

**Environmental Assessment
Add/Alter Intelligence Production Complex
National Air & Space Intelligence Center**

Wright-Patterson Air Force Base

**Contract No. F33601-01-DW003
Delivery Order 5018**

Submitted to:
**Wright-Patterson Air Force Base
88th Air Base Wing
Office of Environmental Management**

Prepared by:
**Versar, Inc.
2288 Grange Hall Road
Beavercreek, OH 45431**

October 2004

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE OCT 2004		2. REPORT TYPE		3. DATES COVERED 00-00-2004 to 00-00-2004	
4. TITLE AND SUBTITLE Environmental Assessment Add/ Alter Intelligence Production Complex National Air & Space Intelligence Center Wright-Patterson Air Force Base				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Versar, Inc., 2288 Grange Hall Road, Beavercreek, OH, 45431				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 71	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Environmental Assessment

Add/Alter Intelligence Production Complex National Air & Space Intelligence Center Wright-Patterson Air Force Base, Ohio

Introduction:

The National Air and Space Intelligence Center (NASIC) has proposed the renovation and construction of additional space for a new Intelligence Production Complex (IPC) at Wright-Patterson Air Force Base (WPAFB). The purpose of the proposed action is to provide facilities and space to enable NASIC to accomplish its current and new mission responsibilities for national security. The current NASIC complex of buildings does not have the physical floor space to accommodate the new mission requirements. Existing floor space is already inadequate for efficient execution of currently fragmented operations throughout the complex. No space or facilities exist for mission growth in support of new national security operations and directives.

Proposed Action and Alternatives:

Proposed Action:

The Proposed Action would include construction of approximately 160,000 SF of multistory, including basement, new facility space and approximately 45,000 SF of altered/renovated space as additions and renovations to Buildings 10828 and 10856 of the NASIC complex. The facilities would consist of reinforced concrete foundations, floor slabs, structural frames, pre-cast concrete walls, and supporting infrastructure including utilities, pavements, communications, fire protection equipment, DOD anti-terrorism/force protection requirements, site improvements, and related support including a new back-up emergency generator plant. Interior demolition and renovation of portions of the two buildings will also be required including abatement of hazardous materials.

The project will also require extensive site work including elimination of sections of Hebble Creek Road and San Antonio Street, rerouting of San Antonio Street, relocation of utilities and underground vaults/lines including steam/high temperature hot water systems, reconfiguration of adjoining parking lots 3A, 9A, 13A, and 14A and construction of a new parking lot east of 14A. Various area roadway intersections will be improved. The new emergency generator plant will include six diesel generators and three above ground fuel tanks.

Alternatives:

The Proposed Action and the No Action alternative were designated by the USAF as the only reasonable alternatives for evaluation. Numerous design considerations, including site planning variations, have been, and continue to be evaluated. However, no other significant action or location alternatives were deemed as reasonable. Under the No Action alternative, current operations and space utilization would remain. No new construction would occur.

Environmental Consequence of the Proposed Action

Natural Resources:

The Proposed Action would result in minor impacts to vegetation in the project area. Up to 40 trees, including large mature specimens could be lost to construction activities. The loss of this vegetation would not impact the diversity of the plant life or habitat in the greater vicinity. Disturbed areas would be revegetated and landscape shrubs and trees would be replanted as appropriate.

A slight loss of wildlife habitat would result from the Proposed Action; however resident wildlife would likely move to adjoining areas including the golf course. No threatened or endangered species, critical habitats, nor wetlands occur in the project area.

Water Resources:

The Proposed Action poses no risk of contamination, nor disruption to ground water in the project area which lies 18 to 25 feet below grade. The project area falls within the City of Dayton's one-year well head protection capture zone, but the project would have no effect on groundwater.

There are no surface water features in the project area. Surface run-off would be impacted from construction activities and additional impervious areas from rooftops and parking lots. Proper erosion and siltation controls as well as stormwater drainage design would minimize potential impacts. No floodplains exist in the project area.

IRP Sites/Hazardous Materials:

Several Installation Restoration Program (IRP) sites are situated near the western margin of the project area. The proposed Action would not affect these sites, nor would these sites be expected to impact the project. Renovation activities within the current NASIC complex would require prior abatement of hazardous materials within the buildings.

Soils:

Project activities, including excavation and grading, would disturb several acres of soil. A project stormwater management plan including erosion, drainage, and dust controls would be required and would minimize potential impacts.

Land Use:

The Proposed Action is consistent with the WPAFB and Area A land use plans. Some current open space would be lost.

Cultural/Historic Resource:

There are no known archaeological resources in the project area and no such resources are anticipated to be impacted. Several of the buildings in the NASIC complex are eligible for the National Register of Historic Places due to their important Cold War context. There would be a worst-case moderate negative impact to one of these facilities as a result of this project. The impacts would be minimized as much as possible through design, ensuring architectural compatibility, and through continued coordination with the Base and State Historic Preservation Officers. Specifically, the new construction will conform to the guidance contained in the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. While conformance with this guidance will prove challenging, the base is committed to meeting these requirements, and with the assistance of the SHPO, the impact to these facilities will be minimized as much as possible.

Air Quality:

Minor short-term impacts would be expected from construction activities. Dust control measures would minimize potential impacts during grading and other construction.

Noise:

Minor impacts to ambient noise levels would be expected from construction activities and from periodic operation of the new generator plant. Location of the generator plant away from buildings and sound transmission barriers would reduce potential impact.

Socioeconomics:

The proposed action would have a nominal beneficial impact to the local economy from construction activity and a long-term minor beneficial impact from new employment and contract revenues.

The No Action alternative could result in the loss of NASIC mission capability along with a possible loss of jobs, payroll, and technology investments.

Transportation/Traffic:

Minor impacts would occur with the Proposed Action from disruption to current parking and travel patterns from both construction activities and long-term road closures, reroutings, parking lot reconfigurations and a net loss of 130 current parking spaces. A construction staging/traffic management plan would help to mitigate short-term disruptions.

Utilities:

Proposed construction could result in temporary disruptions to utility systems. The Proposed Action would have a beneficial impact from provision of un-interruptible power to NASIC.

Public Notice:

All actions proposed in this Environmental Assessment (EA) were previously analyzed in a Draft EA and made available to the public on 1 November 2004 for a 30 day review period. All public and agency comments received were addressed in the EA.

Finding of No Significant Impact:

Based on this environmental assessment conducted in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality (CEQ) regulations, and Air Force Regulation 19-2, Environmental Impact Analysis Process, I conclude that the environmental effects of the Proposed Action would not have a significant impact on the quality of the human or natural environment and therefore, an Environmental Impact Statement does not need to be prepared.



RONALD J. LESTER, Director
Office of Environmental Management

1 Dec 04

Date

Table of Contents

1.0	INTRODUCTION.....	1-1
1.1	Project Description.....	1-1
1.2	Decisions Needed.....	1-2
1.3	Scope of Environmental Analysis	1-2
1.4	Regulatory Requirements	1-2
2.0	THE PROPOSED ACTION AND ALTERNATIVES.....	2-1
2.1	Introduction.....	2-1
2.2	Process Used to Formulate Alternatives	2-1
2.3	Alternatives Eliminated from Further Study	2-2
2.4	Description of Alternatives Considered	2-2
2.4.1	Proposed Action: Add/Alter IPC	2-2
2.4.2	No Action Alternative.....	2-3
2.5	Comparison Matrix of Alternatives.....	2-3
3.0	AFFECTED ENVIRONMENT	3-1
3.1	Introduction.....	3-1
3.2	Biological Resources	3-1
3.2.1	Vegetation.....	3-1
3.2.2	Wildlife	3-1
3.2.3	Threatened and Endangered Species	3-2
3.3	Water Resources.....	3-2
3.3.1	Groundwater	3-2
3.3.2	Surface Water	3-3
3.3.3	Floodplain	3-4
3.3.4	Wetlands.....	3-4
3.4	Installation Restoration Program (IRP).....	3-4
3.5	Land Use	3-5
3.6	Soils	3-6
3.7	Cultural Resources	3-6
3.8	Air Quality	3-7
3.9	Noise	3-8
3.10	Health & Safety.....	3-8
3.11	Socioeconomics	3-9
3.12	Transportation / Traffic.....	3-9
3.13	Utilities.....	3-10

Table of Contents, con't

4.0 ENVIRONMENTAL CONSEQUENCES	4-1
4.1 Introduction	4-1
4.2 Biological Resources	4-1
4.2.1 Vegetation.....	4-1
4.2.1.1 No Action Alternative.....	4-1
4.2.1.2 Proposed Action.....	4-1
4.2.2 Wildlife	4-2
4.2.2.1 No Action Alternative.....	4-2
4.2.2.2 Proposed Action.....	4-2
4.2.3 Threatened and Endangered Species.....	4-2
4.2.3.1. No Action Alternative.....	4-2
4.2.3.2. Proposed Action.....	4-2
4.3 Water Resources	4-2
4.3.1 Groundwater	4-2
4.3.1.1. No Action Alternative.....	4-2
4.3.1.2. Proposed Action.....	4-2
4.3.2 Surface Water	4-3
4.3.2.1. No Action Alternative.....	4-3
4.3.2.2. Proposed Action.....	4-3
4.3.3 Floodplain	4-3
4.3.3.1. No Action Alternative.....	4-3
4.3.3.2. Proposed Action.....	4-4
4.3.4 Wetlands.....	4-4
4.3.4.1. No Action Alternative.....	4-4
4.3.4.1. Proposed Action.....	4-4
4.4 Installation Restoration Program (IRP)	4-4
4.4.1 No Action Alternative.....	4-4
4.4.2 Proposed Action.....	4-4
4.5 Land Use	4-5
4.5.1 No Action Alternative.....	4-5
4.5.2 Proposed Action.....	4-5
4.6 Soils	4-5
4.6.1 No Action Alternative.....	4-5
4.6.2 Proposed Action.....	4-5

Table of Contents, con't

4.7 Cultural Resources	4-6
4.7.1 No Action Alternative.....	4-6
4.7.2 Proposed Action.....	4-6
4.8 Air Quality	4-8
4.8.1 No Action Alternative.....	4-8
4.8.2 Proposed Action.....	4-8
4.9 Noise	4-8
4.9.1 No Action Alternative.....	4-8
4.9.2 Proposed Action.....	4-8
4.10 Health and Safety	4-9
4.10.1 No Action Alternative.....	4-9
4.10.2 Proposed Action.....	4-9
4.11 Socioeconomics	4-9
4.11.1 No Action Alternative.....	4-9
4.11.2 Proposed Action.....	4-9
4.12 Transportation	4-10
4.12.1 No Action Alternative.....	4-10
4.12.2 Proposed Action.....	4-10
4.13 Utilities	4-11
4.13.1 No Action Alternative.....	4-11
4.13.2 Proposed Action.....	4-11
4.14 Cumulative Impacts	4-12
4.15 Unavoidable Adverse Effects	4-12
4.16 Relationship of Short-Term Uses and Long-Term Productivity	4-12
4.17 Irreversible and Irretrievable Commitments of Resources	4-12
5.0 LIST OF PREPARERS	5-1
6.0 LIST OF AGENCIES AND PERSONS CONSULTED	6-1
7.0 REFERENCES	7-1

List of Figures

Figure 1 – Regional Location Map

Figure 2 – Project Vicinity

Figure 3 – Project Area

Figure 4 – Proposed Site Plan

Figure 5 – Operable Unit 4

List of Tables

Table 2-1: Comparative Summary of Environmental Consequences

Table 4-1: Parking Comparison

Appendices

Appendix A – Correspondence and Photographs

List of Acronyms/Abbreviations

ACM	Asbestos Containing Material
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AFMC	Air Force Material Command
AICUZ	Air Installation Compatible Use Zone
ANSI	American National Standards Institute
ASC	Aeronautical Systems Center
bgs	below ground surface
BHE	BHE Environmental, Inc.
BHPO	Base Historic Preservation Officer
BMP	Basewide Monitoring Program
CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CRMP	Cultural Resources Management Plan
dB	decibel
DOC	Department of Commerce/Bureau of Census
DoD	U.S. Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FY	Fiscal Year
gpm	gallons per minute
HAP	Hazardous Air Pollutant
ICI	International Consultants Incorporated
IRP	Installation Restoration Program
IT	IT Corporation
LBP	Lead-based paint
LF	Landfill
MCD	Miami Conservancy District
MSA	Metropolitan Statistical Area
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
O ₃	Ozone
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources

List of Acronyms/Abbreviations (continued)

OEPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PCBs	Polychlorinated Biphenyls
PM	Particulate Matter
PM ₁₀	Particulate Matter (less than 10 microns in diameter)
PM ₂₅	Particulate Matter (less than 25 microns in diameter)
PSD	Prevention of Significant Deterioration
PTI	Permit to Install
RAPCA	Regional Air Pollution Control Agency
RI	Remedial Investigation
ROD	Record of Decision
SCS	Soil Conservation Service
SHPO	State Historic Preservation Office
SO ₂	Sulfur Dioxide
SWPPP	Storm Water Pollution Prevention Plan
TCE	Trichloroethene
tpy	tons per year
USACERL	U.S. Army Construction Engineering Research Laboratory
USAF	U.S. Air Force
USACOE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	Volatile Organic Compound
WPAFB	Wright-Patterson Air Force Base

1.0 Purpose and Need for Action

This environmental assessment (EA) discusses the proposed action of renovating and constructing an addition to the National Air and Space Intelligence Center (NASIC) for a new Intelligence Production Complex (IPC) at Wright-Patterson Air Force Base, Ohio. This EA has been performed in accordance with the National Environmental Policy Act (NEPA) of 1969, 40 Code of Federal Regulations (CFR), Part 1500, the Council on Environmental Quality (CEQ) regulations implementing NEPA, and the U. S. Air Force (USAF) Environmental Impact Analysis Process (EIAP) [Air Force Instruction (AFI) 32-7061].

The purpose of the proposed action is to provide facilities and space to enable NASIC to accomplish its current and new mission growth responsibilities for national security. The current NASIC complex does not have the physical floor space to accommodate expanded and new mission requirements.

1.1 Project Description

WPAFB is located in the southwest part of Ohio in Greene and Montgomery counties, about 8 miles east of downtown Dayton (Figure 1). The Base covers some 8,145 acres with a variety of land uses ranging from administrative and residential to research and industrial. WPAFB is divided into three functional areas: A, B, and C. Area A is primarily an administrative area, Area B is primarily research, and Area C includes airfield operations (ICI/SAIC,1995; Woolpert, 2001).

