

**Final
Environmental Assessment
Area B Improvements
Wright-Patterson Air Force Base, Ohio**

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Prepared for:



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Final

PRIVACY ADVISORY

This Environmental Assessment (EA) has been provided for public comment in accordance with the National Environmental Policy Act (NEPA) as amended by the Fiscal Responsibility Act of 2023 (Public Law 118-5), and the Department of Defense (DoD) NEPA Implementing Procedures initially dated 30 June 2025. This process provides an opportunity for the public to offer input on alternative ways for the Department of Air Force (DAF) to accomplish what it is proposing and solicit comments on the DAF's analysis of environmental effects. Note that Executive Order (EO)14265 dated 5 September 2025 promotes the change from DoD to Department of War (DoW). As this document was prepared well before the EO was issued and is nearing completion, the term "DoW" is defined at this first use, but the term "DoD" was retained throughout this document.

Public input also allows DAF to make better-informed decisions. Letters or other written and/or verbal comments provided may be published in this EA. Providing personal information is voluntary. Private addresses will be compiled to develop a stakeholder inventory; however, only the names of the individuals' making comments and specific comments will be disclosed. Personal information, home addresses, telephone numbers, and email addresses will not be published in this EA.

COMPLIANCE

This EA has been certified not to exceed 75 pages, where a "page" means 500 words and does not include appendices, maps, diagrams, graphs, tables, and other means of graphically displaying quantitative or geospatial information. This EA was prepared prior to the DoD NEPA Implementing Regulations becoming effective on July 1, 2025, and therefore, does not strictly meet that most recent definition of the page limit requirement.

ACCESSIBILITY NOTICE

The digital version of this EA and its project website are compliant with Section 508 of the Rehabilitation Act of 1973 because assistive technology (e.g., "screen readers") can be used to help the disabled to understand the electronic media. Due to the nature of graphics, figures, tables, and images occurring in the document, accessibility may be limited to a descriptive title for each item.

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Acronyms and Abbreviations

88 ABW	88 th Air Base Wing
ACAM	Air Conformity Applicability Model
ACM	Asbestos-containing Material
ADPs	Area Development Plans
AFFF	Aqueous Film-Forming Foam
AFH	Air Force Handbook
AFI	Air Force Instruction
AFIT	Air Force Institute of Technology
AFTC	Air Force Test Center
AICUZ	Air Installation Compatible Use Zone
AIM	Architectural and Industrial Maintenance
AMC	Acquisition Management Complex
AMSL	above mean sea level
APE	Area of Potential Effect
APZ	Accident Protection Zone
AQCR	Air Quality Control Region
AST	Aboveground Storage Tank
AT/FP	Anti-Terrorism/Force Protection
BLS	Bureau of Labor Statistics
BMPs	Best Management Practices
BS	Burial Site
BVAS	Buried Valley Aquifer System
CAA	Clean Air Act
c&dd	construction and demolition debris
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental, Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalent
COA	course of action
CVI	Commercial Vehicle Inspection
CWA	Clean Water Act
CZ	Clear Zone
DAF	Department of the Air Force
DAFMAN	Department of the Air Force Manual
dB	decibels
dBA	A-weighted sound level measurements
DLA	Defense Logistics Agency
DNL	Day-Night Average Sound Level
DoD	Department of Defense
DoDI	Department of Defense Instruction
DOT	Department of Transportation
DoW	Department of War
EA	Environmental Assessment
ECP	Entry Control Point
EFDZ	Earth Fill Disposal Zone
EIS	Environmental Impact Statement

Acronyms and Abbreviations (*continued*)

EISA	Energy Independence and Security Act
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
ESQD	Explosive Safety Quantity Distance
ESZ	Explosive Safety Zone
EUL	Enhanced Use Lease
F/	Facility
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FY	Fiscal Year
GCR	General Conformity Regulation
GHG	greenhouse gas
gpm	gallons per minute
GSF	gross square foot
HASP	Health and Safety Plan
HRB	Huffman Retarding Basin
HVAC	heating, ventilation, and air-conditioning
HWMP	Hazardous Waste Management Program
IDP	Installation Development Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
ISB	Incident Staging Base
ITRP	Installation Tribal Relations Plan
LBP	lead-based paint
LID	low impact development
LA _{eq}	A-weighted equivalent continuous sound pressure level
LOS	level-of-service
MA	Metropolitan Area
MCD	Miami Conservancy District
MILCON	Military Construction
MMRP	Military Munitions Response Program
MS4	Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MSL	mean sea level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NMUSAF	National Museum of the U.S. Air Force
NOA	Notice of Availability
NOx	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service

Acronyms and Abbreviations (*continued*)

NRHP	National Register of Historic Places
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
OU	Operating Unit
PCR	Planning Charrette Report
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
Pb	lead
PM _{2.5}	Particulate matter with an aerodynamic diameter ≤ 2.5 microns
PM ₁₀	Particulate matter with an aerodynamic diameter ≤ 10 microns
POV	privately owned vehicle
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SO ₂	sulfur dioxide
SOPs	Standard Operating Procedures
SPC	Spill Prevention Coordinator
SPCC	Spill Prevention, Control and Countermeasures
SSSP	Site-Specific Spill Plan
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
tpy	tons per year
UECs	Unit Environmental Coordinators
UFC	Unified Facilities Criteria
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USC	U.S. Code
VOC	volatile organic compounds
WPAFB	Wright-Patterson Air Force Base

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

This Environmental Assessment (EA) has been prepared for the Department of the Air Force (DAF) and under contract to the U.S. Army Corps of Engineers (USACE), to analyze potential environmental impacts of proposed projects in Area B at Wright-Patterson Air Force Base (WPAFB) in Dayton, Ohio (Figure 1-1). WPAFB is one of the largest, most diverse, and most organizationally complex installations in the DAF. It provides vital support to ensure that DAF and joint War Fighters have the modernized systems they need. The host command is the 88th Air Base Wing (88 ABW), which is responsible for services to over 100 tenant units currently housed at WPAFB representing a variety of critical Department of Defense (DoD) acquisition, research, and sustainment activities. In addition, WPAFB is a critical center for research, development, testing, evaluation, and provision of acquisition management services and logistic support necessary to keep DAF systems ready for war.

WPAFB is located in the southwestern portion of the state of Ohio in Greene and Montgomery Counties, approximately 10 miles east of the city of Dayton. The base encompasses 8,145 acres and is classified as non-industrial with mixed development. WPAFB is subdivided into two areas: Areas A and B. Area A comprises an active airfield and mixed-use development including administrative uses, light-industrial, community services, with both long-term and temporary lodging. Area B is primarily research and development with educational functions and is located across State Route 444 to the southwest (see Figure 1-2).

The National Environmental Policy Act (NEPA) (Title 42, U.S. Code [USC], Section 4321 et seq., 1969) is a federal law requiring the analysis of potential environmental impacts associated with proposed federal actions prior to taking them. The intent of NEPA is to make informed decisions based on the identification of potential environmental consequences and take appropriate actions to protect, restore, or enhance the environment. NEPA established the President's Council of Environmental Quality (CEQ), which is responsible for coordinating federal agency compliance with NEPA. CEQ directed that all federal agencies use a uniform approach to NEPA, tailored to each agency's activities. The DAF rescinded its NEPA regulations found at 32 CFR Part 989 because the CEQ's NEPA regulations, which the DAF regulations were meant to supplement, have been rescinded, and because the DoD has promulgated department-wide NEPA procedures that will guide DAF's NEPA process. The DoD procedures went into effect on July 1, 2025.

The focus of this EA is three upcoming public-facing projects currently planned or programmed in the near term (approximately five years) in the southwest portion of Area B. This EA has been prepared in accordance with the NEPA of 1969, as amended; the Fiscal Responsibility Act of 2023; the DoD NEPA Implementing Procedures dated 28 September 2025; and Executive Order (EO) requirements. The objectives of this EA are as follows:

- Provide sufficient evidence and analysis for each project to determine whether to prepare a Finding of No Significant Impact (FONSI).
- Aid in DAF compliance with NEPA when an environmental impact statement (EIS) is not necessary and facilitate preparation of an EIS when necessary.

1.1 Purpose of and Need for the Proposed Action

The focus of this EA is on three public-facing Area B projects programmed and/or planned within the approximate time frame of the next five years:

- Project 1: Gate 22 B – New Gate/Road Realignment
- Project 2: New National Museum of the U.S. Air Force (NMUSAF) Café
- Project 3: Emergency Staging Area for Federal Emergency Management Agency (FEMA) Trailers

The locations of these projects are shown on Figure 1-2. A detailed description of each individual project is presented with the project descriptions in Section 2.0.

The purpose of the Proposed Action is to undertake three projects planned or programmed within the next five years that would provide specific facilities, infrastructure, and/or land to support continuing missions in the southwestern portion of Area B and accommodate future growth.

The need for the Proposed Action is driven by the overall need to optimize, consolidate, or modernize facilities. In the short term, the projects to be evaluated in this EA are needed to meet space or mission requirements, correct current deficiencies, protect assets, and/or improve working conditions. The specific need for each individual project is presented with the project descriptions in Section 2.0.

1.2 Documents Incorporated by Reference

This EA is primarily based on information from the following WPAFB planning documents:

- NMUSAF Master Plan dated April 2022 (WPAFB, 2022d)
- WPAFB Base Community Planning (88 CEG/CENPL) Comprehensive Planning Platform (CAC-enabled Sharepoint™ site)

Resource-specific documents are also referenced in Section 3.0, Affected Environment and Environmental Consequences, as applicable to each environmental resource.

1.3 Intergovernmental Coordination, Public and Agency Participation

The NEPA requirements help ensure environmental information is made available to the public during the decision-making process and prior to an action's implementation. As directed by Sections 102 and 104 of the NEPA, agencies shall involve the public, State, Tribal, and local governments, relevant agencies and any applicants, to the extent practicable in conducting reviews to comply with the Act. For this EA, public involvement includes notifying local, state, and federal agencies, and the public about the proposed action and alternatives, soliciting agency and public comments on the EA analysis, and ultimately informing the public of DAF conclusions and findings.

1.3.1 Interagency and Intergovernmental Coordination and Consultations

In compliance with NEPA and as part of the Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) process for this EA, WPAFB has notified relevant stakeholders about the Proposed Action. Intergovernmental consultation has been conducted with the following agencies: the Miami Conservancy District (MCD), the Ohio Department of Natural Resources (ODNR), the U.S. Fish and Wildlife Service (USFWS), and the State Historic Preservation Office (SHPO). The notification process provided these stakeholders with the opportunity to cooperate with WPAFB and to provide comments regarding the Proposed Action. Coordination responses from these agencies are presented in Appendix A of the EA.

1.3.2 Government-to-Government Consultations

The purpose of EO 13175, *Consultation with Indian Tribal Governments*, is to enhance communication and coordination with federally recognized Indian tribes. EO 13175 recognizes the right of federally-recognized Indian tribes to self-government and supports tribal sovereignty and self-determination. Among other things, it requires that agencies have an accountable process to ensure meaningful and timely input by tribal officials in developing policies that have tribal implications. In November 2009, President Obama reaffirmed the government-to-government relationship between the Federal Government and federally-recognized Indian tribal governments in a White House memorandum that acknowledged that Indian tribes exercise inherent sovereign powers over their members and territory. Tribal communications are further discussed in Section 3.6.

1.3.3 Public and Agency Review of the EA

The Air Force has determined a public review is not necessary as part of the reasoned decision-making process for this EA, however, a Notice of Availability (NOA) for the Final EA and Final FONSI will be posted by 88 ABW Public Affairs on the WPAFB website in accordance with DoD NEPA Implementing Procedures Sections 1.5(f) and 1.6. Copies of the NOA will be included in Appendix A of the EA.

Section 508 of the Rehabilitation Act (29 USC § 794d), as amended by the Workforce Investment Act of 1998 (Public Law 105-220), requires federal agencies to develop, procure,

maintain, and use information and communications technology that is accessible to people with disabilities – regardless of whether they work for the federal government. The US Access Board established the Section 508 standards that implement the law and provides the requirements for accessibility. Section 508 requires federal agencies to make their information and communications technology, online training, and websites accessible for everyone. Electronic versions of this document will be compliant with Section 508 of the Rehabilitation Act. This allows assistive technology to be used to obtain the available information from the document. Due to the nature of graphics, figures, tables, and images occurring in the document, accessibility will be limited to the descriptive title for each item.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The Proposed Action consists of the three proposed projects as described in the following sections. Under the Proposed Action, the DAF would undertake the following projects within approximately five years:

- Project 1: Gate 22 B – Gate/Road Realignment
- Project 2: New NMUSAF Café
- Project 3: Emergency Staging Areas for FEMA Trailers

Detailed descriptions of each individual project are presented in Sections 2.1 – 2.3.

The DAF considered a range of alternatives for each project within the Proposed Action. As defined in the DoD NEPA Implementing Procedures, “...*Reasonable alternatives mean a reasonable range of alternatives that are technically and economically feasible, meet the purpose and need for the proposed action, and, where applicable, meet the goals of the applicant*”. Reasonable alternatives are not limited to those directly within the power of the DAF to implement and may involve another government agency or military service to assist in the project or even to become the lead agency.

Planning constraints are also considered, as applicable, in development of the Proposed Action and alternatives. These constraints are man-made or natural elements or conditions that may create significant limitations on the operation or construction of buildings, roadways, utility systems, airfields, training ranges, and other facilities. Planning constraints include operational, natural/environmental, and built features. The identification of planning constraints at WPAFB integrates a multitude of considerations, including natural and cultural resources information, environmental quality issues, airspace restrictions, operational safety requirements, the built environment, and other factors that influence facility site planning on the installation (WPAFB, 2014, 2022a).

The following sections include discussion of selection standards used to determine whether there were reasonable alternatives to the construction described for the three proposed projects.

2.1 Gate 22B – New Gate/Road Realignment

The Proposed Action for Gate 22B is to reconfigure the existing entry control point (ECP) by constructing a new gate house and realigning the road (Figure 2-1). Gate 22B provides southern access to Area B from Colonel Glenn Highway and Interstate (I)-675. Gate 22B handles approximately 50 percent of the vehicular traffic entering Area B during the morning rush hour and is connected via ramps to I-675 and the major arterial roadway, Colonel Glenn

Highway. The purpose of this action is to implement operational and physical changes intended to improve traffic flow, reduce congestion, and improve safety. In addition, the design of the ECP would meet anti-terrorism/force protection (AT/FP) standards and include a Commercial Vehicle Inspection (CVI) facility (which does not currently exist in Area B).

This action is needed because the traffic queue onto the Base via Gate 22B routinely interferes with the northbound I-675 exit to Colonel Glenn Highway and extends onto the I-675 ramp. The current configuration creates undesirable and unsafe conditions. The new CVI facility will improve commercial vehicle access to Area B and alleviate excess commercial vehicle traffic at Gate 26A in Area A, as there is currently no CVI facility serving Area B directly. This ECP is required to secure the installation from unauthorized access and intercept contraband (such as weapons, drugs, or classified material) while maximizing safe vehicular traffic flow.

2.1.1 New Gate 22B/Road Realignment Alternatives and Selection Standards

WPAFB undertook an extensive, multi-phased Planning Charrette to develop and refine three alternative courses of action (COAs) to upgrade the existing Gate 22B ECP (WPAFB 2023b). Three options were initially developed for realigning the road at Gate 22B and evaluated by 88 Civil Engineer Group (WPAFB, 2019b). All three options were in the same general location, and the plans for the gate house were similar for each option; however, they primarily differ in CVI location and road reconfiguration. These options were subsequently updated as the planning charrette process progressed (WPAFB 2023b).

The concepts were designed in accordance with all applicable UFCs including UFC 4-022-01, “Security Engineering Facilities/Access Control Points”, and Surface Development and Distribution Command Transportation Engineering Agency Pamphlet 55-15, “Traffic Engineering for Better Entry Control”. The goal was to design an ECP that would have minimal impacts to the Ohio Department of Transportation right-of-way, to add a CVI facility, and to provide an effective transportation system around WPAFB and the surrounding communities.

Various environmental considerations potentially constrain implementation of the three COA alternatives. North of existing Gate 22B, the area surrounding Hazardous Materials Storage Facilities F/20478 and F/20479 has been identified as a per- and polyfluoroalkyl substances Spill Site 72P (SS072P), which is also known as Aqueous Film-Forming Foam (AFFF) Area 1. An Engineering Evaluation/Corrective Action for a Non-Time Critical Removal Action of downgradient perfluorooctane sulfonate (PFOS)/perfluorooctanoic acid (PFOA) contamination in groundwater and surface water was prepared in November 2022. The recommended removal action includes groundwater extraction, surface water capture, and treatment using passive basins for pretreatment, primary treatment, polishing treatment, and on-site discharge of treated water (USACE, 2022). The public review period concluded in December 2022 (WPAFB, 2022c). Other environmental constraints in the Gate 22B vicinity include other environmental restoration sites, cultural resources (including historic buildings/Wright Field Historic District and

archaeological sites), wetlands, and wooded areas that could potentially serve as protected bat habitat.

2.1.1.1 Screening of Alternatives

WPAFB evaluated the pros and cons of each alternative COA against selection criteria as summarized in Table 2-1. As a result of the planning charrette, COA 1+ was selected as the preferred alternative for the Gate 22B project. Based on that assessment, COA 1+ is evaluated as part of the Proposed Action for this EA. COA 1+ is an enhanced version of the original COA 1 that was evaluated for the Gate 22 B planning process.

2.1.1.2 Alternatives Considered but Eliminated

As shown in Table 2-1, COA 2 and COA 3 provided fewer pros and more cons than COA 1+ and were eliminated from further evaluation as alternatives for the Gate 22B project. Therefore, they were not presented for re-analysis in this EA.

2.1.2 Detailed Description of the Proposed Action and Alternative

This section describes the Proposed Action and the No Action alternative.

2.1.2.1 Proposed Action: COA 1+ (Enhanced)

Option 1 was ultimately selected as the preferred option, with additional upgrades to existing receiving Area B roadways to enhance future on-base traffic flow (“COA1+”) as shown on Figure 2-1. Upgrades would include relocating Thirteenth Street to better access Wright Field, and widening, resurfacing and installing additional drainage on Skyline Drive and the east end of Thirteenth Street, plus constructing several traffic circles to enhance traffic flow in all directions after entering through the new Gate 22B. Project components would include:

- Construction of a new gate house, canopy, final denial barriers, and ballistic-rated identification check stands;
- Construction of new roadways, lighting, and traffic signage;
- Construction of a commercial vehicle inspection site;
- Installation of all required utilities and landscaping/site drainage;
- Demolition of the current gate house, Facility (F) F/20220;
- Construction would consist of asphalt concrete base, aggregate base, asphalt concrete intermediate course, asphalt concrete surface course, storm sewer pipe, stormwater sewer catch basin, storm manhole, fence installation, traffic signs and supports, seeding/mulching, and all required lighting; and
- Upgrade of existing receiving WPAFB roadways to improve their condition and enhance flow with the new traffic patterns.

The facilities would be permanent construction in accordance with the DoD UFC 1-200-01, General Building Requirements, and UFC 1-200-02, High Performance and Sustainable Building Requirements. In addition, this building would comply with DoD AT/FP requirements per UFC 4-010-01; UFC 4-022-01, Entry Control Facilities Access Control Points; and the Air Force Civil Engineer Center Standard Design for Entry Control Facilities/Installation Access Control Points.

2.1.2.2 No Action Alternative

Under the No Action Alternative, the Gate 22B gate house and road system would remain in its current configuration. Excessive queuing and inefficient traffic flow through Gate 22B would continue to pose a serious risk to personnel utilizing Gate 22B with additional traffic disruptions on I-675 (WPAFB, 2018). Failure to modify the gate to meet AT/FP requirements would also continue to place Area B occupants and facilities at risk.

2.2 New NMUSAF Café

Under this proposed military construction (MILCON) project, a new visitor café would be constructed to better serve the needs of the over 800,000 annual NMUSAF visitors and enhance the visitor experience. The project would repurpose and revitalize the existing café dining area to provide offices, conference/collaboration spaces, and event areas shared by the Air Force Museum Foundation and NMUSAF. The new café is needed because the existing Valkyrie Café is aged, obsolete in deteriorating condition, and not up to NMUSAF standards for visiting museum patrons.

2.2.1 New NMUSAF Café Alternatives and Selection Standards

Potential new NMUSAF Café alternatives are limited by the existing NMUSAF facility infrastructure as well as the purpose and need for the new café.

- Alternative locations: the site of the Proposed Action is centrally located on the first floor between existing facilities, F/20487 and F/20494, close to the center point of the museum that would provide visitors an opportunity to take a break, then continue with their visit. A larger, multi-level Café would provide excess capacity for future patron demand as well as potential event space but would be out of scale with the existing NMUSAF building massing and would be prohibitively costly. Other potential locations lack sufficient space due to exterior museum infrastructure or are spaces already programmed for future exhibits/galleries or education facilities. Potential second-floor locations would suffer from similar limitations as the existing café is out of the visitor's typical sightlines and at the end of the visit, outside the visitor's path, resulting in many visitors leaving the Museum to get something to eat and not returning. Potential stand-alone locations on the Museum grounds, outside of the main Museum complex would generate even less visitor traffic. The Proposed Action location would also support related event space requiring kitchen/food handling facilities.

- Renovate existing Valkyrie Café: besides the location constraints noted above, the existing café footprint (6,300 gross square foot [GSF]) is insufficient to provide the modern café facilities, support areas and visitor seating needed to support future NMUSAF visitor traffic and events. Renovation would require extended closure of the existing facilities during demolition and construction of the new facilities, impacting the visitor experience.

Thus, no viable alternatives were identified to be carried forward for evaluation in the EA.

2.2.2 Detailed Description of the Proposed Action and Alternative

This section describes the Proposed Action and the No Action alternative.

2.2.2.1 Proposed Action: New NMUSAF Café

The NMUSAF is the oldest and largest military aviation museum in the world and is the home of the National Aviation Hall of Fame (WPAFB, 2022d). The NMUSAF is not just a museum; it is a dynamic campus with a considerable footprint of facilities, pavements, open spaces, memorial grounds, and an airfield. The NMUSAF organization consists of 96 full-time staff supported by a team of volunteers (over 500 annually) and students. The NMUSAF Main Campus is open to the public (Figure 2-2).

The Wright Field Historic District totals 972 acres and comprises the NMUSAF Main Campus, Wright Field, Gate 1B, and Restoration Division (F/20004). Most divisions have administrative space or support spaces in the main building of the NMUSAF (Facility 20489). The NMUSAF entrance and atrium, Early Years and World War I Galleries, gift shop, theatre, Carney Auditorium, and Valkyrie Café are located in F/20489. In addition, there are back shops, Collection Management storage, exhibit production, and research conducted in F/20001, 20005, and 20009.

Wright Field, surrounding the museum, consists of airfield runways and open spaces in between. Though Wright Field is no longer an active airfield, Runway 09/27 is still used on occasion for delivery of aircraft to the museum under special use permits. A portion of the open space is utilized for athletic fields and testing activities associated with the Sensors Directorate.

Due to its physical separation from the rest of the installation and its almost exclusive use as support for the NMUSAF, future development of the Wright Field Historic District will be primarily focused on the expansion of the museum facilities, exhibition spaces, static displays, and surrounding landscapes. As part of the Army Air Forces Historic District, future development must be coordinated with the SHPO (WPAFB, 2022d).

Under this proposed MILCON, a new visitor café would be constructed to better serve the needs of NMUSAF visitors. The new café is needed because the existing Valkyrie Café in F/20489 is aged, obsolete, in deteriorating condition, and not up to NMUSAF standards for visiting museum patrons. Floor tiles are peeling and held in place with tape. Plumbing is outdated and a safety

and health hazard with water leaks through the floor down into the publicly accessed gift store. This causes unforeseen damage to merchandise as well as liability concerns with ceiling tiles in the store to fall, potentially injuring a visitor or staff member. Water coming from the light fixtures into the store can cause a potential fire hazard. Some of the kitchen drains are currently either disconnected or covered with pizza pans.

The existing café is also located on the second floor, out of the way most visitor's path of travel through the Museum. A new first-floor, 7,200 GSF café would be constructed between facilities F/20487 and F/20494 as shown on Figure 2-2 with construction to start in Fiscal Year 2026. In addition to providing refreshment and culinary facilities for the Museum patron, the centrally located kitchen and food prep area would provide better on-site catering facilities to support existing NMUSAF events. Upon completion and operation, the existing Valkyrie Café in F/20489 would be renovated into office and conference space to support NMUSAF operations. A service road would be constructed to the exterior of the cafe and connect to the existing service road. The public would access the cafe from inside the museum complex.

2.2.2.2 No Action Alternative

If the proposed new café is not constructed, renovation and repairs to the existing café would be required. During renovation and repair to the existing café, visitors would be temporarily unable to obtain lunch or refreshments on-site, which would result in a sub-standard museum experience.

2.3 Emergency Staging Area for FEMA Trailers

The proposed FEMA staging area is located south of the Main NMUSAF Campus in the area of the airfield pavement (Figure 2-3).

During regional and national level Federal Government disaster response efforts, FEMA may request use of DoD installations to serve as Incident Staging Bases (ISBs). FEMA's primary disaster response logistic functions are coordinated and administered at ISBs. The purpose of this action would be to allow temporary access to the former runway and surrounding area as open space for staging of disaster commodities, such as trailers with emergency commodities, generators, mobile homes, and other project cargo (WPAFB, 2021b).

FEMA requires a Real Property Permit for WPAFB to serve as an ISB. The Proposed Action is to grant easements, leases, licenses, rights of entry, and permits to use DAF controlled property for activities that, if constructed, could be categorically excluded. These Real Property Permits would apply to the staging of disaster commodities and for annual training exercises.

2.3.1 FEMA Emergency Staging Area Alternatives

No alternatives are currently known to be available that can accommodate several hundred to several thousand 53-foot trailers containing emergency commodities (WPAFB 2021b, 2021d). The only open spaces with sufficient capacity in Area A are the WPAFB airfield, which is in active operation, and the protected Huffman Prairie Flying Field historic site and natural area.

Alternatives with sufficient open space in Area B include the Hilltop Parcel and Gerlaugh Farm Parcel that have been recently leased for private development and do not have suitable surfaces to handle the expected heavy truck traffic. WPAFB is considered for designation as an ISB because of the space and security afforded by a DoD installation. Other government facilities or open spaces in the area would not offer the space and security for the personnel and supplies needed for a FEMA response to a regional or national incident.

2.3.2 Detailed Description of the Proposed Action and Alternative

This section describes the Proposed Action and the No Action alternative.

2.3.2.1 Proposed Action: FEMA Emergency Staging Area

The proposed FEMA staging area is located behind the Main Campus of the NMUSAF, in the area of the airfield pavement (Figures 2-3 and 2-4).

