at the same time, many of its personnel were deployed around the country on various exercises, resulting in both a deficiency of aircraft and pilots at the base. During the Cuban Crisis, Nellis AFB deployed their combat crew training wing (CCTW) to augment the shortage. Between October 21 and December 17, 1962, the 4520th CCTW provided TAC with 22 F-105s and approximately 100,000 pounds of equipment (Hinds 1976:90-91; Penney 1962a:vi,29-30; Wing History Office 1993:4,8). The 4th TFW, although caught in the middle of a changeover, still maintained the capability to carry out its stated mission:

Attack and destroy enemy forces, supplies, equipment and communication systems and installations with nuclear and conventional weapons. Attack and destroy targets peculiar to joint operations with surface forces. Provide active air defense by engaging and destroying enemy air forces in either offensive or defensive roles by visual interception or under direction of air control and warning systems (Penney 1962b:1-2).

Important to the mission of the 4th TFW were the bombing exercises conducted at the Dare County Bombing Range, located approximately 120 mi (193 km) northeast of Seymour Johnson AFB in Dare County, North Carolina. Before the construction of this bombing range, the Air

Force had no place on the east coast to practice weapons delivery. Pilots and their aircraft had to go to the ranges near Nellis AFB, Nevada, which was not only expensive, but cut down on the amount of time pilots could actually practice bombing missions. Mounting world tension and increased United States involvement in the Vietnam conflict precipitated the construction of a range on the east coast for use by Air Force bases in the area (USAF 1973:1; USAF 1972:1). Construction of this range and associated facilities was completed in 1965 in the coastal area of northeast North Carolina.

Seymour Johnson AFB deployed units overseas during the late 1960s and early 1970s to quell crisis situations and participate in the Vietnam conflict. In January 1968, the 4th TFW began deploying personnel and materiel to Korea in response to the capture of the United States intelligence ship *Pueblo*. All wing resources were returned to Seymour Johnson AFB by July 1968. Individual squadrons from the 4th TFW rotated duty assignments in Vietnam beginning in April 1972; these single squadron rotations continued until September 1973 (Wing History Office 1992:9). The primary mission of the 4th TFW remained much the same as a decade earlier, to maintain a state of readiness for war situations:

the destruction of enemy military supplies, equipment, communication systems, and installations. This mission required the capability to deliver a variety of tactical weapons, nuclear and conventional, in either an offensive or defensive role, in support of air and ground forces (Claypool 1971:2).

The 68th BMW was deployed to Southeast Asia as well. This wing maintained its operational and alert commitments in the United States throughout the 1960s and early 1970s, despite the escalation of hostilities in Vietnam. However, in May 1972, the wing received orders to deploy all of its B-52 aircraft and most of its personnel to support the bombing mission in Vietnam. The 68th BMW was the first to redeploy as a complete unit back to the United States and Seymour Johnson AFB in July 1973 (Wing History Office 1992:3).

The area surrounding Seymour Johnson AFB continued to expand in population and development until the base was annexed by the City of Goldsboro in February 1977 (Public

Affairs Office 1993a:3; Wing History Office 1993:9). The base further expanded its role in 1979 when it began to accommodate the National Emergency Airborne Command Post (NEACP) when the weather at Andrews AFB prohibited flight operations. When these weather conditions prevailed, the EB-4 aircraft diverted to Seymour Johnson AFB.

In July 1979, the 191st Fighter Interceptor Group (FIG) was assigned to Seymour Johnson AFB. This Air National Guard (ANG) unit from Selfridge Field, Michigan, assumed an Air Defense alert commitment at the base during the last decade of the Cold War. Its mission was "to intercept, identify, and, if necessary, destroy the air-breathing threat penetrating the Atlantic Coastal Air Defense Identification Zone" (USAF 1989:16; Wing History Office 1991:10).

In September 1982, the 68th BMW was deactivated, and the B-52s were transferred and reassigned. The 911th AREFS and its KC-135 tankers remained, however; and the 68th Air Refueling Group (AREFG) was retained. Although composed of only 15 aircraft, the group continued to maintain its operational capability and its alert commitment. The KC-135s were replaced in October 1985 with the larger KC-10 tanker, which could transport cargo and personnel as well as its load of fuel, thus expanding the mission of the group (Wing History Office 1991:3; USAF 1989:7). The 344th AREFS was assigned to the 68th AREFG in 1986. The mission of the 68th AREFG during the last decade of the Cold War was to

develop and maintain the operational capability to project power through. . . global mobility . . . to mobilize and deploy assigned aircraft, equipment, and personnel. . . [and]. . . provide strategic airlift and enroute aerial refueling in support of general purpose force deployments. Additionally, the unit is capable of providing air refueling in support of the strategic bomber force from CONUS and deployed locations (USAF 1989:16).

Of the four original squadrons, in 1965 only the 333rd TFS had been reassigned, away from the 4th TFW. In 1982, the 337th TFS was assigned to the 4th TFW; it was deactivated in 1985. In 1988, the 4th TFW consisted of the 334th, 335th, and 336th TFS and was the first unit in the Air Force to receive the F-15E aircraft.

At the end of the Cold War in 1989, the mission of the 4th TFW at Seymour Johnson AFB was to

execute directed tactical fighter missions designed to destroy enemy forces, supplies, equipment, communications systems and installations with nuclear (when equipped) or conventional weapons...[and]...Provide for training of combat aircrews and maintenance personnel...for support of tactical organizations worldwide (USAF 1989:9).

NEACP was redesignated the National Airborne Operations Command (NAOC) and, in the spring of 1990, NAOC began to utilize the alert facility for exercises approximately once a month (personal communication, Fred Claypool, September 30, 1994).

In 1991, during a major Air Force reorganization that merged TAC and SAC resources at Seymour Johnson AFB, the 68th Air Refueling Wing (AREFW) was deactivated, its resources were taken up by the 4th TFW, and the 4th TFW was renamed the 4th Wing. The 4th Wing, the first composite wing in the Air Force, now consisted of the 334th, 335th, and 336th Fighter Squadrons and the 344th and 911th AREFS. Its assets included 72 F-15E fighter-bombers and 20 KC-10 tanker/cargo aircraft. The wing was now capable of tactical bombing, air-to-air combat, air refueling, and cargo airlift.

In 1992, the 4th Wing and Seymour Johnson AFB were reassigned from TAC to ACC. In 1994, the 344th and the 911th AREFS and their KC-10s were reassigned to Air Mobility Command. The F-15 formal training unit is currently being moved from Luke AFB, Arizona to Seymour Johnson AFB. The 333rd Fighter Squadron has already been reactivated under the 4th Wing to accommodate this new training mission.

The Dare County Bombing Range is still in use today. The range is utilized jointly by the Air Force and Navy, although each has a separate area within the range. Aircraft from Seymour Johnson AFB, Pope AFB, and itinerant aircraft from other bases use the range for conventional and nuclear bombing practice. There are targets for dive bombing, rocketry, skip bombing, and aerial gunnery, and, in the center of the complex, there is a large target area for nuclear weapons

delivery tactics. Accuracy is scored by three triangulation towers. Types of aircraft to use the range since its inception include but are not limited to the B-52, B-IB, F-4, F-15, F-16, and the A-10 (personal communication, Larry Pickett, October 3, 1994; USAF 1973:4).

3.2 BASE DEVELOPMENT

The original buildings, facilities, and runways were completed in 1942-1943 to facilitate the World War II mission of Seymour Johnson Field as Headquarters, Technical School under the Army Air Force Technical Training Command and as a pilot training base. On January 1, 1953, when the base was assigned to TAC on inactive status, the Army Corps of Engineers began construction activities for reopening the base. Some of the old buildings were demolished or moved, while construction of new ones began (Wing History Office 1993:47). T. A. Loving and Company of Goldsboro began construction of dining halls and barracks (Mueller 1989:522; Wing History Office n.d.).

Most of the major facilities at Seymour Johnson AFB were constructed between 1956 and 1959, replacing all but 15 World War II buildings (Figure 3.1). The renovation, extension, and realignment of the runway was completed in 1956, as were several dormitories constructed in the center of the base. A large storage warehouse located west of the dorms was also completed in 1956. To accommodate the assignment of ADC and the 482nd FIS, two hangars, base operations buildings, a flight simulator, and security police operations were constructed in 1957 on the eastern end of and adjacent to the new runway. Headquarters and operations facilities for TAC and the 19th Air Force were also completed in 1957 in the north-central area of the base. In 1958, 1,500 Capehart family housing units were built in the northeastern quadrant of the base, and a jet fuel tank farm was completed north of the runway. The 1958 arrival of SAC at Seymour Johnson AFB precipitated the construction, in 1959, of the alert facility, alert apron, and the first weapons storage facilities at the western end of the runway. In 1960, a jet engine maintenance shop was completed along the taxiway just east of the alert facility, as was a base hospital in the northeastern quadrant of the base.

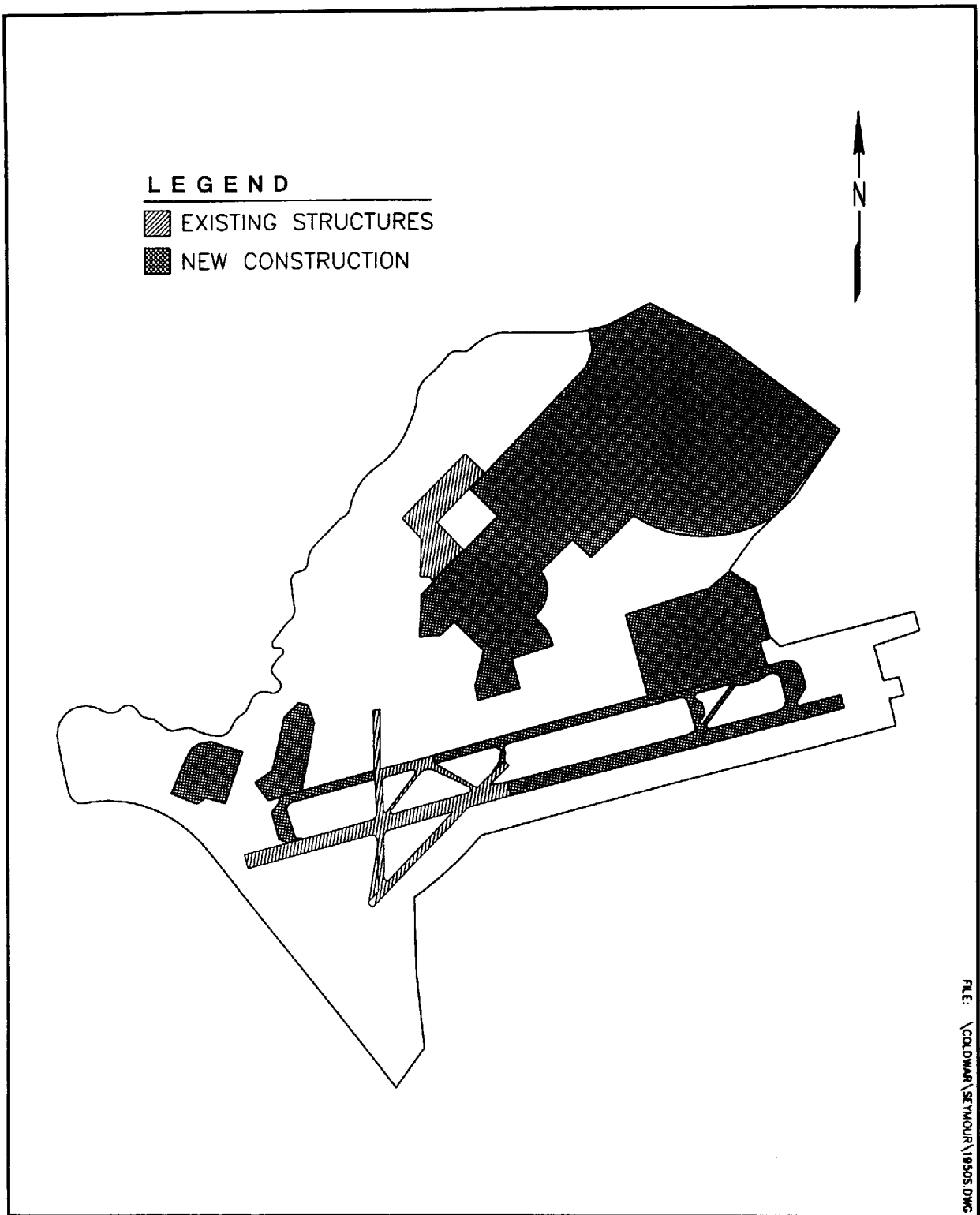


Figure 3.1 Seymour Johnson Air Force Base, 1950 to 1960.

During the 1960s, major additions to the base property list included the completion of the base golf course located southwest of the family housing area, an addition to the weapons storage facilities in the northwestern corner of the base, and the construction of maintenance docks and storage facilities along the flight line east of Base Operations (Figure 3.2). An additional 200 family housing units were completed in 1971 north of the Capehart development (Figure 3.3). The grenade range, demolition range, and explosive residue area were also constructed in the southwestern portion of the base in the 1970s.

Construction of new facilities in the 1980s included small aircraft maintenance docks, corrosion control facilities, munitions maintenance, and several storage facilities on the flight line east of the alert apron and west of Base Operations (Figure 3.4). Two engine test cells were completed in 1989, immediately east of the northern end of the alert apron. A federal prison complex was also completed in 1989, northeast of the alert apron and the new test cells and west of the fuel tank farm.

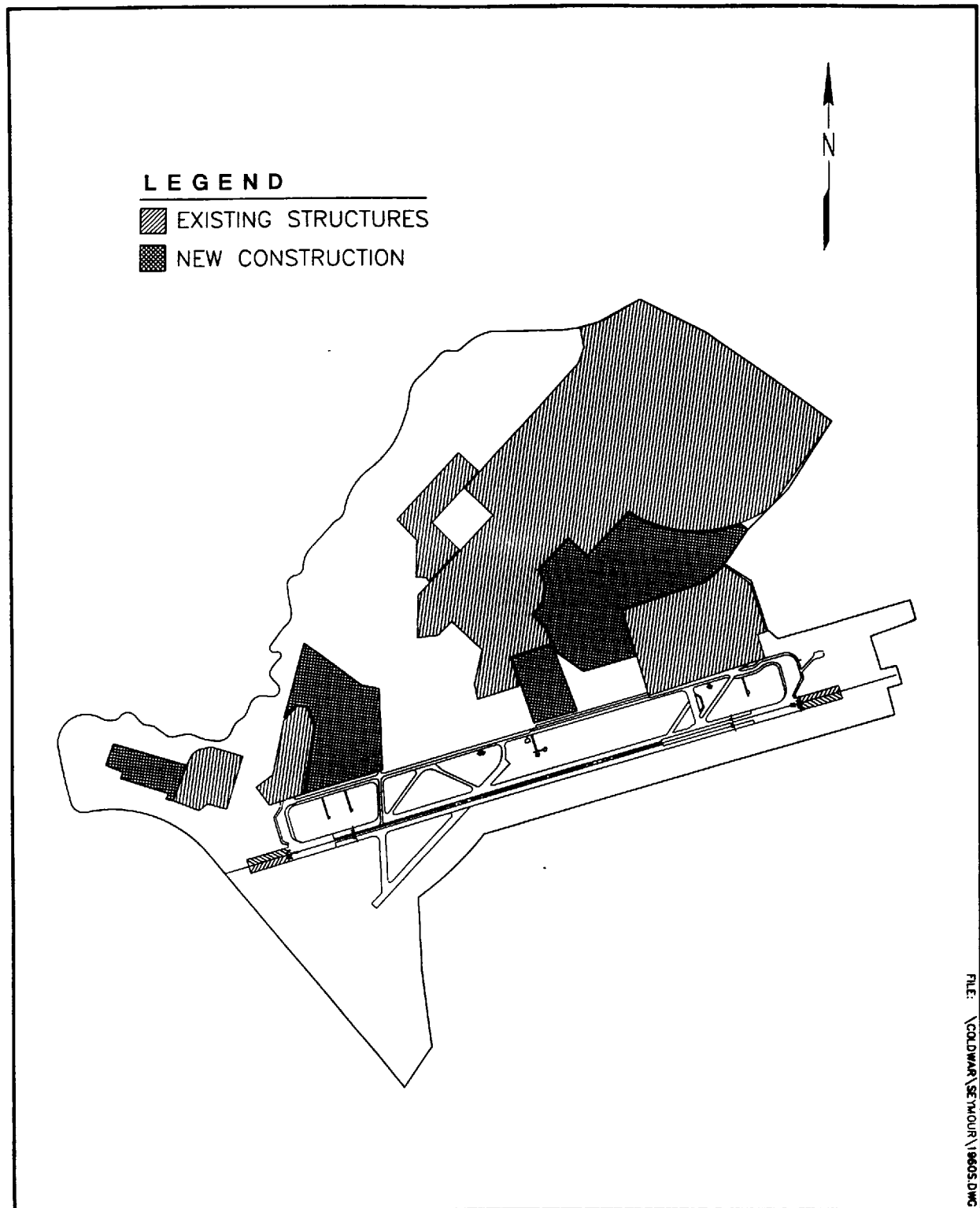


Figure 3.2 Seymour Johnson Air Force Base, 1960 to 1970.

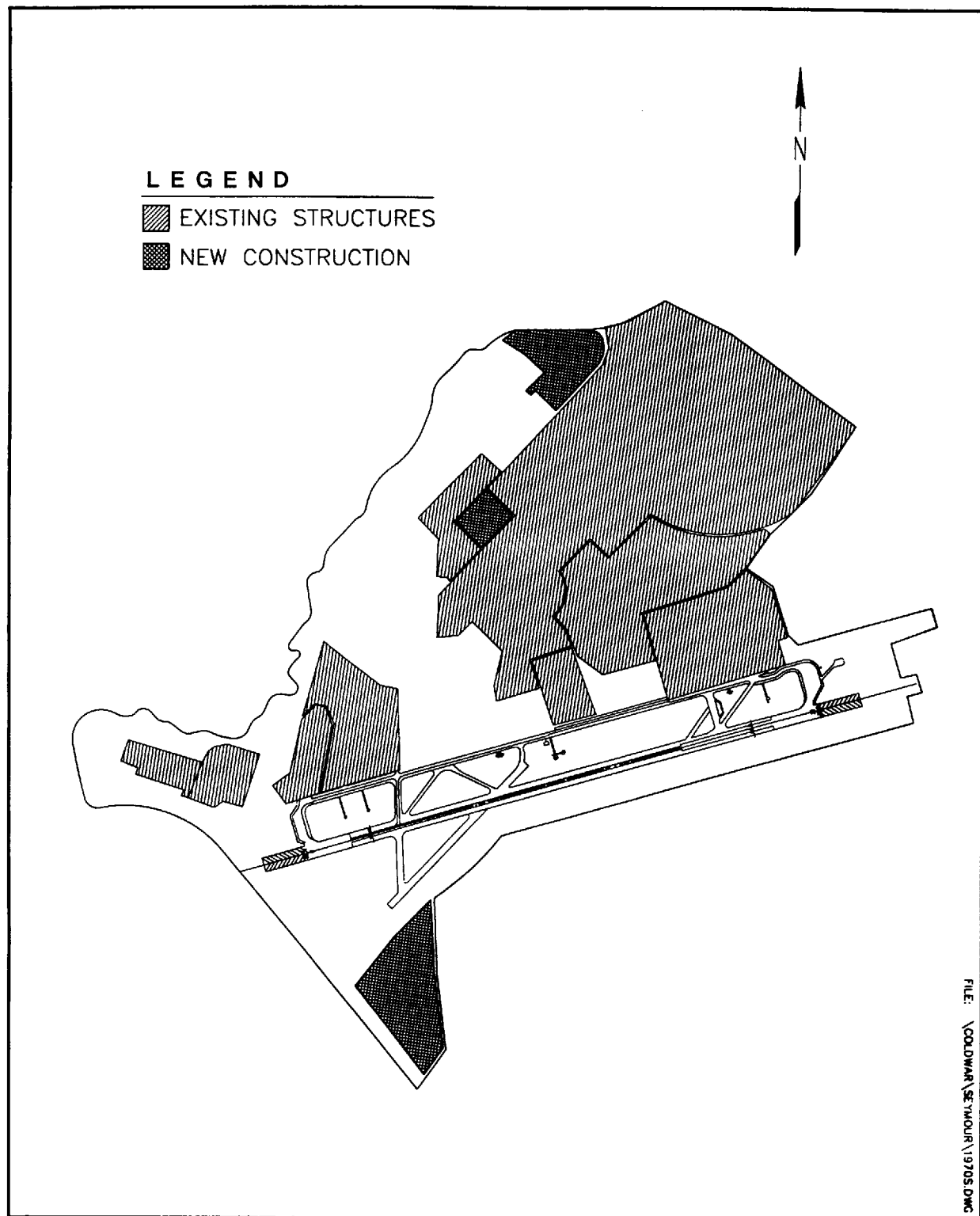


Figure 3.3 Seymour Johnson Air Force Base, 1970 to 1980.

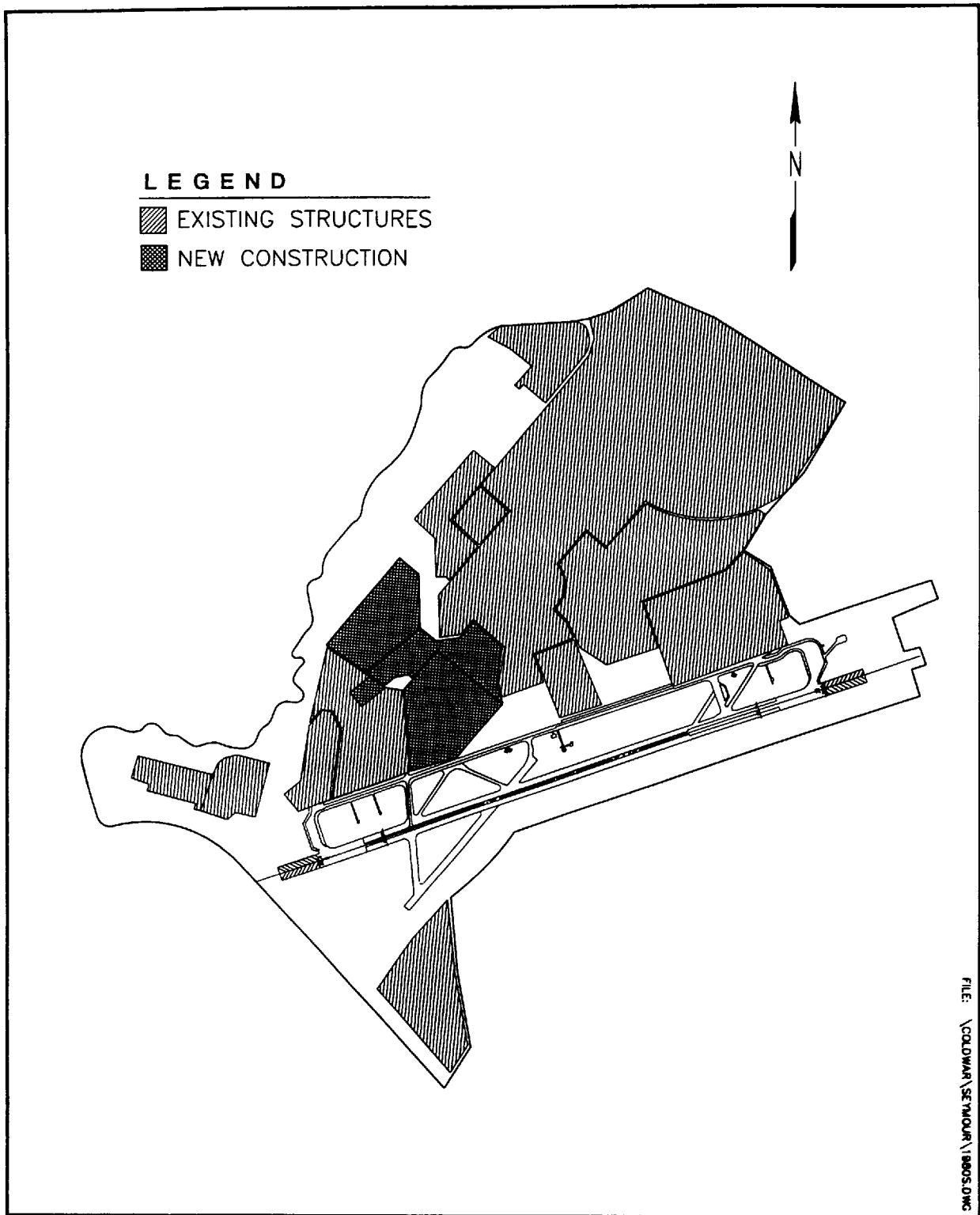


Figure 3.4 Seymour Johnson Air Force Base, 1980 to 1990.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Seymour Johnson AFB was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Seymour Johnson AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Seymour Johnson AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the

importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Upon arrival at Seymour Johnson AFB, the Mariah field team met the point of contact who arranged for an orientation tour of the base to familiarize the field team with the base layout and the various extant Cold War resources. A photographic reconnaissance of the base was conducted to inventory Cold War properties and representative architecture.

Various departments on Seymour Johnson AFB provided information useful to this study. The Wing History Office supplied wing histories to augment base historical information provided by the Public Affairs Office. This information was examined to determine the mission at Seymour Johnson AFB and to link the base to significant events that occurred during the Cold War era. Drawing files were inventoried in the Drafting Department of the Civil Engineering Office. The Drafting Department also provided base layout maps on computer discs, current hard copies of base layout maps, and decade maps useful for depicting base development over the years. Property Cards from the Real Estate Office contained information pertinent to the resources chosen to be documented and evaluated for their Cold War significance. Installation reports from the Real Estate Office provided additional information valuable from a historical

perspective. The Environmental Office provided an Installation Restoration Plan that discussed the base geography, geology, flora, and fauna. The base library was also explored as a possible source of additional research information; however, there was no extant information concerning the base. Several informal interviews were conducted with personnel long affiliated with the base to better understand the relationship of specific base resources to the Cold War era. The Mariah field team also visited the Dare County Bombing Range to document the relationship of the range to the mission at Seymour Johnson AFB. Photographs were taken of properties, and informal interviews were conducted with range personnel.

Based on the information gathered and the photographic inventory of properties, resources determined to be important to the base's Cold War history were selected for further documentation and evaluation.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Seymour Johnson AFB, 124 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Four resources were evaluated at Seymour Johnson AFB, two of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 21125, Located in Real Property No. 3300)

This collection, located in a vault area inside the Civil Engineering Office, consists of architectural drawings, base maps, and aerial photographs. The drawings represent most buildings extant on base as well as utilities, landscapes, runways, topography, and master plans. The drawings consist of ink on mylar, linen, sepia, and vellum, and blue prints. Historic maps are extant dating back to 1943 and span all four phases of the Cold War era. Approximately six aerial photographs also exist in this collection.

This collection is stored in a secure area but is utilized on a continuous basis by base engineers. This use is evidenced by wear on the drawings, especially the older ones.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	21125	None	RecDoc/Obj	16
Documentation	Documentary Collection	21126	None	RecDoc/Obj	16
Combat Weapons and Support Systems					
Alert Facilities	Fighter Alert Facility	21010	5015	Real/Bldg	19
Alert Facilities	Bomber/Tanker Alert Facility	21035	2130	Real/Bldg	20

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
20	21035	2130	Bomber/Tanker Alert Facility
19	21010	5015	Fighter Alert Facility
16	21125	None	Documentary Collection
16	21126	None	Documentary Collection

6.1.1.2 Documentary Collection (Resource No. 21126, Located in Real Property No. 2902)

This collection is located in the Wing Historian's Office at Wing Headquarters, and consists of wing histories, photographs, and a base newspaper collection. Hard copies of 4th Wing histories date from 1958 to 1993. Since these histories deal with the 4th Wing at Seymour Johnson AFB, these volumes could provide valuable insight into the activities conducted at the base in general and at specific facilities in particular during the Cold War era. Copies of these histories are also on file at the Air Force Historical Research Center at Maxwell AFB, Alabama. In addition to the wing histories, there is a bound volume of approximately 150 photographs depicting base construction and personnel, with several aerial photographs. This photo album was compiled by members of the Wing Historian's Office and illustrates the effect of the Cold War on base development throughout the past four and a half decades. The base newspaper collection is complete from 1968 to the present and may provide additional insight into the activities at Seymour Johnson AFB. It is stored in a secure place in the Wing Historian's office and is bound into individual volumes.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS**6.2.1 Alert Facilities****6.2.1.1 Fighter Alert Facility** (Resource No. 21010, Real Property No. 5015)

Building 5015 is a permanent, 22,753 ft² building constructed primarily of steel in 1957. Located at the eastern end of the taxiway, the alert facility is approximately three stories in height, with two main hangar sections connected in the middle by a two-story, concrete block section that has windows on the second floor. This center section connecting the two main hangars consists of two floors designed to sustain on-duty alert crews for sleeping, eating, and minimum recreation. This building was utilized by ADC from 1958 to 1973 as an alert hangar for the 482nd FIS. The

facility is currently used as an extension of the base fire department and for backup inflight emergencies.

Access to the interior of the center section of the building was not secured. However, based on observations of the rest of the building and the Real Property records, interior integrity is intact. The exterior integrity of the building also remains intact.

The exceptional importance of this facility lies in its mission to thwart any surprise attack by the Soviet Union on the United States. ADC protected the sovereignty of United States air space on the east coast during the Cold War by interdicting Soviet aircraft when they proceeded too close.

The building conveys the United States fear of a Soviet bomber attack and the measures taken to ensure that any such attack would be successfully intercepted. It is a direct result of Congressional approval in the 1950s for the construction of interceptor bases and the NSC-68 recommendations for a massive military build-up to counteract the increasing threat posed by the Soviet Union (Lewis et al. 1995). It was used for this purpose during Phases II and III of the Cold War and meets NRHP criteria (a) and (c).

6.2.1.2 Bomber/Tanker Alert Facility (Resource No. 21035, Real Property No. 2130)

Building 2130, built in 1959, is a permanent, 17,933 ft² facility constructed primarily of reinforced concrete. Located at the northwestern end of the taxiway and at the southern end of the alert apron, the two-story building is characterized by the six ramped entrances found on all four sides of its exterior and a sloped earthen berm extending up the four sides of the building and covering the first story. This facility was constructed for SAC alert crews stationed at Seymour Johnson AFB. It was designed to house crews standing alert duty and to facilitate rapid egress from the building to aircraft parked on the adjacent alert apron during a national emergency situation or Operational Readiness Inspection. Following the deactivation of the 68th BMW at Seymour Johnson AFB in 1982, the alert facility was utilized by the 68th AREFW until 1991, thus this facility has been used by B-52, KC-135, and KC-10 air crews. This facility

is no longer in continuous use. However, NAOC, formerly NEACP, has utilized the facility approximately once a month since the spring of 1990 for exercises.

This facility maintains its exterior integrity. Minimal interior modifications have been made to increase aircrew sleeping capacity; however, these modifications have not altered the interior structure or integrity of the building. Thus, interior integrity of the facility is also intact.

The Bomber/Tanker Alert Facility is extremely important to Seymour Johnson AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersal of bombers and tankers across the country (Lewis et al. 1995). The B-52 force, along with the supporting tanker force, was an integral part of the defense triad and was relied upon as the United States' primary nuclear bomber for over 30 years. Subsequently, when the facility was used for tanker alert, it was meeting these same deterrence needs as the dispersal of bombers required the dispersal of tankers to support them. Thus the facility continued to illustrate the concept of deterrence through a survivable force. This building was used for this purpose during Phases II through IV of the Cold War and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Seymour Johnson AFB.

6.4 TRAINING FACILITIES

None were evaluated at Seymour Johnson AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Seymour Johnson AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Seymour Johnson AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Seymour Johnson AFB. These resources should be investigated further for a more comprehensive analyses.

There is a large, framed collection of photographs on the wall in the stairwell of Wing Headquarters titled *Seymour Johnson AFB, Reconstruction Era*. This photo pictorial contains approximately 25 photographs and two newspaper articles detailing construction activities prior to reactivation of the base. There are two aerial photos as well, one dated 1955, the other, 1965.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Seymour Johnson AFB revealed approximately 260 citations. Most of these are unit histories and special collections. More specific topics include the histories of base realignment due to acquisition of the B-52, KC-10, and F-15E. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Seymour Johnson AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

There is an ongoing cultural resource survey being conducted for Seymour Johnson AFB, mostly concerned with World War II era property types. This work is being conducted by Panamerican Consultants, Inc. of Tuscaloosa, Alabama. It is known that the base theater, built in 1942, is scheduled for destruction in the immediate future. It is recommended that this property be evaluated for eligibility immediately, rather than waiting for this entire survey to be completed. Another study is planned for the future concerning integrated environmental aspects of Seymour Johnson AFB.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Seymour Johnson AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were

evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Seymour Johnson AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Seymour Johnson AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is

intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Seymour Johnson AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 21125, Located in Real Property No. 3300)

This collection of drawings, maps, and photographs is stored in a secure location, but is accessed continually, resulting in wear on the various documents. It is recommended that the collection be inventoried and copied. It is further recommended that the base retain the copies for its use, and the originals be sent to a permanent curatorial facility for stewardship and conservation.

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Buildings								
21010	5015	Fighter Alert Facility		*	*	*		NRHP eligible now.
21035	2130	Bomber/Tanker Alert Facility		*	*	*		NRHP eligible now.
Record or Document - Object								
21125	None	Documentary Collection		*		*	*	
21126	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Documentary Collection (Resource No. 21126, Located in Real Property No. 2902)

This collection consists of wing histories, photographs, and a base newspaper collection. Copies of the histories of the 4th Wing are also stored at the Air Force Historical Research Center, thus inventory of the base's collection is all that is recommended. The photographs and base newspaper collection are valuable chroniclers of the effect of the Cold War on Seymour Johnson AFB. It is recommended that these be inventoried and copied, with the copies remaining at the base for its use and the originals sent to a permanent curatorial facility for stewardship and conservation.

9.2.3 Fighter Alert Facility (Resource No. 21010, Real Property No. 5015)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III. It meets NRHP criteria (a) and (c) based on its role to intercept any incursion into United States air space by the enemy and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is determined to be intact based upon partial observation and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.4 Bomber/Tanker Alert Facility (Resource No. 21035, Real Property No. 2130)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II through IV. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. The integrity of the building is intact as only minimal modifications have been

made to the interior. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Civil Engineering, Seymour Johnson Air Force Base

- 1972 *Written Report, Seymour Johnson AFB, Goldsboro, N.C.* Tab-A, sheet 1 of 5, December 1972. On file, Civil Engineering Office, Seymour Johnson Air Force Base, North Carolina.

Claypool, F. D.

- 1971 *History of the 4th Tactical Fighter Wing, Seymour Johnson AFB, N.C.* On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Hinds, J. R.

- 1976 *Epitome of the History of Nellis Air Force Base, 1940-1966*. On file, History Office, Tactical Fighter Weapons Center, Nellis Air Force Base, Nevada.

Holland, G. M. Capt.

- 1957 *History of the 83d Fighter Day Wing, Ninth Air Force, Tactical Air Command, 1 January 1957-30 June 1957*. On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Active Air Force Bases Within the United States of America on 17 September 1982*. Office of Air Force History, United States Air Force, Washington D.C.
-

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Penney, P. L.

- 1962a *History of the 4th Tactical Fighter Wing, Tactical Air Command-9th Air Force, 1 July-31 December 1962*. On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.
- 1962b *History of the 4th Tactical Fighter Wing (TAC), 1 January-30 June 1962*. On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.

Public Affairs Office

- 1993a *Seymour Johnson AFB, N.C.: Base Guide and Telephone Directory*. Blake Publishing Company, Inc., San Diego, California. On file, Public Affairs Office, Seymour Johnson Air Force Base, North Carolina.
- 1993b *Statistical Data and Economic Impact: Seymour Johnson AFB, N.C.* Fact Sheet on file, Public Affairs Office, Seymour Johnson Air Force Base, North Carolina.

United States Air Force

- 1972 *Executive Order Installation Survey Report: Seymour Johnson Air Force Base, Goldsboro, North Carolina*. On file, Real Estate Office, Seymour Johnson Air Force Base, North Carolina.
- 1973 *History of Dare County Weapons Complex*. On file, Headquarters, 4th Operations Group, Seymour Johnson Air Force Base, North Carolina.
- 1975 *4th Tactical Fighter Wing, Seymour Johnson AFB, N.C.: Executive Order 11724 Installation Survey Report*. On file, Real Estate Office, Seymour Johnson Air Force Base, North Carolina.
- 1977 *4th Tactical Fighter Wing, Seymour Johnson AFB, N.C.: Executive Order 11724 Installation Survey Report*. On file, Real Estate Office, Seymour Johnson Air Force Base, North Carolina.
- 1989 *Survey Report: Executive Order 12512 Property Survey of Seymour Johnson Air Force Base, North Carolina*. On file, Real Estate Office, Seymour Johnson Air Force Base, North Carolina.
-

-
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

Wing History Office

- 1957 *83d Fighter Day Wing*. Army & Navy Publishing Company, Baton Rouge, Louisiana. On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.
- 1991 *68th Air Refueling Wing History: 68th Facts from Observation to Air Refueling*. On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.
- 1992 *4th Wing History, Fourth Facts: 50th Anniversary, 1942-1992*. On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.
- 1993 *History of the 4th Wing, Seymour Johnson AFB, N.C.* On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.
- n.d. Chronology in bound photo collection. On file, Wing History Office, Seymour Johnson Air Force Base, North Carolina.
-

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	21001	10	Special Operations (Dare County Bombing Range)	1966
	21004	12	Special Operations (Dare County Bombing Range)	1980
	21005	20	Comm. Transmitter/Receiver (Dare County Bombing Range)	1983
	21009	5006	Flight Simulator Training (KC-10)	1957
	21010	5015	Fighter Alert Facility	1957
	21011	5010	A/SE Storage Facility and Shop	1960
	21012	4909	Maintenance Hangar	1957
	21013	4908	Base Warehouse Supply and Equipment	1957
	21014	4820	Munitions Load Crew Training	1959
	21015	4828	Maintenance Dock Fuel System	1963
	21016	4821	Base Warehouse Supply and Equipment	1959
	21017	4745	Control Tower	1977
	21018	4750	Rapcon Center	1989
	21019	4741	Wing Headquarters	1989
	21020	4735	Fuel System Maintenance Dock	1969
	21021	4605	General Purpose Aircraft Shop (Transient Alert Facility)	1984
	21022	4600	Fire Station	1956
	21023	4507	Base Operations	1957
	21024	4535	Small Aircraft Maintenance Dock	1982
	21025	4534	General Purpose Aircraft Shop	1979
	21026	2151	Non-destructive Shop (X-Ray shop)	1971
	21027	2155	Avionics Shop	1987
	21029	4531	Aircraft Corrosion Control	1982
	21030	4533	A/SE Maintenance Shop	1957
	21031	2140	A/SE Maintenance Shop	1964
	21032	2141	A/SE Maintenance Shop	1964
	21033	10155	Power Check Pad	1989
	21034	10164	Power Check Pad	1988
	21035	2130	Bomber/Tanker Alert Facility	1959
	21037	2330	Small Arms Range System	1976
	21038	2304	Combat Arms Training Maintenance	1976
	21039	2121	Jet Engine Maintenance Shop	1960
	21040	4522	Small Aircraft Maintenance Dock	1986
	21043	2202	Conventional Munitions Shop	1974
	21044	2201	Conventional Munitions Shop	1960
	21045	2204	Multicubicle Magazine Storage	1960
	21047	2903	4th Support Group Headquarters	1957
	21048	2902	4th Wing Headquarters	1957
	21051	1700	Visitor Center	1984
	21052	1702	Traffic Check House	1971

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	21053	1600	Officer's Open Mess	1957
	21055	4400	Flight Simulator Training (F-15)	1988
	21056	4408	Survey Equipment Shop (Parachute Drying Tower)	1957
	21057	4312	Base Warehouse Supply and Equipment	1959
	21059	3804	Visiting Officer's Quarters	1957
	21060	1603	Swimmer's Bath House	1961
	21061	206	Family Housing, Capehart	1958
	21062	118	Family Housing, Capehart	1958
	21064	301	Family Housing, Capehart	1958
	21065	202	Family Housing, Capehart	1958
	21066	315	Family Housing, Capehart	1958
	21067	3720	Center Chapel	1959
	21068	3801	Family Housing Management Office	1994
	21069	3735	Exchange Sales Store	1980
	21070	3740	Base Theater	1975
	21071	3725	Bank Branch	1963
	21072	3730	Bowling Center	1959
	21073	3705	NCO Open Mess	1957
	21074	3642	Base Package Store	1957
	21075	3641	Social Action Facility	1959
	21076	3614	Airman's Dormitory	1956
	21077	3640	Central Post Office	1957
	21079	3624	Education Center	1956
	21080	4215	Arts and Crafts Center	1973
	21081	4229	Housing Supply & Storage Facility	1942
	21082	3639	Credit Union	1959
	21083	4210	Gymnasium	1957
	21084	4423	334th Fighter Squadron Operations	1979
	21085	4421	335th Fighter Squadron Operations	1979
	21086	4082	Golf Clubhouse	1988
	21087	4810	Aircraft General Purpose Shop	1962
	21088	4900	Reserve Forces Operational Training (77th AREF Squadron)	1957
	21089	4012	Squadron Operations (711th & 744th AREF Squadrons)	1979
	21090	4904	Wing Headquarters, 4th Logistics Group	1957
	21091	4901	Wing Headquarters, 4th Operations Group	1959
	21092	5000	Heating Facility	1957
	21093	4906	Squadron Operations	1957
	21096	3722	Commissary	1992
	21097	3728	Recreation Center	1960
	21098	3708	Exchange Service Outlet (Shoppette)	1969
	21099	3702	Exchange Service Outlet (Laundry)	1956
	21100	3703	Exchange Service Station	1963

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	21101	3710	Child Care Center	1975
	21102	4103	Youth Center	1979
	21104	3704	Swimmer's Bath House	1957
	21105	4538	Small Aircraft Maintenance Dock	1981
	21106	3300	Base Engineering Administration	1942
	21107	3312	Base Maintenance Shop (Self Help Store)	1994
	21108	3500	Base Warehouse, Supply and Equipment (4th Supply Squadron)	1956
	21109	4404	Explosive Ordnance Disposal	1980
	21110	4430	Target Intelligence Training	1969
	21111	4405	Explosive Ordnance Disposal	1961
	21112	4403	Field Training Facility	1957
	21113	4402	Wing Headquarters	1962
	21114	3506	Base Covered Storage Facility (SVS Equipment Rental)	1994
	21115	3621	Visual Information Support Center	1956
	21116	3622	Recreation Library	1957
	21117	3100	Vehicle Maintenance Shop	1957
	21118	2505	Locomotive Shop and Shelter	1961
	21120	1905	Security Police-Kennel Support Building	1959
	21121	2800	Composite Medical Facility	1960
	21122	4818	Reserve Forces Operational Training	1991
	21123	4002, 10074	Water Fire Pump Station (4002); Fire Protection Water Storage (10074)	1957
	21124	2805	Dental Clinic	1977
Real Property - Landscape				
	21094	None	Blast Deflectors (with DC-10 aircraft)	N/A
	21103	10289	Baseball Field	1968
	21119	10393	Family Campground	1986
Real Property - Object				
	21006	N/A	Land Compressor Machine ("The Stomper") (Dare County Bombing Range)	1960's
	21007	N/A	Entrance Sign (Dare County Bombing Range)	unknown
	21046	10262	Monument/Memorial (F-4 Phantom II)	1989
	21049	2906	Monument/Memorial (F-105 Thunderchief)	1983
	21050	10288	Main Gate Sign	1967
	21058	4514	Monument/Memorial (F-86)	1988
	21063	None	Signs (USAF Housing Renovation Project)	None
Real Property - Structure				
	21002	10002	Center Scoring Tower (Dare County Bombing Range)	1966
	21003	10001	Western Scoring Tower (Dare County Bombing Range)	1966

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	21008	None	Strafing Targets (Dare County Bombing Range)	unknown
	21036	None	Alert Facility Security Tower	Unknown
	21041	2221, 2222	Storage Igloos	1957
	21042	10348, 10349, 10350	Storage Igloos	1974
	21054	10104	Jet Fuel Storage	1958
	21095	10099	Water Tank	1958
Record or Document - Object				
	21125	None	Documentary Collection	Various
	21126	None	Documentary Collection	Various

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

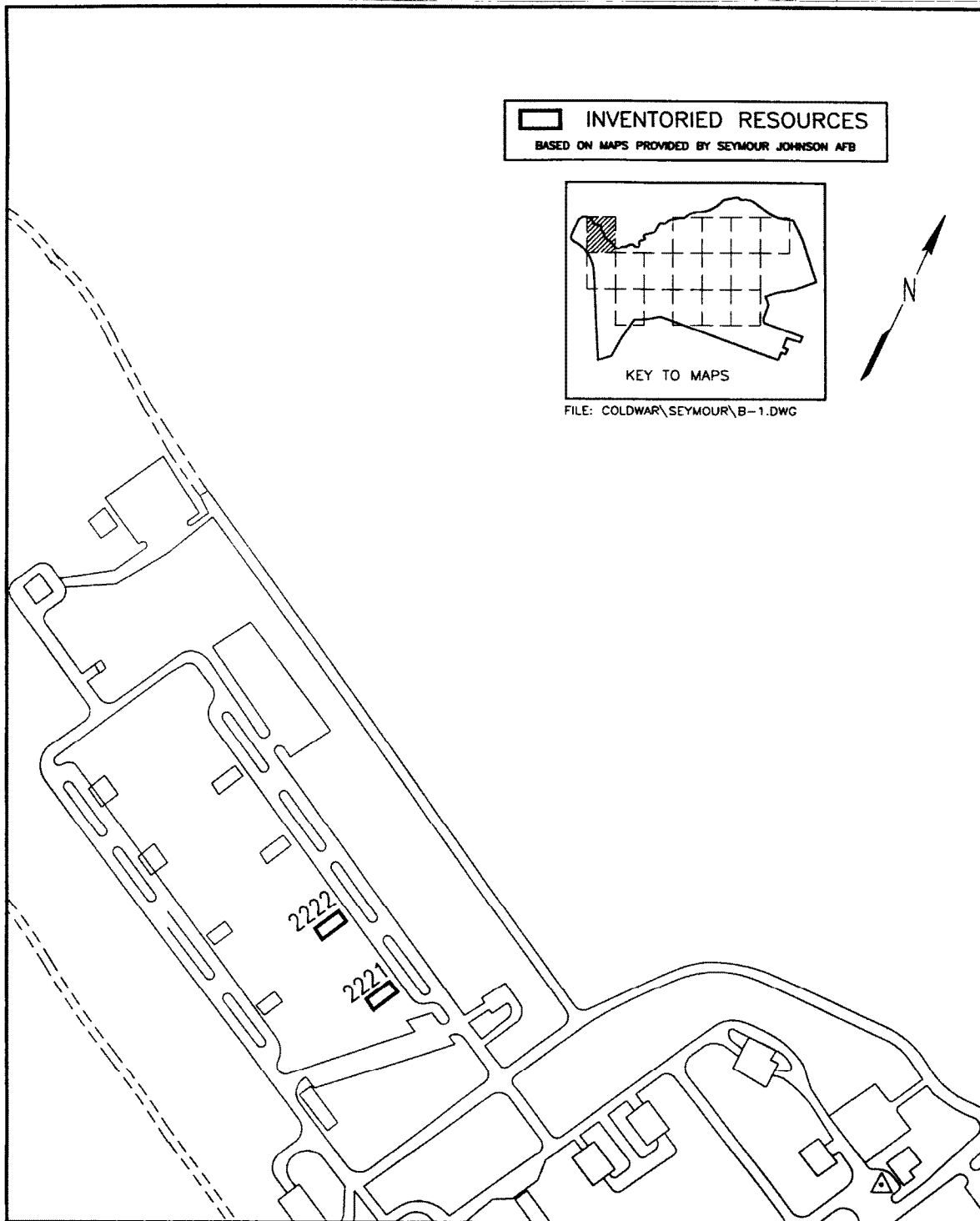


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 15).

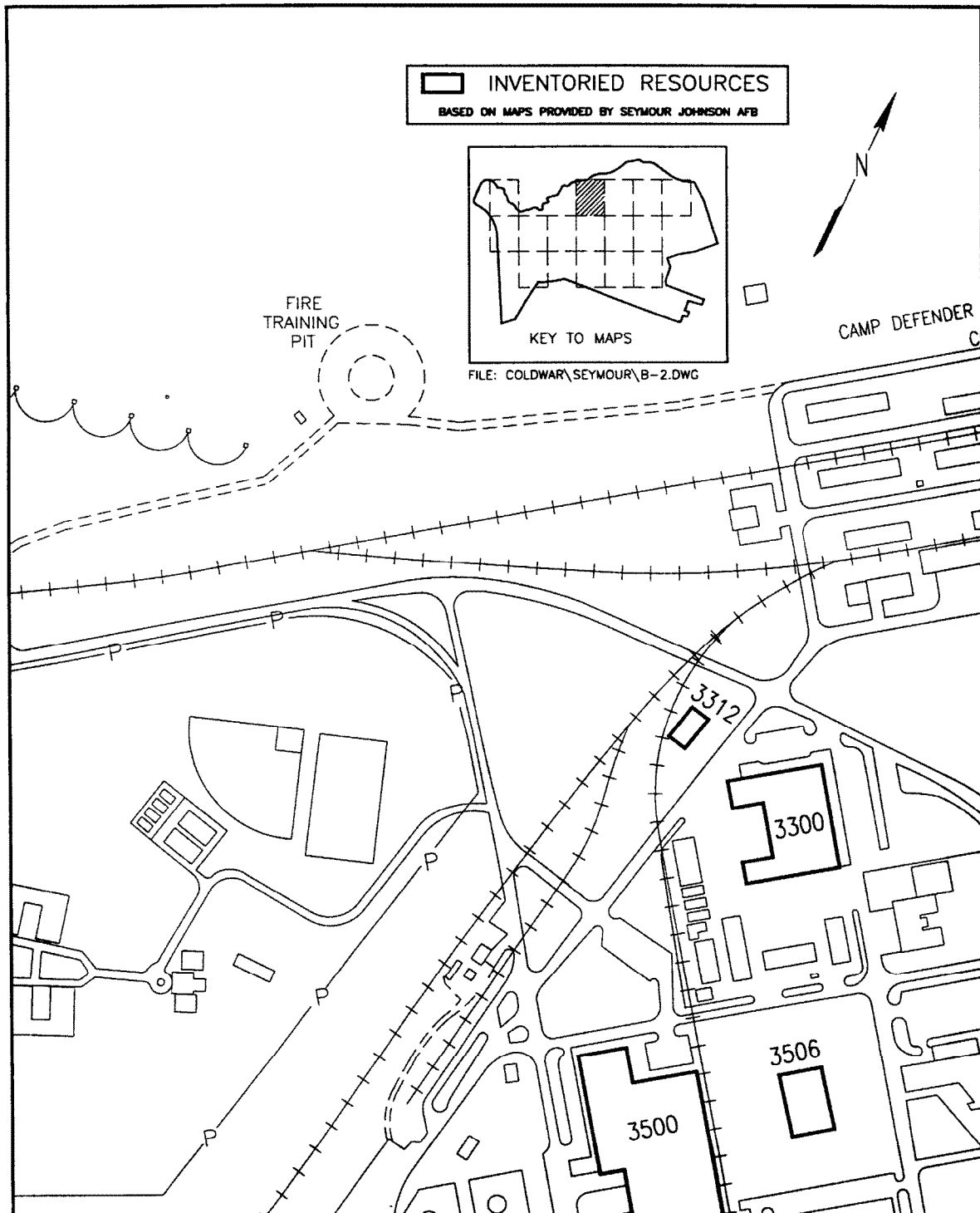


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 15).

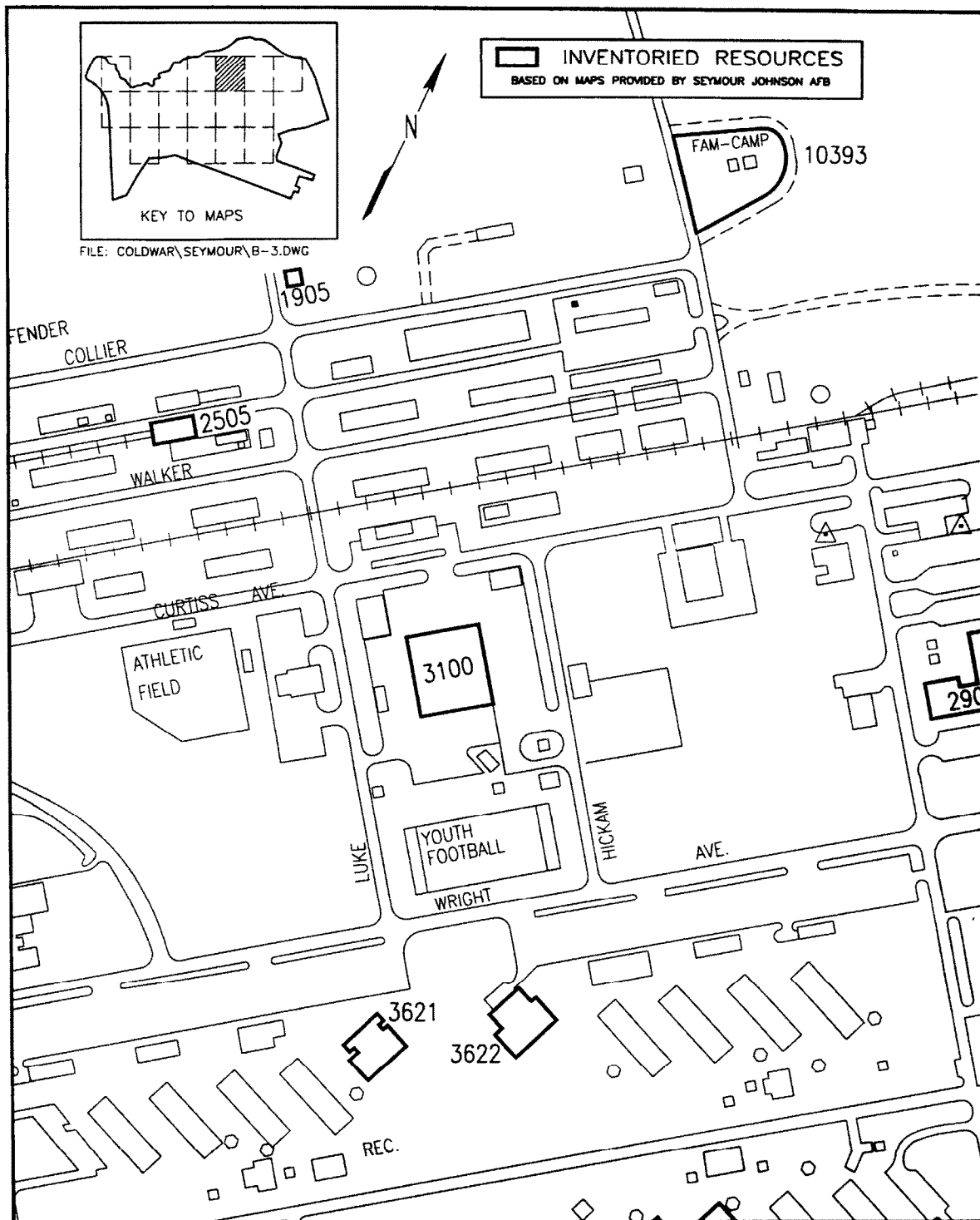


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 15).

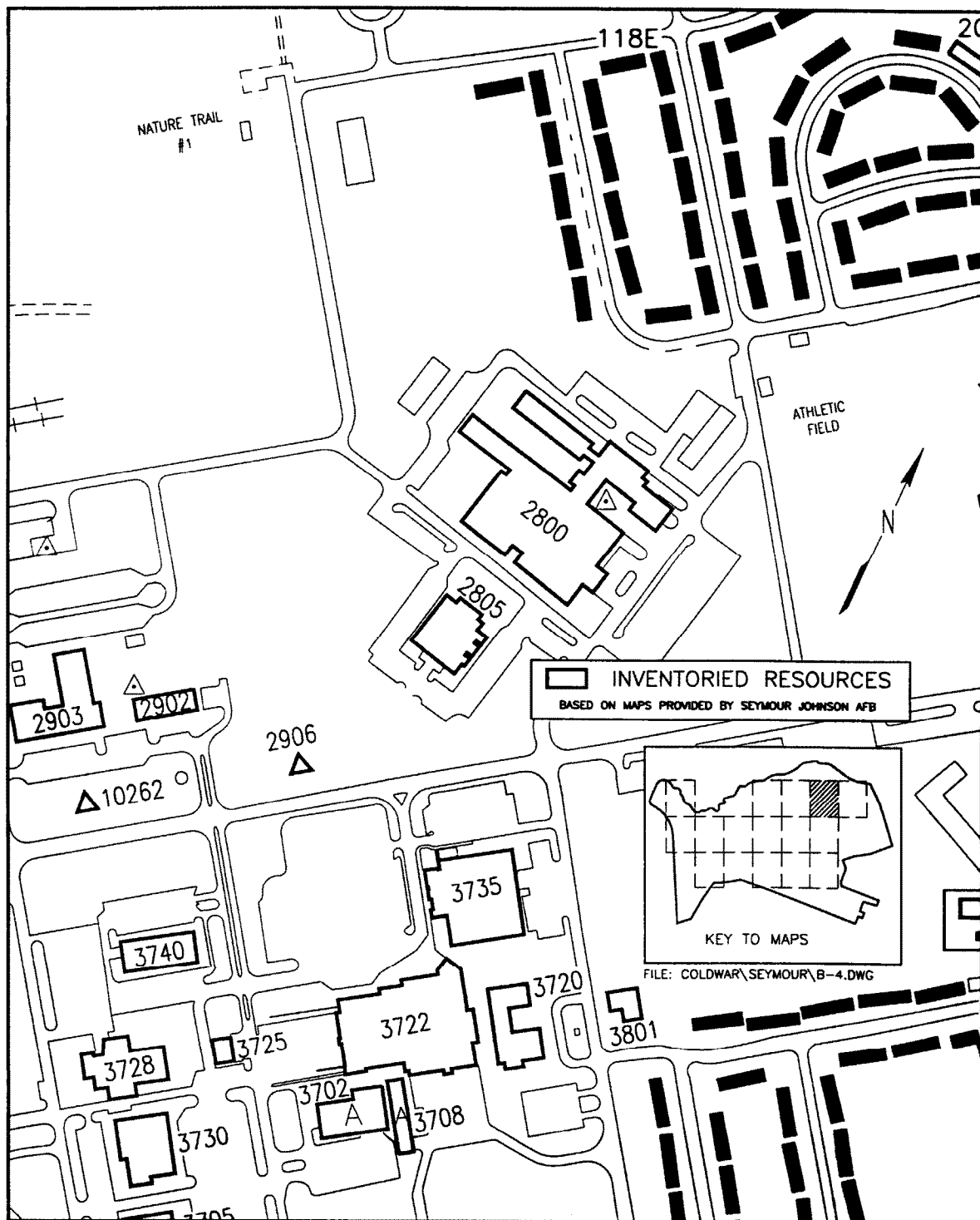


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 15).

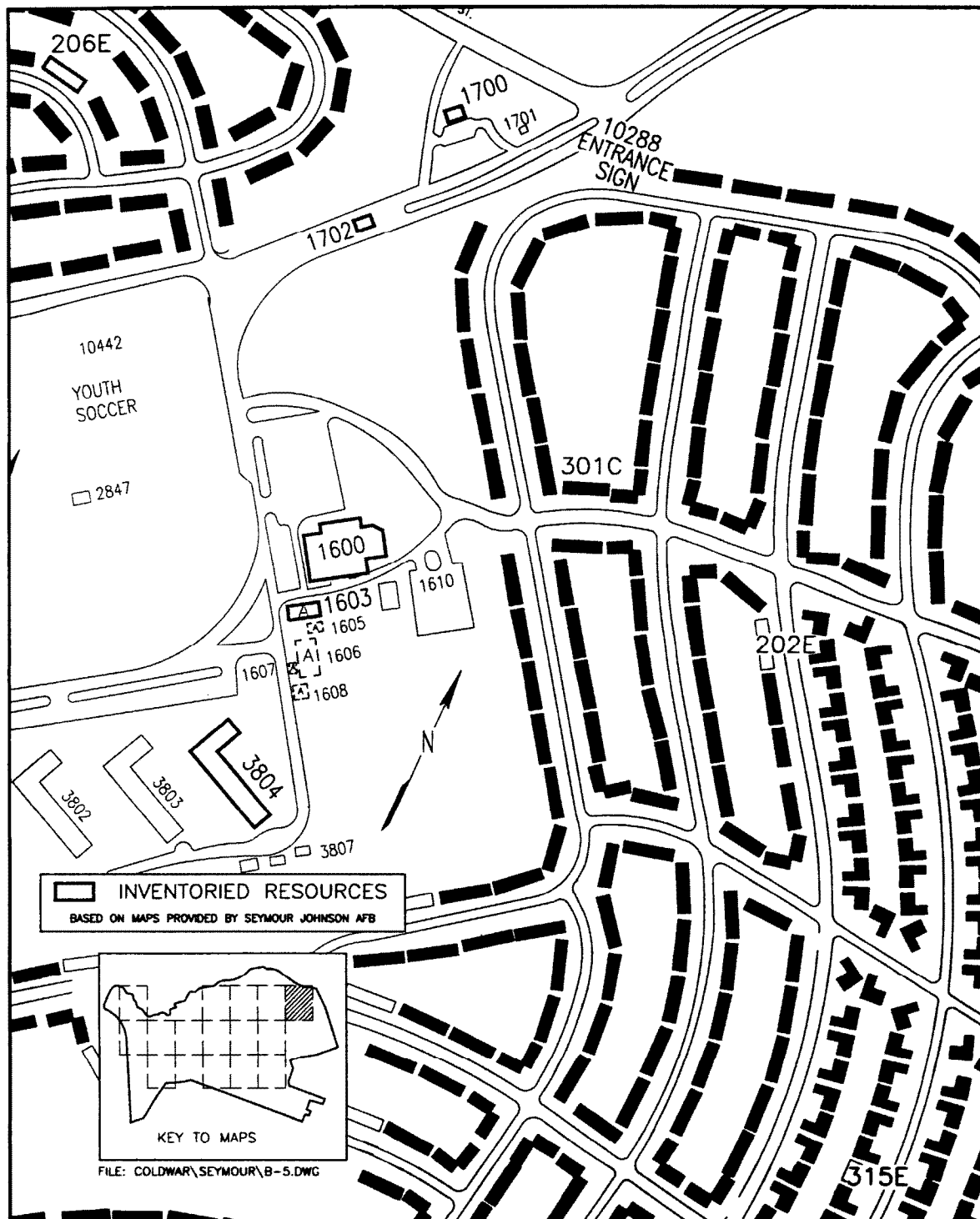


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 15).

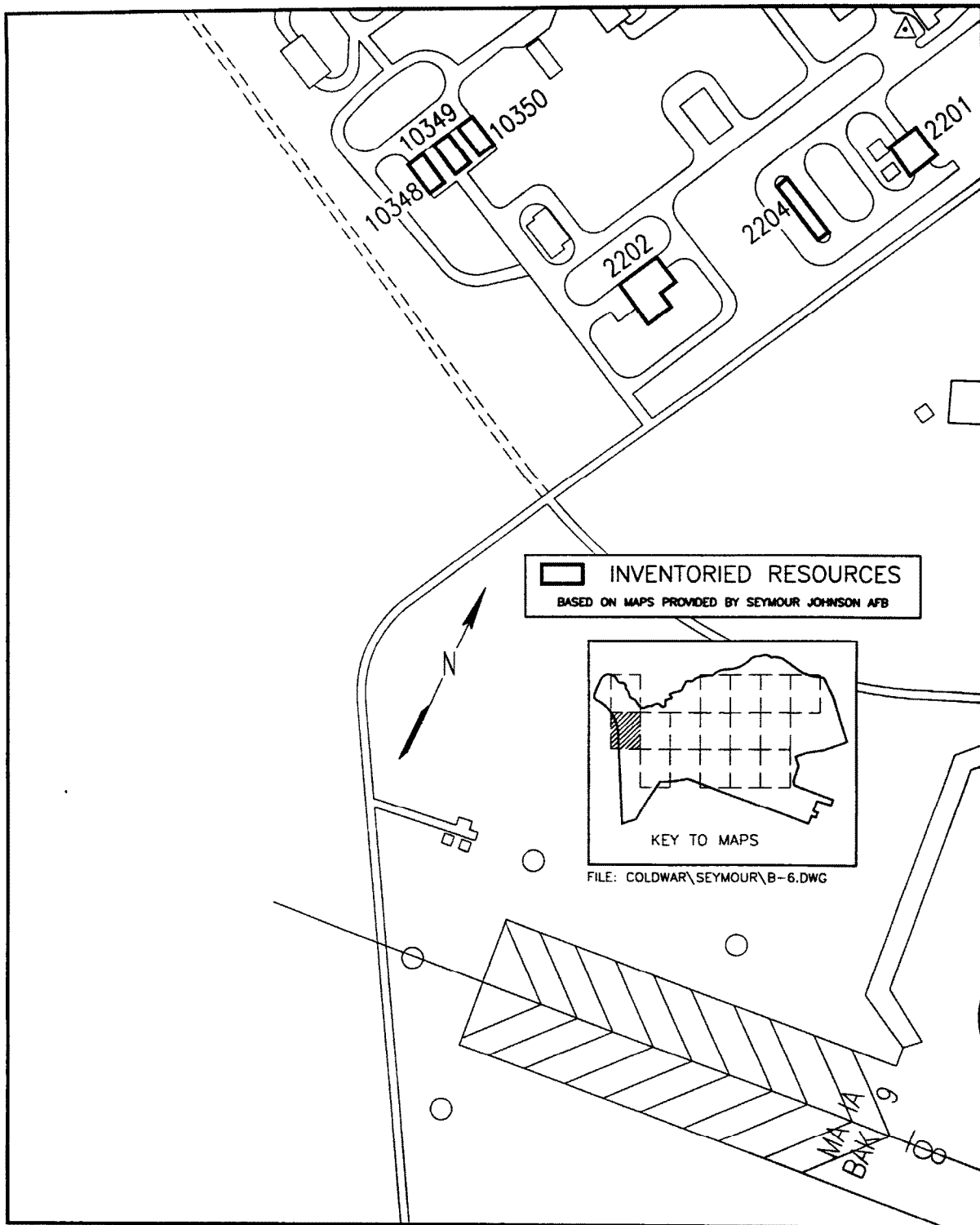


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 15).

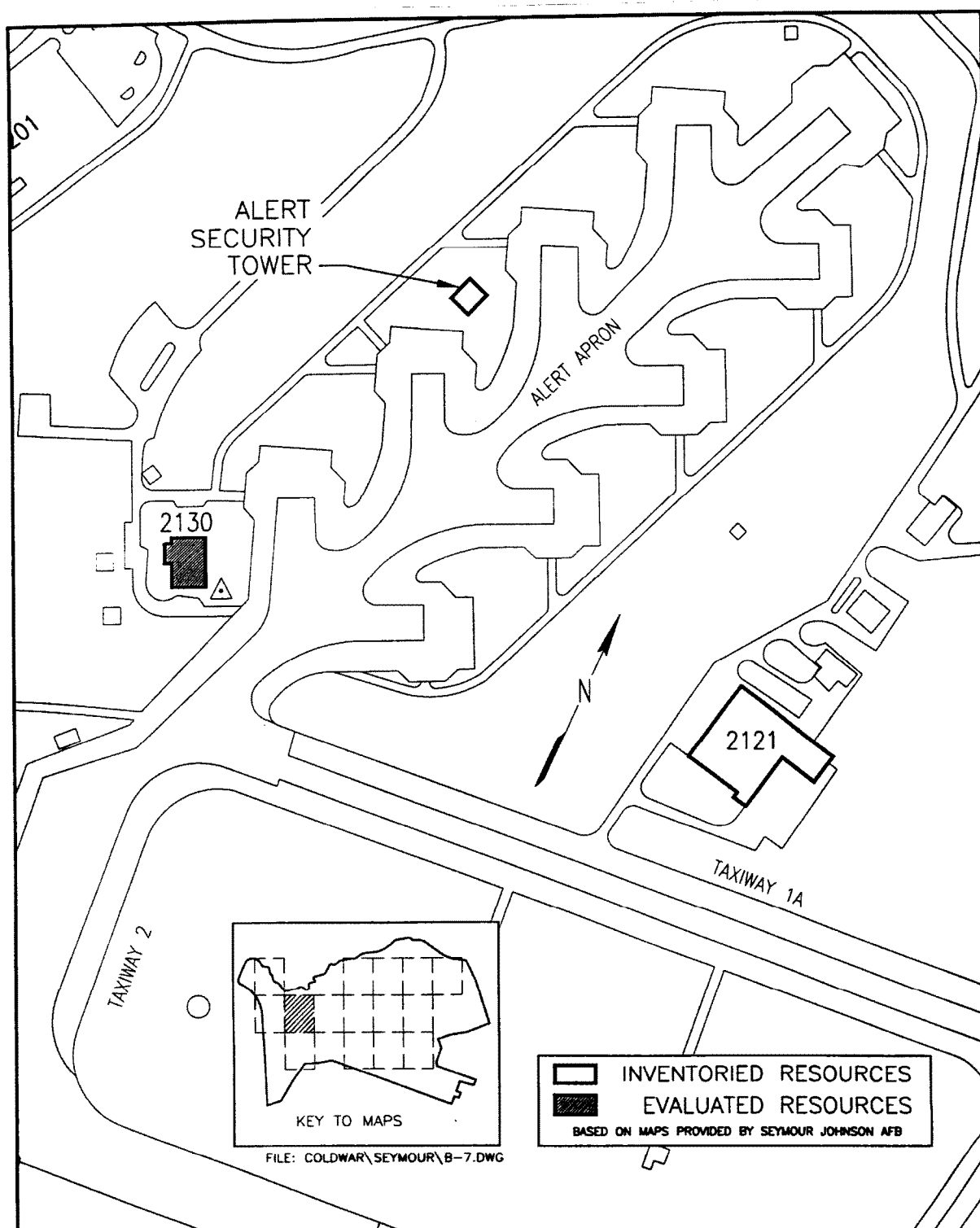


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 15).

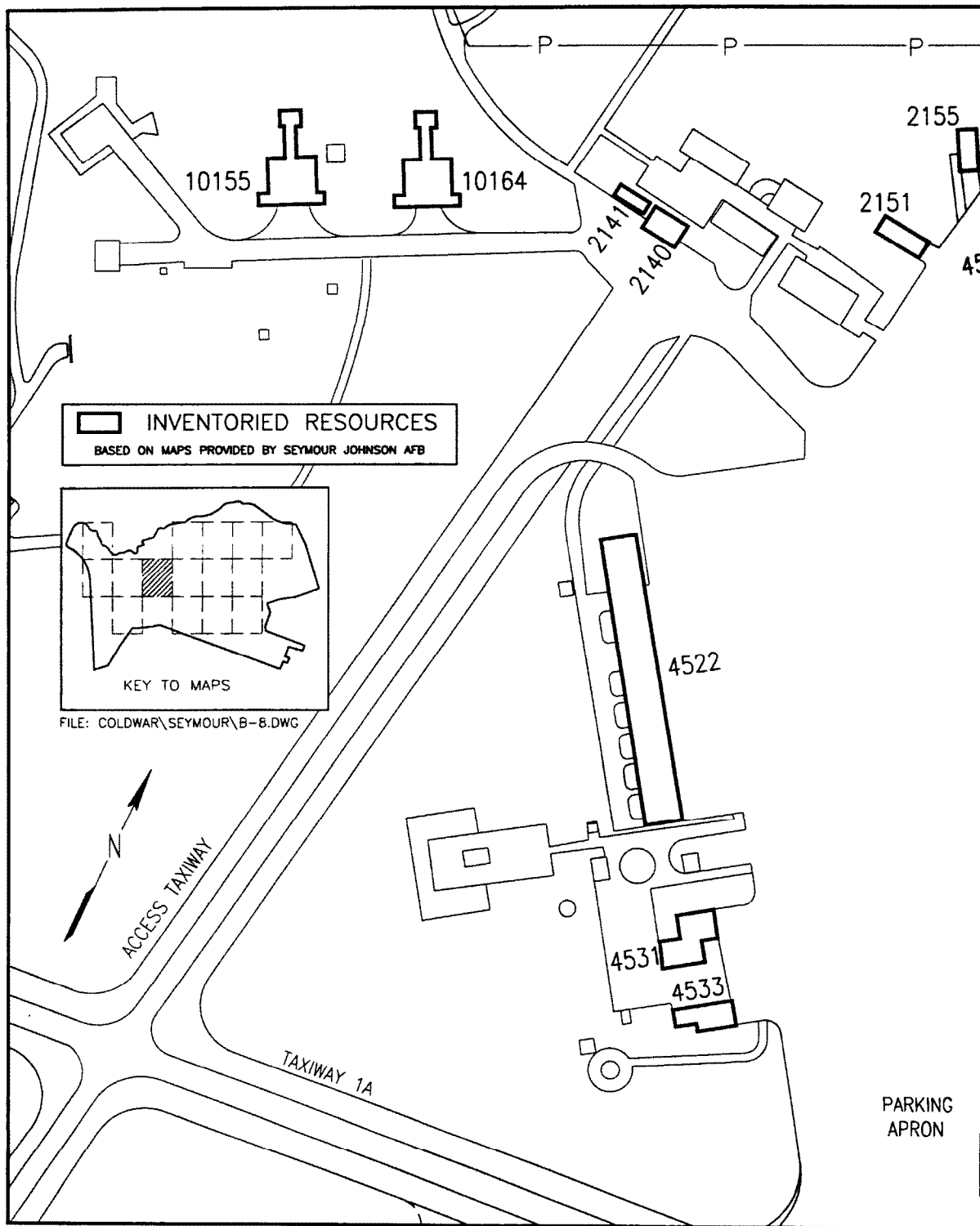


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 15).

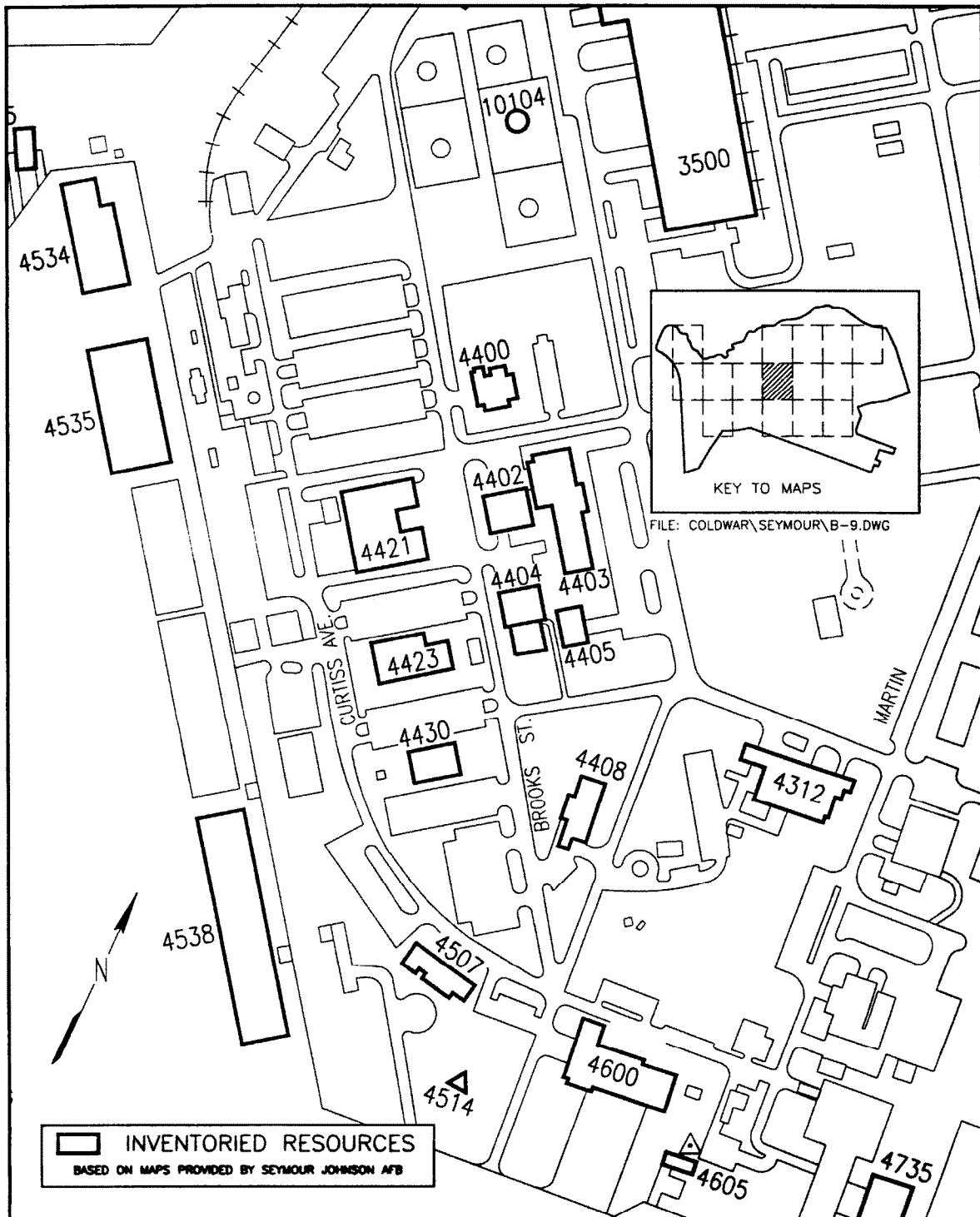


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 15).

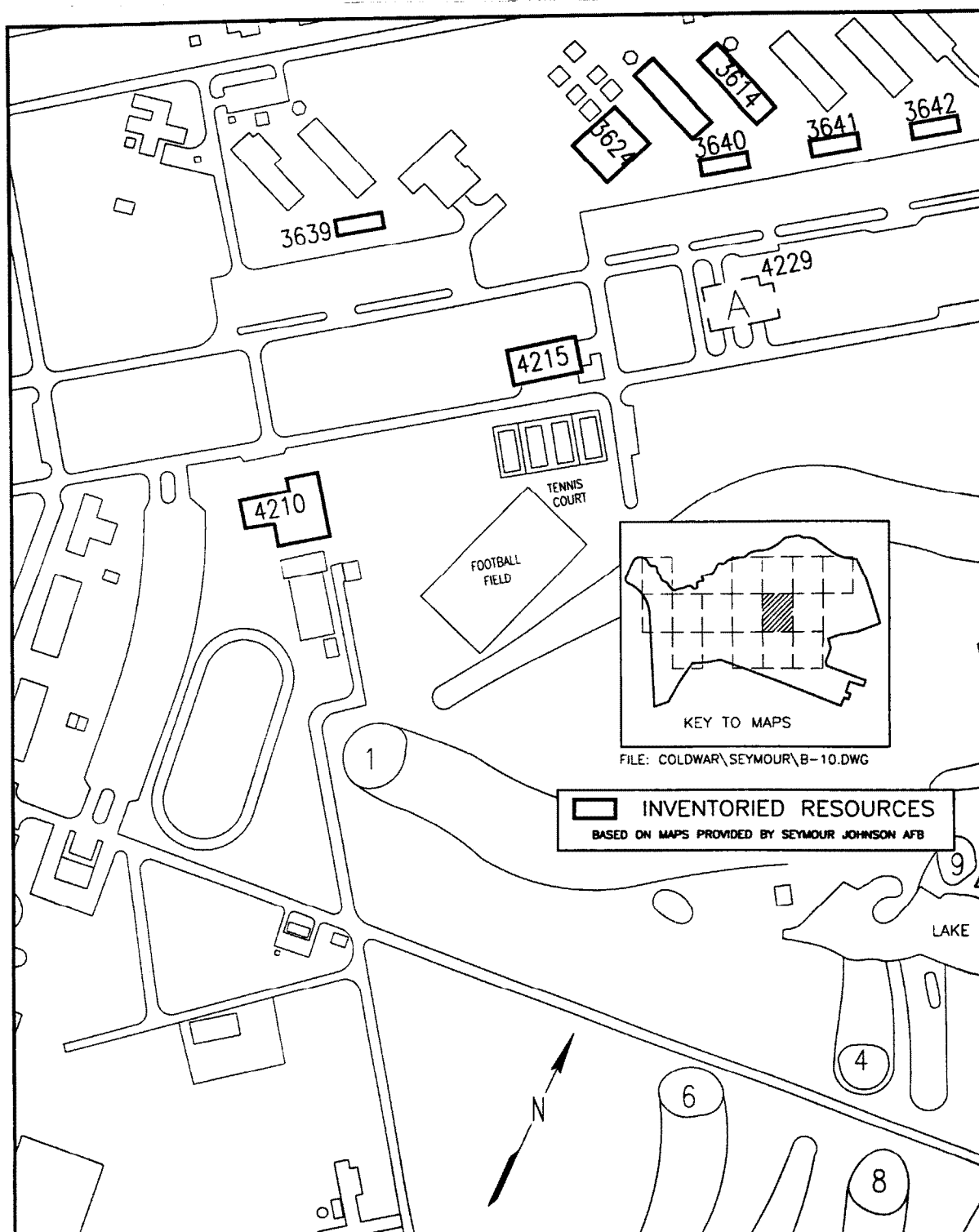


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 10 of 15).