The NASIC complex is located in Area A at the intersection of Hebble Creek Road and San Antonio Street (Figures 2 and 3). Expansion potential of the complex, including buildings 10828, 10829, 10856, 10858, and 10859, is currently constrained by various land uses, other buildings, and streets. With the national focus on anti terrorism, NASIC's mission has grown significantly over the last few years, and current space is inadequate to perform both current as well as future national security mission requirements.

To address both the need and the future requirements, NASIC has developed a design project for a new Intelligence Production Complex (IPC) that would necessitate building demolition, renovation, and expansion, as well as major infrastructure changes/improvements including road closures/realignments, a new emergency generator plant, and parking lot expansion and reconfigurations.

1.2 Decisions Needed

This EA will support the interrelated decisions concerning the construction and operation of the IPC and provide the decision maker and the public with information required to understand the short-term and long-term environmental consequences of the proposed action and of no action as an alternative. As appropriate, measures to mitigate any adverse effects are recommended and the determination of whether a Finding of No Significant Impact (FONSI) will be made.

1.3 Scope of Environmental Analysis

This EA analyzes potential environmental consequences associated with the construction and operation of the IPC. The primary areas of concern associated with the proposed action include:

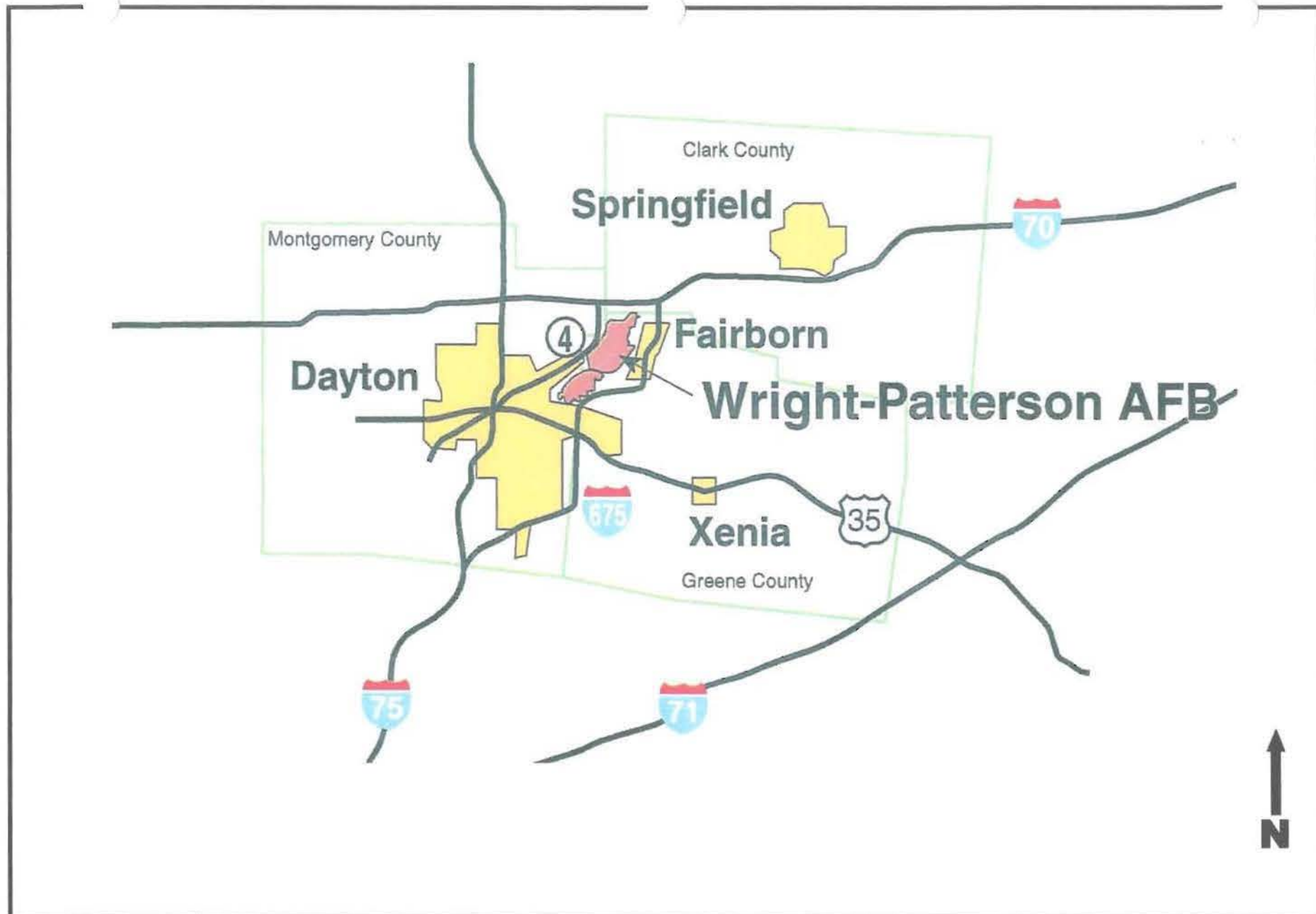
- air quality
- land use
- transportation/traffic
- cultural/historic resources
- health and safety


Other areas of potential impact include:

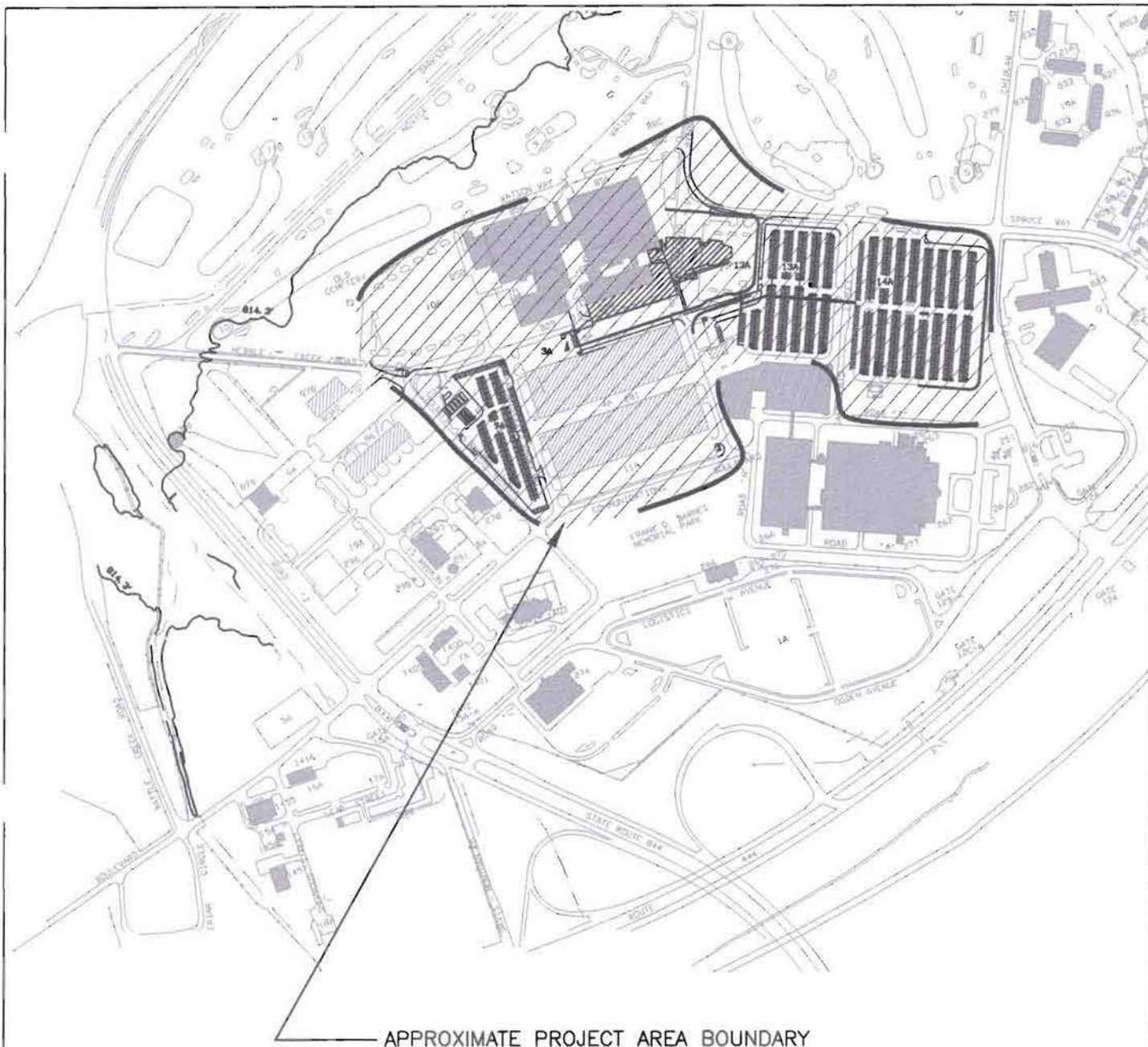
- water resources
- natural resources
- noise
- socioeconomics
- IRP sites
- geology/soils

1.4 Regulatory Requirements

The USAF must comply with numerous statutes, regulations, and policy/instruction directives. These are largely embedded in the EIAP and NEPA evaluation processes. Various permits, issued by the Ohio Environmental Protection Agency (OEPA) and the Regional Air Pollution Control Agency (RAPCA) may apply to the proposed action. These include Permits To Install (PTI) for sewer systems, water mains, and storm water discharges involving disturbance of more than one acre of ground. An asbestos hazardous materials abatement permit would be required from RAPCA. No other air permits would be required for the construction/operation of the IPC project as all project components meet de minimus/exemption rules.



 2288 Grange Hall Rd. Beavercreek, OH 45431 937-431-8960	Client: WPAFB - 88ABW/EM	Project #	Dwn. By : DTR	Date: Oct-04
	Description: Figure 1 – Regional Location Map	Scale: NTS	Sheet No. 1 of 1	

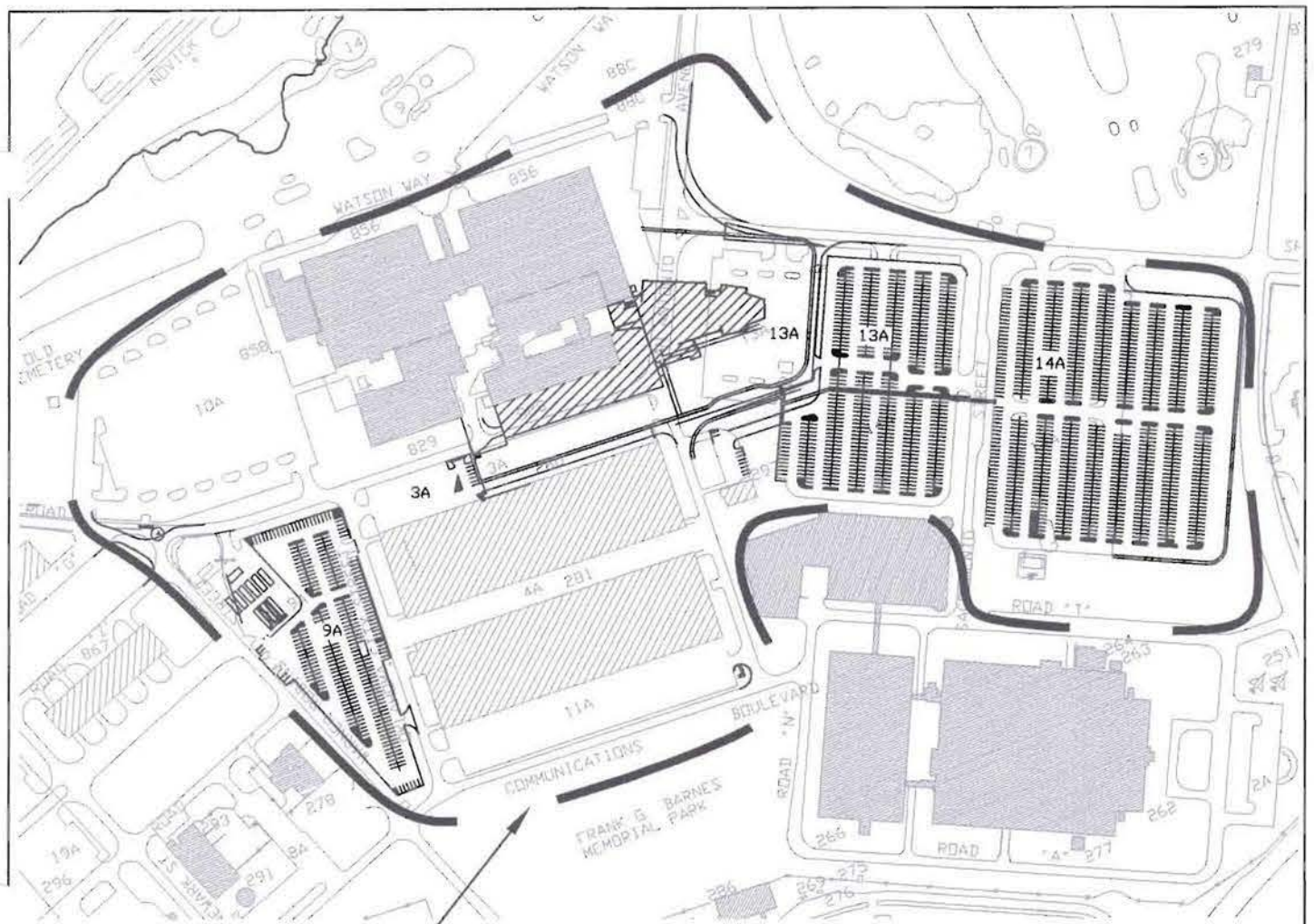


APPROXIMATE PROJECT AREA BOUNDARY

Figure 2 - Project Vicinity

Versar
 2288 Grange Hall Road
 Beaver Creek, OH 45431
 937-431-8960

DEPARTMENT OF THE AIR FORCE
 WRIGHT-PATTERSON AFB
 DAYTON, OHIO



APPROXIMATE PROJECT AREA BOUNDARY

Figure 3 - Project Area

Versar
 2288 Grange Hall Road
 Beavercreek, OH 45431
 937-431-8960

DEPARTMENT OF THE AIR FORCE
 WRIGHT-PATTERSON AFB
 DAYTON, OHIO

2.0 The Proposed Action and Alternatives

2.1 Introduction

This section details the proposed action and the process used to formulate alternatives. Other than No Action, no other reasonable alternatives have been identified.

2.2 Process Used to Formulate Alternatives

The NEPA process requires the formulation and analysis of alternatives, including the No Action alternative to the Proposed Action. The intention is to develop plans that meet the underlying purpose, mission, or need of the proposed project, but which minimize potential environmental impacts and/or other negative consequences.