The purpose of the Proposed Action would be to allow temporary access to the former runway and surrounding area as open space for staging of disaster commodities, such as trailers with emergency commodities, generators, mobile homes, and other project cargo (WPAFB, 2021b). During a regional or national incident, this action is needed because FEMA would not be able to respond without access to secure open storage space at a designated ISB.

FEMA requires a Real Property Permit for WPAFB to serve as an ISB. The proposed action is to grant easements, leases, licenses, rights of entry, and permits to use DAF controlled property for activities that, if constructed, could be categorically excluded. These Real Property Permits would apply to the staging of disaster commodities and for annual training exercises.

Staging of Disaster Commodities

The Proposed Action is to grant a permit providing FEMA temporary access to the former runway and surrounding area (Figure 2-3) (WPAFB, 2021b). The purpose of this action is to provide open space for staging of disaster commodities. Depending on the size of a response operation, an ISB may accommodate between several hundred to several thousand 53-foot trailers containing emergency commodities such as ice, bottled water, Meals Ready to Eat, cots and blankets; tens to hundreds of generators mounted on flatbeds; mobile homes; and time sensitive, oversized, and project-type cargo. Shipments would originate in FEMA or Defense Logistics Agency (DLA) centers or at vendors, be staged at an ISB for several days, and then sent onward to points of distribution for use by disaster survivors or in support of critical facilities.

Annual Exercise

The Proposed Action is to grant a permit renewal to allow for temporary access to the former runway and surrounding area (Figure 2-4) (WPAFB, 2021d). The purpose of this action is for FEMA to conduct annual exercises every two or three years in preparation of regional and national response efforts. The exercises have involved approximately 100 participants for the field training and 50 participants for the classroom training.

This simulation is estimated to include ten 53-foot tractor trailers and several generators. The generators would not be downloaded, and no fuel would be dispensed. The tractor trailers would be utilized in those simulations for approximately 3 days and the generator simulation would be expected to last approximately 24 hours.

2.3.2.2 No Action Alternative

In the event of a national disaster, WPAFB has been proposed to serve as an ISB. In addition to FEMA, DLA, USACE, other contractor personnel may be required to respond. Without access to an ISB such as WPAFB, FEMA would not be able to respond to a regional or national incident with the security of personnel and supplies. No Action would result in negative impacts to the welfare of the surrounding community during a regional or national incident (WPAFB 2021b, 2021d).

2.4 Comparison of Environmental Consequences

The Proposed Action is the only reasonable alternative that meets the minimum requirements identified in Sections 2.1 – 2.3. The DAF regulations; however, require an analysis of the No Action alternative for all actions. Table 2-2 presents a comparison of the potential environmental consequences resulting from implementation of the Proposed Action and the No Action Alternative. The information includes a concise definition of the issues addressed and the environmental impacts associated with each alternative. Short-term impacts primarily address construction and demolition. Long-term impacts are associated with the operations and training activities. The analysis is based on information discussed in detail in Section 3.0, *Affected Environment and Environmental Consequences*, of the EA.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

In compliance with NEPA and the DoD NEPA Implementing Procedures, this section describes the current environmental and socioeconomic conditions most likely to be affected by the Proposed Action and provides a baseline from which to identify and evaluate environmental and socioeconomic changes likely to result from implementation of the Proposed Action. These resources and conditions include:

- Airspace Management
- Air Quality
- Noise
- Land Use
- Cultural Resources
- Biological/Natural Resources
- Water Resources
- Earth Resources
- Infrastructure/Utilities
- Hazardous Materials/Waste
- Safety and Occupational Health
- Socioeconomics

In addition, this section describes the potential environmental consequences associated with implementing the Proposed Action, potential reasonably foreseeable impacts and the No Action Alternative. Potential impacts for each resource area are described in terms of their significance. In considering whether an adverse effect of the proposed action is significant, agencies must examine both the context of the action and the intensity of the effect (as detailed in the DoD NEPA Implementing Procedures) and should receive the greatest attention in the decision-making process.

For each environmental resource, the evaluation begins by defining the affected environment – national, regional, or local – that for the proposed Area B improvements is restricted to the local environment. Evaluation of significance of potential impacts in the vicinity of each proposed site then considers:

- Short- and long-term effects

- Degree of beneficial and adverse impacts
- Direct, indirect and reasonably foreseeable effects
- Past, present, and reasonably foreseeable impacts
- Short-term vs. long-term productivity
- Irreversible/irretrievable commitments of resources
- Effects on public health and safety
- Effects that violate federal, state, tribal, or local environmental law

No resources were determined to have sufficiently limited potential for environmental impacts as a result of implementation of the Proposed Action and therefore no resources were eliminated from further evaluation.

3.1 Reasonably Foreseeable Actions

As WPAFB is an active military installation that undergoes changes in missions and training requirements in response to defense policies, current threats, and tactical and technological advances, it requires new construction, facility improvements, infrastructure upgrades, and maintenance and repairs on an on-going basis. In addition, tenant organizations occupy portions of the Base, conduct aircraft operations, and maintain select facilities. All these on-Base actions would continue to occur before, during, and after the Proposed Action would be implemented.

WPAFB has identified actions in the vicinity of the proposed Area B improvement sites that are in the planning stage. The effects of these actions are included in the foreseeable effects analysis to the extent that concepts regarding such actions exist and the effects of the actions have a potential to interact with the effects of the Proposed Action. Table 3-1 presents potential future projects that have been identified in the vicinity of the proposed Area B improvements.

Time frames and budgets for proposed projects listed in Table 3-1 can only be estimated or are uncertain. The incremental effects of the Proposed Action, when considered together with the effects of other past, present, and reasonably foreseeable future actions in the WPAFB region, are presented in each resource category based on the general type of project (e.g., military construction, demolition). Please note that only those resources that were identified in Table 3-1 were carried forward for analysis. Other resource categories, analyzed for the Proposed Action, would not be affected by these past, present, or reasonably foreseeable actions.

Military construction and demolition projects are also planned for Area A. The MILCON projects include an ECP Gate 15A, an airmen dormitory, a new visiting quarters/temporary lodging facility project and Phase I renovation of 30 existing, historic housing units in the Brick Quarters, and intelligence centers. Of note for Area A is the demolition of several housing units: 10 Military Family Housing Units / Complexes, 21 Temporary Lodging Facilities, and 3 Visiting Officer's

Quarters. These temporary units, transient and visiting facilities / quarters, are all scheduled for demolition in Fiscal Year 2029. Although potential impacts from Area A MILCON and demolition would be similar, the Area A projects would occur several miles away from the Area B improvement projects. The demolition process, while clearing several acres of land, would ultimately contribute to the base's overall open space. In addition, impacts would be expected from the total construction and demolition debris (c&dd) from multiple projects at WPAFB and within the community. The Area B improvements would be phased over several years and primarily involve construction-related materials. Relative to the demolition projects, the incremental contribution of debris to local landfills would be expected to be insignificant.

In addition to projects to be undertaken on base, there are projects planned for the communities in the immediate area of WPAFB. The primary projects reviewed for this EA included Capital Improvement Plan projects for Beaver Creek and Fairborn (Beaver Creek, 2024; Fairborn, 2024). While a majority of individual projects are relatively small, they could collectively contribute to foreseeable impacts in and around WPAFB. Examples include maintenance and repairs to roads and sidewalks, storm water drainage systems, and sanitary sewer collection systems. On a larger scale, some projects are planned to address modifications or upgrades of more extensive systems. One example is the proposed I-675/Grange Hall Road interchange project that would involve upgrading the existing interchange from a partial interchange to a full interchange (Beaver Creek, 2024). This upgrade is needed because of current congestion and the realignment of WPAFB gates for Area B in the vicinity of the interchange. Roads providing principal access to Area B (National Road and Colonel Glenn Highway) are in proximity to the proposed interchange and construction would be expected to take place within a similar time frame. Another example from the city of Fairborn is the Growth Project Infrastructure Support Project that entails the design of sewer infrastructure extensions in support of economic development target areas (Fairborn, 2024). There are a number of projects listed in the plans that are indicative of the overall economic growth and urbanization in the vicinity of WPAFB. Actions associated with demolition, renovation, and construction of facilities and infrastructure could foreseeably impact resources such as air quality, noise, soil, water (especially storm water), traffic and transportation, and occupational health and safety. Other specific resources such as cultural resources, biological resources, or hazardous materials/waste might also be impacted for some locations.

NEPA requires all agencies of the federal government include a detailed statement as to whether or not any irreversible and irretrievable commitment of federal resources that would be involved in the implementation of the Proposed Action. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources could have on future generations. Irreversible effects primarily result from use or destruction of a specific resource that cannot be replaced within a reasonable time frame (e.g., energy and minerals).

Environmental consequences resulting from the construction projects under the Proposed Action construction are considered short-term and temporary. Construction would require

consumption of materials typically associated with construction (e.g., concrete, wiring, piping). The DAF does not expect the amount of these materials used to significantly decrease the availability of the resources. Small amounts of nonrenewable resources would be used; however, these amounts would not be appreciable and are not expected to affect the availability of these resources. Irretrievable effects to vegetation/green space at the project sites would occur as a result of construction of the proposed facilities. However, there are other areas scattered throughout the Base that contain naturally-occurring vegetation as well as areas that had previously contained structures that were demolished and turned into green space. Therefore, the irretrievable loss of vegetation/green space at the Area B project sites could be a retrievable resource elsewhere on the Base and is not a significant loss when compared to the overall green space existing at WPAFB.

3.2 Airspace Management

The DAF describes airspace management as the coordination, integration, and regulation of the use of airspace of defined dimensions. The objective of airspace management is to meet military training requirements through the safe and efficient use of available navigable airspace, in a peacetime environment, and while minimizing the impact on other aviation users and the public (AFI 13-201). There are two categories of airspace, or airspace areas: regulatory and non-regulatory. Within these two categories, further classifications include controlled, uncontrolled, special use, and airspace for special use. The categories and types of airspace are dictated by:

- The complexity or density of aircraft movement
- The nature of the operations conducted within the airspace
- The level of safety required
- National and public interest in the airspace

Controlled airspace includes five different classifications of airspace (Classes A, B, C, D, and E) and defines dimensions within which air traffic control service is provided to flights under instrument meteorological conditions, and to flights under visual meteorological conditions. All military and civilian aircraft are subject to Federal Aviation Regulations.

To address noise and safety associated with aircraft operations, DoD requires military departments to establish an Air Installation Compatible Use Zone (AICUZ) program. The goal of AICUZ is to promote compatible land use around air bases by providing information concerning aircraft operations, noise exposure, and accident potential to local governments and on-Base operations (WPAFB, 2022b). Additional information on noise exposure restrictions and land use restrictions is provided in Sections 3.4 and 3.5 respectively.

3.2.1 Affected Environment

WPAFB is managed and maintained by the 88 ABW. WPAFB has two active runways in Area A oriented north-south: Runway 05L/23R is 12,601 feet long and Runway 05R/23L is 7,000 feet. The airfield is surrounded by Class D airspace and lies under the Class C airspace of James M. Cox Dayton International Airport. The Area A airfield AICUZ does overlap northern portions of Area B.

Wright Field in Area B is no longer an active airfield but is used on special occasions (WPAFB, 2022d). Runway 09/27 opens conditionally to allow special fly-in events for the NMUSAF and Aviation Hall of Fame, and accepts aircraft destined for NMUSAF. Airfield clearance constraints associated with Runway 09/27 affect potential development adjacent to the existing NMUSAF Main Campus and the southern portion of Area B.

The primary surface extends 500 feet north and south of the runway centerline, and no construction is permitted in this area. The transitional airfield surface extends from the primary surface boundary at a 7:1 (horizontal: vertical) slope. This imaginary surface rises to 150 feet above the runway elevation. This imaginary surface cannot be penetrated by facility construction or other obstructions. This constraint limits the development of additional galleries south of the existing NMUSAF Main Campus. (WPAFB, 2022d) These restrictions extend to access roads in the Gate 22B vicinity but not to Gate 22B facilities (existing or proposed) themselves.

3.2.2 Environmental Consequences

An impact to airspace would be considered significant if the Proposed Action violates Federal Aviation Administration safety regulations or causes a substantial infringement of general aviation or commercial flight, or if new construction was proposed in an AICUZ.

3.2.2.1 Gate 22B – New Gate/Road Realignment

The proposed New Gate 22B and Road Realignment falls outside the Clear Zone at the east end of Area B Runway 09/27, which is further to the south and encompasses the I-675 exit and interchange. The realigned entrance/exit roads and portions of the new gate structures lie within the north Transitional Surface that imposes height restrictions in this area. The proposed new overwatch structure would be just outside the Transitional Surface with a height that would not exceed Transitional Surface limitations (150 feet at the surface boundary). Entering vehicles would be temporarily located within the Transitional Surface as they await entry clearance, as is the case with the existing Gate 22B. The proposed New Gate and Road Realignment would have no impact on Airspace.

3.2.2.2 New NMUSAF Café

The proposed New NMUSAF Café would be located between existing NMUSAF facilities F/20487 and F/20494, outside the Runway 09/27 aircraft safety zones. The proposed new construction would have no impact on Airspace.

3.2.2.3 Emergency Staging Area for FEMA Trailers

The proposed temporary use of Wright Field as an emergency staging area for FEMA supply trailers would temporarily preclude use of Runway 09/27 for air traffic. Use of Wright Field for FEMA training exercises would prevent arrival or departure of special aircraft deliveries to the NMUSAF and for special events but could be scheduled to avoid conflicts. Use of Wright Field by FEMA for actual emergency response events would be unscheduled and could interfere with other planned NMUSAF activities and special events. No permanent construction is proposed for the FEMA trailer emergency staging events, so there would be no long-term, permanent impact to Airspace associated with Runway 09/27.

3.2.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.2.1 would remain the same. There would be no alteration or ground disturbance from construction or implementation of FEMA exercises or emergency response activities. Therefore, there would be no short- or long-term impacts because there would be no change to existing airspace over baseline conditions.

3.2.3 Reasonably Foreseeable Effects

Use of the Wright Field Runway 09/27 as an emergency staging area for FEMA trailers would temporarily preclude air traffic in Area B. The only upcoming project in the vicinity that could potentially impact airspace management would be the Acquisition Management Complex MILCON, but it would be outside of Runway 09/27 restricted airspace, no foreseeable impacts would result.

3.3 Air Quality

Air quality within a defined geographical region is most often determined by measuring the concentration of various pollutants in the atmosphere. The federal Clean Air Act (CAA) directed the U.S. Environmental Protection Agency (USEPA) to develop National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. The NAAQS are numerical concentration-based standards for pollutants that have been determined to impact human health and the environment. The USEPA currently enforces both primary and secondary NAAQS for six criteria air pollutants including ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (coarse particulates equal to or less than 10 microns in diameter [PM₁₀] and fine particulates equal to or less than 2.5 microns in diameter [PM_{2.5}]), and lead (Pb). Ambient air quality that falls below the NAAQS is classified as in “attainment” and ambient air quality that exceed the NAAQS is classified as “nonattainment.” Nonattainment areas in which air quality has improved sufficiently to be re-designated to attainment are classified as “maintenance” areas. The CAA and USEPA delegated responsibility for ensuring compliance with NAAQS to the states and local agencies.

The CAA also required that the USEPA promulgate General Conformity Regulations (GCR; 40 CFR Part 93, Subpart B) to ensure that federal actions will conform to the state implementation

plan so as not to impede local efforts to achieve or maintain attainment with the NAAQS. The GCR requires a conformity determination for all federal actions located in nonattainment or maintenance areas for NAAQS unless otherwise exempted. Federal actions may be assumed to conform if total indirect and direct project emissions are below *de minimis* levels presented in 40 CFR 93.153. The threshold levels (in tons of pollutant per year) depend upon the nonattainment or maintenance area status that USEPA has assigned to a region for each NAAQS and the specific NAAQS pollutant. Once the net change in nonattainment or maintenance area pollutants are calculated, the federal agency must compare them to the *de minimis* thresholds to determine if a conformity determination is required.

The DAF applies insignificance indicators to actions occurring in areas that are in attainment or unclassified for a NAAQS to provide an indication of the significance of potential impacts to air quality. Areas where an air pollutant is within five percent of a NAAQS are considered near nonattainment and the insignificance indicator used to evaluate actions in these areas is 100 tons per year (tpy) for all criteria pollutants besides lead. The insignificance indicator used to evaluate actions in areas that are clearly attainment (not within 5 percent of exceeding a NAAQS) is the USEPA Prevention of Significant Deterioration (PSD) permitting threshold of 250 tpy of a criteria pollutant besides lead. The insignificance indicator for lead in both areas is 25 tpy. The insignificance indicators do not denote a significant impact; however, they do provide a threshold to identify actions that have insignificant impacts to air quality. Any action with net emissions below the insignificance indicators is considered so insignificant that the action would not cause or contribute to an exceedance of any NAAQS.

The DAF developed the Air Conformity Applicability Model (ACAM) to quantify project emissions for comparison to GCR *de minimis* thresholds in nonattainment and maintenance areas, and for comparison to insignificance indicators in attainment or unclassifiable areas.

Besides the programs outlined above, the USEPA and Ohio Environmental Protection Agency (OEPA) have established and implement regulations and standards applicable to a wide range of potential air emission sources. Permitting programs and emissions standards potentially applicable to the proposed action projects include:

- Local and regional pollutant impacts resulting from direct and indirect emissions from stationary emission sources under the Proposed Action are addressed through federal and state permitting program requirements under New Source Review regulations (40 CFR 51 and 52). Local stationary source permits are issued by OEPA and enforced by the OEPA Regional Air Pollution Control Agency office in Dayton. WPAFB has appropriate permits in place and has met all applicable permitting requirements and conditions for existing stationary devices.
- The federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) are promulgated in 40 CFR Parts 61 and 63. These NESHAP require emissions control measures and detailed recordkeeping to show compliance with NESHAP restrictions. NESHAP are established for specific emission source categories, several of which are

present at WPAFB and referenced in the Base operating permits. Compliance demonstration requirements for applicable NESHAPs are identified within the operating permit conditions.

- The Ohio Administrative Code (OAC) Rule 3745-15-07 declares dust escaped from any source that causes damage to property to be a public nuisance. Pursuant to OAC Rule 3745-17-08(A)(2), the OEPA Director may require any source that causes or contributes to such a nuisance to submit and implement a control plan that employs reasonably available control measures to prevent fugitive dust from becoming airborne. Construction activities that have the potential to generate noticeable amounts of dust particles smaller in size than PM₁₀, reasonably available control measures should be employed by the general contractor to minimize the impact to the neighboring community. The reasonably available control measures can include, but are not limited to:
 - Maintain a written Dust Control Plan on site.
 - Apply water or other dust control chemicals to roads and surfaces as applicable.
 - Cover open-bodied trucks during the transport of material.
 - Promptly remove debris from paved surfaces to minimize and prevent re-suspension.
 - Plan material and equipment delivery routes to minimize contact of dust with nearby occupants.
- The OAC Rule 3745-113, Architectural and Industrial Maintenance (AIM) Coatings, applies to any person who supplies, sells, offers for sale, or manufactures any AIM coating for use within the state of Ohio, as well as any person who applies or solicits the application of any AIM coating within the state of Ohio. At a minimum, the coating specifications for any construction activity associated with the Proposed Action must conform to the volatile organic compound (VOC) content standards identified in the OAC Rule 3745-113-03 for each specific AIM coating type anticipated for application. The localized environmental impacts of the coating applications may be reduced by specifying the use of no-VOC or low-VOC content coatings used in construction.
- The DAF has adopted the Prevention of Significant Deterioration threshold for greenhouse gases (GHGs) of 75,000 tpy of carbon dioxide equivalent (CO₂e) (or 68,039 metric tpy) as an indicator or “threshold of insignificance” for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant. Actions with a net change in CO₂e emissions below the insignificance indicator are considered too insignificant on a global scale to warrant any further analysis.

3.3.1 Affected Environment

The climate of the southwestern region of Ohio is humid and temperate with warm summers and cold winters. Average minimum and maximum temperatures are between 20 and 35 degrees Fahrenheit in January and 65 and 84 degrees Fahrenheit in July. The average annual precipitation is 41.06 inches, with June typically being the wettest month and October the driest month. The prevailing winds are from the southwest, with average monthly wind speeds between 3 and 7 knots (3.5 to 8 miles per hour).

Air Quality Control Regions (AQCRs) are federally designated areas that are required to meet and maintain federal ambient air quality control standards. WPAFB is located in Greene and Montgomery counties, which are part of the Metropolitan Dayton Intrastate AQCR (40 CFR 81.34). The Metropolitan Dayton Intrastate AQCR is currently classified as an Orphan Maintenance Area for the 1997 Ozone NAAQS (redesignated August 13, 2007) and in attainment for all other criteria pollutants.

The WPAFB air emissions inventory includes over 1,200 emissions sources, principally natural gas-fired boilers; research and development sources, such as laboratory fume hoods and test cells; paint spray booths; refueling operations; and emergency power generators. The most recent renewal of the Title V operating permit was issued to WPAFB on September 17, 2021. There are 18 permitted significant emissions units identified in the permit, most of which are boilers, paint spray booths, and combustion research cells. Most of the stationary sources at WPAFB are classified by OEPA to be insignificant or *de minimis* because of low potential emission levels. *De minimis* sources are exempt from air permitting requirements provided the emission source meets the requirements of OAC Rule 3745-15-05. The Air Program Manager at WPAFB requires notification prior to installation, removal, or relocation of any air source.

WPAFB was previously considered a major NESHAP source because it had the potential to emit 25 tons or more per year of combined hazardous air pollutants; however, in 2020, WPAFB accepted permit limitations categorizing it as a “synthetic minor” (“area”) source, simplifying future NESHAP permitting and compliance.

3.3.2 Environmental Consequences

The environmental consequences to local and regional air quality conditions near a proposed federal action are determined based on the increases in regulated pollutant emissions relative to existing conditions and ambient air quality. For the purposes of this EA, the impact in NAAQS “attainment” areas would be considered significant if the net increases in pollutant emissions from the federal action would result in any one of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard.
- Expose sensitive receptors to substantially increased pollutant concentrations.
- Exceed any Evaluation Criteria established by a State Implementation Plan.

For air sources from federal actions that do not require review for air permitting, the primary tool used to evaluate air impacts is the application of the GCR. The GCR applies to the proposed

action and the precursors for ozone (VOC and oxides of nitrogen [NO_x]) emission estimates are compared to the *de minimis* value while all other criteria pollutants are compared to the PSD value of 250 tons per year (except lead).

The DAF uses the ACAM to determine when a General Conformity Determination is required.

3.3.2.1 Gate 22B – New Gate/Road Realignment

Under the Proposed Action, construction of the New Gate 22B and road realignment includes typical construction activities for site preparation, structure erection and coatings, parking lot pavement, and road improvements. The Proposed Action also includes demolition and removal of the existing Gate 22B structures after the new gate is commissioned.

Installation and demolition activities would result in emissions of criteria pollutants from the equipment engine exhaust and particulate matter emitted as fugitive dust from grading and trenching activities and the movement of material and equipment. Additionally, vehicle combustion emissions of CO and NO_x from the delivery trucks are included along with worker commuter emissions. VOC emissions would result from painting or surface coating required for the project. Because each module in the ACAM only includes the number of workers operating equipment, a separate category for transient workers commuting was included to account for contractors performing specific equipment installation, testing, and project supervision. All emissions from construction activities would be temporary. The New Gate 22B would not have ongoing, permanent emission sources. (It is assumed the existing emergency generator at Gate 22B would be used, therefore the operation of a new emergency generator is not included in the evaluation).

ACAM was used to estimate project emissions and complete the GCR applicability analysis, assess impacts to attainment NAAQS (and precursors), and a GHG analysis. Criteria pollutant emissions and GHG emissions resulting from the Proposed Action are summarized on an annual basis until steady state, when the net gain/loss in emissions is stabilized and the action is fully implemented (Table 3-2 and Appendix B). All activities were assumed to take place in one year to determine the maximum annual emissions.

The annual net change in estimated criteria pollutant emissions associated with the Proposed Action would be less than the General Conformity *de minimis* threshold of 100 tpy for VOCs and NO_x and the DAF insignificance indicators 250 tpy for all other criteria pollutants. A General Conformity Determination would not be required. The annual net change in GHG emissions would be less than the insignificant indicator of 68,039 metric tons of CO₂e. Therefore, all criteria pollutant and GHG emissions would be insignificant and would not cause or contribute to an exceedance of NAAQSs; therefore, the Proposed Action would have an insignificant impact on Air Quality.

3.3.2.2 New NMUSAF Café

Under the Proposed Action, construction of the New NMUSAF Café includes typical construction activities for site preparation, building erection, minor access road paving, and new equipment installation. No demolition activities would be required.

Installation activities would result in emissions of criteria pollutants from the equipment engine exhaust and particulate matter emitted as fugitive dust from grading and trenching activities and the movement of material and equipment. Additionally, vehicle combustion emissions of CO and NO_x from the delivery trucks are included along with worker commuter emissions. VOC emissions would result from painting or surface coating required for the project. A separate category for transient workers commuting was included to account for contractors performing specific equipment installation, testing, and project supervision. All emissions from construction activities would be temporary. The New NMUSAF Café would not have any ongoing, permanent emission sources.

ACAM was used to estimate project emissions and complete the GCR applicability analysis, assess impacts to attainment NAAQS (and precursors), and a GHG analysis. Criteria pollutant emissions and GHG emissions resulting from the Proposed Action are summarized on an annual basis until steady state, when the net gain/loss in emissions is stabilized and the action is fully implemented (Table 3-3 and Appendix B). All activities were assumed to take place in one year to determine the maximum annual emissions.

The annual net change in estimated criteria pollutant emissions associated with the Proposed Action would be less than the General Conformity *de minimis* threshold of 100 tpy for VOCs and NO_x and the DAF insignificance indicators 250 tpy for all other criteria pollutants. A General Conformity Determination would not be required. The annual net change in GHG emissions would be less than the insignificant indicator of 68,039 metric tons of CO₂e. Therefore, all criteria pollutant and GHG emissions would be insignificant and would not cause or contribute to an exceedance of NAAQs; therefore, the Proposed Action would have an insignificant impact on Air Quality.

3.3.2.3 Emergency Staging Area for FEMA Trailers

Under the Proposed Action, large trucks would bring trailers onto the installation for emergency staging. The Proposed Action would include FEMA personnel and contractors to oversee the operations. There would be no permanent on-site generators or other stationary sources of air emissions.

Installation activities would result in emissions of criteria pollutants, specifically CO and NO_x, from the delivery trucks and worker commuter vehicles. A separate category for transient workers commuting was included to account for contractors performing project supervision, traffic control and security. All emissions would be temporary. The Emergency Staging Area for FEMA Trailers would not have any ongoing, permanent emission sources.