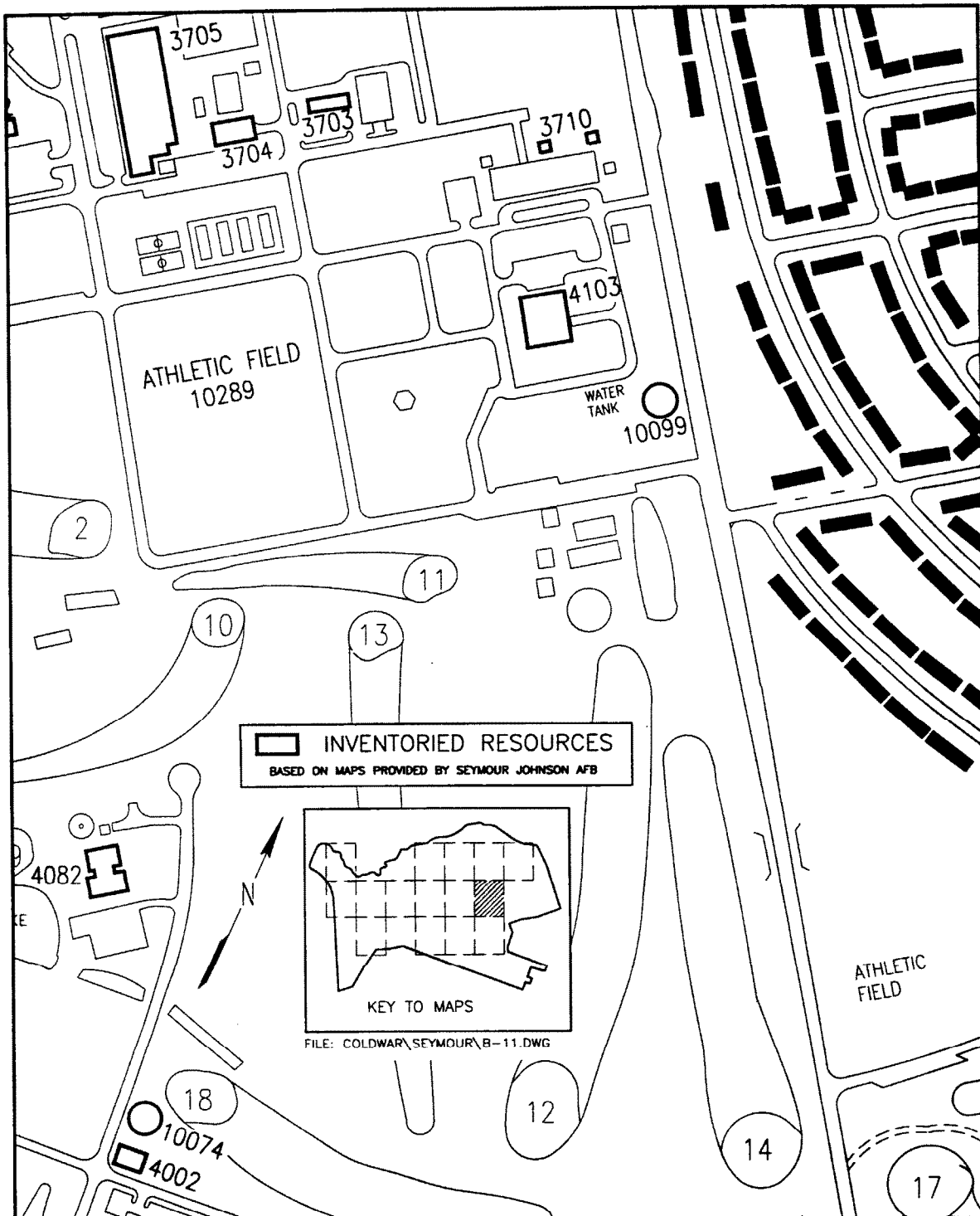


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 11 of 15).

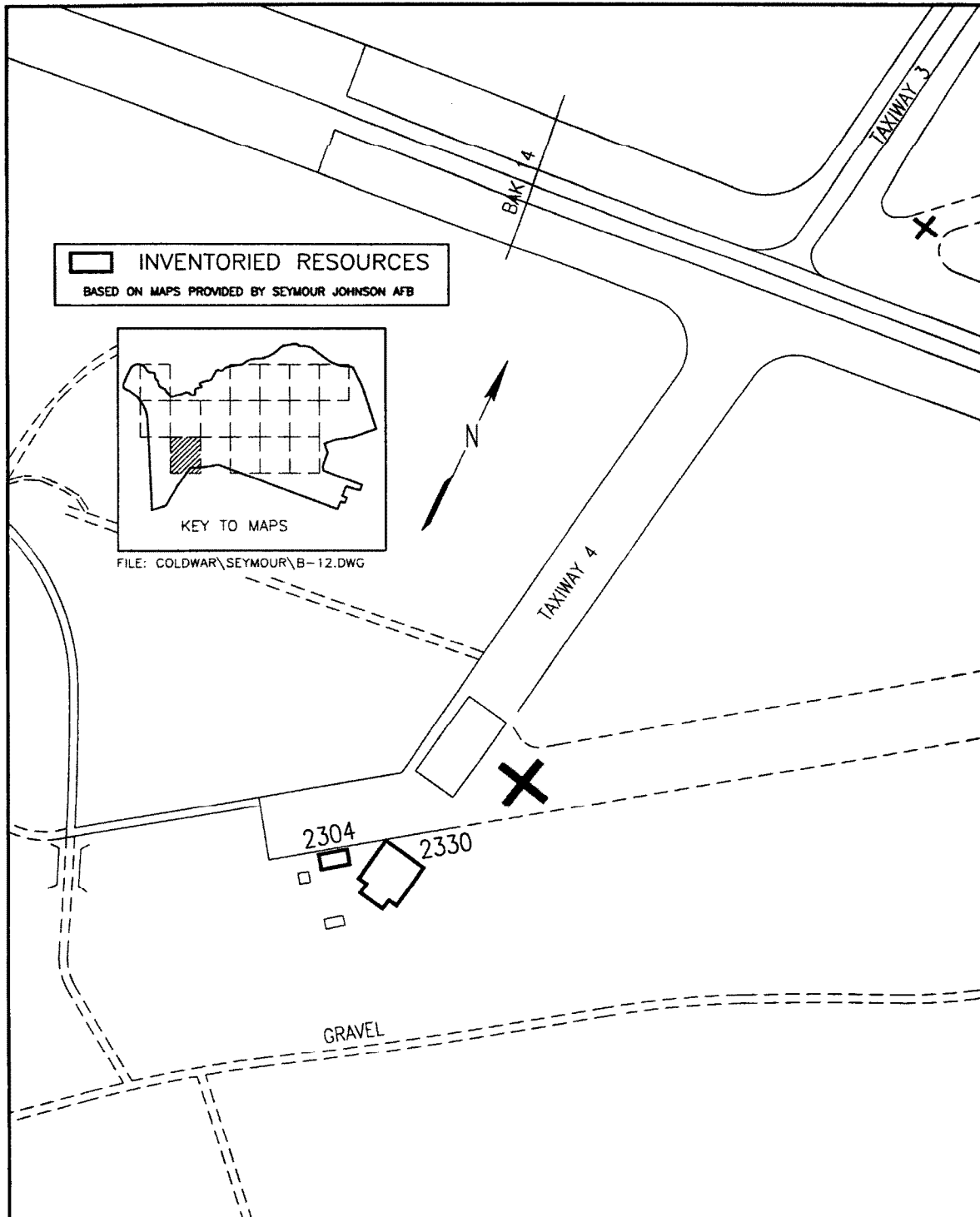


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 12 of 15).

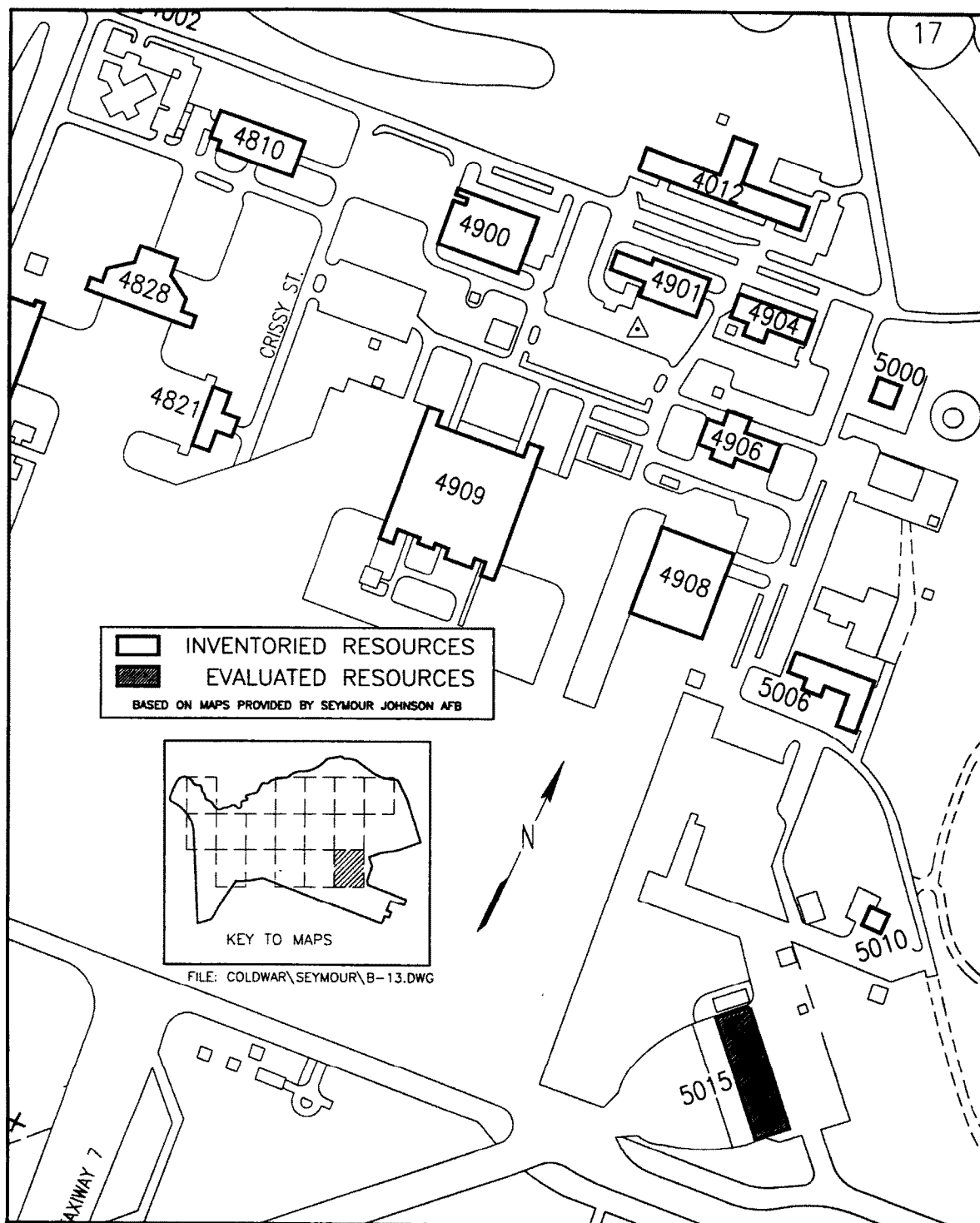


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 13 of 15).

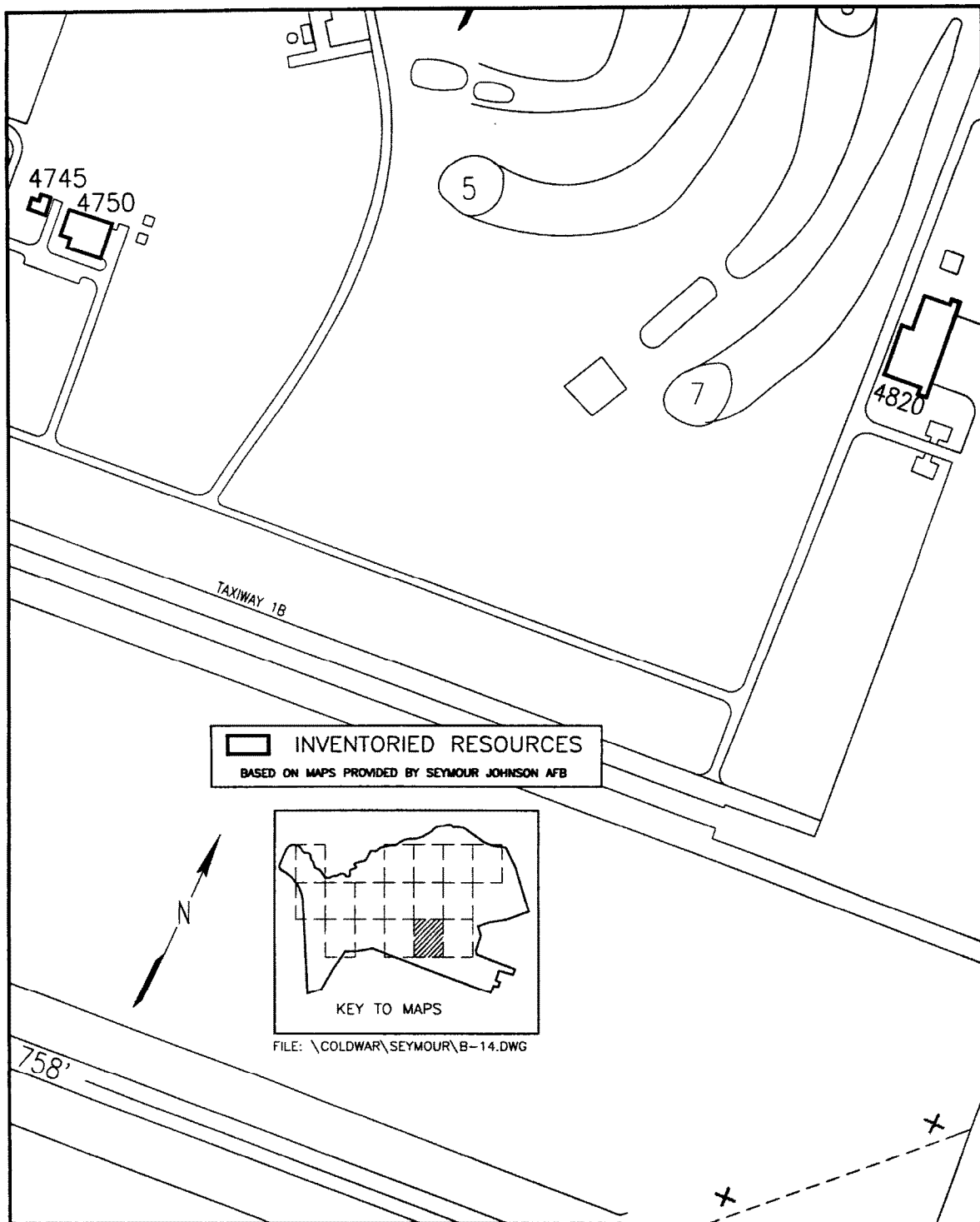


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 14 of 15).

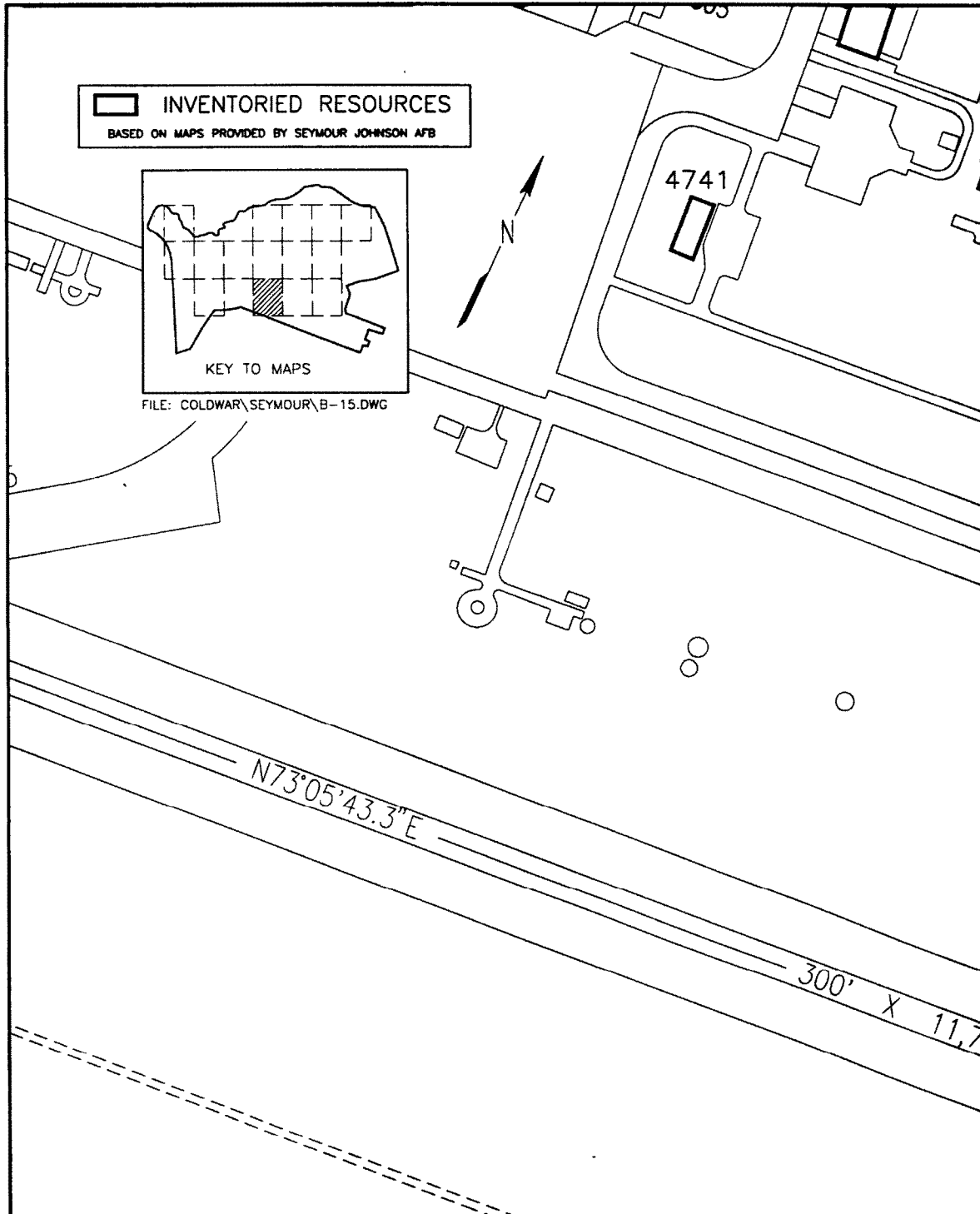
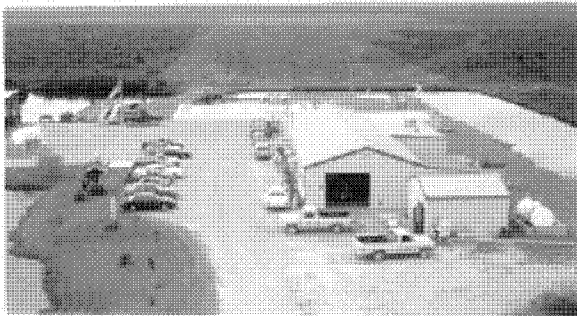


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 15 of 15).

APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



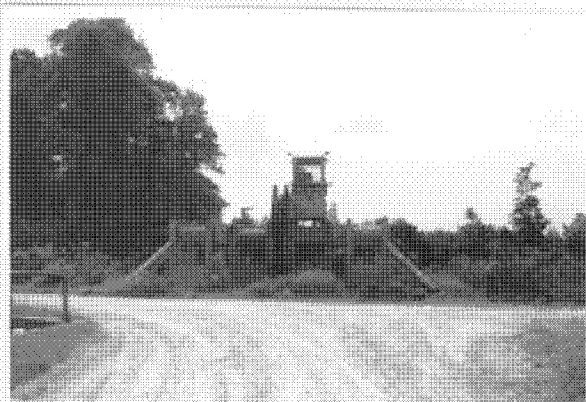
Resource No. 21001, Real Property No. 10
Special Operations (Dare County Bombing
Range)



Resource No. 21003, Real Property No. 10001
Western Scoring Tower (Dare County Bombing
Range)



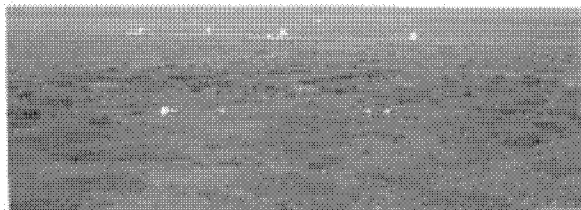
Resource Nos. 21004 and 21005, Real Property
Nos. 12 and 20, Special Operations and
Communications Transmitter/Receiver (Dare
County Bombing Range)



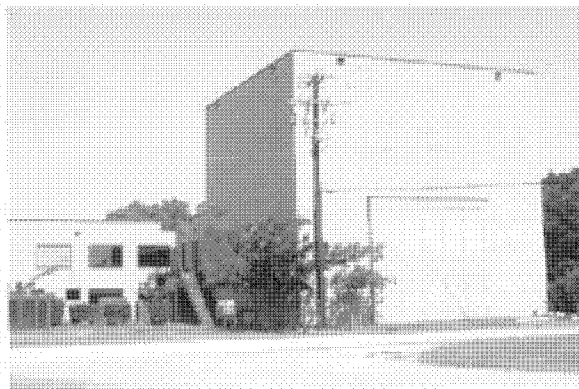
Resource No. 21006, Real Property No. (none)
Land Compressor Machine (Dare County
Bombing Range)



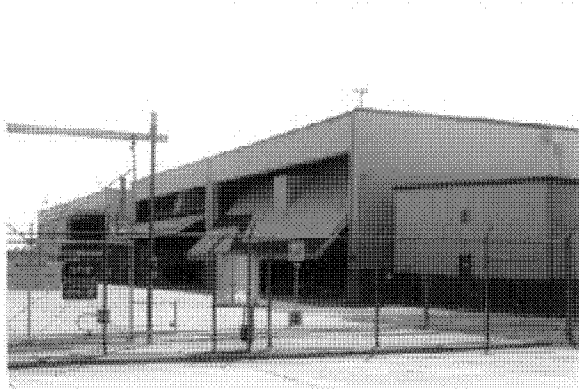
Resource No. 21007, Real Property No. (none)
Entrance Sign (Dare County Bombing Range)



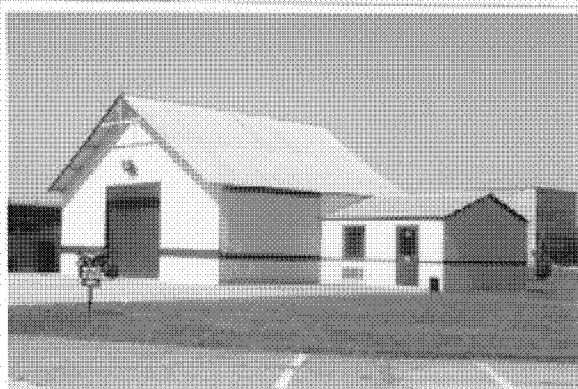
Resource No. 21008, Real Property No. (none)
Strafing Targets (Dare County Bombing Range)



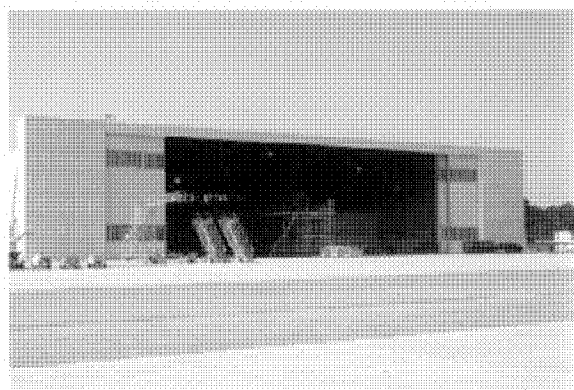
Resource No. 21009, Real Property No. 5006
Flight Simulator Training (KC-10)



Resource No. 21010, Real Property No. 5015
Maintenance Hangar (Old Alert Facility)



Resource No. 21011, Real Property No. 5010
A/SE Storage Facility and Shop



Resource No. 21012, Real Property No. 4909
Maintenance Hangar



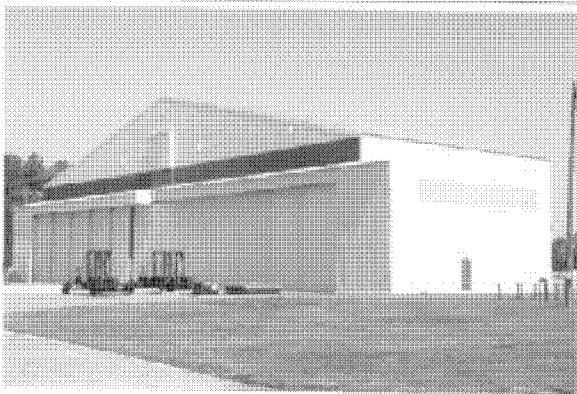
Resource No. 21013, Real Property No. 4908
Base Warehouse Supply and Equipment



Resource No. 21014, Real Property No. 4820
Munitions Load Crew Training



Resource No. 21015, Real Property No. 4828
Maintenance Dock Fuel System



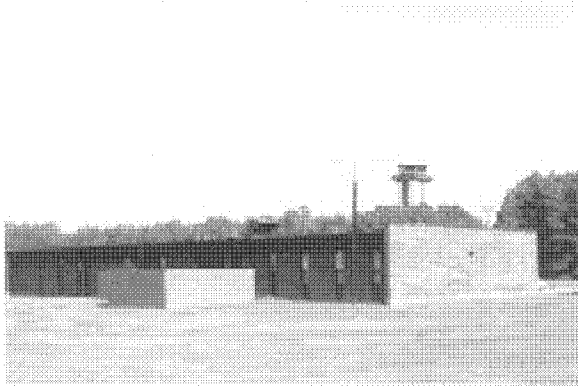
Resource No. 21016, Real Property No. 4821
Base Warehouse Supply and Equipment



Resource No. 21018, Real Property No. 4750
Rapeon Center



Resource No. 21017, Real Property No. 4745
Control Tower



Resource No. 21019, Real Property No. 4741
Wing Headquarters (Passenger Terminal)



Resource No. 21020, Real Property No. 4735
Fuel System Maintenance Dock



Resource No. 21021, Real Property No. 4605
General Purpose Aircraft Shop (Transient Alert Facility)



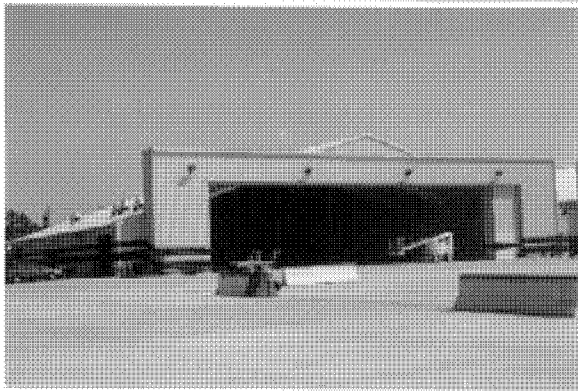
Resource No. 21022, Real Property No. 4600
Fire Station



Resource No. 21023, Real Property No. 4507
Base Operations



Resource No. 21024, Real Property No. 4535
Small Aircraft Maintenance Dock



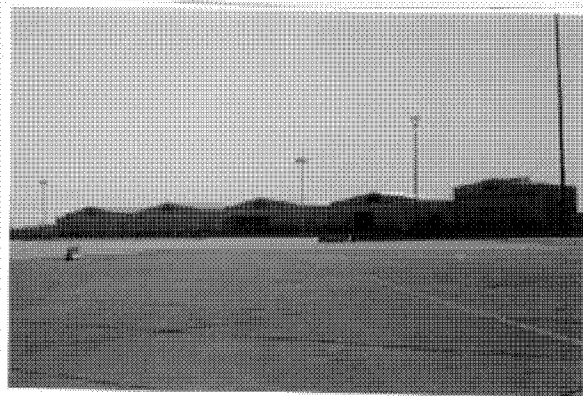
Resource No. 21025, Real Property No. 4534
General Purpose Aircraft Shop



Resource No. 21026, Real Property No. 2151
Non-destructive Shop (X-Ray Shop)



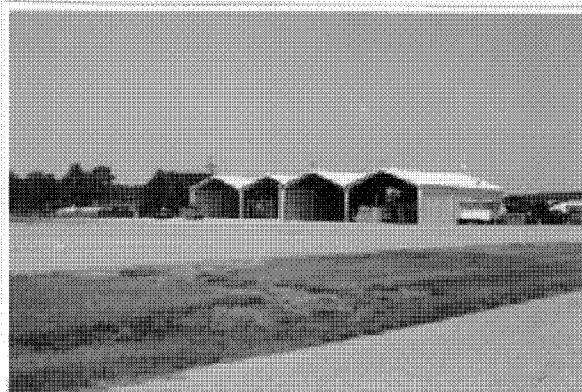
Resource No. 21027, Real Property No. 2155
Avionics Shop



Resource No. 21028, Real Property No. 4522
Small Aircraft Maintenance Dock



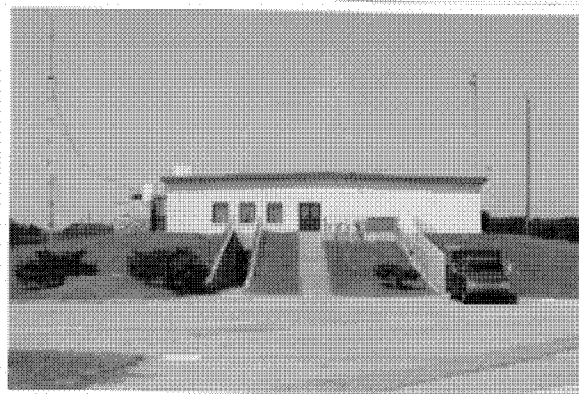
Resource Nos. 21029 and 21030, Real Property
Nos. 4531 and 4533, Aircraft Corrosion Control
and A/SE Maintenance Shop



Resource Nos. 21031 and 21032, Real Property
No. 2140 and 2141, A/SE Maintenance Shops



Resource Nos. 21033 and 21034, Real Property Nos. 10155 and 10164, Power Check Pads (Test Cells)



Resource No. 21035, Real Property No. 2130 Crew Readiness Facility



Resource No. 21036, Real Property No. (none) Alert Facility Security Tower



Resource Nos. 21037 and 21038, Real Property No. 2330 and 2304, Small Arms Range System and Combat Arms Training Maintenance



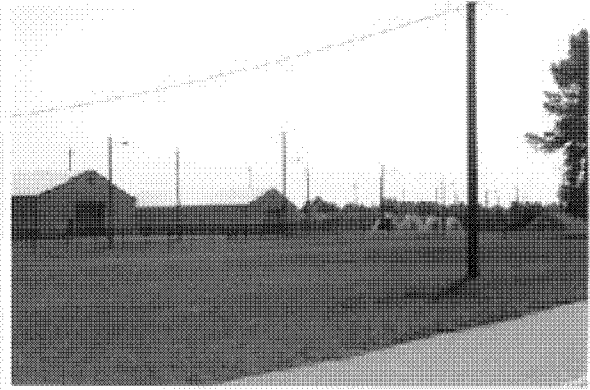
Resource No. 21039, Real Property No. 2121 Jet Engine Maintenance Shop



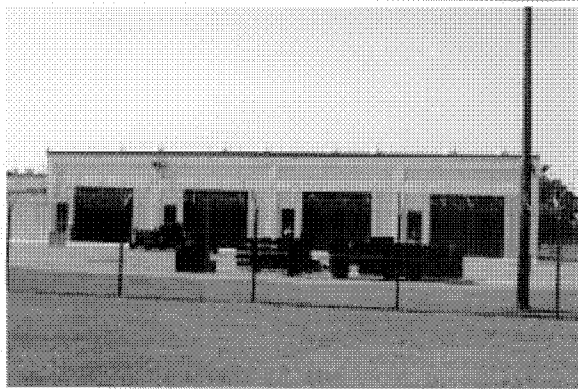
Resource No. 21040, Real Property No. 4522 Small Aircraft Maintenance Dock



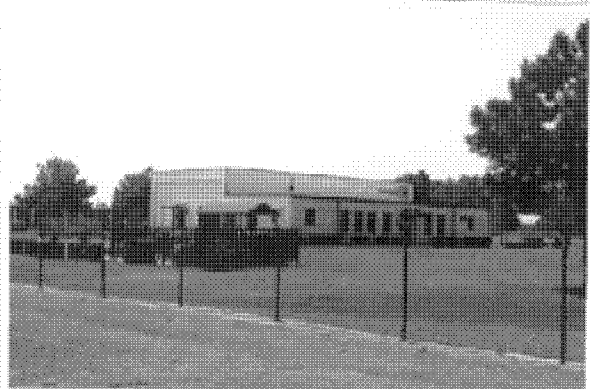
Resource No. 21041, Real Property Nos. 2221 and 2222, Storage Igloos



Resource No. 21042, Real Property Nos. 10348, 10349, and 10350, Storage Igloos



Resource No. 21043, Real Property No. 2202 Conventional Munitions Shop



Resource No. 21044, Real Property No. 2201 Conventional Munitions Shop



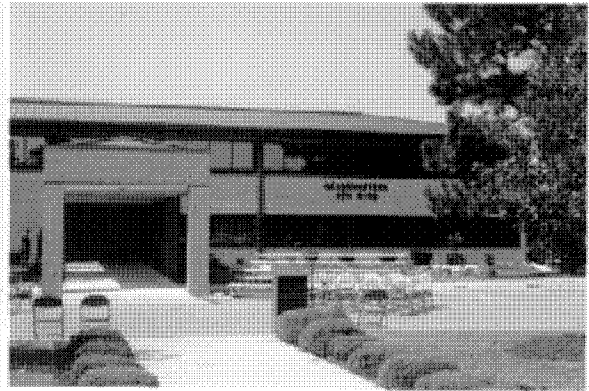
Resource No. 21045, Real Property No. 2204 Multicubicle Magazine Storage



Resource No. 21046, Real Property No. 10262 Monument/Memorial (F-4 Phantom II)



Resource No. 21047, Real Property No. 2903
4th Support Group Headquarters



Resource No. 21048, Real Property No. 2902
4th Wing Headquarters



Resource No. 21049, Real Property No. 2906
Monument/Memorial (F-105 *Thunderchief*)



Resource No. 21050, Real Property No. 10288
Main Gate Sign



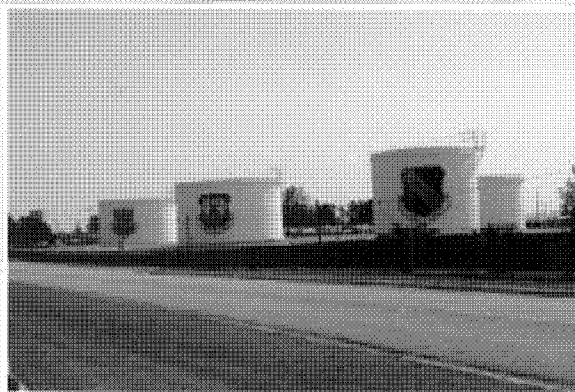
Resource No. 21051, Real Property No. 1700
Visitor Center



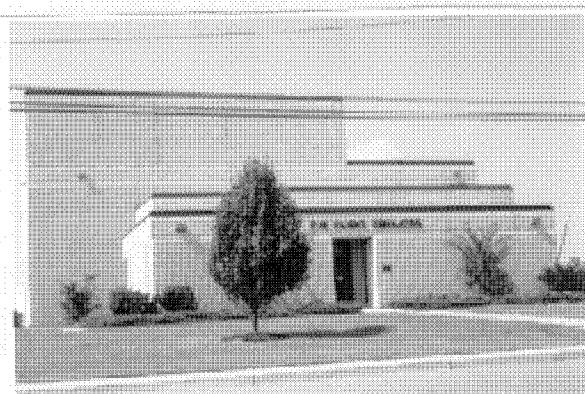
Resource No. 21052, Real Property No. 1702
Traffic Check House



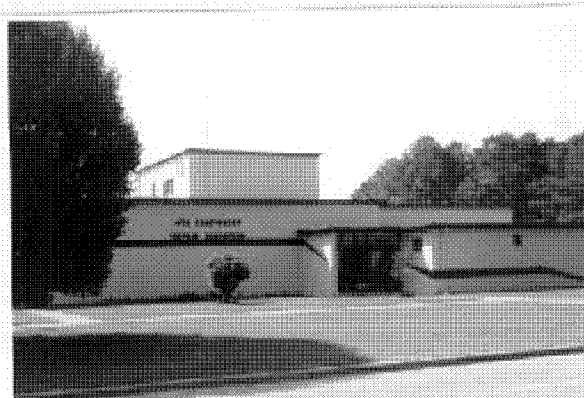
Resource No. 21053, Real Property No. 1600
Officer's Open Mess



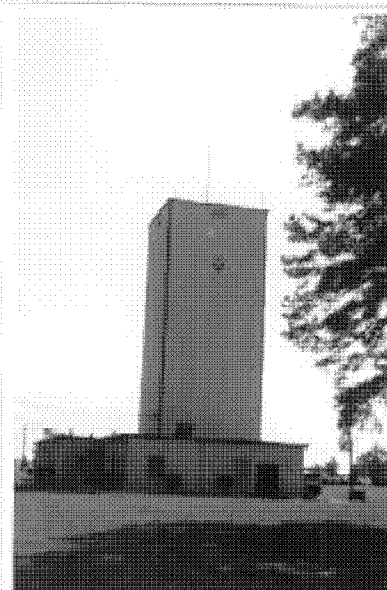
Resource No. 21054, Real Property No. 10104
Jet Fuel Storage



Resource No. 21055, Real Property No. 4400
Flight Simulator Training



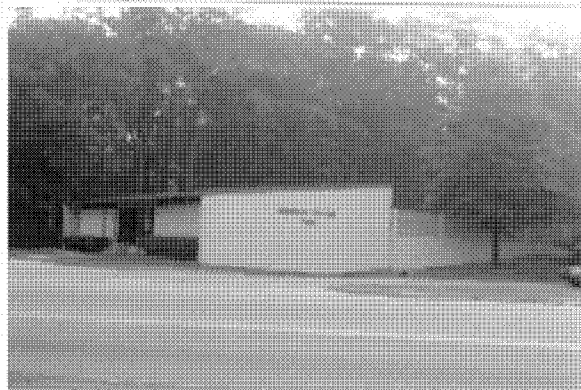
Resource No. 21057, Real Property No. 4312
Base Warehouse Supply and Equipment



Resource No. 21056, Real Property No. 4408
Survey Equipment Shop (Parachute Drying
Tower)



Resource No. 21059, Real Property No. 3804
Visiting Officer's Quarters



Resource No. 21060, Real Property No. 1603
Swimmer's Bath House



Resource No. 21061, Real Property No. 206
Capehart Family Housing



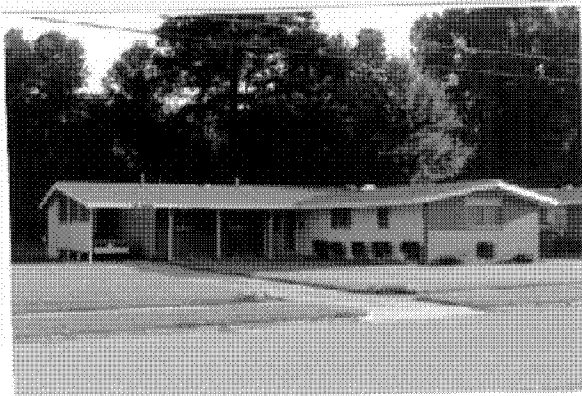
Resource No. 21062, Real Property No. 118
Capehart Family Housing



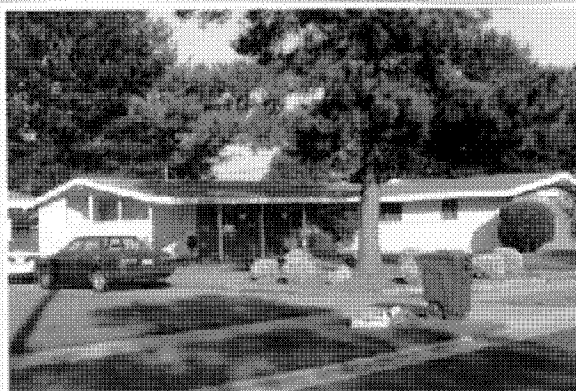
Resource No. 21063, Real Property No. (none)
Signs (USAF Housing Renovation Project)



Resource No. 21064, Real Property No. 301
Capehart Family Housing



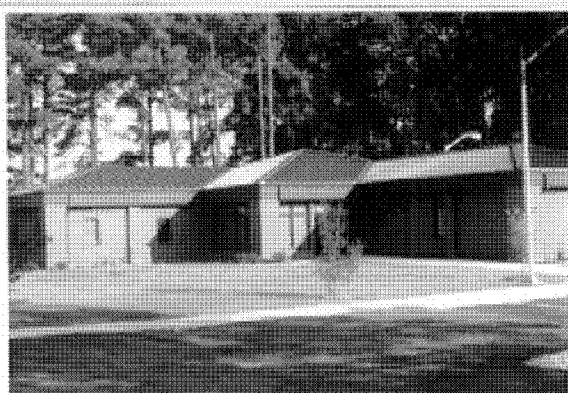
Resource No. 21065, Real Property No. 202
Capehart Family Housing



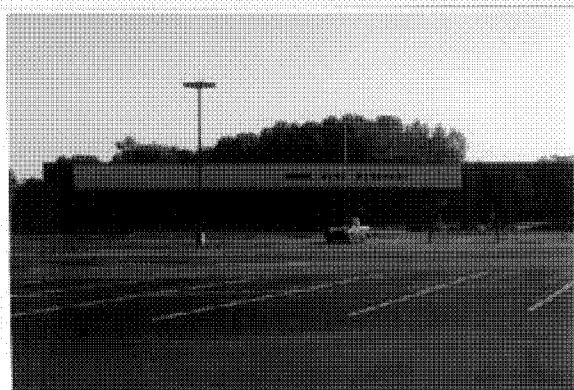
Resource No. 21066, Real Property No. 315
Capehart Family Housing



Resource No. 21067, Real Property No. 3720
Center Chapel



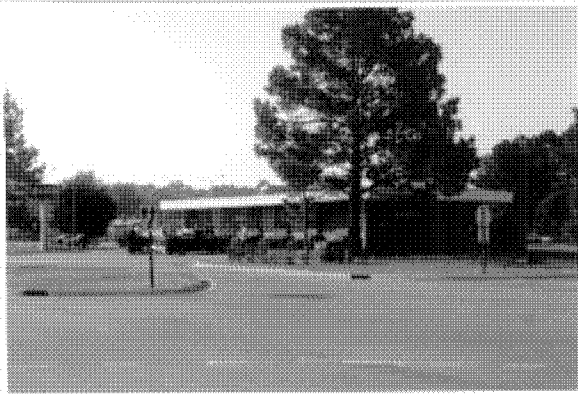
Resource No. 21068, Real Property No. 3801
Family Housing Management Office



Resource No. 21069, Real Property No. 3735
Exchange Sales Store



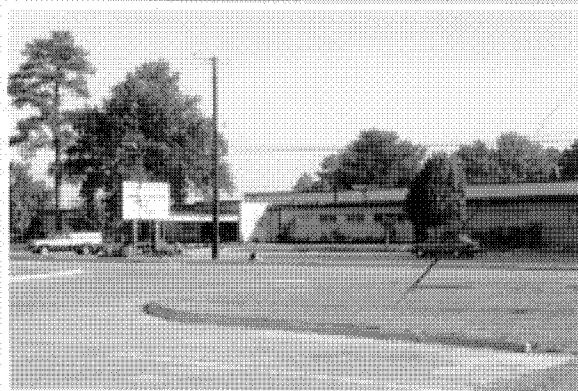
Resource No. 21070, Real Property No. 3740
Base Theater



Resource No. 21071, Real Property No. 3725
Bank Branch



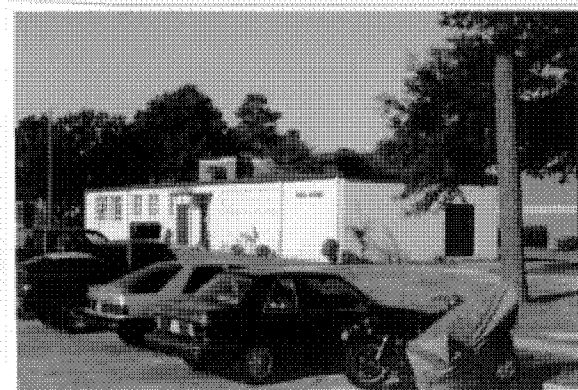
Resource No. 21072, Real Property No. 3730
Bowling Center



Resource No. 21073, Real Property No. 3705
NCO Open Mess



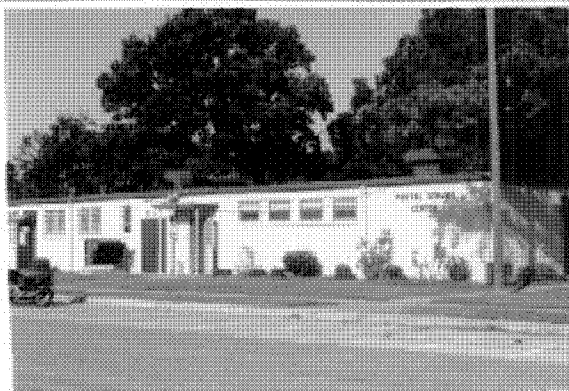
Resource No. 21074, Real Property No. 3642
Base Package Store



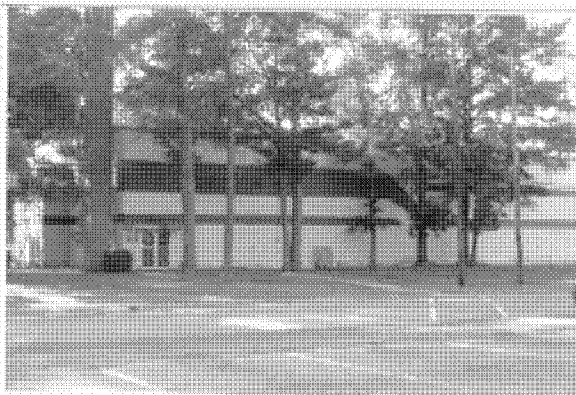
Resource No. 21075, Real Property No. 3641
Social Action Facility



Resource No. 21076, Real Property No. 3614
Airman's Dormitory



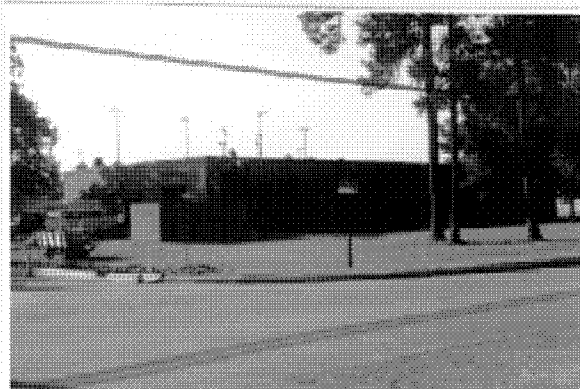
Resource No. 21077, Real Property No. 3640
Central Post Office



Resource No. 21078, Real Property No. 4229
Housing Supply & Storage Facility



Resource No. 21079, Real Property No. 3624
Education Center



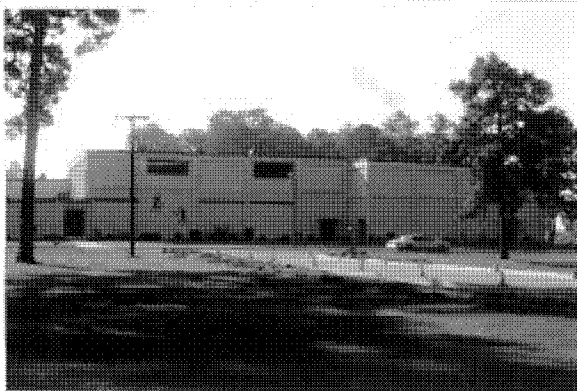
Resource No. 21080, Real Property No. 4215
Arts and Crafts Center



Resource No. 21081, Real Property No. 4229
Housing Supply & Storage Facility



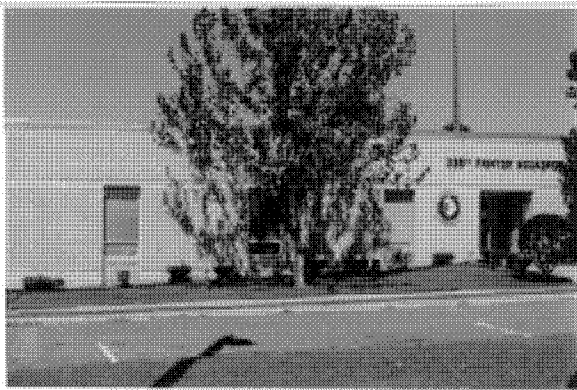
Resource No. 21082, Real Property No. 3639
Credit Union



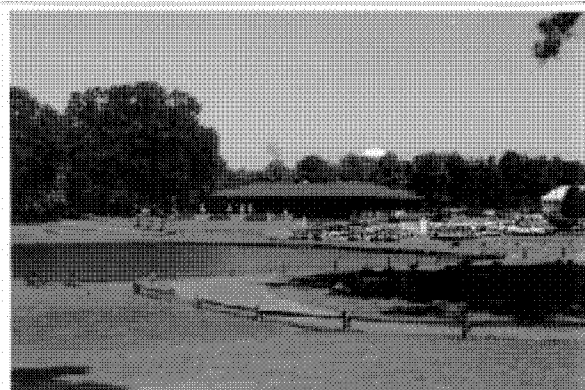
Resource No. 21083, Real Property No. 4210
Gymnasium



Resource No. 21084, Real Property No. 4423
334th Fighter Squadron Operations



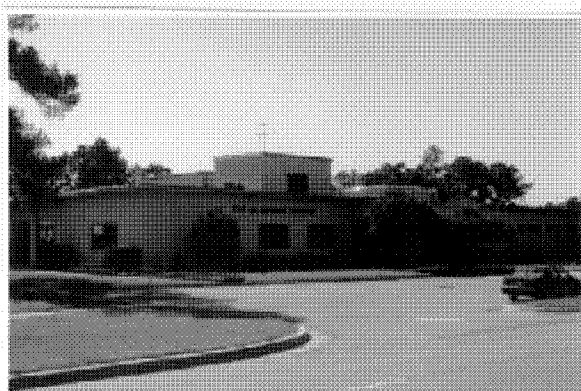
Resource No. 21085, Real Property No. 4421
335th Fighter Squadron Operations



Resource No. 21086, Real Property No. 4082
Golf Clubhouse



Resource No. 21087, Real Property No. 4810
Aircraft General Purpose Shop



Resource No. 21088, Real Property No. 4900
Reserve Forces Operational Training (77th
AREF Squadron)



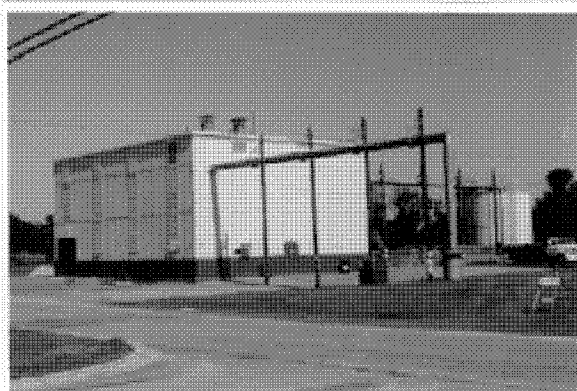
Resource No. 21089, Real Property No. 4012
Squadron Operations (711th & 744th AREF
Squadrons)



Resource No. 21090, Real Property No. 4904
Wing Headquarters (4th Logistics Group)



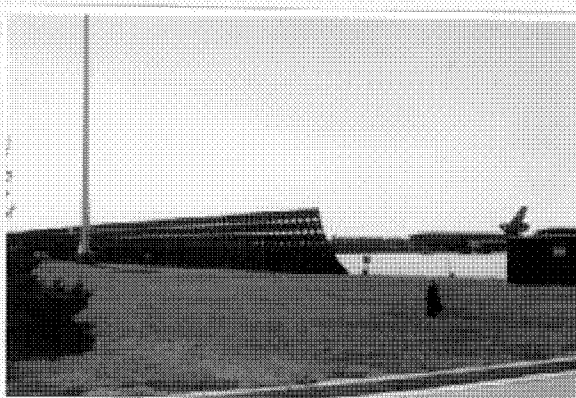
Resource No. 21091, Real Property No. 4901
Wing Headquarters (4th Operations Group)



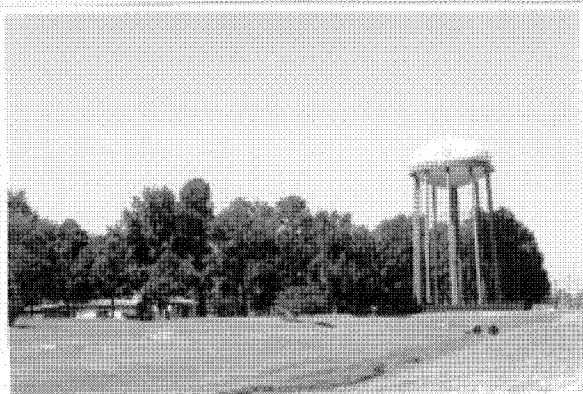
Resource No. 21092, Real Property 5000
Heating Facility



Resource No. 21093, Real Property No. 4906
Squadron Operations



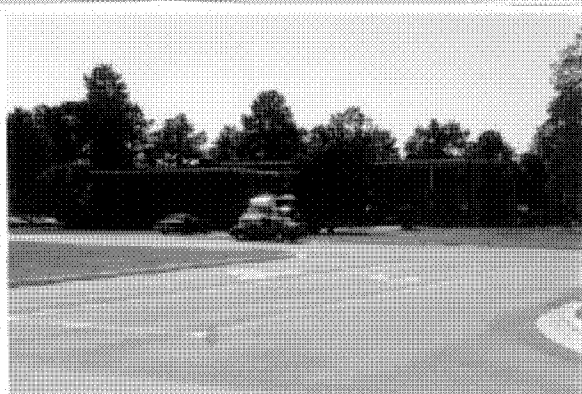
Resource No. 21094, Real Property No. (none)
Blast Deflectors (with DC-10 aircraft)



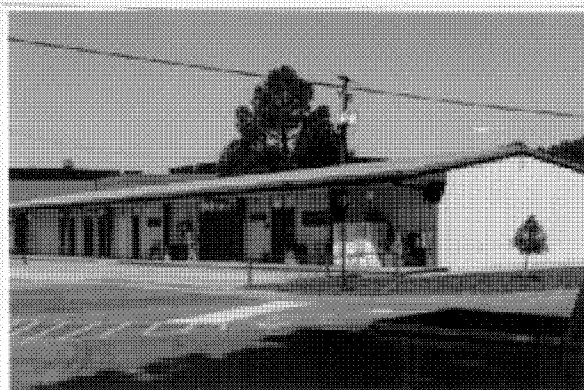
Resource No. 21095, Real Property No. 10099
Water Tank



Resource No. 21096, Real Property No. 3722
Commissary



Resource No. 21097, Real Property No. 3728
Recreation Center



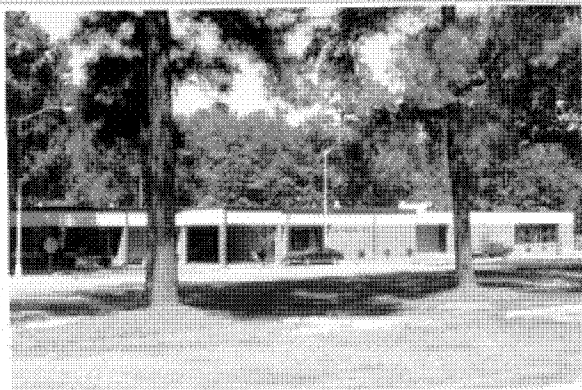
Resource No. 21098, Real Property No. 3708
Exchange Service Outlet (Shoppette)



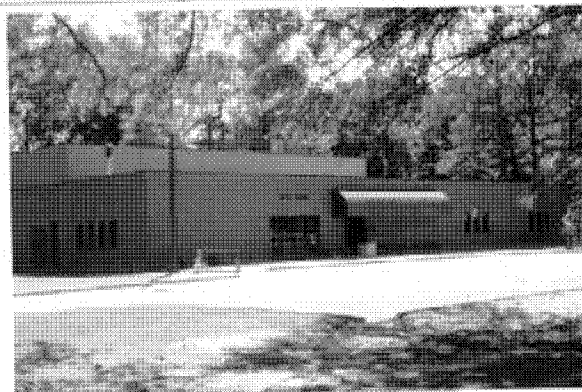
Resource No. 21099, Real Property No. 3702
Exchange Service Outlet (Laundry)



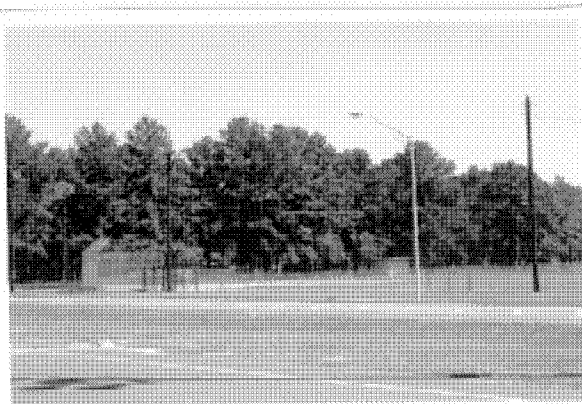
Resource No. 21100, Real Property No. 3703
Exchange Service Station



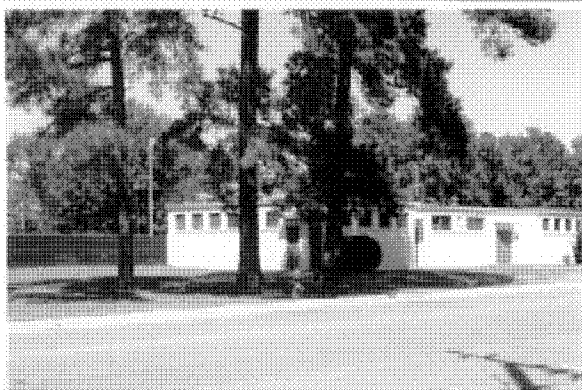
Resource No. 21101, Real Property No. 3710
Child Care Center



Resource No. 21102, Real Property No. 4103
Youth Center



Resource No. 21103, Real Property No. 10289
Baseball Field



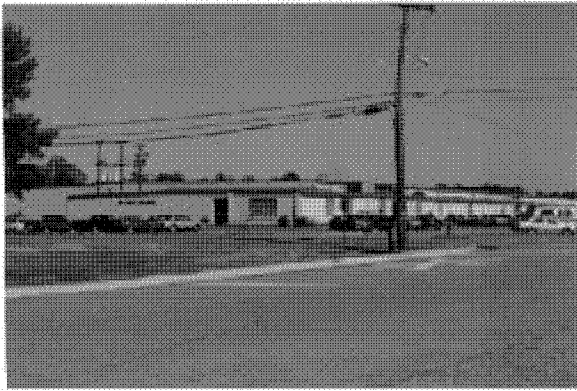
Resource No. 21104, Real Property No. 3704
Swimmer's Bath House



Resource No. 21106, Real Property No. 3300
Base Engineering Administration



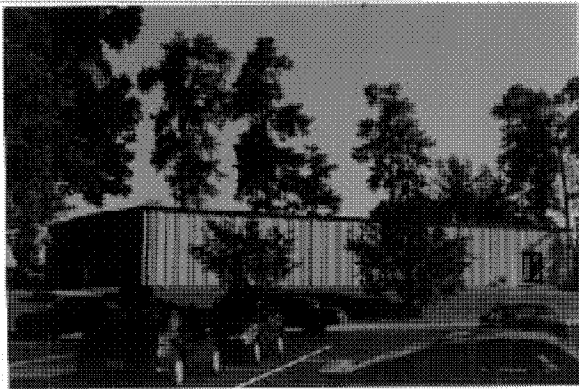
Resource No. 21107, Real Property No. 3312
Base Maintenance Shop (Self Help Store)



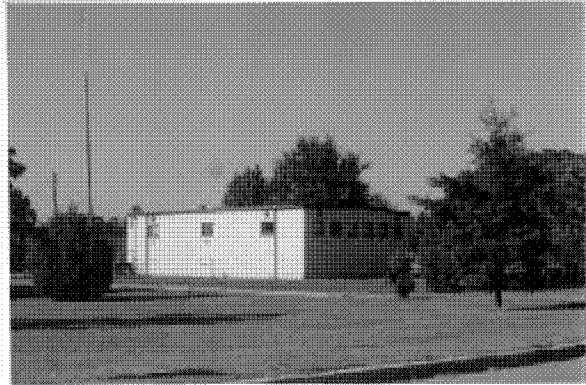
Resource No. 21108, Real Property No. 3500
Base Warehouse, Supply and Equipment (4th
Supply Squadron)



Resource No. 21109, Real Property No. 4404
Explosive Ordnance Disposal



Resource No. 21110, Real Property No. 4430
Target Intelligence Training



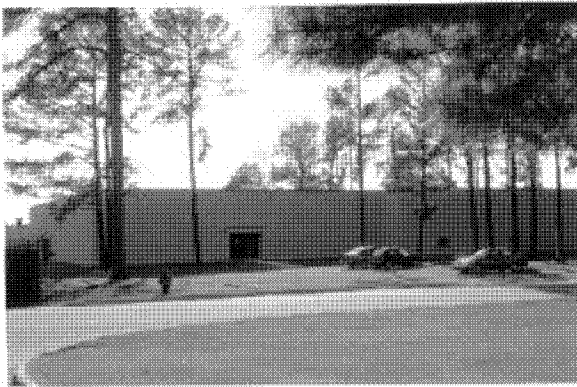
Resource No. 21111, Real Property No. 4405
Explosive Ordnance Disposal



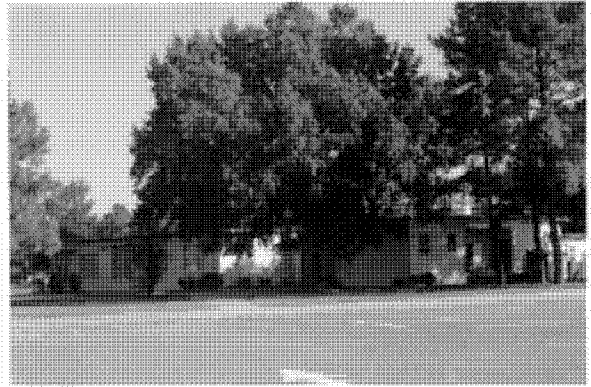
Resource No. 21112, Real Property No. 4403
Field Training Facility



Resource No. 21113, Real Property No. 4402
Wing Headquarters



Resource No. 21114, Real Property No. 3506
Base Covered Storage Facility (SVS Equipment
Rental)



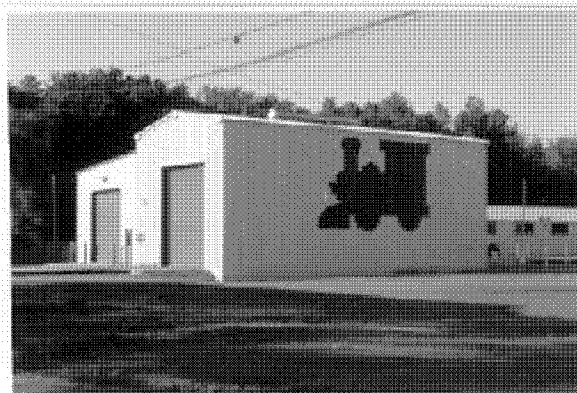
Resource No. 21115, Real Property No. 3621
Visual Information Support Center



Resource No. 21116, Real Property No. 3622
Recreation Library



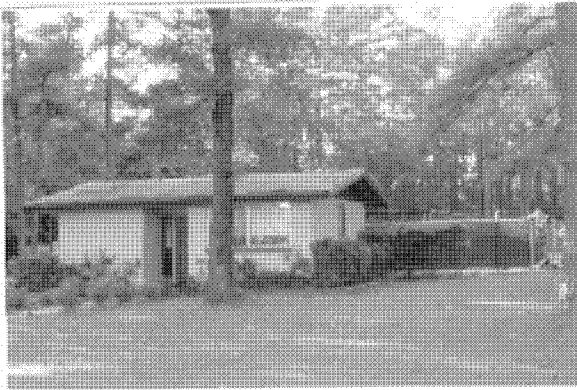
Resource No. 21117, Real Property No. 3100
Vehicle Maintenance Shop



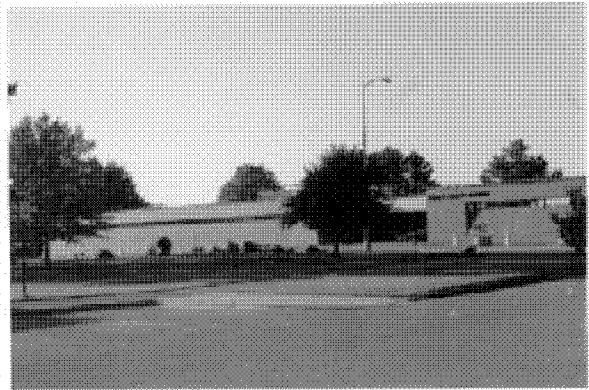
Resource No. 21118, Real Property No. 2505
Locomotive Shop and Shelter



Resource No. 21119, Real Property No. 10393
Family Campground



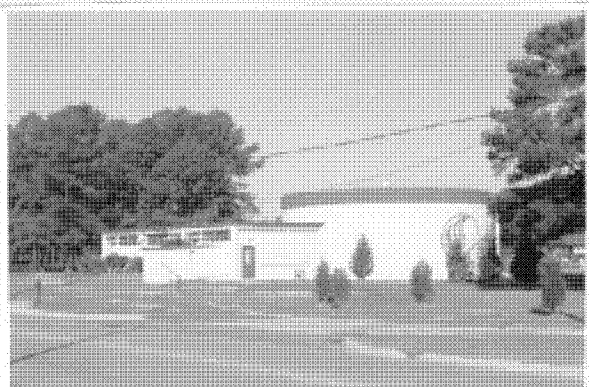
Resource No. 21120, Real Property No. 1905
Security Police-Kennel Support Building



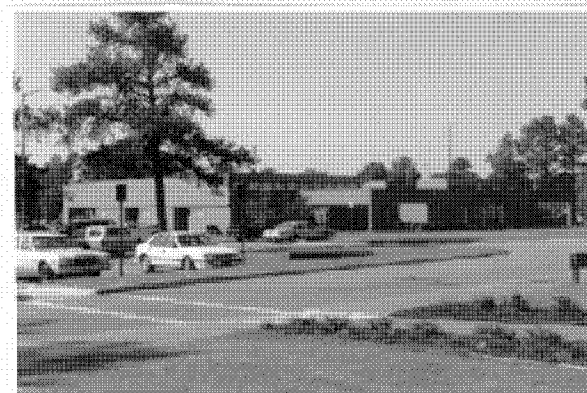
Resource No. 21121, Real Property No. 2800
Composite Medical Facility



Resource No. 21122, Real Property No. 4818
Reserve Forces Operational Training



Resource No. 21123, Real Property Nos. 4002
and 10074, Water Pump Station and Fire
Protection Water Storage



Resource No. 21124, Real Property No. 2805
Dental Clinic

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT SEYMOUR JOHNSON AFB

Resource Number: 21010

Property Description: Maintenance hangar
Associated Property: 21009, 21013, 21093
Non-Inventoried Association: 21009 (5006) was the headquarters for Air Defense Command (ADC); 21013 (4908) was the hangar that maintained alert aircraft for ADC; and 21093 (4906) was the missile storage building for ADC's alert aircraft.

Sub-installation:
Address: 1615 Refueling Plaza, Seymour Johnson AFB, NC
Base Map Date: 1/10/93
Base Map Building Number: 5015

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Fighter Alert Facility

Statement of Significance: This facility housed the Alert Facility for Air Defense Command (ADC) between 1958 and 1973. ADC protected the sovereignty of United States air space on the east coast by interdicting and escorting Soviet bombers when they proceeded too close to American air space.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	19
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	This facility played an important role in protecting the sovereignty of American air space on the east coast; it housed air crews on alert to interdict enemy air craft during one of the most sensitive periods of the Cold War era, i.e., the Cuban Crisis.

Importance: Exceptional
Eligibility Eligible

Height: 30
Square Footage: 22753
Original Planned Duration: Permanent
Existing Use: Small Aircraft Maintenance Hangar
Other Use/Dates: Alert Facility for Air Defense Command 1958-1973.
Helicopter Rescue and Recovery n.d. Currently:
Extension of base fire department and backup for
inflight emergencies.
Comments on Use:
Primary Building Materials: Steel Frame
Character Defining Features: This building is typical of a small aircraft hangar
built to facilitate fighter aircraft. The center
section connecting the two main hangar areas consists
of two floors adapted for sustaining alert crews on
duty for sleeping, eating, and minimum recreation.

Resource Number: 21035

Property Description: Crew Readiness (Alert Facility)
Associated Property: 21091
Non-Inventoried Association: This building housed intelligence and planning for SAC aircrews standing Alert duty.
Sub-installation:
Address: 1200 Alert Apron
Base Map Date: 1/10/93
Base Map Building Number: 2130

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Bomber/Tanker Alert Facility

Statement of Significance: This facility played an integral role in the deployment of alert aircrews and aircraft. The building is specially designed to facilitate rapid egress in the event of national emergencies due to attack or during operational readiness inspections during the Cold War era.

Cold War Relationship-Nat'l. Recognition:	4
Theme Relationship:	4
Temporal Phase Relationship:	3
Level of Importance:	4
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	20
Comments on Threats:	

No Further Work:	No
Stewardship:	Yes
National Register Listing:	Yes
Further Documentation:	Yes
Preservation/Conservation/Repair:	No
Comments on Resource Management:	This facility maintains its exterior architectural integrity with minimal interior modification to keep pace with technology. It embodies the feeling and association characteristic of the Cold War and the deterrence capabilities of the USAF and SAC.

Importance: Exceptional
Eligibility Eligible

Height: 10
Square Footage: 17933
Original Planned Duration: Permanent
Existing Use: This facility is currently utilized for National Airborne Operations Command (NAOP), formerly National Emergency Airborne Command Post (NEACAP) using E4B aircraft.
Other Use/Dates: This facility housed SAC B-52 Alert crews between

1959 and 1982, and KC-135 Air Refueling Squadrons from 1982 until 1991-1992 and the creation of Air Combat Command

Comments on Use: The interior of the structure has been renovated to accomodate/sleep additional pilots and aircrew members; otherwise, the building maintains its original architectural integrity.

Primary Building Materials: Poured Concrete

Character Defining Features: The building is characterized by its eight ramped entrances which facilitate rapid egress, and by its earthen berm that surrounds the lower story of the

Resource Number: 21125

Property Description: Architectural Drawing Files located in vault in CE drawing room consist of 6 banks of flat files (150 drawers). The oldest drawings are located in file drawer No. 50. Four other files are labeled (1) Base Maps; (2) Old Master Plans; (3) Master Originals; and (4) Facilities. Organization of the files varies as follows: individual buildings by number = 57; runways = 4 (numbers 78,79,84, one unnumbered); approximately 60 consist of utilities, nav. aids, sewer systems, real estate, housing, roads, railroads, landscaping, topography, electrical, fuel systems, AICUZ, etc. Drawings consist of a variety of types, including original ink on linen, vellum, mylar, and sepia.

Associated Property: Various; inside 3300

Non-Inventoried Association: Various

Sub-installation:

Address: 1095 Mitchell Ave, Seymour Johnson AFB NC

Base Map Date:

Base Map Building Number: inside 3300

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: These drawings are a record of construction and renovations completed for all buildings on base, past and present. They also can provide further information for future evaluations of extant buildings and structures on base.

Cold War Relationship-Nat'l. Recognition:	2
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	3
Percent Historic Fabric:	4
Severity of Threats:	1
Total Score for Priority Matrix:	16

Comments on Threats: Architectural Drawing Files are in a protected room adjacent to the drafting area. The collections are generally organized.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Many of these drawings date to the early 1940s and 1950s and need to be curated and stored properly to ensure that they remain in good condition for future generations.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Architectural Drawing Collection

Year of Document: Various

Period of Association: 1943 to 1980s, spanning Cold War phases I-IV

Comments on Condition: The older drawings dating to the early 1940s and 1950s need to be curated properly.

Resource Number: 21126

Property Description: Collection of wing histories, photographs, and a base newspaper collection.

Associated Property: Inside 2902

Non-Inventoried Association: None

Sub-installation:

Address: 1510 Wright Ave, Suite 130, Seymour Johnson AFB

Base Map Date:

Base Map Building Number: inside 2902

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence

Property Type: Documentary Collection

Statement of Significance: This collection details the activities of the 4th Fighter Wing at Seymour Johnson AFB. Further research into the various volumes that span 1958-1993 could provide additional insight into the activities conducted at the base in general and specific facilities in particular during the Cold War era. Photographs illustrate base development. Base newspaper describes activities of the base during the Cold War.

Cold War Relationship-Nat'l. Recognition: 2

Theme Relationship: 4

Temporal Phase Relationship: 3

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 16

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: It is recommended that the collection be preserved for posterity.

Object Condition: In Storage/Benign Neglect

Record/Document Category: Report

Year of Document: Various

Period of Association: This collection spans the period 1957 to 1993

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture and to provide research materials for the study.

Buck Abrams
Chief, Environmental Flight
4 CES/CEVN
1095 Mitchell Avenue
Seymour Johnson AFB, North Carolina 27531-2355
(919) 736-6699

Jay E. Barber
Public Affairs Officer
4 WG/PA
1510 Wright Avenue, Suite 200
Seymour Johnson AFB, North Carolina 27531-2468
(919) 736-6352 or 6353

Betsy Bissell
Real Property Officer
4 CES/CERR
1095 Mitchell Avenue
Seymour Johnson AFB, North Carolina 27531-2355
(919) 736-5485

Frederick D. Claypool
Chief, History Office
4 WG/HO
1510 Wright Avenue, Suite 130
Seymour Johnson AFB, North Carolina 27531-2468
(919) 736-5413

James Cunningham
Deputy Base Civil Engineer
4 CES/CD
1095 Mitchell Avenue
Seymour Johnson AFB, North Carolina 27531-2355
(919) 736-5512

Gordon Harrall
Lead Architectural/Structural/Civil Designer
4 CES/CEEE
1095 Mitchell Avenue
Seymour Johnson AFB, North Carolina 27531-2355
(919) 736-5515 or 5514

SSgt McKnight
Facility Security Officer
4 SPS/SPAIP
1585 S. Andrews Street
Seymour Johnson AFB, North Carolina 27531
(919) 736-5701

Larry S. Pickett
Chief, Airspace and Range Management
4 OSS/OSTA
1055 Arnold Avenue
Seymour Johnson AFB, North Carolina 27531
(919) 736-6351

SrA William G. Wood
Auto CAD
4 CES/CEEE
1095 Mitchell Avenue
Seymour Johnson AFB, North Carolina 27531-2355
(919) 736-5512

INFORMAL INTERVIEWS

While visiting the base, the Mariah field team informally interviewed the following people identified by contacts as possessing extensive knowledge of the base's history and Cold War context:

Frederick D. Claypool, Chief, History Office, September 29 and October 3, 1994

James Cunningham, Deputy Base Civil Engineer, October 3, 1994

Gordon Harrall, Lead Architectural/Structural/Civil Designer, October 3 and 4, 1994

Larry S. Pickett, Chief, Airspace and Range Management, October 3, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-25: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT SHAW AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**R. Blake Roxlau
Karen Lewis
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

July 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Mariah Associates, Inc. conducted a cultural resource inventory at Shaw Air Force Base, South Carolina, between December 8 and 13, 1994 to identify extant Cold War resources important to the base, its history, and its Cold War mission as part of the Air Combat Command Cold War Study for the ongoing Department of Defense Legacy Program. Environmental scientists R. Blake Roxlau and Karen Lewis comprised the field team.

Information was gathered at the base from the Wing Historian, the Drawing Room staff, and the Civil Engineering, Real Property, and Public Affairs Offices. On-site inspections were also conducted. A photographic reconnaissance of the base was conducted to document Cold War properties as well as representative architecture on the base. During this research, 127 resources were inventoried.

During the course of the inventory, one resource, a Documentary Collection, was selected for documentation and evaluation due to its importance within the base Cold War context. This resource illustrates the development of the base throughout the Cold War era. Recommendations for the management of this resource include further documentation, stewardship, and conservation.

LIST OF ACRONYMS

AAFBU	- Army Air Forces Base Unit
ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AGE	- Air Ground Equipment
CCTG	- Combat Crew Training Group
ConAC	- Continental Air Command
CRS	- Component Repair Squadron
DoD	- Department of Defense
EMS	- Equipment Maintenance Squadron
FS	- Fighter Squadron
FTD	- Field Training Detachment
FW	- Fighter Wing
HABS	- Historic American Buildings Survey
LOX	- Liquid Oxygen
MAC	- Military Airlift Command
Mariah	- Mariah Associates, Inc.
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
OCONUS	- Off the Continental United States
POL	- Petroleum, Oils, and Lubricants
POW	- Prisoner of War
SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Officer
START	- Strategic Arms Reduction Talks
TAC	- Tactical Air Command
TACAN	- Tactical Air Navigation Station
TARC	- Tactical Air Reconnaissance Center
TEWTS	- Tactical Electronic Warfare Training Squadron
TFG	- Tactical Fighter Group
TFS	- Tactical Fighter Squadron
TFW	- Tactical Fighter Wing
TRG	- Tactical Reconnaissance Group
TRS	- Tactical Reconnaissance Squadron
TRTS	- Tactical Reconnaissance Training Squadron
TRW	- Tactical Reconnaissance Wing
USAF	- United States Air Force
WRSK	- War Readiness Spares Kit

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iii
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	4
2.3 CURRENT BASE LAYOUT	6
2.4 BASE LAND USE	6
3.0 HISTORICAL OVERVIEW	12
3.1 BASE HISTORY AND COLD WAR CONTEXT	12
3.2 BASE DEVELOPMENT	17
4.0 METHODOLOGY	19
4.1 INVENTORY	19
4.2 EVALUATION OF IMPORTANT RESOURCES	20
4.2.1 Documentation	20
4.2.2 Evaluation of Importance	20
4.2.2.1 Cold War Context	20
4.2.2.2 NRHP Criteria	21
4.2.2.3 Exceptional Importance	22
4.2.3 Evaluation of Integrity	22
4.2.4 Priority Matrix	23
4.2.5 Resource Organization	24
4.3 BASE SPECIFIC METHODS	24
5.0 RECONNAISSANCE INVENTORY RESULTS	25
6.0 EVALUATION RESULTS	26
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	26
6.1.1 Documentation	26
6.1.1.1 Documentary Collection	26
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	26
6.3 MATERIEL DEVELOPMENT FACILITIES	27
6.4 TRAINING FACILITIES	27

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.5 INTELLIGENCE FACILITIES	27
7.0 UNDOCUMENTED RESOURCES	28
8.0 FUTURE THREATS TO RESOURCES	29
9.0 PRELIMINARY RECOMMENDATIONS	30
9.1 NRHP ELIGIBILITY	30
9.1.1 Evaluation and Determination of NRHP Eligibility.....	30
9.1.2 Implications of NRHP Eligibility	32
9.2 EVALUATED RESOURCE RECOMMENDATIONS.....	33
9.2.1 Documentary Collection	35
10.0 REFERENCES CITED	36
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Shaw Air Force Base.....	5
Figure 2.2 Shaw Air Force Base Layout.....	7
Figure 2.3 Standard Tactical Air Command Base Layout.....	8
Figure 2.4 Shaw Air Force Base Land Use Diagram	10
Figure 2.5 Standard Tactical Air Command Base Land Use Diagram	11

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	27
Table 9.1 Recommendations for Evaluated Resources	34

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

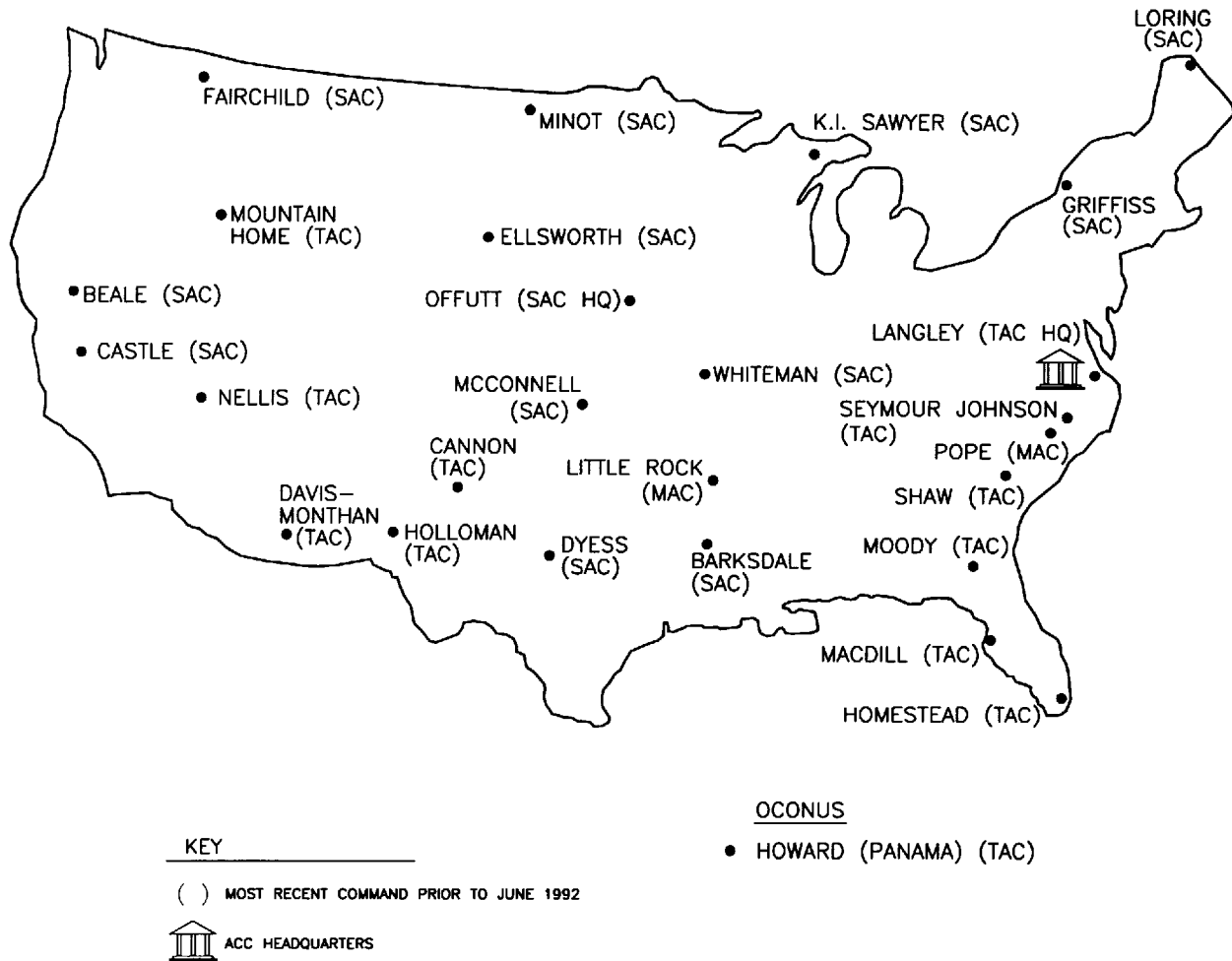
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: COLDWAR\SHAW\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Shaw Air Force Base (AFB). Shaw AFB, a former Tactical Air Command (TAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

Shaw AFB currently consists of the Ninth Air Force Headquarters and the 20th Fighter Wing (FW). The 20th FW is the base host and directs the 20th Operations Group, 20th Logistics Group, 20th Support Group, and the 20th Medical Group. The 55th, 77th, 78th, and 79th Fighter Squadrons (FS), the wing's flying squadrons, are directed by the 20th Operations Group. The 77th, 78th, and 79th FS employ the F-16 *Falcon* fighter to achieve the mission of providing rapid, decisive air power anytime, worldwide. The 55th FS flies the OA/A-10A *Thunderbolt II* for close air support and forward air control missions in support of friendly ground forces. The wing's mission statement is "America's First Team setting the standard in air supremacy" (United States Air Force [USAF] 1994).