The proposed action is based on the current need of NASIC to accommodate existing national security intelligence missions in overcrowded space, to consolidate missions currently fragmented inefficiently throughout the NASIC complex, and to provide space and facilities for mission growth in support of new national security operations and directives. There is currently no existing space to support new requirements and insufficient space to accommodate current operations, including seating in secret-level classified conference rooms. The NASIC Joint Reserve Intelligence Center (JRIC) is one of five Active Directory Hubs for the Joint Reserve Intelligence Program. These hubs provide backup data storage and server processing for the entire 27-site Joint Reserve Intelligence Program network and are critical to supporting commanders during crises and war. The NASIC JRIC success has generated Congressional support with a resulting 200 percent increase in effort supporting the global war on terrorism. The current facility is already overcrowded to support this mission, and NASIC does not have the physical space to successfully accomplish the expanded mission responsibilities directed by the Air Force, including National Security Policy Directive 26.

The No Action alternative is the only reasonable alternative to the proposed action. Under the No Action alternative, no new construction or significant alterations would occur. The No Action alternative also serves as a baseline for comparative evaluation of potential environmental consequences.

2.3 Alternatives Eliminated from Further Study

The Proposed Action and the No Action alternative were designated by the USAF as the only reasonable alternatives for evaluation. Numerous design considerations, including site planning variations, have been, and continue to be evaluated. However, no other significant action or location alternatives were deemed as reasonable.

2.4 Description of Alternatives Considered

2.4.1 Proposed Action: Add/Alter Intelligence Production Complex

The Proposed Action would include construction of approximately 160,000 SF of multistory, including basement, new facility space and approximately 45,000 SF of altered/renovated space as additions and renovations to Buildings 10828 and 10856 of the NASIC complex as shown in Figure 4. The facilities would consist of reinforced concrete foundations, floor slabs, structural frames, pre-cast concrete walls, and supporting infrastructure including utilities, pavements, communications, fire protection equipment, DOD anti-terrorism/force protection requirements, site improvements, and related support including a new back-up emergency generator plant. Interior demolition and renovation of portions of the two buildings would also be required including abatement of hazardous materials.

The IPC would house a highly classified, contiguous, Sensitive Compartmented Information Facility (SCIF). This includes a computer room, intelligence production facility, video telecom, expanded non-imaging infra-red (ONIR) operation, and expanded collaborative/meeting and knowledge area. The project would support ONIR mission requirements as identified through FY08 and reutilize facility space that would be vacated as functions consolidate/relocate to the new IPC addition.

The project would also require extensive site work, including elimination of sections of Hebble Creek Road and San Antonio Street, rerouting of part of San Antonio Street, relocation of utilities and underground vaults/lines including steam/high temperature hot water systems, reconfiguration of adjoining parking lots 3A, 9A, 13A, and 14A and construction of a new parking lot east of 14A. Various area roadway intersections would be improved. The new emergency generator plant would include six diesel generators and three above ground fuel tanks. The plant would be built south of the existing electrical substation in parking lot 9A (Figure 4). Two emergency power units (500KW and 1500KW), would be replaced by the new generator plant. Photographs of the existing Project Area are included as Exhibits in Appendix A.

2.4.2 No Action Alternative

Under the No Action alternative, current operations and space utilization would remain. No new construction would occur and no alteration or project-related improvements would be undertaken.

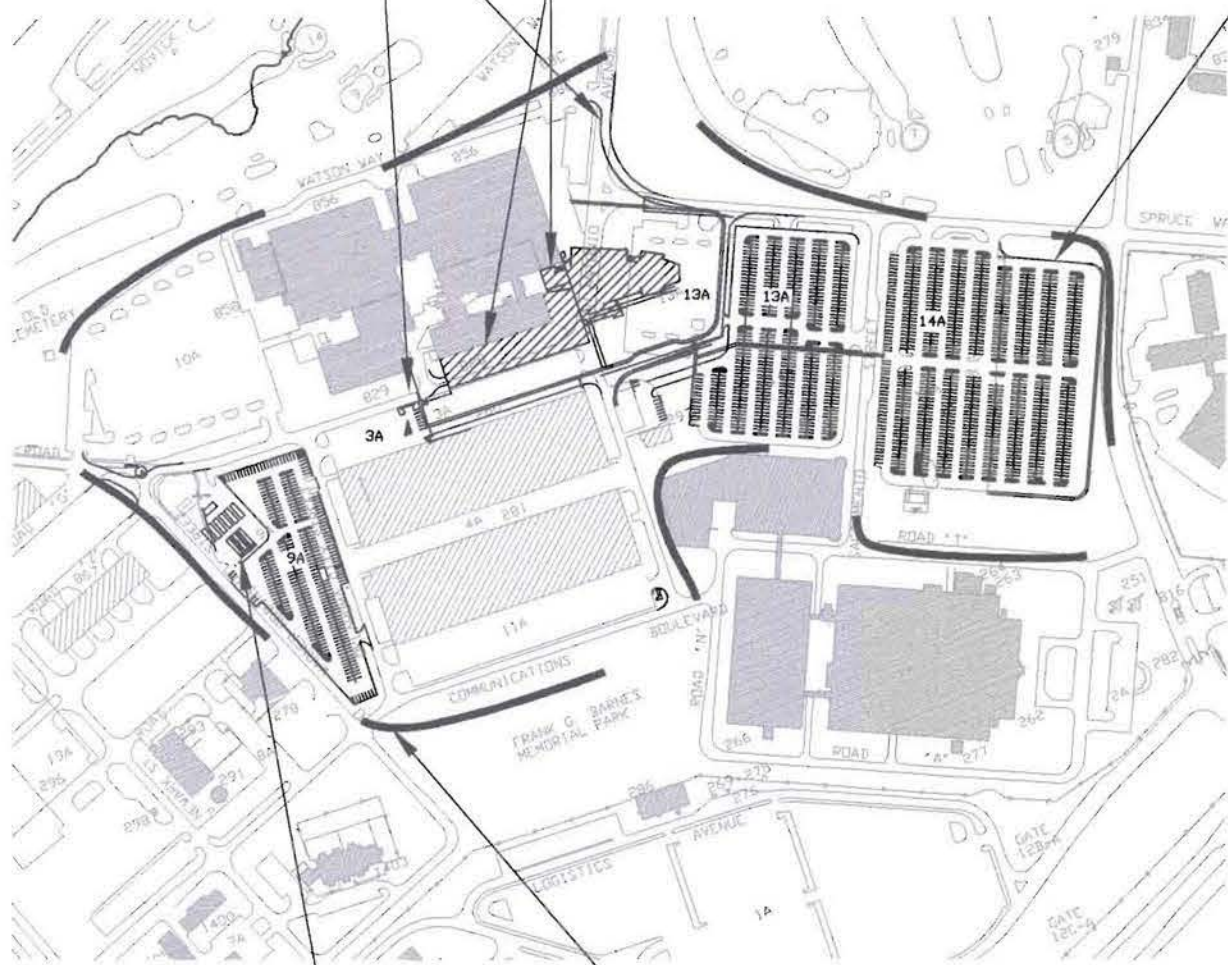
2.5 Comparison Matrix of Alternatives

The potential environmental consequences associated with the Proposed Action and the No Action alternative are summarized in Table 2-1. The information is presented in a brief, concise format based on the analyses detailed in Sections 3 and 4 of this EA.

PROPOSED NEW CONFIGURATION OF HEBBLE CREEK
AND SAN ANTONIO STREETS

PROPOSED NEW PARKING

PROPOSED ADDITION TO BUILDINGS 828/856



APPROXIMATE PROJECT AREA BOUNDARY

PROPOSED SITE FOR NEW EMERGENCY GENERATOR PLANT

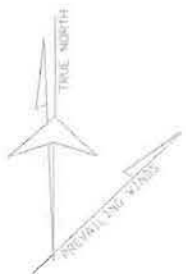


Figure 4 - Proposed Site Plan

Versar
2288 Grange Hall Road
Beavercreek, OH 45431
937-431-8960

DEPARTMENT OF THE AIR FORCE
WRIGHT-PATTERSON AFB
DAYTON, OHIO

**Table 2.1
Comparative Summary of Environmental Consequences**

1 of 4

Resource/Area	Alternative: No Action	Alternative: Construction of Proposed Action
<i>Biological Resources</i>		
Vegetation	<u>Short Term:</u> No Impact	<u>Short Term:</u> Minor impacts to vegetation from construction activities.
	<u>Long Term:</u> No impact	<u>Long Term:</u> Minor impact due to loss of green space.
Wildlife	<u>Short Term:</u> No impact	<u>Short Term:</u> No impact
	<u>Long Term:</u> No Impact	<u>Long Term:</u> No impact
Threatened & Endangered Species	<u>Short Term:</u> No impact	<u>Short Term:</u> No impact; no threatened or endangered species nor their habitats in the project area.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Wetlands	<u>Short Term:</u> No impact	<u>Short Term:</u> No impact; no wetlands occur in the project area.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Water/Groundwater	<u>Short Term:</u> No impact	<u>Short Term:</u> No impact; The project poses no risk of contamination nor disruption to the groundwater.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Surface Water	<u>Short Term:</u> No impact	<u>Short Term:</u> Minimal impact from increased surface runoff during construction activities. Impacts would be minimized with erosion and siltation controls implemented during construction.
	<u>Long Term:</u> No impact	<u>Long Term:</u> Potential impact due to surface water runoff associated with parking lots and more impervious area. Impacts would be minimized by designing appropriate drainage.

**Table 2.1
Comparative Summary of Environmental Consequences**

2 of 4

Resource/Area	Alternative: No Action	Alternative: Construction of Proposed Action
<i>Biological Resources, con't</i>		
Floodplain	<u>Short Term:</u> No Impact	<u>Short Term:</u> No impact; No regulated floodplains occur in the project area.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
<i>Other Resources</i>		
IRP Sites	<u>Short Term:</u> No impact	<u>Short Term:</u> No impact; Operable Unit #4 abuts the project area, but is not expected to be disturbed.
	<u>Long Term:</u> No Impact	<u>Long Term:</u> No impact
Land Use	<u>Short Term:</u> No impact	<u>Short Term:</u> Minor impact due to temporary disruptions of current infrastructure and facilities.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact; expansion and facility locations are consistent with Base and area master plans.
Geology and Soil	<u>Short Term:</u> No impact	<u>Short Term:</u> Potential minor impacts during construction activities (i.e. excavation, soil erosion). Impacts would be minimized with erosion and siltation controls implemented during construction.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Cultural/Historic Resources	<u>Short Term:</u> No impact	<u>Short Term:</u> No known cultural resources in the project area. Cultural resources could potentially be encountered during excavation activities. Impacts would be minimized by consultation with BHPO.
	<u>Long Term:</u> No impact	<u>Long Term:</u> Potential minor impact due to expansion of National Register-eligible buildings, particularly in massing and size. Impact would be minimized through design, ensuring architectural compatibility.

Table 2.1
Comparative Summary of Environmental Consequences

3 of 4

Resource/Area	Alternative: No Action	Alternative: Construction of Proposed Action
<i>Other Resources, con't</i>		
Air Quality	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> Minor, short-term impact from particulate matter and engine exhaust emissions generated during demolition and construction activities. Impacts would be minimized by using reasonably available control techniques to reduce fugitive dust emissions from the site.</p> <p><u>Long Term:</u> Negligible impact from emissions generated during operation of the new emergency generator plant. Plant is exempt from PTI.</p>
Noise	<p><u>Short Term:</u> No Impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> Minor impacts on ambient noise from construction and demolition activities.</p> <p><u>Long Term:</u> Potential minor impacts due to noise generated from new generator plant. Sound transmission barriers and distance from facility would reduce noise.</p>
Health & Safety	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No Impact</p>	<p><u>Short Term:</u> Potential impacts to project workers due to accidents during construction and hazardous materials abatement activities. Impacts would be negligible with adherence to health and safety regulations and project health and safety plans.</p> <p><u>Long Term:</u> No impact</p>
Socioeconomics	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> Potential adverse impact due to loss of NASIC mission capability resulting in inefficiencies, additional costs, and possible loss of technology investment funds, jobs and payroll.</p>	<p><u>Short Term:</u> Nominal, beneficial impact on local economy from revenue generated by construction project.</p> <p><u>Long Term:</u> Minor beneficial impact to local employment and economy due to enhanced mission capabilities' job creation, and payroll/contracting revenues.</p>

**Table 2.1
Comparative Summary of Environmental Consequences**

4 of 4

Resource/Area	Alternative: No Action	Alternative: Construction of Proposed Action
<i>Other Resources, con't</i>		
Transportation/Traffic	<p><u>Short Term:</u> Minor impact associated with current overcrowding of adjoining parking lots.</p> <p><u>Long Term:</u> Potential adverse impact to adjoining parking lots from overcrowding due to Area A employment growth and site planning reconfigurations.</p>	<p><u>Short Term:</u> Minor impacts due to construction traffic, construction activities, and disruptions to current traffic and parking patterns, particularly from street closures, re-routing, and parking reconfigurations. A construction phasing/traffic management plan would help to mitigate adverse consequences.</p> <p><u>Long Term:</u> Minor impacts due to increased traffic from employment growth and traffic volume changes due to road closures/reconfigurations.</p>
Utilities	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> Increased demand due to growth in mission and employment</p>	<p><u>Short Term:</u> Potential minor impacts due to temporary disruptions/relocations of utility systems.</p> <p><u>Long Term:</u> Beneficial impact from un-interruptible power supply and new supporting utility systems.</p>

3.0 Affected Environment

3.1 Introduction

This chapter describes the environment of the project area that would be potentially affected by the proposed action and alternative. This chapter also provides the background information and a basis for the analysis of environmental impact in Chapter 4.0. Where applicable, information from the *Final Environmental Impact Statement for Demolition of Multiple Historic Facilities at Wright-Patterson Air Force Base* (USAF, 1997) and other sources is referenced.

3.2 Biological Resources

3.2.1 Vegetation

Vegetation in the project area is limited. This area is covered largely by concrete, asphalt, and other structures. Most vegetation consists of weeds and grass species growing around the current NASIC complex, on the Parking Lot 14A expansion site, and in the CE complex area west of Parking Lot 9A. Some landscape shrubs are also found around the NASIC buildings. More natural vegetation is found to the north and west of the project area in conjunction with the Prairie Trace Golf Course and LF3.