ACAM was used to estimate project emissions and complete the GCR applicability analysis, assess impacts to attainment NAAQS (and precursors), and a GHG analysis. Criteria pollutant emissions and GHG emissions resulting from the Proposed Action are summarized on an annual basis until steady state, when the net gain/loss in emissions is stabilized and the action is fully implemented (Table 3-4 and Appendix B). All activities were assumed to take place in one year to determine the maximum annual emissions.

The annual net change in estimated criteria pollutant emissions associated with the Proposed Action would be less than the General Conformity de minimis threshold of 100 tpy for VOCs and NOx and the DAF insignificance indicators 250 tpy for all other criteria pollutants. A General Conformity Determination would not be required. The annual net change in GHG emissions would be less than the insignificant indicator of 68,039 metric tons of CO₂e. Therefore, all criteria pollutant and GHG emissions would be insignificant and would not cause or contribute to an exceedance of NAAQSs; therefore, the Proposed Action would have an insignificant impact on Air Quality.

3.3.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.3.1 would remain the same. Therefore, there would be no short- or long-term impacts because there would be no change to existing air quality over baseline conditions.

3.3.3 Reasonably Foreseeable Effects

Concurrent construction activities associated with the three Proposed Actions would have the greatest potential to impact overall air quality emissions. The proposed Acquisition Management Complex MILCON to the northeast of the NMUSAF and the AFTC (F/20004) Renovation and Addition to the southeast are close enough to the Proposed Action sites that concurrent construction emissions could contribute foreseeably to local air quality degradation but are not likely to be significant. Enhanced Use Lease (EUL) development at the Gerlaugh Farm site south of Gate 22B and the proposed FEMA staging area would also potentially be close enough to contribute to foreseeable air quality impacts, but its construction schedule is further out (2030 – 2035) so would not likely be concurrent. Other planned Area B construction and demolition projects (see Table 3-1) are sufficiently distant to be unlikely to contribute to foreseeable impacts with the Proposed Action projects. In addition, each project would utilize a fugitive emissions control plan to mitigate dust emissions and construction activities would be monitored by base personnel. Total emissions from all three projects are combined in Table 3-5.

The annual net change in estimated criteria pollutant emissions associated with all three combined Proposed Actions would be less than the General Conformity de minimis threshold of 100 tpy for VOCs and NOx and the DAF insignificance indicators 250 tpy for all other criteria pollutants. A General Conformity Determination would not be required. The combined annual net change in GHG emissions would be less than the insignificant indicator of 68,039 metric tons of CO₂e. Therefore, all criteria pollutant and GHG emissions would be insignificant and

would not cause or contribute to an exceedance of NAAQs; therefore, the reasonably foreseeable effects of all three combined Proposed Actions would have an insignificant impact on Air Quality.

3.4 Noise

Noise is defined as an undesirable sound that interferes with communication, is intense enough to damage hearing, or is annoying. Human response to noise varies according to the source type, characteristics of the source, distance between source and receptor, receptor sensitivity, and time of day. Sound is measured with instruments that record instantaneous sound levels in decibels (dB); decibels characterize sound levels sensed by the human ear. A-weighted Sound Level Measurements (dBA) incorporate an adjustment of the frequency content of a noise event to represent the way the average human ear responds to a noise event. Sound levels analyzed in this EA are A-weighted.

Two noise considerations must be assessed relative to the proposed Area B Improvement projects:

- Location of the proposed Area B improvements relative to WPAFB aircraft operations.
- Potential noise impacts from the proposed Area B improvements (both construction and operational) on nearby noise receptors.

Federal and local governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and from various other adverse physiological, psychological, and social effects associated with noise. Guidelines and regulations that are relevant to the project are described below.

AFI 32-1015 Integrated Installation Planning (updated January 4, 2021) establishes a comprehensive and integrated planning framework for the development and redevelopment of DAF installations to include noise effects on the surrounding communities. Department of Defense Instruction (DoDI) 4165.57 Air Installations Compatible Use Zones (13 December 2021) establishes policies and responsibilities and prescribes procedures for the DoD AICUZ program for air installations. Air Force Handbook (AFH) 32-7084 (2 Nov 2017) is the AICUZ Program Manager's guide to provide specific direction concerning the AICUZ program and its implementation. There is a diverse set of noise modeling software programs that accurately predict noise levels of fixed-wing aircraft, rotorcraft, sonic booms, small arms, and large caliber weapons.

The DAF land use compatibility guidelines (relative to Day-Night Average sound level [DNL] values) are documented in AFH 32-7084 *AICUZ Program Managers Guide* (2 November 2017), which uses dBA averaged over a 24-hour period. The DNL is the metric used by the DAF in determining noise impacts of military airfield operations for land use planning. Five noise zones are used in AICUZ studies and described in DoDI 4165.57 to identify noise impacts from aircraft operations. These noise zones range from DNL of 65 to 80 dBA and above. For example, it is

recommended that no residential uses, such as homes, multifamily dwellings, dormitories, hotels, or mobile home parks, be located where noise is expected to exceed a DNL of 65 dBA.

The Federal Interagency Committee on Noise developed land-use compatibility guidelines for noise in terms of DNL (USDOT, 1980). According to DAF, Federal Aviation Administration, and U.S. Department of Housing and Urban Development criteria, residential units and other noise-sensitive land uses are “clearly unacceptable” in areas where the noise exposure exceeds the DNL of 75 dBA, “normally unacceptable” in regions exposed to noise between the DNL of 65 to 75 dBA, and “normally acceptable” in areas exposed to noise where the DNL is 65 dBA or less.

For outdoor activities, USEPA recommends DNL of 55 dBA as the sound level below, which there is no reason to suspect that the general population would be at risk from any of the effects of noise (USEPA, 1974).

If noise-sensitive structures are located in areas with a DNL of 65 to 75 dBA, the structures should be designed to achieve a DNL of 25 to 30 dBA interior noise reduction. Noise-sensitive structures might include schools, concert halls, hospitals, and nursing homes. Elevated noise levels in these structures can interfere with speech, causing annoyance or communication difficulties. Some commercial and industrial uses are considered acceptable where the noise level exceeds a DNL of 65 dBA.

3.4.1 Affected Environment

The *2022 WPAFB Air Installations Compatible Use Zones Study* was reviewed for this EA (WPAFB, 2022b). The WPAFB Area B airfield is normally closed. The runway is only used when aircraft are brought into the NMUSAF or for other special events. Primary WPAFB aircraft operations utilize the runways in Area A. Refer to the WPAFB AICUZ Study (WPAFB, 2022b) for a detailed description of the noise contours. Noise contours from the Area A runways over the Area B Proposed Action sites are shown in Figure 3-1.

To further evaluate potential noise impacts at representative residential locations bordering WPAFB, a screening level ambient noise survey at discrete, representative locations around the perimeter of Area B was conducted in December 2021. The survey methods are described in Appendix C. This study used A-weighted LA_{eq} as the sound level metric to measure ambient noise. $LA_{eq(1\text{ hr})}$ represents the A-weighted equivalent continuous sound pressure level averaged over 1 hour (see Appendix C for explanation of the noise metrics). The $LA_{eq(1\text{ hr})}$ for the four sampling locations ranged from 53.1 dBA to 66.3 dBA (Table 3-6). These measured sound levels are typical of many urban areas. The nearest respective sampling locations to the proposed Area B improvements are NS1 north of NMUSAF/Wright Field across Springfield Road, NS2 south of Wright Field across Airway Road, and NS4 west of Wright Field across Springfield Road.

In addition to aircraft operations from WPAFB Area A, existing conditions noise sources include traffic noise from State Route 444, a four-lane highway, and State Route 4, a two-lane road,

both north of the project location, and Interstate 675 south and east of the project location. Other ground transportation noise sources include various types of vehicles both on and off the installation on surface roads, including Springfield Road and the Airway Road/Colonel Glenn Highway. A childcare facility is located in Area B approximately 1/2 mile northeast of Gate 22B.

3.4.2 Environmental Consequences

The noise impact analysis evaluates potential changes to the existing soundscape that would result from implementation of the Proposed Actions. Potential changes in the noise environment can be beneficial (i.e., a reduction in the number of sensitive receptors exposed to unacceptable noise levels), negligible (i.e., no significant change in the total area exposed to unacceptable noise levels), or adverse (i.e., increased noise exposure to unacceptable noise levels). For the purposes of this EA, the impact to the soundscape would be considered adverse if the ambient noise levels increased with an hourly LA_{eq} of 3 dB or more.

3.4.2.1 Gate 22B – New Gate/Road Realignment

Implementation of the Proposed Action would have minor, temporary effects on the noise environment during the demolition and construction phases. Demolition and construction equipment to be used in the Proposed Action include the list in Table 3-7 (FHWA, 2023). LA_{max} dB levels listed are the standard levels for each piece of equipment. Construction equipment noise would be experienced by WPAFB personnel working in and around buildings in Area B of the base, near the demolition and construction activities. Off-base residential communities (closest is approximately 1,800 feet from the new gate location) would not be impacted by demolition and construction noise from equipment noise based on the following assumptions:

- Ambient sound levels would range between 53 dB and 65 dB LA_{eq}
- Sound levels from construction equipment would be lower than the ambient levels;
- Noise from I-675 would contribute to the ambient sound level;
- The nearest residents are within the 70-75 dB Day-Night Average Sound Level;
- Construction activities would not occur during evenings and night-time hours;
- No structures or vegetation between the construction and residences were taken into account that would further attenuate the noise;
- Exterior noise is 15-25 dBA higher than interior noise, depending on whether windows are open or closed.

Therefore, no noise impacts from the Proposed Action of constructing the new Gate 22B are expected.

3.4.2.2 New NMUSAF Café

Implementation of the Proposed Action would have no impacts on the noise environment during the demolition and construction phases of new NMUSAF Cafe project. Demolition and

construction equipment to be used in the Proposed Action are listed in Table 3-8. Construction equipment noise would be experienced by WPAFB personnel working in and around buildings in Area B of the base and near the demolition and construction activities. Off-base residential communities (closest is approximately 2,000 feet) would not be impacted by demolition and construction noise from equipment noise based on the following analysis:

- Ambient sound levels would range between 53 dB and 65 dB LA_{eq};
- Sound levels from construction equipment would be lower than the ambient levels;
- The nearest residents are within the 75 dB Day-Night Average Sound Level noise contour;
- Construction activities would not occur during evenings and nighttime hours;
- No structures or vegetation between the construction and residences were taken into account that would further attenuate the noise;
- Exterior noise is 15-25 dBA higher than interior noise, depending on whether windows are open or closed.

Therefore, no noise impacts from the Proposed Action of demolition and construction of the new NMUSAF Café project are expected. An increase in noise is not anticipated with the operation of the café as there is already a café in use and the operation would not require the use of noise-generating equipment.

3.4.2.3 Emergency Staging Area for FEMA Trailers

Implementation of the Proposed Action would have minor, temporary effects on the noise environment during the emergency response project. The Proposed Action includes temporary access to the inactive runway of WPAFB Area B for the staging of disaster commodities, such as trailers with emergency commodities, generators, mobile homes, and other project cargo. The Roadway Construction Noise Model used to estimate noise levels of construction equipment treats the noise as single events and shown in Tables 3-9 and 3-10. Nearest residents west of the airfield are about 1500-850 feet away from the runway. Residents south of the runway are located 900 feet from the runway. Flatbed truck noise would be experienced by WPAFB personnel working in and around buildings in Area B of the base. Off-base residential communities would not be impacted by flatbed truck noise during the day or evening based on the following analysis:

- Ambient sound levels would range between 53 dB and 65 dB LA_{eq} during daytime hours, which is higher than the truck noise;
- Ambient sound levels in evening would be about 45 dB, which is about the same as the truck noise;
- The nearest residents are within the 70-75 dB Day-Night Average Sound Level aircraft noise contour;

- No structures or vegetation between the airfield and residences were taken into account that would further attenuate the noise;
- Exterior noise is 15-25 dBA higher than interior noise, depending on whether windows are open or closed.

Nearest residents to the WPAFB Area B inactive runway may hear flatbed truck noise during the nighttime hours (2200-0700 hours) due to ambient noise levels of about 35 dBA.

3.4.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.4.1 would remain the same. Therefore, there would be no short- or long-term impacts because there would be no change to existing noise conditions over baseline conditions.

3.4.3 Reasonably Foreseeable Effects

Construction and demolition activities associated with the three Proposed Actions, combined with foreseeable actions related to projects listed in Table 3-1 would have limited potential short-term adverse noise impacts. Potential noise impacts from the Proposed Actions are limited to temporary construction impacts in the immediate vicinity of the Gate 22B and NMUSF sites, and increased truck traffic noise from use of the FEMA emergency trailer staging area. Concurrent construction noise from the Acquisition Management Complex (AMC) MILCON project would be in the same vicinity as the New NMUSAF Café, but foreseeable noise impacts would largely be precluded by intervening buildings (including the NMUSAF buildings). Construction noise from the AFTC (F/20004) Modernization and Addition concurrently with the Gate 22B construction could contribute to noise impacts. Reasonably foreseeable noise impacts could occur at the residential receptors west of the Gerlaugh Farm EUL construction and across (south of) Airway Road from the FEMA staging area, but those impacts would be temporary and unlikely to be significant. Other potentially concurrent construction projects in Area B are not located in the same vicinity or would be blocked by other existing buildings from causing noise impacts to nearby receptors. Therefore, no significant foreseeable impacts from noise would be anticipated.

3.5 Land Use

Land use refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. Natural conditions of property can be described or categorized as unimproved, undeveloped, conservation or preservation area, and natural or scenic area. There is a wide variety of descriptive terms used to categorize land use resulting from human activity including residential, commercial, industrial, agricultural, institutional, and recreational.

Land use planning objectives are two-fold: to ensure orderly growth and ensure compatible uses among adjacent property parcels. Tools supporting land use planning include written master

plans/management plans and zoning regulations. In appropriate cases, the locations and extent of proposed actions need to be evaluated for their potential effects on project sites and adjacent land uses. The foremost factor affecting a proposed action in terms of land use is its compliance with any applicable land use or zoning regulations.

To address land use with respect to noise and safety associated with aircraft operations, the DoD requires military departments to establish an AICUZ program. The goal of AICUZ is to promote compatible land use around air bases by providing information concerning aircraft operations, noise exposure, and accident potential to local governments (WPAFB, 2022b). Potential noise exposure associated with WPAFB's AICUZ is addressed in Section 3.4.

The 2022 AICUZ utilizes the noise planning contour that was established historically for WPAFB to provide consistency when zoning and land use policies in the community are established. Local zoning does not need to be adjusted with changes in missions because the noise contours were based on conservative assumptions regarding future missions. Therefore, the noise contours in the 2022 AICUZ remain in effect for local community planning purposes. Noise contour analysis is addressed in Section 3.4 of this EA.

The AICUZ program is also intended to reduce the potential for aircraft mishaps in populated areas. As a result of this program, WPAFB has altered basic flight patterns to avoid heavily populated areas. In addition, airfield safety zones were established under AICUZ to minimize the number of people who would be injured or killed if an aircraft crashed. Three safety zones are designated at the end of all active runways: Clear Zone (CZ), Accident Potential Zone (APZ) I, and APZ II.

The CZ represents the most hazardous area. The APZs are outside of the CZs. The APZ I is located immediately beyond the CZ and has a high potential for accidents. The APZ II is immediately beyond APZ I and has measurable potential for accidents. While aircraft accident potential in APZs I and II does not necessarily warrant acquisition by DAF, land use planning and controls are strongly encouraged for the protection of the public. Compatible land uses are specified for these zones. According to AFI 32-1015, all new construction is required to comply with the AICUZ.

The DoD and Federal Aviation Administration also identify a complex series of imaginary planes and transition surfaces, known as the Hazards to Aircraft Flight Zone, that together define the airspace needed to remain free of obstructions around an airfield. The Hazards to Aircraft Flight Zones typically include structure height restrictions that vary by surface and distance from the runway.

3.5.1 Affected Environment

There is a variety of land use classifications on WPAFB. Open Space and Outdoor Recreation represent some of the land constrained from development. Over 2,000 acres of this undeveloped land lies within the natural constraints area that is composed of floodplains, lakes,

wetlands, or areas with unsuitable soil for building. Also located within the natural constraint area is the 109-acre Huffman Prairie Flying Field containing remnant prairie habitat that includes several rare plant and animal species.

Human-made constraints also restrict development within the WPAFB boundaries. Included in these types of constraints are archaeological sites and historic buildings that can be identified sites or those that remain undiscovered. Operational restrictions can also impede development. Noise contours from aircraft operations and explosive safety zones must be considered when looking at developing areas on the Base. Airfield and airspace control surfaces, such as runway approach CZs, are to remain clear of building obstructions. The presence of past waste disposal sites and fire training areas must be considered when siting facilities (WPAFB, 1995).

Land uses around WPAFB vary from heavily urbanized to rural agricultural. Most of the urbanized areas are west of the Base, with the low-density or agricultural area located east of the Base.

Most of the land surrounding WPAFB that is impacted from Base activities is compatible with Base operations. Progressive land use controls have been the most important factor concerning compatible development within noise and APZs at WPAFB (WPAFB, 1995, 2022b).

Land use on Base is classified as the following types: residential, commercial, industrial, institutional, open space, vacant/agricultural, and airports. Land use in the vicinity of the proposed Area B Improvements is classified as open space, community service, administrative, and industrial. WPAFB conducts comprehensive land use planning in its Installation Development Plan (IDP) (WPAFB, 2014). Additional area development plans (ADPs) provide more specific planning focus for individual directorate development. The IDP and ADPs are maintained and updated in the Comprehensive Planning Platform, which is currently a Common Access Card-enabled Sharepoint site.

WPAFB land use controls have also been established for portions of the base subject to the Environmental Restoration Program (ERP), in the Land Use Control Implementation Plan (WPAFB, 2019a) as detailed in Section 3.11.

3.5.2 Environmental Consequences

Potential impacts on land use are based on the level of land use sensitivity in areas affected by a proposed action and compatibility of proposed actions with existing conditions. A land use impact would be adverse if it met the following criteria:

- Inconsistency or noncompliance with existing land use plans or policies.
- Precluded the viability of existing land use.
- Precluded continued use or occupation of an area.

- Incompatibility with adjacent land use to the extent that public health or safety is threatened.
- Conflict with planning criteria established to ensure the safety and protection of human life and property.

3.5.2.1 Gate 22B – New Gate/Road Realignment

The proposed New Gate 22B/Road Realignment replaces an existing small-scale administrative function with new facilities. Although these new facilities are a different footprint, they are approximately the same location, this is not a change in land use. The proposed new construction would have no effect on off-base land use to the south. The proposed road improvements to the north would result in a change in on-base circulation, which would be addressed by the WPAFB land use planning program. Potential impacts to traffic are discussed in Section 3.10.2.1.

3.5.2.2 New NMUSAF Café

The proposed New NMUSAF Café would be an extension of the existing NMUSAF facilities and located within the existing Museum site envelope. The Café would be consistent with existing land use and result in no effects to nearby land use on-base or off-base.

3.5.2.3 Emergency Staging Area for FEMA Trailers

The proposed FEMA trailer emergency staging area on the Wright Field runways would be a temporary change in land use, allowed under terms of the Real Property Permit that would be issued by WPAFB. No permanent changes in land use would be anticipated. FEMA emergency staging exercises or events would potentially affect off-base land use to the south with additional traffic and commercial activity, but those changes would be temporary and not permanent.

3.5.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.5.1 would remain the same. Therefore, there would be no short- or long-term impacts because there would be no change to existing land use over baseline conditions.

3.5.3 Reasonably Foreseeable Effects

Two potentially concurrent upcoming Area B projects (see Table 3-1) sufficiently proximate to the Proposed Action sites to contribute to foreseeable land use effects would be the AMC MILCON project to the northeast of Wright Field and the NMUSAF and the AFTC (F/20004) Modernization and Addition, but neither should result in Land Use impacts. Land use impacts from use of the Wright Field runways as a FEMA emergency trailer staging area would be temporary and would not contribute to permanent land use impacts on or near Area B.

3.6 Cultural Resources

Several federal laws and regulations govern protection of cultural resources, including the National Historic Preservation Act (NHPA) (1966), the Archaeological and Historic Preservation Act (1974), the American Indian Religious Freedom Act (1978), the Archaeological Resources Protection Act (1979), and the Native American Graves Protection and Repatriation Act of 1990. As defined by 36 CFR 800.16, historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion, on the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties, as well as properties of traditional religious and cultural importance to a Native American tribe or Native Hawaiian organization and that meet the NRHP criteria.

Typically, cultural resources are subdivided into archeological resources (prehistoric or historic sites where human activity has left physical evidence of that activity but no structures remain standing) and architectural resources (buildings or other structures or groups of structures, or designed landscapes that are of historic or aesthetic significance). Archeological resources comprise areas where human activity has measurably altered the earth or deposits of physical remains are found (e.g., arrowheads and bottles).

Architectural resources include standing buildings, bridges, dams, and other structures of historic or aesthetic significance. Generally, architectural resources must be more than 50 years old to be considered for the NRHP. More recent structures might warrant protection if they have potential as Cold War-era resources. Structures less than 50 years in age, and particularly DoD structures in the category of Cold War-era, are evaluated under explicit guidance of the National Park Service Bulletin 22.

The EA process and the consultation process prescribed in Section 106 of the NHPA requires an assessment of the potential impact of an undertaking on historic properties that are within the proposed project's Area of Potential Effect (APE). An APE is defined as the geographic area(s) "within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." In accordance with Section 106 of the NHPA, determinations regarding the potential effects of an undertaking on historic properties are presented to the SHPO.

Native American tribes define cultural resources very broadly as the resources necessary for the survival and maintenance of their way of life. Ethnographic resources include plants and animals, ceremonial sites, tribal historic sites, and areas of sacred geography possessing mythic/spiritual significance. Over a period of many years (approximately 2008-2018) the WPAFB Cultural Resources Manager worked to identify the federally recognized Native American tribes with an interest in cultural resource preservation at WPAFB, specify the types of projects each tribe desired notification for, and develop and update an Installation Tribal Relations Plan (ITRP) outlining government-to-government consultation practices. The ITRP was signed on March 14, 2016 by the designated DAF government-to-government points of

contact for tribal affairs: the Installation Tribal Liaison Officer (Chief, Environmental Branch) and the Commander Designated Installation Representative (Director, 88th Civil Engineer Group [CEG]) (WPAFB, 2017). Since the original ITRP was signed in 2016, the 88 CEG/CEIE conducts an annual update call with the Tribal signatories. This is the means of communication that the tribal points of contact have requested. The tribes are provided an opportunity to suggest any changes to the ITRP at the annual teleconference, the last of which was held November 28, 2023. Only small modifications have been made to the ITRP over the years, but none that have warranted a new ITRP. There has been no movement away from their preference to be consulted only on matters involving the two Indian burial mound sites or undisturbed soil adjacent to those sites.

In 2002, Gray and Pape Inc. conducted a Phase I archeological survey of 309.04 acres across WPAFB. It was concluded that all the areas had undergone widespread development and had a low probability of yielding prehistoric resources. These results were discussed with the five tribes that were a part of the base's initial Tribal Consultation Meeting in May of 2016, and no levels of tribal interest in these areas was recorded in that or subsequent consultations.

3.6.1 Affected Environment

Over 250 historic buildings, several that are individually eligible for inclusion on the NRHP and most of which are located in one of three NRHP-eligible historic districts are located within WPAFB. The Integrated Cultural Resources Management Plan for WPAFB, prepared in concurrence with the SHPO, identifies cultural resources listed in or eligible for the NRHP and/or are listed on the WPAFB historic building list (WPAFB, 2022e). Archeological resource surveys have not revealed sites within the Wright Field Historic District eligible for listing in the NRHP (WPAFB, 2022d). WPAFB contains no traditional cultural properties or sacred sites as defined by a federally recognized tribe or tribal leader.

As shown in Figure 3-2, the proposed Area B improvements sites are located in or near the Wright Field Historic District that comprises most of the western half of Area B and consists of numerous culturally significant sites, structures, and objects. F/20004 is an NRHP-eligible building located on the southeastern edge of the Wright Field Historic District. The eastern portion of Area B includes two additional buildings – F/20620 and F/20653 – that are individually eligible but are further distant from the proposed Area B improvements.

3.6.2 Environmental Consequences

Adverse impacts on cultural resources might include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance.

3.6.2.1 Gate 22B – New Gate/Road Realignment

The proposed location and construction of the new Gate 22B and road realignment/improvements are not expected to directly impact any known cultural resources in the vicinity. The principal known cultural resource near the proposed action is the Wright Field Historic District, with the nearest component F/20004, a NRHP eligible structure approximately 800 feet west. Another NRHP eligible facility, F/20470, is located in the southeast quadrant of the Thirteenth Street and Skyline Drive intersection that will be expanded south and upgraded as part of the proposed construction. Facilities F/20653 and F/20620 are also NRHP eligible and proximate but more distant from the associated road improvements. The western portion of Thirteenth Street will be relocated and connected to “C” Street on the eastern edge of the Wright Field Historic District. None of this work is expected to infringe on the character of the Historic District or nearby NRHP eligible buildings. As agreed during consultation with the SHPO (consultation response received March 24, 2025, see Appendix A), project design drawings will be submitted for SHPO review once available.

Prior cultural resource mapping efforts identified two potential nearby archaeological sites, one southeast of the existing Gate 22B location and one in the future southwest quadrant of Thirteenth Street and Skyline Drive (extended to the south) intersection (see Figure 3-2). Current project documents do not anticipate any direct construction disturbance in these areas, but given their proximity, subsurface cultural artifacts could be encountered during construction. Contractors would observe standard WPAFB archaeological resource observation and reporting practices should any resources be encountered during construction.

3.6.2.2 New NMUSAF Café

The proposed New NMUSAF Café will be an exterior building addition connected directly to and accessed from the existing NMUSAF. As the existing NMUSAF is the architectural center piece of the Wright Field Historic District, the architectural character of the proposed Café will need to be consistent with that of the existing NMUSAF buildings. As agreed during consultation with the SHPO (consultation response received March 24, 2025, see Appendix A), architectural design drawings will be submitted for SHPO review once available.

3.6.2.3 Emergency Staging Area for FEMA Trailers

The proposed FEMA Trailer Emergency Staging Area – whether in use as part of a training exercise or an actual emergency staging event – is not anticipated to require permanent modifications or construction that would impact the character of the Wright Field Historic District. FEMA’s use of the staging area is expected to be temporary, and the area would revert to existing conditions following an exercise or emergency event. Temporary use of the Staging Area is not anticipated to result in any long-term, permanent adverse effect on the District. As agreed during consultation with the SHPO (consultation response received March 24, 2025, see Appendix A), if in the future permanent alterations are required, proposed design plans will be coordinated with the SHPO prior to construction.