2.2 GEOGRAPHIC DESCRIPTION

Shaw AFB is located approximately 10 mi (16 km) west of Sumter, South Carolina (Figure 2.1) in eastern central South Carolina. The base is located on relatively flat terrain in an area originally dominated by broadleaf and coniferous forest and low lying marshy areas. Although much of the surrounding area is urban, a large portion of forest and wetland environment remains around the base. The climate of the area is dominated by mild winters and warm, humid summers. The local economy is varied, with dependence on the production of heavy equipment, paints, chemicals, medical supplies, and electronics (USAF 1993a). Shaw AFB and its consumer population have a great impact on the Sumter service economy.

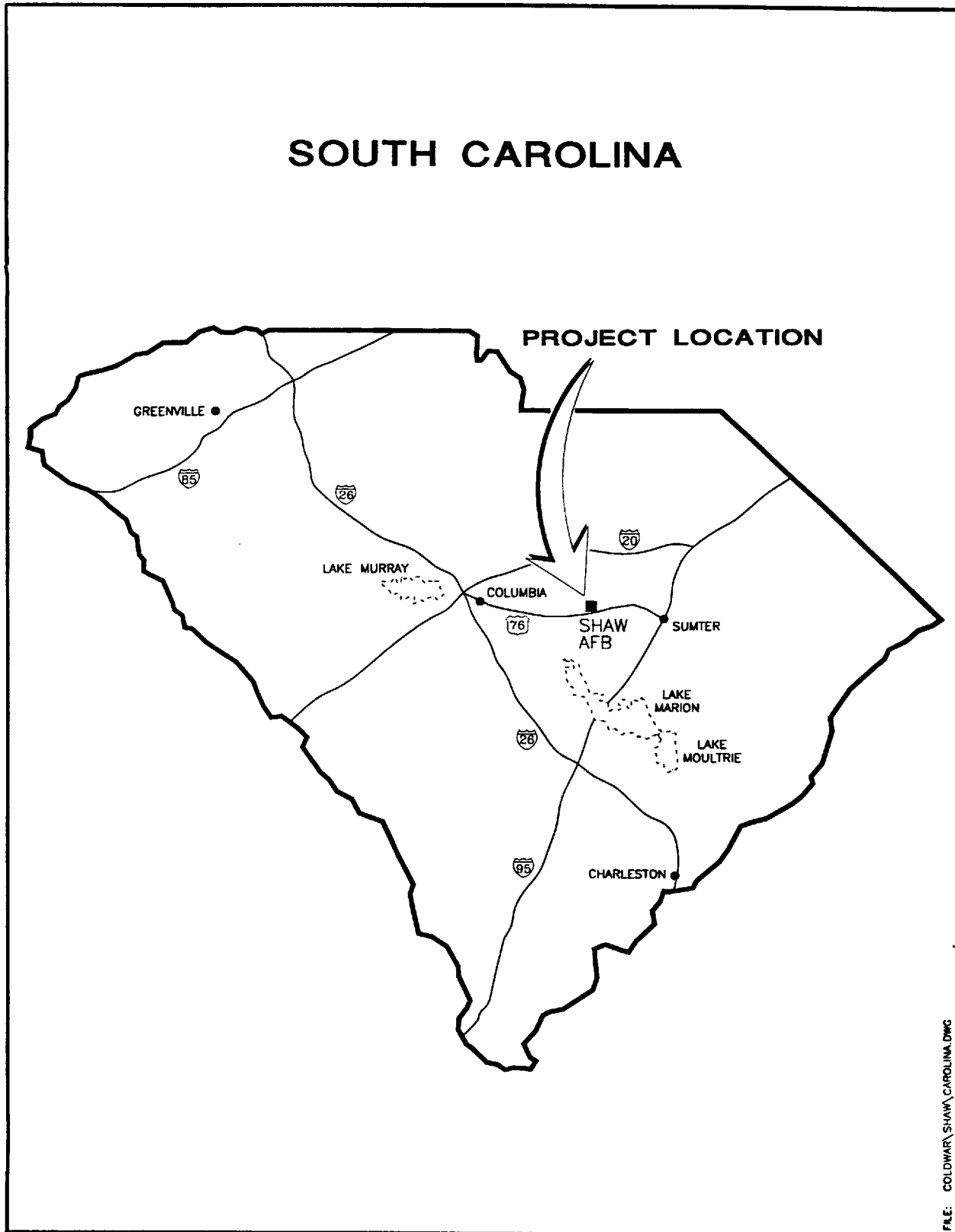


Figure 2.1 Location of Shaw Air Force Base.

2.3 CURRENT BASE LAYOUT

The layout of Shaw AFB (Figure 2.2) is defined by the external boundary of the base and by the flight line. The two instrument runways extend northeast to southwest completely across the base, effectively cutting the base into two sections.

The southeastern section consists of a weapons and magazine storage area, some maintenance buildings, warehouses, garages, and a shooting range. The rest of this portion of the base is open and undeveloped. The northwestern section of the base contains the aircraft parking apron next to the runways. The area from the apron to the boundary of the base is almost completely filled with main base development.

The layout of Shaw AFB is similar to that of a standard TAC base (Figure 2.3). In both, the majority of the base development is located on one side of the flight line, with weapons storage located away from the rest of the development, and some ancillary buildings located on the opposite side of the runways. One notable difference between the two layouts is the lack of open areas at the ends of the runways at Shaw AFB.

2.4 BASE LAND USE

The following is a list of standard TAC land use categories:

Base Support Facilities - house base support functions and supplies.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

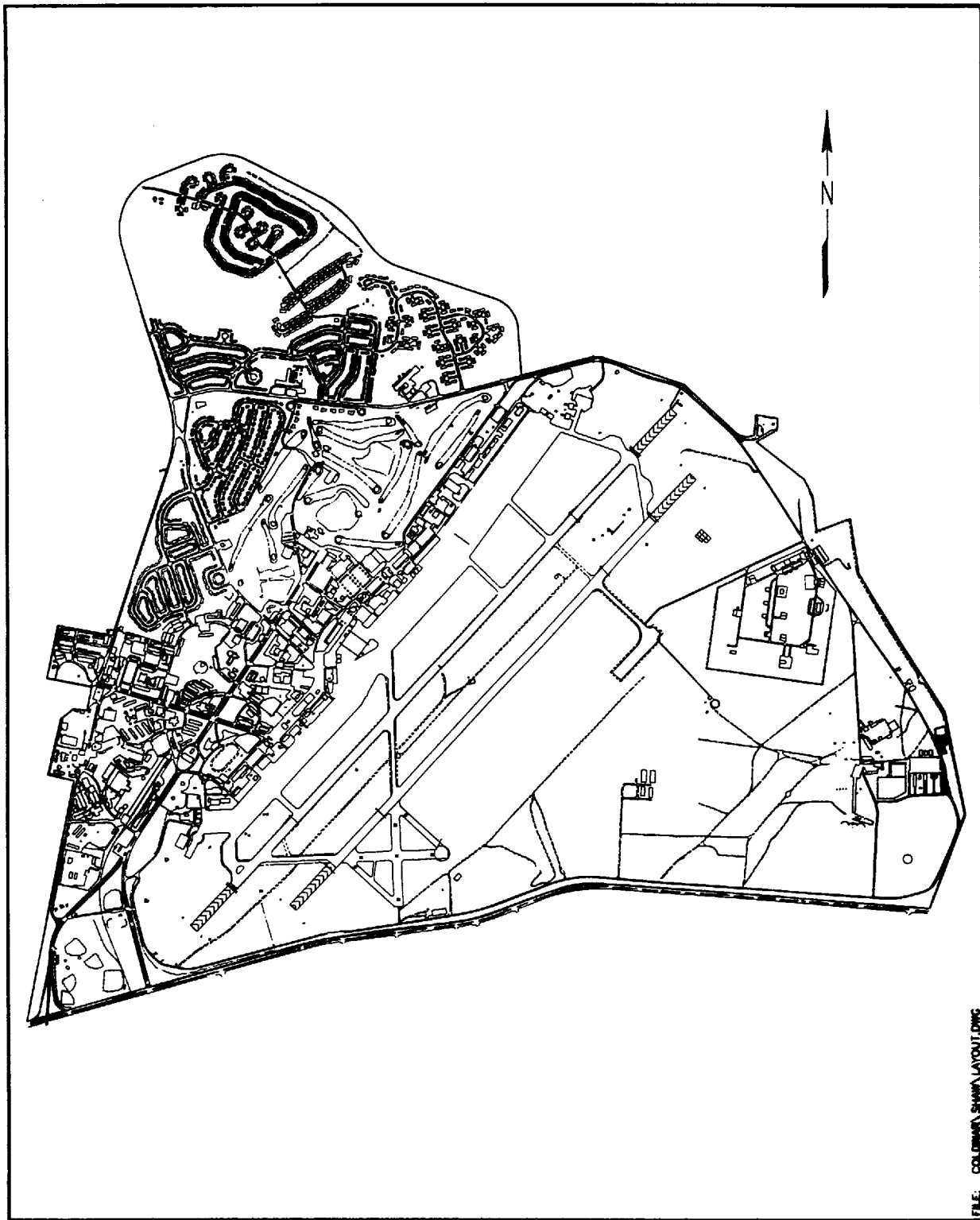


Figure 2.2 Shaw Air Force Base Layout.

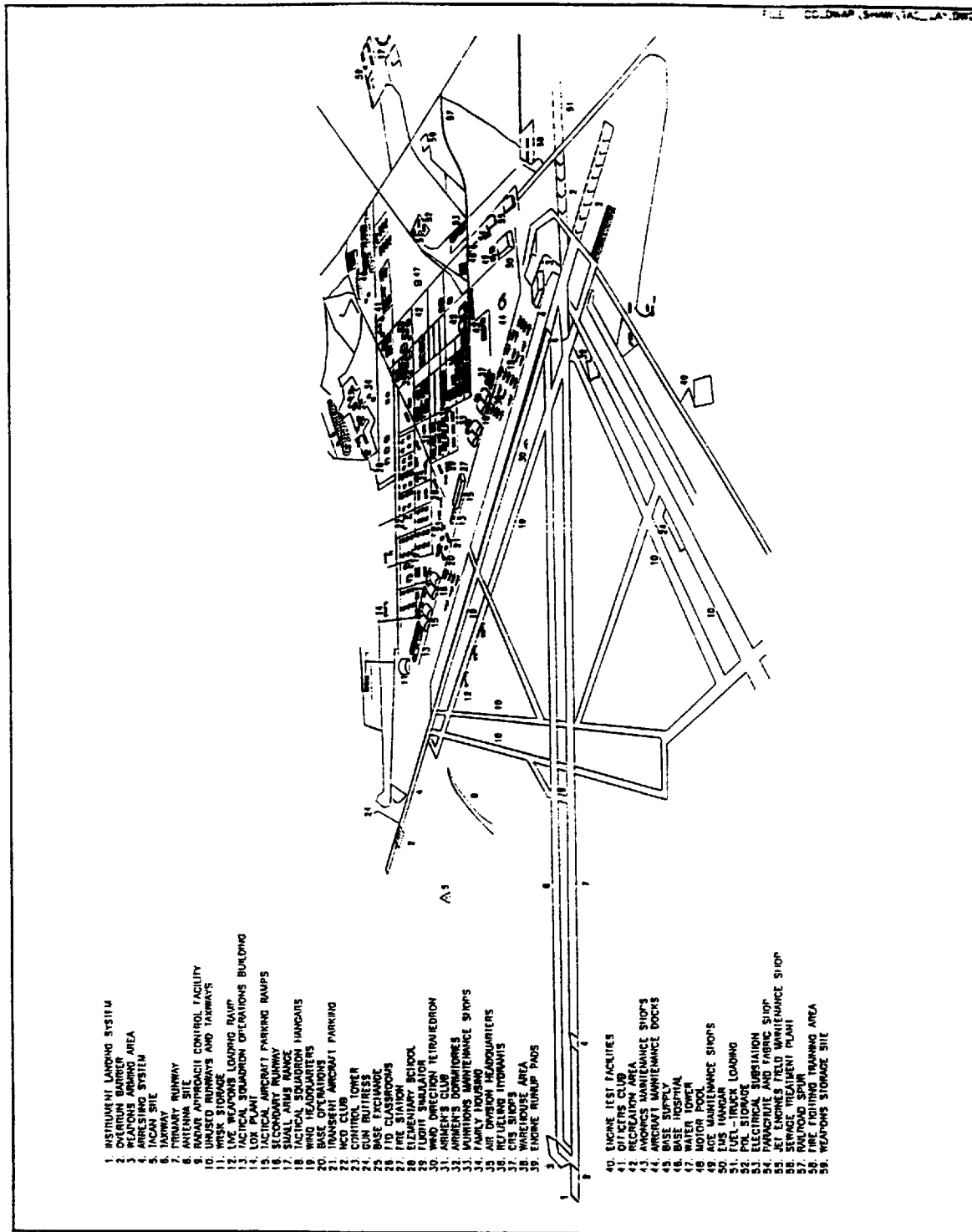


Figure 2.3 Standard Tactical Air Command Base Layout.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases, however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Land use at Shaw AFB is illustrated in Figure 2.4. The mission-related buildings are spread out along most of the flight line, with an industrial area extending along the remaining parking apron. West of these areas is the middle portion of the main base development, which consists of a mixture of recreation, base support, and community areas, including an area of unaccompanied housing and the various base headquarters buildings. Family housing and some community areas are found farthest from the flight line in the northwestern extension of the base. The weapons storage area, an area of base support facilities, and a recreation area are located in the southeastern section of the base.

There are similarities and differences between the land use pattern at Shaw AFB and that of a standard TAC base (Figure 2.5). Similarities include the location of the mission and industrial areas along the flight line; the mix of base support, community, and recreation areas located in the middle of the base; the presence of unaccompanied housing and headquarters buildings also in the middle; and the location of family housing farthest from the flight line. Differences consist of the location of developed areas on the side of the runway opposite main base development and the presence of a recreational area at the end of a runway at Shaw AFB. On the standard plan, there are no facilities on the other side of the runway, and the ends of the runways have open space for use as buffer zones.

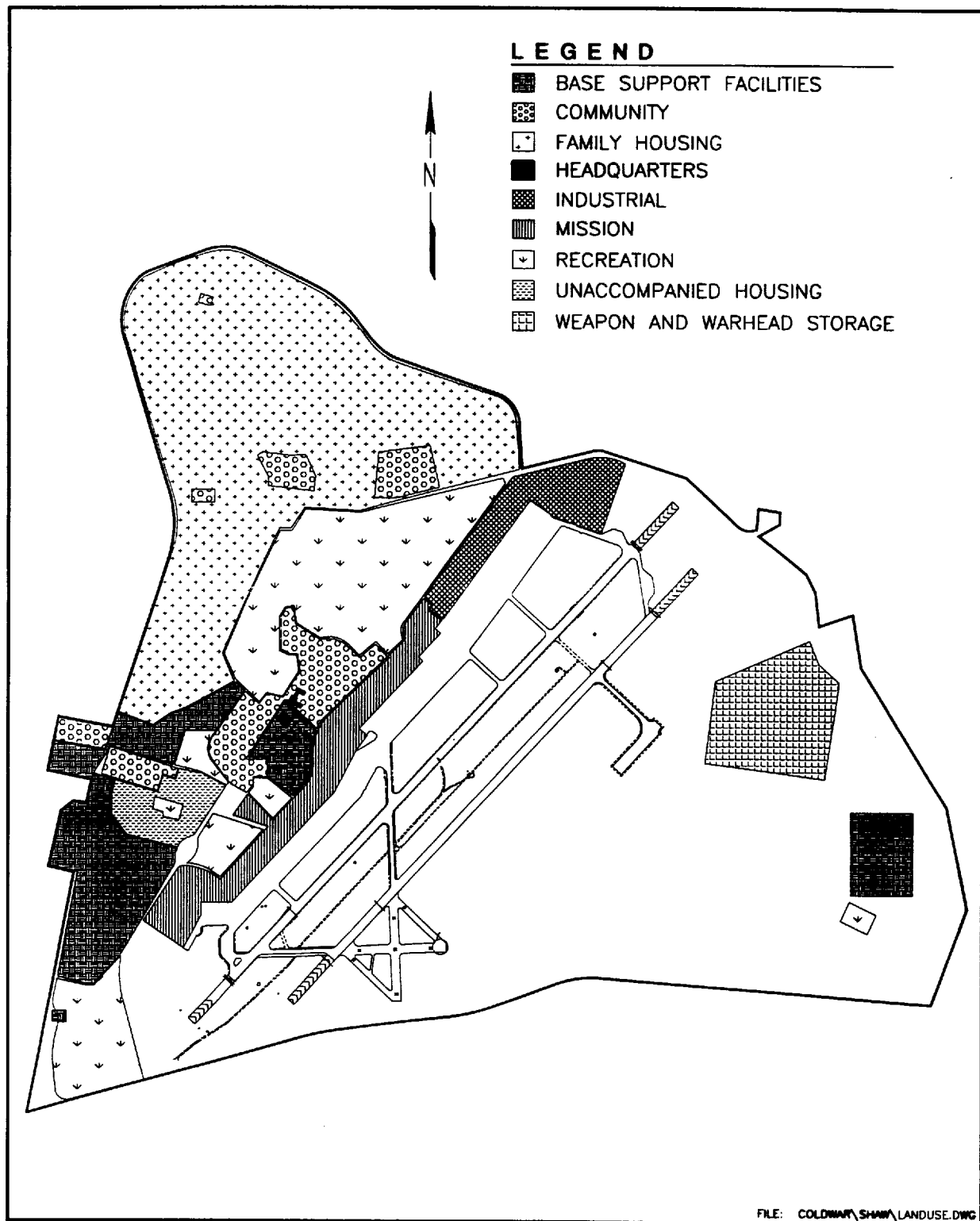


Figure 2.4 Shaw Air Force Base Land Use Diagram.

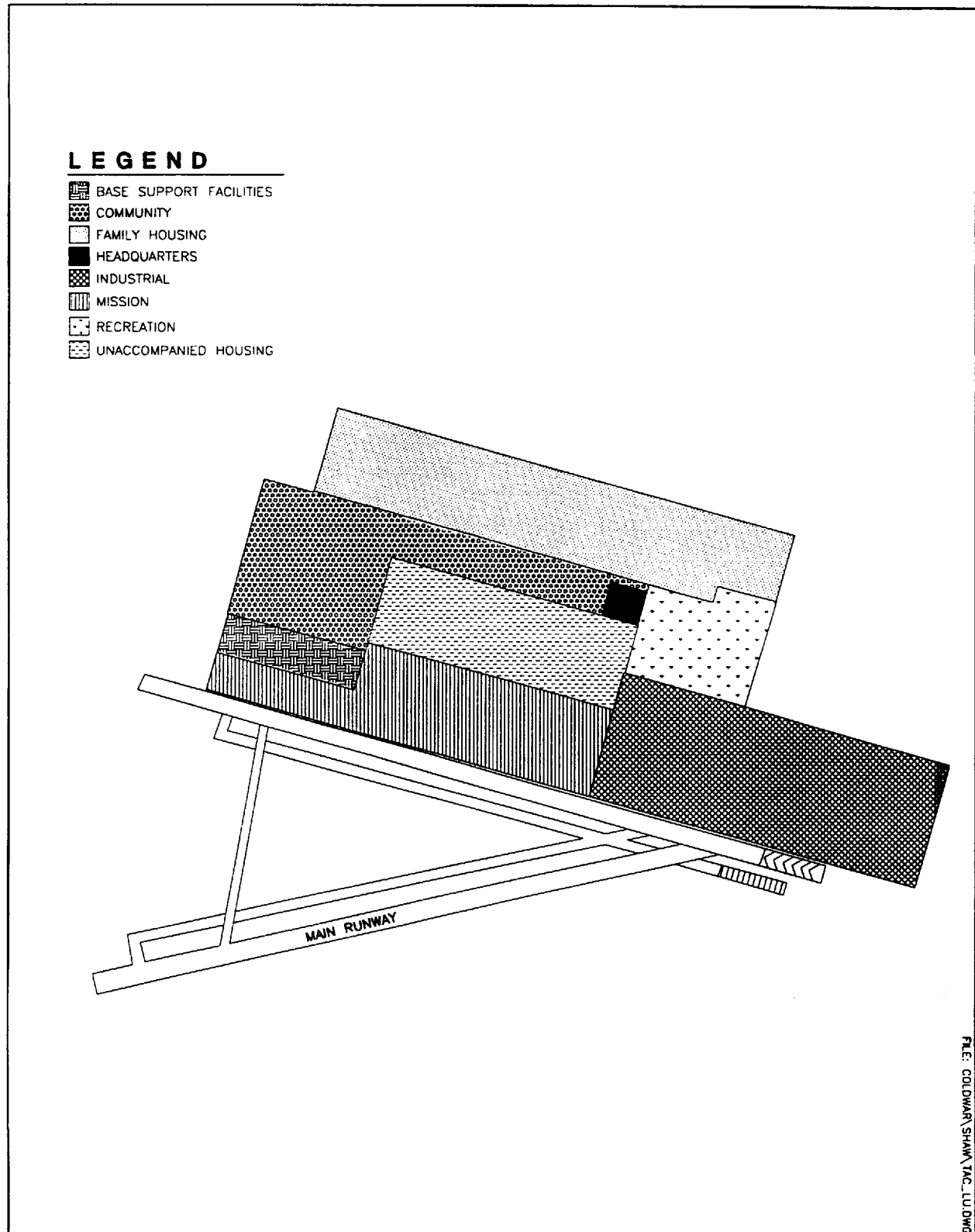


Figure 2.5 Standard Tactical Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

Shaw Army Airfield was established in 1941 as a basic flying training school for pilots who would go on to fly in World War II. Although it is not stated in available sources, the establishment of the airfield was related to the general buildup of equipment and personnel in the Army Air Force in expectation of joining forces in World War II.

The base was established at its present location due to the efforts of a Sumter committee who believed an Army installation would boost the local economy. Primary and alternate sites near Sumter were proposed as locations for the airfield, and after successful lobbying in Washington by the Sumter committee and local politicians, the Army inspected the areas. The alternate site, eight miles northwest of Sumter, was chosen by the Army representatives and a 99-year lease at one dollar per year was negotiated between the city of Sumter and the Army (Office of History, 363rd FW 1991).

The new airfield was named in honor of 1st Lieutenant Ervin David Shaw. Shaw, a native of Sumter, enlisted in the Army in 1917 but accepted a commission in the Royal Canadian Air Force soon after. Shaw became a pilot and was sent to Europe to fly observation missions. Shaw was credited with downing two German planes before he and his observer were shot down and killed in July 1918 (USAF 1993a; Office of History, 363rd FW 1991).

Construction began at Shaw Airfield in June 1941, and the headquarters was moved from a local residence to the airfield in September 1941. The first instructor units were assigned to the base in September of 1941 and began work in early December of the same year. The units assigned were the 454th, 455th, 456th, 457th, and 458th School Squadrons (Office of History, 363rd FW 1991).

With the U.S. entrance into World War II, Shaw Airfield's role as a training installation developed rapidly. The first class of 130 cadets was graduated in February 1942, and, by the end of the year, over 2,600 pilots had been instructed at Shaw Airfield. The instructors employed BT-13 trainer aircraft for pilot instruction (Office of History, 363rd FW 1991).

Pilot training continued throughout World War II under the command of the Eastern Flying Training Command. Basic training was halted near the end of the war, with basic flying squadrons disbanded and personnel reassigned to the 2142nd Army Air Forces Base Unit (AAFBU). The airfield was then reassigned to First Air Force which installed the 139th AAFBU in March 1945. Shaw's training role shifted to transition flying for fighter pilots changing from advanced trainers to P-47 fighters (Office of History, 363rd FW 1991).

A prisoner of war (POW) camp was operated in 1945 and early 1946 at Shaw Airfield near the main gate. One hundred seventy-five German POWs were housed in the camp, which consisted of a converted housing area surrounded by barbed wire, floodlights, and guard towers. The prisoners were used for labor on local farms and for cutting pulpwood (Office of History, 363rd FW 1991).

The airfield was also used as a separation and discharge center for troops returning from the war. The base continued on after the war with only a minimal maintenance crew. Just when it seemed that Shaw Airfield would close, the War Department announced a list of 85 installations, including Shaw, that were recommended for retention (Office of History, 363rd FW 1991).

TAC assumed control of the base in March 1946, and the 316th AAFBU took over operation of the base. The 414th and 415th Night Fighter Squadrons flying P-61 *Black Widow* aircraft were assigned to Shaw in 1946 (Mueller 1989) and were the first tactical units to serve at Shaw Airfield. They were reassigned in March 1947. The 20th Tactical Fighter Group (TFG) equipped with piston engine P-51 *Mustang* aircraft was also assigned to Shaw Airfield in late 1946. The group was composed of the 55th, 77th, and 79th Tactical Fighter Squadrons (TFS)

(Office of History, 363rd FW 1991). On August 14, 1947, the airfield switched from the base unit system to the wing structure. In that reorganization, the 316th AAFBU was deactivated, and the 20th Tactical Fighter Wing (TFW) arrived and became the command unit at Shaw Airfield (Office of History, 363rd FW 1993:31).

In January of 1948, Shaw Airfield was redesignated Shaw AFB, and the first jet aircraft, the F-84 *Thunderjet*, was assigned to the 20th TFW. In December 1948, the base was reassigned to the Continental Air Command (ConAC). In December 1950, after one year under command of ConAC, Shaw AFB was again reassigned to TAC. In January 1951, the base was also assigned to the Ninth Air Force. In April 1951, the 363rd Tactical Reconnaissance Group (TRG) transferred to Shaw AFB, and later that year the 20th TFW and its units were reassigned to Langley AFB (USAF 1993a). The 363rd TRG, with the 16th, 17th, and 18th Tactical Reconnaissance Squadrons (TRS), took over as base host. The 363rd TRG operated two squadrons of RF-80 jet aircraft and one squadron of RB-26 night reconnaissance aircraft. The wing trained pilots for assignment to the Korean conflict (Office of History, 363rd FW 1991). In 1953, the 9th TRS joined the wing, bringing with it a mission of electronic and weather reconnaissance. At the time, Shaw AFB was the only base completely devoted to tactical reconnaissance (Office of History, 363rd FW 1993).

Several significant events took place in 1954 at Shaw AFB. In March, the 363rd TRG began replacing their RB-26 aircraft with RB-57A jets that would provide improved night reconnaissance capability. That same month, the 432nd TRG and its five flying squadrons arrived at the base. The following September, the first RF-84F to see service in the Air Force was assigned to the 18th TRS at Shaw AFB. This reconnaissance aircraft was the first to be capable of supersonic speeds. Also in September, the Ninth Air Force transferred its headquarters to Shaw AFB.

RB-66 reconnaissance aircraft began replacing the RB-57s in 1956. The 16th TRS was the first Air Force unit to be equipped with the RB-66 (Office of History, 363rd FW 1993). The following year,

RF-101 supersonic jets were assigned to the 17th TRS. RF-101s of the 363rd TRG set a transcontinental speed record in 1957 by flying from California to New York in three hours seven minutes (Office of History, 363rd FW 1991).

The 363rd TRG began operating the USAF Advanced Flying School for tactical reconnaissance in 1956. It was the only such school operated in the USAF by a command other than Air Training Command. Later that same year, the 432nd TRG took over the school, and the 363rd TRG was once again a combat unit.

Shaw AFB was reorganized in February 1958. The 837th Air Division, the new base host, and 432nd Tactical Reconnaissance Wing (TRW) were activated; the 363rd TRG was deactivated; and the squadrons of the 363rd TRG went to the new 363rd TRW. In 1958, this wing consisted of the 9th, 16th, 41st, and 43rd TRS flying RF-84F, RB-66, and RF-101 aircraft. The 363rd was again reorganized in 1959 and assigned the 9th, 16th, 20th, and 29th TRS (Office of History, 363rd FW 1993).

During the 1960s, Shaw AFB played a significant role in peacetime, crisis, and war situations. Aircraft stationed at Shaw AFB took part in several deployments during 1961 and 1962 that demonstrated TAC's ability to deploy forces around the world. The operations included "Operation Quick Span," a visit to several west Asian nations, and "Banyan Tree," a deployment to the Panama Canal Zone. "Operation Swift Strike," a joint armed services operation which included paratroop and equipment drops, was staged from Shaw AFB in August of 1961 (Office of History, 363rd FW 1993).

During the 1962 Cuban Missile Crisis, RF-101 *Voodoo* aircraft based at Shaw AFB deployed to Homestead AFB, Florida and participated in intelligence gathering operations. RF-101 from Shaw's 363rd TRW obtained photos of missile sites and Cuban airfields which helped prove the intent of the Soviet and Cuban governments to station nuclear missiles on Cuban soil. President

Kennedy awarded the 363rd TRW with an Outstanding Unit Award for their actions during the missile crisis (Office of History, 363rd FW 1993).

Personnel from Shaw AFB were first deployed to Vietnam in 1961. Aircraft and crews from the 363rd TRW were sent to Southeast Asia in 1965 to participate in the escalating war. Newly operational RF-4C, RF-101, and RB-66 aircraft of the 16th, 20th, and 41st TRS were assigned to Southeast Asia (Office of History, 363rd FW 1993). While many of the aircraft from Shaw AFB were stationed overseas, the base's role throughout the conflict was significant. Units at Shaw AFB trained all Air Force pilots that would eventually fly tactical reconnaissance missions over Vietnam.

In February 1963, the 837th Air Division was redesignated the USAF Tactical Air Reconnaissance Center (TARC). The 363rd TRW again became the base host. TARC, with its 4411th Combat Crew Training Group (CCTG) and the 4416th Test Squadron, became a tenant unit on the base.

In 1971, the 363d TRW consisted of the 16th, 18th, and 33rd TRS, and the 39th Tactical Reconnaissance Training Squadron (TRTS), which all served as training units for RF-4C aircraft. The wing also consisted of the 62nd TRS, which flew RF-4Cs in an operational role, and the 39th Tactical Electronic Warfare Training Squadron (TEWTS), which operated the E/RB-66 for training purposes (Office of History, 363rd FW 1993). Training of reconnaissance aircrews continued throughout the 1970s at Shaw AFB.

The 363rd TRW was redesignated the 363rd TFW in 1981 and began receiving F-16 *Fighting Falcon* fighters. The 16th TRS stayed on at Shaw AFB, and the other reconnaissance squadrons were reassigned. A combination of reconnaissance and tactical fighters was unique to Shaw AFB. In 1989, the last RF-4C was reassigned, and Shaw AFB became strictly a fighter base (Office of History, 363rd FW 1993).

In 1990 and 1991, the 363rd TFW took part in operation Desert Storm. The F-16s of the wing completed several successful missions against enemy forces with minimal losses. In 1991, the wing was redesignated the 363rd FW, and was placed under command of ACC in 1992. Recently, the 363rd FW was replaced by the 20th FW, bringing with it three F-16 squadrons and one A-10 squadron.

3.2 BASE DEVELOPMENT

The original tract of land for Shaw Army Airfield was acquired by lease from the City of Sumter in May 1941. The land was donated to the U.S government in 1948 (USAF 1983).

Construction of Shaw AFB began in 1941. Three 4,500 ft runways were completed in 1941, and support buildings were finished soon after. New construction and replacement of older buildings resulted in the removal of all but a few of the original 1940s buildings. Development during the 1950s included a runway lengthening project and a large housing project which was completed in 1958 and included 905 units (Mueller 1989). Several munitions storage igloos were completed in 1953.

Poinsett Air Force Range was acquired in June 1952. The range is located approximately 7 mi south of Shaw AFB, which administers the facility. The range was activated for use as a training facility for aircrews in the employment of bombing and gunnery techniques (USAF 1983).

During the mid-1960s, major development projects resulted in the replacement of many World War II era warehouses, dormitories, and headquarters. A new medical center was completed in 1968 (Mueller 1989). A new runway was completed in 1974, and two large housing developments were completed in 1974 and 1975.

A new flight apron was constructed in 1980, and several buildings for F-16 support were completed between 1980 and 1982 (Mueller 1989). Several buildings in the ammunition storage area were completed in 1983.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Shaw AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The Department of Defense (DoD) Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993b:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Shaw AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Shaw AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of

resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF Interim Guidance (1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993b) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Mr. Steve Pivnick of the Public Affairs Office met with the field team upon their arrival at Shaw AFB and provided a preliminary tour of the base. MSgt James Liby, the 20th FW Historian, met with the field team upon his return from leave and escorted the team during the photographic inventory of buildings along the flight line and in the ammunition area. All other areas were accessible for photography without escort. The team contacted individuals on the base who would be able to provide them with the mission, history, and property information required to complete their work. These people included Drawing Room staff, Real Property personnel, and personnel who could provide easy access to facilities. MSgt Liby also discussed histories with the team and provided available historical documentation relating to Shaw AFB. The team visited nearby Poinsett Air Force Range and inventoried the buildings on this installation also. Dr. Howard Higgins of Mariah made a one-day Quality Assurance inspection of the team's work during the base visit. Inventoried and evaluated resources were entered into the database after photographs were taken and facilities had been toured.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Shaw AFB, 127 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

One resource was evaluated at Shaw AFB, falling under the DoD category of records/documents. This resource is discussed below in terms of its history, integrity, and importance. The narrative is listed by USAF property type group and subgroup. The prioritization of the evaluated resource is presented in Table 6.1. The detailed documentation for the evaluated resources is presented in Appendix D.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 18129, Located in Real Property No. 250)

This documentary collection, located in the Base Engineering Administration building, includes flat files of base maps and architectural drawings. The files contain numerous historical maps, original base master layouts, and construction and utility project drawings of Shaw AFB and related facilities. The maps, which are stored flat, include paper, linen, mylar, vellum, and blue line reproductions. The files contain important information about historic structures on base and illustrate the development of the installation throughout the Cold War era.

The majority of the files are in good condition, but the collection is threatened by continuous handling and removal from file drawers. Some of the older maps are torn.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

None were evaluated at Shaw AFB.

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	18129	None	RecDoc/Obj	16

* Scale ranges from 1 to 24

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Shaw AFB.

6.4 TRAINING FACILITIES

None were evaluated at Shaw AFB.

6.5 INTELLIGENCE FACILITIES

None were evaluated at Shaw AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Shaw AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were not inventoried. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Shaw AFB. These resources should be investigated further for more comprehensive analyses of the base's Cold War context.

A large maintenance hangar (building No. 1200) along the flight line was noted by the Mariah field team. Although its large size would fit on a SAC base, it is unusually large for a TAC base hangar. Unfortunately, neither the Wing Historian nor retired personnel could provide information about the building. Future research and documentation of this hangar is recommended to determine its history and function.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Shaw AFB revealed approximately 270 citations. Most of these are unit histories and special collections. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Shaw AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix E.

8.0 FUTURE THREATS TO RESOURCES

During the base visit, no threats to the inventoried resources were identified. The Documentary Collection, the only evaluated resource, is threatened by continuous handling and removal from file drawers. Measures to mitigate this threat should be undertaken.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Shaw AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old.

Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Shaw AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Shaw AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Shaw AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Record or Document - Object								
18129	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 18129, Located in Real Property No. 250)

This collection of base layout maps and architectural drawings is in good condition, but is threatened by continuous handling and removal from the file drawers. It is recommended that this collection be inventoried and copied. It is further recommended that the base retain the copies for its use, and that the originals be sent to a permanent curatorial facility for stewardship and conservation.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United State Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Mueller, R.

- 1989 *Air Force Bases: Active Air Force Bases within the United States of America on 17 September 1982*. Volume 1. Office of Air Force History, United States Air Force, Washington, D.C.

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Office of History, 363rd Fighter Wing

- 1991 *363d Fighter Wing: Celebrating 50 years of History*. On file, Wing History Office, Shaw Air Force Base, South Carolina.
- 1993 *50th Anniversary Shaw Air Force Base 1941-1991*. On file, Wing History Office, Shaw Air Force Base, South Carolina.
-

United States Air Force

1983 *Department of the Air Force Installations Survey Report: Shaw AFB, South Carolina.* On file, Real Property Office, Shaw Air Force Base, South Carolina.

1993a *Shaw Air Force Base* (base directory). Blake Publishing Company, San Diego, California.

1993b *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations.* Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

1994 *Fact Sheet: 20th Fighter Wing.* On file, Public Affairs Office, Shaw Air Force Base, South Carolina.

APPENDIX A
RECONNAISSANCE INVENTORY

Table A.1 **Reconnaissance Inventory Table.**

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	18001	14	Traffic Checkhouse	1958
	18002	27	Missile Communications Shop	1965
	18003	250	Base Engineering Administration	1985
	18004	252	Base Engineering Covered Storage	1985
	18005	227	Air Force Headquarters	1941
	18006	308	Warehouse Supply and Equipment Base	1954
	18007	339	Base Engineering Pavement Ground Facility	1985
	18008	330	Base Engineering Maintenance Shop	1991
	18009	350	Base Engineering Covered Storage	1992
	18010	329	Vehicle Operations Administration	1959
	18011	400	Non-commissioned Officers' Professional Educ. Center	1953
	18012	404	Security Police Operations	1953
	18013	900	Visiting Airmen's Quarters Dormitory	1986
	18014	403	Heating Facility Building	1953
	18015	410	Security Police Operations	1958
	18016	405	Recreation Library	1953
	18017	216	Warehouse Supply and Equipment Base	1957
	18018	200	Traffic Management Facility	1945
	18019	208	Base Chapel	1941
	18020	801	Post Office Center	1992
	18021	1122	Wing Headquarters	1988
	18022	1102	Numbered Air Force Headquarters	1971
	18023	1109	DPI	1983
	18024	1118	Group Headquarters	1989
	18025	1130	Numbered Air Force Headquarters	1956
	18026	1128	Communications Facility	1956
	18027	1127	Family Support Center	1956
	18028	1405	Bank	Unknown
	18029	1406	Bank	Unknown
	18030	1213	Survival Equipment Shop	1960
	18031	1420	Commissary Store	1989
	18032	1422	Exchange Sales Store	1975
	18033	1411	Recreation Center	1958
	18034	1413	Base Theater	1959
	18035	1401	Bowling Center	1966
	18036	1402	Non-commissioned Officer's Open Mess	1972
	18037	2798	Golf Clubhouse	1992
	18038	2799	Golf Clubhouse	1974
	18039	1301	Exchange Service Station	1953
	18040	922	Officers' Open Mess	1975
	18041	918	Swimmers Bathhouse	1978

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	18042	912	Base Chapel	1957
	18043	806	Gymnasium	1972
	18044	909	Airmen's Dining Hall	1972
	18045	908	Occupational Health Clinic	1956
	18046	932	Temporary Lodging Facility	1988
	18047	911	Visiting Officers' Quarters	1968
	18048	1047	Physiological Training	1959
	18049	1048	Composite Medical Facility	1968
	18050	1005	Child Care Center	1972
	18051	1046	Dental Clinic	1976
	18052	1049	Branch Exchange	1972
	18053	1037	Education Center	1943
	18054	1033	Wing Headquarters	1943
	18055	1029	Field Training Facility	1966
	18056	325	Vehicle Maintenance Shop	1956
	18057	2204	Wherry Family Housing	1952
	18058	2517	Wherry Family Housing	1952
	18059	2801	Family Housing APPR 50-69	1956
	18060	106	Squadron Operations	1992
	18061	114	Munitions Loading Crew Training	1958
	18062	112	Petroleum Operations Building	1971
	18063	601	Morale, Welfare, and Recreation Storage	1942
	18064	611	Maintenance Hangar	1942
	18065	606	Aircraft Maintenance Shop	1952
	18066	615	Base Operations	1974
	18067	None	New Building	Unknown
	18068	700	Rapcon Center	1964
	18069	729	New Building	Unknown
	18070	706	New Building	Unknown
	18071	710	Squadron Operations	1956
	18072	714	Fire Station	1982
	18073	1205	General Purpose Aircraft Shop	1957
	18074	1200	Maintenance Hangar	1954
	18075	1212	Warehouse Supply and Equipment Base	1958
	18076	1206	Jet Engine Inspection Shop	1956
	18077	1207	Avionics Shop	1956
	18078	1702	Aircraft Backstop	1956
	18079	1696	Jet Engine Test Stand	1983
	18080	1868	Explosive Ordnance Disposal	1986
	18082	1846	Combat Arms Training Maintenance	1941
	18083	1843	Rod and Gun Club	1965
	18084	1836	Security Police Operations	1974
	18085	1832	Missile Communications Shop	1966

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	18087	1855	Vehicle Maintenance Shop	1985
	18088	None	New Building	Unknown
	18089	1980	Warehouse Supply and Equipment Base	1972
	18091	823	Exchange Cafe Snack Bar	1990
	18093	None	Aero Club	Unknown
	18094	1217	ECM Pod Shop and Storage	1981
	18095	1517	Weapon and Release System Shop	1982
	18096	1518	Air Freight Terminal	1985
	18097	1507	Warehouse Supply and Equipment Base	1958
	18098	1511	Fuel Systems Maintenance Dock	1966
	18099	1521	Fast Food Service	1984
	18100	1500	Weapon and Release System Shop	1954
	18101	1510	Non-Destructive Inspection Shop	1970
	18102	1509	Weapons System Maintenance Facility	1967
	18103	1505	Flight Simulator Training	1958
	18104	1601	Weapons System Maintenance Facility	1965
	18105	1602	Aircraft Support Equipment Storage	1966
	18106	1502	Aircraft Support Equipment Storage	1955
	18107	1614	Maintenance Hangar	1959
	18108	1605	Squadron Operations	1956
	18109	1606	Squadron Operations	1992
	18110	1630	Aircraft Maintenance Shop	1982
	18111	1608	Aircraft Maintenance Shop	1979
	18112	1610	Squadron Operations	1992
	18113	1604	Warehouse Supply and Equipment Base	1972
	18114	1725	Petroleum Operations Building	1987
	18115	None	Petroleum operations	Unknown
	18117	1800	Munitions Maintenance Administration	1953
	18118	1813	Munitions Maintenance Administration	1983
	18122	1816	Missile Maintenance Shop	1983
	18127	1815	Conventional Munitions Shop	1983
	18128	1842	Aircraft Support Equipment Storage	1991
Real Property - Landscape				
	18081	1833	Small Arms System Range	1966
	18090	None	Poinsett Air Force Range	Unknown
Real Property - Object				
	18116	None	Ammunition Signs	Unknown
Real Property - Structure				
	18119	1883	Storage Igloo	1992
	18120	1808	Storage Igloo	1953
	18121	1880	Above Ground Magazine Storage	1989
	18123	1852	Aircraft Support Equipment Storage	1969

Table A.1 (Continued)

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	18124	1824	Above Ground Magazine Storage	1983
	18125	1822	Segregated Magazine Storage	1983
	18126	1870	Ancillary Explosives Facility	1983
Record or Document - Object				
	18129	None	Documentary Collection	Various

APPENDIX B
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

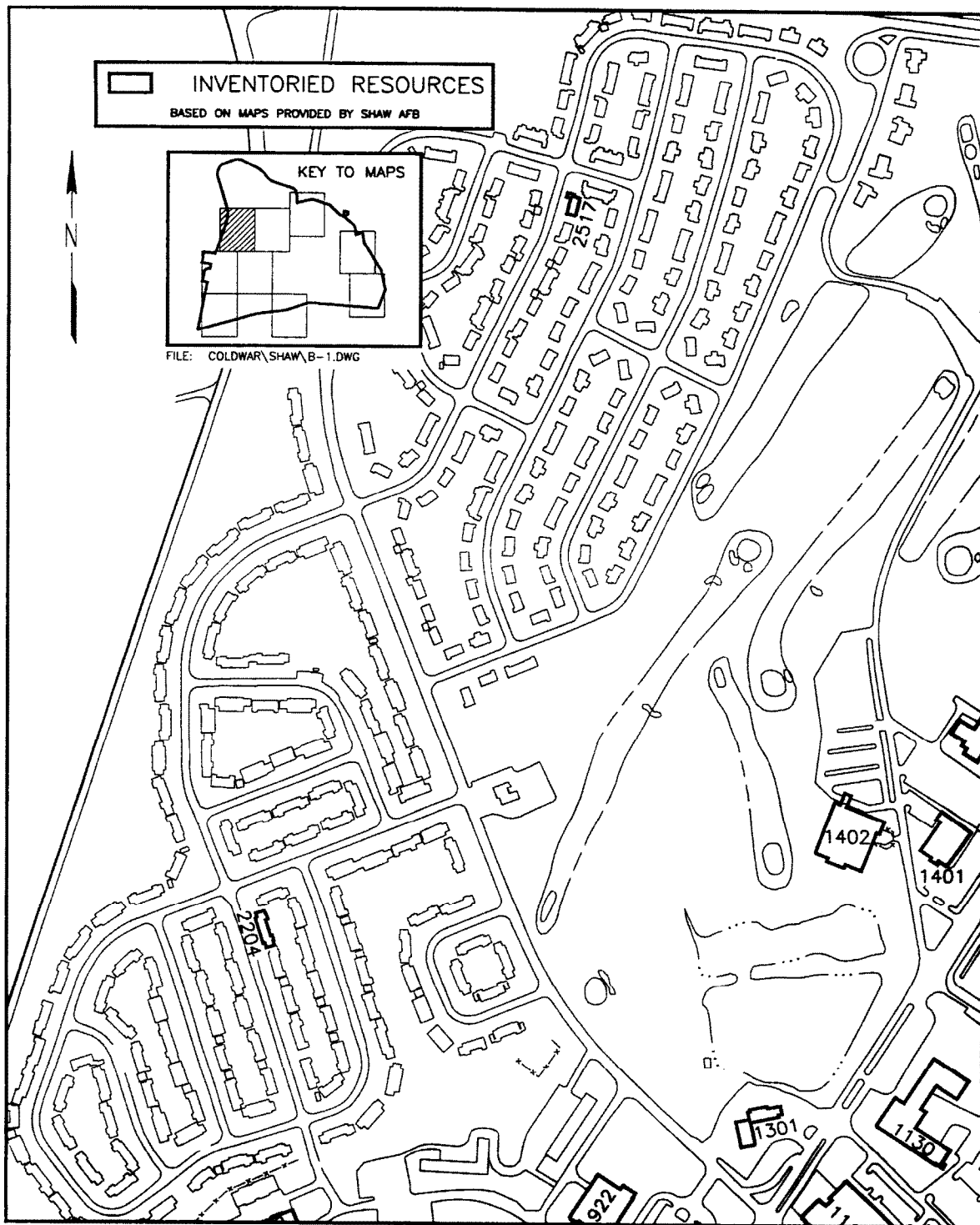
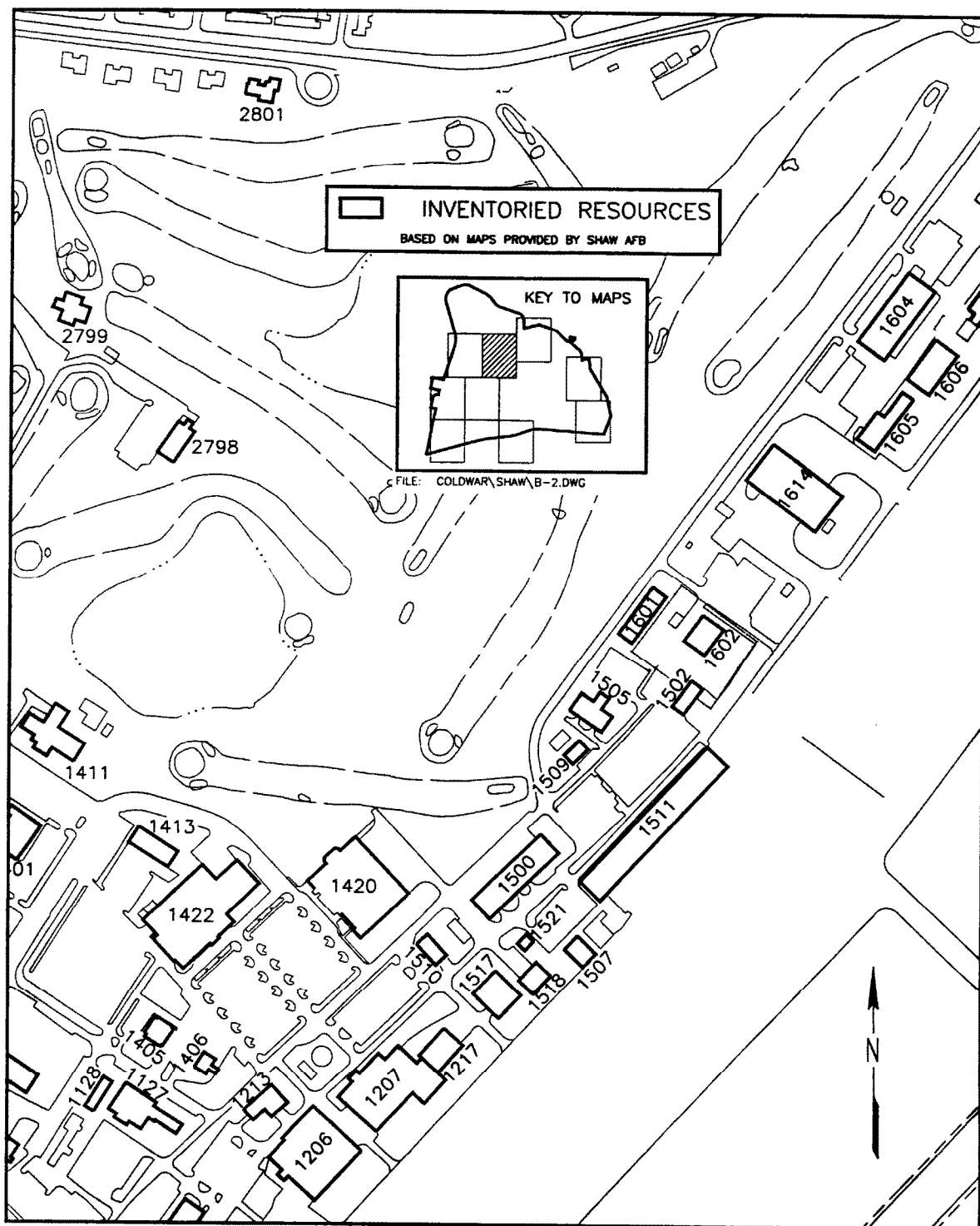


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 9).



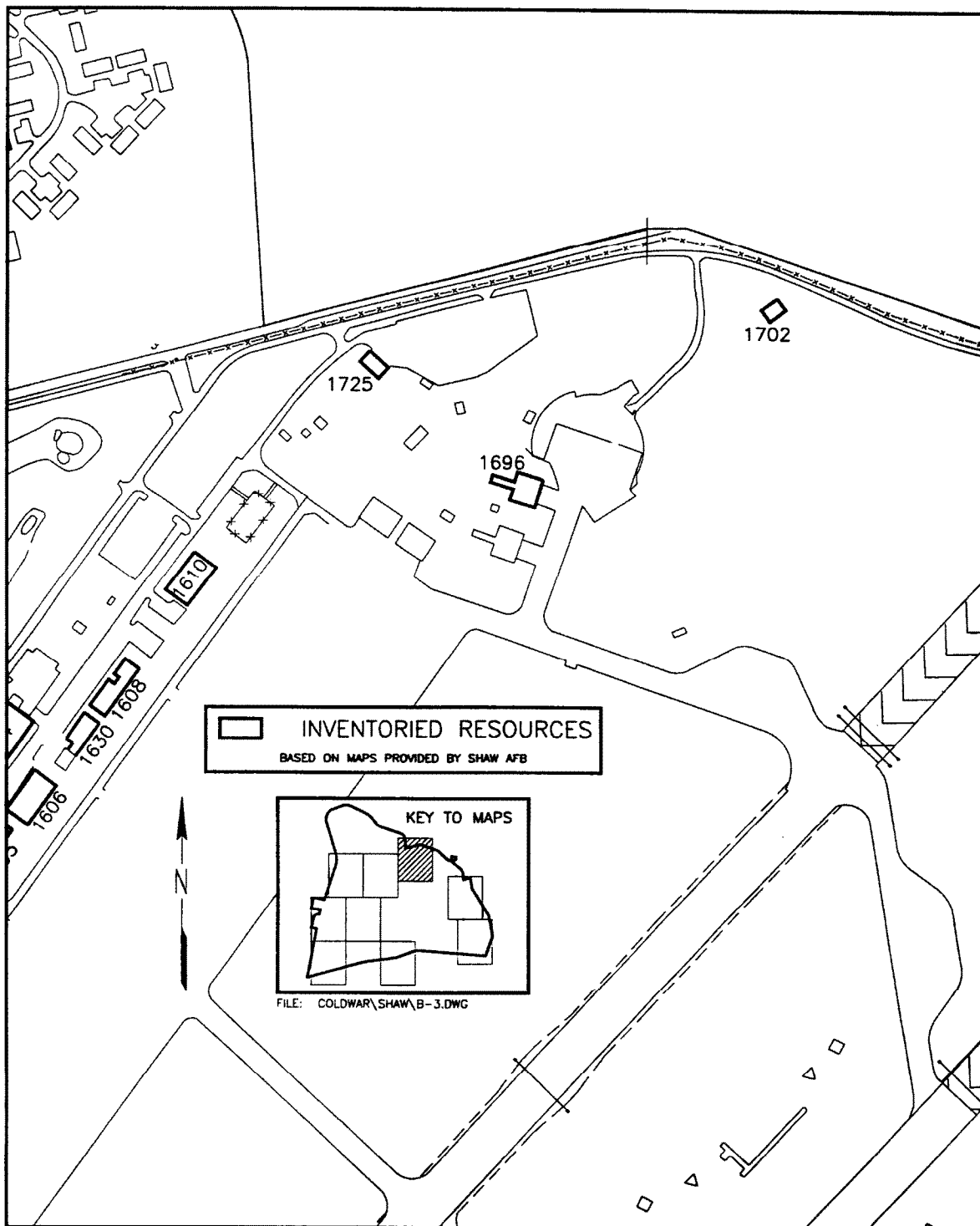


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 9).

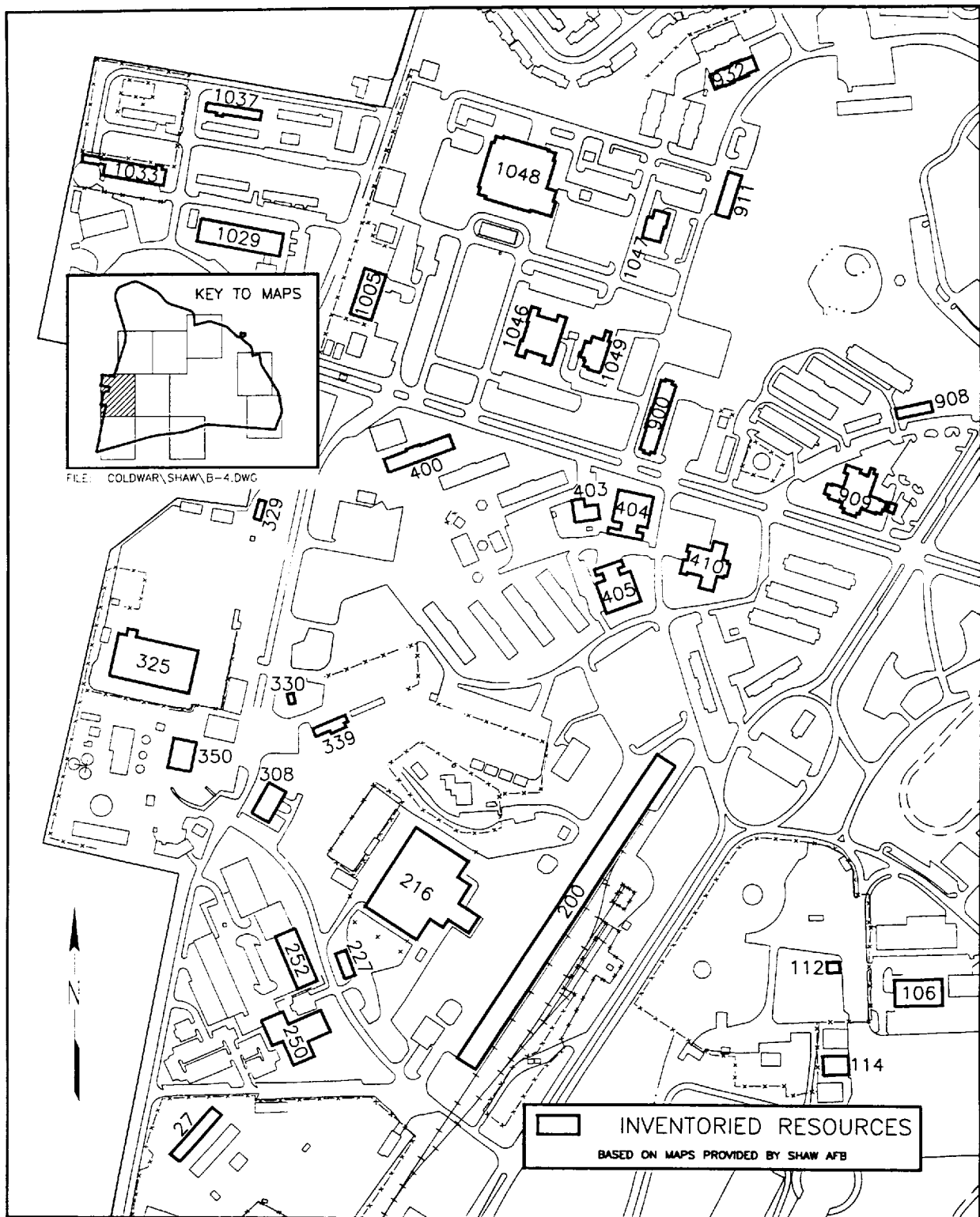


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 9).

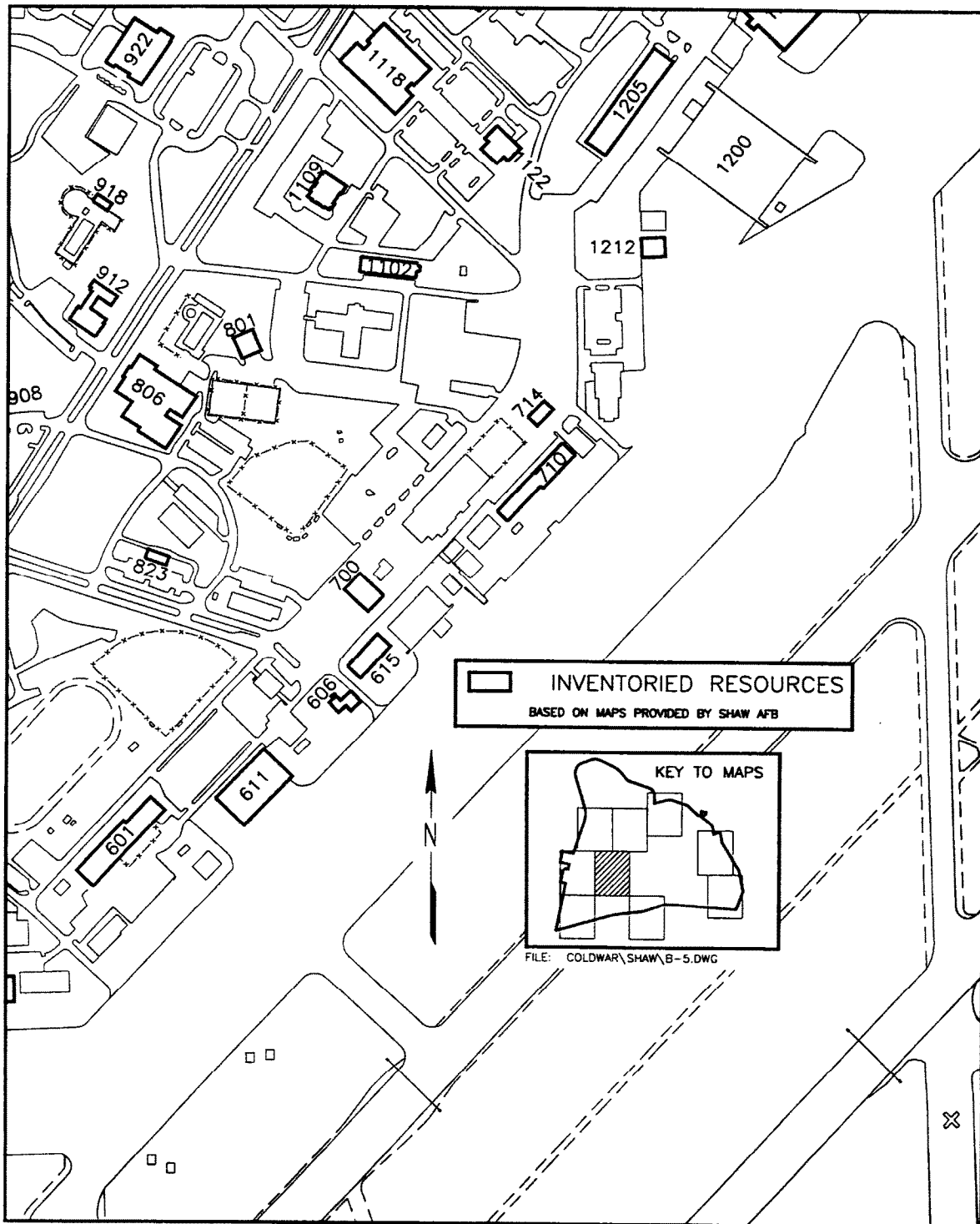


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 9).

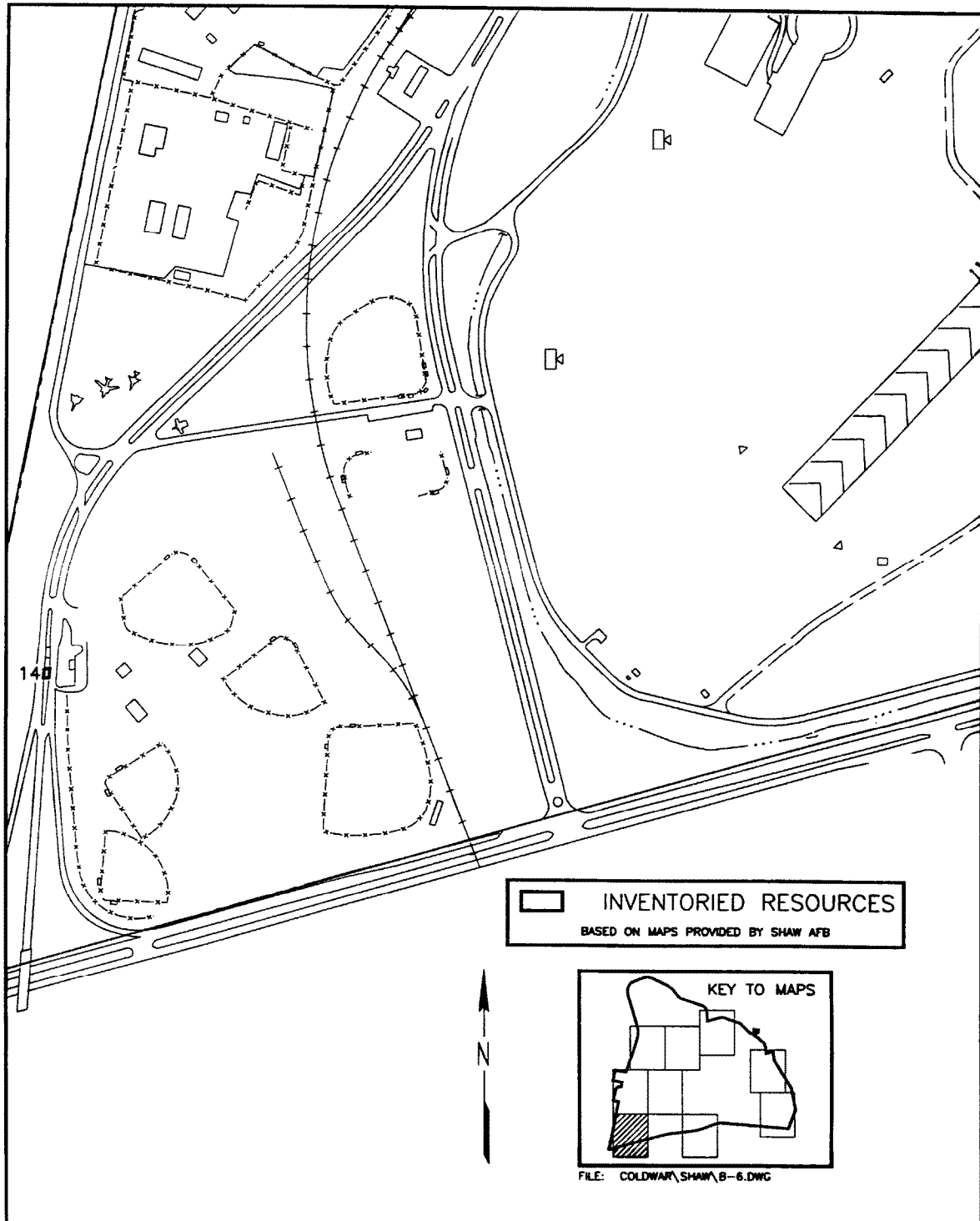


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 9).

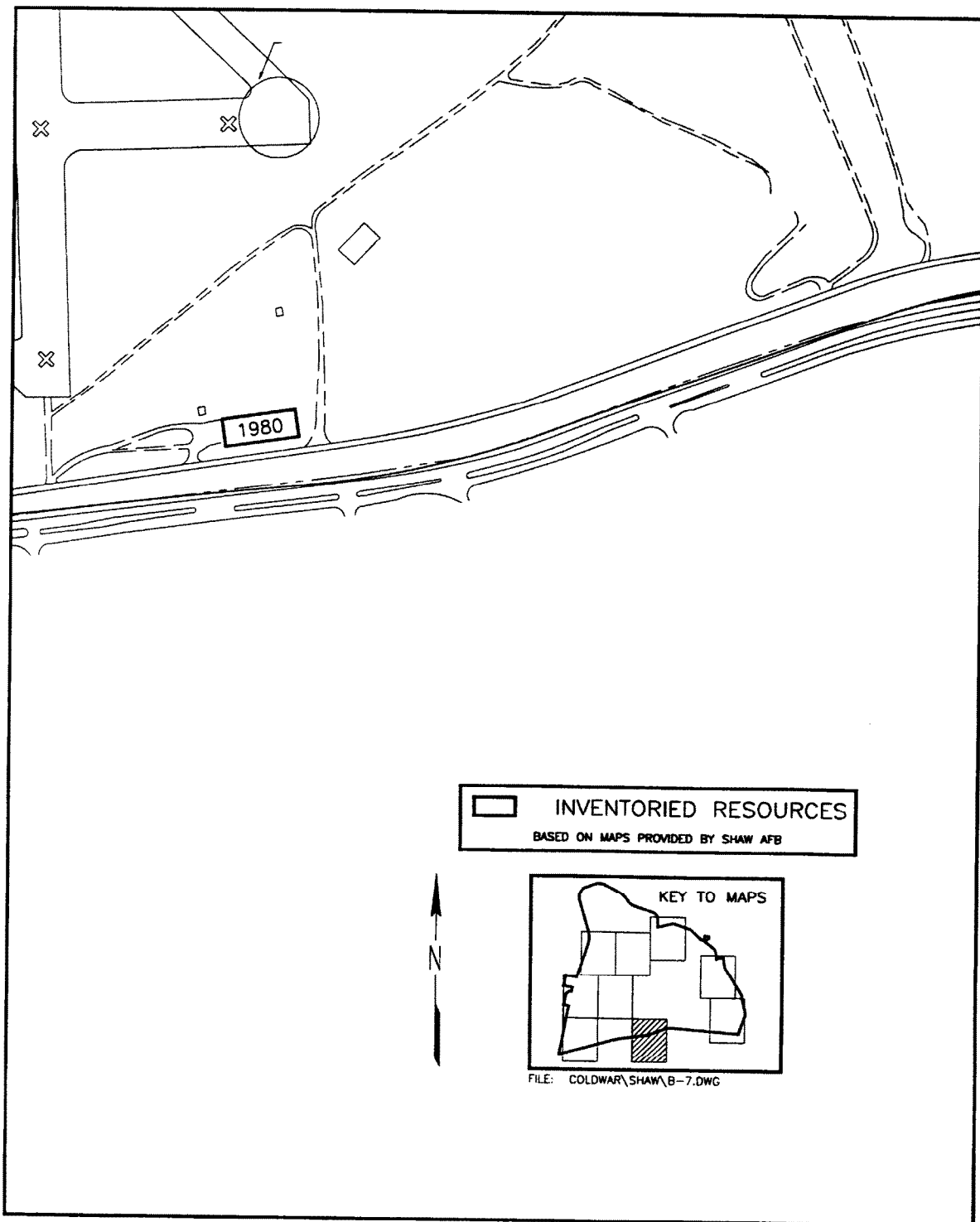


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 9).

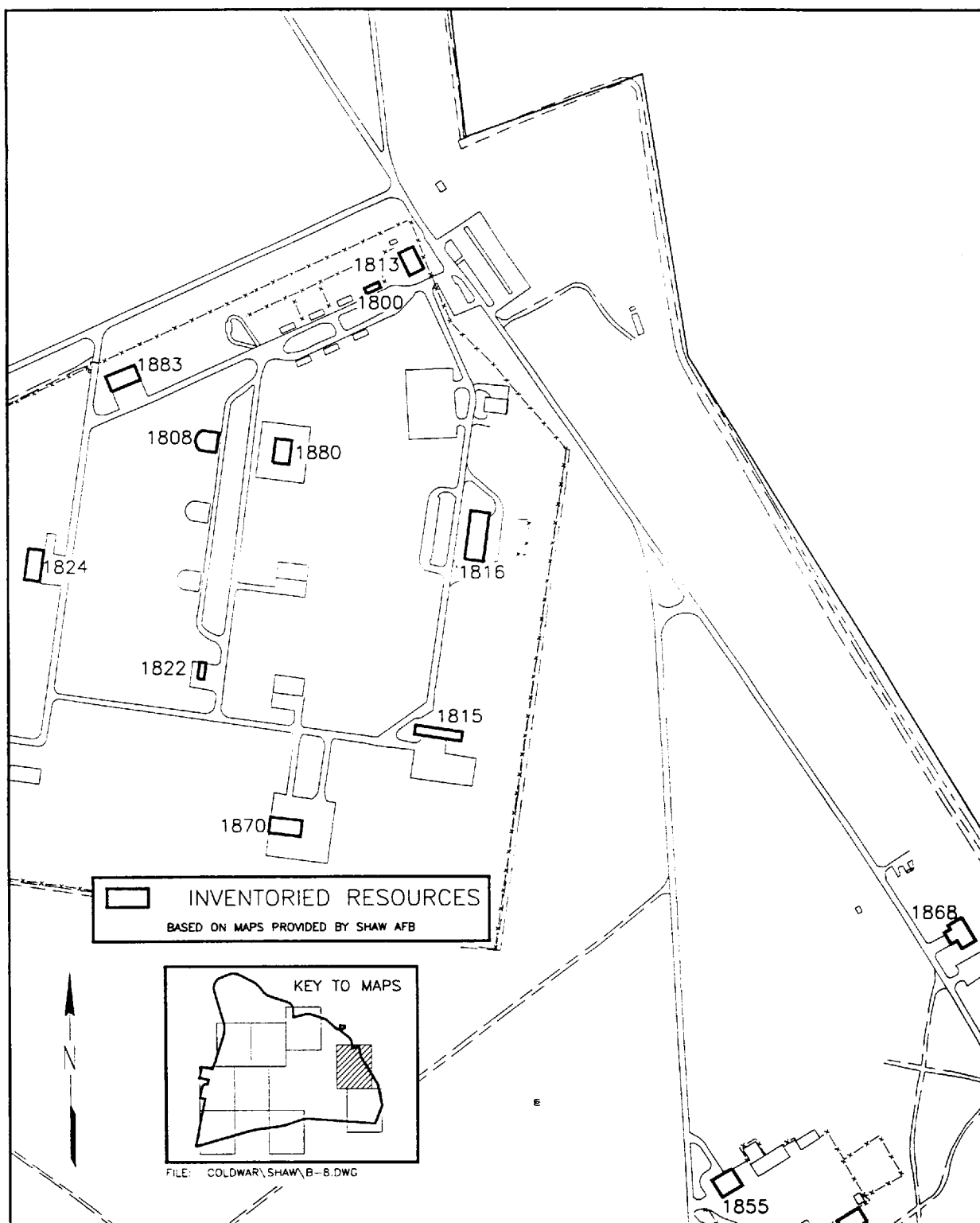


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 9).

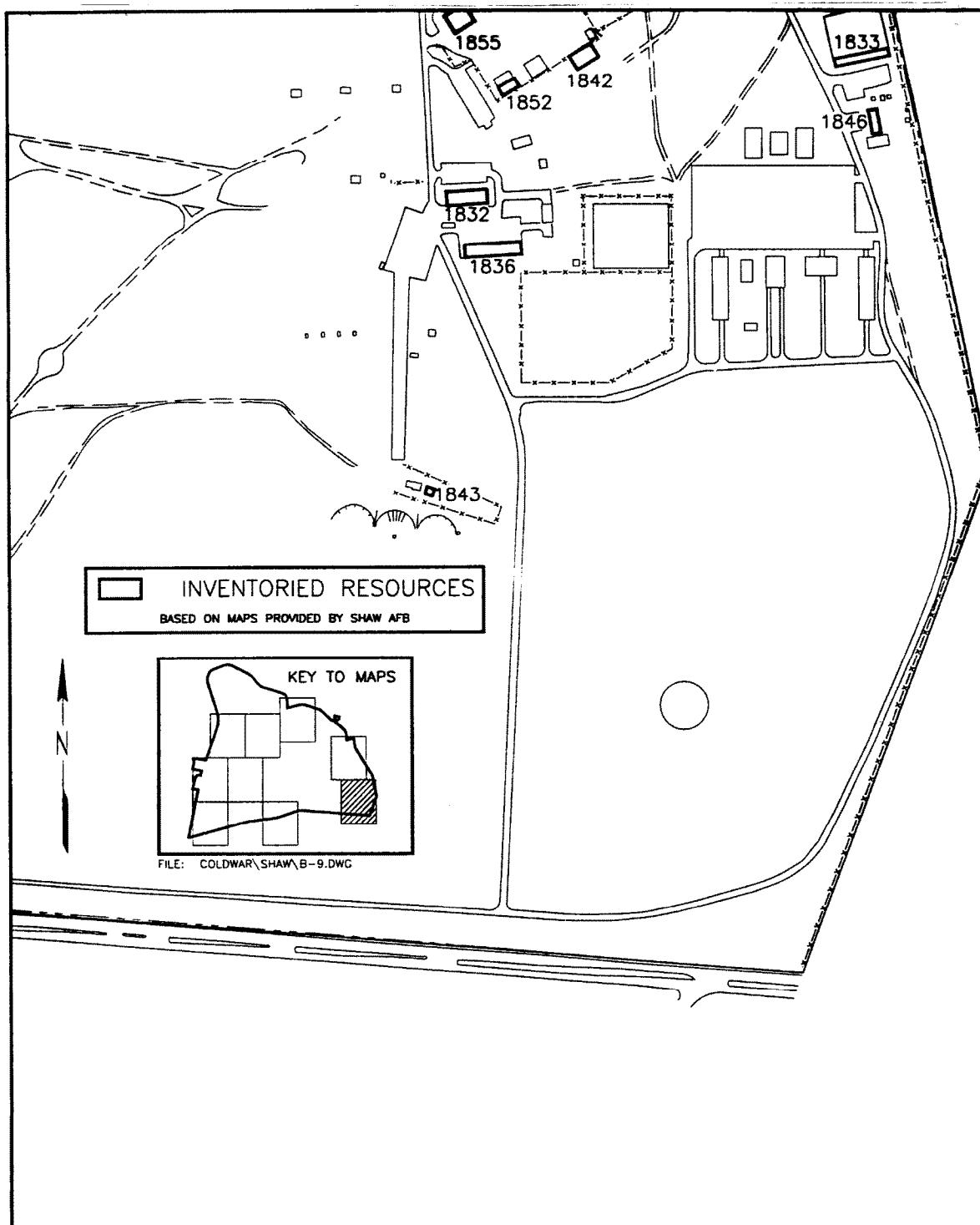
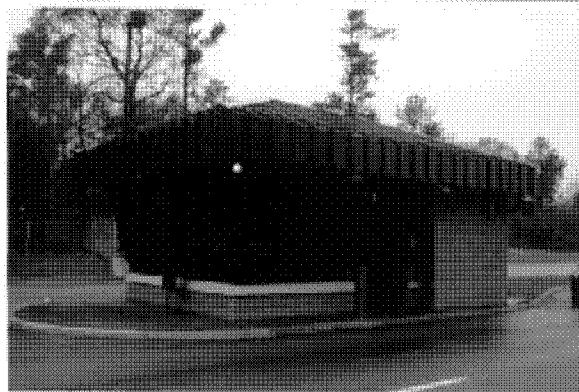
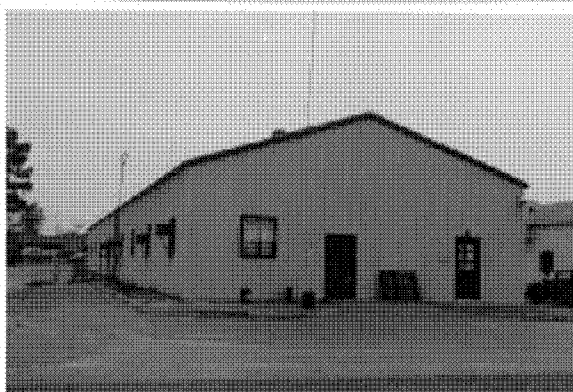


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 9 of 9).