A number of small to mature trees, approximately 20, are found in the grass buffer strip between San Antonio Avenue and Parking Lot 13 A east of the NASIC complex. The trees range from small crabapples (*Malus* spp.) to 30 inch diameter green ash (*Fraxinus pennsylvanica*). Several sugar maples (*Acer saccharum*) and locust (*Robinia pseudoacacia*) in the 14 inch to 28 inch diameter class are also found.

Similarly, some 19 trees occupy the lot 14A expansion site between the current lot and the arbor vitae row (treeline) along the west side of Chidlaw Road. These include several mature, specimen trees in the 36 to 40 inch diameter class including silver maples (*Acer saccharinum*), various oaks (*Quercus* spp.), and one elm (*Ulmus* spp.). Several large clump crabapples, green ash, and basswood (*Tilia* spp.) are also found on the site.

3.2.2 Wildlife

According to the Site-wide Characterization Report (ICI/SAIC, 1995), resident mammals commonly found in commercial/industrial areas and other disturbed areas, such as the project area, include eastern cottontail rabbit, groundhog, field mice, chipmunk, opossum, raccoon, and gray squirrel. Birds, such as pigeon, killdeer, English sparrow, starling, robin, and Carolina chickadee are also often

observed in this area type. Numerous birds, squirrels, and groundhogs have been sighted in the project area.

3.2.3 Threatened and Endangered Species

Compliance with Air Force Policy Directive (AFPD) 32-70 and AFI 32-7064 requires all Air Force properties to protect species classified as endangered or threatened under the Endangered Species Act of 1973 (ESA) and to comply with State of Ohio Law 1531.25 and its implementing regulations for species listed by the state as threatened and endangered (T & E). To comply with these requirements, WPAFB developed an Endangered Species Management Plan (BHE, 2001).

Currently there are 12 federal- and state- listed T & E species at WPAFB including the Indiana bat (*Myotis sodalis*), bald eagle (*Haliaeetus leucocephalus*), eastern massasauga rattlesnake (*Sistrurus catenatus*), clubshell (*Pleurobema clava*, a mussel), and blazing star stem borer (*Papaipema beeriana*, a moth).

The eastern massasauga rattlesnake is a federal candidate species usually found in wet areas including wet prairies, marshes, and low lying areas. No suitable habitat exists in the specific project area. Reports of massasauga sightings have been limited to the Prime BEEF Training Area and Twin Base Golf Course well west of the project area. Because the massasauga rattlesnake is a federal candidate species, there is no requirement to survey construction areas for potential snake habitat.

No Indiana bat habitat exists in the project area. No sightings of Indiana bats have been reported within the project area (WPAFB, 2001a).

Copies of correspondence with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) regarding the potential occurrences of threatened and endangered species in the project areas are provided in Appendix A.

3.3 Water Resources

3.3.1 Groundwater

The deep, porous glacial materials along the Mad and Great Miami River valleys are part of the Buried Valley Aquifer, which reaches a maximum thickness of approximately 230 feet and thins to only a few feet at the edges. Water production in this area is very prolific, yielding over 2,000 gallons per minute (gpm) to water supply wells, with the aquifer being very responsive to applied stresses. Data indicate a typical seasonal variation in water levels of approximately 10 feet. The annual low water levels occur during the autumn months (September-October) with annual high levels occurring in spring (April-

May). Regional groundwater flow is typically west toward the Mad River and the Huffman Dam well field.

A groundwater investigation was conducted in the vicinity of the project area as part of the Operable Unit 4 Remedial Investigation (OU4 RI) and identified four potential contaminant migration pathways (CH2M Hill, 1994). Groundwater velocity along the four pathways (three pathways in the upper sand and gravel zone and one in the lower sand and gravel zone) ranged from 6.6 to 15.7 feet per day.

The Buried Valley is a designated sole source aquifer under United States Code (USC) 1424(e) of the Safe Drinking Water Act (53 FR 15876) and OAC 3745-27-07(B)(5). The Buried Valley Aquifer is a prolific source of water and is highly utilized as a municipal and industrial source of water. Groundwater in the project area occurs at approximately 18-25 feet below ground surface (WPAFB, 2004, 1). Groundwater extraction in the vicinity of the project area occurs at Well #4 in the Prairie Trace Golf Course. OU4 RI groundwater investigations indicate low concentrations of target VOCs and metals with the groundwater gradient moving away from the project area.

The project area falls within the City of Dayton's 1-year wellhead protection capture zone. The purpose of the wellhead protection program is to provide control mechanisms to discourage the storage of hazardous chemical above the aquifer.

3.3.2 Surface Water

WPAFB is located within the Mad River Valley of the Great Miami River Basin. The Mad River empties into the Great Miami River near downtown Dayton, Ohio, approximately 6 miles downstream of the project area. The only surface water in the vicinity of the project area is Hebble Creek to the North across Prairie Trace Golf Course and a tributary to Hebble Creek, West of the area, across Skeel Avenue.

The Mad River is the primary surface water drainage within this region, draining 625 square miles upstream of Huffman Dam [U.S. Geological Survey (USGS, 1993)]. Huffman Dam was constructed on the Mad River, completed in 1921, to control flooding in nearby Dayton, Ohio.

Hebble Creek is a perennial stream that runs parallel to Skeel Avenue and Hebble Creek Road, and ultimately discharges into the Mad River.

The project area is located in Storm Sewer Network Outfall Areas No. 7 and No. 8. These outfall areas drain to Hebble Creek near the intersection of Skeel Avenue and Hebble Creek Road. Hebble Creek discharges into the Mad River through National Pollution Discharge Elimination System (NPDES) Outfall 004.

This outfall is sampled and monitored for the parameters of oil and grease, iron, total suspended solids, pH and temperature.

Storm water runoff from construction activities can impact water quality by contributing sediment and other pollutants exposed at construction sites. The NPDES Storm Water Program, Phase II rules, address construction activities that disturb one acre or more of land. The WPAFB storm water program is covered by an individual permit with OEPA (NPDES OH 0010243). The Base Storm Water Pollution Prevention Plan (SWPPP) provides specific Best Management Practices (BMPs) to prevent surface water contamination.

Storm water flowing from the substantial impervious surfaces in the project area including streets, parking lots, and rooftops is collected by numerous inlets and routed through a network of storm sewers to Outfalls 7 and 8 (Versar, 2003).

3.3.3 Floodplain

The Base Civil Engineering Office uses 814.3 ft above Mean Sea Level (MSL) as the 100-year floodplain elevation of the Mad River (ICI/SAIC, 1995). This elevation is based on U.S. Army Corps of Engineers (USACOE) data and HEC-1 modeling. None of the project area lies within the 100-year floodplain, nor will the project encroach on any stream floodplain.

3.3.4 Wetlands

A wetland inventory was conducted on WPAFB in 1999-2000 and is cited in the INRMP (BHE 2001). A total of approximately 23 acres of wetlands were delineated in Areas B and C. No wetlands have been identified in Area A. No wetlands are located in or near the vicinity of the project area.

3.4 Installation Restoration Program (IRP)

WPAFB has currently identified 68 IRP sites per the Air Force Restoration Information Management System (AFRIMS). WPAFB has grouped all confirmed or suspected sites requiring investigation and characterization into 11 geographically-based Operable Units (OUs), designated OUs 1 through 11 (IT, 1999). In addition to the 11 OUs, WPAFB addressed basewide issues of groundwater and surface water contamination under the Basewide Monitoring Program (BMP) (IT, 1995a).

Although the project area is not located on an IRP site, a portion of it does abut or lie within the boundary of OU4. OU4 consists of the following IRP sites: Landfill (LF) 3, LF4, LF6, LF7, and the Drum Disposal/Storage Area. The west parking lot, 10A, of the NASIC Complex is situated just east of LF3. Parking lot 9A and the site of the new generator plant are relatively close to LF4 (see Figure 5). Source control measures have been completed at LFs 3,4,6, and 7 under the

Basewide Removal Action Plan for Landfill Capping (IT, 1994). Source control measures at LFs 3 and 4 consisted of implementing routine operation and maintenance for landfill gas monitoring and cover maintenance. Four of the eight landfill gas monitoring wells (LG-1, LG-8, LG-9, and LG-10) associated with OU4 are located just west of the project area. Methane has been consistently detected at monitoring point LG-10; methane has not been detected in LG-8 or LG-9 (IT, 2002), but has been migrating southeast of LF4.

Contaminated leachate and groundwater are associated with both LF3 and LF4, however the slow gradient is away from the project area. No releases to the nearby streams or ditches have occurred.

Subsequent to the implementation of source control measures at LFs 3, 4, 6 and 7, a Record of Decision (ROD) was prepared and accepted for No Further Action at these sites (WPAFB, 1998).

3.5 Land Use

WPAFB encompasses 8,145 acres. It is divided into three areas; A, B, and C. Area A contains primarily administrative activities; Area B focuses on research and development; and Area C is dominated by airfield operation, maintenance, and civil engineering activities. Other major land use categories include housing, industrial, outdoor recreation, and open space.

The project area and vicinity are characterized by a variety of land use classifications and facilities including administrative, industrial, community commercial, and outdoor recreation. Expansion of the NASIC complex will require use of adjoining open space (lawns/fields), infrastructure including roadways, and parking lots. Supporting development, specifically the new generator plant, parking lot, and reconfigured San Antonio Avenue/Hebble Creek Road will require use of both open space and current roadway/parking areas.

In addition to the WPAFB General Plan (Woolpert, 2001), which provides a general land use framework for the base, Area and Sub Area Plans are routinely updated to account for future land use, facility, and infrastructure needs in a 15 year horizon. The AFMC Headquarters Sub Area Plan is currently being updated (WPAFB, 2004,2). The future plans call for continuation and expansion of administrative functions/buildings in the area including demolition of World War II-era buildings (e.g. old warehouses, Building 10281) and construction of additional supporting infrastructure, especially the high temperature hot water utility system. Of added importance are the physical site changes necessary to achieve AT/FP (anti-terrorism/force protection) requirements, especially the 25 meter standoff distance. This will necessitate future road closures and/or changes from major thoroughfares to service roads only.

The NASIC expansion project is generally compatible with the Area Plan and its future goals. Closure of Hebble Creek Road will eliminate an east-west connection across the northern zone of the Headquarters Area; however, once Building 10280 is demolished, the roadway could again connect through its new configuration to Spruce Way.

3.6 Soils

The U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) soil survey of Greene County, Ohio (USDA-SCS, 1978), indicates that the majority of the project area is characterized by the Miamian-Urban land complex, gently sloping upland soils underlain by glacial till. Up to one-third of the complex is covered by buildings and infrastructure and another 25% to 50% by borrow/fill areas. This mix describes the project area.

3.7 Cultural Resources

Over 300 recorded or potential cultural resources have been identified within WPAFB, including prehistoric and historic archeological sites, historic structures, and historic landscapes (WPAFB, 1999a). The base contains a number of significant cultural resources among those recorded. Results from these surveys have been summarized and presented in the Cultural Resources Management Plan (CRMP) (WPAFB, 1999a). The CRMP identifies archeological sites, historic structures, and other significant cultural resources on WPAFB. Correspondence with the State Historic Preservation Office (SHPO) is included in Appendix A.

The project area for the NASIC expansion is located in a portion of the base that has disturbed soils; buildings and earth disturbing activities have been present in this area since World War II. According to CRMP, this area has low archeological potential. Therefore, archeological resources are not expected to be within this area. No archeological survey is required of this area (WPAFB, 2004).

The Area A NASIC complex consists of three adjoining buildings, 10828, 10829, and 10856. All three facilities are eligible for listing on the National Register of Historic Places under Criterion G, exceptional importance for their role throughout the Cold War (WPAFB, 2004, 3).

Building 10856 is a large concrete two-story building with a flat roof that was constructed in 1975. Building 10828 is a two-story, concrete building with a flat roof that was built in 1958. The second story is covered by metal siding. The building is incorporated into 10856 along its north elevation. The building was the first of the complex and served as the first permanent headquarters of NASIC's forerunner agency. The primary facades of the entire complex are without windows featuring precast concrete panels. Exterior doors are very

limited and primary, non-employee, access is restricted to the west side entry point.

NASIC was originally the Air Technical Intelligence Center (ATIC) in the 1950s with history dating to the 1942 Technical Data Laboratory at Wright Field and later T-2 Intelligence.

The complex played an important role in the history of the Cold War from 1958 to the end of the era in 1989. Intelligence information and cutting-edge technological developments generated here shaped American foreign policy, military tactics, and weapons system programs.

The purpose and long-term function of the proposed project is to allow NASIC to accomplish its expanding and new mission requirements and, consequently, continue its historic role as one of the largest and most important military intelligence facilities in the world.

3.8 Air Quality

The Clean Air Act Amendments of 1990 (CAAA) tasked the USEPA with generating a revised set of rules governing the establishment of air quality standards and rules governing emissions of pollutants. The National Ambient Air Quality Standards (NAAQS) set concentration levels for the following pollutants, often referred to as "criteria air pollutants": carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead, ozone (O₃; note: emissions of volatile organic compounds or VOCs are regarded as precursors of ozone), and particulate matter equal to or less than 2.5 microns in diameter (PM_{2.5}). Lead is also regulated as a hazardous air pollutant (HAP). Air quality issues associated with the proposed action are primarily related to the operation of the new generator plant and the potential generation of pollutants during demolition and construction activities and fugitive emissions from vehicles.

Air quality is typically good in the vicinity of Wright-Patterson AFB, and is generally affected only locally by military and civilian vehicle emissions, particulate pollution from vehicle traffic, fumes from wastewater treatment plants, industrial sources, and construction activities. Mobile sources such as vehicle and aircraft emissions are generally not regulated and are not covered under existing permitting requirements. Specific emissions sources at Wright-Patterson AFB include natural gas and coal-fired boilers; research and development sources, such as laboratory fume hoods and test cells; paint spray booths; refueling operations; and emergency power generators.

WPAFB is located in the Dayton-Springfield MSA which is designated as maintenance for ozone. In April, 2004, the USEPA designated the Dayton-Springfield area as basic non-attainment for the 8-hour ozone standard. The designations result in a requirement for an air quality conformity applicability

analysis for Federal actions to determine whether or not Conformity Rules apply. Applicability hinges on emission increases from the action or exceedences of de minimus emissions of criteria pollutants.