3.6.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.6.1 would remain the same. There would be no alteration or ground disturbance from construction or implementation of FEMA exercises or emergency response activities. Therefore, there would be no short- or long-term impacts because there would be no change to existing cultural resources over baseline conditions.

3.6.3 Reasonably Foreseeable Effects

The AMC MILCON project and the AFTC (F/20004) Modernization and Addition would be located on the eastern edge of Wright Field, within the Wright Field Historic District. If constructed concurrently with the proposed New NMUSAF Café, both projects could foreseeably contribute potential impacts to the architectural character of Wright Field and the Historic District, and would need to be coordinated with the SHPO. Other planned Area B projects (see Table 3-1) are not sufficiently proximate to contribute to foreseeable cultural resource effects.

3.7 Biological/Natural Resources

Biological resources include native or naturalized plants and animals, and their habitats, such as wetlands, forests, and grasslands. In accordance with DoD and DAF directives, instructions, and policies, WPAFB has prepared and implemented an Integrated Natural Resources Management Plan (INRMP) that details how natural resources are protected and managed at the base. The INRMP is updated on a regular schedule and coordinated with and concurred by the USFWS and ODNR. The current version is dated 2022 – 2026 (WPAFB, 2022f).

Sensitive and protected biological resources include plant and animal species listed as threatened or endangered by the USFWS under the Endangered Species Act (ESA) (16 USC 1531 *et seq.*), or a state. Under Section 7 of the ESA and regulations implementing this section, federal agencies must, in consultation with the USFWS and/or National Marine Fisheries Service, as applicable, ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of critical habitat. In addition, the ESA prohibits the unauthorized “take” of any endangered or threatened species. As a requirement under the ESA, federal agencies must provide documentation that ensures agency actions do not adversely affect the existence of any threatened or endangered species. The ESA requires that all federal agencies avoid “taking” threatened or endangered species, which includes jeopardizing threatened or endangered species habitat. Section 7 of the ESA establishes a consultation process with USFWS that ends with USFWS concurrence or a determination of the risk of jeopardy from a federal agency project.

In Ohio, the ODNR, Division of Wildlife may restrict the taking or possession of native wildlife threatened with statewide extirpation and maintains a list of endangered animal species (Ohio

Revised Code 1531.25) and the Division of Natural Areas and Preserves maintains a list of plant species protected under ORC Chapter 1518 (1518.01). In addition, Air Force Policy Directive 32-70 and DAF Manual (DAFMAN) 32-7003 indicates that INRMPs should provide for the protection and conservation of state-listed protected species when practicable and consistent with the military mission. The *Endangered Species Management Plan* (BHE, 2001), which has been incorporated into the INRMP, provides species-specific protection and conservation measures to protect known special status species occurring on the Base (WPAFB, 2022f).

3.7.1 Affected Environment

Existing WPAFB biological resources potentially affected by the Proposed Action and alternatives include vegetation, wildlife, threatened or endangered species, and their habitats.

3.7.1.1 Vegetation

Natural vegetative communities on WPAFB are divided into five general categories: forest/woodlands (709 acres), prairie (109 acres), old fields (388 acres), wetlands (23 acres), and maintained areas that are routinely mowed (e.g., airfields, parks, roadsides, and golf courses) and other developed areas such as parking lots, residential lawns, and other green space between buildings.

The proposed Area B Improvements are located within the southern portion of the Wright Field District (WPAFB, 2022a). The area is highly developed with minimal vegetation other than maintained turf and occasional street trees. More substantial wooded/forest stands are located east, west and south of the proposed new Gate 22B. Wetland habitat is also located east of the proposed new Gate 22B site.

3.7.1.2 Wildlife

WPAFB is home to a diverse variety of wildlife. Many animals are only present at WPAFB for a short period while migrating between winter and summer habitats, while others are year-round residents. Previously conducted surveys documented the presence of 38 species of mammals, 140 bird species, 12 reptile species, and 9 amphibian species on the Base (WPAFB, 2022f). Most areas of the Base associated with the proposed Area B improvements are located within previously disturbed areas and species occurring in such areas are common species to the Base.

According to the WPAFB INRMP, the Huffman Prairie, a 109-acre sensitive and protected area, is located in Area A and is greater than one mile northeast of the proposed Area B Improvement projects. There are no other known sensitive habitats or protected areas in close proximity to the Area B Improvements project area.

3.7.1.3 Threatened and Endangered Species

Protected wildlife and plant species by the ODNR and the USFWS known to occur or known to have occurred on WPAFB are included in Table 3-11. The occurrence of habitat for threatened

and endangered species in the general vicinity of the proposed action sites is indicated in Figure 33. Consultation with the ODNR (see Appendix A) also identified several state-listed species within one-mile of the project site (but not necessarily on WPAFB).

WPAFB actively manages three federally listed species (Indiana bat, northern long-eared bat, and eastern massasauga). Tricolored bats (*Perimyotis subflavus*) are proposed for federal listing as endangered. No critical habitat has been designated (as defined in the ESA) on WPAFB for any federally listed species. WPAFB also manages four additional species listed in Ohio as endangered (WPAFB, 2022f). Most other threatened or endangered species potentially present or actively managed at WPAFB are located in Area A, remote from the proposed Area B improvements.

No habitat used by roosting bats has been identified in the vicinity of the Proposed Action sites; however, there is a home range of adult and juvenile female Indiana bats, as well as forest stands in Area B that are potentially suitable as habitat for roosting Indiana bats.

3.7.2 Environmental Consequences

Biological resources that would potentially be impacted by the proposed Area B improvements include vegetation, wildlife, and threatened or endangered species. Evaluation criteria for impacts on biological resources are based on:

- Importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource
- Proportion of the resource that would be affected relative to its occurrence in the region
- Sensitivity of the resource to the proposed activities
- Duration of ecological ramifications

The impacts on biological resources would be adverse if species or habitats of high concern are negatively affected over relatively large areas. Impacts are also considered adverse if disturbances cause reductions in population size or distribution of a species of high concern.

The USFWS was consulted and responded on February 26, 2025 (Appendix A) concurring that no adverse effects are anticipated to federally endangered, threatened, or proposed species or proposed or designated critical habitat for the new Museum Café and the staging of FEMA trailer projects. However, for the Gate 22B improvements project, the USFWS will complete consultation once final project designs have been developed and the quantity of unavoidable tree clearing is known. The ODNR was also consulted and on March 20, 2025 responded (Appendix A), identifying state- or federally-listed species whose range included the proposed project areas. Due to the location and nature of the proposed projects, ODNR concluded that none would be impacted by the projects. ODNR included recommendations on tree cutting to preserve potential bat habitat.

3.7.2.1 Gate 22B – New Gate/Road Realignment

Limited existing environmental resources are located in proximity to the proposed Gate 22B New Gate/Road Realignment site as shown in Figure 3-3. The existing Gate 22B and associated Loop Road is heavily trafficked with approximately 7,000 inbound vehicles per day (2,100 vehicles peak hour) based on 2023 traffic count data (WPAFB, 2023b), providing some constraints to wildlife presence. But significant wildlife habitat exists in forest stands to the east and north of the existing gate, and further northeast of the proposed new Gate 22B site. Wetland B1 is located directly east of the new gate with wetland vegetation and wildlife habitat, but it would not be directly impacted by the new gate construction. Much of the new gate and entry road footprint is north of Loop Road on existing mowed grass areas, with the new connector to existing Skyline Drive running north-south displacing a row of existing trees. Existing vegetation and potential wildlife habitat would be removed in these construction areas. As deer and other wildlife are occasionally observed in the undeveloped wood lots, it is assumed the design would include limiting obstacles to address potential impacts to wildlife once the new gate and roadways are in use.

No known threatened or endangered species or confirmed habitat has been identified in or near the Gate 22B site. A portion of a wooded forest stand located east of the existing Gate 22B and on the southern portion of the realigned entry to the new Gate 22B would require removal during construction of the Proposed Action. This wooded forest stand could potentially serve as habitat for the endangered Indiana Bat and the threatened northern long-eared bat and the proposed for listing Tricolored bat, or for bald eagles. Should funding be approved for Gate 22B design and construction, a biological survey of the woods would be conducted prior to initiating any construction to determine whether the woods serve as existing habitat. Prior to tree removal, all trees considered potential habitat greater than or equal to 3 inches at breast height would be marked and inventoried. All tree removal required for construction would only be conducted between October 1 and March 31. Those trees would be replaced under the supervision of the WPAFB Natural Resources Program Manager in accordance with WPAFB Installation Facility Standard Section GO3.10.3.

3.7.2.2 New NMUSAF Café

The proposed New NMUSAF Café would be located between two existing buildings that are part of the existing NMUSAF complex (see Figure 3-3). The existing site is maintained lawn and sidewalks, so the proposed new café would have no significant impact on natural vegetation, wildlife/habitat and threatened or endangered species.

3.7.2.3 Emergency Staging Area for FEMA Trailers

The proposed FEMA Emergency Staging Area is located on the existing Area B/Wright Field Historic District runway, which is inactive, mowed and maintained grass and paved runway. Wildlife in this area would be limited to burrowing mammals and common songbirds that typically inhabit open space of this type. Existing limited wetlands are located at the east end of the runway and would be fenced off with orange snow/silt fence during FEMA exercises or emergency response activities. Other potential habitat west of the runways are beyond the WPAFB security fence so would not be directly affected by the proposed FEMA exercise or

emergency response actions. No threatened or endangered species are known to be present on the proposed site. FEMA activities would be temporary and the Wright Field site restored to prior conditions following use.

3.7.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.7.1 would remain the same. There would be no alteration or disturbance of existing vegetation or habitat from construction or implementation of any of the three projects. Therefore, there would be no short- or long-term impacts because there would be no change to existing biological resources over baseline conditions.

3.7.3 Reasonably Foreseeable Effects

Construction and operational activities associated with the Proposed Actions, combined with potential foreseeable projects listed in Table 3-1 would not adversely affect biological resources. With the exception of the New Gate 22B and roadway construction (see Section 3.7.2.1), the Proposed Actions and nearby construction and/or renovation projects are located within previously-developed and/or disturbed areas, and would not impact any significant vegetation, wildlife, wetlands, or sensitive species.

3.8 Water Resources

Water resources at WPAFB include groundwater, surface water, wetlands, and floodplains. Evaluation of water resources examines the quantity and quality of the resource and its demand for various purposes.

Groundwater consists of the subsurface hydrologic resources and is an essential resource often used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater can be described in terms of its depth from the surface, aquifer or well capacity, water quality, surrounding geologic composition, and recharge rate. Groundwater resources are regulated directly by USEPA and OEPA.

Surface water resources consist of lakes, rivers, and streams. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale, and is regulated directly under the federal Clean Water Act (CWA), and in many cases under state and/or local regulatory authorities. Point source discharges from sewage treatment plants and industrial sources to waters of the United States require permits under the National Pollutant Discharge Elimination System (NPDES) to limit discharge of contaminants to levels acceptable for public health and the environment. Storm water is an important component of surface water systems because of its potential to introduce sediments and other contaminants that could degrade water quality in lakes, rivers, and streams. Storm water flows, which may be exacerbated by high proportions of impervious surfaces associated with buildings, roads, parking lots, and airfields, are important to the management of surface water. Storm water drainage systems convey precipitation away from developed sites to appropriate receiving

surface waters. Higher densities of development require greater degrees of storm water management to mitigate both increases in storm water quantity and decreases in storm water quality. USEPA has developed Storm Water NPDES General Permits for construction, industrial activity, and municipal separate storm sewer systems (MS4) to protect surface water quality from storm water discharges. In Ohio, permits are implemented by OEPA. WPAFB and local governments such as Greene County and the city of Beavercreek have obtained coverage under the Storm Water NPDES MS4 General Permit.

Storm water runoff in urban areas is one of the leading sources of water pollution in the U.S. (USEPA 2018). In December 2007, Congress enacted the Energy Independence and Security Act (EISA) establishing strict storm water runoff requirements for federal development and redevelopment projects. Section 438 of EISA requires federal agencies to develop and redevelop facilities with a footprint that exceeds 5,000 square feet in a manner that maintains or restores the pre-development site hydrology to the maximum extent technically feasible. Federal agencies can comply using a variety of storm water management practices often referred to as “green infrastructure” or “low impact development” (LID) practices, including reducing impervious surfaces and using vegetative practices, porous pavements, cisterns and green roofs (USEPA, 2018).

Wetlands are an important natural system and habitat because of the diverse biologic and hydrologic functions they perform. These functions include water quality improvement, groundwater recharge and discharge, pollution mitigation, nutrient cycling, wildlife habitat detention, and erosion protection. Wetlands that meet the definition of “waters of the United States” (33 CFR 328.3) are regulated under Section 404 of the CWA and implementing regulations. The USACE defines wetlands as “those areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas” (33 CFR Part 328.3(c)(1)). Discharge of dredged or fill material into waters of the United States, including wetlands, are subject to permit approval by the USACE with accompanying water quality certification from OEPA.

EO 11990, *Protection of Wetlands*, May 24, 1977, directs federal agencies to the extent permitted by law, avoid undertaking or providing assistance for new construction located in wetlands unless the agency finds that there is no practicable alternative to such construction, and that the proposed action includes all practicable measures to minimize harm to wetlands that may result for use.

Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters and might be subject to periodic or infrequent inundation due to rain or melting snow. Flood potential is evaluated by FEMA, which defines the 100-year floodplain as the area that has a one percent chance of inundation by a flood event in a given year.

EO 11988, *Floodplain Management*, requires federal agencies to determine whether a proposed action would occur within a floodplain and typically involves consultation of appropriate FEMA Flood Insurance Rate Maps. EO 11988 provides requirements to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. DAFMAN 32-7003 provides more detailed requirements for proposed actions that will occur in or could adversely affect floodplains.

The MCD was established to provide flood control, conservation, and watershed management in the Miami River Watershed. The MCD constructed and operates five dams in the watershed for flood control in the Dayton region, including the Huffman Dam on the northwest side of WPAFB. The MCD through the *Land Use Agreement* (dated January 7, 2000) and the MCD *Policy and Procedure for Permits in Retarding Basins* regulates all construction on land within the Huffman Dam Retarding Basin and more than 5 feet below the spillway elevation of 835 feet above mean sea level (AMSL). All construction activities in the floodplain- or retarding basin must be coordinated with the MCD for approval.

3.8.1 Affected Environment

The topography of Area B directs storm water and groundwater flow generally towards the north and the Mad River (WPAFB, 2022d).

WPAFB is located in the Great Miami River Valley, which is filled with glacial deposits of sand and gravel. The glacial outwash deposits are very permeable and exhibit high transmissivity and hydraulic conductivity. The Miami Valley Buried Aquifer system is a highly productive source of water for the millions of people in southwest Ohio. USEPA designated a portion of the Buried Valley Aquifer System (BVAS) of the Great Miami/Little Miami River Basins of Southwestern Ohio as a sole-source aquifer in 1988, requiring USEPA Region 5 approval on federally-assisted projects constructed in the area to ensure continued use as a drinking water supply (53 Federal Register 15876). The buried aquifer system provides drinking water for more than 1.6 million people in southwest Ohio (Debrewer, 2000).

Most of the wells in the outwash deposits yield between 750 and 1,500 gallons per minute (gpm), but can vary from less than 200 to more than 4,000 gpm (WPAFB, 1995b). The city of Dayton groundwater production wells at Huffman Dam are screened at depths of over 100 feet below ground surface. The city of Dayton enforces a multi-jurisdictional Source Water Protection Area around the wellfields to restrict use of hazardous materials and protect the drinking water source. The Proposed Action sites are outside the Dayton Source Water Protection Program 1-year time-of-travel boundary, but the proposed new NMUSAF Café and the western half of the proposed FEMA Trailer Emergency Staging Area are within the 5-year time-of-travel zone (Dayton, 2025).

The buried valley aquifers coincide with the Great Miami River and its tributaries. Water underground generally follows the same flows as surface waters with upland areas serving as

recharge areas and groundwater divides (MCD, 2002). At WPAFB, the Mad River follows the course of the Mad River Buried Aquifer, part of the BVAS. Groundwater flow in the area of the proposed Area B Improvements is expected to flow generally west and northwest toward the Mad River off-base.

Potential sources of groundwater contamination may limit groundwater use, regardless of groundwater yield. Under its ERP, WPAFB has grouped confirmed or suspected sites requiring investigation and characterization into 11 geographically-based Operating Units (OU), designated as OUs 1 through 11. (Additional detail is provided in Section 3.11.) Remedies for the ERP sites are documented in six Record of Decision (ROD) documents. The current and future land uses as agreed upon in these RODs between USEPA, OEPA, and WPAFB identify the land use controls necessary to support the remedial action or No Further Action decisions for industrial/recreational sites (WPAFB, 2019a). Construction or earth disturbance in or within 300 feet of these designated sites requires submittal to and approval of a Rule 513 Application by OEPA to prevent release of residual contaminants to the environment, including groundwater. Locally in (EFDZ) 4 in the Gate 22B vicinity, local groundwater flow may vary with the more complex geography and subsurface geology. (IT Corporation, 1997) Geotechnical soil samples taken for the Gate 22B Replacement Planning Charrette Report (PCR) did not encounter groundwater.

WPAFB is in the Mad River Valley. The Mad River originates approximately 40 miles north of Springfield, Ohio, flows south and southwest past WPAFB to its confluence with the Great Miami River in Dayton, Ohio, and flows into the Ohio River. Sustained flow of the Mad River originates from groundwater discharge of glacial deposits upstream of Huffman Dam. The Mad River approaches WPAFB from the north and flows along the western border of Area A. The OEPA has divided the Mad River watershed into five areas, the last being the lower Mad River segment from Mud Creek to the Great Miami River. Mud Creek enters the Mad River 2,000 feet north of the state Route 235 bridge, near the northwest corner of Area A. The Base lies adjacent to the northernmost portion of the lower Mad River segment that continues to the south and southwest across Springfield Street from the northern boundary of Area B.

The OEPA has identified the lower segment of the Mad River that flows through and along WPAFB as an impaired water under Section 303(d) of the CWA for not meeting aquatic life and recreation use standards (OEPA, 2010). The USEPA has established in the Mad River Total Maximum Daily Load (TMDL) for Sediment and Turbidity (USEPA, 2010) for effluent discharged to this Mad River segment. A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and allocates pollutant loadings among point and nonpoint pollutant sources. The TMDL for the Mad River watershed has been set at 120 percent of natural sediment loading. According to the report, the natural sediment loading in the basin is approximately 894 tons/square mile/year based on an annual average.

There are 20 defined drainage or "Outfall Areas" and 23 NPDES discharge monitoring points on Base that are addressed under the NPDES permit (WPAFB, 2021a). All storm water from

WPAFB flows into the Mad River. Surface water in the WPAFB area includes the Mad River, Trout Creek, Hebble Creek, Twin Lakes, Gravel Lake, and wetland areas. These surface water features are recharged by both precipitation and groundwater. Trout Creek and Hebble Creek provide drainage of surface water runoff at WPAFB.

The surface water features within Area B consist of man-made ditches and ponds and concrete-lined channels. Storm drainage exits Area B by several paths through a combination of surface drainage and storm drains that ultimately drain to the Mad River. Storm water at the existing Gate 22B is designed to flow from the roadway into swales or just off the side of the roadway. The gate does not have any curbs or collection infrastructure. (WPAFB, 2023b) An extensive storm water conveyance system drains the Wright Field runways and NMUSAF grounds to the west (WPAFB, 2022 d; WPAFB,2023b).

The WPAFB Storm Water Management Plan (SWMP) and the Storm Water Pollution Prevention Plan (SWPPP) (prepared to comply with the CWA and the Ohio Water Pollution Control Act) provides descriptions of storm drainage areas and their associated outfalls, potential storm water pollution sources, and material management approaches to reduce potential storm water contamination (WPAFB, 2021a). The SWMP covers all areas and non-industrial activities within the limits of WPAFB and was last updated in July 2021. Storm water protection for industrial activities is covered in the SWPPP, updated in September 2021 (WPAFB, 2021c).

The SWMP addresses the specific storm water management requirements of municipal NPDES General Permit No. OHQ000003 (WPAFB, 2021a), while the SWPPP addresses the requirements of the industrial NPDES Permit No. IO00001 (WPAFB, 2021c). The current version of this permit is IO00001*GB (the two-letter suffix changes with each renewal of the permit).

The SWPPP and SWMP provide specific best management practices (BMPs) to prevent surface water contamination from activities such as construction, storing and transferring of fuels, storage of coal, storage and use of lubrication oils and maintenance fluids, solid and hazardous waste management, and use of deicing chemicals. Implementation of the following BMPs reduce the likelihood of pollutants entering the WPAFB storm system from construction activities: silt fences, sediment basins, rock check dams, temporary seeding, storm drain inlet protection, and dust control.

Storm water drainage in developed portions of Area B is generally collected in storm sewers and conveyed to NPDES Outfalls 001 – 005. All three Proposed Action sites fall within drainage area 1, discharging to Outfall 001. Storm water quality is periodically monitored by sampling and analysis at outfalls designated in WPAFB's SWMP. Storm water drainage in less developed areas may drain as overland sheet flow to low points that allow infiltration and/or function as wetlands, such as Wetland B1 east of the proposed new Gate 22B.

Wetlands located in the proposed project area are shown in Figure 3-3. Wetland delineations were completed at WPAFB in 1994, 1999, and 2004 (WPAFB, 2022f). The 2009 Update to the WPAFB Wetland Management Plan (WPAFB, 2010) included the results of the 2009 delineation of wetlands within the installation (WPAFB, 2022f). Seventeen wetlands are located in Area B at WPAFB. All wetlands in Area B are located in developed areas. The wetlands exist in proximity to a high level of human activity, and several are components of storm water management. Four of the wetlands, located in the Area B Improvements area, formed on a slope east of Area B's inactive airfield. Underground drainage features or seeps may have led to the formation of these four small wetlands. The wetlands in the vicinity of the project area are of generally low quality due to their proximity to human activities. The nearest wetland consists of a 0.99-acre isolated wetland located just east of the proposed New Gate 22B site (referred to as wetland B1) (WPAFB, 2022f).

A large portion of WPAFB and most of Area A lies within the Mad River floodplain. The 100-year floodplain is at 813.4 feet AMSL (North American Vertical Datum 1988). Area B is classified as Zone X by FEMA, an area that is outside the 500-year floodplain with less than a 0.2 percent chance of an annual flood.

Land upstream of the Huffman Dam is potentially subject to impoundment in the Huffman Retarding Basin (HRB) at elevations below 830 feet mean sea level (MSL) and are subject to MCD jurisdiction below 835 feet MSL.

3.8.2 Environmental Consequences

Evaluation criteria for impacts on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. Impacts would be adverse if proposed activities result in one or more of the following:

- Reduces water availability or supply to existing users
- Overdrafts groundwater basins
- Exceeds safe annual yield of water supply sources
- Affects water quality adversely
- Endangers public health by creating or worsening health hazard conditions
- Threatens or damages unique hydrologic characteristics
- Violates established laws or regulations adopted to protect water resources

As shown on Figure 3-4, the proposed Area B Improvements are well within Area B, outside the HRB boundary and above the FEMA 100-year floodplain of 813.4 feet AMSL. The Gate 22B replacement site is generally located above (outside) the MCD jurisdiction for the HRB of 835-foot MSL and the 830-foot MSL elevation requiring MCD approval. Portions of the associated Gate 22B road improvements, and all of the New NMUSAF Café and FEMA Emergency Staging Area are below (within) the 835 and 830 MSL contours, but are southwest/downstream of the

Huffman Dam flood impoundment and are therefore not impacting the HRB nor require MCD approval. These conclusions were confirmed in consultation with the MCD as part of the IICEP process, submitted February 25, 2025, with MCD concurrence received February 27, 2023 (Appendix A).

3.8.2.1 Gate 22B – New Gate/Road Realignment

Although the new Gate 22B, entry road realignment and road improvements to the north will replace existing Gate 22B facilities and roads, the increase in inspection lanes, canopy and gatehouse, new CVI facility, overwatch tower, and connecting roads would result in a net increase in impervious surface requiring storm water collection, detention and treatment. The new roadway would be curbed with storm water collected in curb inlets and conveyed via underground pipes. Given the increase in impervious area, the storm water would be treated for both quantity and quality to meet post-construction runoff control requirements of the WPAFB SWMP and to meet EISA Section 438 standards using several potential LID techniques, as selected by the construction contractor. Depending on specific locations, the new storm sewers would connect to existing WPAFB storm sewer conveyance systems discharging to NPDES Outfall 001 west of Wright Field, or to local drainage discharging to the existing wooded area south of Loop Road and east of Gate 22B. With revegetation following demolition of existing gate/roadway and some storm water infiltration resulting from LID techniques, any net decrease in groundwater recharge would be insignificant.

In addition, the AFFF Area 1 PFAS Groundwater Facility is located downgradient of the new Gate 22B inspection lanes. This treatment system is already past capacity during approximately half of the rain events that occur. If the increased surface water flow is routed to the drainages being treated, the system would be over capacity, resulting in the overflow of untreated water. A potential solution would be to design a solution capturing runoff from the gate area, the new connector road to 13th Street, and additional lanes along 13th Street, and routing to the drainage ditch adjacent to Loop Road West and the culvert adjacent to 13th Street as needed to accommodate the additional flow and prevent significant impacts.

A significant amount of excavation and embankment placement would be needed to construct the proposed New Gate 22B and Road Realignment, so earth disturbance during construction would exceed 1.0 acre, requiring preparation of a Construction SWPPP and obtaining coverage under the OEPA Construction General Permit (CGP). The SWPPP would detail site-specific erosion prevention and sediment control measures to be implemented, inspected, and maintained during construction. The SWPPP and CGP would include any newly created construction parking and laydown space, if nearby existing paved areas would not be available for use during the temporary construction period. Newly created temporary construction laydown and parking areas would be removed and revegetated at the conclusion of construction or included in the overall permanent New Gate 22B storm water management system design. BMPs included in the SWPPP (e.g., erosion control fence, haybales, inlet sediment filter

protection, rock check dams, temporary seeding, storm drain inlet protection, and sediment basins) should prevent significant impacts to storm water quality during construction.

Although Wetland B1 is not located within the Gate 22B project site, adverse impacts are possible because it is in the vicinity of the site and there is a potential for surface water runoff. The BMPs described above would be selected and implemented to prevent sediment-laden runoff from entering Wetland B1 east of the new roadway connecting New Gate 22B to the existing Skyline Drive to the north. These measures would be expected to mitigate these effects and result in no significant impacts to the Wetland B1.