APPENDIX C
PHOTOGRAPHS OF INVENTORIED RESOURCES



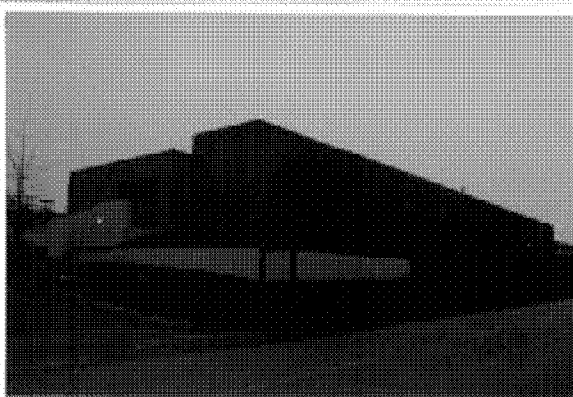
Resource No. 18001, Real Property No. 14
Traffic Checkhouse



Resource No. 18002, Real Property No. 27
Missile Communications Shop



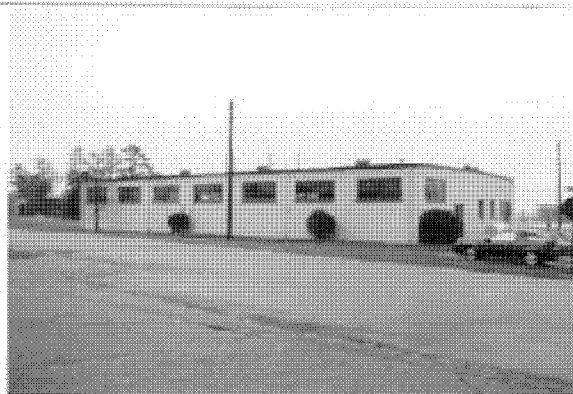
Resource No. 18003, Real Property No. 250
Base Engineering Administration



Resource No. 18004, Real Property No. 252
Base Engineering Covered Storage



Resource No. 18005, Real Property No. 227
Air Force Headquarters



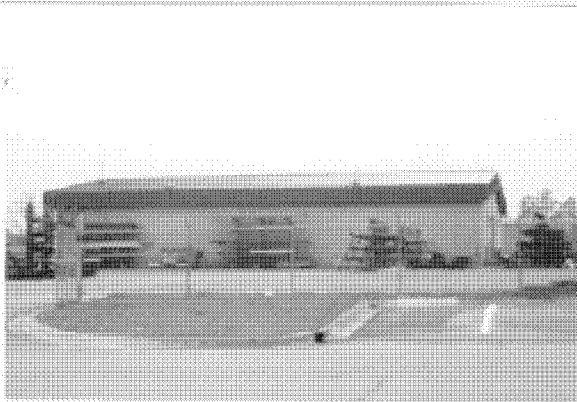
Resource No. 18006, Real Property No. 308
Warehouse Supply and Equipment Base



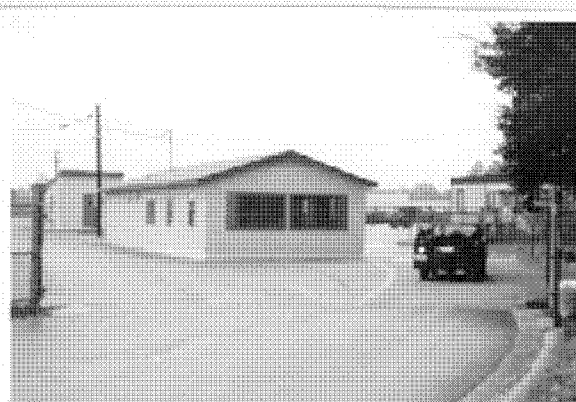
Resource No. 18007, Real Property No. 339
Base Engineering Pavement Ground Facility



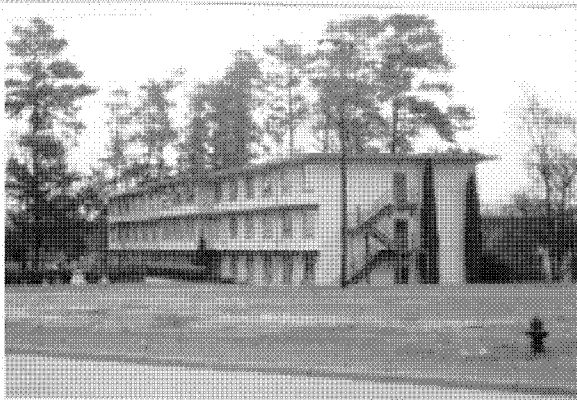
Resource No. 18008, Real Property No. 330
Base Engineering Maintenance Shop



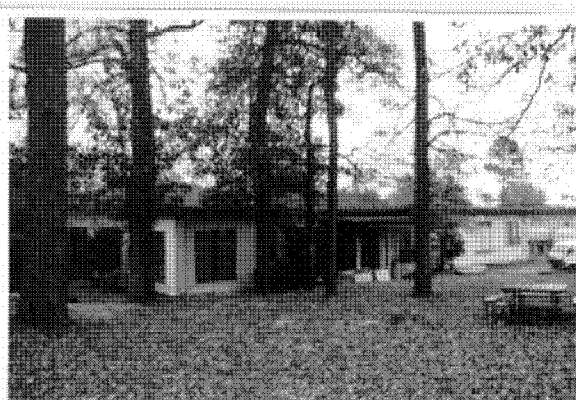
Resource No. 18009, Real Property No. 350
Base Engineering Covered Storage



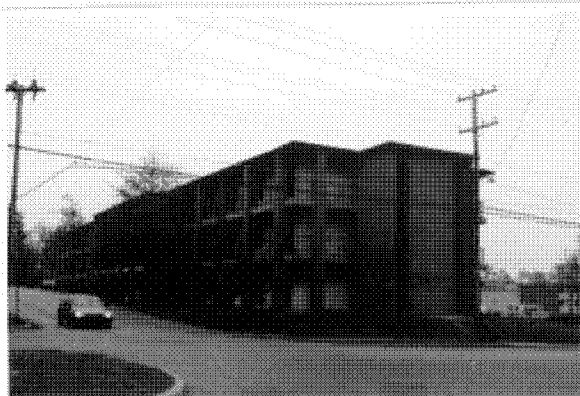
Resource No. 18010, Real Property No. 329
Vehicle Operations Administration



Resource No. 18011, Real Property No. 400
Non-Commissioned Officer's Professional
Education Center



Resource No. 18012, Real Property No. 404
Security Police Operations



Resource No. 18013, Real Property No. 900
Visiting Airman's Quarters Dormitory



Resource No. 18014, Real Property No. 403
Heating Facility Building



Resource No. 18015, Real Property No. 410
Security Police Operations



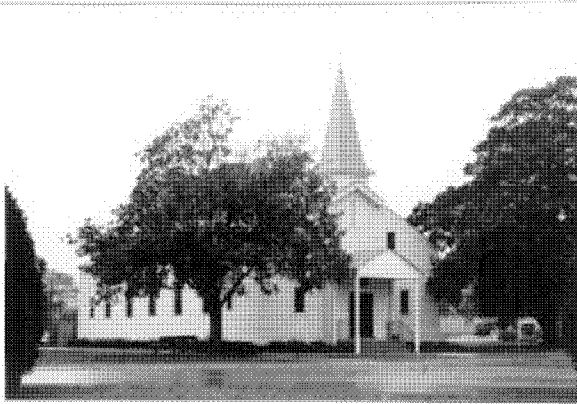
Resource No. 18016, Real Property No. 405
Recreation Library



Resource No. 18017, Real Property No. 216
Warehouse Supply and Equipment Base



Resource No. 18018, Real Property No. 200
Traffic Management Facility



Resource No. 18019, Real Property No. 208
Base Chapel



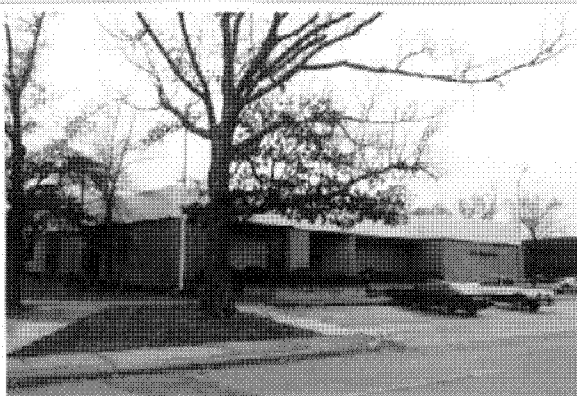
Resource No. 18020, Real Property No. 801
Post Office Center



Resource No. 18021, Real Property No. 1122
Wing Headquarters



Resource No. 18022, Real Property No. 1102
Numbered Air Force Headquarters



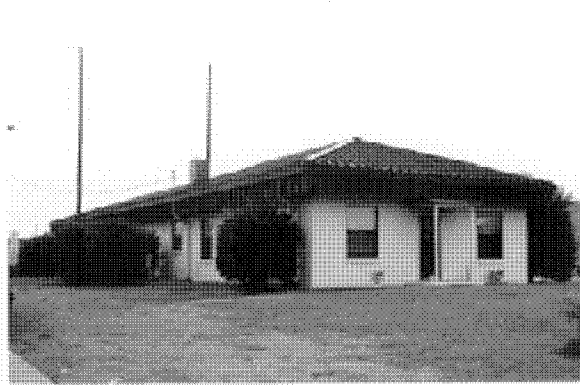
Resource No. 18023, Real Property No. 1109
DPI



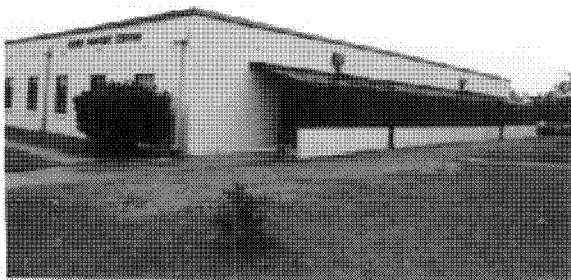
Resource No. 18024, Real Property No. 1118
Group Headquarters



Resource No. 18025, Real Property No. 1130
Numbered Air Force Headquarters



Resource No. 18026, Real Property No. 1128
Communications Facility



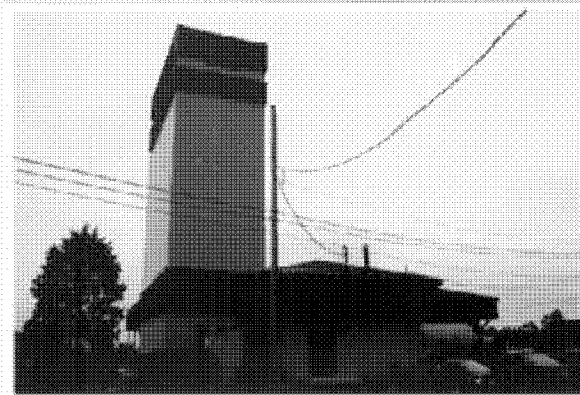
Resource No. 18027, Real Property No. 1127
Family Support Center



Resource No. 18028, Real Property No. 1405
Bank



Resource No. 18029, Real Property No. 1406
Bank



Resource No. 18030, Real Property No. 1213
Survival Equipment Shop



Resource No. 18031, Real Property No. 1420
Commissary Store



Resource No. 18032, Real Property No. 1422
Exchange Sales Store



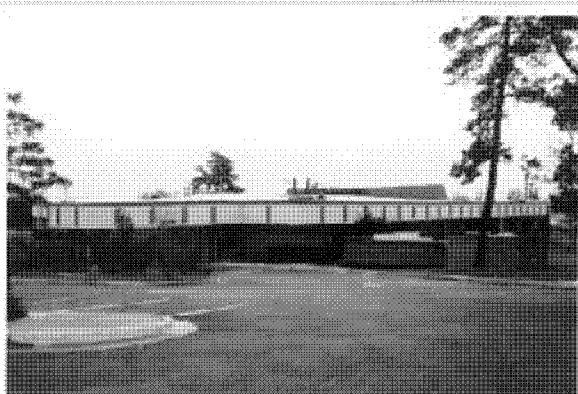
Resource No. 18033, Real Property No. 1411
Recreation Center



Resource No. 18034, Real Property No. 1413
Base Theater



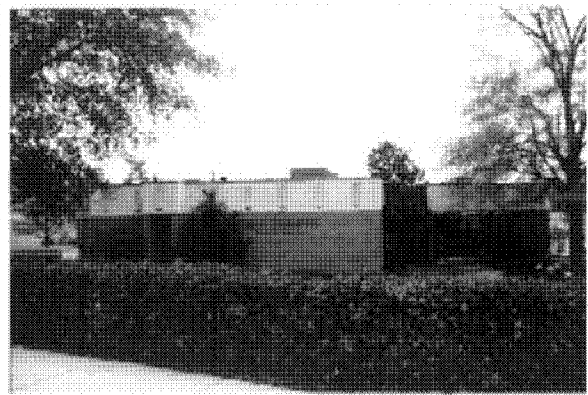
Resource No. 18035, Real Property No. 1401
Bowling Center



Resource No. 18036, Real Property No. 1402
Non-Commissioned Officer's Open Mess



Resource No. 18037, Real Property No. 2798
Golf Clubhouse



Resource No. 18038, Real Property No. 2799
Golf Clubhouse



Resource No. 18039, Real Property No. 1301
Exchange Service Station



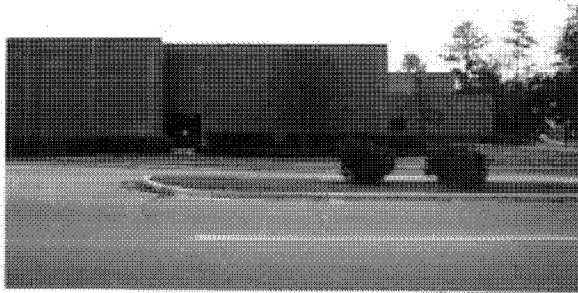
Resource No. 18040, Real Property No. 922
Officer's Open Mess



Resource No. 18041, Real Property No. 918
Swimmer's Bathhouse



Resource No. 18042, Real Property No. 912
Base Chapel



Resource No. 18043, Real Property No. 806
Gymnasium



Resource No. 18044, Real Property No. 909
Airman's Dining Hall



Resource No. 18045, Real Property No. 908
Occupational Health Clinic



Resource No. 18046, Real Property No. 932
Temporary Lodging Facility



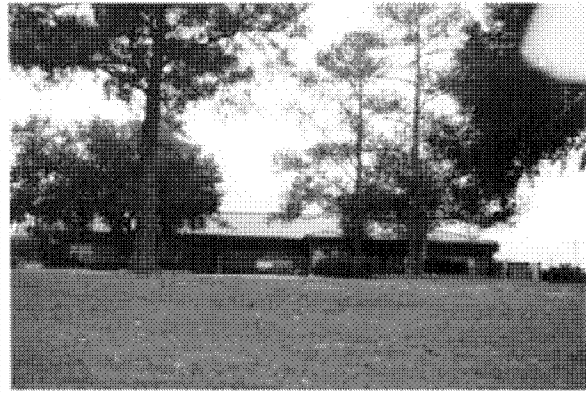
Resource No. 18047, Real Property No. 911
Visiting Officer's Quarters



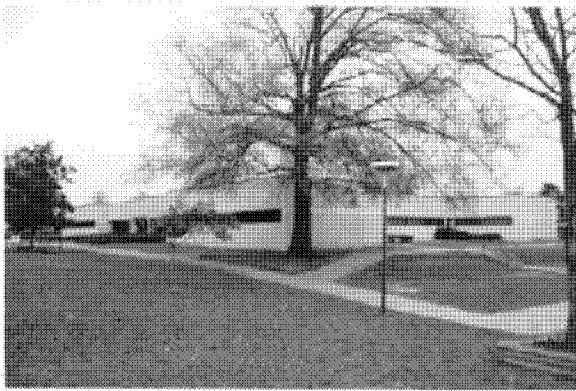
Resource No. 18048, Real Property No. 1047
Physiological Training



Resource No. 18049, Real Property No. 1048
Composite Medical Facility



Resource No. 18050, Real Property No. 1005
Child Care Center



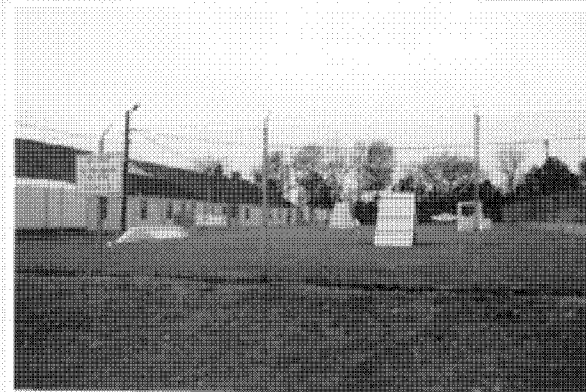
Resource No. 18051, Real Property No. 1046
Dental Clinic



Resource No. 18052, Real Property No. 1049
Branch Exchange



Resource No. 18053, Real Property No. 1037
Education Center



Resource No. 18054, Real Property No. 1033
Wing Headquarters



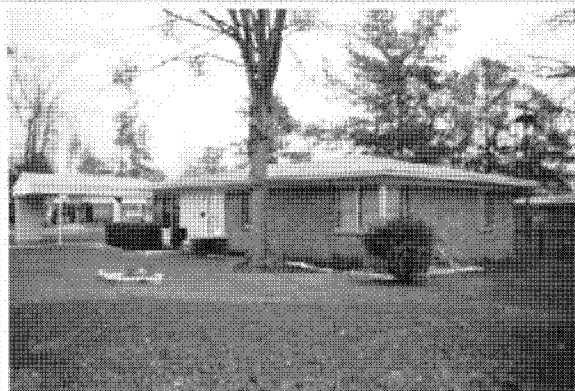
Resource No. 18055, Real Property No. 1029
Field Training Facility



Resource No. 18056, Real Property No. 325
Vehicle Maintenance Shop



Resource No. 18057, Real Property No. 2204
Wherry Family Housing (106 Orchid)



Resource No. 18058, Real Property No. 2517
Wherry Family Housing (275 Palmetto)



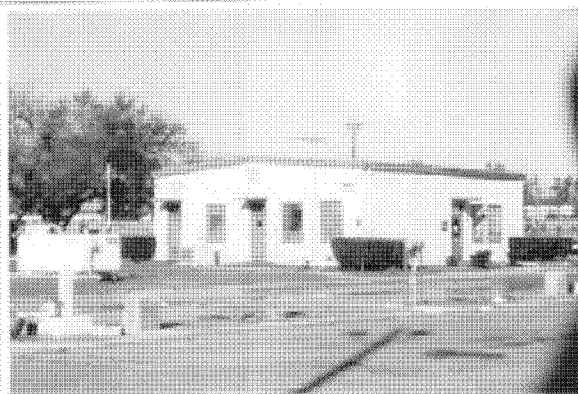
Resource No. 18059, Real Property No. 2081
Family Housing (Appr. 1950-1969)
(2801 Dogwood)



Resource No. 18060, Real Property No. 106
Squadron Operations



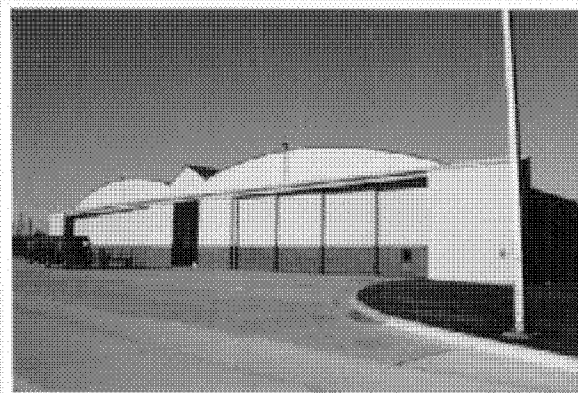
Resource No. 18061, Real Property No. 114
Munitions Loading Crew Training



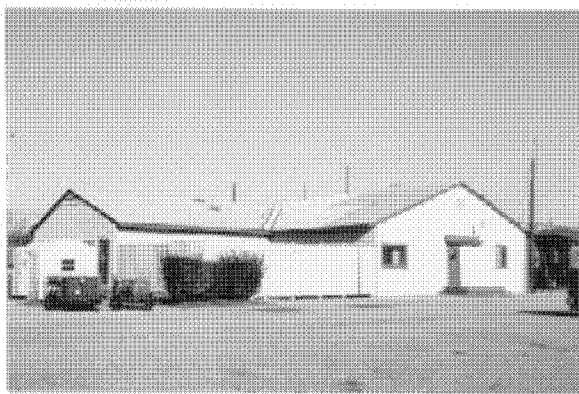
Resource No. 18062, Real Property No. 112
Petroleum Operations Building



Resource No. 18063, Real Property No. 601
Morale, Welfare, and Recreation Storage



Resource No. 18064, Real Property No. 611
Maintenance Hangar



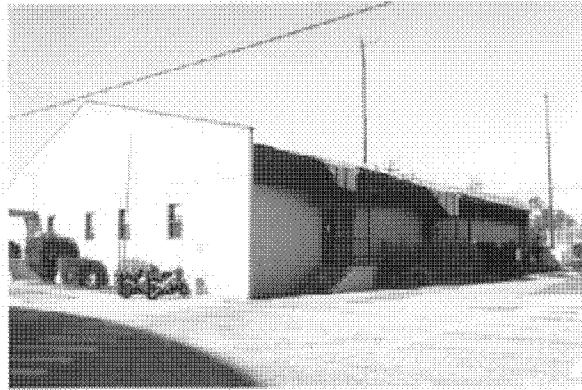
Resource No. 18065, Real Property No. 606
Aircraft Maintenance Shop



Resource No. 18066, Real Property No. 615
Base Operations



Resource No. 18067, Real Property No. (none)
New Building



Resource No. 18068, Real Property No. 700
RAPCON Center



Resource No. 18069, Real Property No. 729
New Building



Resource No. 18070, Real Property No. 706
New Building



Resource No. 18071, Real Property No. 710
Squadron Operations



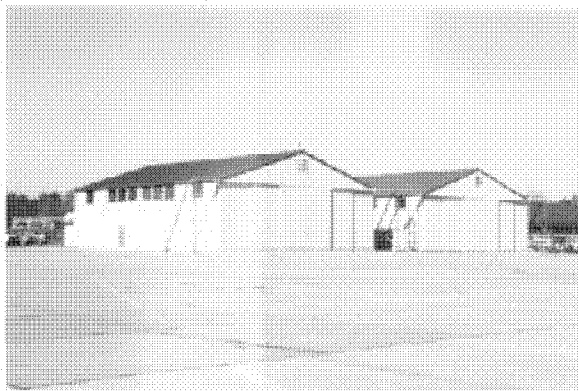
Resource No. 18072, Real Property No. 714
Fire Station



Resource No. 18073, Real Property No. 1205
General Purpose Aircraft Shop



Resource No. 18074, Real Property No. 1200
Maintenance Hangar



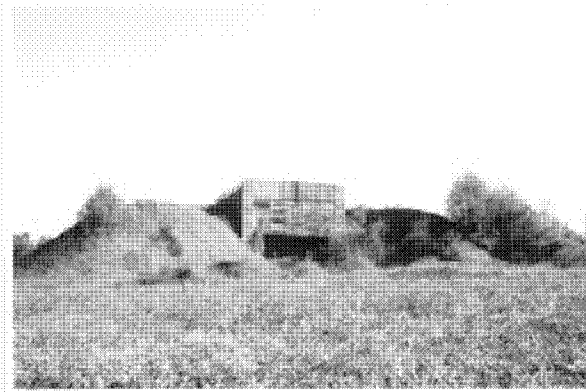
Resource No. 18075, Real Property No. 1212
Warehouse Supply and Equipment Base



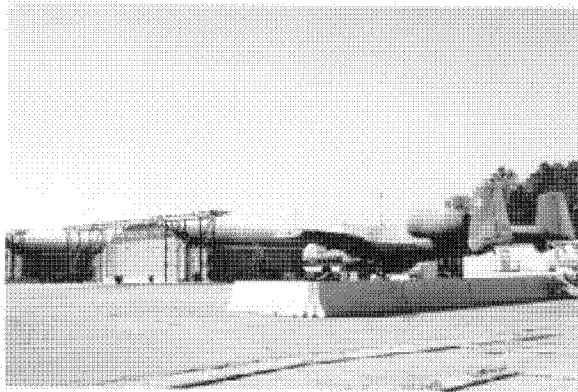
Resource No. 18076, Real Property No. 1206
Jet Engine Inspection Shop



Resource No. 18077, Real Property No. 1207
Avionics Shop



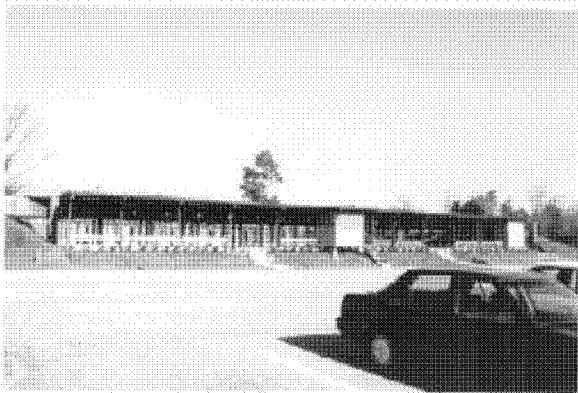
Resource No. 18078, Real Property No. 1702
Aircraft Backstop



Resource No. 18079, Real Property No. 1696
Jet Engine Test Stand



Resource No. 18080, Real Property No. 1868
Explosive Ordnance Disposal



Resource No. 18081, Real Property No. 1833
Small Arms System Range



Resource No. 18082, Real Property No. 1846
Combat Arms Training Maintenance



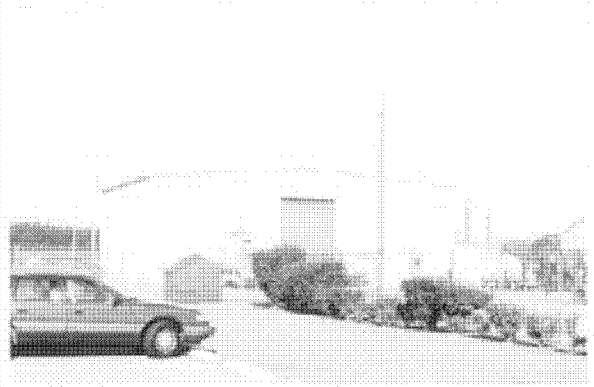
Resource No. 18083, Real Property No. 1843
Rod and Gun Club



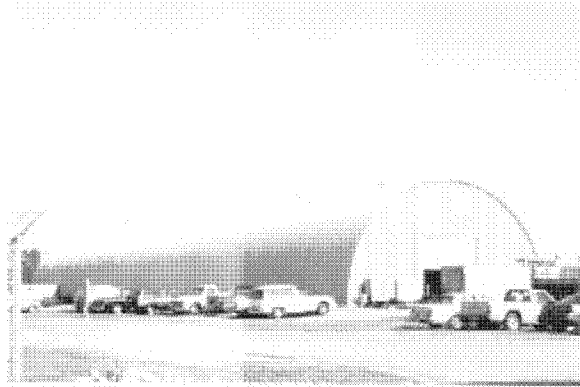
Resource No. 18084, Real Property No. 1836
Security Police Operations



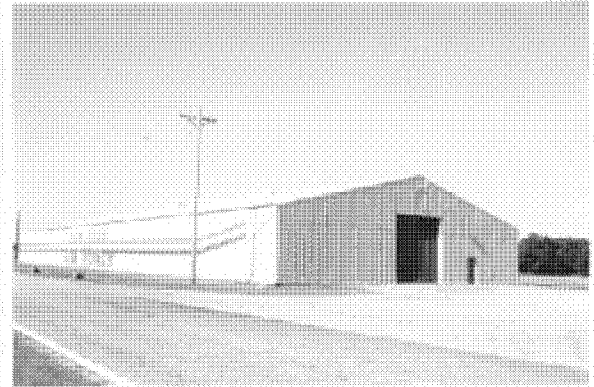
Resource No. 18085, Real Property No. 1832
Missile Communications Shop



Resource No. 18087, Real Property No. 1855
Vehicle Maintenance Shop



Resource No. 18088, Real Property No. (none)
New Building



Resource No. 18089, Real Property No. 1980
Warehouse Supply and Equipment Base



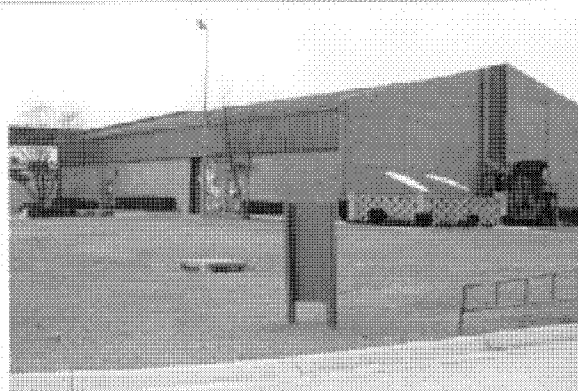
Resource No. 18090, Real Property No. (none)
Poinsett Air Force Range



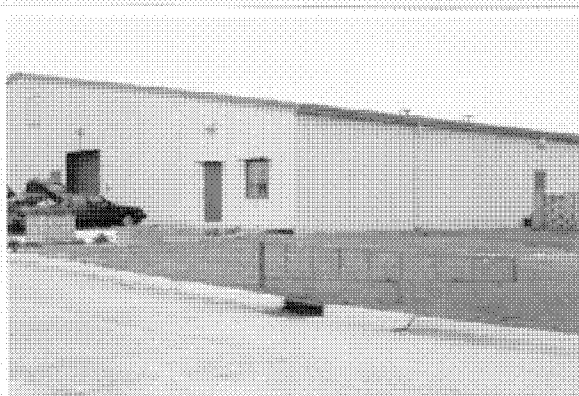
Resource No. 18091, Real Property No. 823
Exchange Cafe Snack Bar (Burger King)



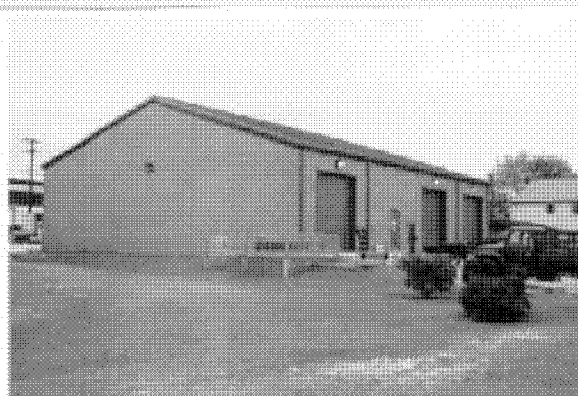
Resource No. 18093, Real Property No. (none)
Aero Club



Resource No. 18094, Real Property No. 1217
ECM Pod Shop and Storage



Resource No. 18095, Real Property No. 1517
Weapon and Release System Shop



Resource No. 18096, Real Property No. 1518
Air Freight Terminal



Resource No. 18097, Real Property No. 1507
Warehouse Supply and Equipment Base



Resource No. 18098, Real Property No. 1511
Fuel Systems Maintenance Dock



Resource No. 18099, Real Property No. 1521
Fast Food Service



Resource No. 18100, Real Property No. 1500
Weapon and Release System Shop



Resource No. 18101, Real Property No. 1510
Non-Destructive Inspection Shop



Resource No. 18102, Real Property No. 1509
Weapons System Maintenance Facility



Resource No. 18103, Real Property No. 1505
Flight Simulator Training



Resource No. 18104, Real Property No. 1601
Weapons System Maintenance Facility



Resource No. 18105, Real Property No. 1602
Aircraft Support Equipment Storage



Resource No. 18106, Real Property No. 1502
Aircraft Support Equipment Storage



Resource No. 18107, Real Property No. 1614
Maintenance Hangar



Resource No. 18108, Real Property No. 1605
Squadron Operations



Resource No. 18109, Real Property No. 1606
Squadron Operations



Resource No. 18110, Real Property No. 1630
Aircraft Maintenance Shop



Resource No. 18111, Real Property No. 1608
Aircraft Maintenance Shop



Resource No. 18112, Real Property No. 1610
Squadron Operations



Resource No. 18113, Real Property No. 1604
Warehouse Supply and Equipment Base



Resource No. 18114, Real Property No. 1725
Petroleum Operations Building



Resource No. 18115, Real Property No. (none)
Petroleum Operations



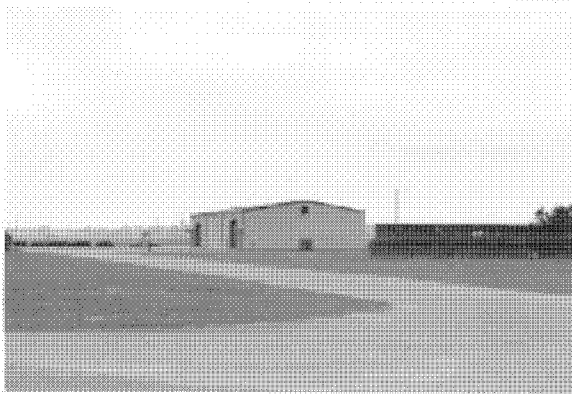
Resource No. 18116, Real Property No. (none)
Ammunition Signs



Resource No. 18117, Real Property No. 1800
Munitions Maintenance Administration



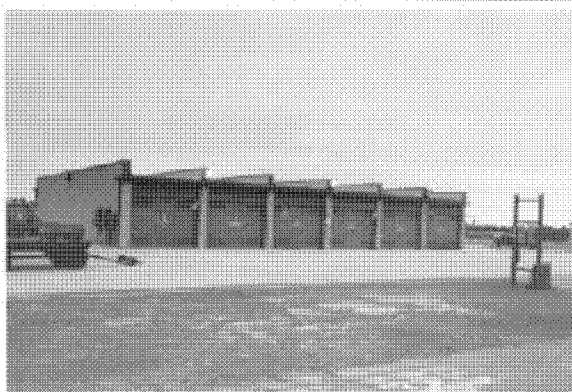
Resource No. 18118, Real Property No. 1813
Munitions Maintenance Administration



Resource No. 18119, Real Property No. 1883
Storage Igloo



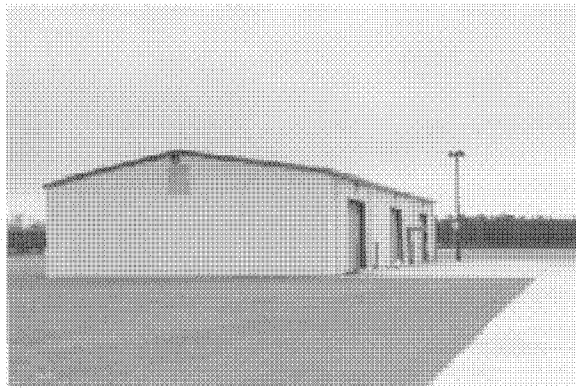
Resource No. 18120, Real Property No. 1808
Storage Igloo



Resource No. 18121, Real Property No. 1880
Above Ground Magazine Storage



Resource No. 18122, Real Property No. 1816
Missile Maintenance Shop



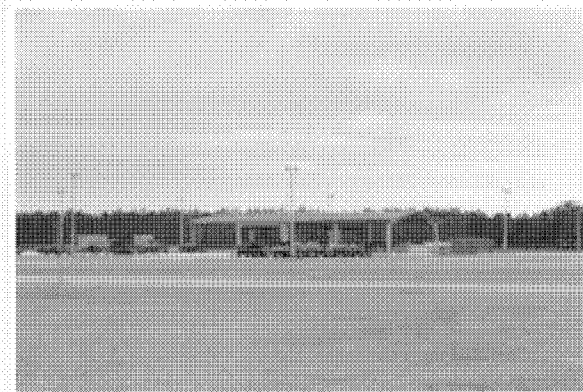
Resource No. 18123, Real Property No. 1852
Aircraft Support Equipment Storage



Resource No. 18124, Real Property No. 1824
Above Ground Magazine Storage



Resource No. 18125, Real Property No. 1822
Segregated Magazine Storage



Resource No. 18126, Real Property No. 1870
Ancillary Explosives Facility



Resource No. 18127, Real Property No. 1815
Conventional Munitions Shop



Resource No. 18128, Real Property No. 1842
Aircraft Support Equipment Storage

APPENDIX D
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT SHAW AFB

Resource Number: 18129

Property Description: Historical maps, base layouts, construction drawings
Associated Property:
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date:
Base Map Building Number: inside 250

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence
Property Type: Documentary Collection

Statement of Significance: This collection illustrates the development of the base throughout the Cold War era.

Cold War Relationship-Nat'l. Recognition:	3
Theme Relationship:	2
Temporal Phase Relationship:	4
Level of Importance:	1
Percent Historic Fabric:	4
Severity of Threats:	2
Total Score for Priority Matrix:	16
Comments on Threats:	Threatened by continual use and handling.

No Further Work:	No
Stewardship:	Yes
National Register Listing:	No
Further Documentation:	Yes
Preservation/Conservation/Repair:	Yes
Comments on Resource Management:	

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: various
Period of Association: all periods or phases
Comments on Condition: The resource is in good condition, but is an actively used resource, thus it is subject to wear and tear.

APPENDIX E
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture extant on Shaw AFB and to provide research materials for this study:

MSgt James Liby
Wing Historian
20th FW/HO
517 Lance Avenue, Suite 205
Shaw AFB, South Carolina 29152-5041
(803) 668-4145

Steven Pivnick
Public Affairs Officer
20th FW/PAO
Shaw AFB, South Carolina 29152
(803) 668-3621

Barbara Smith
Real Property Officer
20th CES/CERR
428 Chapin Street
Shaw AFB, South Carolina 29152-5123
(803) 668-2551

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team during the base visit. They were identified as people possessing extensive knowledge of Shaw AFB history and Cold War context.

Mr. Terrance Madewell, Cultural Resource Officer, December 11, 1994

Mr. Rosmer, Ninth Air Force Historian, December 11, 1994

MSgt James Liby, Wing Historian, December 9 through 12, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME II-27: A BASELINE INVENTORY OF COLD WAR
MATERIAL CULTURE AT WHITEMAN AIR FORCE BASE**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**Patience Elizabeth Patterson
David P. Staley
Katherine J. Roxlau**

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

Contract DACA 63-92-D-0011

for

**United States Army Corps of Engineers
Fort Worth District**

August 1997

**United States Air Force
Air Combat Command**

MANAGEMENT SUMMARY

Whiteman Air Force Base was inventoried for Cold War resources by Patience E. Patterson and David P. Staley between August 22 and 26, 1994 as part of the Air Combat Command Cold War Study for the ongoing Department of Defense Legacy Program. Information was gathered at the base from the files of the Real Property Office, the Site Development Office, the Environmental Office, the Public Affairs Office, and the History Office.

An initial reconnaissance of the base was accomplished with Mr. Don Meuschke, the Cultural/Natural Resource Officer for Whiteman Air Force Base. This initial orientation enabled the team to become familiar with the base and determine what property types were extant on base. It also allowed for the determination of specific properties which would likely be relevant to the Cold War study. These resources were photographed, as were resources that were representative of the different types of facilities on the base.

From the on-site inspection and research, five resources were determined to be important to the base Cold War history. Temporal Phases I through IV, as described in the historic context and methodology document written for this project (Lewis et al. 1995), are represented. Two of the resources are buildings, one is a structure, and two are collections of records and documents. Stewardship, further documentation, and eligibility to the National Register of Historic Places is recommended for the Bomber Alert Facility, Missile Launch Control Facility, and Missile Launch Facility Trainer. Further documentation, stewardship, and conservation are recommended for the two Documentary Collections.

LIST OF ACRONYMS

AAF	- Army Air Field
AAFBU	- Army Air Force Base Unit
ABS	- Air Base Squadron
ACC	- Air Combat Command
ACHP	- Advisory Council on Historic Preservation
AFB	- Air Force Base
AGE	- Air Ground Equipment
AMC	- Air Materiel Command
AMMS	- Airborne Missile Maintenance Squadron
AMS	- Avionics Maintenance Squadron
BMW	- Bombardment Wing
BW	- Bomb Wing
CEBMCO	- Corps of Engineers, Ballistic Missile Construction Office
CES	- Civil Engineering Squadron
CINCSAC	- Commander in Chief of Strategic Air Command
DoD	- Department of Defense
ERCS	- Emergency Rocket Communication System
FMS	- Field Maintenance Squadron
FTD	- Field Training Detachment
FW	- Fighter Wing
HABS	- Historic American Buildings Survey
HICS	- Hardened Intersite Cable System
ICBM	- Intercontinental Ballistic Missile
LCC	- Launch Control Center
LCF	- Launch Control Facility
LF	- Launch Facility
MAC	- Military Airlift Command
MANG	- Missouri Air National Guard
Mariah	- Mariah Associates, Inc.
MMS	- Munitions Maintenance Squadron
MW	- Missile Wing
NCO	- Noncommissioned Officer
NHPA	- National Historic Preservation Act
NPS	- National Park Service
NRHP	- National Register of Historic Places
NSC	- National Security Council
OCONUS	- Off the Continental United States
OMS	- Organizational Maintenance Squadron
PACCS	- Post-Attack Command and Control System
PME	- Precision Measurement Equipment
RAPCON	- Radar Approach Control Center

LIST OF ACRONYMS (Continued)

SAC	- Strategic Air Command
SALT	- Strategic Arms Limitation Treaty
SATAF	- Site Activation Task Force
SDI	- Strategic Defense Initiative
SHPO	- State Historic Preservation Office
SMS	- Strategic Missile Squadron
SMW	- Strategic Missile Wing
START	- Strategic Arms Reduction Talks
SUP	- Silo Upgrade Program
TAC	- Tactical Air Command
UHF	- Ultra High Frequency
USAF	- United States Air Force

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Defense Triad - a group of three weapons systems that was viewed by President Eisenhower at the end of the 1950s as the basis for stable deterrence between the United States and the Soviet Union. The weapons systems included the B-52 bomber, the Polaris submarine launched ballistic missile, and the Minuteman intercontinental ballistic missile.

Emergency Rocket Communication System - a specially equipped missile that transmits emergency messages from the National Command Authorities to sites where nuclear weapons are deployed. The missiles carry radio transmitters rather than nuclear payloads. This system was developed as a back-up means of sending messages to United States missile installations and bomber bases.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S. military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The Treaty, signed in 1963, aimed to reduce environmental damage caused by nuclear testing.

National Emergency War Order - the war plan kept by the President and other national command authorities that directs the function of individual military bases should the nation go to war.

GLOSSARY (Continued)

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, districts, landscapes, sites, and objects.

Section 106 - a review process in the National Historic Preservation Act by which effects of an undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion in the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this was the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers were the weapons systems limited in this agreement.

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limited the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of United States and Soviet Union relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Arms Reduction Talks - a series of negotiations in 1982 and 1983 between the United States and the Soviet Union that sought to reduce the number of strategic nuclear weapons. No agreement was ever reached, primarily because neither side could agree on which weapons to reduce. The Soviet Union walked out of the negotiations after the United States began deploying Pershing II ballistic missiles and Tomahawk cruise missiles in Western Europe in December 1983.

Vladivostok Accord - signed in 1974, this agreement set new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement set numerically equal limits on the number of nuclear weapons deployed by each side. It also limited for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
MANAGEMENT SUMMARY	i
LIST OF ACRONYMS	ii
GLOSSARY	iv
1.0 INTRODUCTION	1
2.0 BASE DESCRIPTION	4
2.1 CURRENT BASE MISSION	4
2.2 GEOGRAPHIC DESCRIPTION	5
2.3 CURRENT BASE LAYOUT	7
2.4 BASE LAND USE	10
3.0 HISTORICAL OVERVIEW	14
3.1 BASE HISTORY AND COLD WAR CONTEXT	14
3.2 BASE DEVELOPMENT	21
4.0 METHODOLOGY	27
4.1 INVENTORY	27
4.2 EVALUATION OF IMPORTANT RESOURCES	28
4.2.1 Documentation	28
4.2.2 Evaluation of Importance	28
4.2.2.1 Cold War Context	28
4.2.2.2 NRHP Criteria	29
4.2.2.3 Exceptional Importance	30
4.2.3 Evaluation of Integrity	30
4.2.4 Priority Matrix	31
4.2.5 Resource Organization	32
4.3 BASE SPECIFIC METHODS	32
5.0 RECONNAISSANCE INVENTORY RESULTS	35
6.0 EVALUATION RESULTS	36
6.1 OPERATIONS AND SUPPORT INSTALLATIONS	36
6.1.1 Documentation	36
6.1.1.1 Documentary Collection	36
6.1.1.2 Documentary Collection	38
6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	38
6.2.1 Alert Facilities	38

TABLE OF CONTENTS (Continued)

	<u>Page</u>
6.2.1.1 Bomber Alert Facility	38
6.2.2 Missiles	40
6.2.2.1 Missile Launch Control Facility	40
6.3 MATERIEL DEVELOPMENT FACILITIES	41
6.4 TRAINING FACILITIES	42
6.4.1 Missile Training	42
6.4.1.1 Missile Launch Facility Trainer	42
6.5 INTELLIGENCE FACILITIES	43
7.0 UNDOCUMENTED RESOURCES	44
8.0 FUTURE THREATS TO RESOURCES	45
9.0 PRELIMINARY RECOMMENDATIONS	46
9.1 NRHP ELIGIBILITY	46
9.1.1 Evaluation and Determination of NRHP Eligibility	46
9.1.2 Implications of NRHP Eligibility	48
9.2 EVALUATED RESOURCE RECOMMENDATIONS	50
9.2.1 Documentary Collection	50
9.2.2 Documentary Collection	52
9.2.3 Bomber Alert Facility	52
9.2.4 Missile Launch Control Facility	52
9.2.5 Missile Launch Facility Trainer	53
10.0 REFERENCES CITED	54
APPENDIX A: RECONNAISSANCE INVENTORY	
APPENDIX B: BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES	
APPENDIX C: PHOTOGRAPHS OF INVENTORIED RESOURCES	
APPENDIX D: DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES	
APPENDIX E: DETAILED RESOURCE CONTENTS	
APPENDIX F: EXTANT SOURCES OF INFORMATION	

LIST OF FIGURES

	<u>Page</u>
Figure 1.1 Bases Selected for the Air Combat Command Cold War Study	2
Figure 2.1 Location of Whiteman Air Force Base	6
Figure 2.2 Whiteman Air Force Base Layout	8
Figure 2.3 Standard Strategic Air Command Base Layout	9
Figure 2.4 Whiteman Air Force Base Land Use Diagram	12
Figure 2.5 Standard Strategic Air Command Base Land Use Diagram	13
Figure 3.1 Whiteman Air Force Base 1950-1960	22
Figure 3.2 Whiteman Air Force Base 1960-1970	24
Figure 3.3 Whiteman Air Force Base 1970-1980	25
Figure 3.4 Whiteman Air Force Base 1980-Present	26

LIST OF TABLES

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup	37
Table 6.2 Evaluated Resource Prioritization by Priority Rank	37
Table 9.1 Recommendations for Evaluated Resources	51

1.0 INTRODUCTION

Mariah Associates, Inc. (Mariah), under contract with the United States Army Corps of Engineers, Fort Worth District, is conducting a reconnaissance inventory of Cold War material culture on selected Air Force bases throughout the continental United States and in Panama for the Air Combat Command (ACC) (Figure 1.1). As each base is inventoried, a report is completed. Once all 27 bases in the study have been inventoried, a final report will be compiled integrating all evaluated resources and assessing them for significance at the national level.

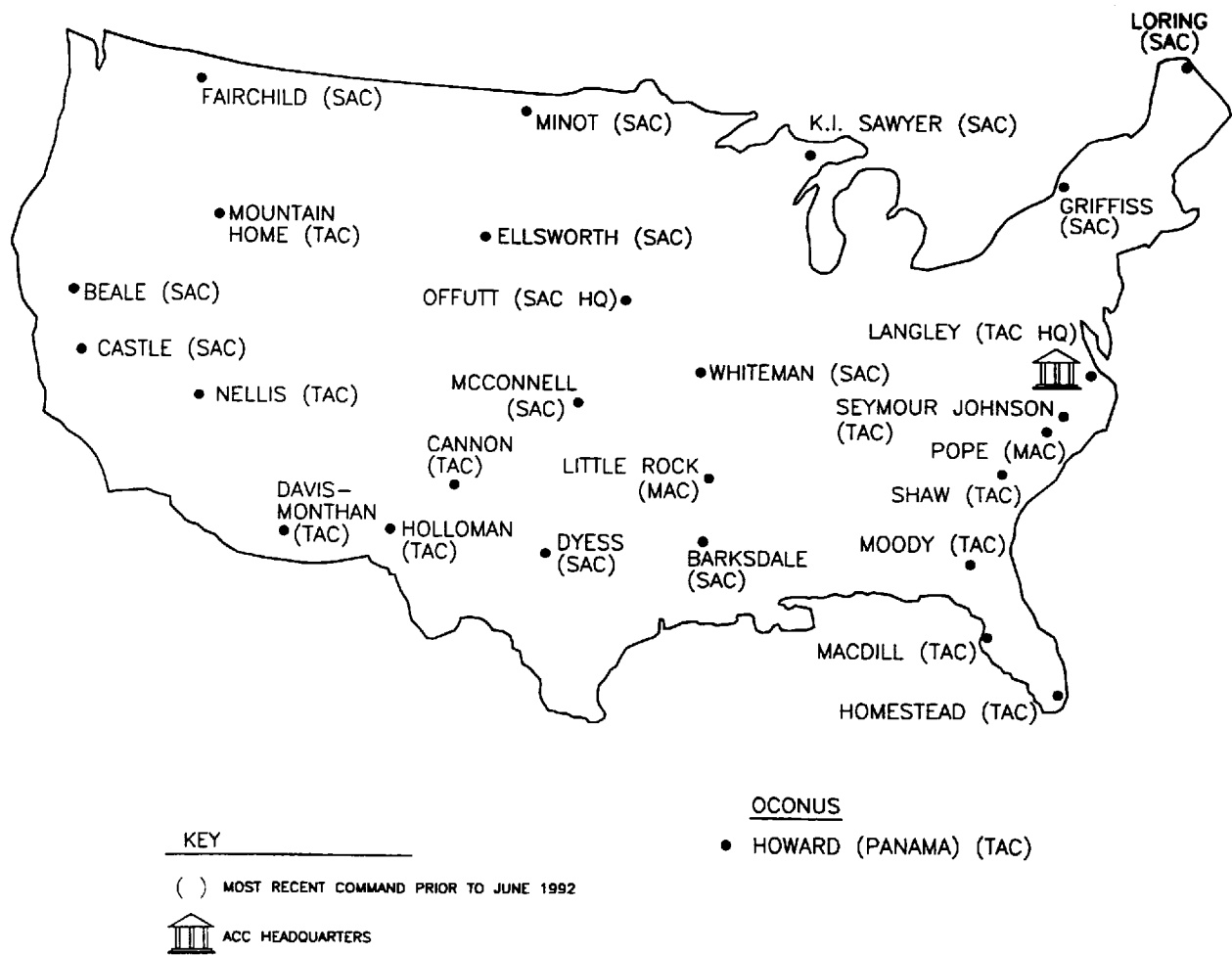
Prior to the initiation of base inventories, Mariah developed a historic context for the Cold War and a methodology for assessment of Cold War material culture (Lewis et al. 1995). The historic context sets the framework for developing individual base Cold War contexts, evaluating resources, and defining significance, and the methodology defines how to conduct the inventory and evaluation. Using the historic context, the methodology also defines four temporal phases of the Cold War to aid in evaluating resources. The phases are delineated based on significant Cold War events and related developments in U.S. government policy and military strategy. The relationship of resources to the phases helps to guide research efforts throughout the inventory, evaluation, and prioritization processes. The phases are as follows:

- Phase I - July 1945 to January 1953

This phase begins with the explosion of the first experimental atomic bomb at Alamogordo, New Mexico. This event spurred a period of intense technological experimentation. This phase, spanning the Truman administration, represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

This phase begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty by Kennedy, both superpowers leaned toward a more amiable co-existence, and a condition of detente was born.



FILE: COLDWAR\WHITEMAN\US-MAP.DWG

Figure 1.1 Bases Selected for the Air Combat Command Cold War Study.

-
- Phase III - November 1963 to January 1981

This phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

This phase begins with the start of President Reagan's administration and ends with the opening of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to Strategic Arms Reduction Talks (START). Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative (SDI).

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 110 requires federal agencies to inventory cultural resources under their control and evaluate those that are significant or potentially eligible for listing on the National Register of Historic Places (NRHP). The reports produced by this project will provide a tool for ACC to use in determining which resources are eligible for the NRHP, and in selecting a number of these resources to be nominated to the NRHP.

This report is a reconnaissance inventory of Cold War related resources on Whiteman Air Force Base (AFB). Whiteman AFB, a former Strategic Air Command (SAC) installation, is one of the bases being evaluated in the attempt to determine the extent of ACC Cold War cultural resources nationwide. As described above, a final report will synthesize the individual base reports and provide initial management recommendations for evaluated resources.

2.0 BASE DESCRIPTION

2.1 CURRENT BASE MISSION

The current host unit on Whiteman AFB is the 509th Bomb Wing (BW). It accepted host responsibilities for the base from the 351st Missile Wing (MW) on July 1, 1993. The 509th BW is made up of the 509th Operations Group, the 509th Logistics Group, the 509th Support Group, the 509th Security Police Group, and the 509th Medical Group. Each of these groups has its attendant squadron, whose missions are in support of the overall missions on base.

One of the main missions on the base at present is that of the 509th BW, the United States Air Force's (USAF) only B-2 *Stealth* bomber flying operation:

The primary mission of the B-2 is to enable any theater commander to hold at risk and, if necessary, attack an enemy's war making potential, especially those targets which, if not destroyed in the first hours or days of a conflict, would allow unacceptable damage to be inflicted on the friendly side (Whiteman AFB 1994:4).

The 509th Operations Support Squadron and the 393rd Bomb Squadron are the units which fly and support the B-2 and its mission. Additionally, the 509th Operations Group flies and maintains the T-38 *Talon* as a companion trainer to the B-2. The T-38 supplements the mission as a basic proficiency trainer due to the limited number of training flights available in the B-2.

The 509th Logistics Group is comprised of the 509th Logistics Support Squadron, the 509th Maintenance Squadron, the 509th Contracting Squadron, the 509th Supply Squadron, and the 509th Transportation Squadron. All of these units work to ensure the accomplishment of the day-to-day mission of the base. The 509th Support Group comprises the 509th Mission Support Squadron, the 509th Services Squadron, the 509th Communications Squadron, and the 509th Civil Engineering Squadron (CES). The 509th Support Group is charged with meeting the needs of every person on the base who must support the mission. The 509th Security Police Group is comprised of the 509th Security Support Squadron, the 509th Security Police Squadron, and the 351st Missile Security

Squadron. The 509th Security Police Group is responsible for a dual-wing security mission: deactivating the Minuteman II intercontinental ballistic missile (ICBM) system and protecting the B-2. The 509th Medical Group is responsible for the good health of the military and their families assigned to Whiteman AFB and providing excellent health care to the retired military and their families residing in the local area.

The second main mission at Whiteman AFB is that of the 351st MW. The 351st Operations Group is comprised of the 351st Operations Support Squadron, the 508th and 509th Missile Squadrons, the 47th Rescue Flight (flying the HH-1H *Huey* helicopter), and the 351st Maintenance Group. All these units are charged with accomplishing the mission of the 351st MW: to operate, maintain, secure, and safely deactivate the Minuteman II weapon system in accordance with the Presidential directive in regard to START.

Whiteman AFB has taken on a third mission, that of the 442nd Fighter Wing (FW). This wing currently operates and maintains the A-10 *Thunderbolt II*. It is responsible for the manning, training, and combat readiness of Air Force Reserve units and the Missouri Air National Guard (MANG) unit at Whiteman AFB.

2.2 GEOGRAPHIC DESCRIPTION

Whiteman AFB is located in Johnson County, 60 mi (96 km) southeast of Kansas City, Missouri, 9 mi (14 km) west of Warrensburg, and 2 mi (3 km) south of Knob Noster. The region is positioned on the northern fringe of the Ozark Mountains in the Central Lowlands physiographic province (Figure 2.1). Its elevation is 834 ft (254 m) above mean sea level (USAF Historical Research Agency 1943). The immediate area is characterized by slightly rolling topography, and is used mainly as farmland. The base is bounded by Knob Noster State Park and State Highway 132 on the west, on the east by State Route D, on the north by agricultural lands that intervene between the base and Knob Noster, and on the south by agricultural and grazing lands (USAF 1989:33).

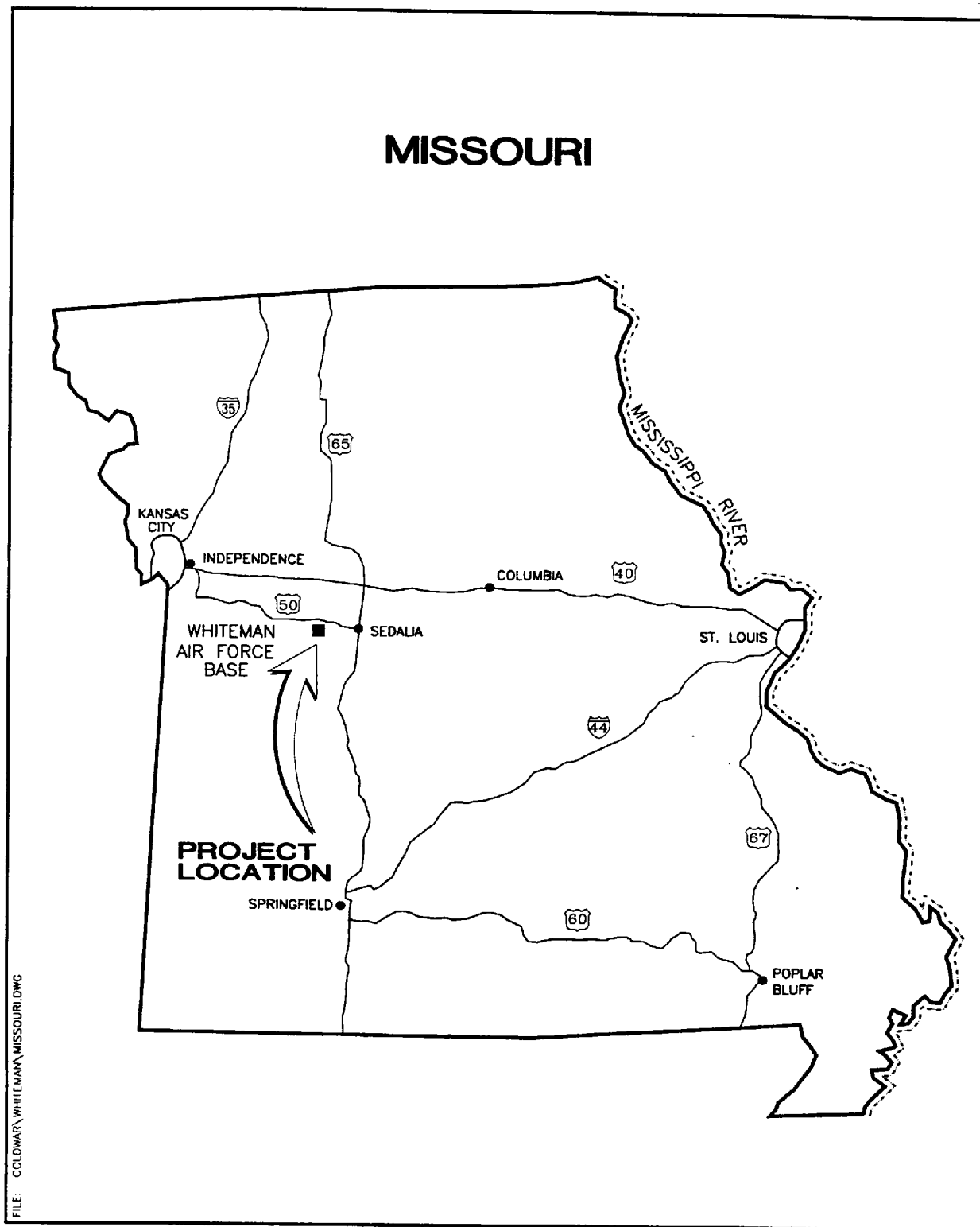


Figure 2.1 Location of Whiteman Air Force Base.

2.3 CURRENT BASE LAYOUT

The layout of Whiteman AFB (Figure 2.2) is fundamentally similar to the standard SAC base layout (Figure 2.3). Any variations from that layout are related to the historic functions of the base.

The central feature of Whiteman AFB, like all air bases, is the air field portion of the base. The main or instrument runway is positioned in a north/northeast-south/southwest orientation and is 12,400 ft (3,779 m) long and 200 ft (61 m) wide. This runway has been the main runway since the early 1950s. Prior to this, in 1943, the base had four 7,200 ft (2,194 m) runways oriented north-south, east-west, northeast-southwest, and northwest-southeast. Portions of the other runways can still be seen as breached expanses of concrete. The eastern end of the old east-west runway is currently being used as a transient missile holding facility.

The flight apron is located along the western side of the instrument runway. Mission and support buildings are found along the entire western side of the apron. Mission buildings, namely hangers associated with the B-2 bomber, were built along the eastern side of the apron at the northern end. The alert facilities are located at the northeastern corner of the base. Weapons and warhead storage facilities are separated from the rest of the base, located on the eastern side of the main runway beside the old northeast-southwest runway.

Unaccompanied housing is centrally located at the base. Accompanied or family housing is located on the western side of the base in two separate areas. Commander's housing is located within the northern one of these two areas.

The two accompanied housing areas are divided by a community area that includes the main gate, school, youth center, church, clubs, and visitor's quarters. Other community facilities are centrally located on the base. A recreational greenbelt extends from the southern end of the base north to

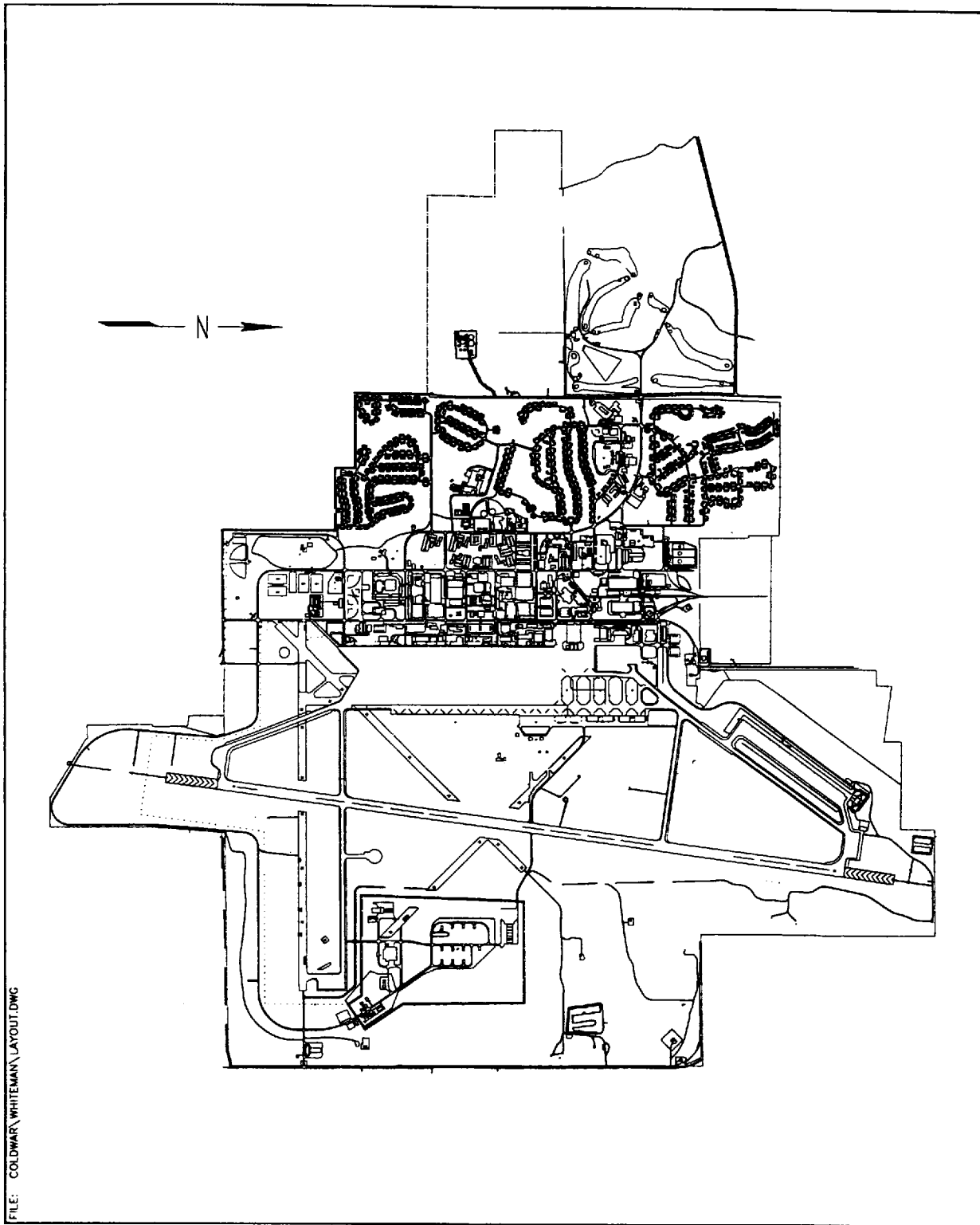


Figure 2.2 Whiteman Air Force Base Layout.

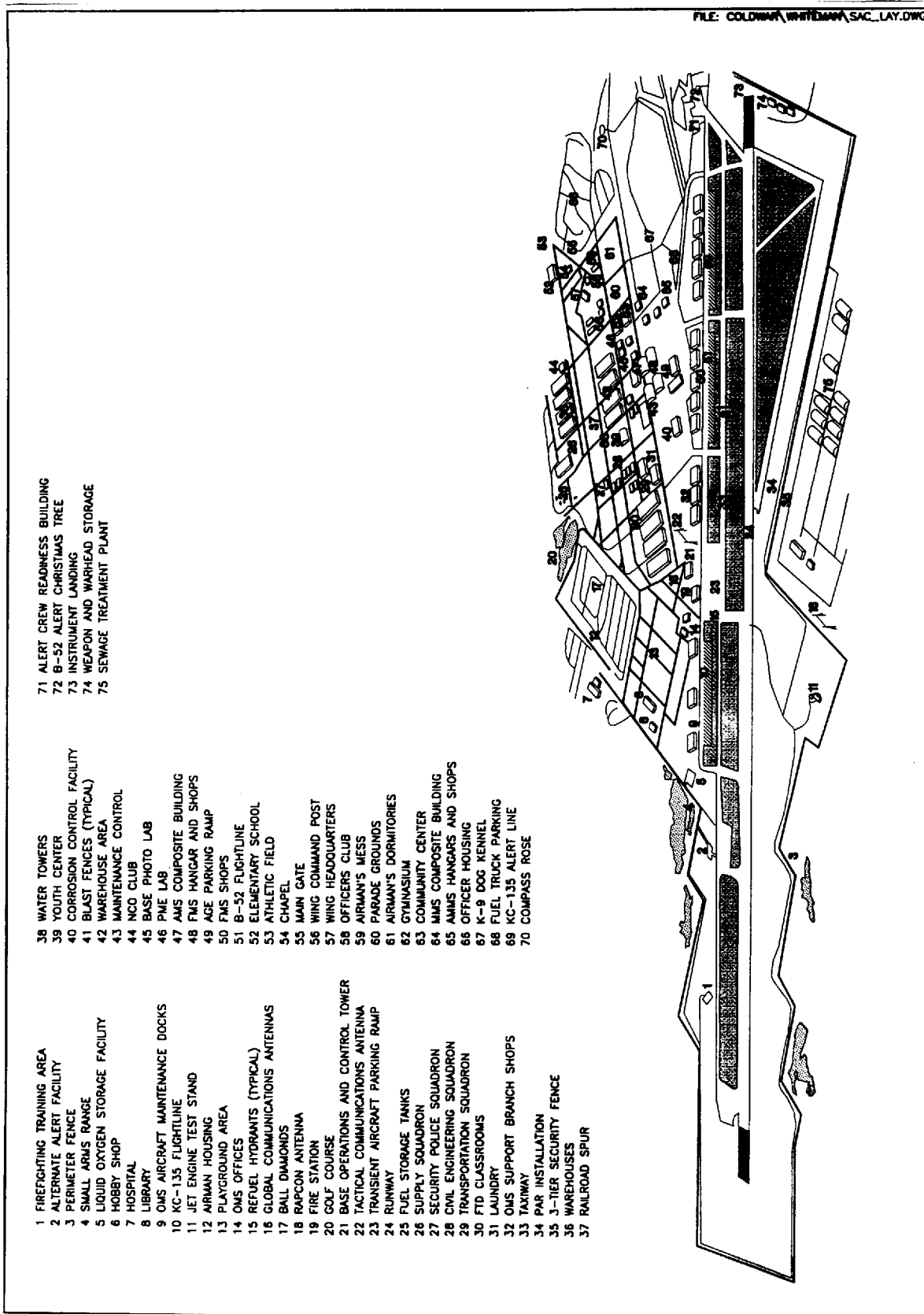


Figure 2.3 Standard Strategic Air Command Base Layout.

between the family housing and the unaccompanied housing. The base golf course lies east of the northern family housing area and is outside of the base perimeter. This property is leased, not owned, by the USAF.

Industrial buildings and facilities are located at the northern end of the base between the northern family housing and the northern end of the flight line mission buildings. This land use is likely related to the existence of a railroad line located several miles north of the base. The shortest railroad spur would lead to the northern end of the base.

2.4 BASE LAND USE

The following is a list of standard SAC land use categories:

Alert Facilities - to provide for air combat readiness and rapid deployment of air crews.

Base Support Facilities - house base support functions and supplies.

Command Post - provides tracking of all base activities and communication between battle staff and SAC headquarters.

Community - shopping, medical, and family support facilities.

Family Housing - accommodations for married personnel and families, including temporary housing.

Headquarters - buildings that house administration.

Industrial - facilities for the storage of supplies and maintenance operations for base facilities and utility systems, and facilities for industrial contractors.

Mission - areas for the preparation and maintenance of aircraft.

Recreation - areas used for athletics, camping, and recreational activities.

Unaccompanied Housing - accommodations for single personnel, temporary personnel, and visitors.

Weapon and Warhead Storage - for nuclear and conventional weapons.

Open Space is another land use type that occurs throughout Air Force bases; however, it is not shown specifically on maps in this report. Open space areas are not directly functional but provide buffers for base facilities, safety clearances, secure areas, utility easements, and environmentally sensitive areas.

Figure 2.4 is a diagrammatic land use plan for Whiteman AFB, and Figure 2.5 is a diagrammatic land use plan of a standard SAC base. Whiteman AFB follows the standard plan in a majority of ways. In both plans, all areas except the weapons and warhead storage areas are located to one side of the flight line, with the mission buildings against the flight line. The headquarters tend to be located away from the flight line near the middle of the base. The alert facility is located near one end of the runway.

Differences between Whiteman AFB and the standard SAC base land use are few. At Whiteman AFB, the main runway is separated from the mission buildings by open space and a large parking ramp. Several hangars associated with the B-2 bomber stand in isolation east of the ramp and removed from the rest of the flight line mission buildings. This varies from the standard plan, which has all mission buildings grouped together along one side of the flight line. The community land use at Whiteman AFB is broken into three areas. One, a community belt of sorts, leads from the main entrance between two units of family housing into the core of the base and various headquarters buildings. The second community area is centrally located, and the third, consisting of the hospital, is surrounded by family housing and recreation areas. This is different from the standard diagram, which shows most of the community buildings located in one central area. Although Whiteman AFB has the standard golf course location and dispersal of recreational areas within housing areas, Whiteman AFB uses a recreational greenbelt to divide some of the housing areas from the mission, headquarters, and support areas.

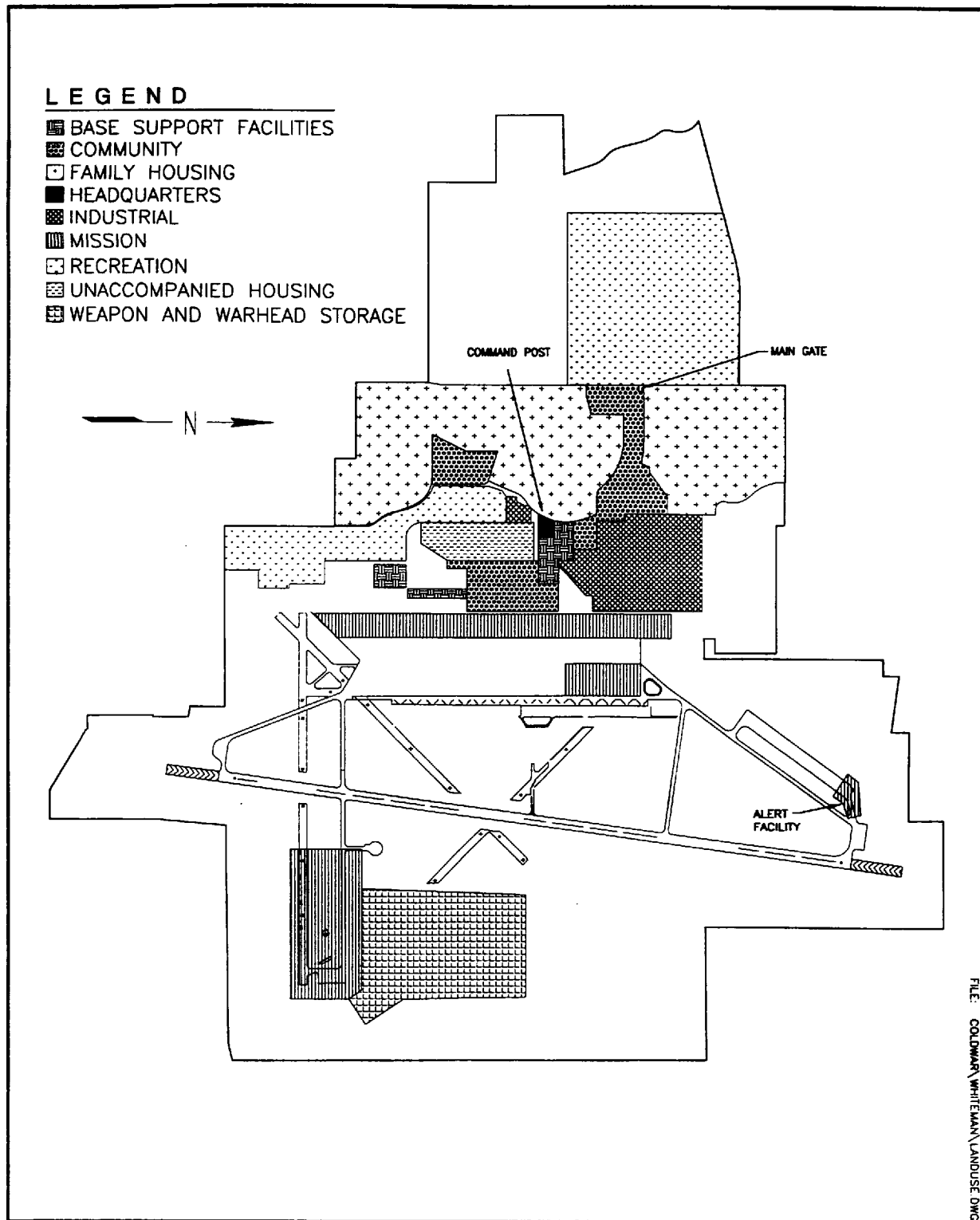


Figure 2.4 Whiteman Air Force Base Land Use Diagram.

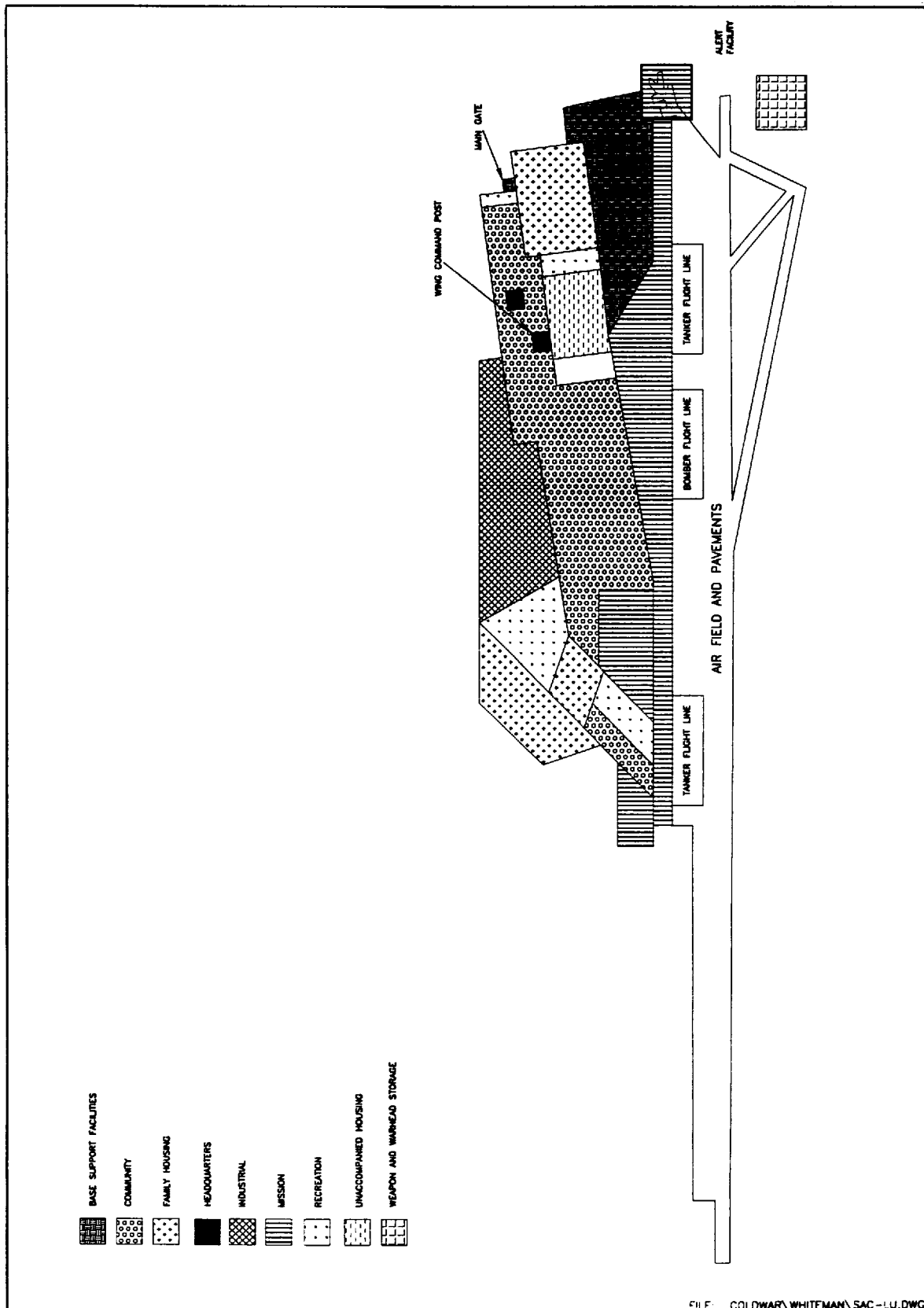


Figure 2.5 Standard Strategic Air Command Base Land Use Diagram.

3.0 HISTORICAL OVERVIEW

3.1 BASE HISTORY AND COLD WAR CONTEXT

At the beginning of the Cold War era, Sedalia Army Air Field (AAF) had been in existence just three years. It began as a glider training field near Warrensburg, Missouri in 1942. Two other sites for the installation had been considered, but lack of room for expansion negated their use. The mayor of Warrensburg, Mr. A. G. Taubert, and the president of the chamber of commerce, Mr. E. C. Houx, convinced Colonel Ox, the United States Army officer in charge of the search and survey of potential installation sites, to consider the area near Knob Noster called the "Blue Flats." Upon seeing the area, Colonel Ox recommended its selection and purchase. The Blue Flats area, called such by the locals because of its loose, gray-blue top soil, was purchased and developed as the training field (USAF Historical Research Agency 1956:1).

Before construction began on the air field, work was initiated in May of 1942 on a spur line of the Missouri Pacific Railway to the site. Construction of the air field's runways was started and finished in 25 days (USAF Historical Research Agency 1956:1). During that time, Sedalia AAF was activated and placed under the direction of the I Troop Carrier Command. The air field's primary mission was the activation of troop carrier units and the advanced training of glider pilots. Many troop carrier wings and groups established themselves at Sedalia AAF for the duration of their training. However, the majority of these tactical organizations received about three months of training at the air field before moving on to other installations for more advanced training and then overseas to theaters of operation (USAF Historical Research Agency 1956:3). By September 1943, 4,290 personnel were assigned to Sedalia AAF.

In April of 1944, all units at the installation were consolidated and placed under the 813th Army Air Force Base Unit (AAFBU). The mission of the 813th AAFBU and Sedalia AAF was to train combat crews and individuals for overseas replacements. Radio operator, mechanic, communications, navigation, and weather schools were all conducted at Sedalia AAF. In the first

quarter of 1945, the conversion from C-47s to C-46s and the attendant combat crew training were the priority (Hooker 1993:7).

After World War II was over, Sedalia AAF was scheduled to be deactivated. On March 28, 1946, the 813th AAFBU was deactivated, and, in its place, the 332nd AAFBU was activated and assigned to the Third Air Force and the newly organized Tactical Air Command (TAC) (Miller 1988:5). Deactivation and closure of the air field continued as the main mission. In September of 1946, the USAF became a separate branch of the military. On December 14, 1947, the air field was turned over to Air Materiel Command (AMC), and 11 civilian caretakers took over responsibility for the base.

In 1949, Sedalia AAF was considered as a location for the USAF Academy; however, a site in Colorado was chosen. Also in 1949, the Soviet Union developed an atomic bomb. Truman's plan to cut defense spending was overshadowed by the National Security Council's (NSC's) advice to commence a massive military build-up in order to counteract the new Communist threat. North Korea invaded South Korea in 1950, and the reality of the Communist threat became even more obvious. All previous budget constraints were loosened (Lewis et al. 1995). Within this context, SAC, with its new global deterrence mission, needed additional bases. Funds were allocated for modernizing and maintaining existing bases rather than building new ones (Lewis et al. 1995). Almost immediately, SAC annexed Sedalia AAF to be under its command. On August 1, 1951, Sedalia AAF became Sedalia AFB, under the Second Air Force of SAC (Miller 1988:6).

Rehabilitation of the base continued into 1952 under the 4224th Air Base Squadron (ABS) as work was undertaken to prepare the base to deploy a B-47 *Stratojet* wing with 30 aircraft (Miller 1988:7). On October 20, 1952, the 4224th ABS was deactivated, and the 340th Bombardment Wing (BMW) was activated at Sedalia AFB. The members of the 340th BMW were receiving training in anticipation of the arrival of the B-47s and the associated KC-97 tankers. In late March of 1954, the first B-47 assigned to the base touched down at Sedalia AFB.

In 1955, USAF Headquarters notified Sedalia AFB that it would be renamed in honor of Second Lieutenant George A. Whiteman. Lt. Whiteman was a native of Sedalia, Missouri and was one of the first American airmen killed in World War II. He was stationed with the 44th Pursuit Squadron (Interceptor), 18th Pursuit Group, Wheeler Field, Hawaii. On December 7, 1941, when the Japanese aircraft attacked Pearl Harbor, Lt. Whiteman managed to reach his fighter and attempted to engage the enemy in combat. The Japanese pilots shot him down just as he became airborne. By the time the rescue teams found the 22 year old pilot, he was dead (Miller 1988:8).