WPAFB has prepared and submitted a base-wide federal operating permit application for air emissions as specified under Title V of the Clean Air Act Amendments of 1990. This activity included an emissions inventory of approximately 1,450 stationary sources of criteria air pollutants. Many of the Title V sources are insignificant including emergency generators and laboratory fume hoods. WPAFB has approximately 139 air emission sources that required permits to install (PTI). The remaining sources were exempt from a PTI by various provisions of OAC 3745-31-03 and OAC 3745-15-05. Of these permitted sources, only 29 are classified as major air pollution sources. Nine of these major sources are coal and natural gas-fired boilers at the two central heating plants. These nine boilers generate by far the largest quantity of emissions from stationary sources at the base. The OEPA finalized the Title V Operating Permit for WPAFB with an effective date of February 17, 2004. Emergency generators are exempt from OEPA permitting requirements, thus, a PTI will not be required for construction of the new emergency generator plant per OAC 3745-31-03 A.1(nn) and A.4(a).

3.9 Noise

Noise levels associated with WPAFB operations can create conflicts related to activities both on and off the base. Flight activities on WPAFB that contribute to the noise environment include the 445th Airlift Wing, the 47th Airlift Flight, and the Aero Club. The base also receives transient aircraft that represent the largest user group at 45 to 50 percent of the aircraft arriving and departing.

Noise levels can be considered in terms of levels ranging from those in a typical home at 40dB, and levels at which noise begins to harm hearing if exposed for a long period (8 hours) at 90dB. Typical noise sources in and around the project area include aircraft and human activities. Military aircraft operations and vehicle traffic are the existing primary sources of noise in the vicinity of the project area. The Air Installation Compatible Use Zone (AICUZ) threshold 65dB noise contour has been established for airfield operations at WPAFB. The project area is located in the <65dB noise zone. This noise level represents existing conditions to which potential noise levels from construction and demolition can be compared.

3.10 Health and Safety

General health and safety issues associated with the proposed project include worker safety and public safety during construction. Occupational and public safety issues are addressed with respect to demolition and abatement activities.

Health and safety issues for the project include hazards associated with construction and renovation of the complex and supporting infrastructure. Such hazards include physical hazards (including heavy and light on-site equipment usage), hazardous materials, and underground/overhead utility work.

Potential hazardous materials of concern to demolition/renovation projects include: fire retardants, cleaning agents, petroleum products, hazardous waste, storage tanks, asbestos-containing materials, pesticide usage, polychlorinated biphenyls (PCBs), radon, medical/biohazard waste, and lead-based paint. The status of these materials or items is typically determined prior to building demolition, renovation, and construction.

All hazardous material/items are covered by appropriate WPAFB protocols and specifications governing abatement, remediation, removal and disposal. These requirements are typically included in design and construction documents.

3.11 Socioeconomics

WPAFB is the largest employer in the Dayton-Springfield MSA and the largest single-site employer in the state of Ohio. Its combined workforce of more than 22,000 in 2004 accounts for nearly one in twelve workers in the greater Dayton area. The Base generates an annual payroll of more than \$1.1 billion with regional contracts adding to that amount. WPAFB's total economic impact to the local economy is estimated at more than \$2.6 billion/year (WPAFB, ASC, 2004).

Given WPAFB's economic importance, various state and local advocacy groups have focused on the base to promote its research potential, including collaborative ventures with regional universities and others; to ensure utmost consideration in DOD funding decisions; and to enhance its standing in any future base realignment and closure (BRAC) considerations. With declining city populations and somewhat stagnant regional population growth over the last 10-15 years due, in part, to the loss of manufacturing employment, the focus on new technologies and defense-related industries is vital to the future of this region.

Like employment at WPAFB overall, employment at NASIC peaked in 1988 then declined through the 1990s (WPAFB, 2004, 5). Since 2000, the growth in NASIC missions have resulted in about 450 more employees, which partly accounts for the current lack of facilities and need for the expansion project. An additional 400 to 500 employees are anticipated by 2009 as a result of the expanded and new missions (WPAFB, 2004, 5).

3.12 Transportation/Traffic

From off base, the project area would be accessed through Gate 15A on Skeel Avenue to Communications Boulevard to Oklahoma City Street or San Antonio Street or from Skeel Avenue to Hebble Creek Road. The project area would also

be accessed through Gate 12A on Chidlaw Road and Spruce Way. Traffic volumes at both gates are relatively heavy, but traffic disperses in a number of directions once past the gates.

Traffic counts were taken in January and December 2002 in the project area (KZF, 2002). Average daily traffic (ADT) ranged from about 1700 vehicles per day (VPD) with a peak hour volume of 200 vehicles per hour (VPH) on Hebble Creek Road to 3000 VPD on Communications Blvd. and over 4000 VPD on San Antonio Street. Peak hour volumes ranged from 308 VPH to 375 VPH on Communications Blvd. and 403 VPH to 514 VPH on San Antonio Street. Mid-day traffic on all of these roadways is similar to the respective highest peak hour volumes. Apparently many Area A, and possibly Area C employees, come and go over the lunch period.

Analyses of current traffic volumes in accordance with Highway Capacity Manual procedures indicates a Level of Service of C, which is good traffic flow.

NASIC employees currently park in several different lots including 88C to the north, 13A to the east, 3A to the south, 9A to the southwest and 10A to the west. Current project plans will eliminate some existing parking stalls, particularly in lot 3A just north of Building 10280, which will lose 144 stalls and in lot 9A which will host the new generator plant.

Restripping of lot 9A would increase the number of stalls, but this is more than offset by the new generator plant space requirements. Reconfiguration of lots 13A and 14A, with removal of walkways and cross drives, and expansion of 14A to the treeline along Chidlaw Road, however, will increase the number of parking stalls from 1,475 to 1,525, a gain of 50. The net parking stall loss would be 130 stalls (WPAFB, 2004, 6).

3.13 Utilities

A complex array of utility systems exists in the project area, all of which are important to current NASIC facilities and the expansion project. Systems include potable water, sanitary and storm sewers, electricity, communications, and high temperature hot water (HTHW). The systems are complicated by lines and vaults that date to World War II including abandoned and unknown lines. Hazardous materials are commonly found with old steam lines.

The HTHW system in part of Area A has recently been or is currently being upgraded. The system in the project area will need to be upgraded to support the expansion project. The proposed new emergency generator plant will be required to provide uninterruptible power to the current and proposed NASIC facility. Major relocations of the existing systems will be required to facilitate project construction.

4.0 Environmental Consequences

4.1 Introduction

The purpose of this chapter is to provide an evaluation of the potential impact associated with the proposed action (construction of the NASIC expansion) as well the No Action alternative presented in Chapter 2.0. The No Action alternative represents the baseline conditions to which the proposed action is compared. The evaluation of the proposed action and alternative is summarized in Table 2-1.

The impacts associated with the project-related demolition actions have been assessed in the Final Environmental Impact Statement for the Demolition of Multiple Historic Facilities at Wright Patterson Air Force Base, Ohio (USAF, 1997) General issues relating to routine building demolition will not be covered in this EA, but are referenced to the EIS for building demolition.

4.2 Biological Resources

4.2.1 Vegetation

4.2.1.1 No Action Alternative

Vegetation at the project site would not be impacted under the No Action alternative.

4.2.1.2 Proposed Action

Much of the proposed construction site is covered by concrete or asphalt. Vegetation at the construction sites primarily consists of lawns, grasses, and shrubs, which are commonly found throughout the base. After construction is complete, the area would be landscaped with grasses, ornamental shrubs and trees.

Numerous small to mature trees east of the NASIC complex would be removed by construction and construction activities may impact some of those not removed, especially by soil compaction. Loss of these trees will have no appreciable effect on vegetation resources of the Base; however, it will take years for new plantings to provide comparable habitat, shade and aesthetics.

4.2.2 Wildlife

4.2.2.1 No Action Alternative

Wildlife at the project site would not be impacted.

4.2.2.2 Proposed Action

Impacts to wildlife would not be expected during the construction of the project, nor would any long-term impacts be expected.

Minor, temporary impacts to wildlife could occur during construction as some small common mammal and bird habitat is disturbed. Any affected wildlife, such as squirrels, chipmunks, groundhogs, and birds would be expected to move to adjoining undisturbed areas such as the Prairie Trace Golf Course.

4.2.3 Threatened and Endangered Species

4.2.3.1 No Action Alternative

Threatened and endangered species would not be impacted under the No Action alternative.

4.2.3.2 Proposed Action

No threatened or endangered species nor their habitats are located in the vicinity of the proposed construction sites. Therefore, no impacts would be expected.

4.3 Water Resources

4.3.1 Groundwater

4.3.1.1 No Action Alternative

The No Action alternative would not impact groundwater under current conditions.

4.3.1.2 Proposed Action

Construction activities at the NASIC expansion site would be limited to relatively shallow subsurface excavation. Because groundwater in this area occurs at approximately 15 to 20 ft bgs, the proposed actions would not alter the

subsurface hydrogeology and would not likely create a potential source of groundwater contamination. Similarly, the excavation work is not expected to encounter any contaminated groundwater associated with LF3 or LF4. Thus, neither construction nor demolition activities are expected to impact groundwater resources.

Nonetheless, because of the sensitivity of the Buried Valley/Sole Source Aquifer protection area, provisions of the WPAFB SWPPP, Spill Prevention and Response Plans, and construction best management practices should be enforced as project specifications.

4.3.2 Surface Water

4.3.2.1 No Action Alternative

The No Action alternative will not be expected to impact surface water resources under typical conditions.

4.3.2.2 Proposed Action

Building construction activities in the project area will involve land surface disturbance. A permit for discharge associated with disturbance of one acre or more of land would be required under Phase II of the NPDES Storm Water Regulations. The area of the affected land is anticipated to be between one to five acres in size. Therefore, a NPDES construction permit from the Ohio EPA would be required.

As the land surface at this location is also typically flat (although elevated in relation to the drainages near Skeel Avenue), erosion control measures would inhibit erosion during heavy rain events. Construction activities would not alter the surface water hydrology and would not create a potential source of surface water contamination as long as spill prevention and BMPs are enforced. Therefore, the construction activities are not expected to impact surface water resources. Long-term impacts associated with the project would include potential impacts due to the increased impermeable surface associated with the new parking lot and other impervious surfaces. Impacts would be minimized by accounting for appropriate drainage and connections to the sewer system in the design of the facilities.

4.3.3 Floodplain

4.3.3.1 No Action Alternative

This alternative would have no effect on any floodplains.

4.3.3.2 Proposed Action

As discussed in Section 3.3.3, the Mad River 100-year flood stage at WPAFB is 814.3 ft MSL. The Miami Conservancy District (MCD) regulates the flood control basin upgradient of Huffman Dam. Structures or additions of any type within the floodplain behind Huffman Dam shall not be erected more than 5 feet below the Huffman Dam Spillway elevation (835 ft MSL) except by authorization by the MCD (MCD, 1996). The land surface in the project area is at an elevation of approximately 830 to 840 ft MSL. Construction of the project would not impact floodplain management.

4.3.4 Wetlands

4.3.4.1 No Action Alternative

Wetlands would not be impacted under the No Action Alternative.

4.3.4.2 Proposed Action

There are no wetlands in the vicinity of the project area. Therefore, wetlands would not be impacted.

4.4 Installation Restoration Program Sites

4.4.1 No Action Alternative

The No Action alternative would have no impact on any IRP sites.

4.4.2 Proposed Action

Although the project area abuts and potentially overlaps a small zone of OU4 – in the proposed new generator location, no actual IRP landfill site will be impacted (see Figure 5). No impacts to either IRP sites would be expected to occur. A survey of landfill gas monitoring wells was conducted in 2002 (WPAFB, 2002b). Soil vapor samples were collected from seven shallow subsurface locations and analyzed in the field for methane, carbon dioxide, oxygen, and lower explosive limit. The sampling points were located adjacent to Building 879 west of the proposed generator site. Subsurface sampling holes were created by driving a punch-bar two feet into the soil using slide-hammer. Soil vapor samples were then collected and analyzed using a Landtec GA-90 gas analyzer. Methane was not detected at any of the monitoring locations and methane has not been detected at the nearest monitoring wells as described in Section 3.4.

The proposed construction site for the new generator is approximately 300 feet southeast of LF4. It is not expected that landfill material would be encountered during construction. However, in the event that landfill material is encountered during construction, the Office of Environmental Management would be notified.

4.5 Land Use

4.5.1 No Action Alternative

Land use would not change under the No Action Alternative. Therefore, the No Action Alternative would have no impact on land use.

4.5.2 Proposed Action

No significant change in project area land use would occur as a result of the NASIC expansion project. Minor impacts would occur due to temporary disruptions to roadways, parking lots, open space, and some facility use as a result of construction activities. Long-term effects would, however, be inconsequential as infrastructure is replaced/rerouted and new facilities are constructed. The NASIC facilities are in an area slated for Administrative (its current classification) and the new generator plant site is in a current industrial area. This area is slated to remain Industrial land use. Although there will be some minor loss of open space, the NASIC expansion project is compatible with both current and long range land use plans for Area A.

4.6 Soils

4.6.1 No Action Alternative

Soils would not be impacted under the No Action Alternative.

4.6.2 Proposed Action

Construction of the new facilities would have the potential for soil erosion. This impact would be short-term. Erosion and dust control measures would be utilized as detailed in the stormwater management plan for the project. Under the stormwater Phase II rules, an NOI must be submitted to OEPA for the project, since more than one acre of land will be disturbed. The NOI must include the stormwater plan, including erosion control measures. Regular monitoring is required to ensure proper implementation. However, due to the relatively flat topography of the project area, excessive erosion is not anticipated and no long-term impacts to soils are expected.

4.7 Cultural Resources

Impact levels for cultural resources are determined based on the impacts to archaeological or historic resources that cannot be avoided through normal project design considerations. For example, changing the windows on a historic facility has the potential to have serious adverse impacts, but with normal design consideration taken in selecting windows that are compatible with the historic structure in which they will be placed, the impact on the resource can be minor or even negligible. This principal applies to many environmental media. For example, construction of a large new facility has potential for serious erosion problems, which would impact earth resources and water resources. However, erosion control provisions are required to be implemented by all base contracts, so the environmental impacts of any new construction project are minimized. Impact threshold definitions for historic structures and buildings, which is the cultural resource area most likely to be impacted by the proposed action, are as follows:

Negligible: The impact would be at the lowest levels of detection, with neither adverse nor beneficial consequences. The determination of effect for Section 106 of the National Historic Preservation Act would be no adverse effect.

Minor: Alteration of a feature(s) would not diminish the overall integrity of the resource. The determination of effect for Section 106 would be no adverse effect.

Moderate: Alteration of a feature(s) would diminish the overall integrity of the resource. The determination of effect for Section 106 would be adverse effect. A memorandum of agreement would be executed between the base and the Ohio State Historic Preservation Officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 Code of Federal Regulations 800.6(b). Working in cooperation with the SHPO to ensure compatible design features would result in only moderate impacts under the National Environmental Policy Act.