At the conclusion of New Gate 22B construction, demolition of existing Gate 22B and associated entry roads would begin. Gate demolition and road removal would be included in the Construction SWPPP and CGP developed for the project. At the conclusion of demolition and removal, all disturbed surfaces would be revegetated.

An early Public Notice of a proposed action adjacent to Wetland B1 will be posted in the *Dayton Daily News* and *Fairborn Daily Herald/Xenia Gazette* on December 26, 2025 through January 25, 2026 (Section 1.3.3 of this EA). In addition, a Finding of No Practicable Alternative (FONPA) will be published as part of the Finding of No Significant Impact (FONSI) and EA .

The proposed new Gate 22B and associated road realignments are located on or near EFDZ 4, 7, 9, and 10, and Burial Sites (BS) 3 and 6, characterized as part of the Remedial Investigation of Operable Unit 9 (IT Corporation, 1997). An OEPA Rule 513 approval would be required for any construction or demolition/removal work (ground disturbance) on or within 300 feet of these areas, as described in Section 3.11.2.1.

3.8.2.2 New NMUSAF Café

Although a small footprint (7,218 GSF), the proposed New NMUSAF Café would exceed the 5,000 GSF threshold requiring no change to pre-construction runoff under EISA Section 438. LID control techniques would be implemented to collect and retain new Café roof and site drainage before entering the existing NMUSAF storm water drainage system. The NMUSAF has tentatively programmed a new 1,700 cubic foot swale or bioretention facility across the existing exterior driveway from the New Café to meet this requirement. No reduction in groundwater recharge would result.

Total earth disturbance during construction should be less than the 1-acre trigger requiring an OEPA CGP if new construction laydown and parking is minimized. The selected construction contractor would work with WPAFB and NMUSAF to identify existing paved construction laydown and parking areas that could potentially be used.

The proposed New NMUSAF Café site is not close enough to any Area B ERP sites to trigger an OEPA Rule 513 requirement.

3.8.2.3 Emergency Staging Area for FEMA Trailers

The proposed use of the existing Wright Field Runway 09/27 as an emergency staging area for FEMA trailers during annual training exercises or an actual emergency event is not anticipated to involve new construction of impervious surfaces, so would generate no permanent increase in storm water runoff. During annual training or an actual emergency event, many heavy vehicles, privately owned vehicles (POVs) and construction trailers would traverse the site. While the intent would be to operate as much as possible on existing paved runway surfaces, many vehicles would necessarily operate on grassed areas, creating potential to introduce significant sources of sediment into existing Wright Field storm water drainage and downstream receiving water (such as Mad River, which is already water-quality limited for total suspended solids). BMPs such as inlet protection measures for structural drainage inlets and hay bales or erosion control fence for surface swales would be installed to minimize sediment loading in runoff.

ERP site BS 5 is located on the south side of the runways, just east of the Spinning Gate access point. Though no construction is planned, WPAFB would coordinate with OEPA to determine whether any protective measures were required to prevent surface damage from traffic and potential spread of subsurface contaminants.

3.8.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.8.1 would remain the same. There would be no soil disturbance or new impervious surfaces generating storm water runoff. Therefore, there would be no short- or long-term impacts because there would be no change to existing storm water over baseline conditions. These projects would have short-term, limited, foreseeable adverse impacts on groundwater and surface water resources due to potential runoff from construction and FEMA operations. For each site, impacts from runoff would be minimized by using BMPs. Once completed, however, reasonably foreseeable increases in impervious surfaces from these foreseeable projects would be considered a small contribution in the context of the whole watershed.

3.8.3 Reasonably Foreseeable Effects

Although storm water drainage from the Proposed Action sites and potential foreseeable projects in Area B, all ultimately discharge to the water quality limited (for total suspended solids) Mad River, the Proposed Action sites are located in different drainage areas from the other foreseeable projects in Area B (except the AFTC [F/20004] Modernization and Addition), limiting potential impacts. The greatest potential foreseeable impacts to water resources would be from concurrent storm water discharges during construction of the New Gate 22B, New NMUSAF Café and the AFTC project, with operation of the FEMA emergency trailer staging area. For each site, impacts from runoff would be minimized by using BMPs. Once completed,

reasonably foreseeable increases in impervious surfaces from these projects would be considered negligible in the context of the whole watershed.

3.9 Earth Resources

Geological resources consist of the earth's surface and subsurface materials. Topography pertains to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features.

Geology is the study of the earth's composition and provides information on the structure and configuration of surface and subsurface features. Hydrogeology extends the study of the subsurface to water-bearing structures. Hydrogeological information helps in the assessment of groundwater quality and quantity and its movement.

Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses.

3.9.1 Affected Environment

The affected earth resources environment includes topography and geology, natural subsurface hazards, and soils.

3.9.1.1 Topography and Geology

The majority of the Base is on the broad alluvial plain of the Mad River Valley that overlies Ordovician-age Richmond shale and limestone bedrock. The land surface elevation on Base ranges from approximately 760 to 980 feet AMSL (WPAFB, 2022f).

The Base is within the glaciated till plain region of southwestern Ohio, an area within the Central Lowlands Physiographic Province. The Central Lowlands province is characterized by low rolling hills, level plains, and flat alluvial valleys.

Topography on Wright Field is relatively flat having been extensively graded, initially for use as an active airfield, and more recently for the NMUSAF. Further east, topography in the vicinity of the existing and new Gate 22B and road reconfiguration is much more varied, rising from around 850 feet AMSL to near 900 feet AMSL. In the vicinity of the proposed New NMUSAF Café elevations are in the 788 – 790 feet AMSL range. Elevations across the proposed FEMA trailer staging area ranges from about 784 feet AMSL in the west to about 820 feet AMSL in the east.

3.9.1.2 Natural Hazards

The state of Ohio is characterized by a low level of seismic activity (ODNR, 2010). The Dayton, Ohio, area does not typically experience earthquakes because of its location in relation to fault zones (Hansen, 2015). Auglaize and Shelby counties, located in northwest Ohio (approximately

45 miles from Greene County), had a series of historic earthquakes in the late 1800s to mid-1900s, with the greatest instrumented magnitude recorded between 5.0 and 5.4 (Hansen 2015). On July 23, 2010, a 5.0 magnitude earthquake originating along the Quebec-Ontario border was felt in Dayton and surrounding areas.

3.9.1.3 Soils

Surface soil at WPAFB formed on unconsolidated deposits, primarily alluvium, glacial outwash, glacial till, and loess (WPAFB, 2022f). Development and substantial earthmoving activities have altered the natural soil characteristics at WPAFB, making precise classifications difficult. The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) has mapped most of WPAFB as urban land complexes.

Forty soil mapping units exist on WPAFB. Warsaw-Fill land complex is the most common soil unit on Base and occurs on 1,326 acres. This soil is found in the northeast portions of the Base. The second most common soil occurring on the Base is the Sloan-Fill land complex. This soil is found in the northern portions of the Base and covers approximately 1,232 acres. Approximately one-half of the soils on Base have a moderate to high potential for erosion. The potential for erosion varies with topographic conditions and includes both disturbed urban land complex soils and natural loams. Bare soil leads to erosion, creation of gullies and rills, and increased sediment load in streams. Erosion can render land unsuitable for training and impassable by vehicles. Sediment in streams may affect water flow and the survival of aquatic organisms.

The proposed new Gate 22B and associated road realignments are located on or near EFDZ 4, 7, 9, and 10, and BS 3 and 6, characterized as part of the Remedial Investigation of Operable Unit 9 (IT Corporation, 1997). Soil at the proposed new Gate 22B and associated road realignments was identified as predominantly Miamian-Urban Land complex, rolling (MrC) described as brown to yellowish-brown silt and clay loam, 0 to 60 inches thick, at 6-12% slope and moderately low permeability, well drained and highly erodible (IT Corporation, 1997). This soil type is not considered to be prime farmland soil by the NRCS (NRCS, 2025).

The proposed sites of the new NMUSAF Café and the Emergency Staging Area for FEMA Trailers are both part of the Wright Field Historic District, originally constructed and operated as an active airfield, with extensive alteration (excavation, preparation, grading and construction). The proposed new NMUSAF Café site is between existing NMUSAF buildings and not near identified environmental restoration sites. The FEMA staging area is predominantly on existing, inactive Wright Field runway. BS 5 is located just south of the existing runway, but no new excavation or construction is planned as part of the FEMA emergency staging activities. The predominant soil type at the NMUSAF Café and Emergency Staging Area for FEMA locations is identified as Fox-Urban land complex, described as well-drained loam, clay loam and gravelly clay loam from 0 to 38 inches over another 40 inches of stratified very gravelly coarse sand to sand, with 2 to 6 percent slopes. This soil type is also not considered to be prime farmland soil by the NRCS (NRCS, 2025).

3.9.2 Environmental Consequences

Protection of unique geological features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards are considered when evaluating potential impacts of a proposed action on geological resources. Impacts can be avoided or minimized if proper construction techniques, erosion control measures, and structural engineering design are incorporated into project development.

Effects on geology and soils would be adverse if the action alters the lithology, stratigraphy, and geological structure that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability; or change the soil composition, structure, or function within the environment.

3.9.2.1 Gate 22B – New Gate/Road Realignment

Construction of the new Gate 22B and associated road realignments/upgrades will require a significant amount of excavation and embankment (WPAFB, 2023b). The selected engineering design and construction contractor would be charged with selecting and implementing appropriate engineering measures and BMPs to stabilize slopes in these areas and to prevent erosion and sediment control during and after construction. There is an elevated grade on Loop Road West that would need to be addressed in the design. Otherwise, the proposed site does not present any known unique geological features or hazards that would require special engineering or construction measures. Proximity to multiple EFDZ and BS may require environmental precautions during construction in coordination with the USEPA and OEPA (see Section 3.11).

In the short term, construction vehicles would disturb the surface and create the potential for soil erosion and sedimentation. Limited, short-term impacts would be minimized by implementing BMPs to control erosion and sedimentation. There would be no long-term adverse impacts because disturbed vegetation would be re-established upon completion of construction activities. Differences between the new and existing ECP footprint (to be removed following construction) and roadway design may result in an increase in impervious area.

3.9.2.2 New NMUSAF Café

The potential for impacts to soils or geological features from construction of the new NMUSAF Café is very limited due to the small footprint of the proposed new addition, the limited area for soil disturbance between existing NMUSAF buildings, and the generally flat terrain. Erosion and sediment control BMPs would minimize impact to site soils and existing drainage. Additional limited, temporary soil disturbance could occur if new construction/installation laydown and parking is required, rather than use of existing paved areas.

3.9.2.3 Emergency Staging Area for FEMA Trailers

No new excavation or construction is proposed to support use of the inactive Wright Field runways as emergency staging areas for FEMA trailer, and the site is effectively flat. Erosion and sediment controls would be utilized in the vicinity of existing stormwater drainage inlets and

swales to prevent soils from entering runoff from vehicles travelling off the paved runways. Any soil disturbance would be revegetated following FEMA demobilization from the site.

3.9.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Action, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.9.1 would remain the same. There would be no soil alteration or disturbance of soil or vegetation from construction, excavation, grading, or fill activities. Therefore, there would be no short- or long-term impacts because there would be no change to existing soils over baseline conditions.

3.9.3 Reasonably Foreseeably Effects

Construction and operating activities associated with the Proposed Actions, combined with foreseeable actions related to the MILCON and demolition projects listed in Table 3-1, would result in temporary disturbed ground surfaces and short-term adverse impacts on earth resources. Although soils would be disturbed by earthmoving and other construction activities, any effects would not be expected outside individual project boundaries and/or result in significant impacts on earth resources because BMPs, erosion and sediment controls and other management measures would be implemented. Foreseeable long-term impacts to soils would be unlikely because disturbed surfaces at each site would either be paved or restored with vegetative cover.

3.10 Infrastructure/Utilities

Infrastructure consists of the systems and physical structures that enable a population in a specified area to function. Infrastructure is wholly human-made, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as “urban” or developed. The availability of infrastructure and its capacity to support growth are generally regarded as essential to economic growth of an area.

The infrastructure components to be discussed in this section include utilities (electrical power, natural gas, steam, and water supply), sanitary sewer, storm sewer, communications, and transportation.

3.10.1 Affected Environment

WPAFB has existing infrastructure to provide utility services and roadways that form a transportation network throughout most of the Base. Infrastructure exists in the immediate vicinity of each of the Proposed Action sites in Area B. A brief overview of each infrastructure/utilities component and comments on its existing general condition are provided.

3.10.1.1 Electrical Power

Dayton Power & Light provides WPAFB with electrical power. The electrical distribution system is owned by Applied Energy Services (also known as AES) – Ohio since February 2011. AES is a public company that assumes full responsibility for operations, maintenance, and

improvements to the electrical system at WPAFB. The Base receives power via two substations that is delivered by primary electrical lines on Base. The 12.47 kilovolt electrical distribution system on Base is mostly underground and is designed to meet the needs of a much larger base population so the current demands of service are within the system's capacity. The overall condition of the system is adequate in providing the power to the current Base population.

3.10.1.2 Water Supply

The water supply and distribution system at WPAFB consists of water collection, treatment, storage, and distribution systems servicing Areas A and B. WPAFB is located over a large aquifer, the Miami Valley Buried Aquifer in the Mad River Valley, where several well fields supply the base water. Four wells supply Area B with its drinking water, pumping at 1,200 – 2,000 gpm. The water supply system for Area B has the capacity to extract and treat 9.36 million gallons per day, while the average demand for this area is 1.25 million gallons per day.

The water system has been privatized on Base for operation and maintenance by American Water Operations and Maintenance, Inc. The water system contains approximately 100 miles of pipe, over 750 hydrants, 14 storage tanks, and several wells and pump stations. There are some concerns with the condition of the pipe distribution lines throughout the base due to age and potential condition of the pipes. Most of the water distribution system pipes were installed in the 1940s. The material of the pipe varies depending on when they were installed or replaced, using materials such as cast iron, ductile iron, polyvinyl chloride, asbestos cement, copper, etc.

3.10.1.3 Sanitary Sewer

The sanitary sewer collection system at WPAFB was also privatized on Base to American Water Operations and Maintenance, Inc. The wastewater produced on the north side of Patterson Field in Area A is discharged to the Fairborn treatment plant, northwest of the Base. The wastewater produced on the remainder of Patterson Field, Wright Field, and Page Manor (Area B) is served by the city of Dayton treatment system. The wastewater system contains over 50 miles of pipe, 27 lift stations, and over 1,000 manholes. The existing system is designed to accommodate a Base population approximately 50% larger. Most of the initial wastewater systems on base were installed the 1940s, and new lines were added in the 1990s for newer facilities.

3.10.1.4 Storm Water System

The storm water conveyance system consists of 250,000 linear feet of sewer pipe, 45,000 linear feet of open ditches and streams, nine ponds and retention basins, and 2,500 catch basins. All storm water flows to the Mad River. Although Huffman Dam/Mad River is considered an impaired waterway, this does not affect WPAFB's current ability to discharge based on its NPDES permit limits and historical monitoring results.

3.10.1.5 Heating and Cooling using Natural Gas

Within the past six years, the Base has converted entirely to natural gas for installation-wide heating and cooling purposes. The installation gets 80 percent of its annual heating

requirements from two centralized heating plants that centralizes heat distribution as steam throughout the Base. Each heating plant feeds a common distribution system for its portion of the Base.

Four small satellite heating sites serve small or remote installation areas constituting four percent of the Base heating requirements. The remaining 16 percent of the Base uses gas-fired unique heating generation. The natural gas system on Base has been privatized with conveyance/transfer for operation and maintenance by Vectren Natural Gas Company. Over the past 20 to 30 years, significant improvement projects have been completed to replace natural gas piping at WPAFB. The supply system is mostly polyethylene pipe and tracer wire, while some areas have cast iron pipe.

3.10.1.6 Communications

AT&T and other providers run a fiber and copper line to Area B from the outside of the installation along Colonel Glenn Highway by Gate 22B, which has a current fiber line connection. The cabling is routed through concrete encased conduit about four to five feet underground. The communications system at WPAFB consists of telephone, local computer systems, long-haul communications, and land mobile radio systems. The Base's communications and information utility infrastructure is in good condition and there are improvements planned that would enable it to meet known future communication requirements.

3.10.1.7 Transportation System

State highways provide direct access to WPAFB. State Route 844 provides a route from the Base to Interstate 675 (I-675), which is located east of the Base. Interstate 675 provides direct access to I-70, which is approximately 9 miles to the north; U.S. 35 is approximately 5 miles to the south; and I-75 is approximately 15 miles to the southwest. State Route 235 provides access from the Base to State Route 4 and I-70. Traffic enters Area B from Springfield Street (Gate 1B), National Road (Gate 19B), and I-675 (Gate 22B). Gate 1B was closed in 2021 and is not currently in use.

Additional information on existing traffic conditions in the vicinity of Gate 22B is provided in Appendix D.

3.10.2 Environmental Consequences

Potential infrastructure/utilities needs and potential impacts are described for each Proposed Action component based on the Gate 22B PCR (WPAFB, 2023b) and the NMUSAF Master Plan Report (WPAFB, 2022d).

3.10.2.1 Gate 22B – New Gate/Road Realignment

Construction and operation of the new Gate 22B and associated road realignments/improvements would not have a significant impact on existing utility systems. The new Gate 22B and roadway footprint will be a relocation of the existing, requiring extension and/or relocation of associated utilities (electrical, water, sanitary sewer, storm sewer and communications; natural

gas is not used). Staffing of the new ECP would increase slightly with additional entry lanes and the new CVI facility, but would result in slight increases in water and sanitary sewer demand. Electrical load would increase slightly but may be offset by efficiencies in new equipment.

If funding is secured to proceed with the new Gate 22B design, additional studies will be conducted and plans prepared to evaluate whether the Proposed Action construction and operation would have significant impacts on the public roadways including I-675, Colonel Glenn Highway, and their associated road network. Potential impacts to the public roadway network fall under the jurisdiction of the Greene County Engineer's Office and for I-675, the Ohio Department of Transportation. During construction of the new Gate 22B and associated roadways, the existing Gate 22B may be shut down for a period of time, significantly re-routing traffic trying to enter WPAFB via other gates, or use of the existing gate may be partially shut down while construction proceeds, potentially impacting traffic flow onto the Base and impacting level-of-service (LOS) on area roadways. A construction phase traffic plan would be prepared and coordinated with Greene County and ODOT to maintain acceptable LOS during the construction period. An operational traffic study would also need to be prepared for coordination with Greene County and ODOT to examine existing LOS and evaluate potential impacts to future LOS. Although the new Gate 22B and roadway realignment would be expected to improve LOS, additional traffic generated by commercial vehicles (trucks) through the new CVI facility may offset those improvements during peak traffic hours.

3.10.2.2 New NMUSAF Café

Construction and operation of the new NMUSAF Café would not have a significant impact on existing Area B utility systems. The new Café would be located between existing NMUSAF buildings and would require extension of existing utility systems (electrical, water, sanitary sewer, natural gas, communications) into the new addition. Upon completion the existing café would be shut down, effectively transferring existing utility demand, with a slight expansion, to the new Café. Existing storm sewer serves the new NMUSAF Café site area, and a new swale or bioretention facility would be installed across the existing driveway from the new Café site. Use of the new Café would be expected to help retain NMUSAF visitors on-site rather than generate new visitors, so no impacts on traffic would be anticipated. Availability of the new Café facilities would be expected to generate new event demand that would increase traffic, but typically not during peak traffic hours.

3.10.2.3 Emergency Staging Area for FEMA Trailers

Implementation of the Emergency Staging Area for FEMA Trailers would be expected to have limited impacts to Area B utility infrastructure. During an actual FEMA emergency response and during annual FEMA training exercises, electricity would be required to power FEMA office trailers, FEMA supply trailers requiring refrigeration or climate control, and for area lighting. The proposed FEMA staging area does contain underground electrical service and two ground-level transformers, but temporary connections would be required to supply temporary construction-type power. Alternatively, power could be provided by portable generators. No water or sanitary sewer infrastructure exists in the proposed FEMA staging area. Temporary portable water

supply and sanitary facilities would have to be provided and serviced daily over the course of the emergency response event or training exercise. Natural gas service would not be required. Underground communications service is available in the FEMA staging area, but new connections would be required if necessary.

During an actual FEMA emergency response or an annual FEMA training exercise, a large undefined number of vehicles (generally tractor trailers, smaller commercial delivery vehicles or military vehicles) would access WPAFB to deliver supplies, distribute supplies, and to staff the response action or training exercise. Over the course of an operating day, this flow of traffic into and off the Base would presumably flow semi-continuously and require defined flow patterns onto and off the Base to maintain smooth operation and to minimize potential impacts to local roadways. This flow pattern and associated queues would also have to accommodate some level of security. To minimize potential impacts to routine traffic through Gate 22B, the Proposed Action includes access to the proposed FEMA staging area via the Spinning Road Secondary Gate off Airway Road/Colonel Glenn Highway. This additional traffic has the potential to impact Airway Road/Colonel Glenn Highway traffic, the residential community across from the Spinning Gate, and access onto and off of I-675.

Based on the temporary use of this access point during emergency scenarios, roadway (Spinning Road Secondary Gate off Airway Road/Colonel Glenn Highway) improvements are not proposed. Should a large number of vehicles need to queue as they enter the facility, one or two of the lanes of the 4-lane roadway could be temporarily shut down by the supporting agencies. This would allow local traffic to continue to flow through the area while FEMA access is provided into the facility. It is assumed that the existing bridge off Airway Road is adequate for anticipated emergency traffic entering the facility.

FEMA will be responsible for coordinating logistics, including lane closures and safety signage, with local law enforcement and/or base security for traffic management. The ingress and egress of trailers would occur over a relatively short period of time (usually not more than two weeks) and would be mitigated with signage, cones and law enforcement presence as warranted.

The trailers come fully loaded. No products would be deposited at the site. Trailers would be temporarily dropped off and left intact and sealed, to be picked up by commercial drivers that would take the trailers to their next destination. The commercial drivers depart with their rigs so the majority of what is parked would be the trailers awaiting further movement. A shuttle fleet (approximately 10 – 20 rigs) is maintained in the event they need to reposition trailers or to execute shorter movements from WPAFB to state staging areas or points of distribution located elsewhere. While traffic congestion could occur, it would be mitigated by working with local law enforcement to ensure it is conducted safely.

When a decision is made to conduct a FEMA emergency response, traffic control and security would be coordinated between FEMA, WPAFB, Montgomery County and Greene County to mitigate potential impacts and incorporate supplemental local traffic control.

3.10.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Action, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.10.1 would remain the same. There would be no potential impacts to utilities or transportation infrastructure from construction or operation of the proposed activities. In the case of Gate 22B, existing traffic conditions would likely continue to degrade anticipated WPAFB growth occurs. Therefore, there would be no short- or long-term impacts because there would be no change to utilities and transportation infrastructure over baseline conditions.

3.10.3 Reasonably Foreseeable Effects

Construction and operating activities associated with the Proposed Actions, combined with foreseeable actions related to the other MILCON projects in Area B (Table 3-1) would have no short- or long-term impacts on the utilities systems at WPAFB because the Proposed Actions would result in minimal additional use of utility resources. The proposed New Gate 22B and New NMUSAF Café would result in minimal new/additional permanent personnel but impacts during construction of Gate 22B and from FEMA emergency trailer staging could contribute to foreseeable traffic impacts from other projects.

Foreseeable traffic impacts would be expected from development of the EUL Hilltop and Gerlaugh Farm parcels depending on their actual timing and concurrency with proposed Gate 22B implementation and with FEMA staging training or actions. Foreseeable impacts could also result from the proposed Intelligence Complex expansion in Area A that would increase traffic on National Road if Gate 22B is closed during new construction and the Hilltop EUL construction was concurrent. A recent traffic study conducted for another project (the proposed Hilltop EUL mixed-use development) determined that existing LOS ratings at the National Road and Gate 19B/Reese Road intersection operate at LOS E in the morning peak and LOS D in the afternoon peak, with several specific lane movements operating at LOS F. (Traffic models calculate and rate intersection LOS from best [Level A] to worst [Level F] delays.) The study recommended modifications to the intersection to be undertaken as a regional effort between WPAFB, Greene County and the Ohio Department of Transportation.

Limited potential for short-term adverse traffic impacts due to additional Area B construction traffic could occur from other concurrent projects, including the Human Performance Wing Laboratory, the AFIT Research Laboratory, the proposed EUL mixed-use development at the Hilltop and Gerlaugh Farm parcels, the AMRL, the AMC and the F/20004 renovation and addition. Since all truck traffic, including construction equipment and construction supply deliveries, must enter Gate 26A in Area A for inspection before accessing an Area B gate, adverse foreseeable impacts could result at Gate 26A, though depending on actual construction project implementation schedules, those impacts could be partially alleviated with opening of the new truck inspection lane at the renovated Gate 22B. WPAFB would need to monitor traffic congestion at Gate 26A, Area B gates and local on-base roadways and anticipate potentially necessary temporary mitigation such as direction of specific construction contractor personnel and equipment to specific gates and times to distribute traffic impacts.

3.11 Hazardous Materials/Waste

The terms, “hazardous material”, “hazardous waste”, and “hazardous substances” have specific legal definitions. DAFMAN 32-7002, *Environmental Compliance and Pollution Prevention*, defines “hazardous material” as all items covered under the Emergency Planning and Community Right-to-Know Act (42 USC 1101 *et seq.*) or other applicable federal, state, or local tracking or reporting requirements; covered under 29 CFR 1910.1200 or 29 CFR 1450; and Class I or Class II ozone depleting substances as defined by 40 CFR 82. “Hazardous materials” are defined under U.S. Department of Transportation (DOT) regulations 40 CFR 100 through 199 as chemicals determined to present risks to safety, health, and property during transportation. The DOT regulations include requirements for shipping papers, package marking, labeling, transport vehicle placarding, and training of personnel handling hazardous materials.

“Hazardous waste” is defined and regulated by the Resource Conservation and Recovery Act (RCRA), which provides (42 USC 6903(5)):

“The term ‘hazardous waste’ means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may: cause, or significantly contribute to an increase in mortality, or an increase in serious irreversible or incapacitating irreversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

USEPA’s regulatory definition of hazardous waste under RCRA is at 40 CFR 261.3. RCRA considers a waste hazardous if it meets certain levels of reactivity, ignitability, corrosivity, or toxicity, or is otherwise listed as a hazardous waste in 40 CFR Part 261. In general, RCRA addresses day-to-day management of these wastes.

The Comprehensive Environmental, Response, Compensation, and Liability Act (CERCLA) defines “hazardous substance” by reference to substances listed or designated under other laws and any element, compound, mixture, solution, or substance designated pursuant to CERCLA Section 102. A complete list of hazardous substances designated pursuant to CERCLA Section 102 with reportable quantities is provided in 40 CFR § 302.4. A hazardous substance not on this list may be considered hazardous according to its ignitability, corrosivity, reactivity, or toxicity as defined by 40 CFR § 261.20-261.24.