Despite the work done at Whiteman AFB and the mission of the B-47, the aircraft was being phased out of the USAF inventory for the newer and more advanced B-52 *Stratofortress*. Whiteman AFB had served well as a B-47 strategic bomber base, but there were no plans to continue the strategic bomber mission at the base (Miller 1988:10).

Once again, national policy and strategy had a direct bearing on Whiteman AFB and its future. As early as 1955, work on the Minuteman ICBM had begun, and, by 1958, the development stage had been reached (Lewis et al. 1995). One major development in the Minuteman series was the ratio of 10 missiles or launch facilities (LF) to one launch control facility (LCF), which makes this missile system less expensive than the older Atlas and Titan systems. The Minuteman uses a solid fuel propellant, and so is a much safer system than the more volatile liquid-fueled Titan. Lighter weight, smaller size, and lower cost distinguish Minuteman from earlier ICBMs. Minuteman missiles are deployed in hardened, dispersed LFs, and provide a highly reliable, survivable, and responsive deterrent force; during the Cold War, this force maintained a near 100% alert rate (USAF n.d.). In April of 1961, test borings were made within a 50 mi (80 km) radius of Whiteman AFB to explore the geological compatibility of the area for a Minuteman missile complex. In June, the Department of Defense (DoD) announced that Whiteman AFB had been chosen as a support base for a Minuteman missile complex (Miller 1988:11).

On April 14, 1962, the ground breaking ceremonies were held for the first Minuteman complex at Whiteman AFB. Four agencies, two military and two civilian, were involved in the missile

construction and installation program, The U.S. Army Corps of Engineers, Ballistic Missile Construction Office (CEBMCO) was designated the Deputy for Construction under the Whiteman, USAF Site Activation Task Force (SATAF) organization. The Corps of Engineers directly supervised the construction of the LF, LCF, and support facilities by the Prime Contractor (civilian). The Boeing Corporation (civilian) was the integrating contractor for installation and checkout of the missile and its components (Antonelli 1964).

Strategic Missile Wing (SMW) IV was deployed on and around Whiteman AFB throughout 14 counties and covered well over 8,000 mi² (20,718 km²) in western central Missouri. SMW IV consisted of 15 flights, with each flight responsible for one LCF and 10 LFs. The individual LFs were located approximately 5 to 30 mi (1.5 to 9 km) from the respective LCF for that flight. The LCFs were 14 to 38 mi (22 to 41 km) from the respective squadron office location, in this case, Whiteman AFB (Antonelli 1964:I-4). Whiteman AFB has the smallest of all the missile areas, and is the only base to have an LCF located within the boundaries of the base (*Oscar-1*, Real Property No. 1230).

By June 1962, excavation of 90 of the planned 150 LF sites was underway. As launch tube liners were installed and concrete was poured around the tubes of the initial 90 sites, construction started on the other 60 sites. Road upgrading and bridge reconstruction also had to be accomplished in order to lay the network communication cables. This voice network system, called the Hardened Intersite Cable System (HICS), was an elaborate link joining each LCF throughout the state. The cable system measured 1,777 mi (2,859 km). In addition to roads, bridges, and cables, land rights had to be acquired from more than 6,429 landowners (351st SMW History Office n.d.:32). Construction continued until November 1962 when the installation of the 150th launch tube was completed.

During the missile site construction, the 340th BMW continued scaling down its operations in readiness for the deactivation and phaseout of the B-47s and the re-deployment of the KC-97 tankers. On February 1, 1963, the 351st SMW was activated and assigned three squadrons: the

508th Strategic Missile Squadron (SMS), 509th SMS, and the 510th SMS. On September 1, 1963, the 340th BMW departed for Bergstrom AFB, Texas, and the 351st SMW became the sole wing at Whiteman AFB and therefore assumed base host responsibilities.

SATAF successfully turned over the missile sites to SAC in operational condition one after the other through late 1963 and early 1964. The first operational flight was *Bravo* of the 508th SMS; other flights followed, with *Oscar* Flight of the 510th SMS being the final delivery. The 351st SMW was now, two years after the formal ground breaking, a combat-ready deterrent force of SAC on full alert duty (351st SMW History Office n.d.).

In May 1966, the 351st SMW began a program called Force Modernization whereby the existing Minuteman missiles were replaced by the new Minuteman II ICBMs, and the LFs and LCFs were modified to work with the new missile. Whiteman AFB's SMW IV was the second Minuteman wing to receive the newer and more sophisticated Minuteman II missile. *Lima* Flight of the 509th SMS was handed over to the Boeing Company to begin the modifications. On September 21, 1967, the first on-base LF maintenance trainer, the "T-12," was accepted into the inventory of the 351st SMW (Office of the Historian, Headquarters, SAC 1983:52). On October 19, 1967, formal ceremonies were held at Whiteman AFB to mark the completion of the Force Modernization program (351st SMW History Office n.d.).

In 1967, survivability of command, control, and communications was an important facet of the national defense. President Kennedy had developed the Post-Attack Command and Control System (PACCS) in 1962, and other systems came on line to ensure survivability of communications links. The Emergency Rocket Communication System (ERCS) went on line to replace the Blue Scout Junior rockets of 1963 (Lewis et al. 1995). During the modernization program of the Minuteman missiles, the ERCS system, known as 494L, was made operational for the 510th SMS using 10 of the squadron's 50 missiles. The 510th SMS was the only squadron in the Air Force operating ERCS. Each ERCS missile carried a communications payload similar in appearance to the nuclear warhead reentry vehicle loaded on a Minuteman II. Each communications payload included two

ultra-high frequency (UHF) transmitters that could each broadcast on any of 10 frequencies. The transmitters were automatically activated when the payload and missile separated during flight (Turley 1991). The ERCS system was a deterrent force from 1967 through 1991, when it was deactivated.

Early in 1968, SAC was dispersing its alert forces, and Whiteman AFB entered into an agreement with the 43rd BMW, Little Rock AFB, Arkansas to support 18 Convair B-58 *Hustler* bombers and seven KC-135A *Stratotankers*. Not until July 1969 did four of the supersonic bombers arrive to carry out SAC's Satellite Basing Program. The USAF phased out the B-58s, and they departed from the base in December of 1969. SAC then announced that four of the original seven KC-135A tankers would remain on alert status at Whiteman AFB after July 1, 1970.

The Spanish Navy training program "Matador" got underway at Whiteman AFB in March 1976 when the first AV-8B *Harrier* aircraft arrived. The program ended in October the same year. Base personnel were treated to the unusual sight of this aircraft maneuvering through its vertical takeoffs and landings during the program (Miller 1988:15).

The 351st SMW maintained its mission of nuclear deterrence by continually training and evaluating systems and personnel. In 1979, a major modification called the Silo Upgrade Program (SUP) was begun. Shortly after the completion of SUP, the 351st SMW embarked upon project Rivet Switch. This was a modification to the UHF radios located in the wing's launch control centers (LCCs) (351st SMW History Office 1989).

In the middle to late 1980s, Whiteman AFB saw more growth and modernization. Several upgrades to the missile systems and the manning of those systems dominated the operations and maintenance of the 351st SMW. These improvements allowed the wing to perform its duties and maintain an effectively high state of readiness (Hooker 1993:17).

General social changes occurring during the Cold War were reflected at Whiteman AFB with the opening of the missile operations career field to women. Studies regarding the feasibility of including women in missile crews were being done as early as 1975 (Vaughn 1975; White 1979). Both studies agreed that there were no legal or job-related barriers that prevented women from entering the Minuteman crew force. Both authors recommended initial implementation programs to permit women officers to enter combat crew duty. On March 25, 1986, Captains Nancy K. Dean and Linda S. Aldrich of Whiteman AFB's Alpha Flight, became the first female combat crew members to pull alert duty at a Minuteman site, *Alpha-1* (Donovan 1991:2). Whiteman AFB's 351st SMW had also been the first wing to have black officers pull alert duty as missile combat crew members. In January 1988, the 351st SMW made another first when 1st Lt. Charles Carr and 2nd Lt. Kara Bloomer pulled the first male/female split gender crew alert (Hooker 1993:18).

In January 1987, the announcement was made that Whiteman AFB would become the first home of the USAF's B-2 bomber. The base became a hub of construction as SAC released approximately 90 million dollars for B-2 support projects for fiscal year 1988 (Hooker 1993:18). The 509th BMW was activated at the base to carry forward the B-2 bomber mission.

With Eastern European nations leaving the Soviet Bloc and the fall of the Berlin Wall in 1989, the world began to change in many ways. In January 1991, the USAF announced that all Minuteman II ICBM wings, including the 351st SMW, would be deactivated. START, signed by President George Bush and Mikhail Gorbachev in July 1991, signaled a future change at Whiteman AFB. The diminishing threat of nuclear war brought about another significant event on September 27, 1991. President Bush addressed the nation in response to the significant developments regarding the end of the Cold War. During his speech, the President ordered, as a goodwill gesture to the new leaders of the former Soviet Union, the immediate stand down of the nuclear armed alert missiles already scheduled for phase-out under the START treaty. "At 1459 hours on 28 September 1991, Whiteman AFB officials reported to the Commander in Chief of Strategic Air Command (CINCSAC), General George L. Butler, that the directive had been

complied with. For the men and women of Whiteman AFB, this represented the Cold War victory" (Hooker 1993:20).

In June 1992, Whiteman AFB was reassigned to the newly created ACC. In July 1993, the newly renamed 351st MW transferred base host responsibilities to the newly renamed 509th BW. The 509th BW continues its mission with the B-2 bomber. The 351st MW continues the deactivation and dismantling of the Minuteman II launch complexes.

3.2 BASE DEVELOPMENT

When the Blue Flats area south of Knob Noster was chosen as the site of the Sedalia glider training field, and subsequently renamed Sedalia AAF, the facility was made up of 3,370 acres (1,363 ha) and contained four runways, each 7,200 ft (2,194 m) by 150 ft (46 m) wide (Figure 3.1). Seven hangars for both powered aircraft and gliders were located to the west of the north-south runway and apron.

In 1951, the base was brought back to life under SAC, and new facilities were needed to support the base's B-47 mission. This included stronger runways to support the weight of the new plane. Improvements continued through the 1950s with the construction of a new north-south runway 200 ft (61 m) wide and 10,400 ft (3,170 m) long and the installation of a runway approach lighting system (Figure 3.1). A waste processing plant was constructed along with a 250,000 gallon water storage tank and a maintenance shop. New family housing and other community facilities were added, such as an elementary school, library, post office, swimming pool, gymnasium, baseball diamonds, tennis and basketball courts, football field, and a base commissary. A nine-hole golf course, on the western side of the base across State Highway 132, was added in 1958. Work was also begun on a new base chapel.

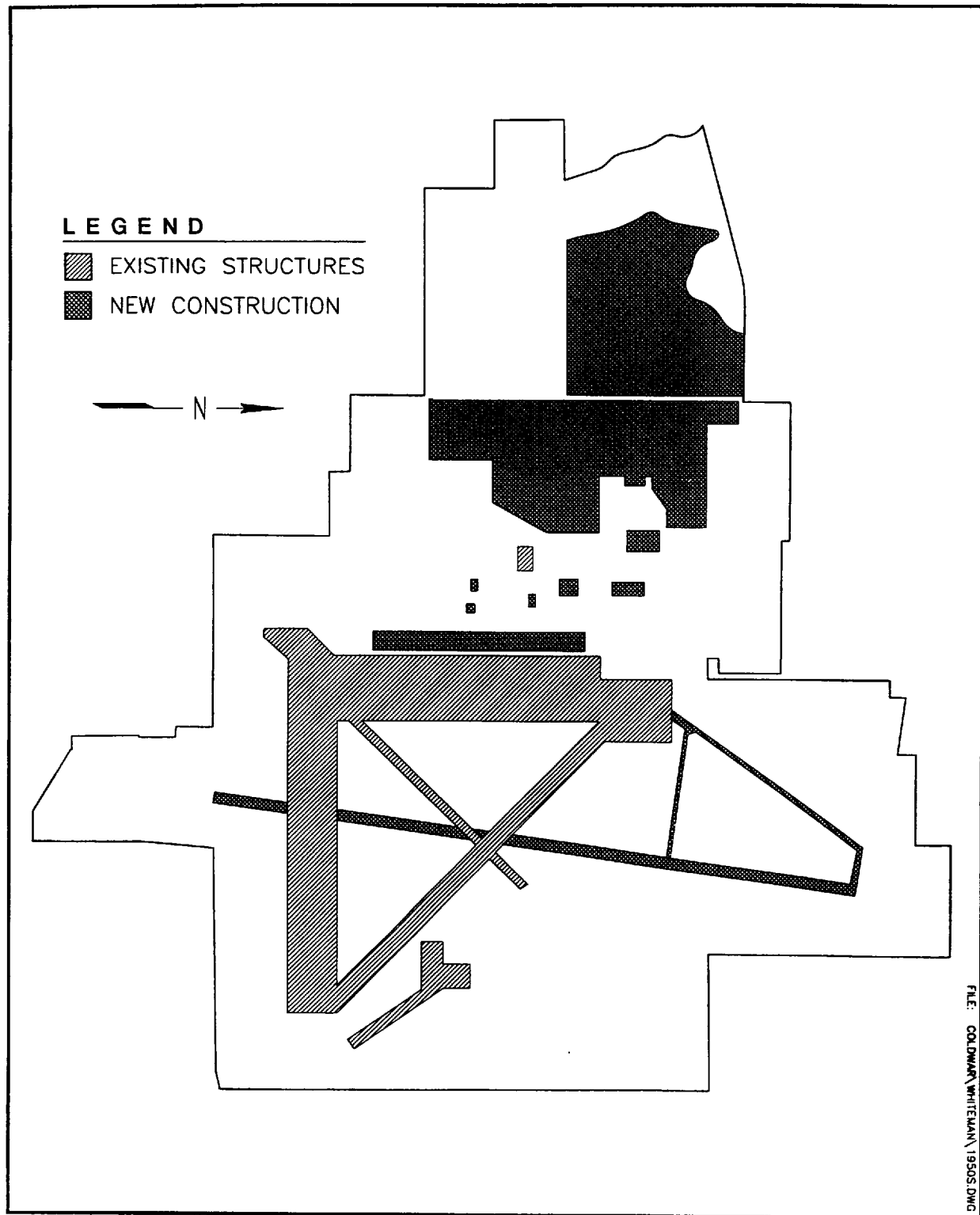


Figure 3.1 Whiteman Air Force Base 1950-1960.

The 1960s brought continued development on the base (Figure 3.2), as well as missile complex construction at 150 locations in the surrounding 8,000 mi² (20,718 km²). This was for the Minuteman ICBMs that Whiteman AFB took on as its primary mission. A new alert facility was completed in 1960. A new base theater was opened in 1969, as well as a child care center. The late 1960s saw the return of the flying mission when the base prepared for the B-58 that was to stand alert duty. The alert facility was once more prepared for that function. The B-58 was only stationed at Whiteman AFB for a short time and was replaced in 1970 with four KC-135A tankers which were to stand alert duty.

In the 1970s, a new hospital was completed (Figure 3.3). In 1978, construction on a new commissary was begun. Other refurbishing projects continued on the base, including housing and recreational areas that were expanded.

The 1980s brought a lot of change for Whiteman AFB. New facilities, such as the civil engineering complex, a missile maintenance complex, and several more dormitories, were constructed (Figure 3.4). In 1987, SAC released almost 90 million dollars for B-2 support projects. Many of the support buildings along the flight line were replaced or completely refitted in the late 1980s and early 1990s. The construction work in support of the B-2 mission is ongoing and expected to continue for some time.

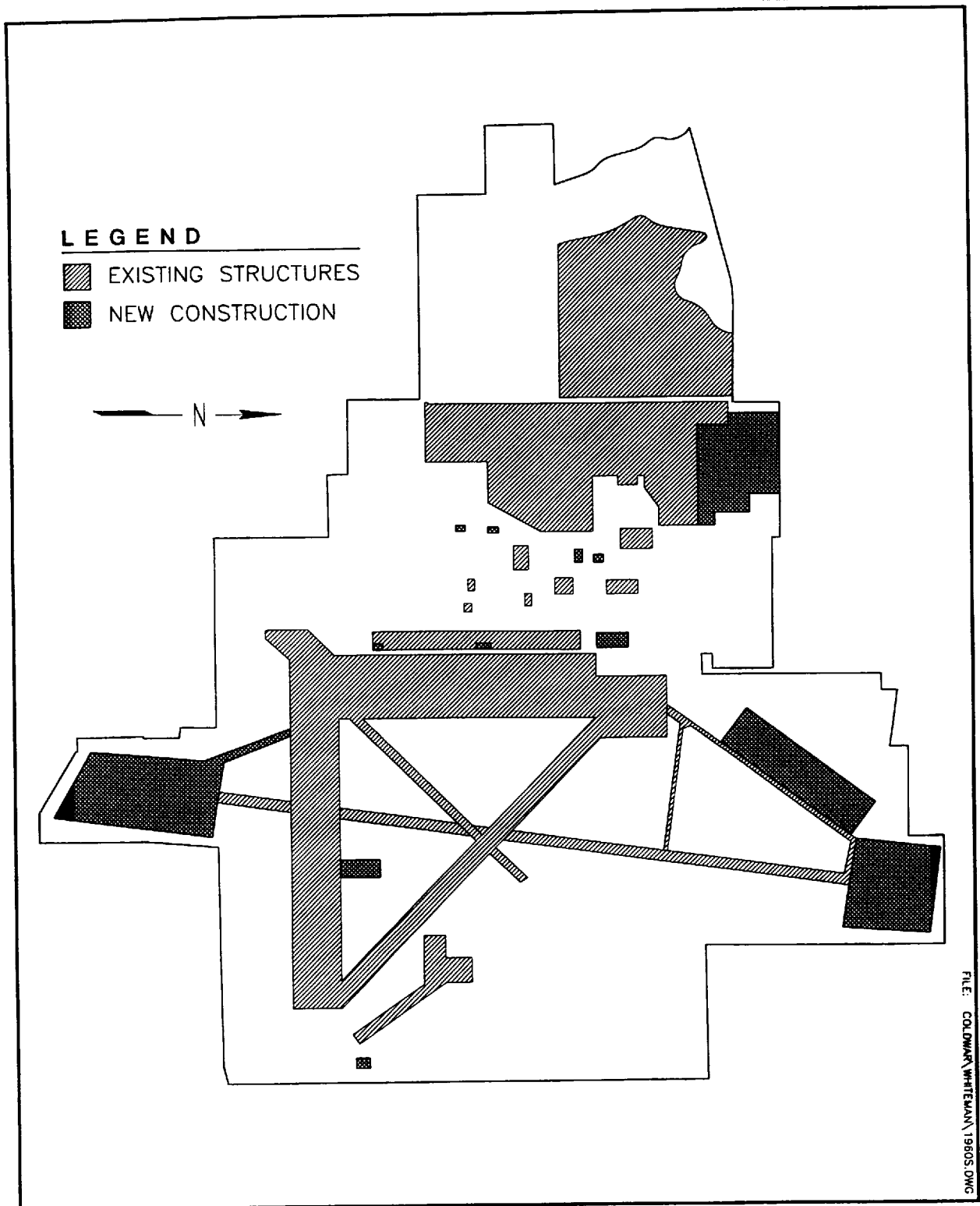


Figure 3.2 Whiteman Air Force Base 1960-1970.

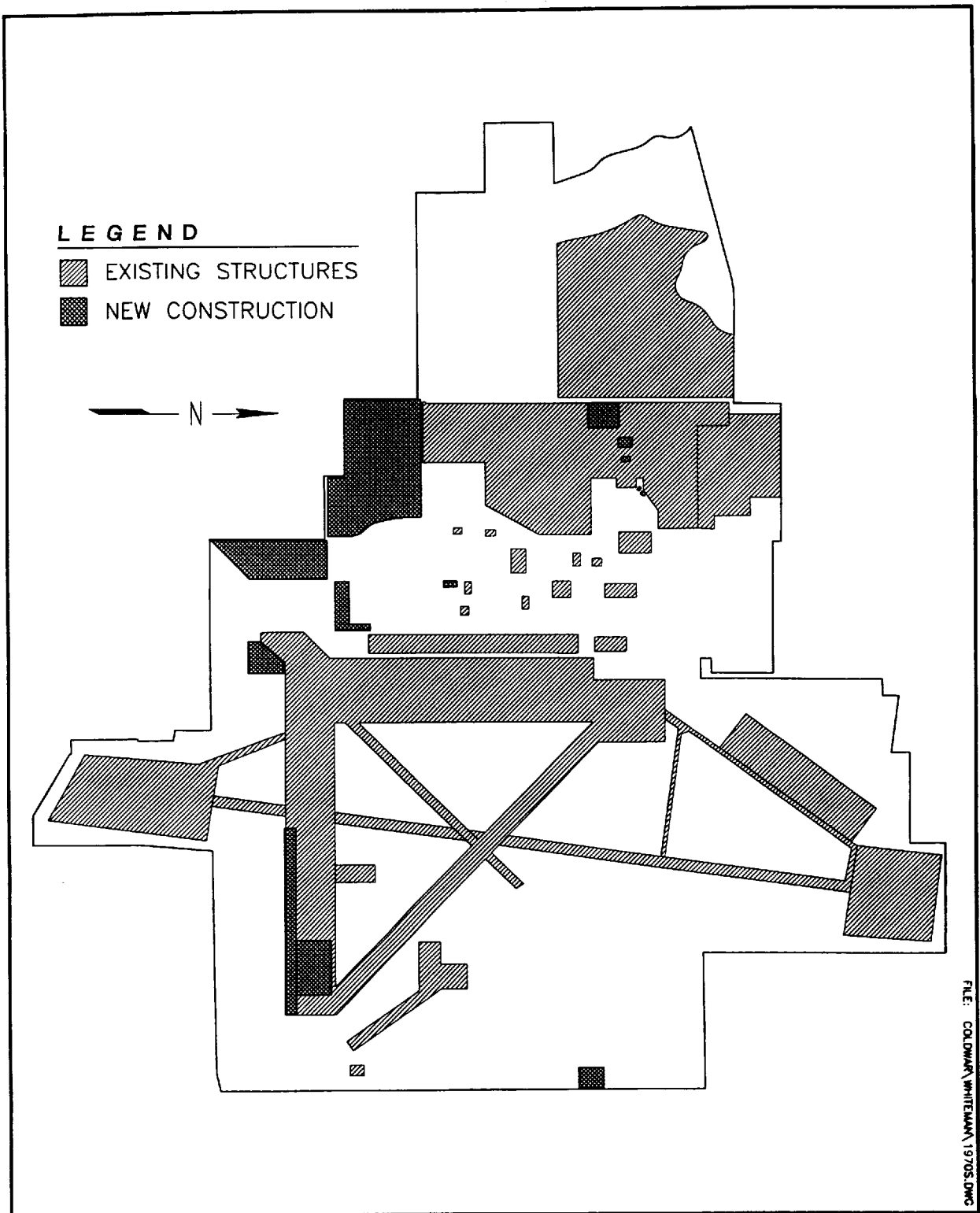


Figure 3.3 Whiteman Air Force Base 1970-1980.

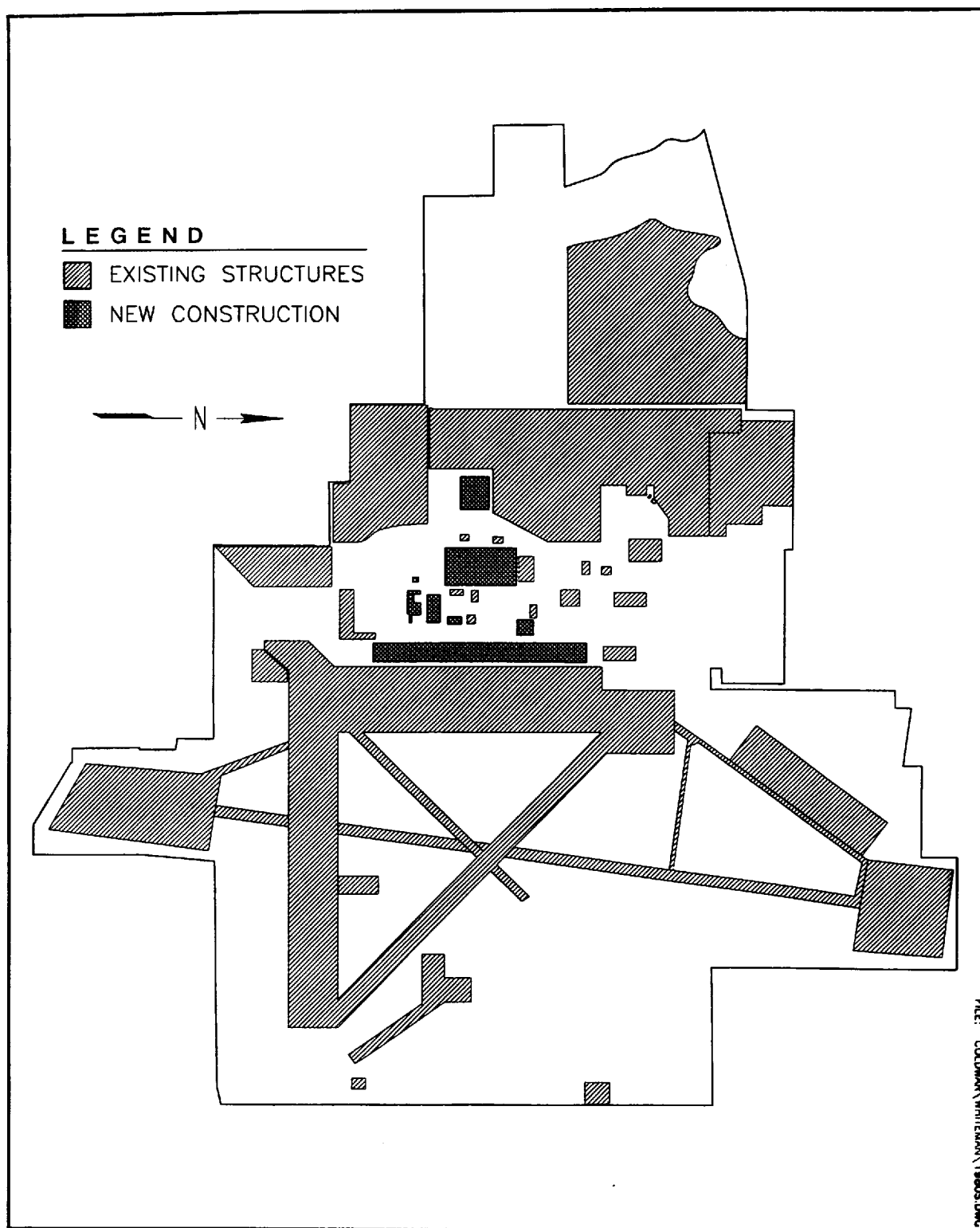


Figure 3.4 Whiteman Air Force Base 1980-Present.

4.0 METHODOLOGY

The methodology for the reconnaissance inventory of Whiteman AFB was developed to help ACC meets its requirements under Section 110 of the NHPA, namely, to ensure that resources which are potentially eligible for inclusion in the NRHP are identified. To this end, the reconnaissance inventory consisted of two major tasks: an overall inventory and an evaluation of important resources.

4.1 INVENTORY

The first major task was an overall inventory of base material culture resources that typify the base and the base's mission as it relates to the Cold War era. The purpose of this inventory is to record the range of resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. Objects has been added as a fifth type of real property resource to accommodate USAF owned items that do not fall under the other categories. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme is used in defining the inventoried resources and is present throughout the remainder of this report to help understand the resources and for use in management.

4.2 EVALUATION OF IMPORTANT RESOURCES

As part of the reconnaissance inventory of Whiteman AFB, certain inventoried resources were selected for documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for this project (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focus on determining the importance of the selected resources, both within the context of the Cold War and in regard to NRHP criteria, and the integrity of the selected resources. These three values are necessary to establish the significance of a resource and for examining its potential eligibility to the NRHP (see Section 9.0).

4.2.1 Documentation

The evaluated resources at Whiteman AFB were documented using a recording form designed specifically for the ACC Cold War study. A Property Management Form was completed for each evaluated resource, detailing information regarding resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

4.2.2 Evaluation of Importance

4.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues: (1) a lack of historical perspective due

to the recent origin of the resources; and (2) an absence of data for comparative evaluation due to the lack of completed Cold War studies. Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program, the National Park Service (NPS) Interagency Resources Division, and the Advisory Council on Historic Preservation (ACHP).

Generally, resources are considered for their importance to American history, architecture, archaeology, engineering, or culture. To be considered important within the historic context of the Cold War, resources must possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource must be associated with critical aspects or persons of the Cold War, corresponding to the four temporal phases established in the historic context. These aspects include policy and strategy, technology, architectural and engineering design, and social impacts. The importance of the resources within one or more of these aspects is addressed in the evaluations.

4.2.2.2 NRHP Criteria

The historical importance of the resources is also presented in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of U.S. history and aid in understanding that pattern;
 - b) portray a direct and important association with the lives of persons nationally significant in U.S. Cold War history;
 - c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of U.S. Cold War history or representing some great idea or ideal of U.S. citizenry embodying the Cold War;
-

-
- d) have yielded or be likely to yield information of importance to United States Cold War history.

4.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older in order to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a significant duration to allow an adequate perspective for evaluating the true historical importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of recently significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, a historic context of the Cold War was developed for determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War, and the effect of the Cold War on the USAF and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990).

4.2.3 Evaluation of Integrity

Integrity is defined as retaining enough physical presence to enable a resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical

characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship making it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide what characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

4.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the urgency for further attention recommended for a resource. The higher the priority matrix score, the higher the priority for management attention to that resource. These judgements regarding resource priority should be viewed as a management tool rather than a ranking of importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which an evaluated resource is ranked. The first is the strength of the relationship between the resource and the role the base played in the Cold War. The second topic ranks the relationship of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impacts. The third ranking is the relationship between the resource and the four temporal phases. The fourth topic figures the level of contextual importance of the resource. The fifth is the percentage of remaining historic fabric, or

integrity, of the resource. Finally, the sixth topic ranks the severity of existing threats to the resource.

4.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups, with associated subgroups, that may adequately characterize extant Cold War resources. These groupings are based on functional descriptions and are another way of organizing the resources. This grouping scheme was adapted by Mariah for use in this study. It is applied to the evaluated resources for use in management and is used throughout the remainder of this report to organize the evaluated resources.

4.3 BASE SPECIFIC METHODS

Between August 22 and 26, 1994, Mariah investigators Patience E. Patterson and David P. Staley conducted a reconnaissance inventory at Whiteman AFB. Upon arrival, the field team met with the point of contact, Mr. Don Meuschke, the Cultural/Natural Resources Officer within the 509th CES. The team advised him of its schedule and the objectives and needs for accomplishing the inventory.

Mr. Meuschke and SSgt Vickie Shirkey provided a base tour to familiarize the field team with the base layout and the types of facilities present and a preliminary assessment of which facilities might be significant in the context of the study. An in-brief meeting, attended by commanders and staff of the 351st MW and the 509th CES, was conducted prior to the base tour on the field team's first day at Whiteman AFB. The meeting provided an opportunity for the CES staff to present the Whiteman AFB mission and plans for future development and also afforded the Mariah field team an opportunity to explain the project.

Mr. Meuschke introduced the team to Ms. Sara Kelchner of the Real Property Office, and the team discussed the need for copies of the Real Property Change List, earlier planning documents, old property inventories, and other pertinent documents the office might have in its files. Access to older files containing the Property Change Cards was also requested by the field team. The team was introduced to Mr. David Duffer of the CES Drafting Office and made arrangements to acquire computer disk copies and print-outs of base maps. An inventory of this office included a review of old project files containing architectural drawings, maps, and aerial photographs. Copies of base maps from several decades were also gathered to assist in the assessment of base development and land use.

On August 24, the team inventoried the combined History Offices of the 509th BW and the 351st MW. The team briefed Sgt Rice of the 351st MW on the project and the research needs. TSgt Roger Hooker of the 509th BW was on temporary reassignment. However, the team was able to access his document collection. The team's investigation in this office included a cursory inventory of the files, photograph collections, and awards and the gathering of copies of histories, fact sheets, and other pertinent documents. The field team also visited the 509th Public Affairs Office to gather current mission statements and inquire as to any historical documents that office might contain. At the Base Planner's Office, on August 25, Mr. Robert Steinkuckler provided copies of portions of the Comprehensive Base Plan and other planning documents identifying proposed developments and demolition.

Over the course of the base visit, the team was provided special tours of on-base and off-base missile facilities by Mr. Meuschke (509th CES), SSgt Shirkey (509th BW), Major Robert Rochester (351st MW), and Mr. James Boling (Real Property Office). The on-base missile facilities included the *Oscar-1* LCF and the T-12 LF maintenance trainer. The team also toured a sample of off-base facilities in various stages of decommissioning, including *Echo-1* LCF and missile LF sites *Echo-8*, *India-2*, *India-3*, *India-4*, and *Oscar-8*. Throughout the base visit, a photographic inventory of resources on base was conducted by the team between scheduled tours and appointments.

On August 26, an out-brief meeting was conducted to discuss the field team's findings and to discuss any ramifications of the study. A detailed and extensive discussion of the Section 106, NHPA review process was beneficial in relieving institutional anxieties at the base.

5.0 RECONNAISSANCE INVENTORY RESULTS

During the reconnaissance inventory of Whiteman AFB, 115 resources were inventoried. Appendix A lists the inventoried resources and Appendix B shows their location on the base. Photographs of inventoried resources are presented in Appendix C.

6.0 EVALUATION RESULTS

Five resources were evaluated at Whiteman AFB, three of them falling under the DoD category of real property and two under records/documents. Each resource is discussed below in terms of its history, integrity, and importance. The narratives are organized by USAF property type group and subgroup. The prioritization of the evaluated resources is presented in Table 6.1, organized by property type group and subgroup, and in Table 6.2, organized in order of priority. The detailed documentation for each of the evaluated resources is presented in Appendix D. Due to the nature of the base and its resources, and the missions associated with these resources, access to some of the evaluated buildings could not be secured. In those instances, documentation describing any changes to the buildings was consulted to provide insight into the integrity of the buildings' interiors.

6.1 OPERATIONS AND SUPPORT INSTALLATIONS

6.1.1 Documentation

6.1.1.1 Documentary Collection (Resource No. 13056, Located in Real Property No. 705)

This documentary collection, located in the Site Development Office of the 509th CES, contains architectural drawings, plans, maps, and photographs pertaining to construction, maintenance, and modifications to Whiteman AFB facilities. The drawings and plans are on linen, vellum, or mylar, and most pertain to individual buildings dating from the 1950s to the present. Additional drawings in the collection pertain to more general systems such as roads, parking lots, lighting, and various comprehensive planning graphics. Drawings of special note include plans dating to the 1940s and the original base construction, and a small subset of drawings pertaining to the Minuteman ICBM mission at the base. The collection also includes base layout maps and a set of aerial photographs of the base. A more in-depth inventory of the collection is presented in Appendix E. This

Table 6.1 Evaluated Resource Prioritization by Air Force Group and Subgroup.

Air Force Group and Subgroup	Property Type	Resource No.	Real Property No.	DoD Resource Category	Priority Matrix Score*
Operations and Support Installations					
Documentation	Documentary Collection	13056	None	RecDoc/Obj	17
Documentation	Documentary Collection	13116	None	RecDoc/Obj	18
Combat Weapons and Support Systems					
Alert Facilities	Bomber Alert Facility	13055	6	Real/Bldg	22
Missiles	Missile Launch Control Facility	13054	1230	Real/Bldg	19
Training Facilities					
Missile Training	Missile Launch Facility Trainer	13008	1100	Real/Struc	19

* Scale ranges from 1 to 24

Table 6.2 Evaluated Resource Prioritization by Priority Rank.

Total Score for Priority Matrix	Resource No.	Real Property No.	Property Type
22	13055	6	Bomber Alert Facility
19	13008	1100	Missile Launch Facility Trainer
19	13054	1230	Missile Launch Control Facility
18	13116	None	Documentary Collection
17	13056	None	Documentary Collection

collection provides detailed information on the historical development of the base and is a source of information about individual facilities.

This collection is in disarray and the contents have not been inventoried. The maps and drawings are an actively used resource, and, as such, are pulled and refiled and are subject to continuous wear.

6.1.1.2 Documentary Collection (Resource No. 13116, Located in Real Property No. 1000)

This large collection includes materials from both the 509th BW and the 351st MW. The collection includes wing histories, reports, files, newspaper clippings, trophies, slides, photographs, videos, and newsreels of the history of the base and the major wings at the base. Although generally not focused on buildings, the collection contains unique materials pertinent to people and events at the base. Notable are the records related to the Minuteman development and operations at the base. These are particularly significant as that mission is gradually being phased out of existence at Whiteman AFB. Minuteman-related documents may be useful in any interpretive efforts conducted at the base. Many of the other elements of the collection would provide a variety of interesting objects and documents that would contribute to displays of base history. A more in-depth inventory of the collection is presented in Appendix E. At present, the collection is located in one office and is subject to chaotic filing and storage conditions.

6.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

6.2.1 Alert Facilities

6.2.1.1 Bomber Alert Facility (Resource No. 13055, Real Property No. 6)

This Bomber Alert Facility is a semisubterranean building, constructed of reinforced concrete and concrete block, with 33,586 ft² of space. Like other alert buildings, the ground floor of this facility

is partially underground with an earthen berm surrounding the building. Ramped tunnels rise from the ground floors, and open, descending ramps emerge from the top floor. The building is located at the northern end of the base along the western side of the instrument runway.

The facility was constructed in 1960 and housed alert crews of B-47 aircraft until 1963. The building was redesignated as an academic classroom in 1966. In 1968, klaxons and alert lights were installed and the building was redesignated as an alert facility in preparation for B-58 crews who assumed alert duty at the location for six months during 1969. It is hypothesized that a contingent of KC-135A tankers used this building for alert duty from 1970 until 1976. This facility is currently being used as offices and classrooms for Reserve Forces Operational Training.

The facility retains much of its external integrity. The interior of the facility was not inspected. However, the facility has only been used as an alert facility or for classrooms and offices, and the real property card for the building indicates no major renovations. Therefore the building's interior integrity is determined to be intact.

The Bomber Alert Facility is extremely important to Whiteman AFB's Cold War context and to Cold War history at the national level. It exemplifies the concept of deterrence and the need to respond immediately to any Soviet attack threat. This facility was constructed and operated in direct response to the Killian Report, meeting the needs of deterrence through a survivable force and the dispersion of bombers across the country (Lewis et al. 1995).

The "molehole" configuration of this alert facility, with its earthen berm and ramps, is representative of the nation's overall alert posture taken during the Cold War. This alert facility is notable in that it supported B-47 and B-58 aircraft, in contrast to most bomber alert facilities which were associated with the B-52. This facility allowed for maximum readiness and rapid deployment in response to enemy aggression, and thereby embodied the SAC strategy of deterrence. This facility was used for this purpose during Phases II and III of the Cold War era, and meets NRHP criteria (a) and (c).

6.2.2 Missiles

6.2.2.1 Missile Launch Control Facility (Resource No. 13054, Real Property No. 1230)

The *Oscar-1* LCF includes above-ground wood-framed support buildings, hardened underground communication silos, and an underground elevator that leads to two underground capsules. Both capsules are constructed of reinforced concrete and are steel-lined. An 8 ton blast door separates the 50-100 ft vertical access shaft from the capsules. One capsule is the launch control equipment capsule, which contains stand-by generators and other life-support and environmental systems. On the other side of the tunnel junction and behind another 8-ton blast door lies the LCC capsule. The alert crew and all essential equipment in this capsule are positioned on a shock-insulated floor suspended from the blast proof outer shell by four liquid-spring shock isolators. A 21 ft long escape tube, filled with loose sand, extends toward the ground surface. All of these features address the importance of survivability. *Oscar-1* is surrounded by relatively open spaces in the southern central area of the base. The facility is bounded by open lots and playing fields to the north and south, the small-arms training range and buildings to the east, and a recreational greenbelt to the west.

Oscar-1 was built in 1964 to be used with the Minuteman I"B" missile. Retrofitting of these missile complexes to the Minuteman II began at Whiteman AFB in 1966. The Minuteman missile system underwent almost constant upgrades and modifications. This missile LCF was used as such between 1964 and 1991.

This facility currently houses the Whiteman Heritage Center. Although the interior of the above ground building has been modified slightly for use as offices and an interpretive center, the vast majority of the facility has been left intact. Several of the electronic face-plates or panels within the LCC capsule have been removed; however, plans have been made to substitute copies or mock-up panels as replacements. Current plans are for the facility to become the permanent home of the Heritage Center with additional interpretive displays and tours of the facility. Some of the more

recent interior modifications, including ceiling and wall coverings, are planned to be replaced with more authentic materials and colors. This resource exhibits a high degree of both exterior and interior integrity.

Oscar-1 is exceptionally significant to the base and national Cold War contexts for a number of reasons. This LCF is unique in that it is the only such facility located within the confines of a base. Because of its proximity to base facilities, the associated above-ground structures are smaller than other LCFs. The Whiteman AFB Minuteman facilities as a group are also distinctive because all utilities are in an underground capsule rather than in an above ground building. However, perhaps the most significant aspect of *Oscar-1's* function was that it was one of the five LCFs in the 510th SMS that was part of the ERCS. This redundant command, control, and communications system replaced the Blue Scout Junior system, its predecessor, in 1967. The system was capable of sending force execution messages via UHF recorders after launch. The transmitters were emplaced within 10 of the possible 50 Minuteman silos controlled by the 510th SMS. This system was developed in response to the Kennedy administration's concern for survivable command, control, and communication (Lewis et al. 1995). This facility was used for this purpose during Phases III and IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.3 MATERIEL DEVELOPMENT FACILITIES

None were evaluated at Whiteman AFB.

6.4 TRAINING FACILITIES

6.4.1 Missile Training

6.4.1.1 Missile Launch Facility Trainer (Resource No. 13008, Real Property No. 1100)

This facility is more specifically called the T-12 Missile LF Trainer. The trainer was constructed in 1967 to be used as a training facility for Minuteman missile maintenance crews, and is located just west of the southern end of the flight line mission buildings and northeast of the *Oscar-1* LCF. Although the trainer is not an actual LF, it was built to replicate all aspects of an actual one. However, this structure includes specialized architectural elements specific to the trainer and its requirements for greater access by personnel. Like an actual LF, this trainer consists of a blast-resistant underground silo made of reinforced concrete with a steel plate liner. The trainer has a launch tube that holds a missile and is approximately 80 ft deep. Beneath the ground, the launch tube is surrounded by a two-level annular equipment room with suspended platforms that afford access for missile service. The launch tube is sealed by a 100 ton door or launcher closure. A single hatch provides access to the normal launch tube and maintenance decks. Unique to the launch trainer is an above-ground concrete building with a staircase that leads down to the two-level equipment room.

The trainer has functioned as a LF trainer since its construction. Because the facility continues to be used, all aspects of its integrity have been retained. Given the active development at the base, the open space surrounding the launch trainer is likely to be needed for construction or parking in the future. This development could have a possible effect on this resource.

The significance of the trainer stems from its direct association with the Minuteman ICBM system. This missile system was a major advance in the development of the nation's deterrence capability because of its cheaper one LCF to 10 LFs configuration, which allowed a greater proliferation of missiles. Also, this system used solid fuel that was stored in the missile rather

than the liquid fuel which had to be loaded into Titan missiles just before firing. This reduction in time between receiving the order to launch and the actual launching made this missile more survivable, thus fulfilling the nation's need for greater deterrent capability. This facility was used for this purpose during Phases III and IV of the Cold War era, and meets NRHP criteria (a) and (c).

6.5 INTELLIGENCE FACILITIES

None were evaluated at Whiteman AFB.

7.0 UNDOCUMENTED RESOURCES

The purpose of the reconnaissance inventory was to provide initial information on the kinds of Cold War resources extant on Whiteman AFB. During the fieldwork at the base, the field team could not inventory all the resources available to them due to time limitations. As a result, some resources were noted as existing but were not inventoried. Because of security, access to buildings along the flight line or within the weapons storage area was not secured. As a result, several buildings were noted as existing but were not evaluated. However, the recent construction dates and the functional labels for a majority of these buildings suggest they are not significant within the Cold War context. Nevertheless, these resources may contain potentially significant information pertaining to the base's Cold War context in general or to specific properties or activities at Whiteman AFB. In the future, these resources should be investigated further in more comprehensive analyses.

The USAF Historical Research Agency at Maxwell AFB, Alabama, is the repository for all Air Force historical documents. A computerized search for materials related to Whiteman AFB revealed approximately 100 citations. Most of these are unit histories and special collections. More specific topics include the histories of Minuteman construction, peace demonstrators, and women missile crews. The vast majority of these documents are available on microfilm. Future studies of Cold War history at Whiteman AFB should allot time to researching these documents.

Finally, as part of the inventory process, various people at the base were contacted to help identify resources important to the base's Cold War history. A list of these contacts, plus a list of informal interviews conducted by the field team at the base, are presented in Appendix F.

8.0 FUTURE THREATS TO RESOURCES

Whiteman AFB is currently undergoing extensive development and construction related to the establishment of the B-2 bomber at the base. Meanwhile, the Minuteman mission of Whiteman AFB is being eliminated, the missiles are being removed from their silos, and nearly all of the LFs and LCFs are being destroyed as per START. In addition to all this construction and demolition, several historic preservation studies are simultaneously underway.

Architectural and construction plans are currently being developed for extensive remodeling of the Bomber Alert Facility (Real Property No. 6). These plans include the removal of the characteristic tunnels and expansion of the top floor of the building. These developments will adversely effect the external integrity of this facility, which has been recommended in this report as eligible to the NRHP.

Both the *Oscar-I* Missile LCF (Real Property No. 1230) and the T-12 Missile LF Trainer (Real Property No. 1100) are located within areas of relatively open space. Demands for building and parking space may eventually compress this space. Fortunately, both resources are included within existing preservation plans for the base. The Missile LCF will become the home of the Whiteman Heritage Center's offices and exhibits, and will provide interpretive tours of this LCF and the Missile LF Trainer. Short term plans call for the removal of all hazardous materials from these resources and minor safety modifications within the facilities for effective public exhibition.

9.0 PRELIMINARY RECOMMENDATIONS

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar at Whiteman AFB is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain requirements. If the resource meets the requirements, it is eligible for nomination to the NRHP.

A comprehensive national evaluation will be completed at the conclusion of the individual base inventories. This evaluation will provide comprehensive management recommendations for the resources recommended in the base reports as eligible, potentially eligible, or eligible in the future. In the comprehensive evaluation, selected eligible resources will be recommended for actual nomination to the NRHP.

9.1 NRHP ELIGIBILITY

9.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Section 4.2.2.2. The eligibility of a resource for inclusion in the NRHP also lies in the resource's age. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, as the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity

of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this report regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the determination of eligibility in consultation with the State Historic Preservation Officer (SHPO). If they cannot agree on a determination, a formal determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this current study at Whiteman AFB, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered as a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered as eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on Whiteman AFB have not been evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are made.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the list. In some cases, historic

properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible when re-evaluated, or a historic property may lose a pre-determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

9.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step to this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future use and reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions), and is intended to help balance agency goals and preservation goals, and to lead to creative conflict resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is

designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective State, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

9.2 EVALUATED RESOURCE RECOMMENDATIONS

Recommendations for the evaluated resources at Whiteman AFB are presented below. Table 9.1 summarizes these recommendations. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - This is recommended if the resource does not retain integrity and does not require protection.

Stewardship - This treatment is recommended if the resource is important and some active role should be taken in the management of the property. This is different from preservation in that the resource requires general maintenance, but does not need specified repairs or specialized storage.

National Register of Historic Places Listing - This is recommended if the resource appears to be eligible for NRHP listing. These assessments will be reconsidered at the national level.

Further Documentation - This is recommended if there is any further work to be accomplished for the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or the integrity needs to be assessed.

Preservation/Conservation/Repair - This is recommended if the resource is considered important and requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

9.2.1 Documentary Collection (Resource No. 13056, Located in Real Property No. 705)

This collection of architectural drawings, plan, maps, and aerial photographs is valuable for the information it provides on the development of the base during the Cold War era. It is a continuously used resource, and as such, is in disarray and is subject to wear. It is recommended that the collection be inventoried and copied. It is further recommended that the copies remain at the base for its use, with the originals stored at a permanent curatorial facility for stewardship and conservation.

Table 9.1 Recommendations for Evaluated Resources.

Resource No.	Real Property No.	Property Type	Management Recommendations*					Comments
			No Further Work	Stewardship	National Register Listing	Further Documentation	Preservation/Conservation/Repair	
Real Property - Building								
13055	6	Bomber Alert Facility		*	*	*		NRHP eligible now.
13054	1230	Missile Launch Control Facility		*	*	*		NRHP eligible now.
Real Property - Structure								
13008	1100	Missile Launch Facility Trainer		*	*	*		NRHP eligible now.
Record or Document - Object								
13056	None	Documentary Collection		*		*	*	
13116	None	Documentary Collection		*		*	*	

* Recommendations regarding future or immediate NRHP listing in this report are preliminary.

9.2.2 Documentary Collection (Resource No. 13116, Located in Real Property No. 1000)

This collection consists of wing histories, reports, files, newsclippings, slides, photographs, newsreel, and videos of the history of the base and its major wings. It also contains trophies won by the various squadrons in multi-base competitions. Currently, the collection is subject to chaotic storage conditions. It is recommended that the trophies be stored in a trophy case for public viewing. It is recommended that the rest of the collection be inventoried and copied, with the copies remaining at the base for its use and the originals going to a permanent curatorial facility for stewardship and conservation.

9.2.3 Bomber Alert Facility (Resource No. 13055, Real Property No. 6)

This building is evaluated as exceptionally important within the base and national Cold War contexts during Phases II and III. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force to meet the needs of deterrence and on its structural components which are unique to this building type and identify it as an example of Cold War military architecture. This integrity of the building is intact based upon visual inspection and the lack of documented major renovations. Therefore, this building is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the building and its features, and further documentation to nominate this resource to the NRHP.

9.2.4 Missile Launch Control Facility (Resource No. 13054, Real Property No. 1230)

This facility is evaluated as exceptionally important to the base and national Cold War contexts during Phases III and IV. It meets NRHP criterion (a) based on its role in providing a survivable force to meet the needs of deterrence and a redundant, survivable communications system for command and control, and criterion (c) based upon its structural components which are unique to this facility type and identify it as an example of Cold War military architecture. The integrity of

the facility is intact based upon visual inspection and the lack of documented major renovations. Therefore, this facility is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the facility, and further documentation to nominate the resource to the NRHP. This facility could be considered the centerpiece of a potential National Register multiple property nomination that would include the T-12 Missile LF Trainer (Real Property No. 1100) and the Transporter Erectors (Resource Nos. 13009 and 13010).

9.2.5 Missile Launch Facility Trainer (Resource No. 13008, Real Property No. 1100)

This facility is evaluated as exceptionally significant to the base and national Cold War contexts during Phases III and IV. It meets NRHP criteria (a) and (c) based on its role in sustaining a survivable force for the needs of deterrence and on its structural components which are unique to this facility type and identify it as an example of Cold War military architecture. The integrity of the facility is intact based upon visual inspection and the uninterrupted, continued used of the facility as a missile maintenance trainer. Therefore, this facility is recommended as eligible to the NRHP. Recommendations include stewardship to maintain the integrity of the facility and further documentation to nominate the resource to the NRHP.

10.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology, Washington, D.C.

Antonelli, A.M. Lt. Colonel

- 1964 *History of Construction Activities and Contract Administration Phases Encountered by Whiteman Area Office Corps of Engineers CEBMCO During Construction of Minuteman Strategic Missile Wing IV, Whiteman AFB, Missouri*. United States Army Corps of Engineers, Ballistic Missile Construction Office, Los Angeles.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Donovan, J. L.

- 1991 *The Integration of Women onto Minuteman Missile Crews*. Master's Thesis. Manuscript on file, Central Missouri State University.

Hooker, R. D. TSgt

- 1993 *The History of Whiteman AFB, Missouri 1942-1993, From Gliders to Stealth*. 509th Bomb Wing History Office, Whiteman Air Force Base, Missouri.

Lewis, K. and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, L. E. Rhodes, P. Boyer, and J. S. Murphey

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for United States Army Corps of Engineers, Fort Worth District. Contributions by P. R. Green, J. A. Lowe, R. B. Roxlau, and D. P. Staley. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Miller, T. M. Sgt.

- 1988 *The History of Whiteman AFB, Missouri 1942-1988*. 351st Strategic Missile Wing History Office. On file, 509th Bomb Wing History Office, Whiteman Air Force Base, Missouri.
-

National Park Service

- 1990 *Guidelines for Evaluating and Nominating Properties That Have Achieved Significance within the Last Fifty Years*. National Register Bulletin 22. National Register Branch, National Park Service, Washington, D.C.
- 1991 *How to Apply the National Register Criteria for Evaluation (revised)*. National Register Bulletin 15. National Register Branch, National Park Service, Washington, D.C.

Office of the Historian, Headquarters, Strategic Air Command

- 1983 *SAC Missile Chronology 1939-1982*. Office of the Historian, Headquarters, Strategic Air Command, Offutt Air Force Base, Nebraska.

351st Strategic Missile Wing History Office

- 1989 *351st Strategic Missile Wing, 25 Years of Deterrence Whiteman AFB, 1964-1989*. 351st Strategic Missile Wing History Office. On file, 509th Bomb Wing History Office, Whiteman Air Force Base, Missouri.
- n.d. *The Minutemen at Whiteman*. 351st Strategic Missile Wing History Office. Manuscript on file in 509th Bomb Wing History Office, Whiteman Air Force Base, Missouri.

Turley, S. 1st Lt.

- 1991 "Emergency Rocket Communications System." *A Missouri Warrior* Supplement, October 18, 1991. Whiteman Air Force Base, Missouri.

United States Air Force

- 1989 *Executive Order 12512 Installation Survey Report, Whiteman Air Force Base*. Whiteman Air Force Base, Missouri.
- 1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations*. Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.
- n.d. *Fact Sheet*. "Minuteman ICBM." 509th Bomb Wing Office of Public Affairs, Whiteman Air Force Base, Missouri.

United States Air Force Historical Research Agency

- 1943 *813th AAFBU History August 1942 through April 1944. Sedalia Army Air Field*. Roll No. B2530, Frame No. 628, United States Air Force Historical Research Agency, Maxwell Air Force Base, Alabama.
- 1956 *Brief History of Sedalia Air Force Base 1942-1954*. Research Studies Institute, Maxwell Air Force Base, Alabama. Copy of history in 509th Bomb Wing History Office, Whiteman Air Force Base, Missouri.
-

Vaughn, A. D. Major

1975 Is it Feasible to Employ Women on Minuteman Missile Crews? Unpublished Air Command and Staff College Research Program Study. Air University, Maxwell Air Force Base, Alabama.

White, J. R. Major

1979 Women on Minuteman Missile Crews. Unpublished Air Command and Staff College Research Study. Air University, Maxwell Air Force Base, Alabama.

Whiteman Air Force Base

1994 *Whiteman AFB, MO*. Office of Public Affairs, 509th Bomb Wing, Whiteman Air Force Base, Missouri. MARCOA Publishing Inc.

APPENDIX A:
RECONNAISSANCE INVENTORY

Table A.1 Reconnaissance Inventory Table.

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Building				
	13001	26101	Missile Guidance Facility (Echo-1 LCF)	1964
	13016	3016	Child Care Center	1969
	13017	3020	Chapel Center	1960
	13018	3205	Temporary Lodging Facility	1992
	13019	3019	Youth Center	1975
	13020	Unknown	Whiteman Elementary School	1957
	13021	7002	Family Housing Appr 50-69 (204,206 Houx Drive)	1957
	13022	7800	Family Housing Appr 50-69 (200,202 Selser Drive)	1957
	13023	2032	Composite Medical Facility (Whiteman Hospital)	1978
	13024	1559	Permanent Party Airmen's Dormitory	1992
	13025	1561	Permanent Party Airmen's Dormitory	1986
	13027	2016	Swimmers' Bath House	1956
	13028	2014	Gymnasium	1956
	13029	8509	Capehart Family Housing (814, 816 Chennault)	1962
	13030	8653	Capehart Family Housing (704 Lindbrgh)	1962
	13035	1705	Traffic Check House	1989
	13036	1235	Small Arms Systems Range	1985
	13037	1236	Combat Arms Training Maintenance	1985
	13038	711	Security Police Operations Building	1990
	13039	709	Missile Service Shop	1987
	13040	1620	Indoor Small Arms Range	1956
	13041	650	Automotive Hobby Shop	1965
	13042	604	Environmental Health	1956
	13044	706	Group Headquarters	1980
	13045	50	Control Tower	1992
	13047	47	Squadron Operations	1954
	13049	705	Base Engineering Administration	1980
	13050	48	Wing Headquarters	1959
	13051	91	Maintenance Hanger	1991
	13052	59	Communications Facility	1975
	13053	53	ICBM & Tactical Air Control Communications and Electronics Shop	1955
	13054	1230	Missile Launch Control Facility (Oscar 1)	1964
	13055	6	Reserve Forces Operational Training (Bomber Alert Facility)	1960
	13057	3006	Visiting Officer's Quarters (01-010)	1954
	13058	3200	Visiting Officer's Quarters (Whiteman Inn)	1992
	13059	3008	Consolidated Open Mess	1958
	13060	3009	Swimmers' Bath House	1958
	13061	6312	Family Housing APPR 50-69	1957

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
	13062	6322	Family Housing APPR 50-69	1957
	13064	166	Solid Waste Disposal Facility	1985
	13065	169	Base Engineering Pavement and Grounds Facility	1990
	13066	115	Base Supply and Equipment Warehouse	1954
	13067	139	Base Supply and Equipment Warehouse	1964
	13069	124	Base Supply and Equipment Warehouse	1964
	13073	1000	Wing Headquarters	1991
	13074	3032	Branch Exchange	1992
	13076	163	Base Engineering Covered Facility	1956
	13077	159	Vehicle Maintenance Shop	1956
	13078	121	Refueling Vehicle Shop	1962
	13079	144	Education Center	1984
	13080	145	Education Center	1954
	13081	1425	Major Command Headquarters	1954
	13082	140	Heating Facility Building	1954
	13083	132	Base Cold Storage	1988
	13084	103	Animal Clinic	1988
	13085	114	Housing Support and Storage Facility	1954
	13086	153	Flight Training Classroom (B-2 FTU)	1990
	13088	152	Field Training Facility (B-2 FTD)	1990
	13089	9	Large Aircraft Maintenance Dock	1954
	13090	410	Red Cross Office	1956
	13091	527	Family Support Center (Library)	1955
	13092	411	Commissary Store	1980
	13095	3	Traffic Check House	1954
	13096	12	Traffic Check House	1976
	13097	524	Base Theater	1969
	13098	534	Bowling Center	1966
	13099	528	Recreation Center	1989
	13100	1553	Detached Airmen's Dining Hall (Ozark Inn)	1987
	13101	529	Sales Exchange Store	1993
	13102	1433	Group Headquarters	1953
	13103	1431	Not on Property List (Old Airmen's Dorm)	1953
	13105	2010	Branch Bank	1954
	13106	200	Squadron Operations	1993
	13107	1435	Reserve Forces Operational Training	1953
	13108	149	Data Processing Installation	184
Real Property - Landscape				
	13033	1627	Softball Field	1989

Table A.1 (Continued).

Resource Category	Resource No.	Real Property No.	Property Type	Year Completed
Real Property - Object				
	13009	62x05	Transporter Erector Tractor	1962
	13010	63x34	Transporter Erector Trailer	1963
	13012	76210	Missile Theodolite Station (<i>Oscar 8</i> Azimuth marker)	1964
	13013	29410	Missile Theodolite Station (<i>India 3</i> Azimuth marker)	1964
	13034	1709	Monuments and Memorial (KC-97)	1992
	13043	Unknown	Monuments and Memorials (B-47)	1976
	13046	704	Monuments and Memorials (Helicopter)	1976
	13048	704	Monuments/Memorials (Minuteman II)	1976
	13068	1243	Air Force Locomotive	Unknown
	13072	3014	Monument/Memorial (F-111 <i>Arduark</i>)	1992
	13087	Unknown	Monuments/Memorials (509th Mushroom Cloud and Wings Statue)	Various
	13093	None	Monument/Memorial (Miniature Minuteman)	Unknown
	13094	133	Monuments/Memorials (B-52)	1992
	13109	3022	Monuments/Memorials (<i>The Great Artiste</i> B-29)	1992
	13110	In 1000	Blanchard Trophies	Various
	13111	In 1000	Photo Engraved Metal Plaques Commemorating History of 351st MW	Various
	13112	In 1000	Scale Models of Minuteman Launch Control and Launch Facilities	Various
	13113	In 1000	Minuteman Warhead Nosecone	Various
	13114	In 1000	Emergency Rocket Communication System Module	Various
	13115	In 410	Heritage Center Exhibit	Various
Real Property - Site				
	13002	26118	Helicopter Pad	1971
	13007	26601	Missile Launch Facility (<i>Echo 8</i>)	1964
	13008	1100	Missile Launch Facility Trainer (T-12)	1967
	13011	76201	Missile Launch Facility (<i>Oscar 8</i>)	1964
	13014	74301	Missile Launch Facility (<i>India 4</i>)	1964
	13015	29301	Missile Launch Facility (<i>India 2</i>)	1964
	13026	2015	Airmen's Swimming Pool	1956
	13032	1245	Miscellaneous Outdoor Recreation Facility	1992
Real Property - Structure				
	13003	26112	High Frequency Hard Antenna (Transmitter)	1964
	13004	26115	Antenna Silo (UHF Antenna Pit)	1964
	13005	26116	LCF Vents and Exhaust	1964
	13031	1300	Water Tank Storage	1962
	13063	172	Mogas Storage	1953

Table A.1 (Continued).

Resource Category	Resource No.	Real Property		Year Completed
		No.	Property Type	
	13070	138	Water Tank Storage	1991
	13071	100	Load and Unload Platform	1964
	13075	180	Recycling Shed	Unknown
	13104	2000	Building Water Supply	1942
Record or Document - Object				
	13056	In 705	Documentary Collection	Various
	13116	In 1000	Documentary Collection	Various

APPENDIX B:
BASE LAYOUT MAPS SHOWING INVENTORIED RESOURCES

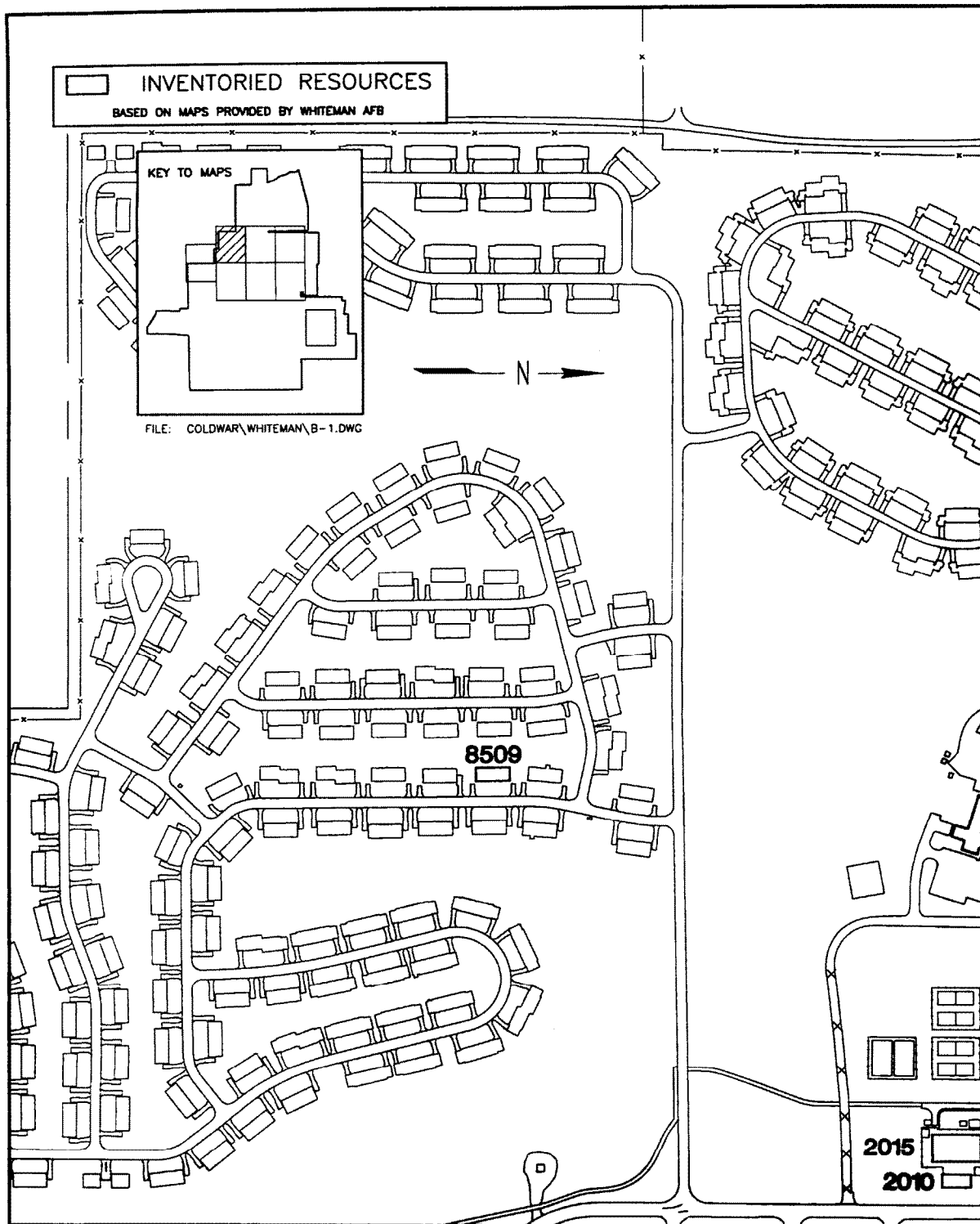


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 1 of 8).

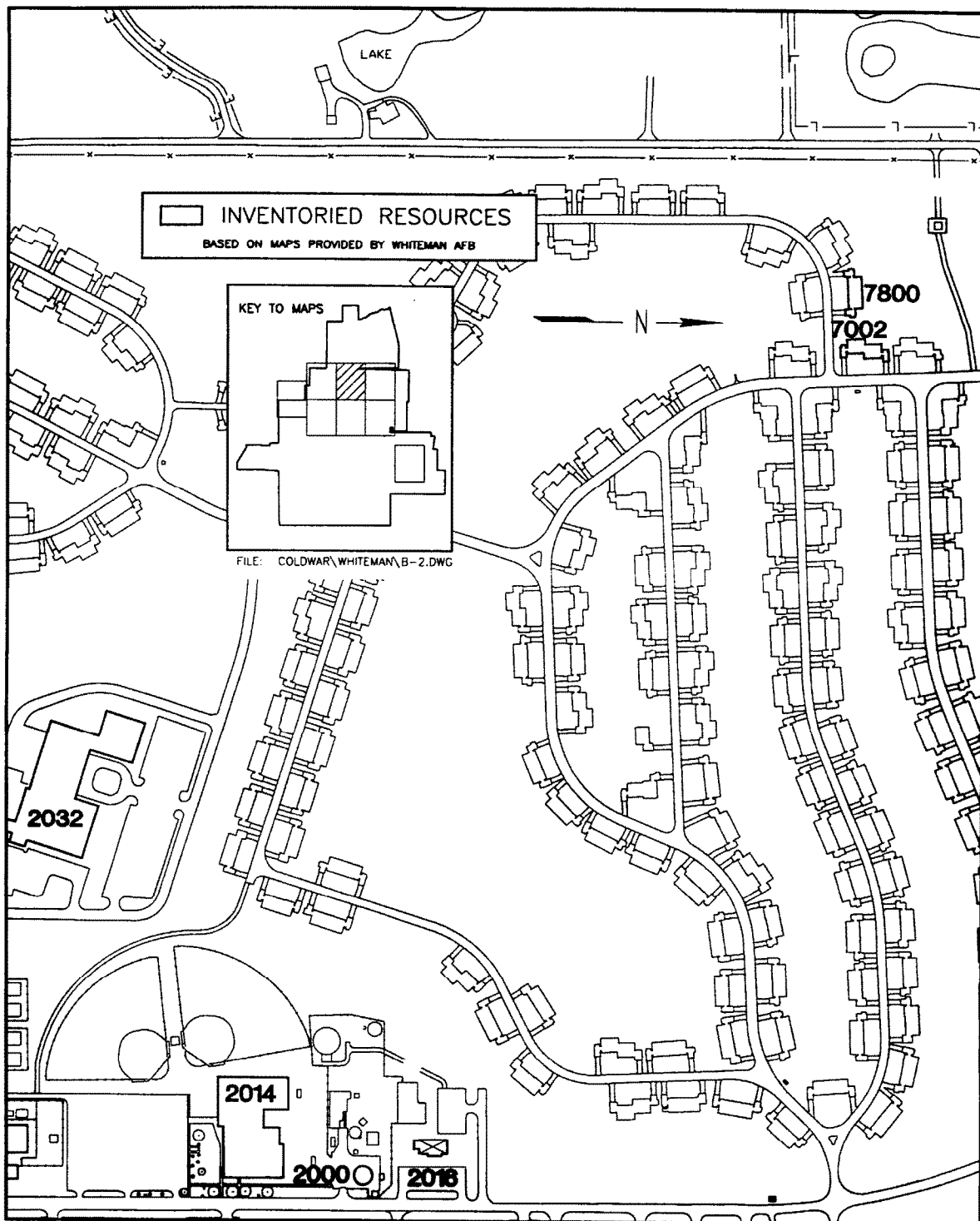


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 2 of 8).

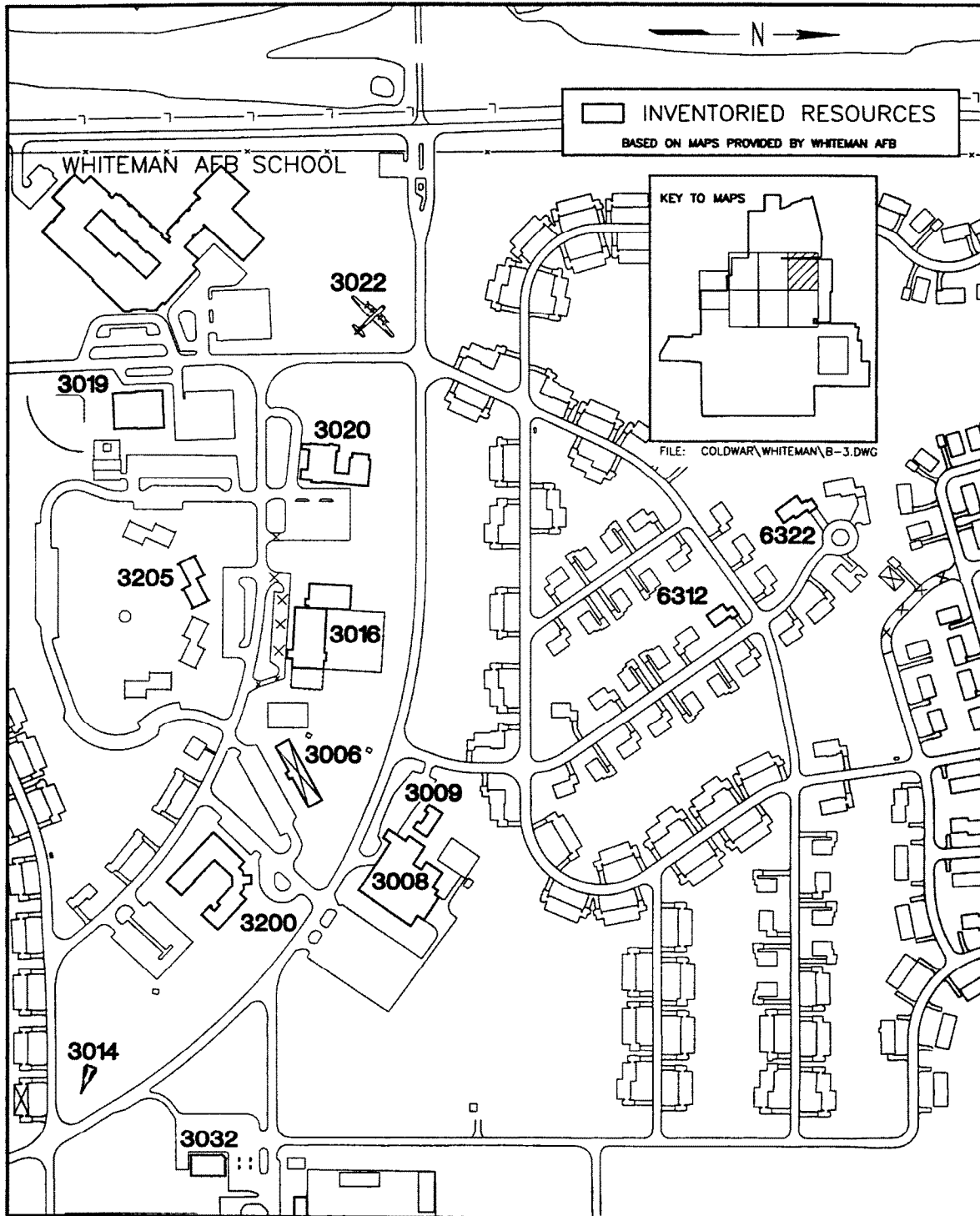


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 3 of 8).

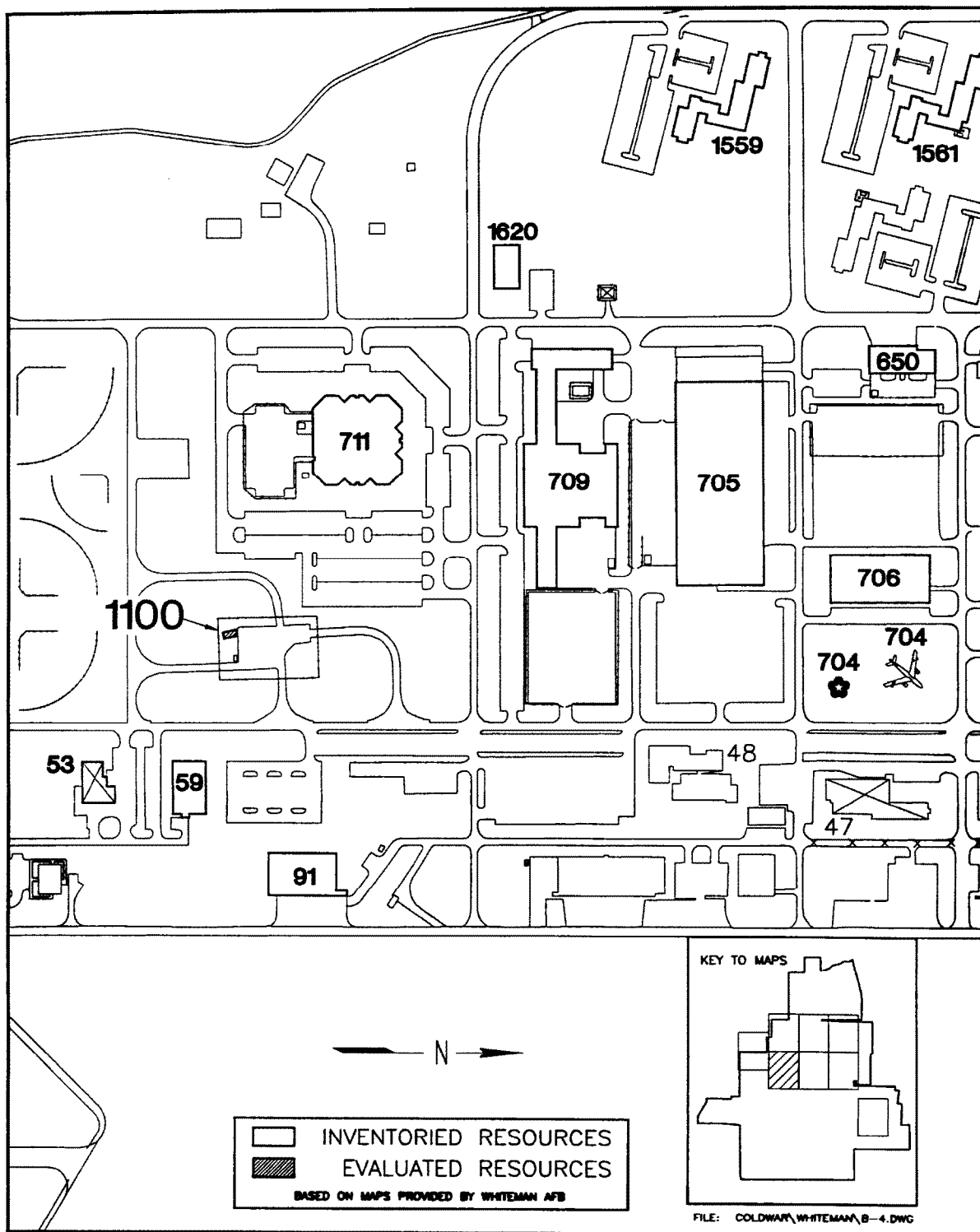


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 4 of 8).

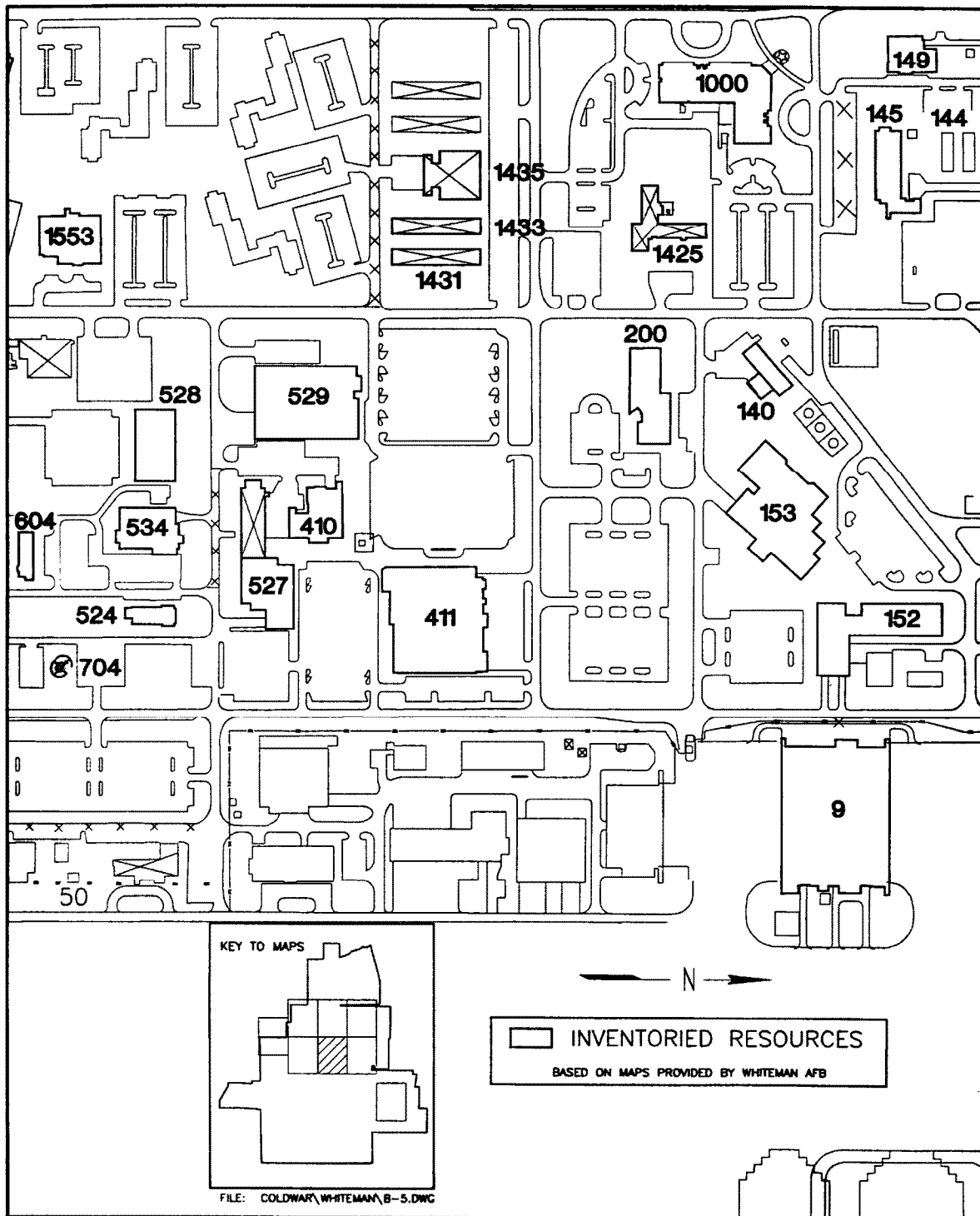


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 5 of 8).