Significant: Alteration of a feature(s) would diminish the overall integrity of the resource. The determination of effect for Section 106 would be adverse effect. Measures to minimize adverse impacts are not possible. The base and the State Historic Preservation Officer and/or Advisory Council would negotiate and execute a memorandum of agreement in accordance with 36 Code of Federal Regulations 800.6(b) that stipulates measures to be taken to compensate for the loss of integrity to the historic resource.

4.7.1 No Action Alternative

The No Action Alternative would have no impact to cultural resources.

4.7.2 Proposed Action

Because the proposed construction sites (San Antonio Street and Hebble Creek Road) are located in an urban-use disturbed area, no impacts to cultural resources are expected to occur under the proposed action. No known archaeological or Native American ceremonial/traditional sites are expected within the project area. In the unlikely event that cultural items are encountered during project construction, work would cease immediately and the Base Historic Preservation Officer (BHPO) would be contacted to assess the items.

Buildings 10828 and 10856, which are to be renovated and expanded, are eligible for the National Register of Historic Places because of their Cold War historic context. As described in Section 3.7, these facilities, and what happened within them, were of vital national and historic importance.

Coordination with the Ohio Historic Preservation Office (OHPO) was begun in July 2004 by the BHPO (letter, Appendix A). The base's position was that both the construction of a partial second floor addition to Building 10856 and the 155,000 square foot addition to Building 10828 should be considered no adverse effect. The reasoning for this was that Building 10856 was actually designed to support a second floor, and the proposed addition would be small in comparison to the overall facility size. In addition, the proposed expansion would be constructed on the western edge of the building, well away from the main facility entrance on the northern façade.

While the base understood that the proposed addition to Building 10828 would be extensive, it was believed that adherence to the Secretary of the Interior's Standards for Rehabilitation would ensure that the addition resulted in no adverse effect on this historic structure. The OHPO responded to the BHPO letter on 20 Oct 04, and they requested elevation drawings and plans for the Building 10856 addition to ensure that it complies with the Secretary of Interior's Standards for Rehabilitation. Their primary concern with this segment of the proposed action was that the new addition "be differentiated from the historic building and be compatible with the massing, size, scale, and architectural features of the historic property." The base is prepared to provide the requested information, with the belief that no adverse effect will be mutually agreed upon.

The OHPO had more serious concerns with the addition to Building 10828, and their preliminary opinion was that this addition would "likely have an adverse effect on the historic property." Their letter did, however, indicate that they were willing to work with the base in development of a Memorandum of Agreement for this project. They also requested on-going consultation with the base during the design phase, which the base is certainly willing to accommodate. While the OHPO refrained from issuing their formal recommendation regarding the effects of this project, with an MOA and proper coordination of the design, the worst-case cultural resource impact from this project would be moderate.

4.8 Air Quality

4.8.1 No Action Alternative

Because no demolition or construction would take place, no increase in emissions would be expected. There would be no change in the impact to air quality.

4.8.2 Proposed Action

Minor, short-term impacts are expected from construction of the project including fugitive dust from various sources, airborne materials from demolition/renovation activities, and exhaust emissions from construction vehicles and equipment. Construction BMPs, including dust suppression and abatement/remediation controls, would minimize particulate and potential hazardous materials.

The Annual Emission Fee Report submitted by WPAFB to OEPA (WPAFB, 2001) estimates nearly 21 tpy of PM₁₀ emissions at the Base. Other recent construction projects in Area A have generated estimated PM₁₀ emissions of less than 2 tpy (WPAFB, FCSARC EA, 2002). Even at several orders of magnitude greater, the emissions from the proposed project would be well within the baseline and far below de minimus levels for conformity applicability.

The new emergency generator plant will emit diesel fuel combustion pollutants when in use. As a backup, emergency generator, however, it is exempt from OEPA PTI requirements as long as use is under 500 hours/year. WPAFB EM will monitor the plant for use and its emissions will be calculated and included in the Basewide Annual Emissions Fee Report (WPAFB, 2004, 4).

No conformity nor further air quality analyses are required.

4.9 Noise

4.9.1 No Action Alternative

The No Action alternative would have no effect on ambient noise levels.

4.9.2 Proposed Action

Short-term minor impacts from construction activities, particularly from truck and heavy equipment operations, would be expected to increase ambient noise levels. At 50 feet, noise levels generated by standard construction equipment range from 72 to 94 dB. While noticeable and potentially annoying to nearby

building occupants or pedestrians, the noise will be intermittent and temporary. Construction crews would be subject to more noise; however, adherence to OSHA health and safety regulations would minimize adverse effects.

No long-term noise impacts are anticipated. When in use, the emergency generator would be a source of noise; however, this would be mitigated by its location in an Industrial use area and sound transmission barriers.

4.10 Health and Safety

4.10.1 No Action Alternative

The No Action alternative would have no impact on Health and Safety in the project area.

4.10.2 Proposed Action

Because project construction workers would be responsible for complying with standard operating procedures and applicable health and safety regulations, no impacts to health and safety would be expected. "Digging clearances" would be obtained from Base Civil Engineering prior to any excavating. The construction area is outside the boundaries of IRP sites in OU4. Results from the methane monitoring program for OU4 as well as recent soil vapor analyses indicate that no impacts due to methane would be expected.

Because demolition crews would be responsible for adhering to standard operating procedures and applicable health and safety regulations, no impacts to worker safety would be expected. In addition, no impacts due to hazardous /toxic materials are anticipated due to required prior abatement/remediation and project adherence to applicable WPAFB health and safety and environmental specifications.

4.11 Socioeconomics

4.11.1 No Action Alternative

The No Action alternative would have no immediate effect on socioeconomics. In the long-term, however, inadequate NASIC facilities could lead to short-term loss of mission capabilities and eventually jobs and payroll. This effect would be minor in terms of WPAFB's overall economic effect on the local economy.

4.11.2 Proposed Action

Nominal, beneficial, short-term socioeconomic impacts would occur during construction and demolition activities. Although there would be no significant impact on the overall economic activities surrounding the Base, there would be nominal beneficial impact on the local economy. Contractors and local businesses would benefit from employment and income through contracts associated with the construction project.

The proposed action would have a long-term beneficial socioeconomic impact for both WPAFB and the Dayton region. In addition to revenues generated by fully housing and operationalizing the recent mission expansion and new NASIC employees, accommodating new mission growth and an additional 400-500 new, largely "high-tech" jobs would provide a nominal boost to the local economy. This impact, however, is relatively small given the overall economic effect of WPAFB and the size of the Dayton MSA economy. Importantly, however, the new facilities and staff would further enhance WPAFB's position in the overall USAF and DOD base realignment picture and foster on-going technological cooperative relationships with regional and statewide economic development programs.

4.12 Transportation/Traffic

4.12.1 No Action Alternative

The No Action alternative would have little effect on transportation/traffic. Continued overcrowding of some project area parking lots would continue.

4.12.2 Proposed Action

Project construction will result in short-term traffic and parking disruptions. Construction traffic, including worker parking and construction staging/laydown areas, will exacerbate the already crowded parking situation around the NASIC complex. Disruptions and traffic problems will also occur over the short-term as roads are closed and/or rerouted and parking is reconfigured. A construction phasing/staging and traffic management plan would help to mitigate the consequences of the short-term traffic/parking problem.

The long-term project road closures, reroutings, intersection improvements and parking lot reconfigurations will result in minor disruptions to traffic flows and parking patterns in the project area. Closure of Hebble Creek Road and rerouting of San Antonio Street will force changes to current vehicular patterns. Some motorists, depending on work or other destinations, may switch parking lots and entry/egress roadways and base access gates.

Current traffic volumes on all of the affected roadways in the project area enjoy at least a Level of Service of C, which indicates good traffic flow. This is true even at peak hour flows, which include approximately similar AM, mid-day, and PM

periods. Even with additional traffic generated by employment and delivery growth, the reconfigured roadways should provide adequate geometry and capacity for acceptable operations/level of service.

It is also important to note that long-term Headquarters Area Plan programs will result in roadway closures and/or other modifications to meet anti-terrorism/force protection design standards, including stand-off distances. The roadway changes included in the proposed action are consistent with these plans, which, for example, call for downgrading Communications Blvd. from a major roadway to a service road (WPAFB, 2004, 2).

The proposed action will also affect the long-term parking situation near the NASIC complex. A net number of spaces will be lost, approximately 130, in proximity to NASIC (Table 4-1), even after expansion of lot 14A. This will result primarily from reconfiguration of the subject lots and the rerouting of San Antonio Street through current lot 13A. It is anticipated that more AFMC Headquarters (Buildings 10262 and 10266) employees will use the new lot east of 14A and additional, future reconfigured space south of these buildings. This will free up space for NASIC employees, including new employees, in parking lot 13A. Similarly, potential demolition of building 10281 and other older facilities may, ultimately, free up some current employee parking space in parking lot 9A and possibly provide new parking space where demolished buildings are now. Regardless, some employees in the area will have to walk farther from their parking spaces than they do currently.

4.13 Utilities

4.13.1 No Action Alternative

No impact would occur to the project area utilities under the No Action alternative.

4.13.2 Proposed Action

Construction of the proposed action would require the relocation and/or replacement of several project area utility systems, particularly in close proximity to the NASIC complex. These include all major systems: water, sewer, electricity, communications, and steam/high temperature hot water lines. Some of the utility vaults/lines date from WWII and land uses present at that time. These include abandoned systems and unknown lines.

Construction work will likely require prior hazardous materials abatement in some systems and some temporary disruptions of service in the area may be anticipated. Detailed routing identification will be required before excavation.

4.14 Cumulative Impacts

Cumulative effects are those which may result from the incremental impact of the federal action (construction of the project) when added to other past, present, and reasonable foreseeable future actions, regardless of what agency (federal or non-federal) undertakes such actions (40 CFR 1508.7).

No other significant actions are known to be occurring or planned during the timeframe of this project. Long-term programs, some of which are Basewide, are in place to reduce expenses, improve infrastructure, and/or contribute to Base plans. These include demolition of outdated facilities, replacement of utility systems, and implementation of anti terrorism/force protection measures. None of these are related to the project in a direct, environmental impact relationship. Therefore, cumulative impacts would not be expected.

4.15 Unavoidable Adverse Effects

No significant unavoidable adverse environmental effects from implementation of the Proposed Action have been identified through this EA. The No Action alternative could result in a long-term loss of mission capability for NASIC.

4.16 Relationship of Short-Term Uses and Long-Term Productivity

Neither the Proposed Action nor No Action Alternative would affect the long-term productivity of the environment; no significant environmental consequences nor depletion of natural resources have been identified through this EA.

4.17 Irreversible and Irretrievable Commitments of Resources

CEQ regulations in 40 CFR 1502.16 require that an agency identify any irreversible or irretrievable commitments of resources that would be involved in the proposed action, should it be implemented. Capital, energy, materials, and labor would be required for the action. These resources are not retrievable.

**Table 4-1
NASIC Expansion Parking Comparison¹**

Lot Description	Existing Parking (# of Stalls)	New Parking (# of Stalls)	Difference
Lot north of Building 30280 (after construction of loading dock)	188	44	-144
Lot southeast of intersection of Warner Robbins St. and Hebble Creek Rd. with generator plant ²	343	307	-36
Lots east of San Antonio Ave. ³	1475	1525	50
Totals =	2006	1876	
		Total Difference =	-130

- 1 After removal of walkways and cross drives in lots and with new generator plant in lot 9A.
- 2 Existing lot is un-striped; the number of existing stalls is approximate.
- 3 The number of existing stalls is the equivalent number of 9' x 18' stalls. Includes expansion of lot 14A and cross lanes.

5.0 List of Preparers

John Koerner, Assistant Program Manager, Senior Scientist/Planner, Versar, Inc., Dayton, Ohio

Cynthia Edgington, Project Scientist, Versar, Inc., Dayton, Ohio

David Robinson, CIH, Senior Scientist, Versar, Inc., Dayton, Ohio

Thomas Wenk, Senior Scientist, Versar, Inc., Dayton, Ohio

6.0 List of Agencies and Persons Consulted

The following persons and agencies have been consulted during the preparation of this EA.

<u>Name</u>	<u>Affiliation</u>	<u>Subject</u>
John Baldino	NASIC/MSFE	NASIC Plans/Operations
Jan Ferguson	88ABW/EM	Cultural/Historic Resources
James Frishkorn	NASIC/MSF	Facility Operations
Robert Gingell	88ABW/CE	Project Design
Doug Hulings	88ABW/CE	Project Design
Ken Lammers	USF&WS	Threatened & Endangered Species
Dale Masin	88ABW/CE	Area Plans
Dan Omlor	NASIC	Project Design
Thomas Perdue	88ABW/EM	EIAP/EA Program Manager
Sherm Siegal	88ABW/EM	IRP Program/Groundwater
Connie Strobbe	88ABW/EM	Air Quality
Debbie Woischke	ODNR/Div Natural Areas	Natural Resources
Richard Young	NASIC/MSFM	Plant Operations/Hazardous Materials

7.0 References

BHE Environmental, Inc., 1999, Wetland Inventory of Wright-Patterson Air Force Base.

BHE Environmental, Inc., 2001, Endangered Species Management Plan for Wright-Patterson Air Force Base, Wright-Patterson Air Force Base, 88th Air Base Wing, Office of Environmental Management, WPAFB, Ohio.

BHE Environmental, Inc. and IT Corporation (BHE/IT), 2001, Final Integrated Natural Resources Management Plan, Wright-Patterson Air Force Base, Ohio.

CH2M HILL, 1994, Remedial Investigation Report: Operable Unit 4, Wright-Patterson Air Force Base, Ohio.

International Consultants Incorporated and Science Applications International Corporation (ICI/SAIC), 1995 Final Site-Wide Characterization Report, Wright-Patterson Air Force Base Environmental Management 88th Air Base Wing.

IT Corporation, Storm Water Pollution Prevention Plan, Wright-Patterson Air Force Base; Versar, Inc., 2003, Final Storm Water Pollution Prevention Plan, Wright Patterson Air Force Base.

KZF Design Inc., 2002, Wright-Patterson Air Force Base NAIC Expansion Study.

Ohio Environmental Protection Agency, 2000, Emissions Inventory Data for Clark, Greene, Miami, and Montgomery Counties, www.epa.oh.us/dapc/aqmp/eiu/eiu.html.

U.S. Air Force, 1997, Final Environmental Impact Statement for the Demolition of Multiple Historic Facilities at Wright-Patterson Air Force Base, Ohio.