Evaluation of hazardous materials and wastes includes underground storage tanks and aboveground storage tanks (ASTs) and the storage, transport, and use of pesticides and herbicides, fuels, and petroleum, oil, and lubricants. Evaluation might also extend to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action. In addition to being a threat to humans, the improper release of hazardous materials and wastes can threaten the health and well-being of wildlife species, botanical habitats, soil systems, and water resources. In the event of release of

hazardous materials or wastes, the extent of contamination varies based on type of soil, topography, and water resources.

Special hazards are those substances that might pose a risk to human health but are not regulated as contaminants as described above. Included in this category are asbestos-containing material (ACM), radon, lead-based paint (LBP), polychlorinated biphenyls, and unexploded ordnance. The presence of special hazards or controls over them might affect, or be affected by, a proposed action. Information on special hazards describing their locations, quantities, and condition assists in determining the significance of a proposed action.

The Toxic Substances Control Act of 1976 provides USEPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. In general, both hazardous materials and wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health or welfare or the environment when released or otherwise improperly managed.

Through its Installation Restoration Program (IRP), the DoD identifies, evaluates, and where appropriate, responds to releases or threats of a release of contamination into the environment from DoD activities or DoD facilities. The IRP provides a uniform, thorough methodology to evaluate past disposal sites, to control the migration of contaminants, to minimize potential hazards to human health and the environment, and to clean up contamination. Knowledge of past IRP activities provides a useful gauge of the condition of soils, water resources, and other resources that might be affected by contaminants. It also aids in identification of properties and their usefulness for given purposes (e.g., activities dependent on groundwater usage might be foreclosed where a groundwater contaminant plume remains to complete remediation).

In addition to implementing the federal RCRA program in Ohio, the OEPA, Division of Materials and Waste Management ensures solid waste, infectious waste, scrap tires, and c&dd are managed in accordance with applicable regulations. The Division of Materials and Waste Management contains a current listing of licensed facilities on its website (OEPA, 2025). Any construction or demolition projects that would occur at WPAFB would be handled by contractors bidding on projects that would select a licensed c&dd facility from the list and any c&dd would be disposed of at one of the facilities on the list. There are six licensed c&dd facilities in Greene and Montgomery Counties.

3.11.1 Affected Environment

The use, occurrence, management, and disposal of “hazardous material”, “hazardous waste”, and “hazardous substances” relevant to the Proposed Actions are described for WPAFB in general.

3.11.1.1 Hazardous Materials

DAFMAN 32-7002, *Environmental Compliance and Pollution Prevention*, establishes procedures and standards that govern management of hazardous materials throughout the DAF. It applies to all DAF personnel who authorize, procure, issue, use, or dispose of hazardous materials, and to those who manage, monitor, or track any of those activities. The Base utilizes a hazardous material management program, through which hazardous materials are controlled from procurement through storage and issue to disposal.

The Installation Management Division Environmental Branch supports and monitors environmental permits, hazardous material and hazardous waste storage, spill prevention and response, and participation on the Environmental Safety and Occupational Health Council. The Environmental Management System Cross Functional Team is a network of safety, environmental and logistics experts who work with hazardous material “Hazmat” Managers, Unit Environmental Coordinators (UECs), and other hazardous material users to ensure safe and compliant hazardous material management throughout the Base (WPAFB, 2024a).

3.11.1.2 Hazardous Waste

The 88th CEG maintains a Hazardous Waste Management Plan (HWMP) (WPAFB, 2024a) as directed by DAFMAN 32-7002, *Environmental Compliance and Pollution Prevention*. This plan prescribes the roles and responsibilities of all members of WPAFB with respect to the waste stream inventory, waste analysis plan, hazardous waste management procedures, training, emergency response, and pollution prevention. The plan establishes the procedures to comply with applicable federal, state, and local standards for solid waste and hazardous waste management. WPAFB is already classified as a large quantity generator and is responsible for stringent management and reporting requirements.

During construction, fueling activities would create the potential for minor spills and releases. The construction contractor would be required to comply with BMPs to reduce the potential for spills, and ensure quick cleanup. Management of hazardous waste is the responsibility of each waste-generating organization and the 88 CEG/Compliance Section of the Environmental Branch (CEIEC).

Environmental and safety procedures for compliant hazardous waste management are implemented by researchers, Hazmat Managers, and UECs as described above.

3.11.1.3 Stored Fuels

Stored fuels present a potential threat to the environment that is mitigated at WPAFB through the Spill Prevention, Control, and Countermeasures (SPCC) Plan. The WPAFB SPCC Plan describes practices used to minimize the potential for stored fuel spills, prevent spilled materials from migrating off the base, and ensure that the cause of any spill is corrected. The WPAFB Facility Response Plan describes emergency planning, notification, and spill response practices. The SPCC and Facility Response Plan have been combined into a single source document that is identified at WPAFB as the Integrated Contingency Plan (WPAFB, 2023a).

The Spill Prevention Coordinator (SPC) is the primary point of contact for the SPCC Program. The SPC works closely with Tank Managers, UECs, and WPAFB emergency response personnel to implement the SPCC Plan. Required SPCC training, standard operating procedures (SOPs), inspections, and record keeping are coordinated by the SPC.

Each organization, shop, or activity at WPAFB that handles or stores petroleum, oil, and lubricants, hazardous materials, or hazardous waste is required to have a Site-Specific Spill Plan (SSSP). These SSSPs are filed with the 88 CEG/Environmental CEIEC SPC. The WPAFB Fire Department is the first responder if spilled materials present a fire hazard, may reach a waterway, or present a situation beyond the capability of the spilling activity to control and clean up the spilled material.

3.11.1.4 Asbestos-Containing Materials

AFI 32-1001, *Civil Engineer Operations (2019) - Chapter 15 Facilities Asbestos Management*, provides the direction for asbestos management at DAF installations. AFI 32-1001 requires bases to develop an Asbestos Management Plan to maintain a permanent record of the status and condition of ACM in installation facilities, as well as documenting asbestos-management efforts. In Ohio, demolition and renovation projects must be conducted in accordance with OEPA regulations at OAC 3745-20 and be conducted by asbestos abatement contractors licensed and certified in accordance with OAC 3745-22.

As part of the New Gate 22B PCR, a hazardous materials survey (June 2023) was conducted to identify potential ACM, LBP and other potential hazardous materials requiring safety precautions during demolition or specific handling and disposal. All samples taken for ACM analysis were determined to be negative, but three areas still in use were assumed to contain ACM and will require confirmation prior to their removal (a HVAC damper, five fire doors, and roof mastic) (WPAFB, 2023b).

3.11.1.5 Lead-Based Paint

DAFMAN 32-7002 describes applicable laws, regulations, and requirements for LBP management at DAF facilities. The sampling event cited above did not include sampling or analyze for LBP but it is assumed that LBP is present (WPAFB, 2023b).

3.11.1.6 Environmental Restoration Program

The ERP has three program categories: IRP, Military Munitions Response Program (MMRP), and building demolition and debris removal. The Base began its IRP in 1981 with the investigation of possible locations of hazardous waste contamination. In 1988, WPAFB entered into an Ohio Consent Order with the OEPA. In October 1989, WPAFB was placed on the USEPA's National Priorities List. The Base identified 71 ERP legacy sites, 26 aqueous-film-forming foam sites, two regional groundwater sites, and several areas of concern and grouped the majority of confirmed or suspected sites requiring investigation and characterization in 11 geographically-based OUs, designated as OUs 1 through 11 (WPAFB, 2024b).

Multiple ERP sites have been identified on or in the vicinity of the proposed new Gate 22B site as part of OU9, including EFDZ 4, EFDZ 7, EFDZ 9, BS 3 and BS 6. The new gate construction would be on EFDZ 4 and EFDZ 7, and border EFDZ 9. New road construction and road improvements to the north would also be on or near EFDZ 2, EFDZ 3 and EFDZ 8. BS 3 and BS 6 are located just west of the existing entry road and Gate 22B, so could be affected by demolition and removal activities. BS 5 is located just south of the inactive runway on the FEMA Trailer Emergency Staging Area. The EFDZs were identified as ERP sites because of their potential for past disposal of hazardous chemicals or materials during or subsequent to fill placement from the 1940s through the 1960s. The Burial Sites were areas of confirmed historical disposal of hazardous chemicals or materials. Soil and groundwater monitoring conducted during site investigation/remedial investigation identified low levels of VOCs, SVOCs, volatile and semi-volatile tentatively identified compounds, pesticides and metals in soils and groundwater. Qualitative and semi-quantitative risk assessments for the various sites concluded that no removal actions were warranted, but on-going monitoring is conducted for specific contaminants (WPAFB, 1998).

3.11.1.7 Military Munitions Response Program

No military munitions or ordnance have been used, stored, disposed, or spilled within the Proposed Action sites, although there are three pistol ranges located just west across Skyline Drive. The closest location of a MMRP site is the Abandoned Ordnance and Skeet Range (TS896) in Area A, downgradient from the Proposed Action sites. A munitions storage facility is located more than two miles away in Area A.

The existing Area B runway (i.e., Runway 09/27) is sited for use and storage of explosives. Tests were performed there in the 2007 – 2010 timeframe without incident, resulting in no residual explosive concerns. The area remains sited for explosives but will not likely be used.

As a result, there would be no impacts due to MMRP sites at the Proposed Action sites.

3.11.2 Environmental Consequences

Impacts to hazardous material management would be considered adverse if the federal action resulted in noncompliance with applicable federal and state regulations, or increased the amounts generated or procured beyond current WPAFB waste management procedures and capacities.

Impacts on pollution prevention would be considered adverse if the federal action resulted in worker, resident, or visitor exposure to these materials, or if the action generated quantities of these materials beyond the capability of current management procedures. Impacts on the ERP would be considered adverse if the federal action disturbed (or created) contaminated sites resulting in negative effects on human health or the environment.

3.11.2.1 Gate 22B – New Gate/Road Realignment

Products containing hazardous materials would be procured and used during construction of the new Gate 22B facilities. It is anticipated that the quantity of products containing hazardous

materials used during these activities would be minimal and their use would be of short duration. No hazardous materials, other than those typically associated with construction projects, are expected as a result of the Proposed Action.

Construction of the new Gate 22B structures, roadways and parking areas would require the use of hazardous materials such as petroleum products, sealants, and paints. These materials are currently used at WPAFB. WPAFB would continue to manage the storage, use, and disposal of construction materials in accordance with current practices and management schemes. Materials would be stored in containers that meet federal, state, and local requirements. Secondary containment systems would be employed as necessary to prevent or limit accidental spills.

Contractors would be responsible for the management of hazardous materials, which would be handled in accordance with federal and state regulations. All original hazardous, toxic, recyclable, and otherwise regulated waste streams generated and identified by the Contractor would be managed through the Environmental Branch of Civil Engineering in accordance with the WPAFB HWMP (WPAFB, 2024a). Therefore, hazardous materials management would not be impacted by construction of the new Gate 22B facilities.

Hazardous waste would be handled, stored, transported, disposed of, or recycled in accordance with the WPAFB HWMP (WPAFB, 2024a). It is anticipated that hazardous wastes generated during construction activities would not be expected to increase over existing conditions. Existing hazardous wastes identified and encountered by contractors during construction would be managed through the Environmental Branch of Civil Engineering in accordance with the WPAFB HWMP (WPAFB, 2024a).

Once operational, it is anticipated that very little if any hazardous materials use or hazardous waste generation would occur in the new Gate 22B facilities. New use of hazardous materials would include provision for applicable emergency response equipment and procedures in an SSSP.

Fuels such as gasoline and diesel would be used in some Gate 22B construction equipment. The Gate 22B construction contractor may site a temporary AST up to a maximum of 500-gallons each at the construction laydown area to refuel construction equipment. The two ASTs would be supplied from weekly tank-truck deliveries. Secondary containment would be provided for the ASTs as well as the fuel delivery transfer station and the equipment refueling area with an SSSP prepared and implemented to prevent fuel releases. Temporary tanks used by the construction contractor would be addressed in WPAFB Environmental Specification 01 35 43 General Environmental Requirements. No emergency generators are anticipated for the new Gate 22B facilities. No other liquid fuels are anticipated to be used in the new Gate 22B operations.

With routine operation of the New Gate 22B, occasional motor vehicle accidents could be anticipated with potential release of fuel (gasoline, diesel) or oils. A spill response kit would be

maintained at the Gate 22B facilities to facilitate rapid response to any releases and minimize potential threats to new storm drainage or soils and subsurface.

Once the new Gate 22B is in operation, the existing Gate 22B facilities will be demolished. An updated ACM and LBP survey covering all areas of the existing facility will be conducted to verify assumed ACM-containing equipment and specify all locations for ACM and/or LBP abatement prior to general demolition. The abatement and associated waste disposal would be conducted in accordance with state and federal regulations and guidance, including WPAFB standard specification sections 01 35 43 (General Environmental Protection Requirements). No ACM or LBP impacts to the environment will result from Gate 22B demolition. The existing Gate 22B hazardous materials survey conducted for the PCR also identified three hydraulic pressure vessels associated with gate operation that will require removal, drainage of hydraulic fluid, and disposal at demolition.

Multiple EFDZs and BSs are located on or near the new Gate 22B and entry roads, areas of road improvements to the north, and areas of the existing Gate 22B and road demolition and removal. Ground disturbance within the EFDZs, BSs and buffer zones must be approved by Air Force Civil Engineer Center personnel and meet OEPA Rule 513 requirements. A Rule 513 Application would be prepared and submitted to OEPA to establish project-specific procedures during site investigation/survey and site excavation, grading, and construction once project design details become available, to prevent release of any residual contaminants present in site soils or groundwater to the environment. In addition, BMPs would be implemented on the Gate 22B project sites during soil disturbing activities that would include but would not be limited to the following measures: silt and/or sediment fencing, rock check dams, temporary seeding, storm drain inlet protection, dust control, and sediment basins. A soil management plan for removal of any soil/fill to be removed from the construction site to include sampling and analysis requirements for potential hazardous constituents, including per- or polyfluoroalkyl substances, in accordance with the OEPA Rule 513 approval and transportation and disposal would be required. New Gate 22B facility design would incorporate vapor intrusion techniques such as vapor barrier, pipes to vent vapor, positive pressure HVAC to prevent potential vapor intrusion hazards to facility personnel. No changes would be required to the Land Use Control Implementation Plan since the site is already considered an industrial site within the base perimeter fence and will remain the same. No long-term impact would be expected to ERP sites as a result of implementing the Proposed Action.

3.11.2.2 New NMUSAF Café

Use of hazardous materials and generation of hazardous waste during construction would be very similar to that described in Section 3.11.2.1 for the New Gate 22B. Fuel use and management during construction would also be similar to New Gate 22B. No significant short- or long-term impacts would be expected from hazardous materials, hazardous waste generation or fuel use during construction.

Once in operation, use and disposal of hazardous materials and wastes would be consistent with other food service establishments with cooking oil (“fryolators”) and refrigeration/freezer equipment. New NMUSAF Café operations would comply with UFC 4-722-01 for restaurants and cafeterias. A separate emergency generator serving the new café is not anticipated.

During New NMUSAF Café construction, utility connections would be made to existing NMUSAF utilities. When detailed design drawings are prepared, specific connection points would be identified and existing NMUSAF hazardous material surveys consulted to determine known presence of ACM, LBP or other hazardous materials of construction. A supplemental hazardous materials survey would be conducted at that time if existing surveys are inconclusive.

The proposed location of the new café within the existing NMUSAF complex is not near existing ERP sites.

3.11.2.3 Emergency Staging Area for FEMA Trailers

No new construction is anticipated as part of the FEMA Trailer Emergency Staging Area, so no use of hazardous materials or generation of hazardous waste would be anticipated. Operation of the staging area for training exercises or actual emergency response activities would involve many motor vehicles on a daily basis, some leaks of fuel or oils could occur from tractor-trailers or other vehicles. A spill response kit would be maintained at the FEMA Staging Area to facilitate rapid response to any releases and minimize potential threats to existing storm drainage or soils and subsurface.

Conduct of operations in the Emergency Staging Area would require power supply to temporary storage and office facilities, and to refrigerated tractor-trailers. No use of generators to supply temporary power is anticipated, so no refueling or transfer of fuel is anticipated.

3.11.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Action, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.11.1 would remain the same. There would be no potential impacts to hazardous materials/waste from construction or operation of the proposed activities. Therefore, there would be no short- or long-term impacts because there would be no change to hazardous materials/waste over baseline conditions.

3.11.3 Reasonably Foreseeable Effects

Limited potential foreseeable impacts would be associated with the Proposed Actions combined with foreseeable actions related to projects listed in Table 3-1 for use and management of hazardous materials and hazardous wastes. Construction, renovation, and demolition involving hazardous materials use, abatement, and waste generation would be confined to their respective project sites. The existing WPAFB HWMP provides the management framework and infrastructure to manage these hazardous materials and hazardous wastes in compliance with applicable federal and state regulations from multiple construction projects on a routine on-

going basis. Operationally, hazardous materials and waste management from the Proposed Actions would be negligible, so no impacts would result. Foreseeable impacts associated with ERP sites would only result if projects were conducted within the same OU components (e.g., EFDZs, BSs), and no foreseeable projects are currently projected to be constructed within the same OU9 components potentially impacted by the New Gate 22B construction.

3.12 Safety and Occupational Health

A safe environment is one in that there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself together with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of highly noisy environs. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications. Any facility or human-use area with potential explosive or other rapid oxidation processes creates unsafe environments for nearby populations. Extremely noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

Explosives are classified based on their reactions to specific influences. The explosives hazard class is further subdivided into “divisions” based on the character and predominance of the associated hazards and their potential for causing personnel casualties or property damage.

Explosive safety zones (ESZs) are designated for areas where ordnance is stored or handled. The ESZs are typically determined based upon the net explosive weight of the ordnance to be stored or handled and the blast resistance properties of the magazine. Explosive Safety Quantity Distance (ESQD) arcs that delineate the extents of each ESZ are calculated. The ESZ and ESQD requirements are specified in Defense Explosive Safety Regulation 6055.09_DAFMAN 91-201, *Explosive Safety Standards*. The equivalent explosives regulations are specified in the Department of the Army Pamphlet 385-64, *Ammunition and Explosives Safety Standards* (July 24, 2023) and in ATP 4-35.1, *Ammunition and Explosives Handler Safety Techniques* (November 8, 2021).

Construction site safety consists primarily of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. The health and safety of on-site military and civilian workers are safeguarded by DoD and DAF regulations designed to comply with standards issued by the Occupational Safety and Health Administration (OSHA) and USEPA. These standards specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors. In addition, health and safety plans are typically developed by the contractor on a project-specific basis.

The DoD seeks effective ways to minimize the likelihood of mass casualties from terrorist attacks against DoD personnel in the buildings in which they work and live. The intent of UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, is to minimize the possibility of mass casualties in buildings or portions of buildings owned, leased, privatized, or otherwise occupied, managed, or controlled by or for DoD. The UFC standards provide appropriate, implementable, and enforceable measures to establish a level of protection against terrorist attacks for all inhabited DoD buildings where no known threat of terrorist activity currently exists.

UFC mandates minimum standoff distances for new and existing buildings and for those buildings to exist within or outside of a controlled perimeter. Standoff distances are distances maintained between a building or portion thereof and the potential location for an explosive detonation, primarily an adjacent roadway, parking area, and/or trash cans. A controlled perimeter is a physical boundary at which vehicle access is controlled with sufficient means to channel vehicles to the access control points. At a minimum, access control at a controlled perimeter requires the demonstrated capability to search for and detect explosives.

3.12.1 Affected Environment

The existing WPAFB public health and safety environment relevant to the Proposed Action and alternatives includes munitions and explosives safety, construction safety, and AT/FP considerations.

3.12.1.1 Munitions and Explosives Safety

No military munitions or ordnance have been used, stored, disposed, or spilled within the Proposed Action sites, although there are three pistol ranges located just west across Skyline Drive. The closest location of a MMRP site is the Abandoned Ordnance and Skeet Range (TS896) in Area A, downgradient from the Proposed Action sites. A munitions storage facility is located more than two miles away in Area A.

The existing Area B runways (i.e., Runway 09/27) is sited for use and storage of explosives. Tests were performed there in the 2007 – 2010 timeframe without incident, resulting in no residual explosive concerns. The area remains sited for explosives but will not likely be used.

3.12.1.2 Construction Safety

All contractors performing demolition and construction activities are responsible for following ground safety regulations and worker compensation programs and are required to conduct construction activities in a manner that does not pose any risk to workers or personnel. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and availability of Safety Data Sheets. Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplace operations; to monitor exposure to workplace chemical (e.g., asbestos, lead, and hazardous materials), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; to recommend and evaluate controls (e.g., ventilation and respirators) to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance

program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures.

3.12.1.3AT/FP

The DoD seeks effective ways to minimize the likelihood of mass casualties from terrorist attacks against DoD personnel in the buildings in which they work and live. The intent of UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, is to minimize the possibility of mass casualties in buildings or portions of buildings owned, leased, privatized, or otherwise occupied, managed, or controlled by or for DoD. The UFC standards provide appropriate, implementable, and enforceable measures to establish a level of protection against terrorist attacks for all inhabited DoD buildings where no known threat of terrorist activity currently exists. UFC mandates minimum standoff distances for new and existing buildings and for those buildings to exist within or outside of a controlled perimeter. Standoff distances are distances maintained between a building or portion thereof and the potential location for an explosive detonation, primarily an adjacent roadway, parking area, and/or trash cans. A controlled perimeter is a physical boundary where vehicle access is controlled with sufficient means to channel vehicles to the access control points. At a minimum, access control at a controlled perimeter requires the demonstrated capability to search for and detect explosives.

3.12.2 Environmental Consequences

Impacts on health and safety are evaluated for their potential to jeopardize the health and safety of Base personnel as well as the surrounding public. Impacts might arise from physical changes in the work environment, demolition and construction activities, introduction of demolition and construction-related risks, and risks created by either direct or indirect workforce and population changes related to proposed Base activities. DAF regulations and procedures promote a safe work environment and guard against hazards to the public. The WPAFB programs and day-to-day operations are accomplished according to applicable DAF federal and state health and safety standards.

3.12.2.1 Gate 22B – New Gate/Road Realignment

The new Gate 22B replacement contractor would be responsible for preparing and implementing a construction health and safety plan (HASP) to maintain construction contractor safety as well as the public that would continue to access WPAFB Area B via existing Gate 22B over the course of construction. The HASP would include SOPs for all construction activities. Given the nature of the new and modified entry road realignment and new gate facilities construction, construction HASP methods and procedures would be similar to those implemented on public roadwork construction projects. Although the Gate 22B contractor would not face the hazard of high-speed traffic adjacent to the construction zone, existing Gate 22B would be expected to remain at least partially open during construction with substantial peak-hour traffic in close proximity to new gate and road construction. Temporary rerouting of entry and exit traffic would be necessary where existing and new gate/road footprints overlap. Daily work zones would be established and demarcated with hazard cones, flags, fencing or jersey barriers to restrict access between public traffic and construction activities. “Spotters” would be

assigned to control movement of construction equipment and crew in proximity to existing/temporarily relocated gate operations. Safety hazards to the construction crew and to the public could be minimized by curtailing construction activities during morning and evening peak traffic hours, and by scheduling as much construction as possible during second and/or third shift operating hours when existing Gate 22B is closed.

Use of high-profile equipment would require a “spotter” when operating near any overhead hazards. To minimize vehicle accidents, contractors would direct heavy vehicles entering and exiting construction site. The Base has also incorporated stringent safety standards and procedures into day-to-day operations. In addition, proper excavation techniques would be used to ensure that existing underground utility lines are not damaged; in the event a utility line is cut or otherwise damaged, on-site personnel would need to implement emergency procedures. The selected construction contractor would be directed to demonstrate specific construction procedures and techniques to maintain cut and fill slope stability until construction completion. Following completion of the new Gate 22B construction and commissioning, a demolition contractor would proceed with demolition of existing Gate 22B. The contractor would be required to develop a Demolition Plan, associated SOPs and health and safety plans for each type and stage of demolition and to protect nearby new Gate 22B personnel and facilities. Therefore, no adverse effects are anticipated as a result of the Proposed Action due to safeguards existing to protect personnel.

Once operational, long-term potential impacts due to workplace activities would be minimized by adherence to health and safety regulations and standards. The new Gate 22B would be designed to meet UFC standards, which provide for worker safety in security/access control points.

No adverse effect to AT/FP would be expected because this project would be designed to comply with AT/FP regulations and provide physical security mitigation in accordance with DoD Minimum Antiterrorism Standards for Buildings (UFC 4-010-01) and in accordance with ECFs/ACPs UFC 4-022-01 and guidance in SDDCTEA PAM 55-15, Entry Control Facilities Access Control Points; and the Air Force Civil Engineer Center Standard Design for Entry Control Facilities/Installation Access Control Points.

3.12.2.2 New NMUSAF Café

Potential short-term impact to workers could occur during construction activities. Construction of the New NMUSAF Café would slightly increase the short-term risk associated with contractors performing construction activities at WPAFB during the normal workday.

Contractors would be required to establish and maintain safety programs, develop health and safety plans, and adhere to SOPs. Any potential adverse impacts to the health and safety of nearby personnel would be minimized by clearly identifying the work zone and prohibiting access to unauthorized individuals. Use of high-profile equipment such as cranes would require a “spotter” when operating near any overhead hazards. With the new café located between two

existing NMUSAF buildings, “spotters” would also be utilized whenever heavy construction equipment is used to prevent damage to the existing NMUSAF building exteriors. To minimize vehicle accidents, contractors would direct heavy vehicles entering and exiting construction site. Although NMUSAF patrons would not typically access the NMUSAF building exteriors where the new café would be constructed, contractors would need to be vigilant to exclude public access when contractor personnel access the NMUSAF building interiors. Specific work plans and exclusion areas would need to be established to make connections to existing NMUSAF utilities, some of which may be located in the existing building interior spaces.

The Base has also incorporated stringent safety standards and procedures into day-to-day operations. In addition, proper excavation techniques would be used to ensure that existing underground utility lines are not damaged; in the event a utility line is cut or otherwise damaged, on-site personnel would need to implement emergency procedures. Following completion of the new café construction and commissioning, the contractor would proceed to dismantle and remove existing Valkyrie Café furniture, equipment and utilities, and prepare the space to retrofit offices. The contractor would be required to develop a HASP to protect nearby NMUSAF patrons, personnel and facilities. Therefore, no adverse effects are anticipated as a result of the Proposed Action due to safeguards existing to protect personnel.