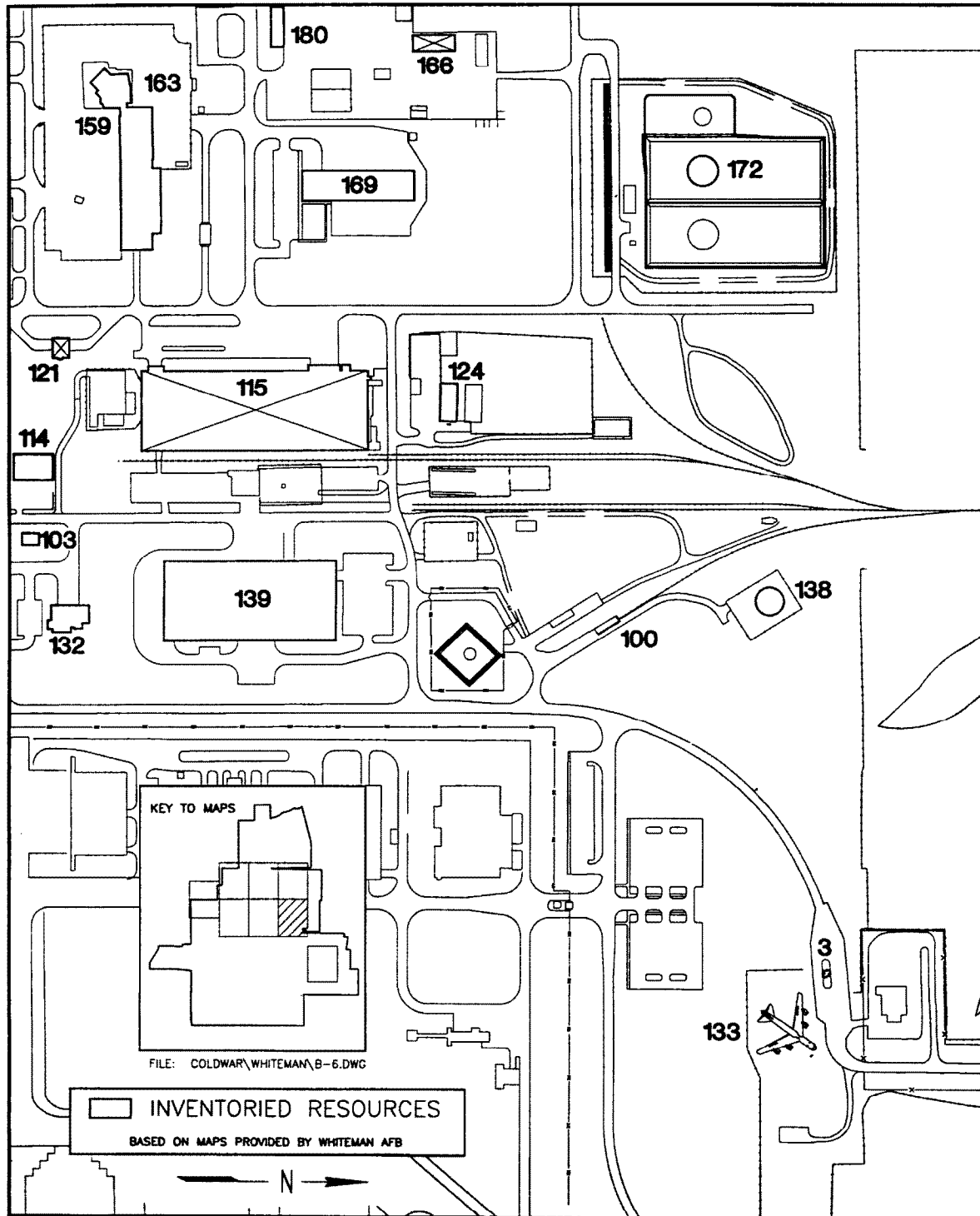


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 6 of 8).

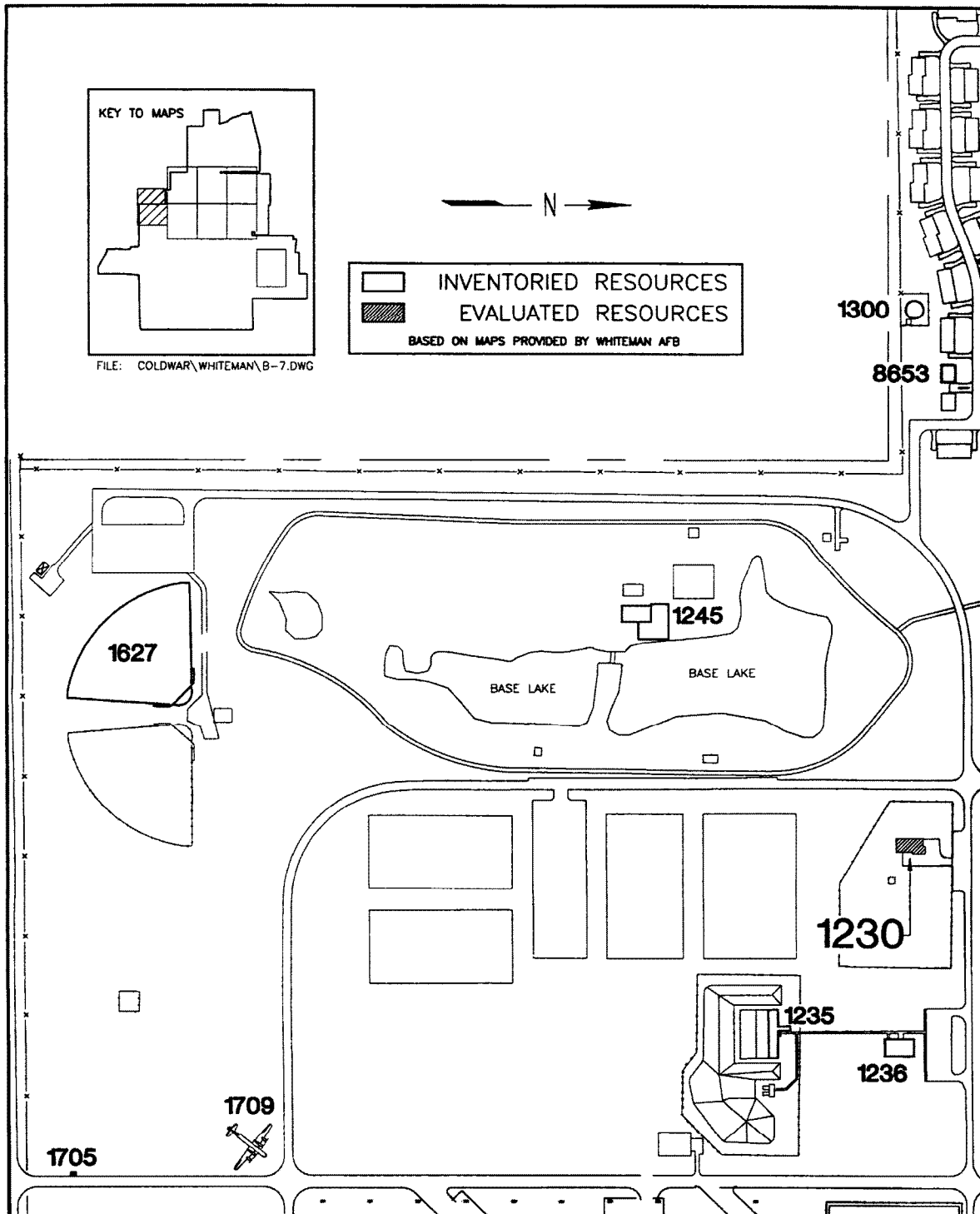


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 7 of 8).

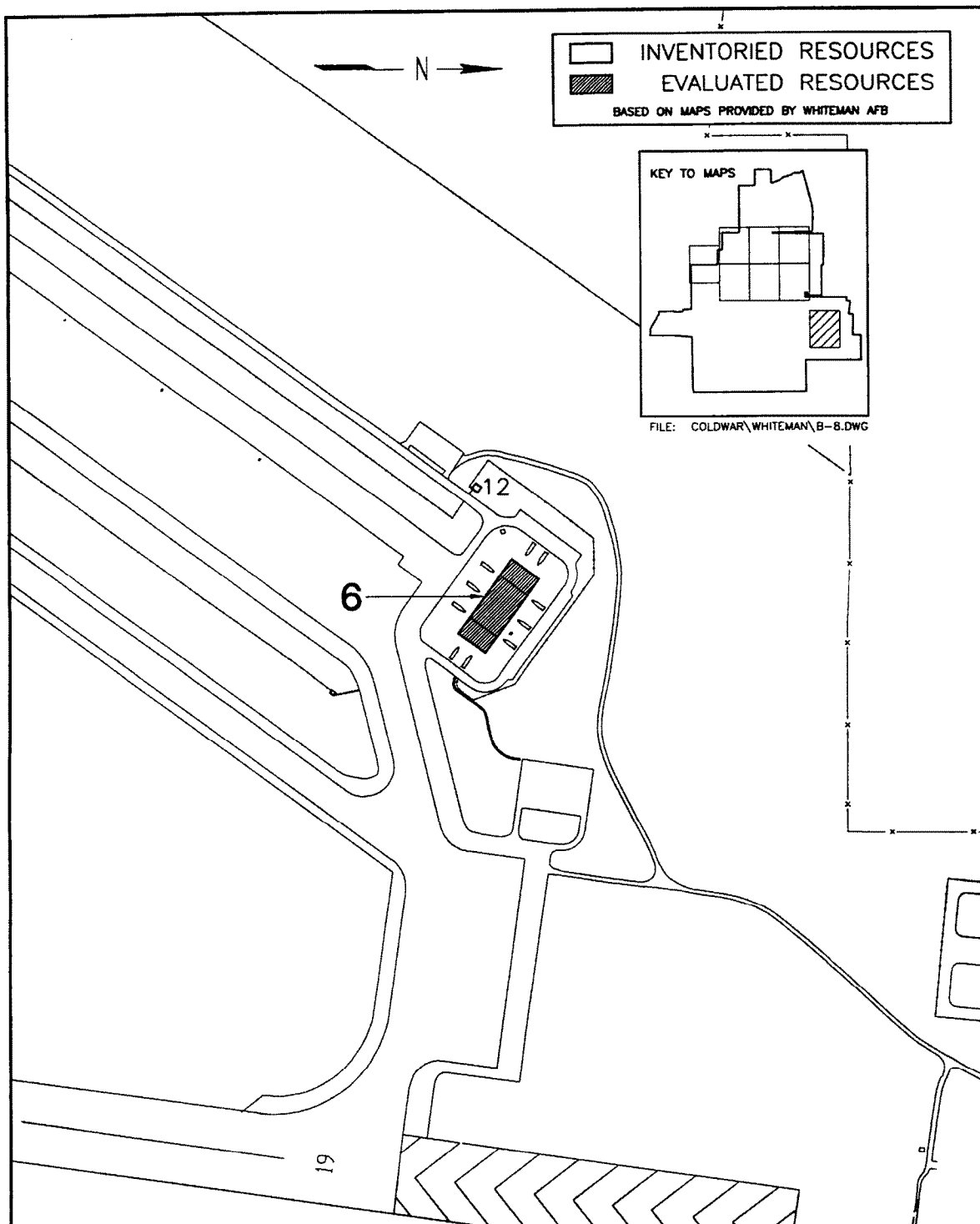


Figure B.1 Base Layout Map Showing Inventoried Resources (Map 8 of 8).

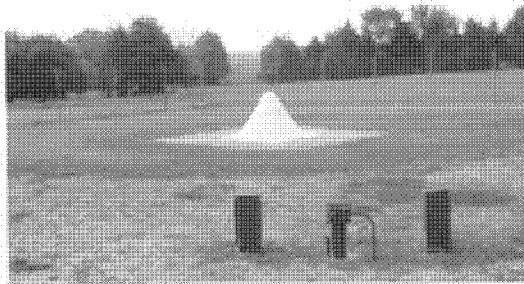
APPENDIX C:
PHOTOGRAPHS OF INVENTORIED RESOURCES



Resource No. 13001, Real Property No. 26101
Missile Guidance Facility (*Echo-1* LCF)



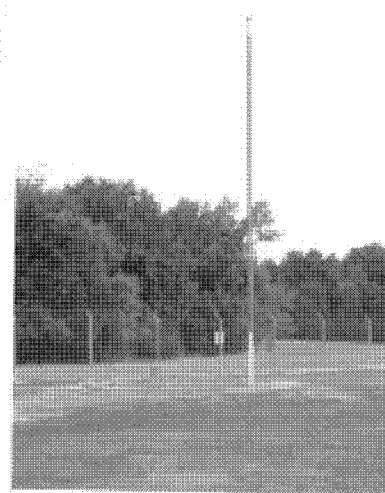
Resource No. 13002, Real Property No. 26118
Helicopter Pad



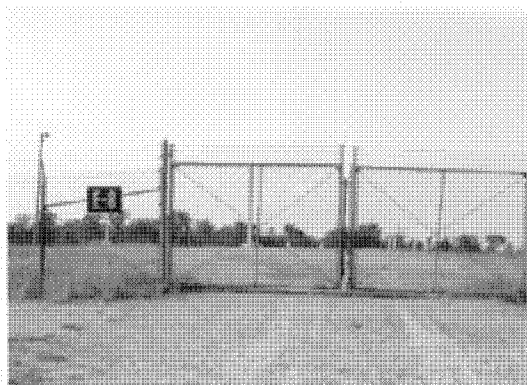
Resource No. 13003, Real Property No. 26112
High Frequency Hard Antenna (Transmitter)



Resource No. 13005, Real Property No. 26116
LCF Vents and Exhaust



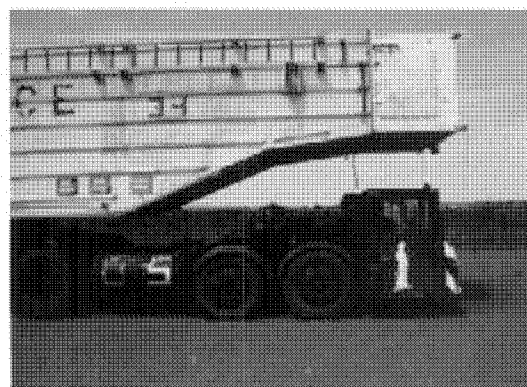
Resource No. 13004, Real Property No. 26115
Antenna Silo (UHF Antenna Pit)



Resource No. 13007, Real Property No. 26601
Missile Launch Facility (*Echo 8*)



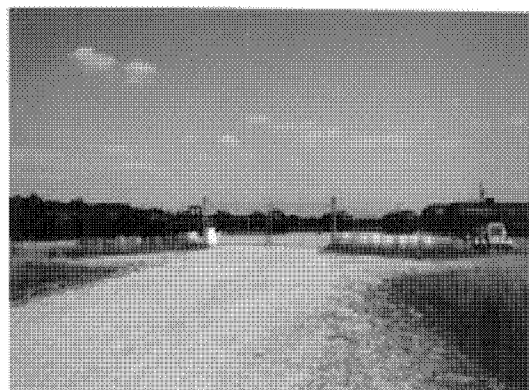
Resource No. 13008, Real Property No. 1100
Field Training Facility (T-12 Launch Facility
Trainer)



Resource No. 13009, Real Property No. (none)
Transporter Erector Tractor



Resource No. 13010, Real Property No. (none)
Transporter Erector Trailer



Resource No. 13011, Real Property No. 76201
Missile Launch Facility (*Oscar 8*)



Resource No. 13012, Real Property No. 76210
Missile Theodolite Station (*Oscar 8* Azimuth
marker)



Resource No. 13013, Real Property No. 29410
Missile Theodolite Station (*India 3* Azimuth
Marker)



Resource No. 13014, Real Property No. 74301
Missile Launch Facility (*India 4*)



Resource No. 13015, Real Property No. 29301
Missile Launch Facility (*India 2*)



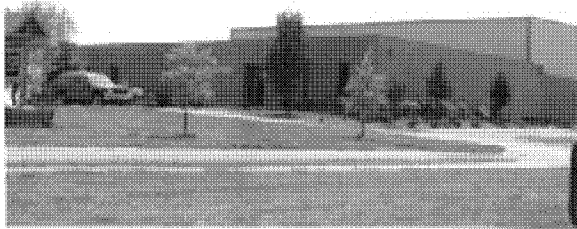
Resource No. 13016, Real Property No. 3016
Child Care Center



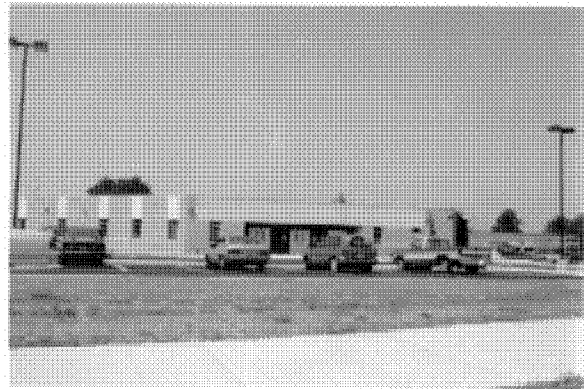
Resource No. 13017, Real Property No. 3020
Chapel Center



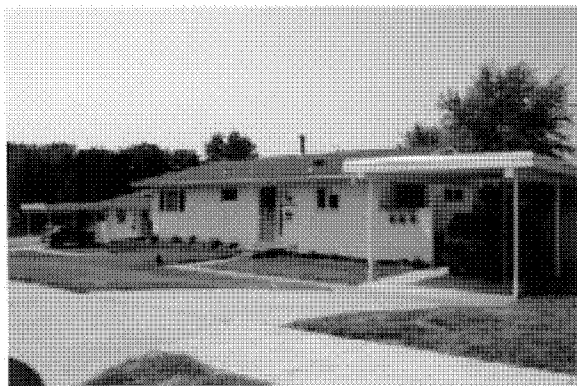
Resource No. 13018, Real Property No. 3205
Temporary Lodging Facility



Resource No. 13019, Real Property No. 3019
Youth Center



Resource No. 13020, Real Property No.
(unknown), Whiteman Elementary School



Resource No. 13021, Real Property No. 7002
Family Housing Appr. 1950-1969 (204,206
Houx Drive)



Resource No. 13022, Real Property No. 7800
Family Housing Appr. 1950-1969 (200,202
Selser Drive)



Resource No. 13023, Real Property No. 2032
Composite Medical Facility



Resource No. 13024, Real Property No. 1559
Permanent Party Airman's Dormitory



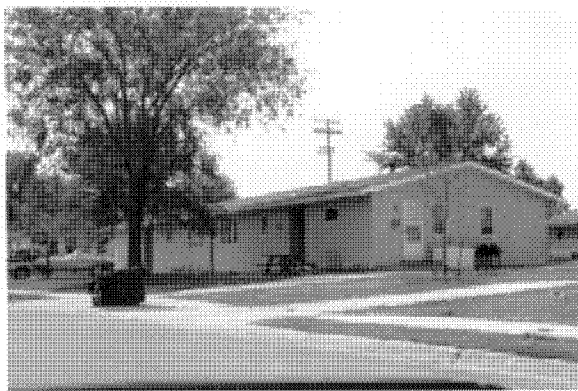
Resource No. 13025, Real Property No. 1561
Permanent Party Airman's Dormitory



Resource Nos. 13026 and 13027, Real Property
Nos. 2015 and 2016, Airman's Swimming Pool
and Bath House



Resource No. 13028, Real Property No. 2014
Gymnasium



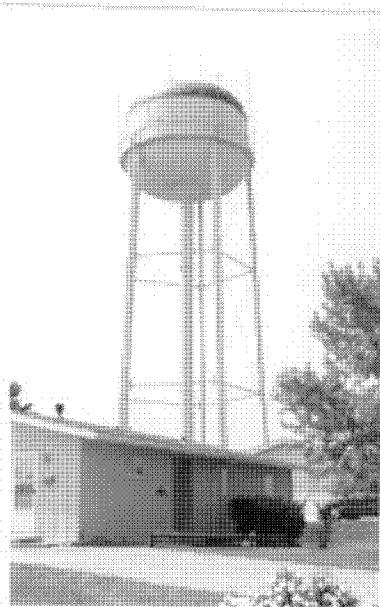
Resource No. 13029, Real Property No. 8509
Capehart Family Housing (814, 816 Chennault)



Resource No. 13030, Real Property No. 8653
Capehart Family Housing (704 Lindbergh)



Resource No. 13032, Real Property No. 1245
Miscellaneous Outdoor Recreation Facility



Resource No. 13031, Real Property No. 1300
Water Tank Storage



Resource No. 13033, Real Property No. 1627
Athletic Field



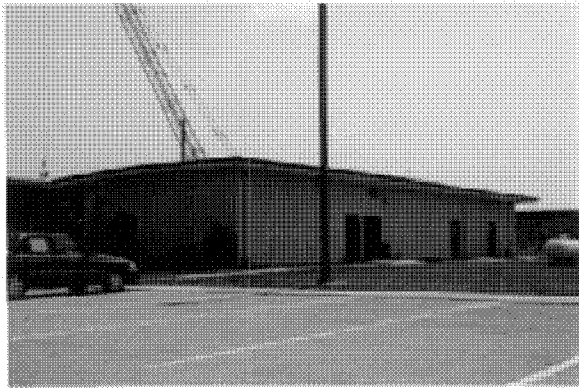
Resource No. 13034, Real Property No. 1709
Monuments/Memorial (KC-97)



Resource No. 13035, Real Property No. 1705
Traffic Check House



Resource No. 13036, Real Property No. 1235
Small Arms Systems Range



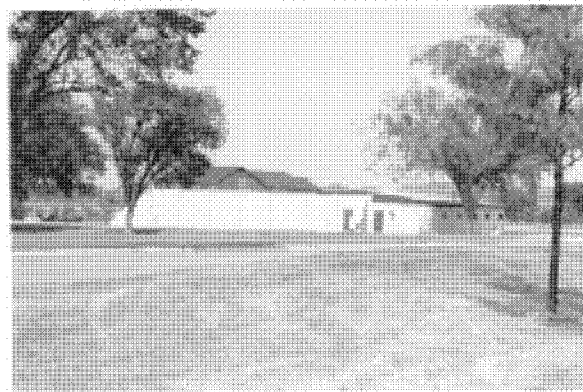
Resource No. 13037, Real Property No. 1236
Combat Arms Training Maintenance



Resource No. 13038, Real Property No. 711
Security Police Operations Building



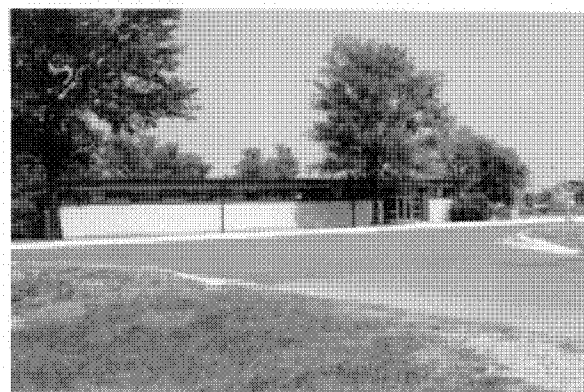
Resource No. 13039, Real Property No. 709
Missile Service Shop



Resource No. 13040, Real Property No. 1620
Indoor Small Arms Range



Resource No. 13041, Real Property No. 650
Automotive Hobby Shop



Resource No. 13042, Real Property No. 604
Environmental Health



Resource No. 13043, Real Property No. 706
Monuments/Memorials (B-47)



Resource No. 13044, Real Property No. 704
Group Headquarters



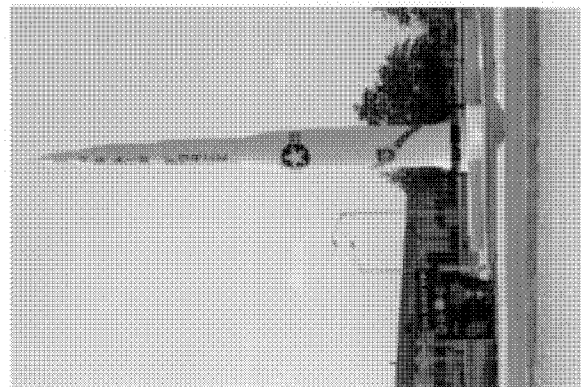
Resource No. 13045, Real Property No. 50
Control Tower



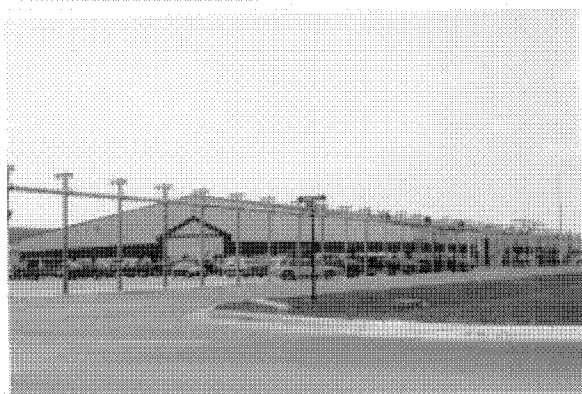
Resource No. 13046, Real Property No. 704
Monuments/Memorials (Helicopter)



Resource No. 13047, Real Property No. 47
Squadron Operations



Resource No. 13048, Real Property No. 704
Monuments/Memorials (Minuteman II)



Resource No. 13049, Real Property No. 705
Base Engineering Administration



Resource No. 13050, Real Property No. 48
Wing Headquarters



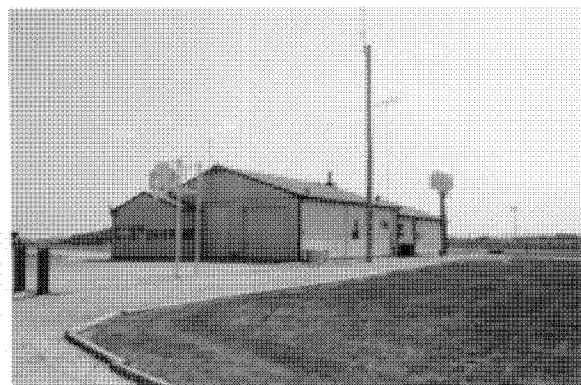
Resource No. 13051, Real Property No. 91
Maintenance Hangar



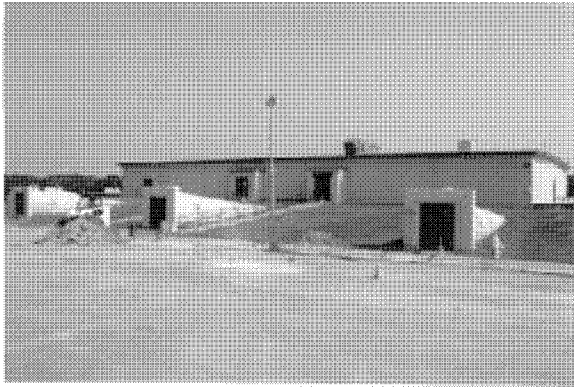
Resource No. 13052, Real Property No. 59
Communications Facility



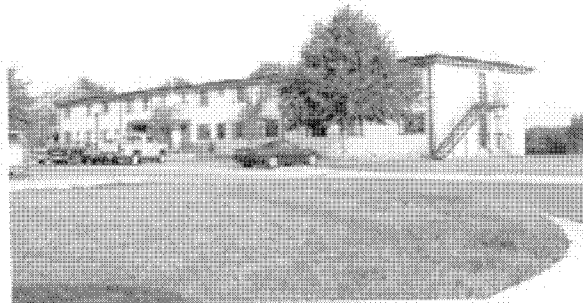
Resource No. 13053, Real Property No. 53
ICBM and TAC Communications and
Electronics Shop



Resource No. 13054, Real Property No. 1230
Missile Guidance Facility (*Oscar 1*)



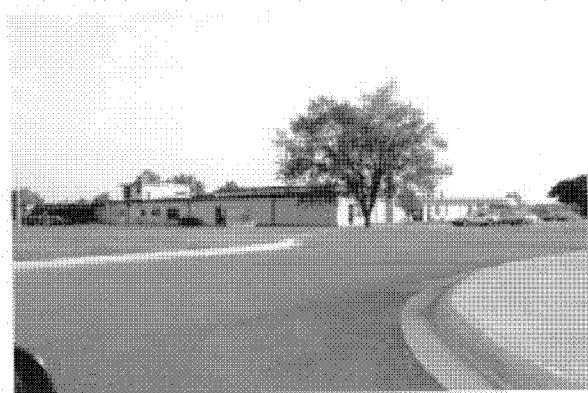
Resource No. 13055, Real Property No. 6
Reserve Forces Operational Training (Crew
Readiness)



Resource No. 13057, Real Property No. 3006
Visiting Officer's Quarters



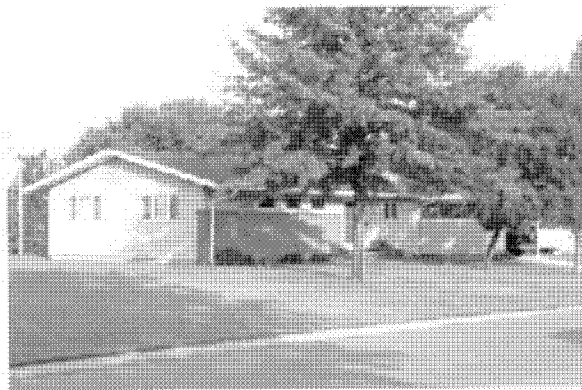
Resource No. 13058, Real Property No. 3200
Visiting Officer's Quarters (Whiteman Inn)



Resource No. 13059, Real Property No. 3008
Consolidated Open Mess



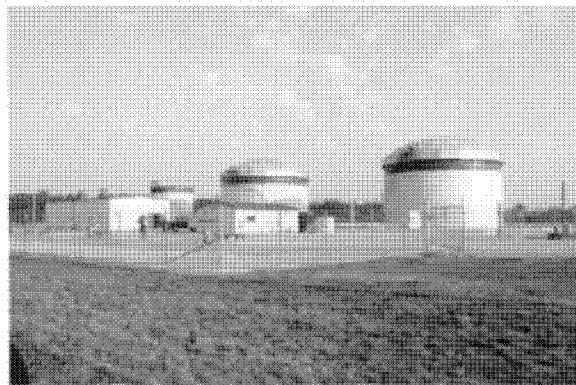
Resource No. 13060, Real Property No. 3009
Swimmer's Bath House



Resource No. 13061, Real Property No. 6312
Family Housing Appr. 1950-1969



Resource No. 13062, Real Property No. 6322
Family Housing Appr. 1950-1969



Resource No. 13063, Real Property No. 172
Mogas Storage



Resource No. 13064, Real Property No. 166
Solid Waste Disposal Facility



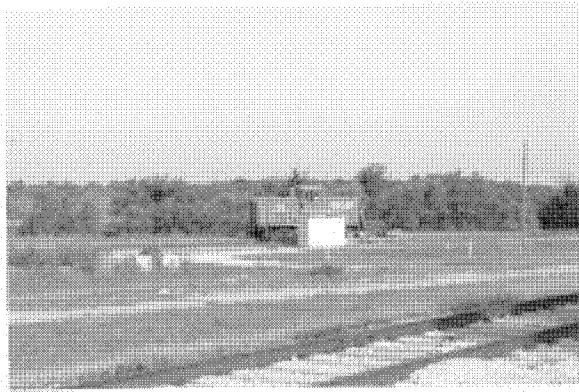
Resource No. 13065, Real Property No. 169
Base Engineering Pavement and Grounds Facility



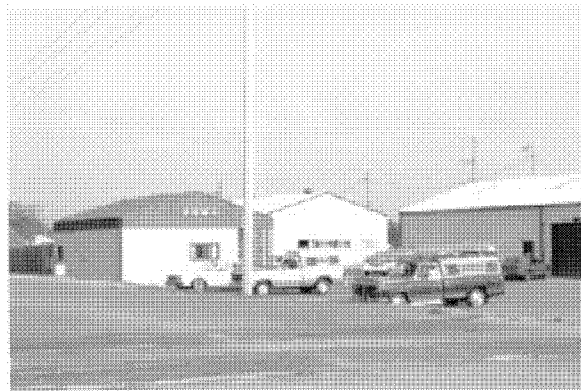
Resource No. 13066, Real Property No. 115
Base Supply and Equipment Warehouse



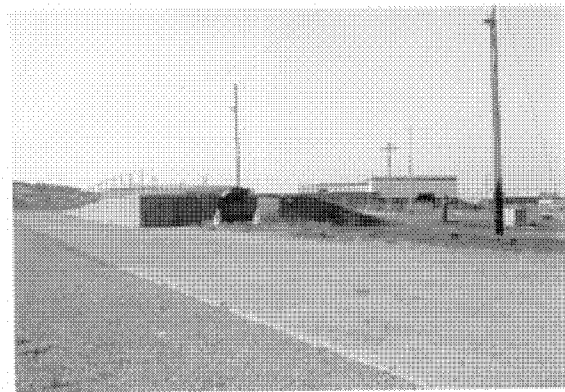
Resource No. 13067, Real Property No. 139
Base Supply and Equipment Warehouse



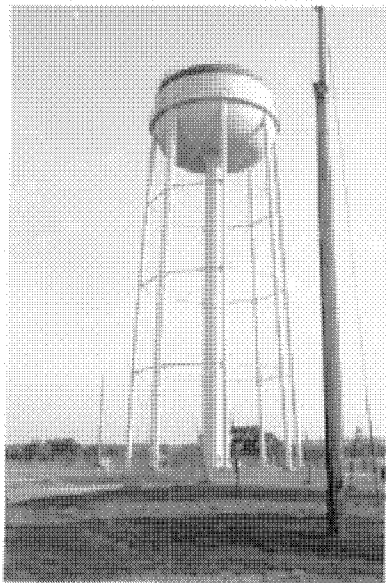
Resource No. 13068, Real Property No. (none)
Air Force Locomotive



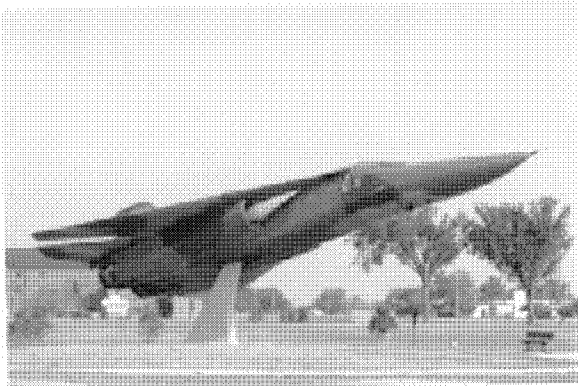
Resource No. 13069, Real Property No. 124
Base Supply and Equipment Warehouse



Resource No. 13071, Real Property No. 100
Load and Unload Platform



Resource No. 13070, Real Property No. 138
Water Tank Storage



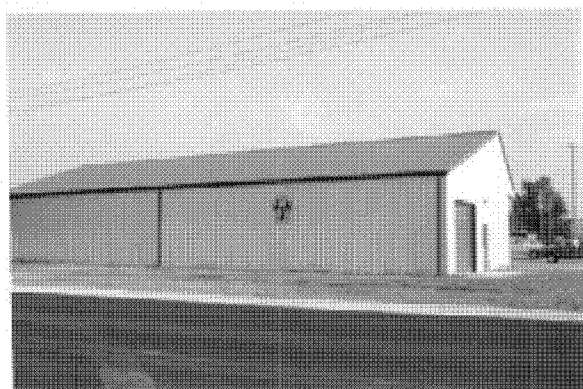
Resource No. 13072, Real Property No. 3014
Monument/Memorial (F-111 *Ardivark*)



Resource No. 13073, Real Property No. 1000
Wing Headquarters



Resource No. 13074, Real Property No. 3032
Branch Exchange



Resource No. 13075, Real Property No. 180
Recycling Shed



Resource No. 13076, Real Property No. 163
Base Engineering Covered Facility



Resource No. 13077, Real Property No. 159
Vehicle Maintenance Shop



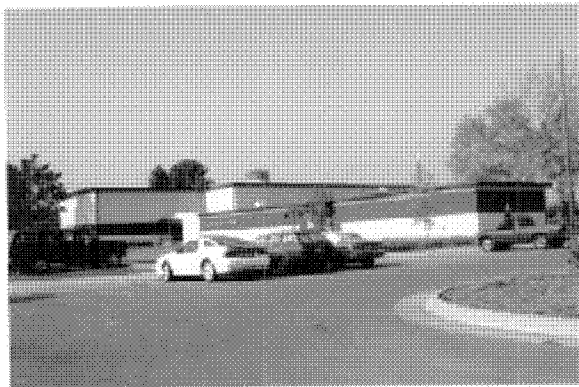
Resource No. 13078, Real Property No. 121
Refueling Vehicle Shop



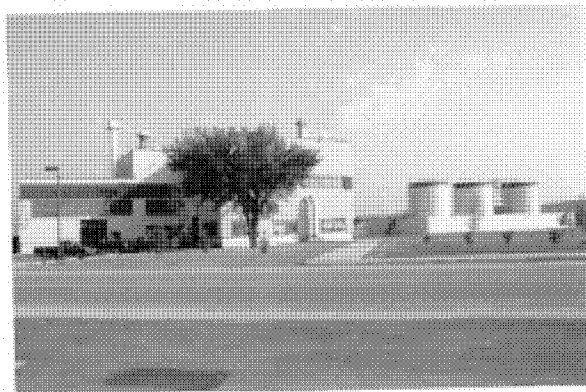
Resource No. 13079, Real Property No. 144
Education Center



Resource No. 13080, Real Property No. 145
Education Center



Resource No. 13081, Real Property No. 1425
Major Command Headquarters



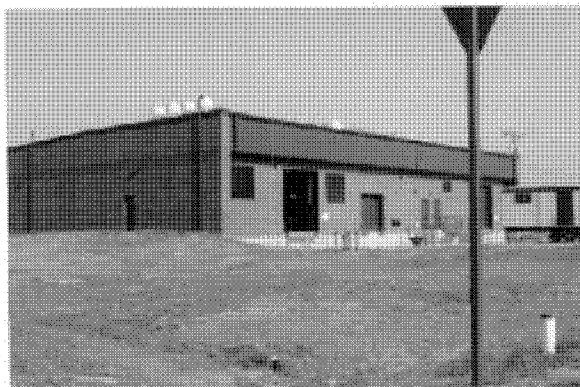
Resource No. 13082, Real Property No. 140
Heating Facility Building



Resource No. 13083, Real Property No. 132
Base Cold Storage



Resource No. 13084, Real Property No. 103
Animal Clinic



Resource No. 13085, Real Property No. 114
Housing Support and Storage Facility



Resource No. 13086, Real Property No. 153
Flight Training Classroom (B-2 FTU)



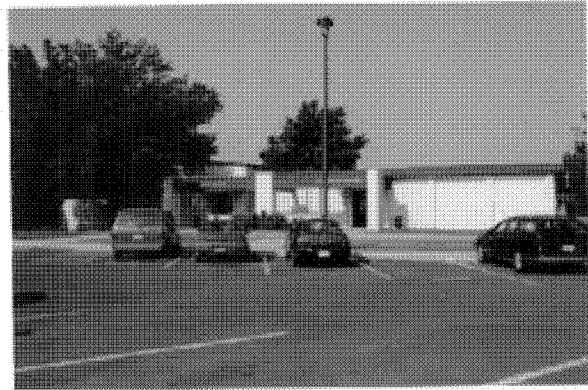
Resource No. 13088, Real Property No. 152
Field Training Facility (B-2 FTD)



Resource No. 13087, Real Property No. 155
Monuments/Memorials (509th Mushroom Cloud
and Wings Statue)



Resource No. 13089, Real Property No. 9
Large Aircraft Maintenance Dock



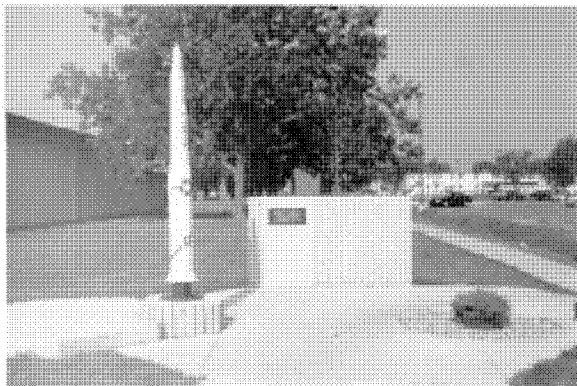
Resource No. 13090, Real Property No. 410
Red Cross Office



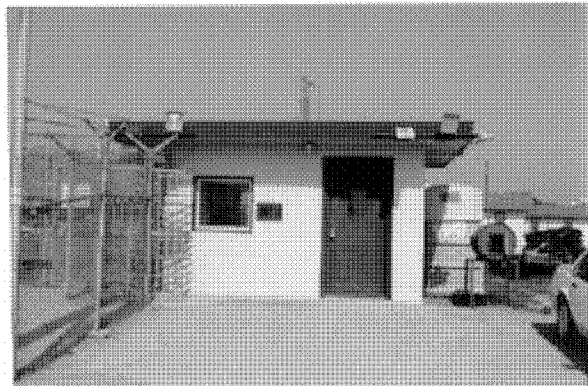
Resource No. 13091, Real Property No. 527
Family Support Center (Library)



Resource No. 13092, Real Property No. 411
Commissary Store



Resource No. 13093, Real Property No. (none)
Monument/Memorial (Miniature Minuteman)



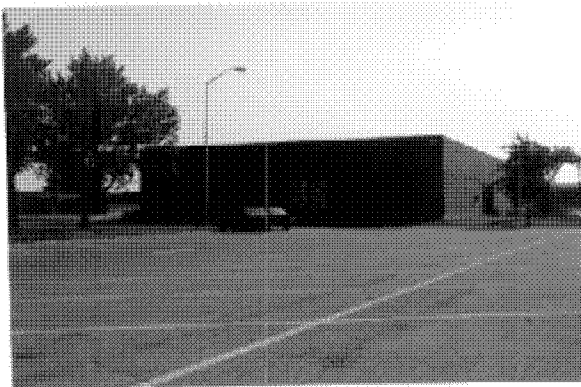
Resource No. 13096, Real Property No. 12
Traffic Check House



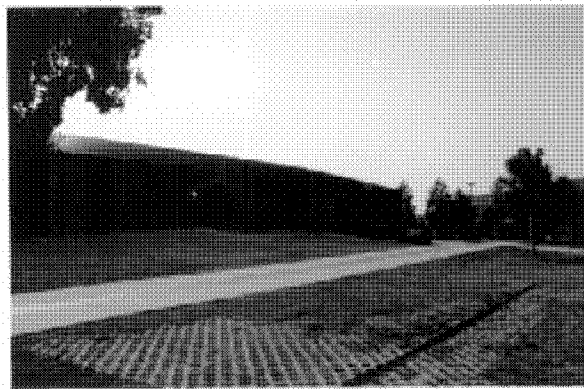
Resource No. 13097, Real Property No. 524
Base Theater



Resource No. 13098, Real Property No. 534
Bowling Center



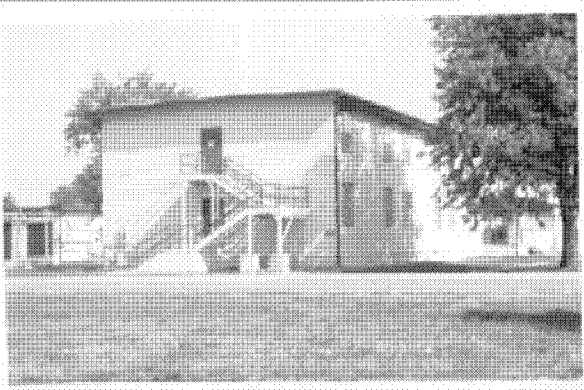
Resource No. 13099, Real Property No. 528
Recreation Center



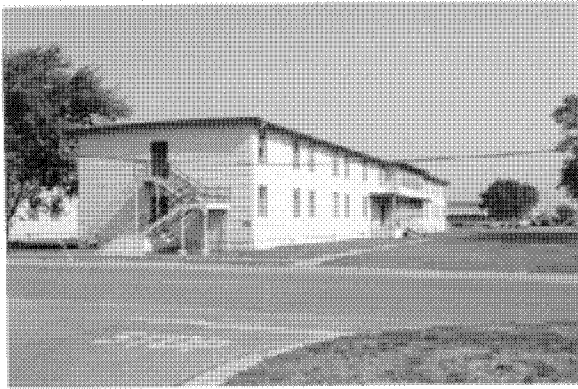
Resource No. 13100, Real Property No. 1553
Detached Airman's Dining Hall (Ozark Inn)



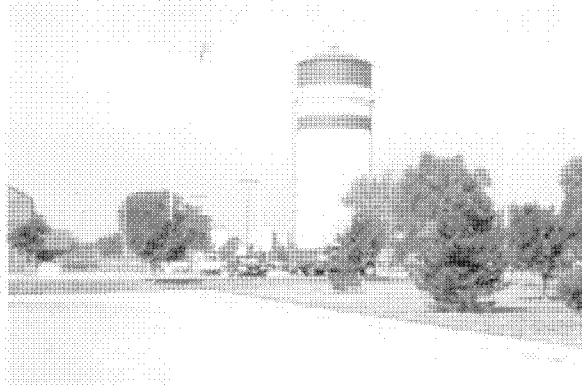
Resource No. 13101, Real Property No. 529
Sales Exchange Store



Resource No. 13102, Real Property No. 1433
Group Headquarters



Resource No. 13103, Real Property No. 1431
Old Airman's Dorm



Resource No. 13104, Real Property No. 2000
Building Water Supply



Resource No. 13105, Real Property No. 2010
Branch Bank



Resource No. 13106, Real Property No. 200
Squadron Operations



Resource No. 13107, Real Property No. 1435
Reserve Forces Operational Training



Resource No. 13108, Real Property No. 149
Data Processing Installation



Resource No. 13109, Real Property No. 3022
Monuments/Memorials (*The Great Artiste B-29*)

APPENDIX D:
DATA BASE DOCUMENTATION FOR EVALUATED RESOURCES

EVALUATED RESOURCES AT WHITEMAN AFB

Resource Number: 13008

Property Description: Field Training Facility (T-12 Missile Launch Facility Trainer)

Associated Property: 13056

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 2/10/94

Base Map Building Number: 1100

Operational Support & Installations:

Combat Weapons and Support Systems:

Training Facilities: Missile Training

Material Development Facilities:

Intelligence:

Property Type: Missile Launch Facility Trainer

Statement of Significance: A rare and critical training facility for Minuteman I and II maintenance teams for launch facilities. Currently being used.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 3

Percent Historic Fabric: 4

Severity of Threats: 3

Total Score for Priority Matrix: 19

Comments on Threats: Although not an actual launch facility, the site is an example of the actual launch facility and also includes specialized architectural elements specific to the trainer and its requirements for greater access.

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: National Register nomination is recommended especially as part of a Whiteman Minuteman complex theme.

Importance: Exceptional

Eligibility: Eligible

Height: 10
Square Footage: 659
Original Planned Duration: Permanent
Existing Use: Field Training Facility
Other Use/Dates:
Comments on Use:
Primary Building Materials: Reinforced concrete with steel plate liner
Character Defining Features: Underground silo with greater than normal personnel access.

Resource Number: 13054

Property Description: Missile Guidance Facility (Oscar I Launch Control Facility)

Associated Property: 13011-13015;13056

Non-Inventoried Association: All missile launch facilities and launch control facilities in the 510th Missile Squadron.

Sub-installation:

Address:

Base Map Date: 2/10/94

Base Map Building Number: 1230

Operational Support & Installations:

Combat Weapons and Support Systems: Missiles

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Missile Launch Control Facility

Statement of Significance: Oscar I is the only Minuteman launch control facility located within the confines of an Air Force Base. Because of its proximity to base facilities, the support structures are smaller than other lcf's in the system. Oscar I is also unique in that it had control of all 50 missiles in the squadron and the Emergency Rocket Communications System, an important element of the Mutual Assured Destruction policy. The construction of the lcf and the lfs in the system, that is the underground construction, concrete and steel, heavy blast doors, multiple energy sources, and shock isolators, etc ensured the survivability of the system.

Cold War Relationship-Nat'l. Recognition: 4

Theme Relationship: 4

Temporal Phase Relationship: 2

Level of Importance: 4

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 19

Comments on Threats:

No Further Work: No

Stewardship: Yes

National Register Listing: Yes

Further Documentation: Yes

Preservation/Conservation/Repair: No

Comments on Resource Management: Should be listed on the National Register. This should be considered as the centerpiece of the Whiteman Minuteman Complex; a resource that should be listed as exceptionally significant.

Importance: Exceptional

Eligibility: Eligible

Height: 10
Square Footage: 8507
Original Planned Duration: Permanent
Existing Use: Heritage Center
Other Use/Dates: Missile Guidance Facility-Launch Control Facility/1964-1991
Comments on Use: Used now for tours
Primary Building Materials: Reinforced Concrete and Steel Plates
Character Defining Features: Underground life support capacity, launch control capsule is mounted on four shock mounted hangars and platform, escape tunnel 21 feet long, elevator to surface and missile operations building. Capsules for control and support machines were rounded steel surrounded by feet of reinforced concrete thick enough to withstand impact by thermonuclear weapons.

Resource Number: 13055

Property Description: Reserve Forces Operational Training (Crew Readiness - Molehole)
Associated Property: 13096; 13056
Non-Inventoried Association:
Sub-installation:
Address: Alert Road
Base Map Date: 2/10/94
Base Map Building Number: 6

Operational Support & Installations:
Combat Weapons and Support Systems: Alert Facilities
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Bomber Alert Facility

Statement of Significance: SAC Alert facility associated with B-47 aircraft in contrast to most facilities associated with the B-52.
This facility was used as an alert facility from 1960 to 1963 and then perhaps again in 1968. The buildings exterior represents the classic molehole construction complete with ramped tunnels for rapid egress. The significance of the alert facility lies in its and its association with the B-47 bomber.

Cold War Relationship-Nat'l. Recognition: 4
Theme Relationship: 4
Temporal Phase Relationship: 3
Level of Importance: 3
Percent Historic Fabric: 4
Severity of Threats: 4
Total Score for Priority Matrix: 22
Comments on Threats: Facility is in danger of loosing its integrity as an alert facility because of plans to remove tunnels and expansion of the above ground story.

No Further Work: No
Stewardship: Yes
National Register Listing: Yes
Further Documentation: Yes
Preservation/Conservation/Repair: No
Comments on Resource Management: Exceptionally significant and NRHP eligible.

Importance: Exceptional
Eligibility Eligible

Height: 15
Square Footage: 33586
Original Planned Duration: Permanent
Existing Use: Reserve Forces Operational Training (442 FW)
Other Use/Dates: Crew Readiness 1960-63;68?
Comments on Use:
Primary Building Materials: Reinforced concrete and concrete block
Character Defining Features: Underground construction, covered tunnel ramps.

Resource Number: 13056

Property Description: Architectural drawings, map, photos
Associated Property: 13008, 13054, 13055
Non-Inventoried Association:
Sub-installation:
Address:
Base Map Date: 2/10/94
Base Map Building Number: inside 705

Operational Support & Installations: Documentation
Combat Weapons and Support Systems:
Training Facilities:
Material Development Facilities:
Intelligence:
Property Type: Documentary Collection

Statement of Significance: Flat files in site development office contain detailed drawings of individual buildings and general topics with dates ranging from the 1940s and the beginning of the base to present. Collection includes vellum, paper, cloth, and mylar drawings. Many of these are likely to be unique. Twenty unorganized files contain details of Minuteman construction and minuteman sites.

Cold War Relationship-Nat'l. Recognition: 3
Theme Relationship: 2
Temporal Phase Relationship: 4
Level of Importance: 2
Percent Historic Fabric: 4
Severity of Threats: 2
Total Score for Priority Matrix: 17
Comments on Threats: Files are in disarray. The value of this resource is not recognized.

No Further Work: No
Stewardship: Yes
National Register Listing: No
Further Documentation: Yes
Preservation/Conservation/Repair: Yes
Comments on Resource Management:

Object Condition: In Storage/Benign Neglect
Record/Document Category: Architectural Drawing
Year of Document: Various
Period of Association: 1940 - 1990
Comments on Condition: Records need to be cared for

Resource Number: 13116

Property Description: Wing History Offices containing 509th BW and 351st MW histories, reports, files, records, trophies, photographs, slides, and movie reels.

Associated Property:

Non-Inventoried Association:

Sub-installation:

Address:

Base Map Date: 2/10/94

Base Map Building Number: inside 1000

Operational Support & Installations: Documentation

Combat Weapons and Support Systems:

Training Facilities:

Material Development Facilities:

Intelligence:

Property Type: Documentary Collection

Statement of Significance: Office files may contain unique reference materials, clippings, reports, etc.

Cold War Relationship-Nat'l. Recognition: 3

Theme Relationship: 4

Temporal Phase Relationship: 4

Level of Importance: 2

Percent Historic Fabric: 4

Severity of Threats: 1

Total Score for Priority Matrix: 18

Comments on Threats: Threat to resource only due to chaotic filing conditions.

No Further Work: No

Stewardship: Yes

National Register Listing: No

Further Documentation: Yes

Preservation/Conservation/Repair: Yes

Comments on Resource Management: Files and collections need to be inventoried and curated if deemed valuable, remainder should be organized and filed.

Object Condition: Being Preserved

Record/Document Category: Various

Year of Document: Various

Period of Association: 1940-1990

Comments on Condition: Records are being preserved but need organization.

APPENDIX E:
DETAILED RESOURCE CONTENTS

CONTENTS OF DOCUMENTARY COLLECTION
(RESOURCE NO. 13056, LOCATED IN REAL PROPERTY NO. 705)

120 Flat File Drawers:

- Twenty unorganized files containing as-built and detailed drawings of Minuteman facilities (may possibly include drawings of Real Property No. 1100)
- Approx. 80 files containing drawings of individual buildings organized by real property numbers; includes plans and modifications of evaluated Real Property Nos. 6 and 1230 dating to 1958 and 1964 respectively
- Approx. 20 files of general systems such as base parking, railroads, and roads; contains plans and as-built drawings spanning 1940s-1990s on mylar, vellum, and sailcloth
- Complete set of high altitude aerial photographs of missile facilities
- Limited selection of 1980s large-scale aerial photographs of base

Wooden Map Compartments:

- Miscellaneous rolls of project maps dating circa 1970s and 1980s

Loose Storage on Top of Flat Files:

- Bound Base Comprehensive Plan, 1970s
 - Minuteman base facility drawings such as locational and plan drawings; compiled by Base Design Section-Boeing Corporation
 - Housing drawings and details in two wooden binders
-

CONTENTS OF DOCUMENTARY COLLECTION
(RESOURCE NO. 13116, LOCATED IN REAL PROPERTY NO. 1000)

File Cabinets:

- 509th BW histories, 1943-1993: 16 file drawers
- 351st MW histories, 1963-1993: 20 file drawers
- Civil Engineering files, late 1980s-1990s: 1 file cabinet
- Whiteman AFB 25 year history: 3 file cabinets

Cabinet No. 1: Current working history files and collection of videos and newsreels; collection of four scrapbooks of the 1980s and 1990s on top of the cabinet

Cabinet No. 2: Peacekeeper newspaper clippings; technical manuals ca. 1978; Strategic Missile Evaluating Squadron 1973-1990; IG reports 1973-1990; historic and reference files regarding women, integration, and operations; automated missile crew scheduling

Cabinet No. 3: Missile construction newspaper clippings; peace protester destruction 1984; 451st achievement reports 1965-1967; modification records; maintenance records; Rivet Mile; Minuteman handouts and manufacturer pamphlets; test reports; 16 large binders of slides of people, awards, events, and buildings, ca. 1980s-1990s, located on top of Cabinet No. 2 and 3; video collection - 11 cassettes predominately regarding the B-2

Photograph Collection:

- Massive unorganized collection of prints and slides dating from the 1960s to the 1990s; majority of collection dates to the 1990s with various missile development and construction photos of the 1960s mixed in

Trophies:

- Seven Fairchild trophies
-

APPENDIX F:
EXTANT SOURCES OF INFORMATION

BASE CONTACTS

The following people were contacted during the base visit by the field team to help identify Cold War material culture and provide research materials.

Mr. Don Meuschke
Cultural/Natural Resource Officer
509 CES/CERR
930 Arnold Ave
Whiteman AFB, MO 65305-5022
(816) 687-1227

Mr. David Duffer
Drafting Office Manager
509 CES/CERR
930 Arnold Ave
Whiteman AFB, MO 65305-5022
(816) 687-6280

Ms. Sara Kelchner
Real Property Officer
509 CES/CERR
930 Arnold Ave
Whiteman AFB, MO 65305-5022
(816) 687-6299

TSgt Rice
351st MW Historian
509th BW/HO
555 Mitchell Ave, Ste 210
Whiteman AFB, MO 65305-5022
(816) 687-1145

SSgt Vickie Shirkey
Heritage Center
509 CES/CERR
930 Arnold Ave
Whiteman AFB, MO 65305-5022
(816) 687-1227

Major Robert Rochester
351st MW
555 Mitchell Ave
Whiteman AFB, MO 65305-5022
(816) 687-1227

Mr. Robert Steinkuckler
Planner
509 CES/CERR
930 Arnold Ave
Whiteman AFB, MO 65305-5022
(816) 687-6306

SSgt Sharpe
Facility Security Officer
509 SPS/SPAC
Whiteman AFB, MO 65305
(816) 687-6914

INFORMAL INTERVIEWS

The following people were informally interviewed by the Mariah field team while at the base. They were identified as people possessing extensive knowledge of Whiteman AFB's history and Cold War context.

Mr. Don Meuschke, Cultural/Natural Resource Officer, August 22-26, 1994

TSgt Rice, 351st MW Historian, August 24, 1994

SSgt Vickie Shirkey, Heritage Center, August 22-26, 1994

Major Robert Rochester, 351st MW/Heritage Center, August 23, 1994

Mr. Robert Steinkuckler, Planner, August 25, 1994

**A SYSTEMIC STUDY OF AIR COMBAT COMMAND
COLD WAR MATERIAL CULTURE**

**VOLUME III: SUMMARY REPORT AND
FINAL PROGRAMMATIC RECOMMENDATIONS**

Prepared for

**Headquarters, Air Combat Command
Langley Air Force Base, Virginia**

Prepared by

**R. Blake Roxlau
Katherine J. Roxlau**

with contributions by

Karen Lewis

**Mariah Associates, Inc.
Albuquerque, New Mexico
MAI Project 735-15**

Under

**Contract DACA 63-92-D-0011
for
United States Army Corps of Engineers
Fort Worth District**

November 1997

**United States Air Force
Air Combat Command**

LIST OF ACRONYMS

AAB	-	Army Air Base
AAF	-	Army Airfield
ABW	-	Air Base Wing
ACC	-	Air Combat Command
ACCS	-	Airborne Command and Control Squadron
ACE, FW	-	Army Corps of Engineers, Fort Worth
ACHP	-	Advisory Council on Historic Preservation
ADC	-	Air Defense Command
AEC	-	Atomic Energy Commission
AFB	-	Air Force Base
AFLC	-	Air Force Logistics Command
AFR	-	Air Force Range
AFRES	-	Air Force Reserve
AFS	-	Air Force Station
AFSC	-	Air Force Systems Command
AMARC	-	Aerospace Maintenance and Regeneration Center
AMC	-	Air Materiel Command
ANG	-	Air National Guard
ARDC	-	Air Research and Development Command
ARW	-	Air Refueling Wing
ATC	-	Air Training Command
BG	-	Bomb Group
BMEWS	-	Ballistic Missile Early Warning System
BMG	-	Bombardment Group
BMW	-	Bombardment Wing
BW	-	Bomb Wing
CONAC	-	Continental Air Command
DEW	-	Distant Early Warning
DoD	-	Department of Defense
ECM	-	Electronic Countermeasure
EIG	-	Engineering Installations Group
FIS	-	Fighter Interceptor Squadron
FW	-	Fighter Wing
GLCM	-	Ground Launched Cruise Missile
HABS	-	Historic American Buildings Survey
IAAFA	-	Inter-American Air Force Academy
ICBM	-	Intercontinental Ballistic Missile
LCF	-	Launch Control Facility
LF	-	Launch Facility
MAC	-	Military Airlift Command

LIST OF ACRONYMS (Continued)

Mariah	-	Mariah Associates, Inc.
MATS	-	Military Airlift Transport Service
MIRV	-	Multiple Independently-Targetable Reentry Vehicle
NACA	-	National Advisory Committee for Aeronautics
NEADS/SOCC	-	Northeast Air Defense Sector/Sector Operations Control Center
NHL	-	National Historic Landmark
NHPA	-	National Historic Preservation Act
NPS	-	National Park Service
NRHP	-	National Register of Historic Places
NSC	-	National Security Council
OTH-B	-	Over the Horizon Backscatter
PACCS	-	Post Attack Command and Control System
PAVE PAWS	-	Position Acquisition Vehicle Entry Phased Array Warning System
POW	-	Prisoner-of-war
RADC	-	Rome Air Development Center
RDJTF	-	Rapid Deployment Joint Tactical Force
SAC	-	Strategic Air Command
SAGE	-	Semi-Automatic Ground Environment
SALT	-	Strategic Arms Limitation Treaty
SHPO	-	State Historic Preservation Officer
SLBM	-	Submarine Launched Ballistic Missile
SMW	-	Strategic Missile Wing
SW	-	Strategic Wing
TAC	-	Tactical Air Command
TALC	-	Tactical Airlift Center
USAF	-	U.S. Air Force
USCENTCOM	-	United States Central Command
USREDCOM	-	United States Readiness Command
USSOCOM	-	United States Special Operations Command
USSPACECOM	-	United States Space Command
USSTRATCOM	-	United States Strategic Command
USSTRIKCOM	-	United States Strike Command
WSA	-	Weapons Storage Area

GLOSSARY

Anti-Ballistic Missile Protocol - signed in 1974, this agreement amends the Strategic Arms Limitation Treaty I by reducing the number of anti-ballistic missile systems deployed by the United States and the Soviet Union to one each.

Cold War - a war of political beliefs that lasted four and one-half decades from 1945 to 1989, and which took place between democratic countries and communist or socialist countries. The United States and the Soviet Union were the main Cold War opponents. No actual, physical battles occurred between these two countries, but the arms race in which they engaged was a major feature of the Cold War era.

Cuban Missile Crisis - a U.S. - U.S.S.R. confrontation that nearly led to war between the superpowers. The crisis began on October 16, 1962 when intelligence reports confirmed that the Soviets were installing nuclear ballistic missiles in Cuba. President Kennedy responded with a naval blockade of Cuba. On October 28, the Soviet Union agreed to remove its missiles.

Distant Early Warning Line - developed in response to the Killian Report, this early warning detection system was designed to track enemy bombers and missiles travelling over the Arctic Circle towards the United States. This line consists of over 50 radar stations stretching across the Arctic Circle from the Aleutian Islands of Alaska to Iceland.

Historic American Buildings Survey - a division of the National Park Service, this office provides documentation of historically significant buildings, structures, sites, or objects. Documentation includes measured drawings, perspective corrected photographs, a written history, and field documentation.

Killian Report - (also known as the Surprise Attack Study) a list of recommendations presented to the National Security Council for building the U.S.'s military. It contains recommendations for research and development of new technologies, including long-range nuclear missiles, as well as dispersal of the country's existing bomber force, and development of early warning radar systems.

Legacy Program - a preservation program developed by the Department of Defense to identify and conserve irreplaceable biological, cultural, and geophysical resources, and to determine how to better integrate the conservation of these resources with the dynamic requirements of military missions.

Limited Nuclear Test Ban Treaty - a multilateral agreement signed by over 100 nations. The treaty prohibits nuclear testing underwater, in the atmosphere, and in outer space. It does not prohibit underground testing. The treaty, signed in 1963, aims to reduce environmental damage caused by nuclear testing.

GLOSSARY (Continued)

National Command Authority - the President and the Secretary of Defense, who are responsible for making final decisions about the use of U.S. nuclear weapons.

National Emergency Airborne Command Post - one of three National Military Command Centers which directly supports the National Command Authority and the Joint Chiefs of Staff. In the event of a national emergency, this airborne command post provides a survivable means of executing National Command Authority war orders.

National Register of Historic Places - a listing, maintained by the Keeper of the Register under the Secretary of the Interior, of historic buildings, structures, districts, landscapes, sites, and objects.

NSC-68 - a National Security Council document developed in 1950 which recommended the massive build-up of U.S. military forces to counteract the large military buildup by the Soviet Union.

Operation Paperclip - a mission carried out during the last days of World War II whereby German scientists from Peenemunde, the research and development facility for the V-2 rocket, were transported to the United States to begin development of American rocket systems.

Post Attack Command and Control System - a system of airplanes that could serve as U.S. command posts should command centers on the ground become inoperable. These modified Boeing 707 aircraft were originally supervised by the Strategic Air Command. They are now under the control of U.S. Strategic Command.

Section 106 - a review process in the National Historic Preservation Act by which effects of a federal undertaking on a historic or potentially historic property are evaluated.

Section 110 - a requirement in the National Historic Preservation Act that all Federal agencies locate, identify, inventory, and nominate to the Secretary of Interior all properties, owned or under control of the agency, that appear to qualify for inclusion to the National Register of Historic Places.

Strategic Arms Limitation Treaty I - signed in 1972, this is the first treaty to actually limit the number of nuclear weapons deployed. Anti-ballistic missile systems and strategic missile launchers are the weapons systems limited in this agreement.

GLOSSARY (Continued)

Strategic Arms Limitation Treaty II - developed in 1979, this treaty further limits the number of nuclear weapons deployed by each side by setting numerically equal limits. The treaty also addresses modernization of the systems for the first time, allowing development of only one new intercontinental ballistic missile. Though this agreement was not signed, due to deterioration of U.S. - U.S.S.R. relations in the late 1970s, both sides agreed to abide by its terms.

Strategic Defense Initiative - a U.S. research program, also known as "Star Wars," to determine whether a defensive space shield could be built to destroy attacking ballistic missiles.

Vladivostok Accord - signed in 1974, this agreement sets new limits on the number of nuclear weapons deployed by the United States and the Soviet Union. Unlike the Strategic Arms Limitation Treaty I, this agreement sets numerically equal limits on the number of nuclear weapons deployed by each side. It also limits for the first time nuclear weapons equipped with more than one warhead.

TABLE OF CONTENTS

	<u>Page</u>
LIST OF ACRONYMS.....	i
GLOSSARY	iii
1.0 INTRODUCTION	1
1.1 COLD WAR MATERIAL CULTURE STUDY	1
1.2 COLD WAR COMMANDS.....	3
2.0 COLD WAR HISTORIC CONTEXT	5
3.0 METHODOLOGY AND TECHNIQUES	9
3.1 INVENTORY METHODOLOGY	9
3.2 METHODOLOGY FOR EVALUATION OF IMPORTANT RESOURCES	10
3.2.1 Documentation	10
3.2.2 Evaluation of Importance.....	11
3.2.2.1 Cold War Context	11
3.2.2.2 NRHP Criteria.....	11
3.2.2.3 Exceptional Importance.....	12
3.2.3 Evaluation of Integrity	13
3.2.4 Priority Matrix	13
3.2.5 Resource Organization.....	14
3.3 FIELDWORK TECHNIQUES	15
3.4 METHODOLOGY PROBLEMS.....	16
4.0 INVENTORIED BASES	19
4.1 BASE SUMMARIES	19
4.1.1 Barksdale AFB	19
4.1.2 Beale AFB.....	22
4.1.3 Cannon AFB.....	24
4.1.4 Castle AFB	25
4.1.5 Davis-Monthan AFB.....	26
4.1.6 Dyess AFB	27
4.1.7 Ellsworth AFB.....	28
4.1.8 Fairchild AFB.....	29
4.1.9 Griffiss AFB.....	30
4.1.10 Holloman AFB	31
4.1.11 Homestead AFB	33
4.1.12 Howard AFB	34
4.1.13 K.I. Sawyer AFB	34
4.1.14 Langley AFB	35

TABLE OF CONTENTS (Continued)

	<u>Page</u>
4.1.15 Little Rock AFB	36
4.1.16 Loring AFB	37
4.1.17 MacDill AFB	38
4.1.18 McConnell AFB	39
4.1.19 Minot AFB	40
4.1.20 Moody AFB	41
4.1.21 Mountain Home AFB	42
4.1.22 Nellis AFB	43
4.1.23 Offutt AFB	44
4.1.24 Pope AFB	45
4.1.25 Seymour Johnson AFB	46
4.1.26 Shaw AFB	46
4.1.27 Whiteman AFB	47
4.2 BASE LAND USE AND LAYOUT	48
5.0 EVALUATED RESOURCES	51
5.1 OPERATIONAL AND SUPPORT INSTALLATIONS	53
5.1.1 Base and Command Centers	53
5.1.2 Communications	53
5.1.3 Housing	53
5.1.4 Memorial	54
5.1.5 Documentation	54
5.2 COMBAT WEAPONS AND SUPPORT SYSTEMS	55
5.2.1 Alert Facilities	55
5.2.2 Communications	56
5.2.3 Ground Vehicles and Equipment	56
5.2.4 Maintenance Docks/Hangars	56
5.2.5 Missiles	56
5.2.6 Storage	57
5.2.7 Documentation	57
5.3 TRAINING FACILITIES	58
5.3.1 Flight Training	58
5.3.2 Combat Training	58
5.3.3 Combat Support Training	58
5.3.4 Missile Training	58
5.4 MATERIEL DEVELOPMENT FACILITIES	59
5.4.1 Research Laboratories	59
5.4.2 Test Sites	60

TABLE OF CONTENTS (Continued)

	<u>Page</u>
5.5 INTELLIGENCE FACILITIES.....	60
5.5.1 Communications.....	60
5.5.2 Radar Sites	60
5.5.3 Spy Satellites	60
5.5.4 Weather Reconnaissance.....	61
6.0 PRELIMINARY RECOMMENDATIONS	63
6.1 NRHP ELIGIBILITY	63
6.1.1 Evaluation and Determination of NRHP Eligibility	63
6.1.2 Implications of NRHP Eligibility	65
6.2 SUMMARY OF PRELIMINARY RECOMMENDATIONS.....	66
6.2.1 Real Property Resources	66
6.2.1.1 Ineligible Resources.....	67
6.2.1.2 Future Eligible Resources.....	68
6.2.1.3 Potentially Eligible Resources	70
6.2.1.4 Eligible Resources.....	70
6.2.1.5 NRHP Listed Resources.....	70
6.2.1.6 Object Resources	71
6.2.2 Literary Resources	75
6.3 APPLICATION OF PRIORITY MATRIX.....	81
7.0 MANAGEMENT CONSIDERATIONS	91
7.1 WHY PRESERVATION?	91
7.2 THE PUBLIC AND COLD WAR RESOURCES.....	92
7.3 NOMINATION OF RESOURCES TO THE NRHP.....	93
7.3.1 Individual Resource Nominations	93
7.3.2 Historic District Nominations	93
7.3.3 Multiple Property Nominations.....	94
7.4 ASSOCIATED RESOURCES.....	95
7.5 PRESERVATION RANKING SYSTEM.....	96
8.0 FINAL PROGRAMMATIC RECOMMENDATIONS.....	99
8.1 MULTIPLE PROPERTY LISTING	99
8.2 ELIGIBLE AND POTENTIALLY ELIGIBLE RESOURCES	99
8.2.1 Historic Districts.....	100
8.2.1.1 Historic District at Ellsworth AFB.....	100
8.2.1.2 Historic District at Holloman AFB	101
8.2.1.3 Historic District at Minot AFB	102
8.2.1.4 Historic District at K.I. Sawyer AFB	104
8.2.1.5 Historic District at Loring AFB	104

TABLE OF CONTENTS (Continued)

	<u>Page</u>
8.2.1.6 Historic District at Offutt AFB	106
8.2.1.7 Historic District at Nellis AFB	107
8.2.2 Individual Nominations.....	108
8.3 FUTURE ELIGIBLE RESOURCES	108
8.4 INELIGIBLE RESOURCES	109
8.5 OBJECT RESOURCES	109
8.6 LITERARY RESOURCES.....	109
9.0 REFERENCES CITED	111
APPENDIX A: LIST OF INDIVIDUAL BASE REPORTS	
APPENDIX B: SOURCES OF INFORMATION ON ARCHIVE CURATION	

LIST OF FIGURES

Figure 1.1	Location of Cold War Study Bases.....	2
Figure 4.1	Changes in Base Command Throughout the Cold War Era	20
Figure 6.1	Range of Priority Matrix Scores for All Evaluated Resources	90
Figure 6.2	Range of Priority Matrix Scores for Literary Resources and Real Property Resources	90
Figure 8.1	Location of Recommended Historic Districts.....	101

LIST OF TABLES

Table 4.1	Major Missions During the Cold War Era.....	21
Table 5.1	Categorization of Evaluated Resources by Property Group, Subgroup, and Type	51
Table 6.1	Preliminary Recommendations for Ineligible Resources.....	68

LIST OF TABLES (Continued)

	<u>Page</u>
Table 6.2 Preliminary Recommendations for Future Eligible Resources.....	69
Table 6.3 Preliminary Recommendations for Potentially Eligible Resources	71
Table 6.4 Preliminary Recommendations for Eligible Resources.....	72
Table 6.5 Resources Already Listed on the NRHP.....	75
Table 6.6 Preliminary Recommendations for Object Resources.....	76
Table 6.7 Preliminary Recommendations for Literary Resources.....	77
Table 6.8 Priority Matrix Scores for the Evaluated Resources in Order of Priority.....	82
Table 7.1 Preservation Ranking of Eligible and Potentially Eligible Resources	97

LIST OF PHOTOGRAPHS

Photograph 4.1 Segregated Storage Igloo in the WSA of Barksdale AFB, Louisiana	22
Photograph 4.2 High Speed Test Track at Holloman AFB, New Mexico	32
Photograph 4.3 Tactical Air Command Headquarters Building at Langley AFB, Virginia	37
Photograph 4.4 Missile Launch Control Facility Oscar-1 at Whiteman AFB, Missouri	49
Photograph 5.1 Strategic Air Command Commander's Housing at Offutt AFB, Nebraska.....	54
Photograph 5.2 Fighter Alert Facility at Langley AFB, Virginia	55
Photograph 5.3 Large Aircraft Maintenance Dock at Loring AFB, Maine.....	57
Photograph 5.4 Missile Launch Facility Trainer at Whiteman AFB, Missouri	59
Photograph 5.5 PAVE PAWS Facility at Beale AFB, California.....	61

LIST OF PHOTOGRAPHS (Continued)

	<u>Page</u>
Photograph 8.1 Launch Ramps at Holloman AFB, New Mexico.....	102
Photograph 8.2 Remains of the Control Room of SAGE Facility at Minot AFB, North Dakota.....	103
Photograph 8.3 Fighter Alert Facility and Apron at K.I. Sawyer AFB, Michigan.....	105
Photograph 8.4 Bomber Alert Facility at Loring AFB, Maine	106
Photograph 8.5 Strategic Air Command Memorial Chapel at Offutt AFB, Nebraska.....	107

1.0 INTRODUCTION

1.1 COLD WAR MATERIAL CULTURE STUDY

Air Combat Command (ACC) contracted Mariah Associates, Inc. (Mariah) through the U.S. Army Corps of Engineers, Fort Worth District (ACE, FW) to locate, evaluate, interpret, and prioritize important Cold War material culture at 27 selected ACC bases within the United States and Panama (Figure 1.1). The project was primarily funded by the Department of Defense (DoD), with some additional funding from the Legacy Program. The contract was managed by the ACE, FW. As a basis for the project, Mariah developed a historic context for evaluation of ACC resources and a conceptual methodology to guide determinations of the historical significance of these resources (Lewis et al. 1995). The material culture at the ACC installations was evaluated within the context of the Cold War through the use of a consistent methodology applied on a nationwide basis.

The overall goal of the Cold War study is to comply with Section 110 of the National Historic Preservation Act (NHPA) of 1966. Section 110 requires federal agencies to inventory cultural resources under their control and to evaluate those that are significant or potentially eligible for nomination to the National Register of Historic Places (NRHP). This study will provide the tools for ACC to determine which resources are eligible for the NRHP and to select resources for nomination to the NRHP.

The study included the evaluation of real property, personal property, and records and documents which are important within the context of the Cold War at each base. The four themes under which the resources were evaluated included national policy and military strategy, technology, military architecture and engineering, and United States society and culture. Classified resources were included in the study. However, none of these resources were determined to be important, and none were evaluated. Therefore, these materials are not discussed in this document.

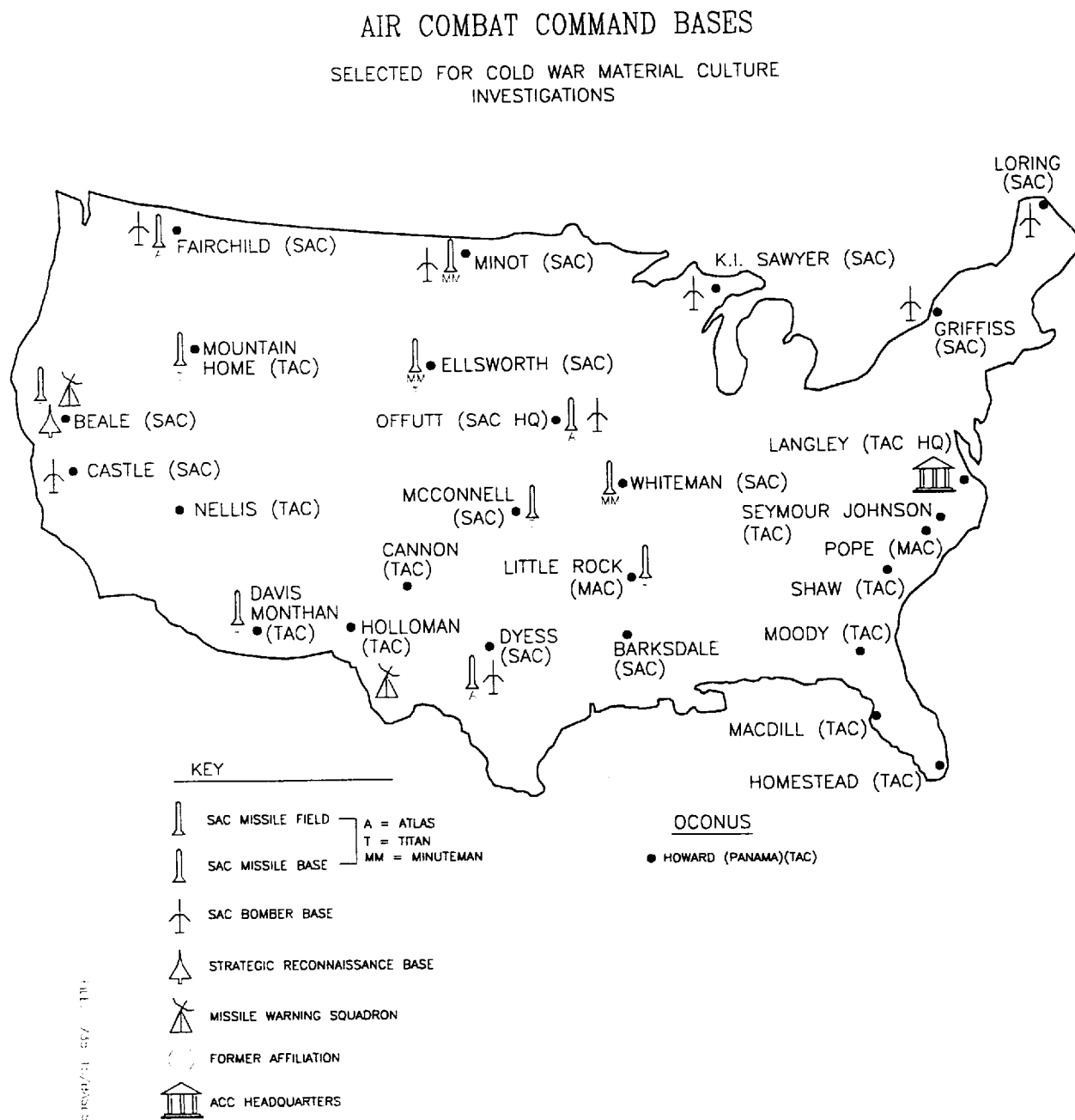


Figure 1.1 Location of Cold War Study Bases.

The study evaluated and provided preliminary recommendations for any resources that embodied exceptional importance due to their relationship to the Cold War, thus allowing resources that were less than fifty years of age to be considered as eligible for nomination to the NRHP. A material culture inventory report, detailing the evaluation of real property, personal property, and records and documents, and providing preliminary recommendations, was completed for each base. The Command Cultural Resources Manager for ACC, in consultation with the relevant State Historic Preservation Officer (SHPO), the base commander, and United States Air Force (USAF) Headquarters, will make final determinations of NRHP eligibility for the evaluated Cold War resources at each base.

This report summarizes the individual base findings of the Cold War material culture study and provides programmatic recommendations. This document describes the study's historic context and project methodology, summarizes individual base descriptions and histories, compares base layout and land use patterns, describes resources selected for evaluation, and presents preliminary recommendations for the evaluated resources at each base. The priority ranking system applied during the study is discussed, along with the results. Finally, a programmatic approach to management and treatment of these evaluated resources is provided.

1.2 COLD WAR COMMANDS

The end of the Cold War, and the lessons learned during the Gulf War of 1990 to 1991, resulted in the reorganization of the DoD. ACC was formed June 1, 1992 to incorporate the assets of the Strategic Air Command (SAC), the Tactical Air Command (TAC), and the Military Airlift Command (MAC). ACC also inherited the resources of the Air Defense Command (ADC) whose assets had been divided between TAC and SAC when it was deactivated in 1980. During the Cold War, SAC controlled strategic nuclear weapons in the form of intercontinental ballistic missiles (ICBMs) and long-range nuclear bombers, and had the responsibility of strategic reconnaissance. TAC promoted the goals of U.S. policy with the maintenance of tactical air power and, after 1980, also had the responsibility of air defense. MAC provided global rapid

transport of personnel and equipment. ADC was responsible for the defense of U.S. airspace and, until its 1980 deactivation, maintained a fighter interceptor force and early warning and response systems. Each of these commands played a different roll in the various U.S. Cold War strategies.

2.0 COLD WAR HISTORIC CONTEXT

Prior to initiation of the base inventories, Mariah developed a historic context for the Cold War. The context set the framework for evaluating ACC resources and defining significance. Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources.

The historic context prepared for the study presents four broad topics: the Cold War and its effect on American society and culture, U.S. policy and military strategy during the Cold War, the development of the Air Force during the Cold War, and ACC material culture resulting from Cold War policies and strategies.

The American society and culture chapter is designed to aid in the evaluation of resources that reflect American attitudes as they related to the Cold War. The fears and anxieties about nuclear war that pervaded every aspect of the Cold War era culture, including television, books, and other popular culture mediums, are related.

The U.S. policy and military strategy chapter discusses the significant historic developments of the Cold War and illustrates the cause-and-effect relationship between events and development of policies and strategies. Major policy trends during the Cold War era are divided into four temporal phases which are subsequently used to aid in the evaluation of material culture on each base. The four phases are as follows:

- Phase I - July 1945 to January 1953

Phase I begins with the testing of the first atomic device at the Trinity Site, which led to the surrender of Japan and the end of World War II. This event spurred a period of intense technological experimentation. Spanning the Truman administration, this phase

represents the inception and perpetuation of Cold War propaganda that fueled fear and mistrust of the Soviet Union and significantly accelerated the nuclear arms race.