U.S. Air Force, 2001a, Final Environmental Assessment of the Huffman Prairie Flying Field Cultural Landscape Plan, Wright-Patterson Air Force Base, Ohio.

U.S. Air Force, 2002, Final Environmental Assessment for Realigning Visitor Circulation at Huffman Prairie Flying Field, Wright-Patterson Air Force Base, Ohio.

U.S. Air Force, 2002, Final Environmental Assessment – Fully Contained Small Arms Range Complex, Wright-Patterson Air Force Base, Ohio.

U.S. Army Corps of Engineers, 1987, Wetlands Delineation Manual, Department of Army, Waterways Experiment Stations, Corps of Engineers, Washington, D.C.

U.S. Department of Agriculture, Soil Conservation Service (USDA-SCS), 1978, Soil Survey of Greene County, Ohio.

U.S. Department of Commerce, Bureau of the Census, 1991, Decennial Census of the Population.

Woolpert Consultants, 2001, General Plan, Wright-Patterson Air Force Base, Ohio.

Wright-Patterson Air Force Base, 1995, Air Installation Compatible Use Zone (AICUZ) Study, Wright-Patterson Air Force Base, Ohio.

Wright-Patterson Air Force Base, 1996, Record of Decision for 21 No Action Sites, Wright-Patterson Air Force Base, Ohio.

Wright-Patterson Air Force Base, 1998, Final Record of Decision for 41 No Action Sites, Wright-Patterson Air Force Base, Ohio.

Wright-Patterson Air Force Base, 2001, Final Cultural Resources Management Plan.

Wright-Patterson Air Force Base, 1999, Economic Impact Analysis, Wright-Patterson Air Force Base, Ohio.

Wright-Patterson Air Force Base, 2003, FY 2006 Military Construction Project Data (DD Form 1391), NASIC Add/Alter Intelligence Production Complex, Project Number ZHTV063303.

Wright-Patterson Air Force Base, Aeronautical Systems Center (ASC), Public Affairs Office, 2004, Fact Sheet, Wright-Patterson Air Force Base.

Wright-Patterson Air Force Base, 2004, Personal Communication between Sherm Siegel (WPAFB) and John Koerner (Versar, Inc.), August 2004, 1.

Wright-Patterson Air Force Base, 2004, Personal Communication between Dale Masin (WPAFB) and John Koerner (Versar, Inc.), August 2004, 2.

Wright-Patterson Air Force Base, 2004, Personal Communication between Jan Ferguson (WPAFB) and John Koerner (Versar, Inc.), August 2004, 3.

Wright-Patterson Air Force Base, 2004, Personal Communication between Connie Strobbe (WPAFB) and John Koerner (Versar, Inc.), August 2004, 4.

Wright-Patterson Air Force Base, 2004, Personal Communication between John Baldino / Dan Omlor (WPAFB) and John Koerner (Versar, Inc.), August 2004, 5.

Wright-Patterson Air Force Base, 2004, Personal Communication between Doug Hulings (WPAFB) and John Koerner (Versar, Inc.), August 2004, 6.

APPENDIX A

Correspondence

Photographs

20 Aug 04

88 ABW/EMO
5490 Pearson Road, Building 89
Wright-Patterson Air Force Base, OH 45433-5332

Mr. Ken Lammers, Acting Director
U.S. Fish and Wildlife Service
Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4115

Dear Mr. Lammers,

The U.S. Air Force is seeking informal consultation with the U.S. Fish and Wildlife Service in compliance with Section 7 of the Endangered Species Act for the proposed expansion of the National Air and Space Intelligence Center (NASIC). Wright-Patterson Air Force Base (WPAFB) has initiated an environmental assessment (EA) for this project in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969. The geographic location of the proposed construction site is Greene County, R.8,T.3, in Area A of WPAFB.

The geographic location of the proposed construction site for the expansion project is Greene County, R.8.,T.3. This location is depicted in Figure 1. The location of the project area is in a land use area described as Administrative and Industrial. Currently, the area is mostly covered by buildings and infrastructure – roads and parking lots. There are no natural resources (i.e., woodland, prairie, wetlands, ponds, or streams) in the vicinity of the proposed construction site. Two Indiana bats (*Myotis sodalist*) were captured on the base in July 2000 near the intersection of Prairie Road and Symmes Road along Trout Creek. This site appears to be within about one mile of the project area.

The expansion project includes construction of approximately 160,000 SF of new space and 45,000 SF of renovations to the existing buildings. Hebble Creek Road would be closed at Oklahoma City Street and San Antonio Street would be closed between Spruce Way and the current Hebble Creek Road. A new generator plant will be constructed in the current industrial area West of Warner Robins Avenue.

In addition to the proposed action of constructing the new complex and supporting facilities, the No Action alternative will be evaluated. Under the No Action alternative, none of the facilities would be constructed. No other alternatives will be evaluated.

I am requesting comment from your agency regarding the presence or absence of Federal and State-listed species that may be located within 0.5 miles of the proposed project location. Threatened and endangered species known to exist within the vicinity of the base include the Indiana bat, bald eagle (*Haliaeetus leucocephalus*), eastern massasauga rattlesnake (*Sistrurus c. catenatus*), clubshell (*Pleurobema clava*, a mussel), and blazing star stem borer (*Papaipema beeriana*, a moth).

In addition, please comment on the presence or absence of areas of ecological concern including wetlands, national wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries that may be located within the areas likely to be disturbed by the project. The attached maps (see Figures 1 and 2), depict the locations of the proposed project areas. We have also contacted the ODNR's Division of Natural Areas and Preserves for a search of their Natural Heritage Database.

Please send your comments to me at the address located on the letterhead. If you have any questions, please call me at 937-257-5535 ext.257. Thank you in advance for your time.

Sincerely,

A handwritten signature in cursive script that reads "Thomas Perdue".

Thomas Perdue
EIAP Program Manager
Operations Branch
Office of Environmental Management



August 18, 2004

Heritage Data Services
Division of Natural Areas and Preserves
Ohio Department of Natural Resources
Fountain Square Building F
Columbus, Ohio 43224

Request for Data for Proposed Project
At San Antonio Street and Hebble Creek Road (Area A)
Wright-Patterson Air Force Base, Ohio

Dear Ms. Woischke,

The purpose of this letter is to request information from the Natural Heritage Program for State and Federally-listed threatened or endangered plants and animals in the vicinity of San Antonio Street and Hebble Creek Road (Area A) at Wright-Patterson Air Force Base (WPAFB). Under contract to WPAFB, we are currently preparing an environmental assessment (EA) to address potential impacts associated with the expansion of the National Air and Space Intelligence Center. The intent of the EA is to satisfy requirements under the National Environmental Policy Act (NEPA) of 1969.

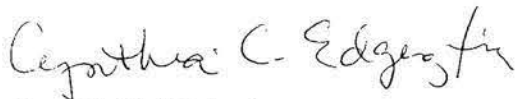
The geographic location of the proposed construction site for the expansion project is Greene County, R.8.,T.3. This location is depicted in Figure 1. The location of the project area is in a land use area described as Administrative and Industrial. Currently, the area is mostly covered by buildings and infrastructure – roads and parking lots. There are no natural resources (i.e., woodland, prairie, wetlands, ponds, or streams) in the vicinity of the proposed construction site. Two Indiana bats (*Myotis sodalist*) were captured on the base in July 2000 near the intersection of Prairie Road and Symmes Road along Trout Creek. This site appears to be within about one mile of the project area.

The expansion project includes construction of approximately 160,000 SF of new space and 45,000 SF of renovations to the existing buildings. Hebble Creek Road would be closed at Oklahoma City Street and San Antonio Street would be closed between Spruce Way and the current Hebble Creek Road. A new generator plant will be constructed in the current industrial area West of Warner Robins Avenue.

Page 2
August 18, 2004

A form for a Data Request has been attached. We would appreciate any information from your database that applies to our project area. Please expedite our request, if possible, and contact me at 937/431-8960 if you have any questions or require further information. Thank you for your attention to this request.

Sincerely,



Cynthia C. Edgington
Project Scientist

cc: T. Perdue (88 ABW/EMO, WPAFB)

DATA REQUEST

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF NATURAL AREAS AND PRESERVES
HERITAGE DATA SERVICES
1889 FOUNTAIN SQUARE COURT, BUILDING F-1
COLUMBUS, OHIO 43224
PHONE: 614-265-6453; FAX: 614-267-3096

INSTRUCTIONS:

Print this form from your browser. Then fill out both pages, sign it and return it to the address or fax number listed above along with: (1) a letter formally requesting data and describing your project, and (2) a map detailing the boundaries of your study area. A photocopy from the pertinent portion of a USGS 7.5 minute topographic map is preferred but other maps are acceptable. Our turnaround time is two weeks, although we can often respond more quickly.

FEES:

Fees are determined by the amount of time it takes to complete your project. The charge is \$25.00 per 1/2 hour with a 1/2 hour minimum. We can perform a data search manually or by computer. The Heritage Data Services staff will determine the most cost-efficient method of doing your search. A cost estimate can be provided upon request. Unless otherwise specified, an invoice will accompany the data services response.

This request is being submitted by fax mail both (circle one)
Date: 8/18/04

Your Agency/Organization: Versar, Inc.

Your Name/Title: Cynthia Edgington, Project Scientist

Address: 2288 Grange Hall Road

City/State/Zip: Beavercreek, OH 45431

Phone/Fax: 937-431-8960 / 937-431-8920

Project Name/Number: Environmental Assessment (EA) for Expansion of the NASIC Complex, WRIGHT-PATTERSON Air Force Base, OHIO

Project is located on the following USGS 7.5 minute topographic map (s): Fairborn Quad,

R.8., T.3.

If there is a program or contracting agency requiring this information, please give the name and phone number of a contact person:

Thomas Perdue, 88 ABW/EMO, WPAFB 937/257-5535
X257

The Natural Heritage Data Base contains records for the categories of species and features listed below. Check the appropriate item/s to indicate your selection.

PLANTS:	<input type="checkbox"/> Federal Status Only	ANIMALS	<input type="checkbox"/> Federal Status Only
	<input type="checkbox"/> State Legal Status Only		<input type="checkbox"/> State Legal Status Only
	<input type="checkbox"/> Rare (non-legal status)		<input type="checkbox"/> Rare (non-legal status)
	<input checked="" type="checkbox"/> All of the above		<input checked="" type="checkbox"/> All of the above
PLANT COMMUNITIES:	<input checked="" type="checkbox"/> All		
	<input type="checkbox"/> Wetlands Only		
	<input type="checkbox"/> Other		
OTHER FEATURES:	<input type="checkbox"/> Geologic Features		
	<input type="checkbox"/> Breeding/Non-breeding Animal Concentrations		
	<input type="checkbox"/> Champion Trees		
	<input type="checkbox"/> State Nature Preserves and Natural Areas		
	<input type="checkbox"/> State Wild, Scenic and Recreational Rivers		
	<input type="checkbox"/> State Parks, Forests, Wildlife Areas		
	<input checked="" type="checkbox"/> All of the above		
	<input type="checkbox"/> Other		

Besides name, location and status, specify any additional information you need:

None

The area you want to search:	<input type="checkbox"/> study area as outlined on the map
	<input checked="" type="checkbox"/> study area plus 1/2 mile radius
	<input type="checkbox"/> study area plus 1 mile radius
	<input type="checkbox"/> other

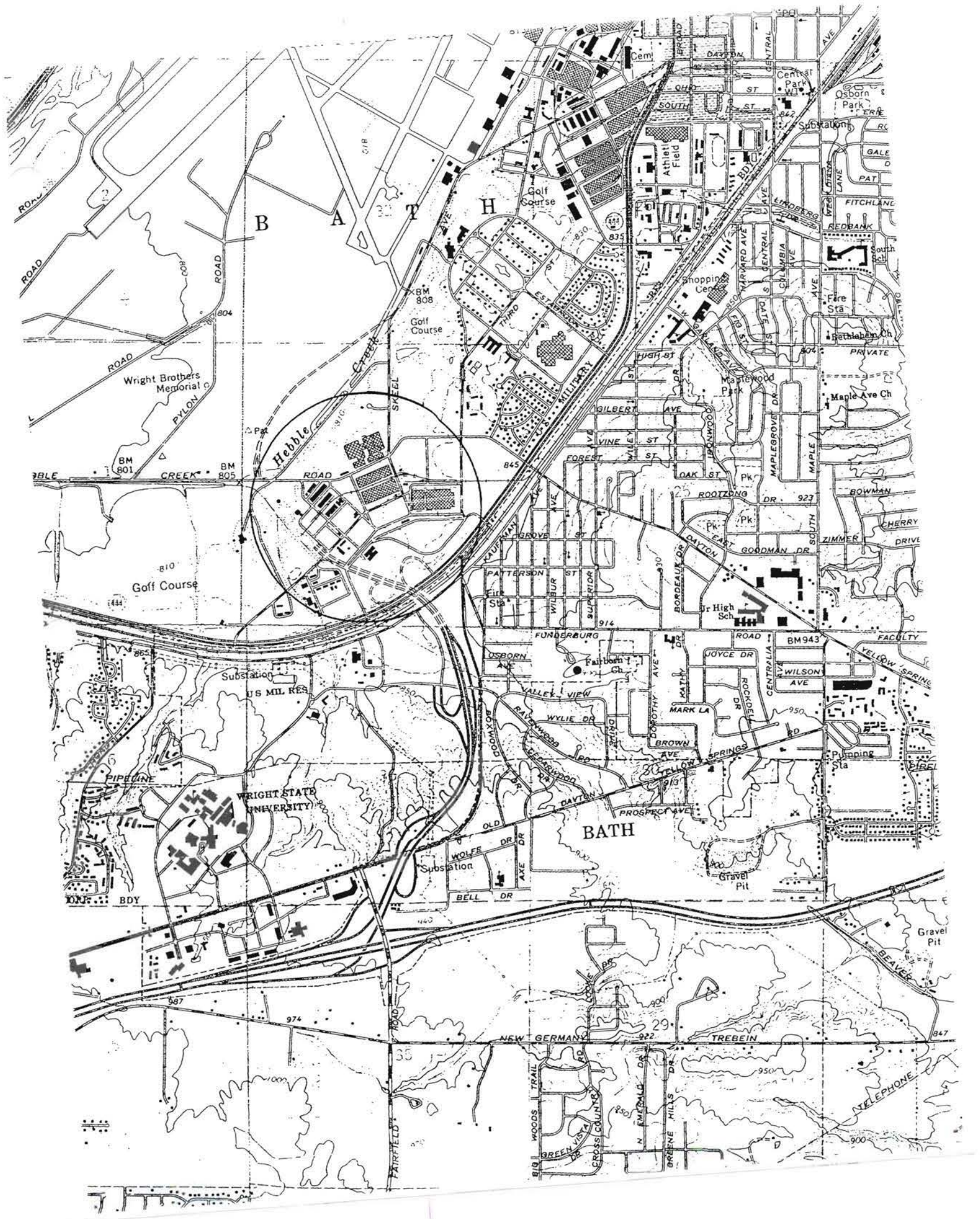
How will the information be used:

The name, status, and location of each species will be published in an EA that is being performed to satisfy requirements under the National Environmental Policy Act (NEPA).