Once operational, long-term potential impacts due to workplace activities would be minimized by adherence to health and safety regulations and standards, and existing NMUSAF practices and procedures.

Per the “Final NMUSAF Master Plan” (WPAFB April 2022), the existing NMUSAF does not meet UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings* that require a 108-foot standoff distance between exterior walls and POV roadways and parking lots, and a larger standoff (213 feet) at the Museum entrance atrium and theater. A separate project is being developed to address these deficiencies. Because the proposed New NMUSAF Café site is located between two existing NMUSAF facilities and within the NMUSAF exterior footprint, it will not aggravate the existing AT/FP standoff deficiencies. No adverse effect to AT/FP would be expected as a result of constructing the New NMUSAF Café.

3.12.2.3 Emergency Staging Area for FEMA Trailers

FEMA would be required to develop and implement a HASP for all use of the existing Area B Runway 09/27 to stage emergency supply trailers. At a minimum, the HASP would need to establish traffic control procedures to ensure vehicle and pedestrian safety, safety requirements for temporary lighting, safety requirements for provision of temporary power (temporary utility power, or use of portable generators), and health procedures for provision of temporary sanitary facilities (water and sewer). The FEMA HASP would have to be reviewed and approved by WPAFB prior to any on-site activities.

The UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings* apply to permanent existing and new construction. FEMA use of the Area B Runway 09/27 to stage emergency

supply trailers is not expected to include any new construction. Access into the area would be via the Spinning Gate off Airway Road to the south, rather than through secure Base ECPs such as Gate 22B. An interior security fence separates the emergency staging area from other secure portions of Area B, so no adverse effects to WPAFB AT/FP would be expected. FEMA would be required to develop and implement a temporary security provision to ensure AT/FP security of FEMA personnel, DAF observers, and the public during emergency staging events. FEMA would coordinate AT/FP with Security Forces prior to and at the time of the emergency response activities.

3.12.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Action, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.12.1 would remain the same. There would be no potential impacts to safety and occupational health from construction or operation of the proposed activities. Therefore, there would be no short- or long-term impacts because there would be no change to safety and occupational health over baseline conditions.

3.12.3 Reasonably Foreseeable Effects

Construction and demolition activities associated with the Proposed Action and Alternatives, combined with foreseeable actions related to projects listed in Table 3-1, would have potential short-term foreseeable adverse impacts on health and safety (e.g., slips; falls; heat exposure; and exposure to mechanical, electrical, vision, or chemical hazards). Implementation of appropriate safety methods during these activities would be expected to minimize the potential for such impacts. Workers at construction sites would be required to adhere to site specific health and safety plans; construction areas would be secured to prevent unauthorized personnel from entering work sites; and in accordance with the Occupational Safety and Health Act, all workers would be provided with appropriate personal protective equipment. Therefore, no significant foreseeable impacts to safety and occupational health would be anticipated.

3.13 Socioeconomics

Socioeconomics is the relationship between economics and social elements such as population levels and economic activity. Factors that describe the socioeconomic environment represent a composite of several interrelated and nonrelated attributes. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic condition of a region.

Activities at military installations that can affect regional socioeconomics include construction project expenditures; employment changes; procurement of goods and services; and salaries

(Soldiers, civilians, and contractors). As the DAF increases or decreases either expenditures or employment at an installation, these impacts are felt within the region by businesses, local governments, and individuals. Installation changes through expenditures from construction projects or an increase or decrease in employee populations could result in varying degrees of economic impact, depending on the economic diversity and size of the regional economy and population. Construction activity could result in temporary increases in jobs, income, and sales due to increased spending in a given region. Impacts from stationing actions can manifest themselves as a loss or gain in jobs; change in real estate demand; change in demand for educational and other services; or change in state or local tax revenue. These potential impacts would vary depending on the local affected environment.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, seeks to protect children from disproportionately incurring environmental health or safety risks that might arise as a result of federal policies, programs, activities, and standards. The EO defines environmental health and safety risks as “risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink and use for recreation, the soil we live on, and the products we use or are exposed to).” Such information aids in evaluating whether a proposed action would render vulnerable children targeted for protection in the EO.

3.13.1 Affected Environment

The demographics and employment characteristics of the community surrounding WPAFB are described in the following sections.

3.13.1.1 Demographics

Metropolitan statistical areas are geographic entities defined by the Office of Management and Budget for use by federal statistical agencies in collecting, tabulating, and publishing federal statistics. A metro area contains a core urban area of 50,000 or more of a population. Each metro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core (Census, 2023).

WPAFB is located 10 miles outside of Dayton, Ohio. According to the 2020 Census data, the city of Fairborn had a population of 34,510; the city of Dayton had a population of 137,644 (-2.7% from 2010); and the Dayton Metropolitan Area (MA) (consisting of, Greene, Miami and Montgomery counties) had a population of 814,049 residents. Based on the 2020 Census data, the Dayton MA was the fourth largest metropolitan area in Ohio. Table 3-12 provides summary level demographic data for the census tracts in the immediate vicinity of WPAFB Area B.

3.13.1.2 Employment Characteristics

The Base provides a major source of employment in the five-county area. In addition, WPAFB awards numerous contracts every year to local businesses. For Fiscal Year (FY) 2021, the total number of jobs provided by WPAFB was over 30,000 – 35,000. This number includes military

active duty, trainees and reservists, DoD civilians, and other civilians, such as contractors. This number of indirect jobs supported by the Base, such as restaurants, dry cleaners, and others is estimated at 34,560 – 43,560. The total economic impact to the local Dayton-Springfield Metropolitan Statistical Area (MSA) was \$4.2 – 6.5 billion.

Recent unemployment rates indicate the unemployment rate for the Dayton MSA was 3.8 percent in June 2023 (BLS, 2023a), the same as the U.S. average, down from the 2020 annual average of 8.0 percent (15.0 percent peak) during the COVID-19 peak. The June 2023 Dayton MSA unemployment rate was slightly higher than the state average of 3.4 percent in the same month (BLS, 2023b).

Table 3-12 provides summary level socioeconomic data for the census tracts in the immediate vicinity of WPAFB Area B.

3.13.2 Environmental Consequences

Socioeconomic impacts would be considered significant if they were to cause substantial change to the sales volume, income, employment, population, or community services available in the vicinity of the proposed action. Construction of new facilities would generally inject new revenue and jobs into the local construction industry resulting in temporary, short-term beneficial impacts. Addition of new permanent personnel and their families may likewise result in positive increased, long-term economic activity, but may also result in adverse impacts on necessary community services such as housing, education and recreation.

Each WPAFB Area B proposed project would have an adverse impact with respect to the socioeconomic conditions in the surrounding MA if it would:

- Change the local business volume, employment, personal income, or population that exceeds the MA's historical annual change and/or
- Affects social services or social conditions, including property values, school enrollment, county or municipal expenditures, or crime rates.

3.13.2.1 Gate 22B – New Gate/Road Realignment

Construction of the proposed new Gate 22B and associated road realignment would add temporary, beneficial short-term socioeconomic impacts in the forms of local construction revenue and jobs. The proposed new Gate 22B construction and immediate road realignment would be expected to cost on the order of \$ 52.4 M to be awarded to a local construction contractor (not including associated road improvements leading further into Area B).

Construction jobs should range from 20 – 30 new temporary jobs over an anticipated 9 – 15 month gate replacement period, plus up to 6 months for road improvements.

Negligible, if any, long-term socioeconomic impacts would result from operation of the proposed new Gate 22B. Gate staffing would increase by less than 10 personnel with an additional POV gate and the new CVI facility, increasing jobs and payroll nominally. Operation of the new CVI

facility should improve commercial delivery vehicle access to Area B (since commercial vehicles must currently enter Gate 26A in Area A for inspection and a gate pass and then enter Area B by another gate) and should result in improved operating efficiencies for local area delivery services.

No direct or indirect impacts to children would be anticipated.

3.13.2.2 New NMUSAF Café

Construction of the proposed new NMUSAF Café would add temporary, beneficial short-term socioeconomic impacts in the forms of local construction revenue and jobs. Construction jobs should range from 20 – 30 new temporary jobs over an anticipated 24-month construction period.

Negligible long-term socioeconomic impacts would result from operation of the proposed new NMUSAF Café. Staffing could increase slightly from the existing Valkyrie café, and some additional Café jobs may result from larger or more frequent events staged at the new Café. The new Café would be expected to retain more NMUSAF visitors who might otherwise leave the Museum for meals, increasing revenue slightly.

No direct or indirect impacts to children would be anticipated.

3.13.2.3 Emergency Staging Area for FEMA Trailers

Use of the emergency staging area for FEMA trailers for training or for actual emergency events would not be expected to result in significant socioeconomic impacts as no permanent construction is anticipated or permanent changes in employment. During training or actual FEMA emergency events, a temporary influx of additional population (participants, management or observers) would occur in Area B that would include lodging, meals, fuel and incidental expenses for those personnel in the local WPAFB economy. Additional local expenditures would be for temporary facilities such as office trailers, sanitary facilities, and traffic control.

Children in the local neighborhoods across Airway Road from the proposed FEMA staging area would be subjected to temporary increases in truck traffic and congestion, including air emissions, noise and safety hazards.

3.13.2.4 No Action Alternatives

For each No Action Alternative to the Proposed Actions, no new construction or use of the Proposed Action sites would occur, and existing conditions as described in Section 3.13.1 would remain the same. There would be no potential impacts to socioeconomics from construction or operation of the proposed activities. Therefore, there would be no short- or long-term impacts because there would be no change to socioeconomics over baseline conditions.

3.13.3 Reasonably Foreseeable Effects

Foreseeable socioeconomic impacts could occur from Proposed Action activities that are concurrent with other major WPAFB Area B activities such as Enhanced Use Lease construction on the Hilltop and Gerlaugh Farm parcels (particularly with Gerlaugh Farm directly across from the proposed Gate 22B replacement). Other planned WPAFB potentially concurrent construction could include the new Advanced Materials Research Laboratory in Area B, the proposed Area A New Kittyhawk Dormitory and Intelligence Complex Expansion, Area A Gate 15A Modifications, and other NMUSAF projects such as the Facility 20004A renovation and expansion that are categorically excluded from NEPA review. Competition in the local construction labor market could result in robust job opportunities and increased labor wages, driving up the overall cost of local construction.

4.0 PREPARERS

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5.0 REFERENCES

- BHE Environmental (BHE), 2001. Endangered Species Management Plan for Wright-Patterson Air Force Base, Ohio. 2001.
- BHE Environmental (BHE), 2005. Update to Wright-Patterson Air Force Base Wetland Management Plan, Ohio. 2005.
- U.S. Bureau of Labor Statistics (BLS), 2023a. Local Unemployment Statistics. Unemployment Rates for Metropolitan Areas. Accessed 2023.
- U.S. Bureau of Labor Statistics (BLS), 2023b. State Employment and Unemployment. Accessed 2023.
- U.S. Census Bureau (Census), 2023. Definition of Metropolitan and Micropolitan Statistical Areas. Accessed 2023.
- City of Beavercreek (Beavercreek), 2024. Capital Improvement Plan, 2024 – 2026. Dated August 23, 2018. <https://www.daytonohio.gov/154/Source-Water-Protection-Program>. Accessed January 2024.
- City of Fairborn (Fairborn), 2024. Capital Improvement Plan, 2023 – 2027. Dated August 23, 2018. <https://www.daytonohio.gov/154/Source-Water-Protection-Program>. Accessed January 2024.
- Dayton, 2025. City of Dayton (Dayton). Source Water Protection Program. Source Water Protection Area Map – Draft: for reference purposes only. Map dated August 23, 2018. <https://www.daytonohio.gov/154/Source-Water-Protection-Program>. Accessed March 25, 2025.
- Debrewer, 2000. Debrewer, L.M., G.L. Rowe, D.C. Reutter, R.C. Moore, J.A. Hambrook, and N.T. Baker. Environmental setting and effects on water quality in the Great and Little Miami River basins, Ohio and Indiana. U.S. Geological Survey Water-Resources Investigations Report 99-4201. <http://in.water.usgs.gov/newreports/miami/miami.pdf>.
- Federal Highway Administration (FHWA), Roadway Construction Noise Model (Version 1.1), https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/, accessed 10 October 2023.
- Hansen, 2015. Hansen, Michael C. Earthquakes in Ohio. Education Leaflet No. 9. State of Ohio, Department of Natural Resources, Division of Geological Survey. Revised Edition 2015.
- IT Corporation, 1997. Remedial Investigation Report, Operable Unit 9, Wright-Patterson Air Force Base, Ohio. September 1997.
- Miami Conservancy District (MCD), 2002. State of the Upper Great Miami Watershed. 2002.
- Natural Resources and Conservation Service (NRCS), 2025. Web Soil Survey, National Cooperative Soil Survey, <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, accessed March 18, 2025.

Ohio Department of Natural Resources (ODNR), 2010. Division of Geological Survey. Earthquakes and Seismic Risk in Ohio. Last Updated July 22, 2010. <http://geosurvey.ohiodnr.gov/earthquakes-ohioseis/seismic-risk-in-ohio>. Accessed November 9, 2017.

Ohio Environmental Protection Agency (OEPA), 2010. Integrated Water Quality Monitoring and Assessment Report. Draft for Public Comment. March 8, 2010.

Ohio Environmental Protection Agency (OEPA), 2025. Division of Materials and Waste Management. Licensed Municipal Solid Waste Facilities. March 21, 2025. [Licensed Solid Waste and C&DD Facilities | Ohio Environmental Protection Agency](#). Accessed March 21, 2025.

U.S. Army Corps of Engineers (USACE), 2022. *Engineering Evaluation/Cost Analysis, Non-Time Critical Removal Action for Per- and Polyfluoroalkyl Substances (PFAS) Assessment to Support the Water Treatment System, Site SS072P (AFFF Area 1: Buildings 478 and 479)*. Wright-Patterson Air Force Base. October 2022.

U.S. Department of Transportation (USDOT), 1980. Airport Noise Compatibility Planning; Development of Submission Aircraft Operator's Noise Exposure Map and Noise Compatibility Program. Final Rule and Request for Comments. 14 CFR 11 and 150. Federal Register 49(244). December 18, 1980.

U.S. Environmental Protection Agency (USEPA), 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. EPA 550/9-74-004. March 1974.

U.S. Environmental Protection Agency (USEPA), 2010. Mad River Total Maximum Daily Loads for Sediment and Turbidity. http://oaspub.epa.gov/tmd/waters_list.tmdl_report?p_tmdl_id=33884. Accessed November 2010.

U.S. Environmental Protection Agency (USEPA), 2018. Stormwater Management for Federal Facilities under Section 438 of the Energy Independence and Security Act. <https://www.epa.gov/nps/stormwater-management-federal-facilities-under-section-438-energy-independence-and-security-act>. Accessed January 4, 2018.

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

Wright-Patterson Air Force Base (WPAFB), 1995b. Final Site-Wide Characterization Report at Wright-Patterson Air Force Base. Prepared by ICI and SAIC. March 3, 1995.

Wright-Patterson Air Force Base (WPAFB), 1998. Record of Decision for 41 No Action Sites at Wright-Patterson Air Force Base. August 27, 1998.

Wright-Patterson Air Force Base (WPAFB), 2014. *Installation Development Plan (IDP)*. Wright-Patterson Air Force Base. August 2014.

Wright-Patterson Air Force Base (WPAFB), 2017. Installation Tribal Relations Plan. Environmental Branch, Installation Management Branch, 88th Civil Engineer Group, Wright-Patterson Air Force Base. March 2017.

Wright-Patterson Air Force Base (WPAFB), 2018. *DD Form 1391, Add Entry Control Point 22B, Draft*. Wright-Patterson Air Force Base. August 30, 2018.

Wright-Patterson Air Force Base (WPAFB), 2019a. Land Use Control Implementation Plan at Wright-Patterson Air Force Base, Ohio. Final. February 2019.

Wright-Patterson Air Force Base (WPAFB), 2019b. Gate 22B – Maps, Plans, Sketches. Wright-Patterson Air Force Base. February 28, 2019.

Wright-Patterson Air Force Base (WPAFB), 2021a. Storm Water Management Plan. July 2021.

Wright-Patterson Air Force Base (WPAFB), 2021b. *Form 813, Permit for Federal Emergency Management Agency (FEMA) Incident Staging, Area B*. Wright-Patterson Air Force Base, Ohio. August 20, 2021.

Wright-Patterson Air Force Base (WPAFB), 2021c. Storm Water Pollution Prevention Plan. September 2021.

Wright-Patterson Air Force Base (WPAFB), 2021d. *Form 813, Permit for Federal Emergency Management Agency (FEMA) Annual Exercise, Area B*. Wright-Patterson Air Force Base, Ohio. October 27, 2021.

Wright-Patterson Air Force Base (WPAFB), 2022a. *Installation Development Plan (IDP) – Area B*, Wright-Patterson Air Force Base. January 2022.

Wright-Patterson Air Force Base (WPAFB), 2022b. Air Installations Compatible Use Zones Study. February 2022.

Wright-Patterson Air Force Base (WPAFB), 2022c. *Wright-Patterson Air Force Base Restoration Advisory Board (RAB) Meeting, Draft Slides*. Wright-Patterson Air Force Base. March 2022.

Wright-Patterson Air Force Base (WPAFB), 2022d. *National Museum of the United States Air Force, Final NMUSAF Master Plan*. Wright-Patterson Air Force Base. April 2022.

Wright-Patterson Air Force Base (WPAFB), 2022e. Integrated Cultural Resources Management Plan, Installation Supplement. August 2022.

Wright-Patterson Air Force Base (WPAFB), 2022f. Final Integrated Natural Resources Management Plan (2022-2026). August 2022.

Wright-Patterson Air Force Base (WPAFB), 2023a. Integrated Contingency Plan, February 2023.

Wright-Patterson Air Force Base (WPAFB), 2023b. *Gate 22B Planning Charette Report, Intermediate (65%) Submittal*, Wright-Patterson Air Force Base. September 2023.

Wright-Patterson Air Force Base (WPAFB), 2024a. Hazardous Waste Management Plan. January 2024.

Wright-Patterson Air Force Base (WPAFB), 2024b. Installation Restoration Program – Wright Patterson Air Force Base, U. S. Air Force Fact Sheet: 4 March 2024.

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**Figure 2-2
Site 2 – New NMUSAF Café**

**Figure 2-3
Site 3 – Catastrophic Event Staging Area for FEMA**

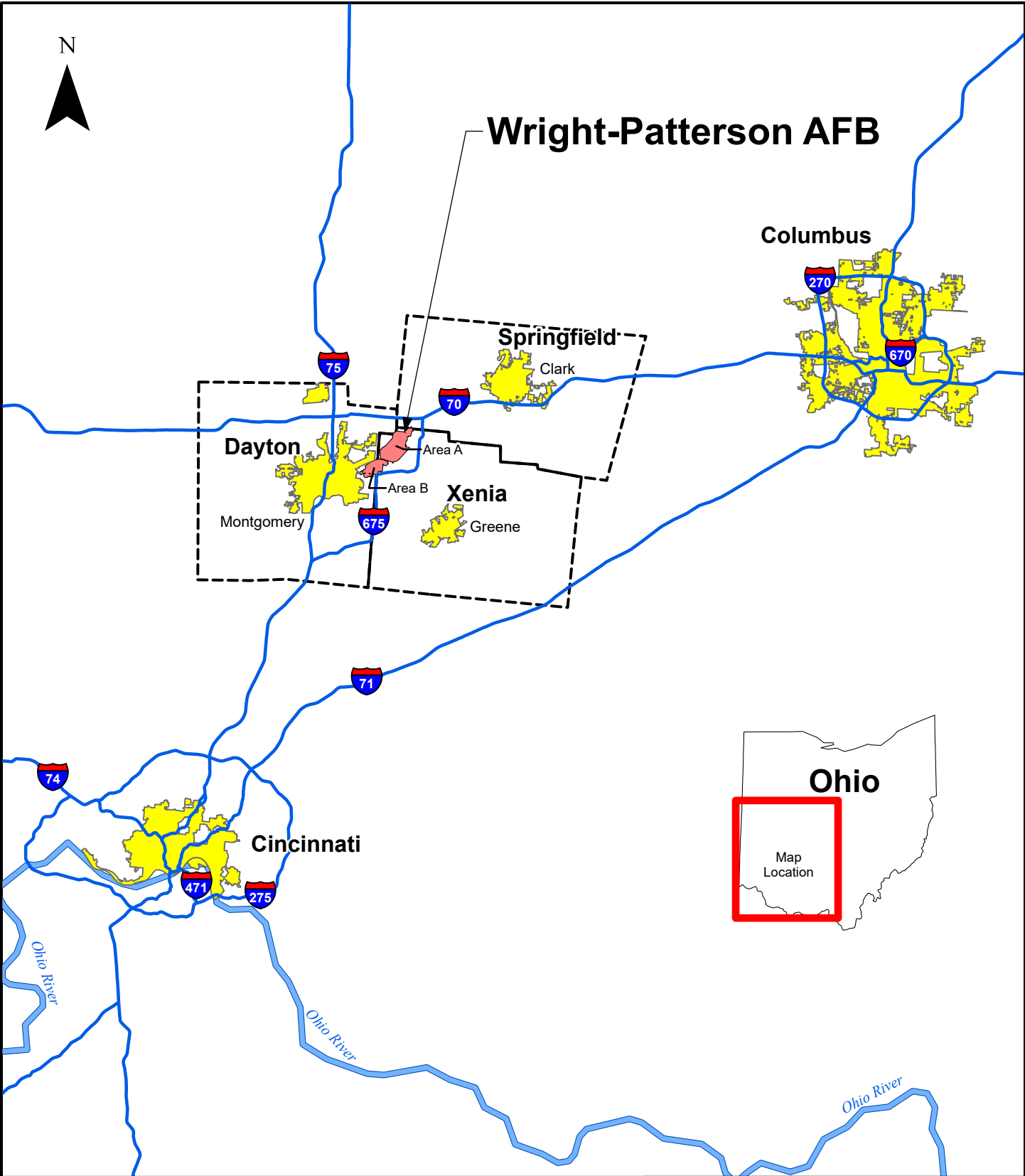
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**Figure 3-1
Operational Noise Contours**

**Figure 3-2
Cultural Resources**

**Figure 3-3
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**Figure 3-4
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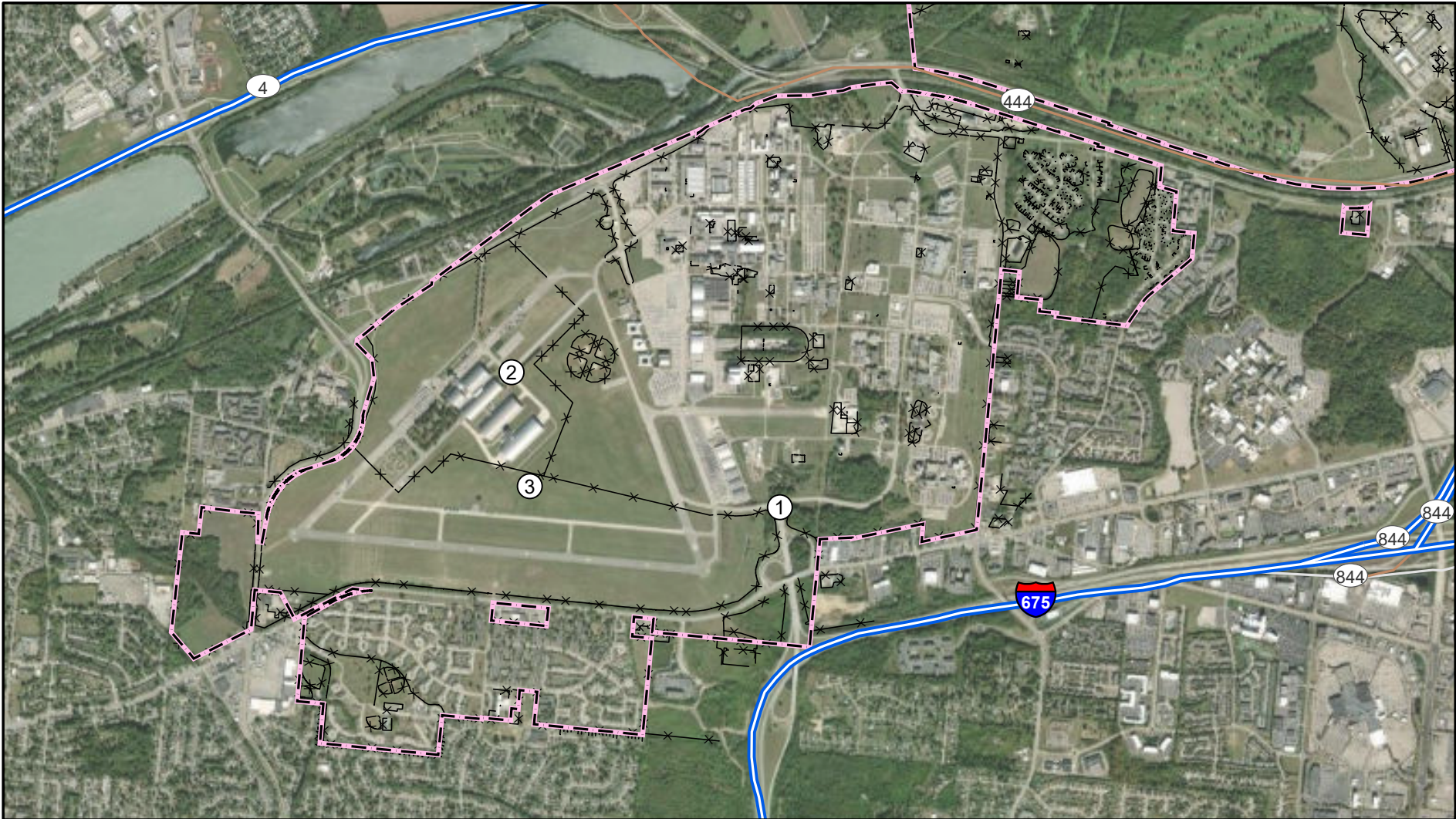
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Environmental Assessment for Area B Improvements




FIGURE NUMBER

1-1

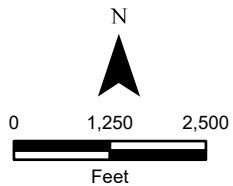
**Location of WPAFB
and Surrounding Cities**