- Phase II - January 1953 to November 1963

Phase II begins with the Eisenhower administration and is characterized by a continued massing of nuclear and conventional forces and an associated explosion in defense technology. During this time, deterrence through intimidation was the driving force behind the U.S. strategy. With the signing of the Limited Nuclear Test Ban Treaty, both superpowers leaned toward a more amiable co-existence and a condition of detente was born.

- Phase III - November 1963 to January 1981

Phase III spans the Johnson, Nixon, Ford, and Carter administrations. The phase covers the entire era of detente between the superpowers and is characterized by multiple attempts at nuclear arms limitation talks and agreements. Strategic Arms Limitation Treaty (SALT) I, the Vladivostok Accord, the Anti-Ballistic Missile Protocol, and SALT II were all signed by the leaders of the two nations during this phase.

- Phase IV - January 1981 to November 1989

Phase IV begins with the presidency of Ronald Reagan and ends with the destruction of the Berlin Wall. This phase is characterized by the massive buildup of military forces, triggering new technological developments focused on upgrading and modernization, all as a prelude to nuclear arms reduction talks. Detente was replaced with deterrence through intimidation, with a focus on the threat of the Strategic Defense Initiative.

The historic context chapter dealing with development of the Air Force during the Cold War discusses the major commands of the Air Force, related agencies, and the development and primary roles of these commands and agencies. The chapter also illustrates the interrelationships among commands and between commands and agencies.

The ACC material culture chapter concentrates on the technical systems and associated structures that were developed at ACC bases in order to meet the specific needs of Cold War missions. Examples of this are the numerous specially constructed bomber alert facilities and missile launch control facilities, both of which played important roles in the deterrence mission. The amount of material culture produced during the Cold War is phenomenal. For example, entire bases were constructed in order to support fighter interceptors. Huge missile fields of ICBM silos and launch control facilities were constructed in remote locations. Runways were lengthened, redesigned, and reconstructed with concrete in order to support heavier and faster jet aircraft. In short, the Air Force infrastructure underwent drastic remodeling to accommodate the needs of the Cold War.

3.0 METHODOLOGY AND TECHNIQUES

The methodology for the reconnaissance inventory study was developed to help ACC meet its requirements under Section 110 of the NHPA, namely, to ensure that resources that are potentially eligible for inclusion in the NRHP are identified and evaluated. To this end, the reconnaissance inventory of each of the 27 bases consisted of two major tasks: an overall inventory of resources and an evaluation of important resources.

Prior to conducting the base visits, the base was notified of the visit and requested to provide escorts for the field teams. They were also asked to provide documentary materials on real property at the base and on base history.

3.1 INVENTORY METHODOLOGY

During site visits, the first major task was an general inventory of base material culture resources which typify or describe the base and the base's mission as it relates to the Cold War era. The purpose of this inventory was to record the range of Cold War resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

The DoD Legacy Program outlines three general categories under which Cold War resources may be included: real property, personal property, and records/documents (USAF 1993:3-4). These categories divide the extant resources for ease in management. Real property includes buildings, structures, sites, and landscapes. For this study, objects was added as a fifth type of real property resource to accommodate Air Force owned items that do not fall under the other types. Personal property may include such items as relics of battle or other military activity, weapons, clothing, flags, or other moveable objects. Records/documents pertains to documents and objects that may provide a record of the past but are not necessarily associated with real

property. Specifically, these may include photographs, videotapes, manuscripts, books, reports, newspapers, maps, oral histories, or architectural drawings (DoD 1993:13).

This organizational scheme was used in defining the resources and is used throughout the remainder of this document to help understand the evaluated resources and for management purposes.

3.2 METHODOLOGY FOR EVALUATION OF IMPORTANT RESOURCES

For the second major task of the reconnaissance inventory, certain inventoried resources were selected for further documentation and evaluation. Selection was based on the importance of the resource to the base and the base's role in the Cold War, and the importance of the resource within the national context of the Cold War. The basis for selection and the standards for evaluation are discussed in detail in the historic context and methodology designed for the study (Lewis et al. 1995). Resource selection procedures are detailed in the field guide designed to standardize the procedures used in the field (Lewis and Higgins 1994). The evaluations focused on determining the integrity of the selected resources and the importance of these resources, both within the context of the Cold War and with regard to NRHP criteria. These three values are necessary to establish the significance of a resource and to examine its potential eligibility to the NRHP.

3.2.1 Documentation

The evaluated resources were documented using a Mariah Property Management Form designed specifically for the ACC Cold War study (Lewis and Higgins 1994). The form was completed for each evaluated resource and details resource identification, description, integrity, location, reference information, property type group and subgroup, association with the base's Cold War context, evaluation of importance, and management recommendations.

3.2.2 Evaluation of Importance

3.2.2.1 Cold War Context

Evaluation of a resource within that resource's historic context ensures an understanding of its role and helps in making comparisons among similar resources. However, evaluating the importance of resources within the Cold War era is hindered by two issues:

- 1) a lack of historical perspective due to the recent origin of the resources and
- 2) an absence of data for comparative evaluation due to uncompleted Cold War studies.

Tools currently available to guide evaluation of Cold War resources include standard federal legislative stipulations, as well as guidance provided by the Legacy Program (DoD 1993), the National Park Service (NPS) Interagency Resources Division (NPS 1990; 1991a, 1991b), and the Advisory Council on Historic Preservation (ACHP) (ACHP 1991).

In this study, resources were considered for their importance to American history, architecture, engineering, or culture. To be considered important within the historic context of the Cold War, resources needed to possess value or quality in illustrating or interpreting the Cold War heritage of the United States. A resource needed to be associated with critical aspects of policy and strategy, technology, architectural and engineering design, or social impacts or persons of the Cold War, and correspond to one of the four temporal phases established in the historic context. The importance of each evaluated resource was addressed within one or more of these aspects.

3.2.2.2 NRHP Criteria

The historic importance of the evaluated resources was also addressed in relation to four NRHP criteria. The criteria are very similar to the four aspects of the Cold War listed above. These NRHP criteria, adapted by the USAF *Interim Guidance* (USAF 1993) to meet the needs of Cold War studies, are as follows:

- a) portray a direct association with events that have made a significant contribution to, are directly identified with, or outstandingly represent the broad national pattern of United States Cold War history and aid in understanding that pattern;
- b) portray a direct and important association with the lives of persons nationally significant in United States Cold War history;
- c) embody the characteristics of an architectural, engineering, technological, or scientific type specimen valuable for understanding a component of United States Cold War history or representing some great idea or ideal of United States citizenry embodying the Cold War; or
- d) have yielded or be likely to yield information of importance to United States Cold War history.

3.2.2.3 Exceptional Importance

The evaluation of importance for Cold War resources is more complex than the evaluation process for older resources. Generally, resources must be 50 years of age or older to be considered eligible for NRHP listing. This age criterion, although arbitrary, was established to ensure that the passage of time has been of a sufficient duration to allow an adequate perspective for evaluating the true historic importance of a resource. This ensures that the NRHP is truly a listing of historically significant resources, not those that are simply trendy or of fleeting importance (NPS 1990).

However, when the requirements for NRHP eligibility were developed, exceptions were made for resources that are not yet 50 years old. Listing of more recent significant properties is allowed if they are of exceptional importance.

A number of tools are useful in determining exceptional importance. For this study, the historic context of the Cold War was developed to aid in determining exceptional importance (Lewis et al. 1995). The historic context refers to all of those historic circumstances and factors surrounding the Cold War and the effect of the Cold War on the Air Force and its properties. Evaluation of a resource within this historic context ensures an understanding of its role and

helps in making comparisons among similar resources. A final consideration is that the more recently a property has achieved importance, generally the more difficult it is to demonstrate exceptional importance (NPS 1990). All Cold War resources determined eligible for the NRHP must meet the exceptional importance requirement because the Cold War by definition of this project began in 1945.

3.2.3 Evaluation of Integrity

Integrity of a resource is defined as retaining enough physical presence to enable that resource to communicate its importance. Authenticity of a resource's historical identity, evidenced by the survival of physical characteristics that existed during the resource's historical period, is critical to integrity. If a property retains the physical characteristics it possessed in the past, then it has the capacity to convey the association that makes it important (NPS 1991a:44).

In terms of historic resources, there are seven attributes of integrity that are important: location, design, setting, materials, workmanship, feeling, and association. Survival of these attributes enables a property to maintain a direct link with the past and convey the relationship that makes it historically important (ACHP 1991). However, if an attribute does not directly affect the characteristics making the resource important, the lack of integrity in that attribute may not preclude intact integrity for the resource as a whole. It is therefore necessary to decide which characteristics of a resource contribute to its importance, not only to establish its level of integrity, but also to aid in decisions about what alterations would damage that integrity.

3.2.4 Priority Matrix

As part of the documentation and evaluation process, a priority matrix was completed for each evaluated resource. This matrix calculates the level of urgency for further attention for a resource. The higher the priority matrix score, the higher the priority for management attention

to that resource. These judgements regarding resource priority should be viewed as a management tool rather than as a strict ranking of historic importance.

The matrix calculation is a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource. There are six topics under which each evaluated resource was ranked, with possible scores for each topic ranging from 1 to 4. The first topic is the strength of the relationship between the resource and the role the base played in the Cold War. A resource that has a direct relationship to the Cold War received a higher score than a resource with a weak relationship. The second topic indicates the association of the resource to the four aspects of the Cold War: policy and strategy, technology, architectural and engineering design, and social impact. Resources related to policy and strategy received a "4," while a resource pertaining to "social impact" received a "1." The third ranking places the resource within the four temporal phases. A resource relating to the earlier phases of the Cold War scored higher than a more recent resource. The fourth topic measures the level of contextual importance of the resource. The greater the importance of the resource within the Cold War context, the higher the score. The fifth indicates the percentage of remaining historic fabric, or integrity, of the resource. Those resources with high integrity received a score of "4," while resources with very low integrity received a score of "1." Finally, the sixth topic ranks the severity of existing threats to the integrity of the resource. A threatened resource scored higher than a resource that was maintained and not threatened.

3.2.5 Resource Organization

The USAF *Interim Guidance* (USAF 1993) refers to resources as property types and suggests five property type groups that characterize extant Cold War resources. These groups are:

- 1) operational and support installations,
 - 2) combat weapons and support systems,
 - 3) training facilities,
 - 4) materiel development facilities, and
-

5) intelligence facilities.

Each of these groups has a number of subgroups which further categorize particular types of resources. These groupings are based on functional descriptions and are another way of organizing the resources. The grouping scheme was adapted by Mariah for use in this study. It was applied to the evaluated resources for use in management and is used throughout this document to organize the evaluated resources.

3.3 FIELDWORK TECHNIQUES

Fieldwork consisted of reconnaissance visits to each of the 27 bases. This was accomplished by three field teams, each comprised of a historian and an archaeologist. The two major tasks were included in the fieldwork: a photographic inventory of property types regardless of their importance within the Cold War context, and documentation and evaluation of important Cold War resources.

Upon arrival at a base, the field team met with key personnel such as the base or wing historian, cultural resource specialists, and real property officers. A tour of the base was arranged during which the team identified important Cold War era resources for further evaluation. Real property files and relevant publications and documents on base history and missions were reviewed, and a number of informal interviews were conducted with base personnel.

A major task at each base was a photographic inventory of real property resources which typify the base and the base's mission as it relates to the Cold War era. The purpose of the inventory was to record the range of Cold War resources extant on the base, regardless of age, function, or importance. The resources were catalogued in an inventory log, identified on a base layout map, and documented with black-and-white 35 mm photographs.

After completion of the photographic inventory, the field team reviewed and selected specific Cold War resources for further documentation and evaluation. Tours of these resources were

arranged when possible, though in many instances access was not possible. Resource evaluations were recorded on the Mariah Property Management Form using a computer database.

The database was designed to document several aspects of the resources including construction date, primary use, building material, history of use, level of integrity, and a statement of significance. The database also provided the scoring for the priority matrix system described above (Section 3.2.4).

3.4 METHODOLOGY PROBLEMS

Several difficulties were encountered during the course of developing the methodology for the project. One of these was the lack of previously conducted inventories, resulting in uncertainty among the field teams as to the types of resources that would be encountered during the study. Certain examples of Cold War era resources that had been evaluated and nominated as National Historic Landmarks (NHL), such as the Titan II missile complex at Davis-Monthan Air Force Base (AFB), were known to exist. However, the vast majority of resources that would be encountered during the inventory were as yet unrecorded.

After the two initial base visits had been completed, it became apparent that most base buildings were not of major importance within the Cold War context. While virtually all buildings on active AFBs had some type of Cold War era role, most clearly did not embody the base's mission during the Cold War era. For example, a corrosion control hangar may have played an important role in keeping aircraft in operational service, but it cannot be seen as an icon of the Cold War. On the other hand, fighter alert facilities often retain many features that exemplify their previous function as Cold War air defense facilities. With a minimal amount of interpretation, an individual can envision fighter aircraft and their crews scrambling on an intercept mission. In this case, the direct relation to the base's Cold War era mission is undeniable.

As a result of these observations on early base visits, field teams began to scrutinize buildings more rigidly. In order to be evaluated, a building had to possess features or characteristics that set it apart as playing a direct and significant role in Cold War operations and strategy as defined by the base's mission.

Another concern was inconsistencies in selecting and evaluating resources. This was due to the use of two-person field teams, composed of various combinations of six team members. Each member and each team had a unique outlook on the resources they encountered and evaluated.

The development of consistency was addressed in a variety of ways, including the assignment of a document coordinator, team meetings, and final evaluation coordination once all 27 bases had been inventoried. The document coordinator reviewed and edited all 27 individual base reports. This coordinator added a single and consistent element to all base reports and ensured that individual teams were selecting and evaluating resources using the same criteria. Meetings were held periodically among all field team members, the document coordinator, and the project manager to discuss the resources evaluated and any problems that arose during field work. Finally, after all base inventories were complete, a panel that included the document coordinator and at least one member from each field team reviewed all evaluated resources and identified minor changes to further ensure consistency.

4.0 INVENTORIED BASES

4.1 BASE SUMMARIES

Twenty-seven bases were inventoried as part of this project. The following brief descriptions summarize each base's location, mission, and history. Figure 4.1 illustrates the changes in command of each base throughout the Cold War era, and Table 4.1 shows the major missions held by each base during this time.

4.1.1 Barksdale AFB

Barksdale AFB is located in northwestern Louisiana, adjacent to Bossier City and 2 mi (3.2 km) northeast of Shreveport. The installation supports the Eighth Air Force headquarters and the 2nd Bomb Wing (BW), currently deploying B-52H bombers.

The base was originally established as Barksdale Army Airfield (AAF) in 1930, and the 3rd Attack Wing began arriving for training in 1935. During World War II, the base served as an operational and flight training center. Training for B-26 combat crews continued through 1945, and pilot instruction continued under Air Training Command (ATC) until 1948.

Barksdale AAF was renamed Barksdale AFB in 1948, and the 47th Bombardment Group (BMG) was assigned to the installation. In 1950, SAC took over command of the base, and the 47th BMG converted to the B-45 bomber, making Barksdale AFB the first installation in the Air Force to house a jet bomber unit. Bossier Base, located inside Barksdale AFB, was a nuclear weapons stockpile established by the Atomic Energy Commission (AEC) in 1951, and later became the weapons storage area (WSA) under the responsibility of Barksdale AFB (Photograph 4.1). The Second Air Force, in charge of SAC operational units, was assigned to Barksdale AFB between 1950 and 1975. B-47 bombers were located at the base in 1954 but were replaced by B-52 bombers and a refueling tanker force in 1958.

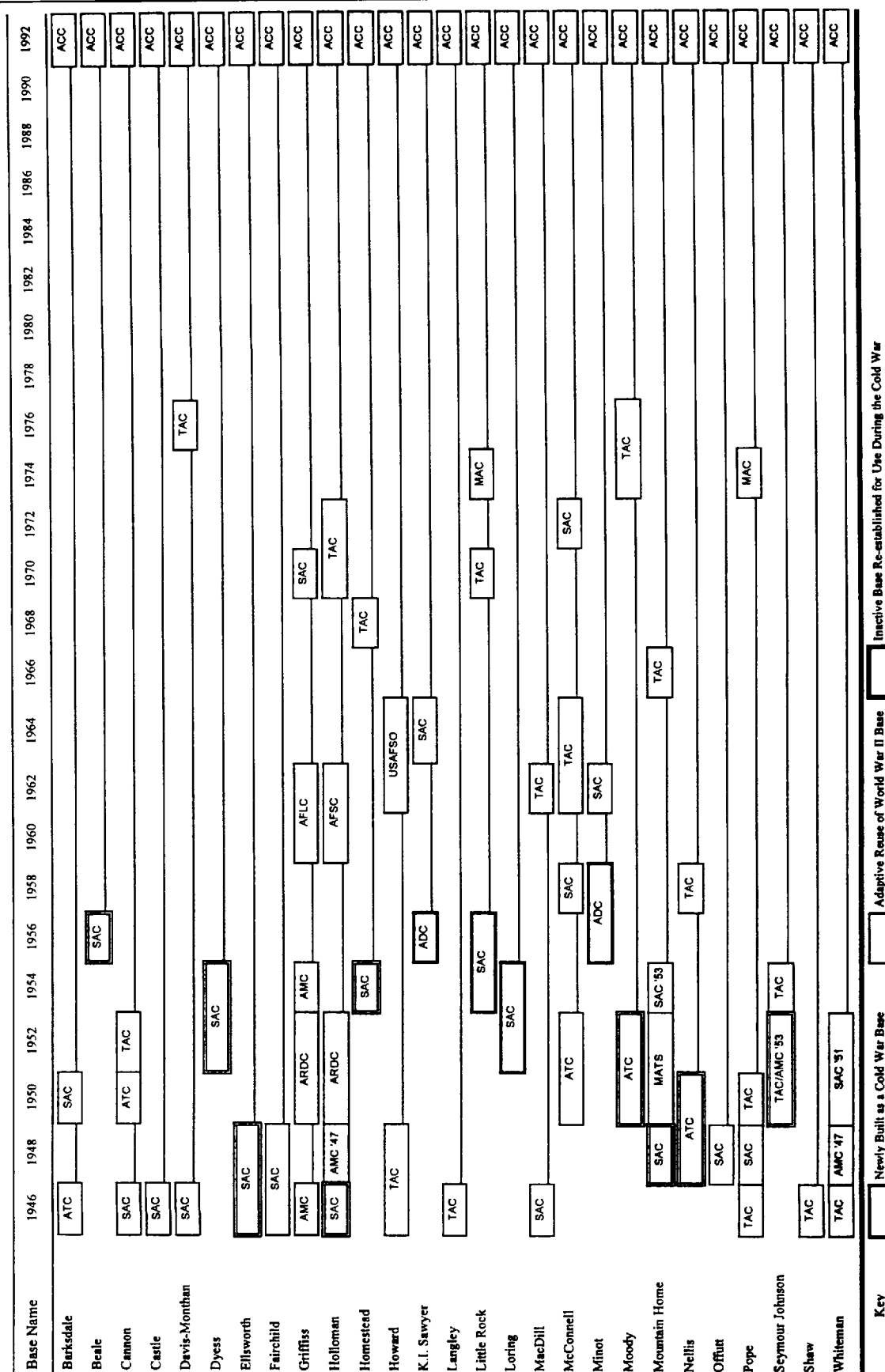
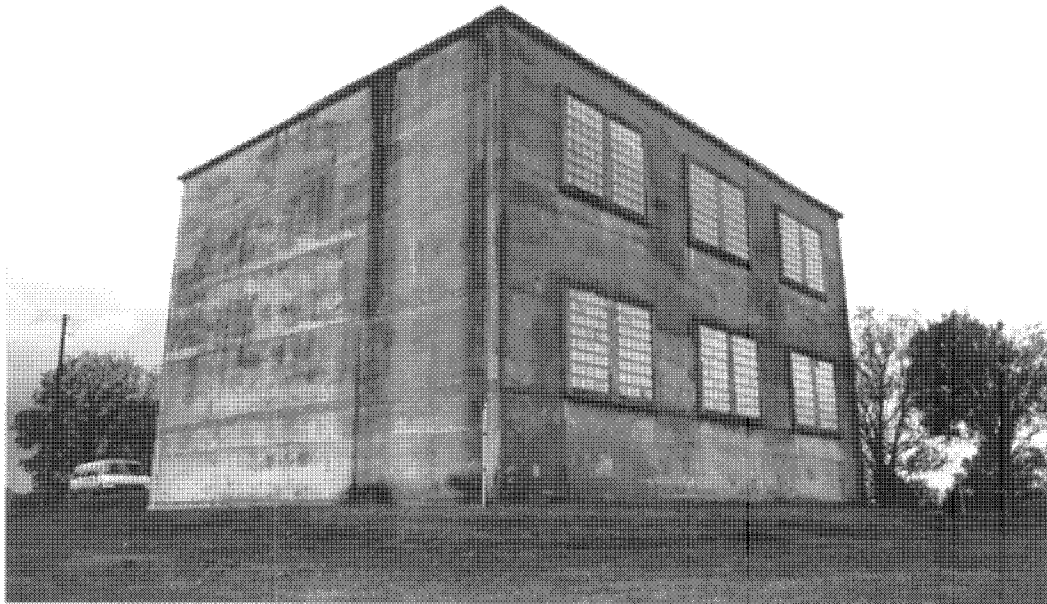


Figure 4.1 Changes in Base Command Throughout the Cold War Era.

Table 4.1 Major Missions During the Cold War Era.

Base Name	Mission													
	SAC Bomber	TAC Fighter	ADC Interceptor	MAC Airlift	SAC Reconnaissance	TAC Reconnaissance	Former AEC Installations	Major Command Headquarters	Missile	Training	Research and Development	Early Warning	Command, Control, and Communications	Associated Bombing Ranges
Barksdale	*				*		*			*			*	
Beale	*				*				*	*		*		*
Cannon		*								*				*
Castle	*	*	*		*					*				
Davis-Monthan	*	*	*		*	*			*	*				
Dyess	*			*					*	*				
Ellsworth	*				*		*		*	*			*	*
Fairchild	*				*		*		*	*				
Griffiss	*	*	*								*	*		
Holloman		*		*						*	*	*		
Homestead	*	*		*					*	*				
Howard		*												
K. I. Sawyer	*	*	*									*		
Langley		*		*		*		*					*	
Little Rock	*			*	*				*					
Loring	*	*	*				*							
MacDill	*	*						*		*				*
McConnell	*	*		*					*	*				*
Minot	*	*	*						*			*	*	
Moody		*								*				*
Mountain Home	*	*		*	*	*			*	*		*	*	*
Nellis		*								*	*			*
Offutt								*	*				*	
Pope				*	*	*					*			
Seymour Johnson	*	*	*											*
Shaw		*				*				*				
Whiteman	*								*				*	



Photograph 4.1 Segregated Storage Igloo in the WSA of Barksdale AFB, Louisiana.

During the Cuban Missile Crisis, U-2 aircraft flew reconnaissance missions from Barksdale AFB, and the B-52 bombers and refueling tankers were on continuous alert. The Eighth Air Force was reassigned to the base in 1975, and the mission of the base as a bomber and tanker facility has continued since that time.

The primary Cold War mission at Barksdale AFB was SAC bomber and tanker alert. Barksdale AFB also has a WSA that was originally a nuclear weapons installation controlled by the AEC.

4.1.2 Beale AFB

Beale AFB is located in northern California, approximately 13 mi (21 km) east of Marysville. The installation is home to the 9th Reconnaissance Wing, which currently operates the U-2R reconnaissance plane.

Camp Beale was established in 1942 for U.S. Army operations and, during World War II, served as a training base for U.S. Army armored divisions, a hospital, and a German prisoner-of-war (POW) camp. After the war, the camp functioned as a separation center for returning troops.

In 1947, the installation was acquired by the Air Force, renamed Beale Air Force Range (AFR), and used for bomber training for units stationed at nearby Mather AFB. In 1951, Beale AFR was renamed Beale AFB, and in 1956, the installation was assigned to SAC and designated a dispersal location for bombers and tankers. KC-135 tankers and B-52 bombers began operational service at Beale AFB in 1959. Beale AFB used radar systems to detect incoming aircraft and operated a Semi-Automatic Ground Environment (SAGE) facility responsible for the San Francisco Defense Sector. The SAGE system controlled interceptors in flight through a complex computer and communications system. Between 1962 and 1965, Beale AFB also maintained nine Titan I missile launch facilities (LFs) located at three sites around the base.

The SR-71 strategic reconnaissance plane was assigned to Beale AFB in 1964. This unique plane flew high altitude, worldwide reconnaissance missions from Beale AFB until 1990, when it was retired due to budgetary constraints. The U-2R, another strategic reconnaissance aircraft, was assigned to Beale AFB in 1976 and continues as the only type of aircraft operational at the base. A Precision Acquisition Vehicle Entry Phased Array Warning System (PAVE PAWS) became operational at the base in 1979. This building, along with three others now operated by the U.S. Space Command (USSPACECOM), is responsible for detecting submarine launched ballistic missiles (SLBM) fired at the United States.

Several important Cold War missions were carried out at Beale AFB, including SAC bomber and tanker alert, U-2R and SR-71 reconnaissance, SAGE sector responsibilities, and PAVE PAWS missile detection.

4.1.3 Cannon AFB

Cannon AFB is located in extreme eastern New Mexico, approximately 0.6 mi (0.96 km) west of Clovis, New Mexico, and supports the operation of the 27th Fighter Wing (FW). The wing currently flies F-111 fighter bomber and EF-111A electronic countermeasures (ECM) aircraft.

The history of this installation extends to the 1920s when it was established as Portair Field, a commercial and private landing field. In the 1930s, the airfield was renamed the Clovis Municipal Airport and in 1942, it became Clovis AAF. SAC became the host of the field in 1946 and briefly used the installation for bomber operations.

In 1947, the name of the airfield was changed to Clovis AFB, and then the base was deactivated. In 1950, Clovis AFB was chosen as one of many bases to undergo expansion due to recommendations of the National Security Council (NSC) document NSC-68 and the initiation of the Korean War, and the base reactivated as an ATC installation. A year later, TAC became the base host. A number of fighter and fighter-bomber aircraft units were stationed at the installation between 1950 and 1956. The base was designated a permanent installation in 1957 and renamed after General John Cannon, former Twelfth Air Force and TAC commander. F-100 fighters were stationed at Cannon AFB in 1957, and the 27th FW was assigned to the base in 1958. Since 1969, the F-111 fighter-bomber and the EF-111A ECM aircraft have been assigned to Cannon AFB.

The primary Cold War mission at Cannon AFB was fighter and fighter-bomber training. Cannon AFB is the primary USAF installation to fly the F-111 and EF-111A aircraft.

4.1.4 Castle AFB

Castle AFB is located in north central California approximately 8 mi (13 km) north of Merced. The base is scheduled for closure in 1995. The 93rd BW is currently the base host and operated B-52G bombers and KC-135A/R tankers.

Merced Army Flying School was established in 1941 as a basic pilot training school for World War II recruits using BT-113A light trainers. The school was renamed Merced AAF in 1943, and pilot training continued until 1945. The facility was renamed Castle AAF in 1946 to honor a B-17 pilot killed in action.

In 1946, SAC assumed control of the field and activated the 93rd BMG with B-29 bombers, which was then replaced by the 93rd Bombardment Wing (BMW). SAC designated the installation Castle AFB in 1948, and in 1949, the 93rd BMW was equipped with B-50 bombers. The 93d BMW flew B-47 jet bombers between 1954 and 1955 as it awaited delivery of B-52s. The first operational B-52 bombers in the Air Force were assigned to Castle AFB in 1955 to perform the role of combat readiness and aircrew training. Also in 1955, the 456th Fighter Interceptor Squadron (FIS) under ADC was assigned to Castle AFB. They originally operated F-86 aircraft and later converted to F-102 and F-106 aircraft. In 1956, KC-135 tankers were assigned to the base and began both crew training and operational missions. The 456th FIS was replaced by TAC's 84th FIS in 1973, which in turn was replaced by the 318th FIS in 1981.

The primary Cold War mission at Castle AFB was training for SAC bombers and tankers. Castle AFB also served as an ADC fighter-interceptor base between 1956 and 1968. The alert mission continued under TAC from 1973-1989.

4.1.5 Davis-Monthan AFB

Davis-Monthan AFB is located in southern Arizona, adjacent to the city of Tucson. The installation currently supports the 355th Wing, which maintains EC-130 ECM aircraft and A/OA-10 attack aircraft for close air support and forward air control support. Davis-Monthan AFB is also home to the Aerospace Maintenance and Regeneration Center (AMARC), where retired aircraft are scrapped, stored, or reconditioned.

Davis-Monthan AAF was established in 1927 as a refueling and maintenance stopover for army aircraft. During World War II, the field's role increased to support a mission of training B-17, B-24, and B-29 aircrews. After the war, the field served as a storage center for B-29 and C-47 aircraft, which marked the beginning of the AMARC.

In 1946, SAC and B-29 bombers were both assigned to Davis-Monthan AAF. The field was renamed Davis-Monthan AFB in 1948, and B-50 bombers and KB-29 tankers began flying the same year. The 43rd and 303rd BMWs began converting to B-47s in 1953, which served in the deterrence role until 1964. Also in 1953, the 15th FIS began service at the installation, equipped with F-86 fighters. Davis-Monthan AFB was also home to U-2 strategic reconnaissance aircraft, and fighter crew training continued in the 1960s and 1970s. In 1976, TAC assumed command of the installation.

Eighteen Titan II missiles, located around the Tucson area, were placed on alert in 1963 and continued on alert status until 1984. Since then, all but one launch facility has been razed. The remaining facility is now part of the Pima Air and Space Museum.

Several important Cold War missions were carried out at Davis-Monthan AFB, including SAC bomber alert, ADC fighter interceptor alert, U-2 reconnaissance, and Titan II strategic deterrence. Another important aspect of Davis-Monthan AFB is the AMARC.

4.1.6 Dyess AFB

Dyess AFB is located adjacent to the city of Abilene in north-central Texas. It is currently home to the 7th Wing which operates B-1B bombers and C-130E transports.

The installation was established as Tye AAF in 1942 and served as a training base until it was deactivated in 1947. In 1952, in response to the Korean conflict and the military buildup initiated by the recommendations of NSC-68, the installation was appropriated as a USAF base, and in 1953, SAC took command of the base. During this re-establishment period, the base was designated Abilene AFB. In 1956, it was renamed Dyess AFB after Lt. Col. William Dyess, who led the air defense of the Philippines during the opening stages of World War II.

SAC B-47 bombers and KC-97 tankers were stationed at Dyess AFB beginning in 1955. These aircraft were on base until 1962, when the B-52 bombers and KC-135 tankers began to replace them. In 1983, it was announced that Dyess AFB had been chosen to receive the B-1B bomber. The B-52s and the KC-135s were redeployed, and the first B-1B arrived at Dyess in 1985.

Missiles were also stationed at Dyess AFB for a short period of time. Between 1962 and 1965, 12 Atlas F ICBMs were operated by the 578th Strategic Missile Squadron. In 1987, the Peacekeeper Rail Garrison was proposed for deployment at Dyess AFB. Although advanced planning efforts were completed, the rail garrison did not become operational.

The primary Cold War mission at Dyess AFB was SAC bomber and tanker alert. Dyess AFB also controlled Atlas F missiles for strategic deterrence.

4.1.7 Ellsworth AFB

Ellsworth AFB is located approximately 12 mi (19 km) northeast of Rapid City, in western South Dakota. Currently, the 28th BW, flying the B-1B bomber, and the 99th Wing, a development and training unit, operate from the base. The 44th Strategic Missile Wing (SMW), equipped with Minuteman II ICBM's, was deactivated in the fall of 1994.

Rapid City Army Air Base (AAB) was established in 1942 as a training facility for B-17 bomber crews. Later in World War II, the base was used to train weather reconnaissance crews in the operation of P-61, P-51, and other aircraft. After a post-war deactivation, the base was reopened, SAC assumed command in 1946, and the 28th BMW, with B-29 bombers, was assigned to the installation. In 1948, Rapid City AAB was declared a permanent installation. The following year, the 28th BMW converted to the B-36 bomber.

In 1950, Rapid City AAB was renamed Ellsworth AFB. In the same year, Rushmore Air Force Station (AFS) was established on the site of the current WSA. Rushmore AFS was a storage facility for nuclear weapons and associated parts operated by the AEC. In 1956, B-52 bombers began replacing the B-36s. KC-135 tankers were assigned to Ellsworth AFB in 1959 to support the deterrence mission of the 28th BMW. Titan I missiles were stationed in the vicinity of Ellsworth AFB in 1962. Their alert duty was short-lived, as they were replaced the same year with 150 Minuteman I ICBM's. The Minuteman I's were replaced by Minuteman II's in 1971. In 1992, deactivation of the missile sites began.

Several important Cold War missions were carried out at Ellsworth AFB, including SAC bomber and tanker alert and strategic deterrence with Titan I, Minuteman I, and Minuteman II missile systems. Ellsworth AFB also houses the WSA that was originally an AEC nuclear storage area.

4.1.8 Fairchild AFB

Fairchild AFB is located approximately 12 mi (19 km) west of Spokane in eastern Washington. The current host of the base is the 92nd Air Refueling Wing (ARW) under Air Mobility Command (AMC). B-52H bombers and KC-135R tankers were operated under the 92nd BW until ACC relinquished command of the base on July 1, 1994. The USAF Survival Training School began operations at Fairchild AFB in 1971 and the school continues to provide training for POW situations and other survival skills.

Fairchild AFB was established as Spokane Army Air Depot in 1942 as a repair center for aircraft, primarily the B-17 bomber. The depot was deactivated after World War II but was reactivated in 1946. SAC assumed command of the installation in 1947 and assigned two B-29 bomber wings to the base.

In 1951, the base was renamed Fairchild AFB and the first B-36 bombers were assigned. B-52 bombers became operational at the installation in 1956 and 1957, and the first KC-135 tankers began service in 1957. Nine Atlas missile complexes, surrounding Fairchild AFB, were activated in 1960. The missiles were deactivated in 1965 after being replaced by more advanced ICBMs deployed at other installations.

The Deep Creek AFS, a storage facility for nuclear weapons and associated parts, was established in 1952 and operated by the AEC. The Deep Creek AFS merged with Fairchild AFB in 1962 and is now the WSA at Fairchild AFB.

Several important Cold War missions were carried out at Fairchild AFB, including SAC bomber and tanker alert and strategic deterrence using Atlas missiles. Fairchild AFB also housed an AEC nuclear operations and storage area.

4.1.9 Griffiss AFB

Griffiss AFB is located in central New York approximately 2 mi (3.2 km) east of Rome. The installation currently supports the 416th BW operation of B-52G bombers and KC-135R tankers. There are several notable tenant units at the installation, including Rome Laboratory, the Northeast Air Defense Sector/Sector Operations Control Center (NEADS/SOCC), and the 485th Engineering Installations Group (EIG).

The base was established in 1941 as Rome Air Depot. During World War II, the installation served as a storage, shipping, and maintenance center. In 1946, AMC assumed command of the installation and in 1948, the installation was officially designated Griffiss AFB after Lt. Colonel Townsend Griffiss, the first American killed in the World War II European theater. The same year, Griffiss AFB was assigned the role of research, development, and testing of electronic equipment.

The Rome Air Development Center (RADC) was opened on Griffiss AFB in 1951 with the mission of developing and testing electronic air-ground systems including detection, control, communications, and data transmission systems. All of these systems were intended for use in the nuclear deterrence and early warning missions. At this time, Air Research and Development Command (ARDC) became the base host. RADC developed several early warning systems throughout the Cold War era, including the Distant Early Warning (DEW) Line, Ballistic Missile Early Warning System (BMEWS), and the SAGE system. In 1954, AMC once again took control of the base.

Griffiss AFB supported an interceptor mission beginning in 1955 with the arrival of the 465th FIS. The 49th FIS replaced the 465th in 1959 and continued in service until 1987. The interceptor squadrons were responsible for the defense of the northeastern United States and Nova Scotia. In 1961, AMC was renamed Air Force Logistics Command (AFLC). SAC began its tenure at Griffiss AFB in 1959 with the assignment of the 4039th Strategic Wing (SW). The

SW operated B-52 bombers and KC-135 tankers. The 416th BMW assumed the bomber and tanker alert mission in 1963. In 1970, SAC assumed command of the base.

The NEADS was established at Griffiss AFB in 1987. As part of the air defense network, the installation monitors all aircraft entering U.S. airspace and challenges unidentified aircraft. Griffiss AFB is scheduled to close in 1995, although Rome Lab will continue to operate as a stand alone facility.

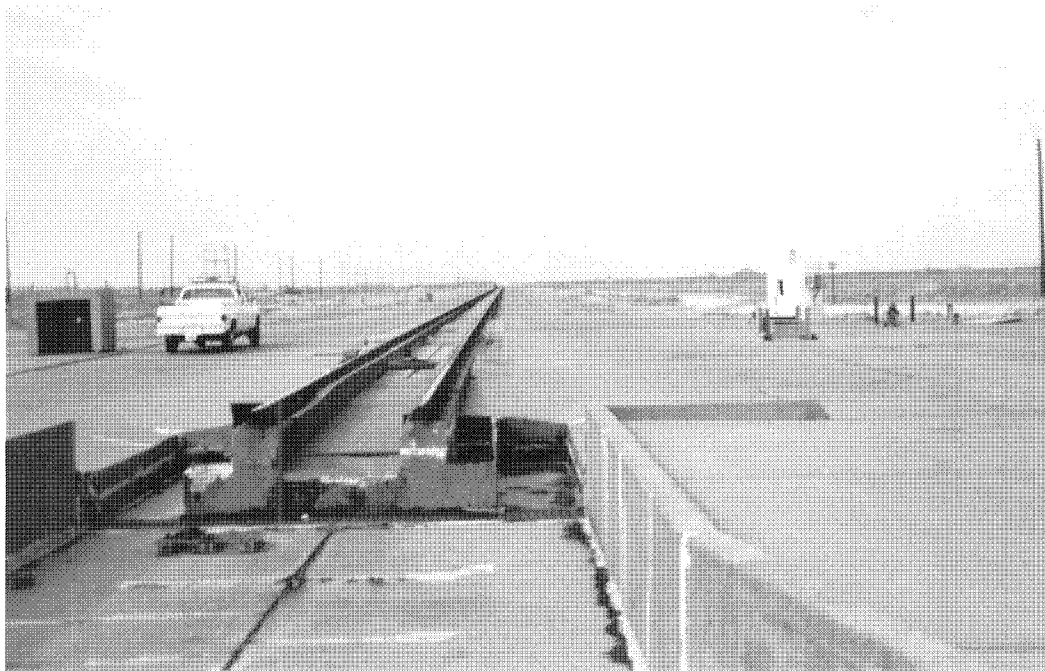
Several important Cold War missions were carried out at Griffiss AFB, including SAC bomber and tanker alert, ADC fighter interceptor alert, and the RADC.

4.1.10 Holloman AFB

Holloman AFB is located approximately 7 mi (11 km) southwest of Alamogordo in south-central New Mexico. The installation currently supports the operation and maintenance of the F-117A Stealth fighter by the 49th FW. The 4th Space Warning Squadron is a tenant on the base and provides missile warning and launch detection to the National Command Authority.

Alamogordo AAF was established in 1942. It was originally intended to be a British Overseas Training Program base, but plans for this mission never materialized. The base was used, however, for training of B-17 and B-29 aircrews during World War II.

After the war, SAC assumed control of the base for one year until AMC took over in 1947. The installation became the USAF guided missile range for the testing of pilotless aircraft, guided missiles, and associated equipment (Photograph 4.2). The installation was renamed Holloman AFB in 1948.



Photograph 4.2 High Speed Test Track at Holloman AFB, New Mexico.

ARDC took command of the base in 1951 and Air Force Systems Command (AFSC) replaced ARDC in 1961. Although TAC assumed command of the base in 1971, the base continues to function as a test site for missiles, the high speed test track, and other experimental projects.

The primary Cold War mission at Holloman AFB was research, development, and testing of pilotless aircraft. Holloman AFB was directly affected by "Operation Paperclip," which brought the Peenemunde scientists, including Werner von Braun, from Germany to the United States at the end of World War II. Holloman AFB also maintained an Air National Guard (ANG) fighter alert facility throughout the Cold War. The 46th Test Group from Eglin AFB was also a tenant due to their role with the High Speed Test Track.

4.1.11 Homestead AFB

Homestead AFB is located in extreme south Florida. In 1992, the installation received extensive damage from Hurricane Andrew, causing the base operational units to be reassigned and preparations for base closure to be implemented. As preparations were underway, a determination was made not to close Homestead AFB, but rather to realign the base as an Air Force Reserve (AFRES) station with plans for the Florida ANG and the U.S. Customs Service to be located at the installation.

The Army Air Corps established Homestead AAF in 1942 as a training base for transport aircrews. In 1943, training consisted of instruction of C-54 crews that would fly the World War II Burma-to-China supply route. Training continued until 1945, when a hurricane destroyed the installation and the Army abandoned the airfield. In 1953, the installation was reactivated and renamed Homestead AFB. In 1954, Homestead AFB was assigned to SAC as a bomber dispersal base in response to the Korean War and NSC-68. SAC B-47 bombers and KC-97 tankers were the first aircraft stationed at the base. The B-47s and KC-97s were replaced by B-52 bombers and KC-135 tankers in 1960.

Homestead AFB played a crucial role during the Cuban Missile Crisis with a variety of USAF and other military units temporarily deployed to the base. Homestead AFB would have been the point of origin for a United States attack on Cuba if the conflict had escalated. As a result of the missile crisis, it was decided to permanently station tactical fighters at Homestead AFB along with the strategic forces already present. In 1968, TAC assumed command of the base, and in the early 1980s, the installation began training operations for F-4 fighter crews. In 1985, F-16 fighters were assigned as tactical assets and continued in service until the hurricane of 1992.

Several Cold War missions were carried out at Homestead AFB, including the TAC maintenance of tactical fighter crews that began with the Cuban Missile Crisis, and SAC bomber and tanker alert missions.

4.1.12 Howard AFB

Howard AFB is located in the Republic of Panama on the western bank of the Panama Canal, approximately 4 mi (6.4 km) southwest of Panama City. The base currently houses the 24th Wing and several tenant units. The 24th Wing's mission is to support United States interests in and around Latin America by providing, employing, and supporting airpower. Two AFRES and ANG units provide airlift capabilities on a rotational basis, and another ANG unit provides fighter support.

Howard AFB was established in 1939 as Bruja Airfield and was renamed Howard Field the same year. The installation served throughout World War II.

In 1947, the installation came under control of the new Air Force and TAC, and was renamed Howard AFB. The base alternated between auxiliary status and being officially inactive until 1961. At this time, all transportation, passenger, and cargo handling were shifted to this base from nearby Albrook AFB, which had been the main U.S. AFB in Panama. The two installations shared many functions. The Cuban Missile Crisis of 1962 prompted the United States to install a tactical force at Howard AFB, which included fighter and airlift capabilities. The base continues to maintain air defense of the Canal Zone.

The primary Cold War mission at Howard AFB was the support of United States interests in Latin America.

4.1.13 K.I. Sawyer AFB

K.I. Sawyer AFB is located in the upper peninsula of Michigan, 21 mi (34 km) south of Marquette and 7 mi (11 km) northeast of the small community of Gwinn. The base is scheduled to close in 1995. The 410th BW maintained a bomber force at the base until the Fall of 1994.

K.I. Sawyer AFB was established in 1956 on the site of K.I. Sawyer Municipal Airport. The base was established as an ADC fighter interceptor base and housed a SAGE facility to counter the threat of Soviet long-range bombers. The establishment of this base and others as ADC bases derived from the 1954 Killian Report which suggested that the United States was at risk from Soviet bomber attack. The base was activated in 1956 with 25 F-102 fighter interceptors. B-52 bombers and KC-135 tankers were assigned to the base in 1958, and command of the base was shifted from ADC to SAC in 1964. A portion of the planes were on constant alert to respond to any threat of Soviet attack.

In the early 1970s, FB-111 medium bombers were based at K.I. Sawyer AFB as part of the bomber dispersal program. F-106 fighter interceptors of the 87th FIS were reassigned to TAC from ADC in 1979 and continued in service at K.I. Sawyer AFB until 1985.

Several Cold War missions were carried out at K.I. Sawyer AFB, including ADC fighter interceptor alert, SAC bomber and tanker alert, and the operation of a SAGE facility.

4.1.14 Langley AFB

Langley AFB is located approximately 3 mi (5 km) north of downtown Hampton in southeastern Virginia. The base currently houses ACC Headquarters and the 1st FW which employs the F-15C and F-15D fighter aircraft.

Langley AAF was established in 1917 to support the activities of the National Advisory Committee for Aeronautics (NACA). The field served as a training school during World War I. Between the two world wars, the airfield housed numerous units including pursuit and bomber squadrons, training and testing units, airship companies, and General Headquarters Air Force. During World War II, Langley AAF had the role of coastal patrol and anti-submarine duty, while continuing a variety of training activities.

Following World War II, TAC set up its headquarters at Langley AAF in order to be near Army and Navy commands, which were in the general vicinity of Washington D.C. (Photograph 4.3). In March of 1946, ATC assumed command of the installation, and in May that year, TAC resumed command. The Air Force was established as a separate service in 1947, and the field was renamed Langley AFB in 1948. In the late 1940s and 1950s, a number of units were assigned to the base, including fighters, interceptors, bombers, and reconnaissance aircraft. In the 1960s and early 1970s, transport aircraft, Bomarc air defense missiles, and EC-135 auxiliary command post aircraft were stationed at Langley AFB. In the mid-1970s, F-15 fighters were assigned to the installation.

The primary Cold War missions at Langley AFB were TAC headquarters and the maintenance of TAC operational capabilities.

4.1.15 Little Rock AFB

Little Rock AFB is located in central Arkansas, approximately 15 mi (24 km) southwest of the state capitol of Little Rock. The installation currently supports the 314th Airlift Wing, which operates the C-130E and provides airlift for United States and allied forces worldwide. The wing also operates the Combat Aerial Delivery School, which provides advanced training to C-130 pilots.

The base was established in 1952 as part of the response to the Russian acquisition of an atomic weapon and the Korean War. Activated in 1955 under the command of SAC, the base housed strategic reconnaissance operations utilizing RB-47 aircraft. In 1961, the base became a bomber facility with a shift from RB-47s to B-47 aircraft. The B-47 was phased out in 1964 and was replaced by the B-58 medium bomber until it was retired in 1970. The base was transferred from SAC to TAC in 1970, and C-130s began operation in a tactical airlift role. MAC assumed control of the base in 1974 and took over C-130 operations, which continue today under AMC.



Photograph 4.3 Tactical Air Command Headquarters Building at Langley AFB, Virginia.

In 1960, Little Rock AFB was chosen as a site for the Titan II missile support base. Eighteen Titan II ICBM's became operational at sites surrounding the base in 1965. The missiles were removed from alert in 1985.

Several important Cold War missions were carried out at Little Rock AFB, including strategic reconnaissance, SAC bomber alert, TAC and MAC airlift, and strategic deterrence with Titan II ICBM's.

4.1.16 Loring AFB

Loring AFB is located in northeastern Maine, approximately 8 mi (13 km) northeast of Caribou. The base was scheduled for closure in the fall of 1994. Prior to closure, the base operated a bomber and tanker force as part of the U.S. deterrence force.

Limestone AFB was authorized in 1947 and construction began immediately. Operations began in 1950, although the installation was not completed until 1953. The base is one of the few postwar bases to be built for a Cold War mission rather than converted from an older base.

In 1953, SAC assumed command of the installation, and the 42nd BMW was established and began operation of B-36 bombers. The base's name was changed to Loring AFB in 1954 to honor Major Charles J. Loring for heroics during the Korean War. In 1955, KC-97 tankers were added to the base inventory to bolster the deterrence mission. B-52 bombers replaced the B-36 in 1956, and KC-135 took over refueling duties from the KC-97s in 1957. The 42nd BMW (later designated 42nd Wing and 42nd BW) served in the deterrence role at Loring AFB until the early 1990s. The 27th FIS, operating the F-106, was operational at Loring AFB from 1959 through 1987 as part of the defense of the northeastern United States and Canada.

Several Cold War missions were carried out at Loring AFB, including SAC bomber and tanker alert and ADC fighter interceptor alert. Loring AFB also houses a WSA originally owned by the AEC.

4.1.17 MacDill AFB

MacDill AFB is located on the western coast of Florida in the metropolitan Tampa area. The current base mission is the support of two unified commands by the 6th Air Base Wing (ABW). These two commands are the United States Central Command (USCENTCOM) and the United States Special Operations Command (USSOCOM). USCENTCOM oversees U.S. military interests in Southwest Asia, the Arabian Peninsula, and Northeast Africa, and USSOCOM is responsible for the defense of the United States and Canada and for global deployment.

MacDill AAF was established for the purpose of defending U.S. interests in the Caribbean and was opened in 1939. During World War II, B-26, B-17, and B-29 aircrews were trained at the

airfield. The installation was renamed in 1946 when SAC took over base operations, deployed bombers on alert, and began operation of reconnaissance aircraft.

The base was preparing to close in 1961 when the Cuban Missile Crisis began. As a result of this crisis, SAC maintained its alert bomber force at MacDill AFB and United States Strike Command (USSTRIKCOM) was established at the base as a rapid response force capable of fighting a limited nuclear war. USSTRIKCOM operated F-84 and later F-4 fighters. In 1962, TAC assumed command of MacDill AFB.

During the Vietnam War, MacDill AFB was home to training squadrons for F-4 crews and briefly served as a training base for B-57 tactical bombers between 1968 and 1970. F-16 fighters were assigned to MacDill in 1982 to replace the F-4s. U.S. Readiness Command (USREDCOM) and Rapid Deployment Joint Task Force (RDJTF) were two rapid deployment commands that were tenants at the base during the early 1980s.

Several Cold War missions were carried out at MacDill AFB, including SAC bomber alert, strategic reconnaissance, tactical fighter alert, operation of a number of major command headquarters, and maintenance of limited nuclear war tactical forces.

4.1.18 McConnell AFB

McConnell AFB is located in south-central Kansas near the city of Wichita. The current base mission is the operation of KC-135R tankers by the 22nd ARW of Military Airlift Transport Service (MATS). The 384th Bomb Group (BG), equipped with the B-1B, is stationed at McConnell AFB as a tenant unit. ACC relinquished command of McConnell AFB on January 1, 1994.

McConnell AFB was established at the Wichita Municipal Airport, the home of several aircraft manufacturers including Boeing and Cessna. AMC was in residence at the airport in 1946. In

1950, it was decided to locate an air force base near the Boeing plant at Wichita and train crews for the B-47 bombers, which were rolling off Boeing's assembly lines. The base was named Wichita AFB and was activated under ATC in 1951 with the mission to train B-47 crews. In 1954, the base's name was changed to McConnell AFB.

SAC assumed command in 1958 and began operating 18 Titan II missiles at sites surrounding McConnell AFB in 1962. The missiles were housed in separate complexes and stayed on alert until 1986. The B-47 crew training continued until 1963, when the aircraft was taken out of service, and TAC assumed control of the base. Throughout the 1960s, TAC trained F-105 fighter-bomber crews at McConnell AFB for service in Vietnam. In 1972, SAC again assumed command of McConnell AFB, and during the 1970s, KC-135 tankers were the main aircraft operating from the installation. In 1986, it was announced that B-1B bombers would be operated from McConnell AFB.

Several Cold War missions were carried out at McConnell AFB, including ATC training for bomber crews, SAC bomber and tanker alert, strategic deterrence with Titan II missiles, and TAC training of fighter-bombers.

4.1.19 Minot AFB

Minot AFB is located 13 mi (21 km) north of the city of Minot in north-central North Dakota. The 5th BW currently operates B-52H bombers, and the 91st Missile Group maintains Minuteman III missiles on alert.

The base was activated in 1957 as an ADC installation. The 5th FIS, equipped with F-106 fighters, was activated in 1960 and the SAGE system was operationalized a year later. Minot's SAGE system was deactivated in 1963.

SAC was assigned responsibility for Minot AFB in 1962, and the base assumed a strategic mission with the arrival of B-52 bombers; a contingent of KC-135 tankers had been stationed at Minot AFB since 1959. Fighter interceptors continued their mission as a tenant unit until 1988. In 1964, 150 Minuteman missiles became combat ready with launch control facilities (LCFs) and LFs surrounding Minot AFB. The Minuteman missile was a response to the fear of a "missile gap" between the United States and the U.S.S.R. In 1971, Minuteman III's, armed with Multiple Independently-Targetable Reentry Vehicles (MIRVs), replaced the Minuteman I's at the Minot AFB LFs.

Several Cold War missions were carried out at Minot AFB, including ADC fighter interceptor alert, operation of a SAGE facility, SAC bomber and tanker alert, and strategic deterrence with Minuteman I and Minuteman III ICBMs.

4.1.20 Moody AFB

Moody AFB is located approximately 10 mi (16 km) northeast of Valdosta in south-central Georgia. The installation currently supports the 347th FW which is charged with maintaining training in offensive, defensive, and close air support operations for its F-16C/D, A-10A, and C-130E aircraft.

Moody AAF was established in 1941 as a training field for bombers, navigators, and observers. Moody AFB went through three commands in the first four years as a USAF installation: 1947 under TAC, 1948 under Continental Air Command (CONAC), and 1951 under SAC. In September of 1951, ATC assumed command and the installation served as a pilot training base during the Korean War.

In 1951, the base was officially named Moody AFB and continued as an ATC pilot training base until 1975. During that period, several training aircraft were operated including the F-89, F-94, F-86, T-33, T-37, and T-38. In 1975, the installation was reassigned to TAC. In 1980, the base

was assigned a role in the RDJTF. The 347th initially operated F-4E fighters and converted to F-16s beginning in 1987.

Several Cold War missions were carried out at Moody AFB, including ATC fighter training, TAC operations, and the maintenance of RDJTF crews.

4.1.21 Mountain Home AFB

Mountain Home AFB is located in southwestern Idaho approximately 50 mi (80 km) south of Boise. The base currently supports the 366th Wing, which operates KC-135R tankers, F-15C/D and F-16C/D fighters, and B-1B bombers.

The installation was activated in 1942 as Mountain Home AAB, and in 1943, was renamed Mountain Home AAF. Throughout World War II, B-24 and other bomber crews were trained at the base, and when the war ended, the base was deactivated.

In 1947, the installation was reactivated and renamed Mountain Home AFB. SAC used the installation briefly in 1948 and 1949 as a reconnaissance base and, when this mission ended, Mountain Home AFB was deactivated. In 1951, the base was reactivated and assigned to MATS. MATS trained crews for operation in the Korean War until 1953. SAC assumed control of the base again in 1953, with the assignment of the 9th BMW. The 9th BMW operated B-29 and KB-29 bomber and tanker aircraft and later B-47 and KC-97 aircraft. In the early 1960s, three Titan I ICBM sites were stationed near Mountain Home AFB under the 9th Strategic Aerospace Wing. These sites were subsequently deactivated in 1965.

TAC assumed control of Mountain Home AFB in 1966. During the 1960s and 1970s, the base hosted tactical reconnaissance and tactical fighter units, which operated RF-4C and F-111 aircraft. In 1981, the EF-111 ECM aircraft was added to the Mountain Home AFB inventory. In the late 1980s, Detachment 1 of the Northwest Air Defense Sector began operating the Over the

Horizon Backscatter (OTH-B), a radar facility designed to detect early missile attack. In the 1990s, F-15 and F-16 fighters were assigned to Mountain Home AFB, and the current structure of the composite wing was implemented with the reassignment of the base to ACC.

Several Cold War missions were carried out at Mountain Home AFB, including MATS crew training, SAC bomber and tanker alert, strategic deterrence with a small Titan I force, and maintenance of TAC reconnaissance and fighter units. Mountain Home AFB is the only base to house the OTH-B early warning system.

4.1.22 Nellis AFB

Nellis AFB is located in southeastern Nevada, approximately 8 mi (13 km) northeast of Las Vegas. The current base mission includes training of composite strike forces and weapons training for mission ready crews at the Weapons and Tactics Center. The USAF Demonstration Team, the Thunderbirds, is also stationed on the base. Aircraft currently operated by the 57 FW at Nellis AFB include, A-10A, F-15C/D/F, and F-16C/D.

Las Vegas Airfield was established in 1941 and after a few name changes, the facility was redesignated Las Vegas AAF in 1943. During World War II, many gunnery students and co-pilots were trained at the airfield. Primary and advanced pilot training were also provided near the end of the war.

In 1948, the installation was renamed Las Vegas AFB and in 1949, ATC took command of the base continuing the advanced pilot and gunnery training. In 1950, the base was renamed Nellis AFB after a Nevada World War II pilot who was killed in action. During the Korean War, the base continued its role as advanced gunnery training center for fighter pilots. The Thunderbirds were assigned to the installation in 1956, and base command was transferred to TAC in 1958. TAC continued the training missions associated with the base and added the mission of maintenance and training of operational F-105 fighters. Aircraft were continually updated to

meet the demands of deterrence throughout the Cold War, and the missions of advanced crew training in realistic settings and operational flying were continually adapted at Nellis AFB.

The primary Cold War mission at Nellis AFB was ATC and TAC training of fighter pilots. Nellis AFB is the only ACC installation to house a flying demonstration team.

4.1.23 Offutt AFB

Offutt AFB is located in eastern Nebraska, approximately 7 mi (11 km) south of Omaha. Offutt AFB currently supports the 55th Wing, which conducts worldwide strategic reconnaissance. United States Strategic Command (USSTRATCOM) is a major tenant on the base. USSTRATCOM is a unified command made up mainly of Air Force and United States Navy personnel who oversee the U.S.'s strategic forces. The 2nd Airborne Command and Control Squadron (ACCS) operates the Post Attack Command and Control System (PACCS) at Offutt AFB.

Offutt AFB history dates to 1896 when Fort Crook, an Army installation, was completed on the site. Through the years, the fort served many purposes, including balloon training, and in 1920 the fort was renamed Fort Crook Flying Field. During World War II, the installation was used for a government aircraft manufacturing complex.

The Air Force took command of the field in 1946 with AMC in command. By June of the same year, ADC assumed command. In 1948, SAC assumed command of the installation, and it was renamed Offutt AFB. SAC headquarters was placed at Offutt AFB in 1948. The base houses many SAC facilities that are representative of the Cold War. The underground command center, the airborne command post, and a host of other war-fighting components were all located at Offutt.

Several important Cold War missions were carried out at Offutt AFB, including operating PACCS and housing SAC headquarters.

4.1.24 Pope AFB

Pope AFB is located approximately 10 mi (16 km) northwest of Fayetteville, North Carolina. It is bordered on three sides by the Fort Bragg Military Reservation. The current mission includes the 23rd Wing, a composite wing that operates C-130E transports, F-16C/D fighters, and A-10A close air-support aircraft.

Pope Field was established in 1919 as an accompanying airfield to Fort Bragg. In 1941, the Army acquired the installation and renamed it Pope AAF. During World War II, the airfield functioned as a troop carrier training facility.

In 1946, TAC assumed command of the field, and in 1948, SAC assumed command and the installation was renamed Pope AFB. Responsibility shifted several more times until TAC assumed command of the base in 1950. Between 1950 and 1954, the Ninth Air Force was headquartered at Pope AFB, and the installation was the center of the fighter-bomber and reconnaissance assets of TAC. After the departure of the Ninth Air Force, tactical airlift became the mission at Pope AFB. A number of cargo and troop airlift missions took place throughout the 1960s and 1970s. MAC assumed command of the base in 1974, but the mission remained the same. Pope AFB continued to be one of the major airlift bases until the end of the Cold War era.

Several important Cold War missions were carried out at Pope AFB, including maintenance of TAC fighter-bomber and reconnaissance assets, headquarters for the Ninth Air Force, and TAC and MAC tactical airlift.

4.1.25 Seymour Johnson AFB

Seymour Johnson AFB is located 100 mi (161 km) west of the Atlantic Ocean, near Goldsboro, North Carolina. The installation currently supports the operation of KC-10A tanker and F-15E fighter aircraft by the 4th Wing.

The installation was acquired in 1942 and during World War II, conducted maintenance and repair training, processing for overseas duty, technical officer training, and P-47 pilot training. The installation was temporarily deactivated in 1946.

Seymour Johnson AFB was reactivated in 1953 and TAC assumed command of the installation. The base was turned over to AMC in October of the same year. TAC was again assigned command of Seymour Johnson AFB in 1954, and the base reactivated in 1956. The base became home to F-86 fighter training and an ADC tenant interceptor squadron. B-52 bombers and KC-135 tankers were assigned to the base in 1958 as part of the SAC deterrent force. At the same time, tactical and interceptor forces remained at the base. The bombers were removed from the base in 1982, but the tankers remained in service. KC-135s were replaced by KC-10s in 1985 and these continued in service through the end of the Cold War.

Several important Cold War missions were carried out at Seymour Johnson AFB, including TAC fighter training, ADC fighter interceptor alert, and SAC bomber and tanker alert.

4.1.26 Shaw AFB

Shaw AFB is located in east-central South Carolina, approximately 10 mi (16 km) west of Sumter. The current mission includes the operation of three squadrons of F-16C/D fighters and one squadron of A-10A attack aircraft by the 20th FW.

Shaw AAF was established in 1941 as a pilot training base. The installation served as a basic flying training school until 1945 when it assumed an advanced training role. After the war, the field entered a brief period of inactivity. TAC assumed control of the base in 1946 and began operating fighter aircraft. In 1948, the installation was renamed Shaw AFB.

In 1950, the base mission shifted to the operation of tactical reconnaissance aircraft. In 1954, the Ninth Air Force moved its headquarters to Shaw AFB. From the 1950s until the end of the Cold War, numerous types of tactical reconnaissance aircraft were operated from the base. These aircraft included the piston-engined RB-26, and jet engined RF-84, RB-57, RB-66, and RF-4C.

Several important Cold War missions were carried out at Shaw AFB, including the operation of fighter aircraft, the operation of reconnaissance aircraft, and the operation of the Ninth Air Force Headquarters.

4.1.27 Whiteman AFB

Whiteman AFB is located in north central Missouri, approximately 60 mi (97 km) southeast of Kansas City, Missouri. The installation currently supports the 509th BW, which operates the B-2 bomber, and the 442nd FW, which operates AFRES and Missouri ANG A-10 aircraft, and is currently deactivating its Minuteman II force.

The base was established as Sedalia AAF in 1942. During World War II, the airfield initially served as a training center for glider pilots and later for radio operators, mechanics, and navigators. In 1946, TAC assumed command of the installation, and in 1947, the base was transferred to AMC. In 1948, the field was renamed the Sedalia Air Force Auxiliary Field and in 1951, it was renamed again as Sedalia AFB when SAC assumed command.

SAC began operating B-47 bombers and KC-97 tankers in 1954. The aircraft maintained a deterrence mission until 1963, when they were transferred from the base. In 1955, the base was

renamed Whiteman AFB for a pilot who was killed during the attack on Wheeler Field, Hawaii, on December 7, 1941.

It was determined in 1961 that Whiteman AFB should house Minuteman I ICBMs. Construction on 15 LCFs and 150 LFs was begun in 1962. The missiles became operational between 1963 and 1964. Minuteman II ICBMs replaced their predecessors in 1966 (Photograph 4.4). In 1991, the missiles were taken off alert and began deactivation. The B-2 bomber mission began at Whiteman in 1987 and continues to the present.

Several important Cold War missions were carried out at Whiteman AFB, including SAC bomber and tanker alert, strategic deterrence with Minuteman I and Minuteman II ICBMs, and AFRES and ANG fighter alert. Whiteman AFB is the only ACC installation to house the B-2 bomber.

4.2 BASE LAND USE AND LAYOUT

Prior to initiating field visits to the bases, standard land use and layout plans for TAC and SAC bases were located in two publications (Boeing Company 1970, 1985). These standard plans show the general layout of TAC and SAC bases and the patterns for land use. The layouts and land use patterns of each study base was compared with these standards to identify differences and similarities.

In general, the layouts and land use patterns at the 27 bases follow the standard plans, with a dual parallel flight line. Mission and industrial areas are closest to the flight line; headquarters, community, base support, unaccompanied housing, and recreation areas are found in the central portion of the base next to the mission area; and family housing is at the outskirts of the base beyond the central portion. Most of the base development is located on one side of the flight line, with weapon and warhead storage and industrial areas the two types of land use found on the opposite side of the flight line.



Photograph 4.4 Missile Launch Control Facility Oscar-1 at Whiteman AFB, Missouri.

The amount of similarity between a base plan and the standard plan seems to correspond to whether a base was built during the Cold War, was a World War II base that had been deactivated but then was reactivated during the Cold War, or was a World War II base that remained open and was adapted and re-used for Cold War duty (Figure 4.1). The four bases that were built for the Cold War correspond almost exactly to the standard plans. Four other bases that were reactivated during the Cold War also correspond to the standards, but there are small differences that are left over from the days when they were used during World War II. These differences usually include portions of a triangular runway still apparent amongst the current parallel runway. The remaining 19 bases were World War II bases that were adaptively reused for the Cold War. These have the least similarity with the standard plans. This is because these bases were never shut-down and stripped of structures like those World War II bases that were closed, thus configuring these bases to the new Cold War standard plans was more difficult.

These bases also often have portions of the old triangular runways apparent, and some even have the old runways in use.

5.0 EVALUATED RESOURCES

A total of 142 resources were evaluated during the course of the ACC Cold War material culture study. Details of these resources can be found in the individual base reports (see Appendix A). Of these, 55 are literary resources and 87 are real property buildings, structures, or objects. All of the evaluated resources have been assigned to one of the five USAF property groups discussed in the methodology chapter. They have been further categorized into subgroups. Finally, each resource is defined by a property type name (Table 5.1). As an example, all missile LCFs, regardless of where they are located or whether they are for an Atlas, Titan, Minuteman, or Peacekeeper system, are called by the same property type name, Missile Launch Control Facility.

Table 5.1 Categorization of Evaluated Resources by Property Group, Subgroup, and Type

OPERATIONAL AND SUPPORT INSTALLATIONS (67)	
<u>Base and Command Centers</u>	Major Command Headquarters (5) Major Command Post (1) Command Center (2) USAF Conference Center (1)
<u>Communications</u>	Low Frequency Transmitter Complex (1)
<u>Housing</u>	Unaccompanied Housing (1) Commander Housing (1)
<u>Memorial</u>	Memorial Chapel (1) Museum Collection (3)
<u>Documentation</u>	Architectural Drawing Files (5) Map Files (2) Base Newspaper Collection (3) Office Files (4) Photograph Collection (5) Documentary Collection (32)
COMBAT WEAPONS AND SUPPORT SYSTEMS (53)	
<u>Alert Facilities</u>	Bomber Alert Facility (16) Bomber/Tanker Alert Facility (3) Tanker Alert Facility (3) Fighter Alert Facility (7) Command and Control Alert Facility (3)
<u>Communications</u>	SAGE Facility (3)
<u>Ground Vehicles and Equipment</u>	Bare Base Installation (1)

<u>Maintenance Docks/Hangars</u>	Engine Test Building (1) Maintenance Hangar (1) Large Aircraft Maintenance Dock (4)
<u>Missiles</u>	Missile Launch Control Facility (1) Missile Launch Complex (2)
<u>Storage</u>	Segregated Storage Igloo (4)
<u>Documentation</u>	Architectural Drawing Files (3) Photograph Collection (1)
<hr/> TRAINING FACILITIES (8) <hr/>	
<u>Flight Training</u>	Flight Simulator (1)
<u>Combat Training</u>	Threat Facility Collection (1) Weapons School (1) RED FLAG Facility (1)
<u>Combat Support Training</u>	Inter-American Air Force Academy (IAAFA) Headquarters (1)
<u>Missile Training</u>	Missile Launch Facility Trainer (2) Ground Launched Cruise Missile (GLCM) Training Facility (1)
<hr/> MATERIAL DEVELOPMENT FACILITIES (9) <hr/>	
<u>Research Laboratories</u>	Medical Science Laboratory (1) Rome Laboratory (1) USAF Tactical Airlift Center (TALC) (1)
<u>Test Sites</u>	Launch Ramp (1) Blockhouse (2) Tracking and Documentation (1) Test Track (1) Weapons Guidance Laboratory (1)
<hr/> INTELLIGENCE FACILITIES (5) <hr/>	
<u>Communications</u>	Satellite Communications Complex (1)
<u>Radar Sites</u>	PAVE PAWS Facility (1) OTH-B Facility (1)
<u>Spv Satellites</u>	Deployable Warning Complex (1)
<u>Weather Reconnaissance</u>	Global Weather Service (1)

() = Number of evaluated resources in each category.

5.1 OPERATIONAL AND SUPPORT INSTALLATIONS

Sixty-seven resources falling under the Operational and Support Installations group were evaluated. Of this number, 51 are literary resources and 16 are real property resources.

5.1.1 Base and Command Centers

Of the 16 real property resources, nine were identified within the Base and Command Center subgroup. Property types represented under this subgroup include Major Command Headquarters, a Major Command Post, Command Centers, and the USAF Conference Center. They were evaluated based on their roles as headquarters where Cold War policies and strategies were implemented. Several of the buildings possessed specially designed situation rooms or command posts where crisis situations and everyday operations were carried out. Examples of these types of buildings include the former TAC headquarters at Langley AFB and the former SAC headquarters at Offutt AFB.

5.1.2 Communications

Only one resource was evaluated within the Communications subgroup. This property type is the Low Frequency Transmitter Complex located at Offutt AFB.

5.1.3 Housing

Two base housing facilities were included in this subgroup, both of which are associated with former SAC commander General Curtis LeMay. These resources include the Commander Housing that LeMay and all other SAC commanders save one occupied while commanding SAC forces (Photograph 5.1), and Unaccompanied Housing that LeMay commissioned in order to improve the quality of life of Air Force enlisted personnel. Both of these resources are located at Offutt AFB.



Photograph 5.1 Strategic Air Command Commander's Housing at Offutt AFB, Nebraska.

5.1.4 Memorial

Four resources were evaluated under the Memorial property type subgroup. The property types represented consist of a Memorial Chapel at Offutt AFB, and Museum Collections at Offutt, Fairchild, and Minot AFBs.

5.1.5 Documentation

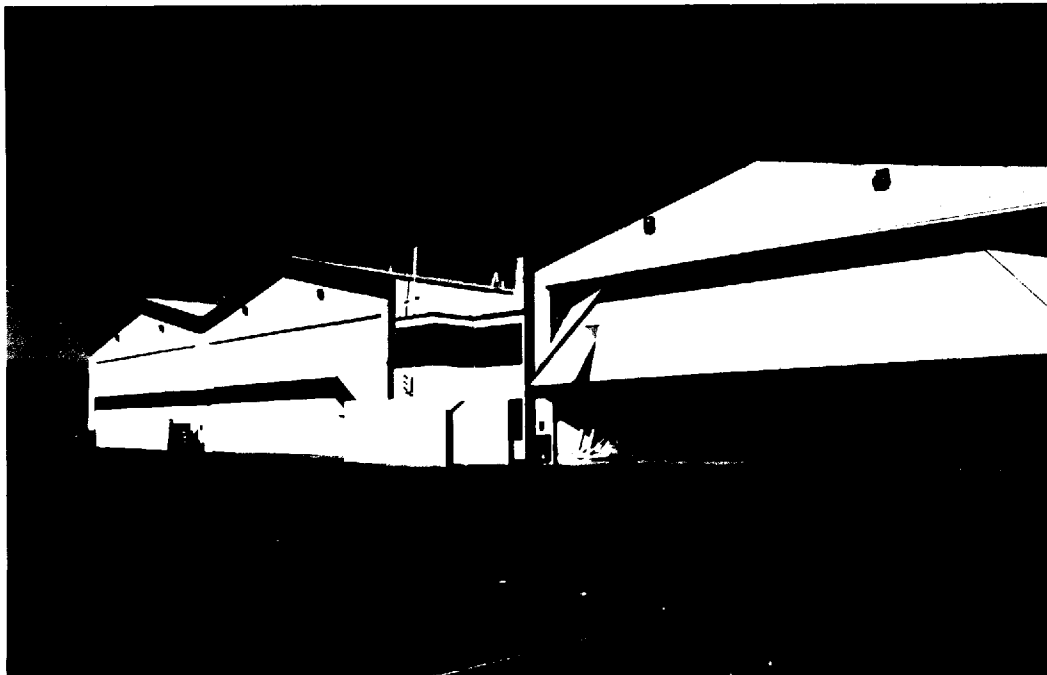
A total of 51 evaluated resources fall under this Documentation subgroup. Property types represented include Architectural Drawing Files, Map Files, Base Newspaper Collections, Office Files, Photograph Collections, and Documentary Collections. This subgroup of resources was identified at almost every base included in the study.

5.2 COMBAT WEAPONS AND SUPPORT SYSTEMS

The highest number of real property resources, 49, were evaluated under the category of Combat Weapons and Support Systems. Four literary resources were also evaluated under this category.

5.2.1 Alert Facilities

Alert Facilities was the most prevalent property subgroup evaluated under this category. There were 32 alert facilities evaluated in all. There were 16 Bomber Alert Facilities evaluated at 15 of the study bases. Three Bomber/Tanker Alert Facilities were recorded at Davis-Monthan, McConnell, and Seymour Johnson AFBs. Three Tanker Alert Facilities were evaluated at Minot, Ellsworth, and K.I. Sawyer AFBs. A Fighter Alert Facility was evaluated at each of seven study bases (Photograph 5.2). Three Command and Control Alert Facilities were evaluated, all located at Offutt AFB.



Photograph 5.2 Fighter Alert Facility at Langley AFB, Virginia.

5.2.2 Communications

Three communications facilities, all SAGE Facilities, were evaluated within the Combat Weapons and Support Systems group. Located at Minot, Beale, and K.I. Sawyer AFBs, these large windowless, cube-shaped buildings housed a complex network of computers which cycled early warning data between ground-based radar stations, the SAGE Facility, and interceptor squadrons at bases in its sector, and controlled fighter interceptor aircraft in flight.

5.2.3 Ground Vehicles and Equipment

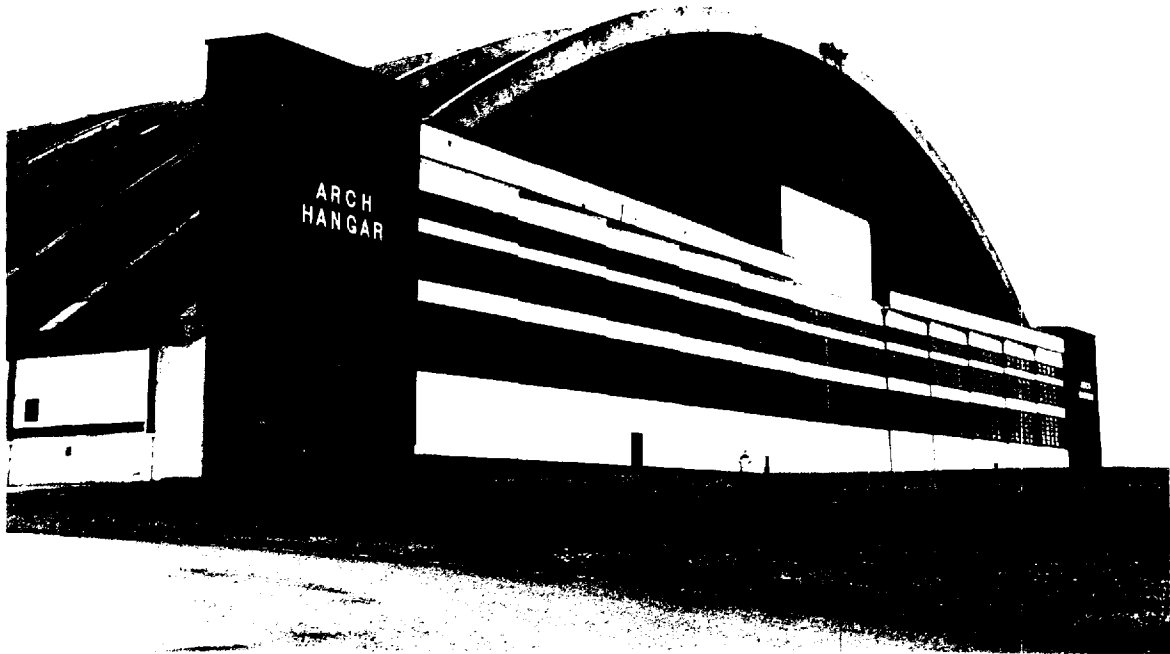
The only property type identified under this subgroup is the Bare Base Installation at Holloman AFB. It consists of a number of buildings, a taxiway, and loading aprons.

5.2.4 Maintenance Docks/Hangars

A total of six resources were evaluated under this subgroup. Property types represented include Large Aircraft Maintenance Docks at Ellsworth, Dyess, and Loring AFBs (Photograph 5.3), a Maintenance Hangar at Nellis AFB, and an Engine Test Building at Fairchild AFB. These buildings are either architecturally unique or are associated with particular Cold War aircraft.

5.2.5 Missiles

Three missile facilities, which are no longer in service but are being preserved, were evaluated in this study. These property types include Missile Launch Complexes at Davis-Monthan and Ellsworth AFBs, and a Missile Launch Control Facility at Whiteman AFB.



Photograph 5.3 Large Aircraft Maintenance Dock at Loring AFB, Maine.

5.2.6 Storage

The only property type evaluated under this subgroup is the Segregated Storage Igloo. Four examples were evaluated at Fairchild, Barksdale, Loring, and Ellsworth AFBs. These four nearly identical concrete buildings are associated with early AEC activities.

5.2.7 Documentation

The remaining four resources within the Combat Weapons and Support category consist of literary resources. Property types include Architectural Drawing Files at Ellsworth AFB, two collections of Architectural Drawing Files at Minot AFB, and a Photograph Collection at Nellis AFB.

5.3 TRAINING FACILITIES

A total of eight training facilities were evaluated. All of the resources are real property.

5.3.1 Flight Training

The Flight Training resource is the Flight Simulator documented at Offutt AFB.

5.3.2 Combat Training

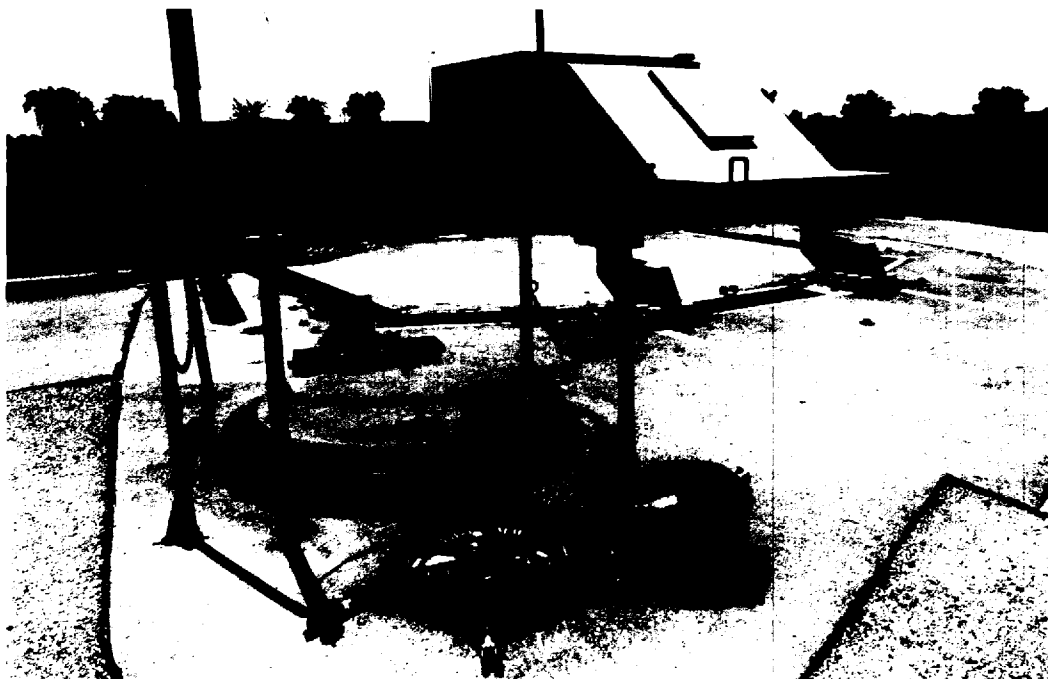
Three resources at Nellis AFB were evaluated as Combat Training facilities. Property types included are the RED FLAG Facility, which instructed pilots in air-to-air combat, the Threat Facility Collection, which is a collection of Soviet bloc equipment used for instructional purposes, and a Weapons School.

5.3.3 Combat Support Training

Only one evaluated resource falls under this subgroup, the IAAFA Headquarters at Howard AFB in Panama. This facility was used to train aircrews from Latin American nations that were friendly to the United States.

5.3.4 Missile Training

The evaluated Missile Training resources consist of two Missile Launch Facility Trainers at Minot and Whiteman AFBs (Photograph 5.4), and the GLCM Training Facility at Davis-Monthan AFB.



Photograph 5.4 Missile Launch Facility Trainer at Whiteman AFB, Missouri.

5.4 MATERIEL DEVELOPMENT FACILITIES

Nine Materiel Development resources were evaluated, all of them real property. All of these buildings were used in the development of a variety of Cold War weapon and supply systems.

5.4.1 Research Laboratories

The resources under this subgroup consist of the following property types: a Medical Science Laboratory at Holloman AFB, the Rome Laboratory Headquarters at Griffiss AFB, and the USAF TALC at Pope AFB.

5.4.2 Test Sites

The six Test Sites are all located at Holloman AFB and are related to a number of early Cold War weapons systems such as the Matador missile. The property types represented include two Blockhouses, a Test Track, one Launch Ramp, one Tracking and Documentation facility, and a Weapons Guidance Laboratory.