The information supplied above is complete and accurate. Any material supplied by the Natural Heritage Data Base will not be published without prior written permission and without crediting the Division of Natural Areas and Preserves as the source of the material.

Your Signature Cynthia C Edgington

DNR 5203 Rev. 1/97





Ohio Department of Natural Resources

BOB TAFT, GOVERNOR

SAMUEL W. SPECK, DIRECTOR

Division of Natural Areas and Preserves

Nancy Strayer, Acting Chief

1889 Fountain Square, Bldg. F-1

Columbus, OH 43224-1388

Phone: (614) 265-6453; Fax: (614) 267-3096

August 19, 2004

Cynthia Edgington
Versar, Inc.
2288 Grange Hall Rd.
Beavercreek, OH 45431

Dear Ms. Edgington:

I have reviewed our Natural Heritage maps and files for the NASIC Complex Expansion project area, including a half mile radius, at San Antonio Street and Hebble Creek Road (Area A) on the Wright-Patterson Air Force Base, on the Fairborn Quad in Greene County. The numbers on the list below correspond to the areas marked on the accompanying map. Common name, scientific name and status are given for each species.

Fairborn Quad

A. Dayton Aviation Heritage National Historical Park - U.S. National Park Service

1. Huffman Prairie Area

Cistothorus platensis - Sedge Wren, species of concern

Papaipema beeriana - Beer's Noctuid, endangered

There are no existing or proposed state nature preserves or scenic rivers at the project site. We are also unaware of any geologic features, breeding or non-breeding animal concentrations or state parks, forests or wildlife areas in the project vicinity.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas. Also, we do not have data for all Ohio wetlands. For National Wetlands Inventory maps, please contact Madge Fitak in the Division of Geological Survey at 614-265-6576.

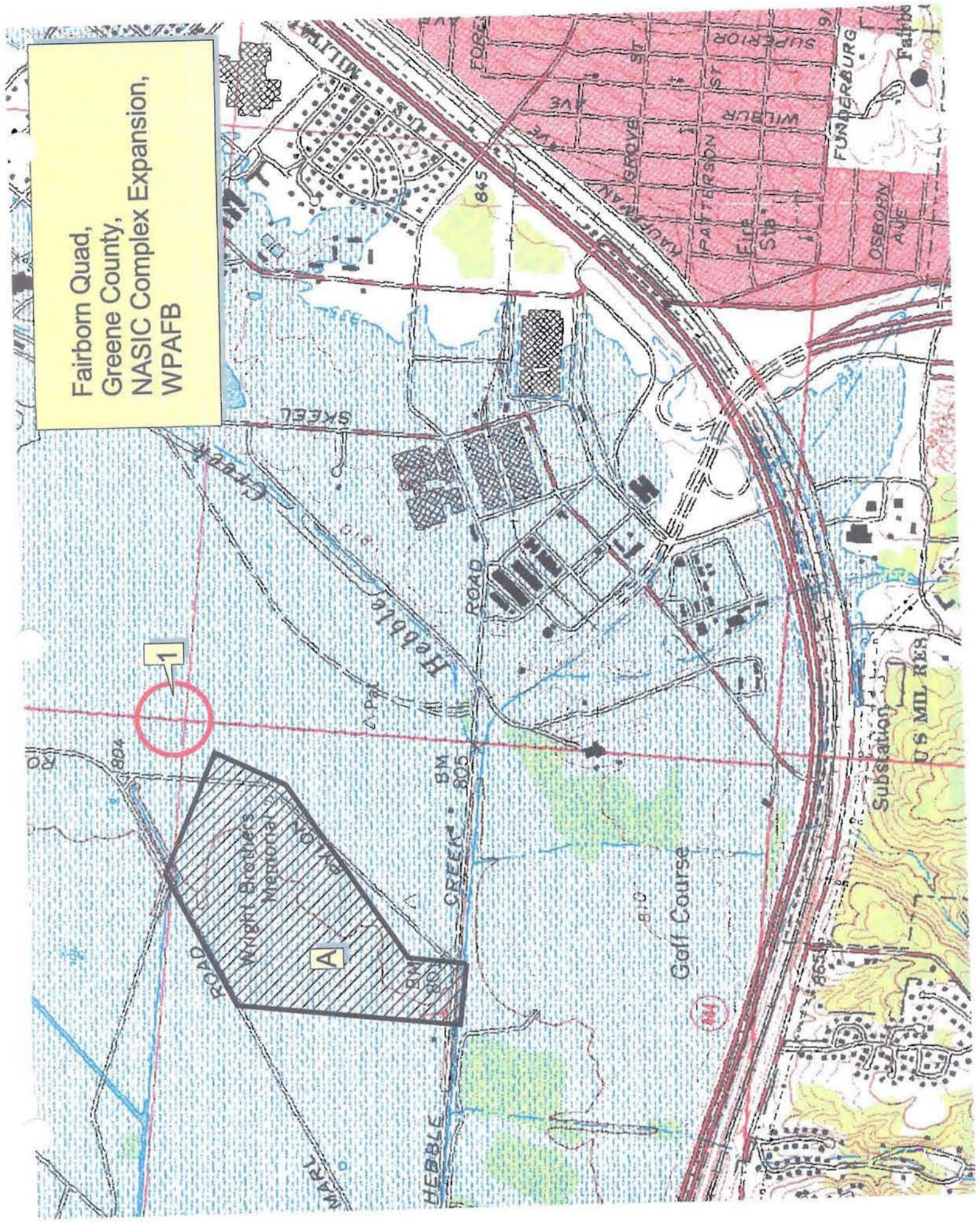
Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Debbie Woischke".

Debbie Woischke, Data Specialist
Support Services Group

Fairborn Quad,
Greene County,
NASIC Complex Expansion,
WPAFB



7 July 2004

88 ABW/EMO Bldg 89
5490 Pearson Road
Wright-Patterson AFB OH 45433-5332

Mr. Mark Epstein
Department Head, Resource Protection & Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus OH 43211-1030

Dear Mr. Epstein

In order to meet critical new mission requirements, Wright-Patterson Air Force Base (WPAFB) is proposing to expand the National Air and Space Intelligence Center (NASIC). The NASIC is a complex of three buildings, 10828, 10829, and 10856 within Area A of the base, in Greene County (see the location map at Attachment 1). All three facilities are eligible for listing on the National Register of Historic Places under Criterion G, exceptional importance, for their role throughout the Cold War.

There are two components to this project. The first component entails a 3,700 square foot partial second floor addition to Building 10856. Building 10856 is a concrete building with a flat roof (Attachment 2). The main entrance of the facility is on the north façade between its two wings. Constructed in 1958, the building was originally designed to support a second floor. The proposed second floor addition is needed to meet the expanding staffing and mission requirements of the tenant. The addition will be small in comparison to the overall building footprint and will be constructed on the western edge of the building (Attachment 3).

In December of 1993, we corresponded with you concerning the initial addition to the eastern side of the second floor of Building 10856. At that time, you concurred with our finding of No Adverse Effect (Attachment 4). Based on our past correspondence and the current proposed project, we believe the new addition will have No Adverse Effect on this historic property.

The second component of this project is the expansion of Building 10828. Building 10828 is a two-story concrete building with metal siding (Attachment 5). The facility was constructed in 1958 and continues to be used as an intelligence facility today. The current facility is critically full, impacting both its current and growing capabilities and new missions. The proposed project calls for a two-story, 155,000 square foot addition to the east and south of Building 10828. The project is necessary to meet vital mission requirements. WPAFB has examined other options to meet the new mission requirements, but the only viable option is to construct an addition adjacent to Building 10828.

At this time, we are submitting a site layout (Attachment 6) showing the proposed location of the addition. While the addition is extensive, and requires a road closure and rearrangement of parking lots, the only potential effect on Facility 10828 is the change in massing and architecture created by the new addition. In order to create a compatible addition, WPAFB will comply with the Secretary of the Interior's *Standards for Rehabilitation* for additions to historic structures. Based on the compliance with these standards, we believe the addition will have No Adverse Effect on this historic facility.

Please review the enclosed information and let us know whether you concur in our finding of No Adverse Effect. Should you or your staff have any questions, I can be reached at (937) 257-5528.

Sincerely

JAN FERGUSON
Cultural Resources Program Manager
Operations Branch
Office of Environmental Management

ATTACHMENTS

1. Project Location Map
2. Ohio Historic Inventory Form for Facility 10856
3. Location plan of second floor addition to Facility 10856
4. OHPO 13 Dec 93 Letter concerning an Addition to Facility 10856
5. Ohio Historic Inventory Form for Facility 10828
6. Site plan for Facility 10828 addition

WRIGHT-PATTERSON AIRFORCE BASE HISTORIC STRUCTURES INVENTORY

EXTERIOR CHARACTER DEFINING FEATURES

1. Location: _____

2. Building Name: Facility 10828

3. Building Type: _____

4. General Exterior Features Description

Facility 10828 is a 2 story concrete building with a flat concrete roof. The only windows in this facility are on the east facade near the entrance to the facility. Facility 10828 has a central courtyard and is connected to facility 10829 and 10856 via a corridor. The building is surrounded by a berm.

5. Structural System: Concrete

6. Exterior Wall Materials
- | | | |
|---|---|-------|
| <input checked="" type="checkbox"/> Concrete | <input type="checkbox"/> Clapboard | Other |
| <input type="checkbox"/> Concrete Block | <input type="checkbox"/> Wood Shingle | |
| <input type="checkbox"/> Stone | <input type="checkbox"/> Board and Batten | |
| <input type="checkbox"/> Stucco | <input type="checkbox"/> Vertical Board | |
| <input type="checkbox"/> Terra Cotta | <input type="checkbox"/> Asbestos/Asphalt | |
| <input type="checkbox"/> Log | <input type="checkbox"/> Brick | |
| <input type="checkbox"/> Horizontal Wood Siding | <input checked="" type="checkbox"/> Metal | |
| <input type="checkbox"/> Rustic/Drop | | |

7. Roof Type: Gable Hip Pyramidal Shed Flat Monitor Gambrel

Other: _____

8. Roofing Materials: Metal Composition Slate Tile Wood Shingle Wood Shake Concrete

9. Foundation Materials: Poured Concrete Concrete Block Wood Stone Brick

Other: _____

10. Window Type: Double-hung Casement Awning Hopper Industrial

10a. Window Description: _____

11. Window Materials: Wood Steel Aluminum

11a. Glazing: Single Double Triple

11b. Glazing Pattern: 1 over 1 2 over 2 4 over 4 6 over 6

Other: _____

WRIGHT-PATTERSON AIRFORCE BASE HISTORIC STRUCTURES INVENTORY
INTERIOR CHARACTER DEFINING FEATURES

0.	2. Building Name Facility 10828
3. Building Type	

4. General Interior Features Description

Due to USAF Security issues, access to the interior of this building can not be obtained.

5. Exposed Structure

6. Interior Wall Materials
- | | | |
|------------------------------------|-----------------------------------|---|
| <input type="checkbox"/> Plaster | <input type="checkbox"/> Paneling | <input type="checkbox"/> Brick |
| <input type="checkbox"/> GWB | <input type="checkbox"/> Tile | <input type="checkbox"/> Concrete Block |
| <input type="checkbox"/> Wallpaper | <input type="checkbox"/> Concrete | |

6a. Interior Wall Surfaces Description

7. Flooring Type
- | | | | |
|-------------------------------|-----------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> Wood | <input type="checkbox"/> Concrete | <input type="checkbox"/> Stone | <input type="checkbox"/> Metal |
|-------------------------------|-----------------------------------|--------------------------------|--------------------------------|

7a. Flooring Description

8. Ceiling Materials
- | | | | | | |
|----------------------------------|------------------------------|-------------------------------|--------------------------------|-----------------------------------|--|
| <input type="checkbox"/> Plaster | <input type="checkbox"/> GWB | <input type="checkbox"/> Wood | <input type="checkbox"/> Metal | <input type="checkbox"/> Concrete | <input type="checkbox"/> Acoustical Tile |
|----------------------------------|------------------------------|-------------------------------|--------------------------------|-----------------------------------|--|

8a. Ceiling Description

9. Interior Door Types
- | | | | |
|-------------------------------|--------------------------------|------------------------------------|--------------------------------|
| <input type="checkbox"/> Wood | <input type="checkbox"/> Metal | <input type="checkbox"/> Fireproof | <input type="checkbox"/> Glass |
|-------------------------------|--------------------------------|------------------------------------|--------------------------------|

9a. Interior Doors Description




View 1 – Looking SW from Spruce Street, east of San Antonio

View 2 – Looking south along San Antonio, from northeast corner of Bldg 856.



View 3 – Looking west from intersection of Hebble Creek and San Antonio.

 Versar INC. 2288 Grange Hall Rd. Beavercreek, OH 45431 937-431-8960	Client:	88ABW / EM	Project #	Dwn. By :	Date:
	Description:	Photo Documentation of NASIC Expansion Project Site		DTR	Oct-04
				Scale:	Sheet No.
				NTS	1 of 3




View 4 – Looking NW toward Bldg. 30828 from intersection of Hebble Creek and San Antonio.

View 5 – Looking north along San Antonio adjacent to Bldgs. 280/281



View 6 – Looking south across Hebble Creek at parking lot 9A.

 2288 Grange Hall Rd. Beavercreek, OH 45431 937-431-8960	Client:	Project #	Dwn. By :	Date:
	88ABW / EM		DTR	Oct-04
Description:			Scale:	Sheet No.
Photo Documentation of NASIC Expansion Project Site			NA	2 of 3




View 7 – Looking SE along Hebble Creek at intersection with Oklahoma City St.

View 8 – Looking southwest through Lot 9A near site of new generator plant.



View 9 – View northeast from Parking Lot 9A toward Bldg. 281, 829/828.

 Versar INC. 2288 Grange Hall Rd. Beavercreek, OH 45431 937-431-8960	Client:	88ABW / EM	Project #	Dwn. By :	Date:
	Description:	Photo Documentation of NASIC Expansion Project Site		Scale:	Sheet No.
				DTR	Oct-04
				NA	3 of 3