5.5 INTELLIGENCE FACILITIES

Five evaluated resources fall under the Intelligence Facilities group. All five are real property resources.

5.5.1 Communications

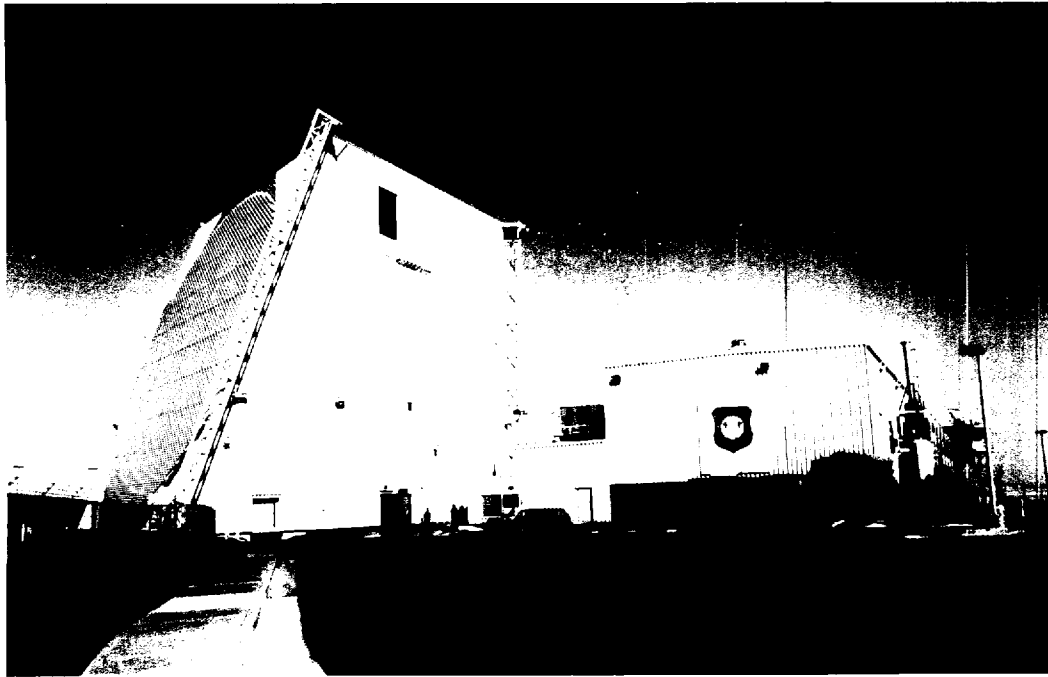
Under the subgroup Communications, a Satellite Communications Complex at Offutt AFB was evaluated. This facility provided global communication capabilities to SAC headquarters.

5.5.2 Radar Sites

Two facilities, both early warning systems, were evaluated under the Radar Sites subgroup. The OTH-B Facility was evaluated at Mountain Home AFB. This facility houses an early warning system which is designed to "see" incoming objects beyond the horizon. A PAVE PAWS Facility (Photograph 5.5), evaluated at Beale AFB, is a large early warning system that is designed to track incoming SLBMs and can also track a variety of objects in space.

5.5.3 Spy Satellites

A Deployable Warning Complex at Holloman AFB was evaluated under the subgroup Spy Satellites.



Photograph 5.5 PAVE PAWS Facility at Beale AFB, California.

5.5.4 Weather Reconnaissance

A Global Weather Service facility at Offutt AFB, which was used to plan Cold War operations, was evaluated under the subgroup Weather Reconnaissance.

6.0 PRELIMINARY RECOMMENDATIONS

6.1 NRHP ELIGIBILITY

Cultural resources are defined as physical manifestations of past human activity, occupation, or use. This definition includes historic sites and objects. According to the NHPA, a historic property is a cultural resource that either is listed on the NRHP or has been evaluated and determined eligible for listing. For example, a Cold War maintenance hangar is a cultural resource, but it may or may not be a historic property according to NHPA terminology. A determination of eligibility is a decision of whether a resource meets certain NRHP requirements. If the resource meets these requirements, it is eligible for nomination to the NRHP and thus becomes a historic property.

6.1.1 Evaluation and Determination of NRHP Eligibility

Under the NHPA, cultural resources must meet certain requirements to be eligible for nomination to the NRHP, and these requirements apply to Cold War resources. First, a resource must be determined to be important within its historic context. It must also meet at least one of the NRHP criteria of importance, as described in Chapter 3. The eligibility of a resource for inclusion in the NRHP also lies in the age of the resource. Generally, a resource must be at least 50 years old to be considered eligible. However, if a resource is found to be of exceptional importance within its historic context and in regard to the NRHP criteria, then the 50 year threshold is waived. This is especially important for this study, since the resources that were evaluated achieved importance during the Cold War era, thus are currently less than 50 years old. Finally, resources must possess integrity of at least two of the following: location, design, setting, materials, workmanship, feeling, and association, as appropriate.

Recommendations in this document and in the individual base reports regarding NRHP eligibility are preliminary. It is the responsibility of the federal agency to make the formal

determination of eligibility in consultation with the relevant SHPO. If they cannot agree, a determination of eligibility is then required from the Keeper of the NRHP, who acts on behalf of the Secretary of the Interior in these matters. For this study, the Command Cultural Resources Manager for ACC is the responsible party acting in the role of the federal agency. It is through the Command Cultural Resources Manager, in consultation with the base commander, the respective SHPO, and USAF Headquarters, that a determination of eligibility will be made for the evaluated resources. Processing of NRHP nominations is conducted through the chain of command, from the base through the major command to the Air Force Federal Preservation Officer, with the final decision made by the Keeper of the NRHP.

As stated above, if a resource is determined to be eligible for nomination to the NRHP, or is listed on the NRHP, the resource is considered a historic property. Resources that have not been completely evaluated for NRHP eligibility, and thus cannot be subject to a determination of eligibility, are considered to be potentially eligible resources. This includes resources that are unidentified or unknown. Because of this potential, these resources must be treated as though they are eligible and managed accordingly until complete evaluation and determination of eligibility can be made. In general, resources are considered eligible, and treated as such, until determined otherwise. Within the scope of the current Cold War study, only those resources that have importance within the Cold War context have been evaluated for their eligibility. This means that most of the resources on the study bases were not evaluated, and thus must be considered and treated as eligible until an evaluation and determination of eligibility are completed.

Once a historic property has been listed on the NRHP, its determination of eligibility is basically final, although there are processes for removing properties from the register. In some cases, historic properties, though evaluated and determined eligible, are not nominated to the list. These properties, though not on the list, are treated the same as those properties listed. However, a determination of eligibility of an unlisted historic property is not the final determination for that resource. As time passes, a resource previously determined ineligible may become eligible

when re-evaluated, or a historic property may lose a previously determined eligibility. Therefore, it is necessary to re-evaluate unlisted historic properties periodically.

6.1.2 Implications of NRHP Eligibility

Under NHPA, federal agencies have responsibilities toward the management of historic properties, both those that have been identified and those that are unknown. There are many provisions in this law which must be adhered to by federal agencies. Two sections of the NHPA apply directly to resource protection, Section 110 and Section 106.

Section 110 of the NHPA requires federal agencies to assume responsibility for the preservation of historic properties that are owned or controlled by the agency. The first step in meeting this responsibility is to identify, inventory, evaluate, and nominate all resources under the agency's ownership or control that appear to qualify for listing on the NRHP. The current Cold War study is a means to meeting this step. The agency must ensure that any resource that might qualify for listing is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. If it is deemed necessary to proceed with a project that will adversely affect a historic property, the agency must document the property for future reference, and deposit such records in a designated repository.

Section 106 outlines a review process whereby the effect of a proposed project on historic properties is considered prior to proceeding with that project. The review process is warranted for all federal undertakings (federally conducted, licensed, permitted, or assisted actions) and is intended to help balance agency goals and preservation goals, and to lead to creative design resolution rather than to block or inhibit proposed undertakings. Thus it is a process that is designed to take place during the planning stages of a project when changes can be made to achieve this balance. Entities involved in the review process can include the agency, the SHPO of the respective state, and the ACHP.

The principal steps in the Section 106 process include:

- 1) Identification of all historic properties (both listed and eligible for listing to the NRHP) that may be affected by the proposed project; if no such historic properties are identified, and the SHPO agrees with the findings, the project proceeds; if historic properties are identified the process continues to Step 2.
- 2) Determination of the effect the proposed project may have on the identified historic properties; if there will be no effect and the SHPO concurs, the project proceeds; if there will be no adverse effect and the SHPO and ACHP agree, the project proceeds; if there will be an adverse effect the process continues to Step 3.
- 3) Consultation among the agency, SHPO, and ACHP to attempt to avoid, minimize, or mitigate the adverse effect; this step either results in the development of a Memorandum of Agreement, in which case the process continues to Step 4, or in no agreement, which means consultation is terminated.
- 4) ACHP comments on the project; the agency will either proceed with the project implementing the terms of the Memorandum of Agreement, or will consider the ACHP's comments and proceed with the project anyway, or will cancel the project.

Under Section 106, federal agencies undertaking a project having an effect on a listed or eligible historic property must provide the ACHP a reasonable opportunity to comment. Having complied with this procedural requirement, the agency may adopt any course of action it believes is appropriate. While the ACHP comments must be taken into account and integrated into the decision-making process, project decisions rest with the agency implementing the undertaking.

6.2 SUMMARY OF PRELIMINARY RECOMMENDATIONS

6.2.1 Real Property Resources

In the individual base reports completed under this study (see Appendix A), each selected real property building and structure resource was evaluated for eligibility to the NRHP. A determination of eligibility was then recommended, along with future treatment and/or management actions. The three real property object resources which were identified were not

evaluated for eligibility, but recommendations as to treatment and/or management actions were presented. This section summarizes these preliminary recommendations of eligibility and future actions. More than one recommendation may apply to a given resource. Terminology used in the recommendations is defined as follows:

No Further Work - recommended if the resource does not require any preservation, protection, or management actions.

Stewardship - recommended if the resource requires some active management and maintenance. This is different from preservation in that the resource requires general maintenance but does not need specified repairs or specialized storage.

Further Documentation - recommended if there is any further work or research to be accomplished in documenting the resource. This may be recommended when archival research should be completed to document a Cold War relationship, inventory of documents is needed, Historic American Buildings Survey (HABS) documentation is desirable, or assessment of integrity is needed.

Preservation/Conservation/Repair - recommended if the resource requires maintenance or repair to avoid loss or further deterioration. This is also recommended when specialized storage conditions are required to maintain the resource.

National Register of Historic Places Listing - recommended if the resource appears to be eligible or potentially eligible for NRHP listing.

6.2.1.1 Ineligible Resources

Table 6.1 presents the preliminary recommendations made for the four resources recommended as ineligible to the NRHP. In general, ineligible resources were recommended for further documentation. This means that although the resource does not meet the requirements for eligibility to the NRHP, it may retain valuable data that could be salvaged prior to any actions that would result in the deterioration or destruction of the resource. Further documentation might consist of producing detailed architectural drawings of the resource, recording building materials, or researching the history of the construction and function of the resource.

Table 6.1 Preliminary Recommendations for Ineligible Resources.

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Beale AFB	17002	2145	SAGE Facility	*				
Beale AFB	17103	1200	Bomber Alert Facility	*				
Homestead AFB	4001	701	Bomber Alert Facility			*		
K.I. Sawyer AFB	23036	708	SAGE Facility			*		

6.2.1.2 Future Eligible Resources

Recommendations for the seven future eligible resources are presented in Table 6.2. These resources are evaluated as important within the Cold War context. However, they do not possess the qualities that would make them exceptionally important with regard to the context of the study and NRHP criteria. Since these resources are less than 50 years in age, they are not currently eligible to the NRHP. When they do reach the 50 year threshold, they may become eligible. Therefore, they are recommended as future eligible resources. Stewardship for these resources is recommended in order to retain their integrity and further documentation is recommended to ensure that when they reach the 50 year threshold, they will be re-evaluated for eligibility to the NRHP.

Table 6.2 Preliminary Recommendations for Future Eligible Resources.

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Dyess AFB	2002	5110	Large Aircraft Maintenance Dock		*	*		
Fairchild AFB	14002	2150	Engine Test Building		*	*		
Holloman AFB	1012	901	Bare Base Installation		*	*		
Offutt AFB	7003	301	Global Weather Service		*	*		
Offutt AFB	7006	416/417	Unaccompanied Housing		*	*		
Offutt AFB	7007	453	Flight Simulator		*	*		
Offutt AFB	7014	542/566/598	Satellite Communications Complex		*	*		

6.2.1.3 Potentially Eligible Resources

Recommendations for the six potentially eligible resources are presented in Table 6.3. These resources are identified as exceptionally important, but require further documentation in order to determine their eligibility to the NRHP. Eligibility could not be determined during fieldwork due to several factors, most notably, lack of access to the interior of facilities to determine integrity. Therefore, these resources may be currently eligible and thus are recommended as potentially eligible. Further documentation is recommended for these resources to complete the evaluation of eligibility. Stewardship is recommended to retain the current level of integrity in the interim during the evaluation.

6.2.1.4 Eligible Resources

Table 6.4 presents the recommendations for the 62 eligible resources. Eligible resources are those that retain a high degree of integrity and have been shown to have qualities of exceptional importance, thus making them eligible for nomination to the NRHP. Stewardship is recommended to retain the resources' intact integrity. Further documentation is recommended to nominate the resource to the NRHP. Preservation/conservation/repair is recommended for one eligible resource that requires active treatment to retain integrity.

6.2.1.5 NRHP Listed Resources

Five resources that are already listed on the NRHP were evaluated as part of this Cold War study. All five resources had been nominated to the Register based on their importance within historic contexts other than the Cold War. Recommendations for these resources are provided in Table 6.5.

Table 6.3 Preliminary Recommendations for Potentially Eligible Resources.

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Ellsworth AFB	11095	606	Tanker Alert Facility		*	*		*
Griffiss AFB	8113	793	Bomber Alert Facility		*	*		*
Howard AFB	27081	812	IAAFA Headquarters		*	*		*
Minot AFB	10017	1040	Tanker Alert Facility		*	*		*
Mountain Home AFB	15001	291	Bomber Alert Facility		*	*		*
Offutt AFB	7012	501	Major Command Post		*	*		*

6.2.1.6 Object Resources

The three real property object resources were not evaluated for NRHP eligibility. However, recommendations were made as to treatment and/or management actions. These recommendations are presented in Table 6.6. In general, stewardship is recommended for these resources, though further documentation in the form of inventory is recommended for one Museum Collection, and preservation/conservation/repair is recommended for another Museum Collection.

Table 6.4 Preliminary Recommendations for Eligible Resources.

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Barksdale AFB	26001	6067	Bomber Alert Facility		*	*		*
Barksdale AFB	26002	6225	Bomber Alert Facility		*	*		*
Barksdale AFB	26005	7378	Segregated Storage Igloo		*	*		*
Beale AFB	17059	5760	PAVE PAWS Facility		*	*		*
Castle AFB	16058	1582	Bomber Alert Facility		*	*		*
Castle AFB	16059	1560	Fighter Alert Facility		*	*		*
Davis-Monthan AFB	24017	140	Bomber/Tanker Alert Facility		*	*		*
Davis-Monthan AFB	24038	128	Fighter Alert Facility		*	*		*
Davis-Monthan AFB	24040	70	GLCM Training Facility		*	*		*
Dyess AFB	2122	4120	Bomber Alert Facility		*	*		*
Ellsworth AFB	11001	88106	Segregated Storage Igloo		*	*		*
Ellsworth AFB	11075	7504	Large Aircraft Maintenance Dock		*	*		*
Ellsworth AFB	11088	D11	Missile Launch Complex		*	*		*
Ellsworth AFB	11100	7430	Bomber Alert Facility		*	*		*
Fairchild AFB	14003	1467	Segregated Storage Igloo		*	*		*
Fairchild AFB	14004	2080	Bomber Alert Facility		*	*		*
Griffiss AFB	8010	106	Electronic Research Laboratory		*	*		*
Griffiss AFB	8029	700	Command Center		*	*		*
Holloman AFB	1001	900	Tracking and Documentation		*	*		*
Holloman AFB	1003	None	Launch Ramp		*	*	*	*
Holloman AFB	1004	1116, 1139, 1142	Blockhouse		*	*		*
Holloman AFB	1009	39710	Test Track		*	*		*
Holloman AFB	1010	39560	Blockhouse		*	*		*

Table 6.4 (Continued)

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Holloman AFB	1014	1200-1207	Medical Science Laboratory		*	*		*
Holloman AFB	1015	1062	Deployable Warning Complex		*	*		*
Holloman AFB	1018	1265	Weapons Guidance Laboratory		*	*		*
Holloman AFB	1019	1090	Fighter Alert Facility		*	*		*
Homestead AFB	4006	931	USAF Conference Center		*	*		*
K.I. Sawyer AFB	23001	400	Fighter Alert Facility		*	*		*
K.I. Sawyer AFB	23005	104	Bomber Alert Facility		*	*		*
K.I. Sawyer AFB	23129	108	Tanker Alert Facility		*	*		*
Langley AFB	22001	1362	Fighter Alert Facility		*	*		*
Little Rock AFB	25002	160	Bomber Alert Facility		*	*		*
Loring AFB	9003	8250	Large Aircraft Maintenance Dock		*	*		*
Loring AFB	9102	8280	Large Aircraft Maintenance Dock		*	*		*
Loring AFB	9125	8970	Bomber Alert Facility		*	*		*
Loring AFB	9146	260	Segregated Storage Igloo		*	*		*
MacDill AFB	5001	1105	Bomber Alert Facility		*	*		*
MacDill AFB	5003	501, 501A	Major Command Headquarters		*	*		*
MacDill AFB	5004	540	Major Command Headquarters		*	*		*
McConnell AFB	12052	978	Bomber/Tanker Alert Facility		*	*		*
Minot AFB	10014	475	SAGE Facility		*	*		*
Minot AFB	10015	718	Fighter Alert Facility		*	*		*
Minot AFB	10016	1085	Bomber Alert Facility		*	*		*
Minot AFB	10106	690	Missile Launch Facility Trainer		*	*		*
Mountain Home AFB	15059	2215	OTH-B Facility		*	*		*
Nellis AFB	6001	620	Command Center		*	*		*

Table 6.4 (Continued)

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Nellis AFB	6051	292	Maintenance Hangar		*	*		*
Nellis AFB	6066	201	RED FLAG Facility		*	*		*
Nellis AFB	6072	470	Threat Facility Collection		*	*		*
Nellis AFB	6130	282	Weapons School		*	*		*
Offutt AFB	7004	302	Major Command Headquarters		*	*		*
Offutt AFB	7008	463	Memorial Chapel		*	*		*
Offutt AFB	7009	464	Command and Control Alert Facility		*	*		*
Offutt AFB	7011	500	Major Command Headquarters		*	*		*
Offutt AFB	7028	524	Command and Control Alert Facility		*	*		*
Offutt AFB	7066	None	Low Frequency Transmitter Complex		*	*		*
Seymour Johnson AFB	21010	5015	Fighter Alert Facility		*	*		*
Seymour Johnson AFB	21035	2130	Bomber/Tanker Alert Facility		*	*		*
Whiteman AFB	13008	1100	Missile Launch Facility Trainer		*	*		*
Whiteman AFB	13054	1230	Missile Launch Control Facility		*	*		*
Whiteman AFB	13055	6	Bomber Alert Facility		*	*		*

Table 6.5 Resources Already Listed on the NRHP.

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Davis-Monthan AFB	24019	8004	Missile Launch Complex		*			
Langley AFB	22114	693	Major Command Headquarters		*			
Offutt AFB	7002	40	Command and Control Alert Facility		*			
Offutt AFB	7015	16	Commander Housing		*			
Pope AFB	20021	306	USAF TALC		*			

6.2.2 Literary Resources

During the base inventories, certain literary resources were selected for evaluation. These 55 resources ranged from base newspaper collections to office files to photograph collections. Although not evaluated for eligibility to the NRHP, these resources were evaluated for their importance and condition, and recommendations for future treatment and/or management actions were made. These recommendations are presented in Table 6.7.

In general, further documentation is recommended by inventorying the literary resource to determine the exact contents of the collection. Next, copying the collection is recommended to

Table 6.6 Preliminary Recommendations for Object Resources.

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Fairchild AFB	14116	Inside 3511	Museum Collection		*		*	
Minot AFB	10001	Inside 475	Museum Collection		*	*		
Nellis AFB	6139	None	Static Display		*			
Nellis AFB	6192	Inside 620	Artifact Collection		*			
Nellis AFB	6197	Inside 7	Artifact Collection		*	*	*	
Offutt AFB	7099	Inside 458	Museum Collection		*			

Table 6.7 Preliminary Recommendations for Literary Resources.

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Barksdale AFB	26117	Inside 3433	Documentary Collection		*	*	*	
Barksdale AFB	26118	Inside 5541	Documentary Collection		*	*	*	
Beale AFB	17116	Inside 2535	Architectural Drawing Files		*	*	*	
Cannon AFB	3114	Inside 352	Photograph Collection		*	*	*	
Cannon AFB	3115	Inside 352	Documentary Collection		*	*	*	
Cannon AFB	3116	Inside 1	Documentary Collection		*	*	*	
Castle AFB	16088	Inside 1200	Documentary Collection		*	*	*	
Davis-Monthan AFB	24182	Inside 2300	Documentary Collection		*	*	*	
Davis-Monthan AFB	24183	Inside 5315	Documentary Collection		*	*	*	
Ellsworth AFB	11105	Inside 8203	Documentary Collection		*	*	*	
Ellsworth AFB	11109	Inside 8203	Architectural Drawing Files		*	*	*	
Fairchild AFB	14115	Inside 2451	Photograph Collection		*	*	*	
Fairchild AFB	14117	Inside 2285	Office Files		*			
Fairchild AFB	14118	Inside 2451	Documentary Collection		*	*	*	
Holloman AFB	1017	Inside 55	Architectural Drawing Files		*	*	*	

Table 6.7 (Continued)

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Homestead AFB	4007	Inside 160	Documentary Collection		*	*	*	
Howard AFB	27122	Inside 703	Documentary Collection		*	*	*	
Howard AFB	27123	Inside 1	Documentary Collection		*	*	*	
K.I. Sawyer AFB	23130	Inside 531	Architectural Drawing Files		*	*	*	
Langley AFB	22191	Inside 621	Documentary Collection		*	*	*	
Little Rock AFB	25109	Inside 370	Base Newspaper Collection		*	*	*	
Little Rock AFB	25110	Inside 528	Documentary Collection		*	*	*	
Little Rock AFB	25111	Inside 380	Office Files		*			
MacDill AFB	5006	Inside 30	Documentary Collection		*	*	*	
MacDill AFB	5007	Inside 299	Documentary Collection		*	*	*	
MacDill AFB	5008	Inside 299	Base Newspaper Collection		*	*	*	
MacDill AFB	5009	Inside 30	Map Files		*	*	*	
McConnell AFB	12138	Inside 948	Documentary Collection		*	*	*	
McConnell AFB	12139	Inside 384	Documentary Collection		*	*	*	
Minot AFB	10011	Inside 450	Architectural Drawing Files		*	*	*	

Table 6.7 (Continued)

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Minot AFB	10012	Inside 450	Architectural Drawing Files		*	*	*	
Minot AFB	10013	Inside 450	Architectural Drawing Files		*	*	*	
Moody AFB	19136	Inside 743	Documentary Collection		*	*	*	
Moody AFB	19137	Inside 918	Documentary Collection		*	*	*	
Mountain Home AFB	15133	Inside 512	Office Files		*			
Mountain Home AFB	15134	Inside 512	Base Newspaper Collection		*	*	*	
Mountain Home AFB	15135	Inside 1300	Documentary Collection		*	*	*	
Nellis AFB	6188	Inside 812	Documentary Collection		*	*	*	
Nellis AFB	6189	Inside 812	Documentary Collection		*	*	*	
Nellis AFB	6190	Inside 812	Photograph Collection		*	*	*	
Nellis AFB	6191	Inside 620	Documentary Collection		*	*	*	
Nellis AFB	6196	Inside 7	Documentary Collection		*	*	*	
Offutt AFB	7094	Inside 301	Architectural Drawing Files		*		*	
Offutt AFB	7095	Inside 301	Documentary Collection		*	*	*	
Offutt AFB	7096	Inside 301	Map Files		*	*	*	

Table 6.7 (Continued)

Base Name	Resource No.	Real Property No.	Property Type	Management Recommendations				
				No Further Work	Stewardship	Further Documentation	Preservation/Conservation/Repair	National Register Listing
Offutt AFB	7097	Inside 301	Photograph Collection		*		*	
Offutt AFB	7098	Inside 450	Office Files		*			
Offutt AFB	7100	Inside 301	Photograph Collection		*		*	
Pope AFB	20102	Inside 280	Documentary Collection		*	*	*	
Pope AFB	20106	Inside 280	Photograph Collection		*	*	*	
Seymour Johnson AFB	21125	Inside 3300	Documentary Collection		*	*	*	
Seymour Johnson AFB	21126	Inside 2902	Documentary Collection		*	*	*	
Shaw AFB	18129	Inside 250	Documentary Collection		*	*	*	
Whiteman AFB	13056	Inside 705	Documentary Collection		*	*	*	
Whiteman AFB	13116	Inside 1000	Documentary Collection		*	*	*	

ensure against loss. Finally, it is recommended that the original collection be sent to a permanent curatorial facility for conservation and stewardship, with the copies kept at the respective base for its use. If a base is being closed or realigned, the copying step was removed from the recommendations.

6.3 APPLICATION OF PRIORITY MATRIX

As discussed in Section 3.2.4, a priority matrix score was computed for each evaluated resource (Table 6.8). This score, a combination of the importance of the resource within the Cold War context, the integrity of the resource, and any threats posed to the resource, calculates the urgency for further treatment and/or management attention for that resource. The higher the score, the higher the priority for attention to that resource. It should be noted that the best examples of each property type are not necessarily ranked the highest. For example, a pristine bomber alert facility that has no immediate threats could be ranked lower than a bomber alert facility with less integrity that is highly threatened.

The total matrix score can range between 6 and 24; however, the study scores ranged between 11 and 23. The range of scores for the 142 evaluated resources is very limited with 108 resources, or 76%, scored between 16 and 21 (Figure 6.1). In general, the literary resources scored lower and real property resources scored higher (Figure 6.2). This is probably due to the more direct association of real property resources such as buildings and structures with the Cold War context. For the 55 literary resources, 16 was the midpoint score, with 56% of the resources scored between 16 and 18. For the 87 real property resources, 18 was the midpoint score, with 56% of the resources falling between the scores of 19 and 21.

The problems with consistency identified in Section 3.4 apply to the priority matrix scoring. Individual team members and the teams themselves each had a unique outlook on the resources they encountered, and this outlook is reflected in the priority matrix scores. This uniqueness

Table 6.8 Priority Matrix Scores for the Evaluated Resources in Order of Priority.

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
23	K.I. Sawyer AFB	23005	104	Bomber Alert Facility	4	4	3	4	4	4
23	Loring AFB	9146	260	Segregated Storage Igloo	4	4	4	3	4	4
22	Castle AFB	16059	1560	Fighter Alert Facility	4	4	3	3	4	4
22	Castle AFB	16058	1582	Bomber Alert Facility	4	4	3	3	4	4
22	K.I. Sawyer AFB	23129	108	Tanker Alert Facility	4	4	2	4	4	4
22	Langley AFB	22114	693	Major Command Headquarters	4	4	4	4	4	2
22	Minot AFB	10017	1040	Tanker Alert Facility	4	4	3	4	4	3
22	Minot AFB	10015	718	Fighter Alert Facility	4	4	3	4	4	3
22	Offutt AFB	7066	None	Low Frequency Transmitter Complex	4	4	2	4	4	4
22	Whiteman AFB	13055	6	Bomber Alert Facility	4	4	3	3	4	4
21	Ellsworth AFB	11095	606	Tanker Alert Facility	4	4	4	3	4	2
21	Ellsworth AFB	11100	7430	Bomber Alert Facility	4	4	3	4	4	2
21	Ellsworth AFB	11001	88106	Segregated Storage Igloo	4	3	4	4	4	2
21	Ellsworth AFB	11109	Inside 8203	Architectural Drawing Files	4	3	4	4	4	2
21	Fairchild AFB	14002	2150	Engine Test Building	3	4	3	3	4	4
21	K.I. Sawyer AFB	23001	400	Fighter Alert Facility	4	4	3	4	2	4
21	Langley AFB	22001	1362	Fighter Alert Facility	4	4	3	3	4	3
21	Little Rock AFB	25002	160	Bomber Alert Facility	4	4	3	4	4	2
21	Loring AFB	9125	8970	Bomber Alert Facility	4	4	3	4	4	2

Table 6.8 (Continued)

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
21	Minot AFB	10016	1085	Bomber Alert Facility	4	4	3	4	4	2
21	Minot AFB	10014	475	SAGE Facility	4	4	3	4	3	3
21	Mountain Home AFB	15001	291	Bomber Alert Facility	4	4	3	4	4	2
21	Nellis AFB	6072	470	Threat Facility Collection	4	4	4	4	4	1
20	Barksdale AFB	26005	7378	Segregated Storage Igloo	4	2	4	4	4	2
20	Barksdale AFB	26001	6067	Bomber Alert Facility	4	4	3	4	4	1
20	Beale AFB	17002	2145	SAGE Facility	4	4	3	4	3	2
20	Beale AFB	17059	5760	PAVE PAWS Facility	4	4	2	4	4	2
20	Beale AFB	17103	1200	Bomber Alert Facility	4	4	3	3	3	3
20	Dyess AFB	2122	4120	Bomber Alert Facility	4	4	3	3	4	2
20	Ellsworth AFB	11075	7504	Large Aircraft Maintenance Dock	4	3	4	4	4	1
20	Ellsworth AFB	11088	D11	Missile Launch Complex	4	4	3	4	4	1
20	Griffiss AFB	8113	793	Bomber Alert Facility	4	4	3	4	4	1
20	Griffiss AFB	8010	106	Electronic Research Laboratory	4	3	4	4	4	1
20	Holloman AFB	1010	39560	Blockhouse	4	3	4	4	4	1
20	Holloman AFB	1001	900	Tracking and Documentation	4	3	3	4	4	2
20	Holloman AFB	1009	39710	Test Track	4	3	4	4	4	1
20	Holloman AFB	1004	1116, 1139, 1142	Blockhouses	4	3	4	4	4	1
20	Holloman AFB	1003	None	Launch Ramp	4	3	4	4	3	2
20	Homestead AFB	4006	931	USAF Conference Center	4	4	2	3	4	3

Table 6.8 (Continued)

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
20	Howard AFB	27081	812	IAAFA Headquarters	4	4	4	4	3	1
20	Loring AFB	9102	8280	Large Aircraft Maintenance Dock	3	3	3	4	4	3
20	Nellis AFB	6051	292	Maintenance Hangar	3	4	4	4	4	1
20	Offutt AFB	7004	302	Major Command Headquarters	4	4	4	3	4	1
20	Offutt AFB	7012	501	Major Command Post	4	4	3	4	1	4
20	Seymour Johnson AFB	21035	2130	Bomber/Tanker Alert Facility	4	4	3	4	4	1
19	Cannon AFB	3114	Inside 352	Photograph Collection	3	2	4	3	4	3
19	Davis-Monthan AFB	24019	8004	Missile Launch Complex	4	4	3	3	4	1
19	Davis-Monthan AFB	24038	128	Fighter Alert Facility	4	4	3	3	4	1
19	Davis-Monthan AFB	24017	140	Bomber/Tanker Alert Facility	4	4	3	3	4	1
19	Fairchild AFB	14004	2080	Bomber Alert Facility	4	4	3	4	3	1
19	Fairchild AFB	14003	1467	Segregated Storage Igloo	4	4	3	3	4	1
19	Homestead AFB	4001	701	Bomber Alert Facility	4	4	3	3	1	4
19	Loring AFB	9003	8250	Large Aircraft Maintenance Dock	3	3	4	3	4	2
19	MacDill AFB	5001	1105	Bomber Alert Facility	4	4	3	3	4	1
19	Nellis AFB	6001	620	Command Center	4	4	2	4	4	1
19	Nellis AFB	6190	Inside 812	Photograph Collection	4	4	2	3	4	2
19	Offutt AFB	7011	500	Major Command Headquarters	4	4	3	4	3	1
19	Offutt AFB	7009	464	Command and Control Alert Facility	4	4	2	4	4	1

Table 6.8 (Continued)

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
19	Offutt AFB	7028	524	Command and Control Alert Facility	4	4	2	4	4	1
19	Seymour Johnson AFB	21010	5015	Fighter Alert Facility	4	4	3	3	4	1
19	Whiteman AFB	13054	1230	Missile Launch Control Facility	4	4	2	4	4	1
19	Whiteman AFB	13008	1100	Missile Launch Facility Trainer	3	4	2	3	4	3
18	Barksdale AFB	26002	6225	Bomber Alert Facility	4	4	2	4	2	2
18	Cannon AFB	3115	Inside 352	Documentary Collection	3	2	4	3	4	2
18	Davis-Monthan AFB	24182	Inside 2300	Documentary Collection	3	4	4	2	4	1
18	Ellsworth AFB	11105	Inside 8203	Documentary Collection	3	2	4	2	4	3
18	Griffiss AFB	8029	700	Command Center	4	4	1	4	4	1
18	Holloman AFB	1019	1090	Fighter Alert Facility	4	4	2	3	4	1
18	Homestead AFB	4007	Inside 160	Documentary Collection	4	4	2	2	4	2
18	Howard AFB	27122	Inside 703	Documentary Collection	3	4	4	2	4	1
18	K.I. Sawyer AFB	23036	708	SAGE Facility	4	4	2	4	1	3
18	K.I. Sawyer AFB	23130	Inside 531	Architectural Drawing Files	3	2	4	2	4	3
18	Langley AFB	22191	Inside 621	Documentary Collection	3	2	4	2	4	3
18	MacDill AFB	5003	501, 501A	Major Command Headquarters	4	4	2	3	4	1
18	McConnell AFB	12052	978	Bomber/Tanker Alert Facility	4	4	2	3	4	1
18	Nellis AFB	6189	Inside 812	Documentary Collection	3	2	4	3	4	2
18	Nellis AFB	6066	201	RED FLAG Facility	4	4	2	3	4	1

Table 6.8 (Continued)

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
18	Offutt AFB	7015	16	Commander Housing	3	4	4	3	3	1
18	Offutt AFB	7100	Inside 301	Photograph Collection	4	4	2	3	4	1
18	Pope AFB	20021	306	USAF TALC	3	4	3	3	4	1
18	Whiteman AFB	13116	Inside 1000	Documentary Collection	3	4	4	2	4	1
17	Barksdale AFB	26118	Inside 5541	Documentary Collection	3	4	4	1	4	1
17	Davis-Monthan AFB	24040	70	GLCM Training Facility	4	4	1	3	4	1
17	Davis-Monthan AFB	24183	Inside 5315	Documentary Collection	3	2	4	3	4	1
17	Fairchild AFB	14117	Inside 2285	Office Files	2	4	4	2	4	1
17	Holloman AFB	1018	1265	Weapons Guidance Laboratory	4	3	3	4	2	1
17	Holloman AFB	1015	1062	Deployable Warning Complex	4	4	1	3	4	1
17	Holloman AFB	1014	1200 - 1207	Medical Science Laboratory	4	3	2	3	4	1
17	Holloman AFB	1012	901	Bare Base Installation	4	4	2	3	3	1
17	MacDill AFB	5004	540	Major Command Headquarters	4	4	1	3	4	1
17	MacDill AFB	5006	Inside 30	Documentary Collection	2	2	4	2	4	3
17	Nellis AFB	6130	282	Weapons School	3	4	2	3	4	1
17	Nellis AFB	6188	Inside 812	Documentary Collection	3	2	4	3	4	1
17	Nellis AFB	6191	Inside 620	Documentary Collection	3	4	2	3	4	1
17	Offutt AFB	7098	Inside 450	Office Files	3	2	4	3	4	1
17	Offutt AFB	7099	Inside 458	Museum Collection	3	3	2	3	4	2
17	Whiteman AFB	13056	Inside 705	Documentary Collection	3	2	4	2	4	2

Table 6.8 (Continued)

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
16	Barksdale AFB	26117	Inside 3433	Documentary Collection	3	2	4	2	4	1
16	Dyess AFB	2002	5110	Large Aircraft Maintenance Dock	4	3	1	3	4	1
16	Fairchild AFB	14118	Inside 2451	Documentary Collection	2	2	4	3	4	1
16	Howard AFB	27123	Inside 1	Documentary Collection	3	2	4	3	3	1
16	Little Rock AFB	25111	Inside 380	Office Files	3	4	2	2	4	1
16	MacDill AFB	5009	Inside 30	Map Files	2	2	4	2	4	2
16	Minot AFB	10001	Inside 475	Museum Collection	3	3	3	2	4	1
16	Minot AFB	10106	690	Missile Launch Facility Trainer	3	3	2	3	4	1
16	Moody AFB	19137	Inside 918	Documentary Collection	3	2	4	2	4	1
16	Mountain Home AFB	15059	2215	OTH-B Facility	4	3	1	3	4	1
16	Mountain Home AFB	15135	Inside 1300	Documentary Collection	2	2	4	3	4	1
16	Offutt AFB	7008	463	Memorial Chapel	4	1	3	3	4	1
16	Offutt AFB	7007	453	Flight Simulator	3	3	2	3	4	1
16	Offutt AFB	7002	40	Command and Control Alert Facility	3	4	2	3	3	1
16	Offutt AFB	7014	542 /566 /598	Satellite Communications	3	3	2	3	4	1
16	Offutt AFB	7095	Inside 301	Documentary Collection	2	2	4	3	4	1
16	Offutt AFB	7094	Inside 301	Architectural Drawing Files	2	2	4	3	4	1
16	Offutt AFB	7097	Inside 301	Photograph Collection	2	2	4	3	4	1
16	Seymour Johnson AFB	21125	Inside 3300	Documentary Collection	2	2	4	3	4	1
16	Seymour Johnson AFB	21126	Inside 2902	Documentary Collection	2	4	3	2	4	1

Table 6.8 (Continued)

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
16	Shaw AFB	18129	Inside 250	Documentary Collection	3	2	4	1	4	2
15	Beale AFB	17116	Inside 2535	Architectural Drawing Files	2	1	3	2	4	3
15	Cannon AFB	3116	Inside 1	Documentary Collection	3	3	2	2	4	1
15	Fairchild AFB	14115	Inside 2451	Photograph Collection	2	2	4	2	4	1
15	Holloman AFB	1017	Inside 55	Architectural Drawing Files	3	2	4	2	3	1
15	Little Rock AFB	25110	Inside 528	Documentary Collection	3	2	3	2	4	1
15	Minot AFB	10013	Inside 450	Architectural Drawing Files	2	2	3	2	4	2
15	Minot AFB	10012	Inside 450	Architectural Drawing Files	2	2	3	2	4	2
15	Offutt AFB	7096	Inside 301	Map Files	2	2	3	3	4	1
15	Pope AFB	20102	Inside 280	Documentary Collection	2	2	3	2	4	2
14	McConnell AFB	12139	Inside 384	Documentary Collection	3	0	4	2	4	1
14	McConnell AFB	12138	Inside 948	Documentary Collection	3	0	4	2	4	1
14	Minot AFB	10011	Inside 450	Architectural Drawing Files	2	2	3	2	3	2
14	Moody AFB	19136	Inside 743	Documentary Collection	3	1	4	1	4	1
14	Mountain Home AFB	15133	Inside 512	Office Files	4	4	2	2	1	1
14	Nellis AFB	6196	Inside 7	Documentary Collection	2	4	1	2	4	1
14	Offutt AFB	7006	416, 417	Unaccompanied Housing	2	1	3	2	2	4
14	Offutt AFB	7003	301	Global Weather Service	3	3	2	3	2	1
13	Castle AFB	16088	Inside 1200	Documentary Collection	2	2	1	1	4	3

Table 6.8 (Continued)

Total Score for Priority Matrix	Base Name	Resource No.	Real Property No.	Property Type	Cold War Relationship - National Recognition	Theme Relationship	Temporal Phase Relationship	Level of Importance	Percent Historic Fabric	Severity of Threats
13	Fairchild AFB	14116	Inside 3511	Museum Collection	2	1	4	1	4	1
13	Mountain Home AFB	15134	Inside 512	Base Newspaper Collection	2	1	2	1	4	3
12	Little Rock AFB	25109	Inside 370	Base Newspaper Collection	3	1	3	1	3	1
12	MacDill AFB	5008	Inside 299	Base Newspaper Collection	2	1	4	1	3	1
12	MacDill AFB	5007	Inside 299	Documentary Collection	2	1	4	2	2	1
11	Pope AFB	20106	Inside 280	Photograph Collection	2	2	1	1	4	1

translated into inconsistencies in scoring similar resources between different bases. Thus, one needs to proceed with caution when applying the scores on a study-wide basis. However, as each base was in itself inventoried by only one team, the priority matrix scores are consistent between the resources evaluated within each base. Use of the priority matrix scores as a basis for intra-base treatment and/or management decisions is therefore valid.

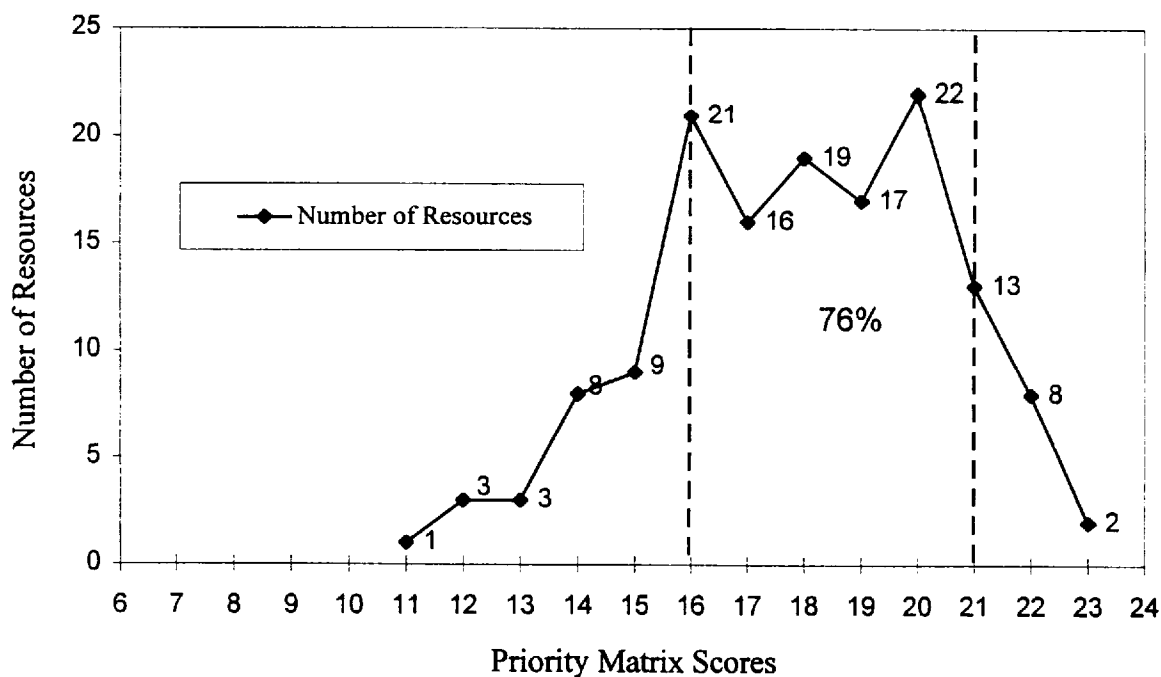


Figure 6.1 Range of Priority Matrix Scores for All Evaluated Resources.

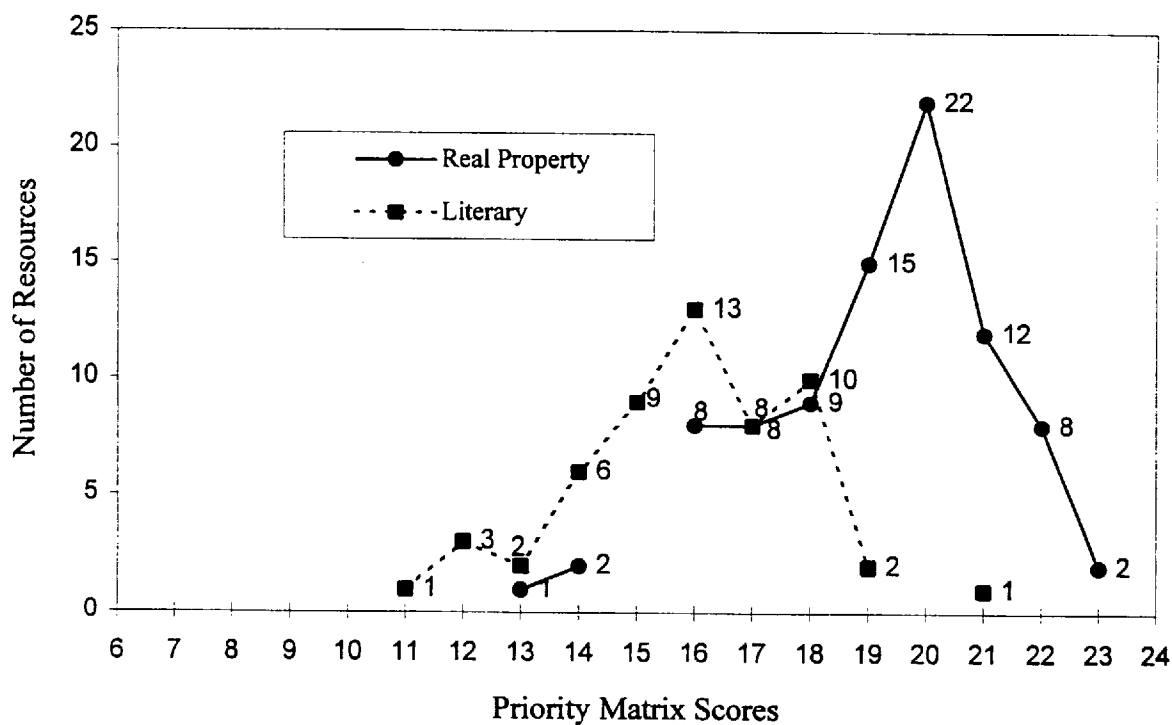


Figure 6.2 Range of Priority Matrix Scores for Literary Resources and Real Property Resources.

7.0 MANAGEMENT CONSIDERATIONS

7.1 WHY PRESERVATION?

Preservation of the material remains of the past is essential to possessing a thorough knowledge of that past. While the interpretations of history and of historical resources will change through time to allow for current prejudices, the resources themselves, if preserved, do not change, and thereby provide a solid link with the reality of historical fact. As long as historical resources exist, they can provide an extensive body of data on both human responses to the exigencies of life and the results of these responses to guide us when deciding how to respond to such exigencies in the future. As the old adage goes, "those who do not know the past are doomed to repeat it." In addition, historical resources act as mnemonic devices of the past, not only imparting information but also triggering emotion in the viewer toward the circumstances of that past. As such, historical resources occupy a valued role in the heritage of the United States.

The Cold War shaped the lives and expectations of millions of Americans, influenced the development of U.S. culture and society, and dominated domestic and international military, political, and diplomatic decisions and events over a forty-five year period. These effects are still apparent in all realms of the United States. Cold War tangible resources form a geographic archive which can help in shaping a contextual history of this era and can enrich our understanding of how the United States developed and emerged during this trying time.

By preserving Cold War era resources, the Air Force can preserve its heritage and educate its personnel on the legacy they inherit. Many of those who enter the service in future years will not remember the events or missions of the Cold War or the Air Force's role in world events during that era. An eighteen year old airman entering the service in 1995 was only 12 years old when the Cold War concluded in 1989. The legacy of the Cold War is important to the Air Force, and can be handed down to future generations of Air Force personnel through the preservation of historic resources.

In addition to the Air Force community, the general public would gain from the educational opportunities provided through the preservation of Cold War resources. Interpretation of specific resources or groups of resources would allow the Air Force to illustrate the pivotal roles that it played throughout the Cold War era, thereby providing insight into the whole of Cold War history to the public.

7.2 THE PUBLIC AND COLD WAR RESOURCES

Many of the Cold War resources evaluated in this study would make interesting and educational attractions for civilian visitors. Although public access to historic resources is generally desirable, the public can "access" historic resources in other ways. For example, a building in active use and not suited for public visitation could be interpreted and presented to the public in another fashion. Interpretation might consist of a presentation of photos, drawings, or videos of a resource, or a display of artifact collections from a resource. These types of presentations could be made on base in a museum or heritage center, or could be mobilized to other rural or urban venues such as fairs, museums, libraries, or schools.

The geographic location of a particular base may influence preservation efforts for its Cold War resources. For instance, a base such as the now closed Loring AFB in northeastern Maine contains numerous Cold War resources that would make excellent interpreted resources for public education and enjoyment. However, the base's remote location would seemingly make it a poor choice for preservation due to the low number of visitors who might be expected to visit the base.

On the other hand, preservation might be less controversial and ultimately more successful on a remote base since outside demand for base property and encroachment by surrounding development would be lower than in a metropolitan area. Furthermore, a rural community might hold the historic resources on a base in their area in higher regard than the residents of an urban

area because of the stronger economic and social effects of the base on that community. Preserving resources for visitation might also have a greater impact on the economy of a small community than it would in a heavily populated area.

Location near already developed tourist attractions is another concern when making preservation decisions. If public visitation is desired, a certain number of potential visitors are already present if the site is located near other area attractions. Also, the presence of multiple resources together on one base is more likely to attract visitors than the presence of just one resource.

7.3 NOMINATION OF RESOURCES TO THE NRHP

Nomination to the NRHP of resources that have been evaluated as eligible, potentially eligible, or future eligible is recommended. However, there are three distinct approaches that can be used when designing the nominations. The approach chosen will in turn affect the management of these 75 resources (62 eligible resources, six potentially eligible resources, and seven future eligible resources).

7.3.1 Individual Resource Nominations

The resources could be nominated to the NRHP as separate historic properties. A separate nomination for each resource would have to be prepared for submission to the NRHP. This approach would be implemented on individual bases rather than through a nationwide effort of property nominations. Management of the resources would then continue on a singular basis.

7.3.2 Historic District Nominations

The NPS defines a historic district as a group of resources that "possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically in plan or physical development" (NPS 1990:4). In other words, a historic

district is a collection of resources that share common features and are associated with the same period and events in history.

Several bases possess groups of resources that could be nominated to the NRHP as historic districts. One nomination would be prepared for each district, encompassing all resources included in that defined district. This approach would also be implemented on an individual bases rather than nominating through a nationwide effort. However, management of these resources would be somewhat simplified, in that a number of resources on a base would be considered together under one district.

7.3.3 Multiple Property Nominations

A multiple property listing includes related resources that share themes, trends, and patterns of history (NPS 1991b:2). It differs from historic districts in that it may cover any geographic scale --local, regional, state, or national. The process consists of two steps:

- 1) completing a documentation form which denotes the historic contexts shared by the resources and the property types that illustrate these contexts, and
- 2) registering individual resources or historic districts to the listing.

These two things together constitute a multiple property submission. This type of listing is designed to simplify the nomination of similar or related resources and is geared toward the nomination of resources in the future. Information common to the group of resources is presented once in the first step, which establishes the listing, while information specific to each individual resource is used in the second step. Individual resources can be nominated at any time once the multiple property listing has been established.

The multiple property listing would be established at the national level, with individual bases providing documentation on resources that would fit into this listing. Management of these resources would be simplified as they would be considered together under one listing.

7.4 ASSOCIATED RESOURCES

For the purposes of this study, associated resources are those resources that were not evaluated but which are directly associated with a resource that was evaluated. Associated resources have a direct connection with the function of the evaluated resource. An evaluated resource can, and often does, have more than one associated resource; however, an associated resource is usually associated with only one evaluated resource. An example is an evaluated resource, such as a bomber alert facility, that has four associated resources, such as a "christmas tree" alert apron, a guardhouse, a building for conjugal and family visits, and a recreation area reserved for personnel on alert duty.

During the inventory of the bases, resources known to be associated with evaluated resources were identified and recorded on the Mariah Property Management Form when the evaluation was conducted. Preliminary recommendations presented in the individual base reports focus solely on the evaluated resources themselves; associated resources are merely mentioned. However, when developing management and preservation plans that address the evaluated resources, especially when education is one of the goals, associated resources must also come under consideration.

Associated resources, though not considered exceptionally important with regard to the Cold War context and the NRHP criteria, are valuable for expanding the understanding and interpretation of evaluated resources. They add a certain depth of perspective, and greatly help to place the evaluated resource within its own specific context. The two kinds of resource, evaluated and associated, form a system, with the evaluated resource at the center and the associated resources revolving around it. Instead of trying to understand the Cold War significance and function of an evaluated resource in and of itself, one is able to assimilate information from other resources also, and thus personal interpretation expands from the evaluated resource to the system.

The programmatic recommendations presented in Chapter 8.0 concentrate on the evaluated resources. However, in the implementation of these recommendations, resources associated with those evaluated resources must be taken into account and be made a part of any management and preservation plans.

7.5 PRESERVATION RANKING SYSTEM

In order to identify the best examples of each real property type, another ranking system was devised after all base visits were completed. It was hoped that this new ranking system would help in defining preservation recommendations for resources evaluated in this study, regardless of threats to the resources. Only those 68 resources identified as eligible or potentially eligible to the NRHP are ranked. Resources that were evaluated as future eligible, ineligible, or already listed are not ranked since they do not currently qualify for NRHP consideration or are already being actively preserved. Only real property buildings and structures are considered since object and literary resources were not evaluated for eligibility.

Using photographs of each evaluated resource and the base reports as references, each two-person field team ranked the resources they evaluated from 1 to 10, with scores of "10" being the best example. Criteria for scoring a resource included integrity; representativeness of the property type within the Cold War context; and whether or not the resource would, in the opinion of the field team, make a good candidate for preservation. A score of "10" is reserved for resources that are in pristine condition and appear to be as they were during the Cold War. For example, a Bomber Alert Facility that is maintained, has structural features such as rapid egress tubes, is still used periodically for alert training, and possesses only minor renovations would probably receive a "9." In contrast, a Tanker Alert Facility in average condition, with no exterior features to make it recognizable as a Cold War structure, would likely receive a "4."

The results of this ranking are presented in Table 7.1. Resources that received a score of "10" include the high speed Test Track and Blockhouse at Holloman AFB, the PAVE PAWS Facility

Table 7.1 Preservation Ranking of Eligible and Potentially Eligible Resources.

Ranking	Property Type	Base Name	Resource No.	Real Property No.
10	Blockhouse	Holloman AFB	1010	39560
10	Memorial Chapel	Offutt AFB	7008	463
10	Missile Launch Complex	Ellsworth AFB	11088	D11
10	PAVE PAWS Facility	Beale AFB	17059	5760
10	Test Track	Holloman AFB	1009	39710
10	Threat Facility Collection	Nellis AFB	6072	470
9	Bomber Alert Facility	Dyess AFB	2122	4120
9	Bomber Alert Facility	K.I. Sawyer AFB	23005	104
9	Bomber Alert Facility	Minot AFB	10016	1085
9	Bomber/Tanker Alert Facility	Seymour Johnson AFB	21035	2130
9	Fighter Alert Facility	Langley AFB	22001	1362
9	Fighter Alert Facility	Minot AFB	10015	718
9	Large Aircraft Maintenance Dock	Ellsworth AFB	11075	7504
9	Launch Ramp	Holloman AFB	1003	None
9	Low Frequency Transmitter Complex	Offutt AFB	7066	None
9	Major Command Headquarters	Offutt AFB	7011	500
9	Major Command Post	Offutt AFB	7012	501
9	Missile Launch Control Facility	Whiteman AFB	13054	1230
9	Missile Launch Facility Trainer	Whiteman AFB	13008	1100
9	Rome Laboratory Headquarters	Griffiss AFB	8010	106
9	SAGE Facility	Minot AFB	10014	475
9	Segregated Storage Igloo	Barksdale AFB	26005	7378
9	Segregated Storage Igloo	Ellsworth AFB	11001	88106
9	Segregated Storage Igloo	Loring AFB	9146	260
9	Tracking and Documentation	Holloman AFB	1001	900
8	Blockhouse	Holloman AFB	1004	1116, 1139, 1142
8	Bomber Alert Facility	Barksdale AFB	26001	6067
8	Bomber Alert Facility	Castle AFB	16058	1582
8	Bomber Alert Facility	Griffiss AFB	8113	793
8	Bomber Alert Facility	Loring AFB	9125	8970
8	Bomber Alert Facility	MacDill AFB	5001	1105
8	Bomber Alert Facility	Mountain Home AFB	15001	291
8	Command and Control Alert Facility	Offutt AFB	7028	524
8	Fighter Alert Facility	Castle AFB	16059	1560
8	Fighter Alert Facility	Davis-Monthan AFB	24038	128
8	Fighter Alert Facility	K.I. Sawyer AFB	23001	400
8	Maintenance Hangar	Nellis AFB	6051	292
8	Major Command Headquarters	Offutt AFB	7004	302
8	Missile Launch Facility Trainer	Minot AFB	10106	690
8	Segregated Storage Igloo	Fairchild AFB	14003	1467
8	Tanker Alert Facility	K.I. Sawyer AFB	23129	108
8	Tanker Alert Facility	Minot AFB	10017	1040

Table 7.1 (Continued)

Ranking	Property Type	Base Name	Resource No.	Real Property No.
7	Bomber Alert Facility	Ellsworth AFB	11100	7430
7	Bomber Alert Facility	Fairchild AFB	14004	2080
7	Bomber/Tanker Alert Facility	Davis-Monthan AFB	24017	140
7	Command and Control Alert Facility	Offutt AFB	7009	464
7	Command Center	Griffiss AFB	8029	700
7	Command Center	Nellis AFB	6001	620
7	Fighter Alert Facility	Holloman AFB	1019	1090
7	IAAFA Headquarters	Howard AFB	27081	812
7	Medical Science Laboratory	Holloman AFB	1014	1200 - 1207
7	USAF Conference Center	Homestead AFB	4006	931
6	Bomber Alert Facility	Little Rock AFB	25002	160
6	Bomber Alert Facility	Whiteman AFB	13055	6
6	Fighter Alert Facility	Seymour Johnson AFB	21010	5015
6	Large Aircraft Maintenance Dock	Loring AFB	9003	8250
6	Large Aircraft Maintenance Dock	Loring AFB	9102	8280
6	Major Command Headquarters	MacDill AFB	5004	540
6	Major Command Headquarters	MacDill AFB	5003	501, 501A
6	OTH-B Facility	Mountain Home AFB	15059	2215
6	RED FLAG Facility	Nellis AFB	6066	201
6	Weapons School	Nellis AFB	6130	282
5	Bomber/Tanker Alert Facility	McConnell AFB	12052	978
5	GLCM Training Facility	Davis-Monthan AFB	24040	70
5	Weapons Guidance Laboratory	Holloman AFB	1018	1265
4	Bomber Alert Facility	Barksdale AFB	26002	6225
4	Tanker Alert Facility	Ellsworth AFB	11095	606
3	Deployable Warning Complex	Holloman AFB	1015	1062

at Beale AFB, the Threat Facility Collection at Nellis AFB, the SAC Memorial Chapel at Offutt AFB, and a Missile Launch Complex at Ellsworth AFB. In general, high scoring resources exhibit intact structural features or characteristics that make them easily recognizable, and therefore easily interpreted, as Cold War era resources. Therefore, these resources are good candidates for preservation and education.

8.0 FINAL PROGRAMMATIC RECOMMENDATIONS

Based on the considerations presented in the previous section, it is recommended that a combination of the three NRHP nomination approaches and the preliminary recommendations be implemented in the management and preservation of the evaluated resources. It is further recommended that these resources be developed for public education whenever possible, either through direct access to the resource or by interpreting the resource through photographs and other forms of documentation.

8.1 MULTIPLE PROPERTY LISTING

It is recommended that a multiple property listing be established under which SAC, TAC, MAC, and ADC Cold War resources that are determined eligible can be registered. The documentation form that establishes a listing should be prepared and presented to the Keeper of the National Register by ACC. The listing should use the historic context written for the Cold War study as a basis for its context and the property types evaluated during this study should be the range of property types eligible for inclusion under the listing.

Once the listing is established, the individual installations should nominate resources eligible to the NRHP under their purview using this listing. In this approach, resources that share a common history, context, purpose, or some other similarity will be grouped together under one heading, making management of the resources easier. As resources are evaluated for eligibility in the future, they can be added easily under this listing, allowing them to be compared with other resources of the same property type.

8.2 ELIGIBLE AND POTENTIALLY ELIGIBLE RESOURCES

All resources preliminarily recommended as eligible or potentially eligible to the NRHP should be more fully documented and nominated under the multiple property listing. This should be

accomplished by the individual installations using the base reports produced by this study as guides. Other preliminary recommendations such as stewardship and preservation/conservation/repair should be followed for each nominated resource, at least until the nomination has been reviewed by the Keeper of the NRHP and a final determination has been made. Nominations produced by the installations should use a combination of the historic district and individual nomination approaches.

8.2.1 Historic Districts

Using historic district nominations when possible will not only reduce the amount of effort needed to complete the nomination of eligible resources but will also make management of the resources easier by grouping them under one nomination. Seven bases were chosen for districts based upon the presence of a number of exceptionally important resources and a continuity of theme between those resources (Figure 8.1).

8.2.1.1 Historic District at Ellsworth AFB

Ellsworth AFB, located near Rapid City, South Dakota, possesses a number of Cold War era resources that are related to strategic deterrence. These include a Bomber Alert Facility, a Tanker Alert Facility, an architecturally unique "Arch Hangar" originally designed to accommodate B-36 bombers, and several structures in the weapons storage area that feature blast-resistant construction which were used during the early years of the Cold War by the AEC. In addition to these resources, a Minuteman II LCF and LF located some distance from the main base are proposed for acquisition by the National Park Service for interpretive purposes. A Minuteman II missile maintenance facility located on the main base is already open for tours and is interpreted by the South Dakota Air and Space Museum on base.

Ellsworth AFB played a major role during the Cold War and retains many resources that embody that role. The base is located near the tourist attractions of Mt. Rushmore and the Black Hills,

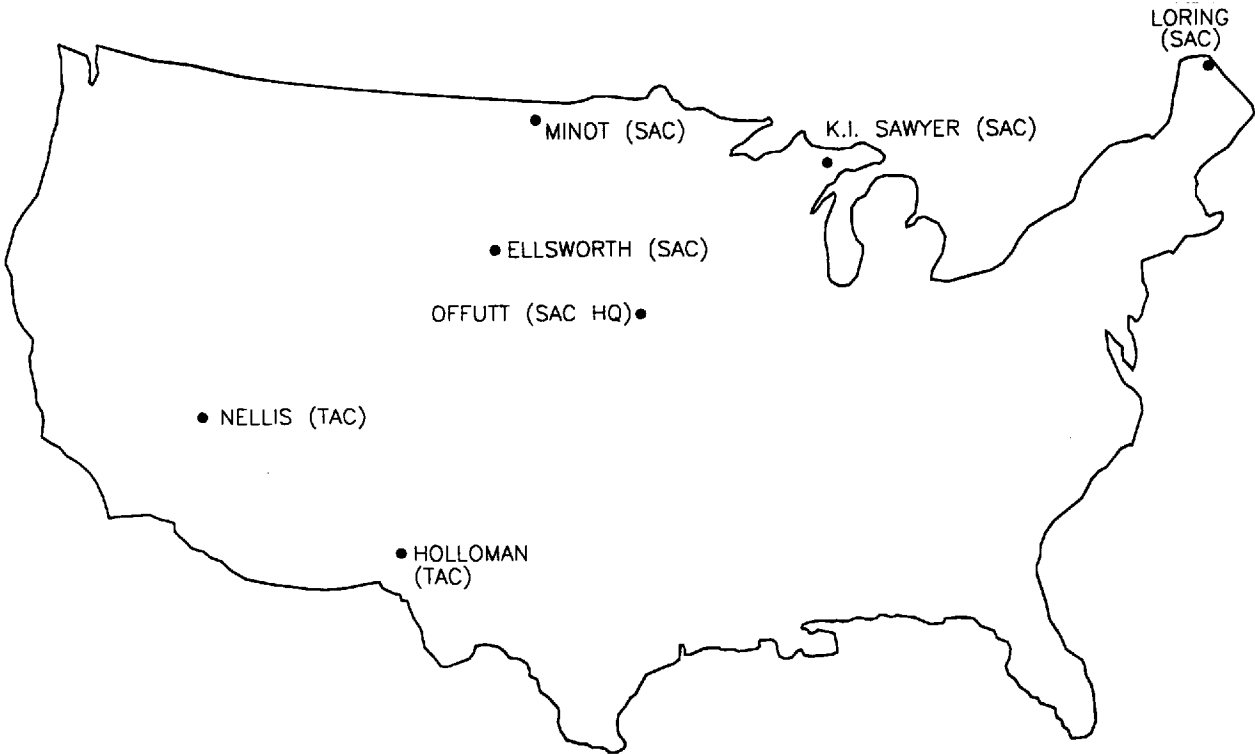
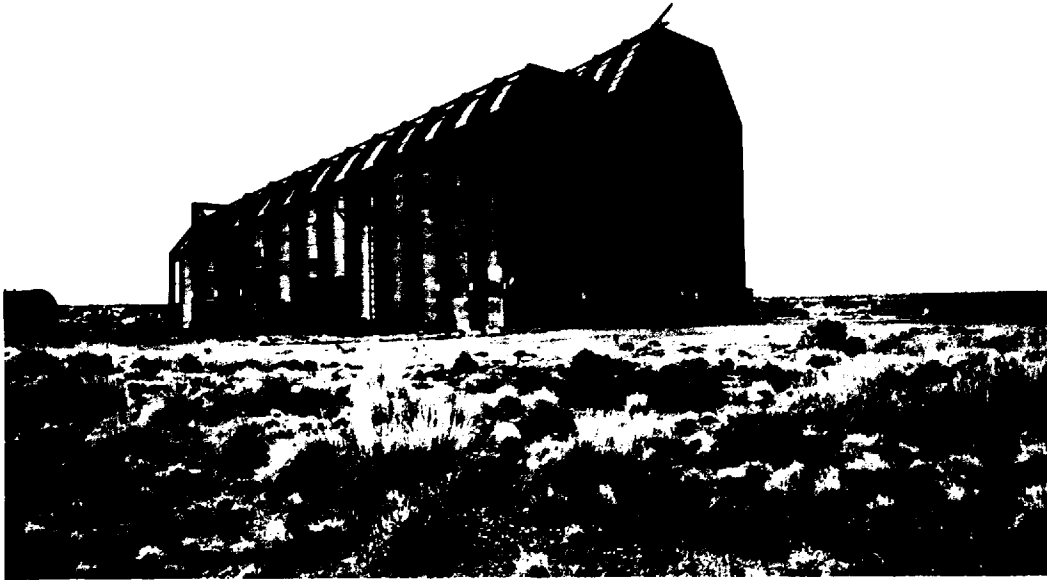


Figure 8.1 Location of Recommended Historic Districts.

which bring in thousands of visitors annually. A historic district located on the base would attract many visitors.

8.2.1.2 Historic District at Holloman AFB

Holloman AFB, located near Alamogordo, New Mexico, played a significant role in the development and testing of missiles and jet aircraft employed during the Cold War and possesses several very unique Cold War era resources related to these functions. These resources include a Launch Ramp (Photograph 8.1), a high speed Test Track, a Weapons Guidance Laboratory, Blockhouses, and a Tracking and Documentation facility. Other resources that were evaluated at Holloman AFB that wouldn't fit in the district include a Deployable Warning Complex, Fighter Alert Facility, Bare Base Installation, Architectural Drawing Files, and a Medical Science Laboratory.



Photograph 8.1 Launch Ramps at Holloman AFB, New Mexico.

The resources at Holloman AFB are excellent candidates for preservation, interpretation, and listing as a historic district. The base is located adjacent to White Sands National Monument and near Carlsbad Caverns, both of which receive year-round public visitation, and New Mexico in general is known for its many tourist attractions. Public visitation would likely be high at any developed resources at the base. The structures are unique and attractive as technological icons of the Cold War, and cover the Cold War from the beginning (Phase I) to the end (Phase IV).

8.2.1.3 Historic District at Minot AFB

Minot AFB, located in north-central North Dakota, is an example of a base specifically designed for Cold War operations. Except for recent construction, the base was built specifically to support the missions of air defense, bombers, tankers, and nuclear missiles. The base possesses resources that embody all of these missions including Fighter, Bomber, and Tanker Alert

Facilities and a SAGE Facility (Photograph 8.2), most of which retain a high degree of integrity. A Missile Launch Facility Trainer, a non-working duplicate of a missile silo, is also located on the main base.

The relative "purity" of Minot AFB as a Cold War installation and the high integrity of these resources on the base make the evaluated resources excellent candidates for listing as a historic district. Although the area is relatively isolated, preservation and interpretation would be a benefit to the base community the nearby city of Minot, and surrounding rural communities. In addition, many Canadian tourists visit Minot year-round.



Photograph 8.2 Remains of the Control Room of SAGE Facility at Minot AFB, North Dakota.

8.2.1.4 Historic District at K.I. Sawyer AFB

K.I. Sawyer AFB, located on the Upper Peninsula of Michigan, is in many respects similar to Minot AFB. It was built as a Cold War base, specifically to support bomber, tanker, and air defense missions. K.I. Sawyer AFB has Bomber, Fighter, and Tanker Alert Facilities which are all clustered near one end of the runway (Photograph 8.3) and a SAGE Facility. These facilities, which portray the concepts of strategic deterrence and air defense, could be nominated as a historic district.

Like Minot AFB, K.I. Sawyer AFB is located in a rural area, and preservation and interpretation would benefit the nearby community of Marquette and the smaller communities in the Upper Peninsula. With imminent closure of the base in the Fall of 1995, the Air Force community will depart the base. However, many bases have been reactivated after some period of time and these resources should be managed to prevent potential impacts. The presence of the deterrent force in the Upper Peninsula is an important historic aspect of the region, and the local community, although small, may value these resources.

8.2.1.5 Historic District at Loring AFB

Loring AFB, located in northern Maine, possesses several resources that could be nominated to the NRHP as a historic district. These resources include a Segregated Storage Igloo and several associated structures, a Bomber Alert Facility (Photograph 8.4), and two large, architecturally unique maintenance docks. These buildings are representative of Loring AFB's role as a nuclear bomber base on the strategic northern perimeter of the United States.

Loring AFB has since been closed. Despite this, the resources located on the former base may be important to local community members who may see value in their preservation.



Photograph 8.3 Fighter Alert Facility and Apron at K.I. Sawyer AFB, Michigan.



Photograph 8.4 Bomber Alert Facility at Loring AFB, Maine.

8.2.1.6 Historic District at Offutt AFB

Offutt AFB is located near Omaha, Nebraska and housed the former SAC headquarters. Resources related to this function include two Major Command Headquarters, a Command Post, two Command and Control Alert Facilities, and a Low Frequency Transmitter Complex. The Cold War command structure at Offutt AFB is unquestionably one of the most important elements of the Cold War mission of deterrence, and these facilities illustrate the importance of maintaining command, control, and communications from this installation. Another resource on base is the SAC Memorial Chapel (Photograph 8.5), which commemorates the deterrence mission of this command.

Offutt AFB is located near a major metropolitan area, and the extreme importance of the base within the Cold War command structure would ensure public interest in the resources located



Photograph 8.5 Strategic Air Command Memorial Chapel at Offutt AFB, Nebraska.

here. Part of the base, including the SAC commander's quarters, is already listed as a historic district encompassing Fort Crook, a late 1890s army installation. A Cold War era historic district would complement the nineteenth century district. Many of the buildings that have been evaluated as important to the Cold War are actively utilized at the present time and might be best interpreted by historic photographs and other documentation sources. This could be done at the base museum.

8.2.1.7 Historic District at Nellis AFB

Nellis AFB, located near Las Vegas, Nevada, served as a training base throughout the Cold War. Several facilities that portray this role are located on the base including a Threat Facility where Soviet bloc weaponry is displayed, the RED FLAG air combat training center, a Weapons School facility, the Thunderbirds maintenance hangar, and a Command Center.

Because of the Thunderbirds, the role of Nellis AFB as a fighter training base is already well known to the public. This historic district would profit from this publicity in the form of visitors from nearby Las Vegas, already an important tourist center. As these facilities are currently in use, these facilities might best be presented to the public through photographs and displays.

8.2.2 Individual Nominations

The remaining 32 eligible and potentially eligible resources should be documented further and nominated to the NRHP using individual nomination forms. Although these resources are nominated individually, a base can develop them together for public education purposes, thus increasing their power in attracting visitors.

8.3 FUTURE ELIGIBLE RESOURCES

As time passes, and resources that are preliminarily recommended as eligible in the future begin to meet the 50 year eligibility requirement, individual installations need to re-evaluate these resources for eligibility to the NRHP. Resources that are found to be eligible should be nominated either individually, as part of historic districts, or added to existing historic districts already registered under the multiple property listing. Until a formal determination of eligibility is decided, these resources should undergo stewardship to retain their current level of integrity.

Because this study concentrated on exceptionally important resources, many important resources, which may become eligible when they meet the 50 year requirement, were not evaluated. As important Cold War resources on these bases become 50 years old, they should be evaluated for their eligibility to the NRHP and nominated if found eligible. The dates of construction of each evaluated resource is included in the resource data base contained in each base inventory report, and can be used to determine when a resource reaches the fifty year requirement.

8.4 INELIGIBLE RESOURCES

Ineligible resources have been recommended as such usually because of a lack of integrity. These four resources, though lacking integrity, still held importance within the base's Cold War context. Therefore, it is recommended that these resources preliminarily recommended as ineligible undergo further documentation to record their importance and role within the base's Cold War context. This documentary information can then be used for public education.

8.5 OBJECT RESOURCES

The three object resources were not evaluated for their eligibility to the NRHP. However, they serve an important heritage role at the installations on which they are kept. It is recommended that the preliminary recommendations be enacted for these resources, including stewardship for all of them, preservation/conservation/repair for resources that need active preservation attention, and further documentation for those collections of objects in need of cataloging. These resources can be used for public education purposes both on base or at various locations in rural and urban communities.

8.6 LITERARY RESOURCES

Various types of literary resources were identified at the bases during this study. Base Newspaper Collections describe events and changes occurring at the various bases. Architectural Drawing Files, Map Files, and Photograph Collections illustrate and record the effect these changes had on base development and give details as to the construction of various base facilities. Office Files record the various missions and roles of the base. Documentary Collections are simply a mixture of the other five types of resources and are the most frequent type of literary resource identified during the study.

These property types are a unique resource, valuable for the information they provide about base history, Cold War history, and individual resources on the bases. These resources are needed to make determinations of eligibility and are integral to the preparation of NRHP nominations for eligible resources. They are useful in determining the level of preservation required by certain resources and are essential when planning preservation or conservation actions. When modifications to a building or structure are required, these resources can aid in determining what alterations would affect the integrity of that resource the least. Finally, these resources provide excellent material for public education displays and programs. Due to these varied and important roles, literary resources require some level of management and preservation.

The preliminary recommendations for these resources are to inventory and catalogue the resources, copy the resources, keep the copies at the base, and store the originals at a permanent curatorial facility for stewardship and conservation. In this way, the originals would be preserved and the base would retain copies for use in its activities. Inventory and cataloging are necessary as the subject matter of the materials in each resource needs to be known in order for the materials to be useful. This can be done by devising a coding system for all the materials, assigning the individual codes to each item, then making a list of codes with their subject matter. Copying the materials can be accomplished in a variety of ways, from photocopying, to copying onto microfiche or microfilm, to producing negatives of photographs, to scanning materials onto CD-ROM disks. These copies could then be kept in the appropriate offices on base for any research, projects, or activities conducted there.

The original materials, along with the inventories, could be archivally stored at an established curatorial facility, such as the USAF Historical Center at Maxwell AFB, Alabama, or at some locally available facility. The bases themselves could also establish a curation facility on the installation. Sources of information on the establishment of archival curation facilities and curation methods is provided in Appendix B. Once the literary resources evaluated in this study have been curated, guidelines for the on-going curation of materials obtained in the future should be established to prevent a backlog.

9.0 REFERENCES CITED

Advisory Council on Historic Preservation

- 1991 *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities*. Report prepared for the U.S. House of Representatives, Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, and the Committee on Science, Space, and Technology. Washington, D.C.

Boeing Company

- 1970 *SAC Bomber Operations and Maintenance*. Boeing Military Airplane Systems Division, Seattle.

- 1985 *TAC Fighter Operations and Maintenance*. Boeing Military Airplane Company, Seattle.

Department of Defense

- 1993 *Coming in from the Cold: Military Heritage in the Cold War*. Report to the United States Congress by the Legacy Resource Management Program, Washington, D.C.

Lewis, K., and H. C. Higgins

- 1994 *Cold War Properties Inventory Field Guide*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

Lewis, K., K. J. Roxlau, and L. E. Rhodes

- 1995 *A Systemic Study of Air Combat Command Cold War Material Culture, Volume I: Historic Context and Methodology for Assessment*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. MAI Project 735-15. Mariah Associates, Inc., Albuquerque.

National Park Service

- 1990 *National Register Bulletin 22: Guidelines for Evaluating and Nominating Properties That Have Achieved Significance Within the Last Fifty Years*. Report prepared by the National Register Branch, National Park Service. Washington, D.C.

- 1991a *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* (revised). Report prepared by the National Register Branch, National Park Service. Washington, D.C.

- 1991b *National Register Bulletin 16B: How to Complete the National Register Multiple Property Documentation Form*. Report prepared by the National Register Branch, National Park Service. Washington, D.C.
-

United States Air Force

1993 *Interim Guidance: Treatment of the Cold War Historic Properties for U.S. Air Force Installations.* Report prepared by Dr. Paul Green, United States Air Force, Washington, D.C.

APPENDIX A

LIST OF INDIVIDUAL BASE REPORTS

LIST OF INDIVIDUAL BASE REPORTS

Lewis, K., R. B. Roxlau, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 2: A Baseline Inventory of Cold War Material Culture at Beale Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 4: A Baseline Inventory of Cold War Material Culture at Castle Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 7: A Baseline Inventory of Cold War Material Culture at Ellsworth Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Lewis, K., D. P. Staley, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 10: A Baseline Inventory of Cold War Material Culture at Holloman Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Lowe, J. A., J. A. Evaskovich, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 1: A Baseline Inventory of Cold War Material Culture at Barksdale Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 15: A Baseline Inventory of Cold War Material Culture at Little Rock Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 24: A Baseline Inventory of Cold War Material Culture at Pope Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 26: A Baseline Inventory of Cold War Material Culture at Seymour Johnson Air Force Base.*

Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Lowe, J. A., P. E. Patterson, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 6: A Baseline Inventory of Cold War Material Culture at Dyess Air Force Base*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Lowe, J. A., L. E. Rhodes, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 8: A Baseline Inventory of Cold War Material Culture at Fairchild Air Force Base*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 22: A Baseline Inventory of Cold War Material Culture at Nellis Air Force Base*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 21: A Baseline Inventory of Cold War Material Culture at Mountain Home Air Force Base*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Lowe, J. A., D. P. Staley, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 9: A Baseline Inventory of Cold War Material Culture at Griffiss Air Force Base*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 16: A Baseline Inventory of Cold War Material Culture at Loring Air Force Base*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Patterson, P. E., D. P. Staley, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 5: A Baseline Inventory of Cold War Material Culture at Davis-Monthan Air Force Base*. Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 11: A Baseline Inventory of Cold War Material Culture at Homestead Air Force Base*.

Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 17: A Baseline Inventory of Cold War Material Culture at MacDill Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 18: A Baseline Inventory of Cold War Material Culture at McConnell Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 27: A Baseline Inventory of Cold War Material Culture at Whiteman Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 20: A Baseline Inventory of Cold War Material Culture at Moody Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Rhodes, L. E., K. Lewis, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 3: A Baseline Inventory of Cold War Material Culture at Cannon Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Rhodes, L. E., P. E. Patterson, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 23: A Baseline Inventory of Cold War Material Culture at Offutt Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Roxlau, R. B., K. Lewis, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 19: A Baseline Inventory of Cold War Material Culture at Minot Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 13: A Baseline Inventory of Cold War Material Culture at K.I. Sawyer Air Force Base.*

Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 14: A Baseline Inventory of Cold War Material Culture at Langley Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 25: A Baseline Inventory of Cold War Material Culture at Shaw Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

Staley, D. P., P. E. Patterson, and K. J. Roxlau

1997 *A Systemic Study of Air Combat Command Cold War Material Culture: Volume II - 12: A Baseline Inventory of Cold War Material Culture at Howard Air Force Base.* Prepared for Headquarters, Air Combat Command, Langley AFB, Virginia. Mariah Associates, Inc., Albuquerque.

APPENDIX B

SOURCES OF INFORMATION ON ARCHIVE CURATION

SOURCES OF INFORMATION ON ARCHIVE CURATION

American Institute of Conservators
1717 K Street NW
Suite 301
Washington, D.C. 20006
(202) 452-9545

Association for Preservation Technology International
P.O. Box 8178
Fredericksburg, VA 22404
(703) 373-1621

The Getty Conservation Institute
4503 Glencoe Avenue
Marina del Rey, CA 90292
(310) 393-4244

Architectural Records Management
American Architectural Foundation
1735 New York Avenue NW
Washington, D.C. 20006

National Center for Preservation Technology and Training
NSU Box 5682
Natchitoches, LA 71497
(318) 357-6464

Schrock, Nancy Carlson and Mary Campbell Cooper, *Records in Architectural Offices: Suggestions for the Organization, Storage, and Conservation of Architectural Office Archives*. Available from:

Massachusetts Committee for the Preservation of Architectural Records
P.O. Box 129
Cambridge, MA 02142

American Institute of Architects Library and Archives: Co-operative Preservation of Architectural Records. This group offers advice and information on how to identify and preserve important records. They have chapters in Utah, New York, California, Massachusetts, Connecticut, Virginia, North Carolina, and Washington D.C.