-  Wright-Patterson Air Force Base (WPAFB)
-  WPAFB Fence

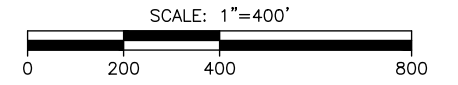
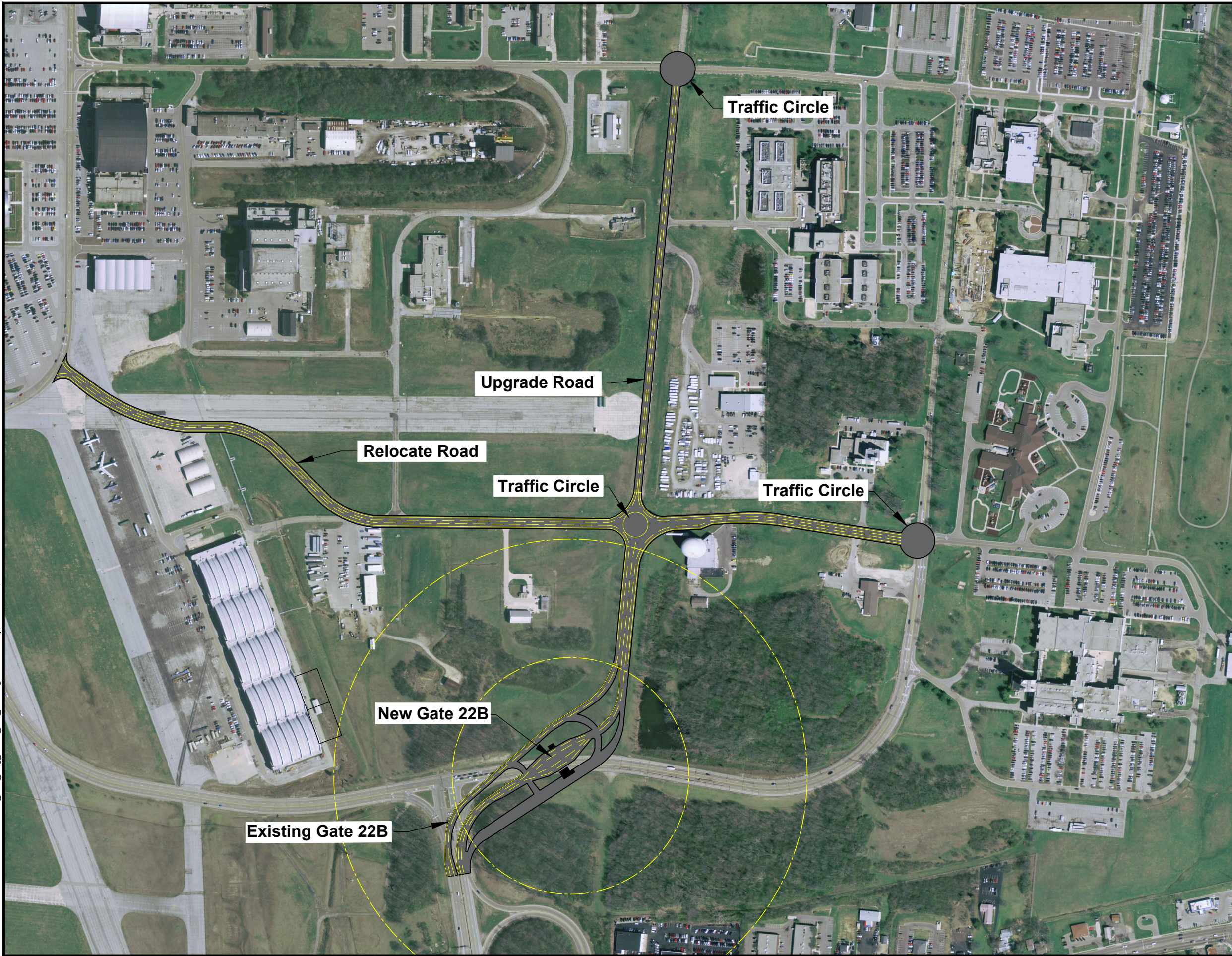
-  Gate 22B Gate/Road Realignment
-  New NMUSAF Café
-  Staging Area for FEMA Trailers


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Environmental Assessment for Area B Improvements	
FIGURE NUMBER 1-2	Site Location Map Area B - Wright-Patterson AFB

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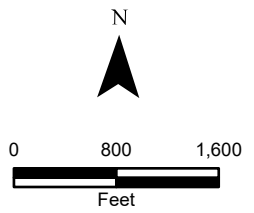
Environmental Assessment for Area B Improvements


FIGURE NUMBER
2-1

Site 1 - Gate 22B
Gate/Road Realignment
Area B - Wright-Patterson AFB





-  Installation Boundary
-  Wright Field District
-  Existing Café to be Converted to Office Space
-  New NMUSAF Café

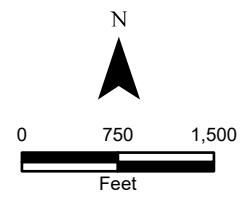



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FIGURE NUMBER 2-2	Site 2 – New NMUSAF Café Area B – Wright-Patterson AFB



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-  Catastrophic Event Staging Area for FEMA
-  Installation Boundary

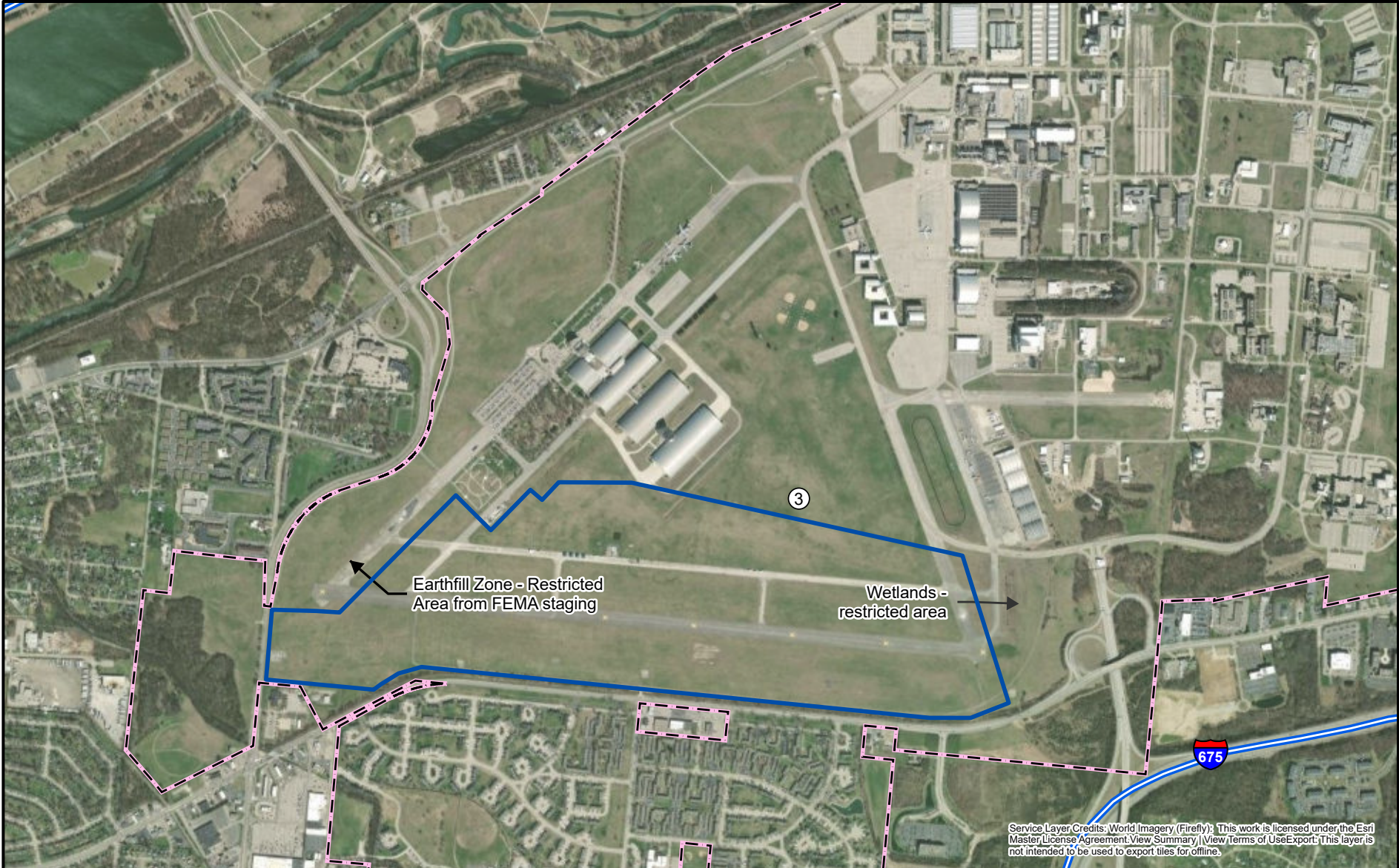


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Environmental Assessment for Area B Improvements

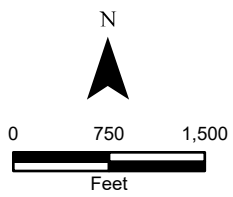
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2-3


Site 3 - Catastrophic Event Staging Area for FEMA



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-  Exercise Staging Area for FEMA
-  Installation Boundary

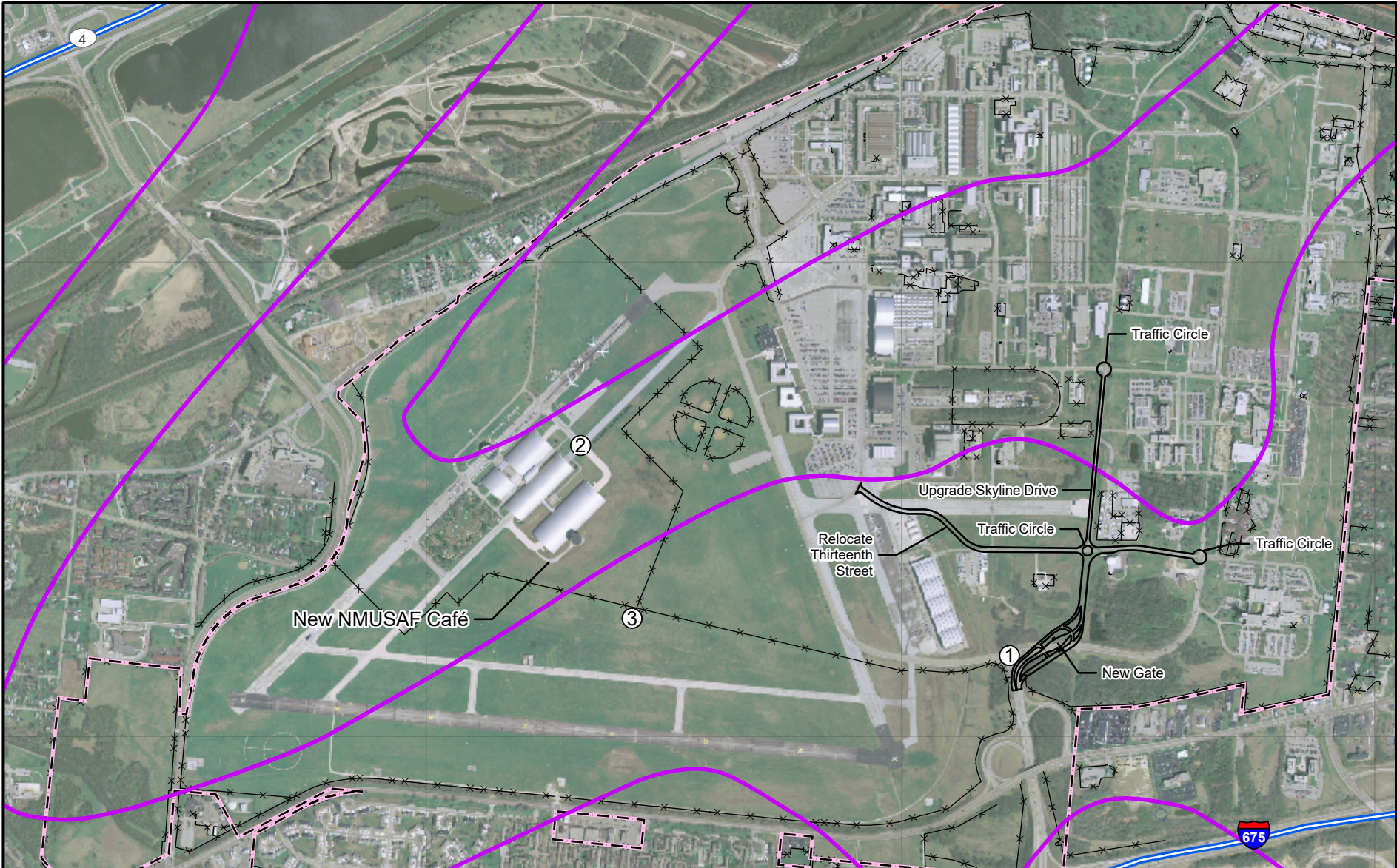





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Environmental Assessment for Area B Improvements

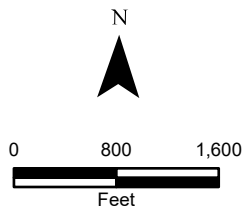
FIGURE NUMBER
2-4


Site 3 - Exercise Staging Area for FEMA



-  Installation Boundary
-  2022 AICUZ DNL Noise Contours
-  Fence

-  ① Gate 22B Gate/Road Realignment
-  ② New NMUSAF Café
-  ③ Staging Area for FEMA Trailers



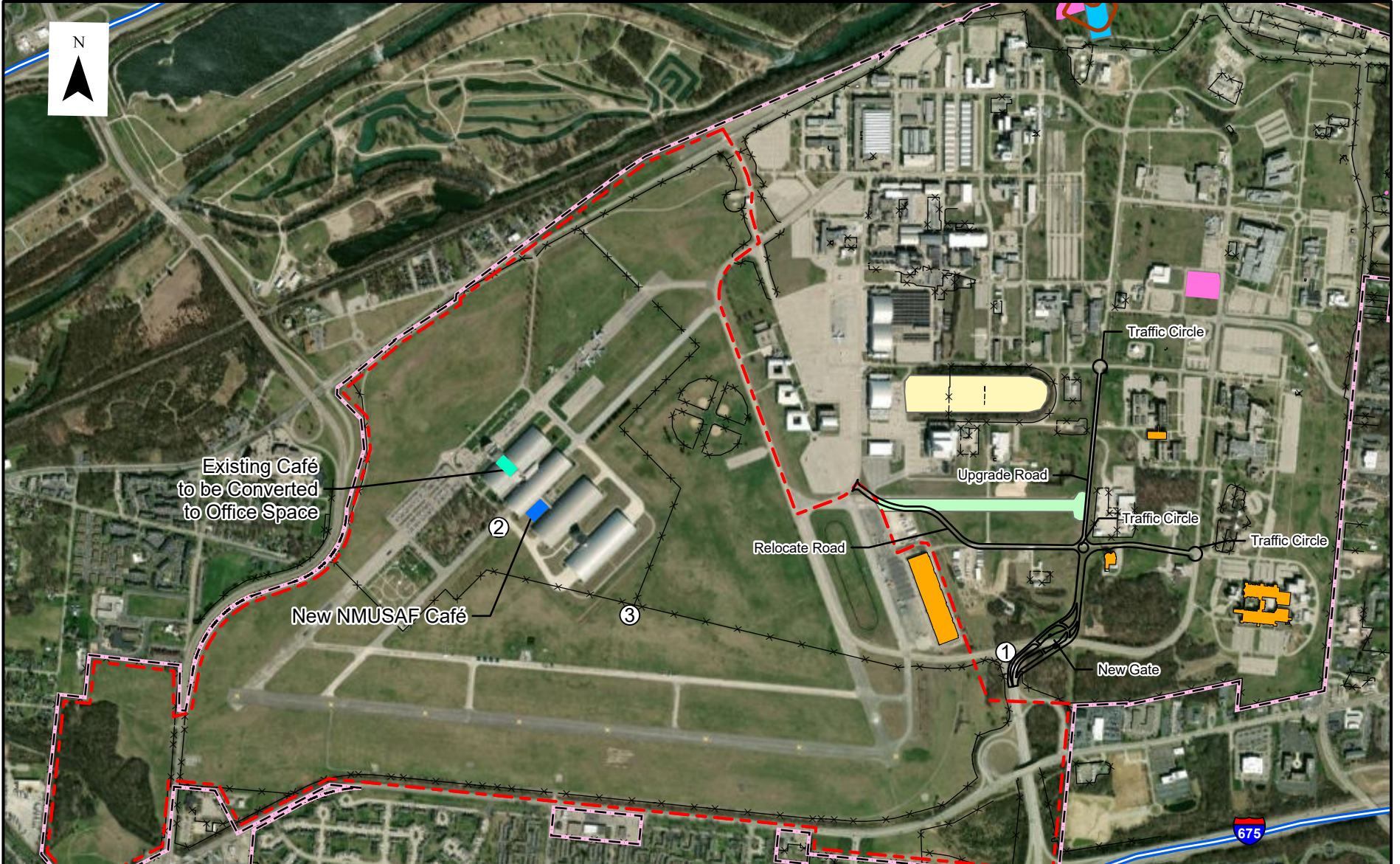
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Environmental Assessment for Area B Improvements

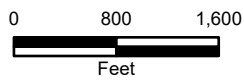
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3-1


**Operational Noise Contours
Area B – Wright-Patterson AFB**

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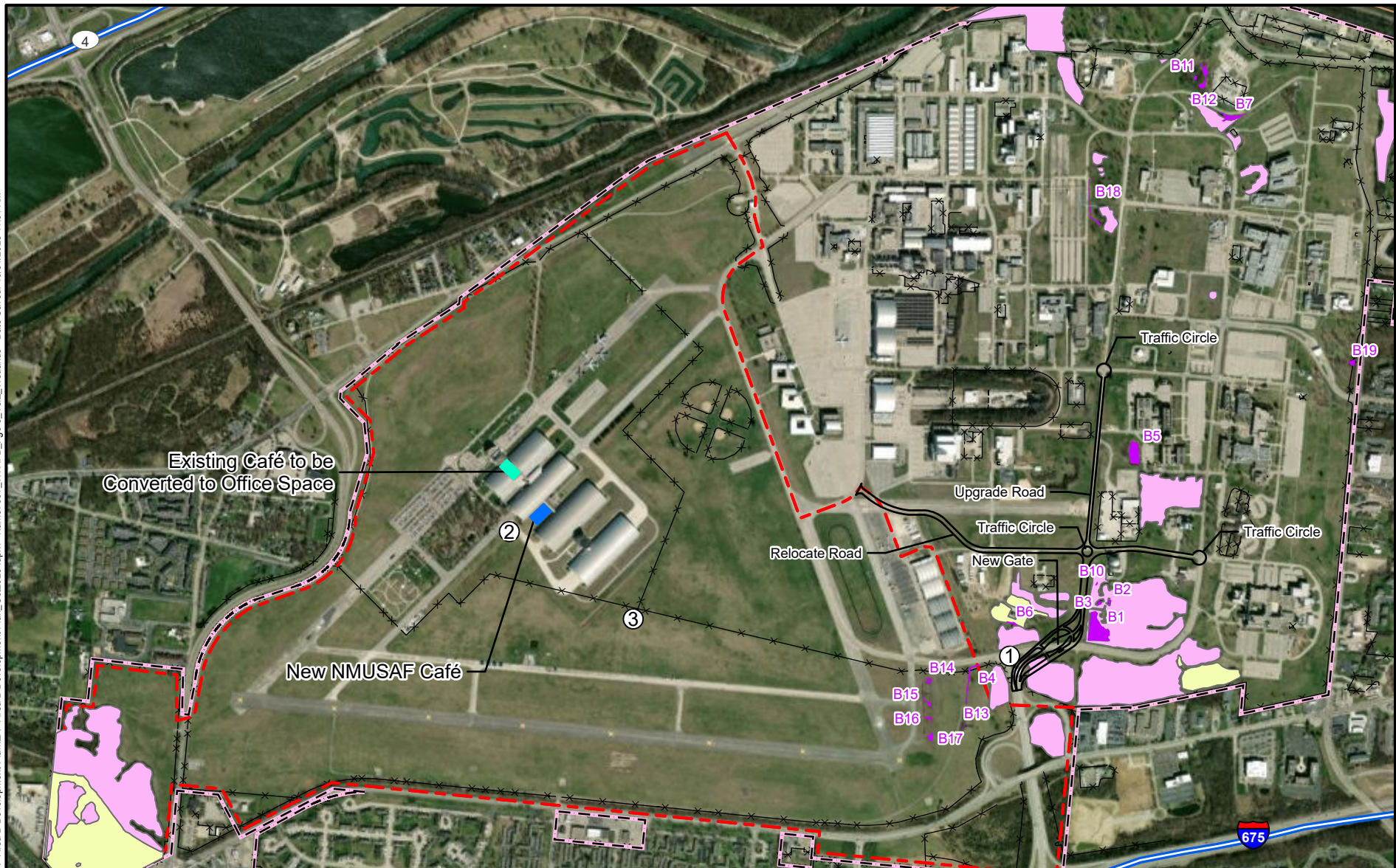


- | | | | |
|----------------------------|---|--------------------------|----------------------------------|
| Installation Boundary | Wright Memorial Site A | Accelerated Runway | ① Gate 22B Gate/Road Realignment |
| Wright Field District | Fence | Building 12 Pond | ② New NMUSAF Café |
| Prehistoric Resource Sites | Existing Café to be Converted to Office Space | Gun Range | ③ Staging Area for FEMA Trailers |
| Archaeological Site | New NMUSAF Café | Wright Brothers Memorial | |
| Historic Buildings | | | |



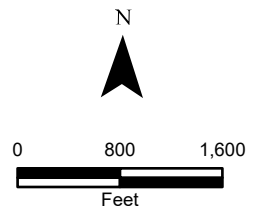
 US Army Corps of Engineers Louisville District	Environmental Assessment for Area B Improvements
	Cultural Resources Area B – Wright-Patterson AFB
FIGURE NUMBER 3-2	

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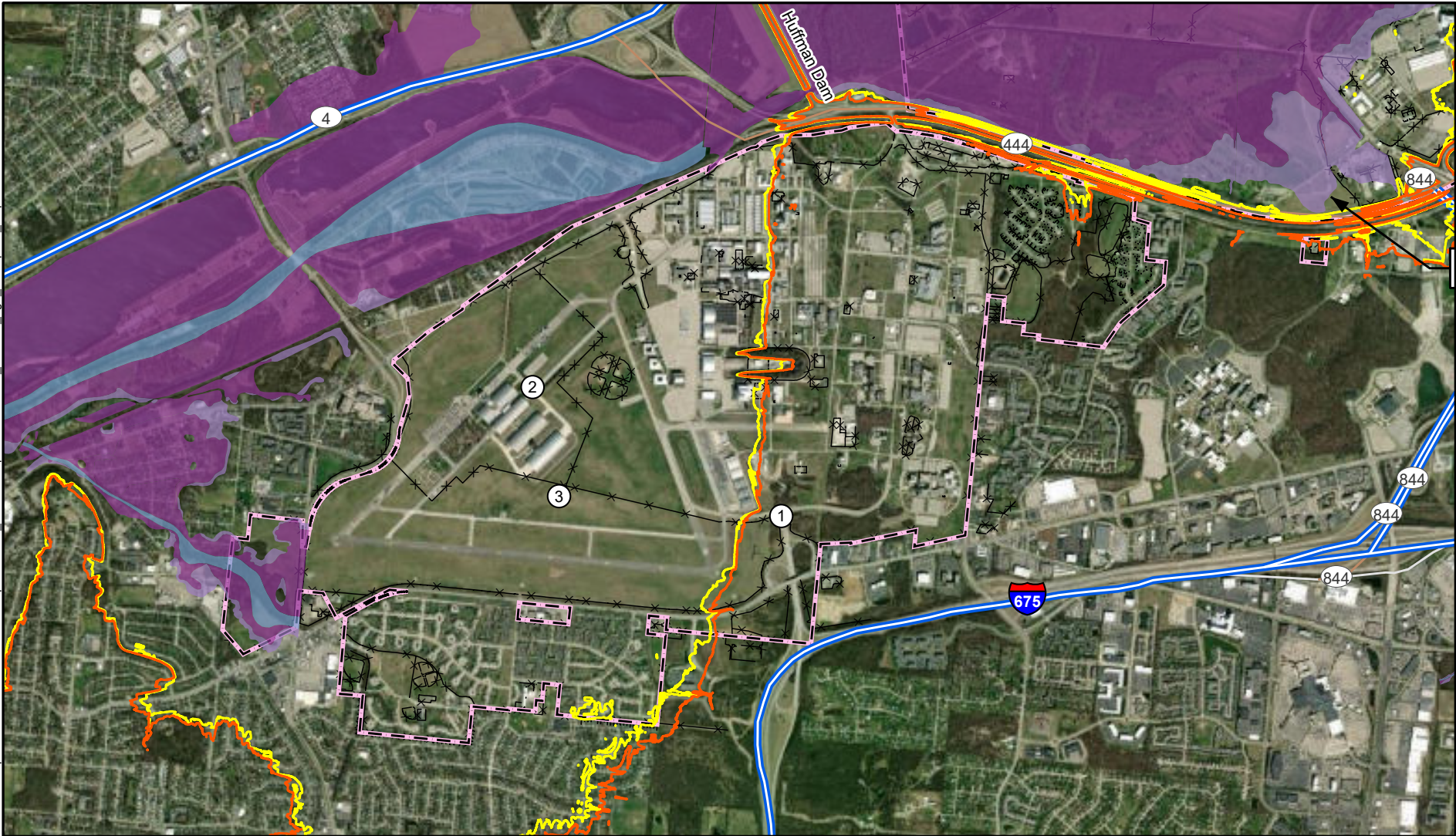


	Installation Boundary		Fence
	Wright Field District	Special Status Species	
	Wetlands		Bald Eagle
	Existing Café to be Converted to Office Space		Blazing Stem Star Borer
	New MILCON Café		Indiana Bat

- ① Gate 22B Gate/Road Realignment
- ② New NMUSAF Café
- ③ Staging Area for FEMA Trailers



	US Army Corps of Engineers Louisville District
	Environmental Assessment for Area B Improvements
FIGURE NUMBER 3-3	Threatened and Endangered Species and Wetlands Area B – Wright-Patterson AFB

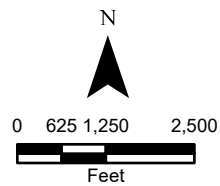


Legend

- Wright-Patterson Air Force Base (WPAFB)
- WPAFB Fence
- 830 Contours
- 835 Contours
- USA Flood Hazard Areas**
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway

- Gate 22B Gate/Road Realignment
- New NMUSAF Café
- Staging Area for FEMA Trailers

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Louisville District

Environmental Assessment for Area B Improvements

FIGURE NUMBER

3-4

Floodplain Map
Area B – Wright-Patterson AFB

Tables

Table 2-1 New Gate 22B/Road Realignment Alternatives Screening (Pros/Cons)

<i>Alternative</i>	<i>Off-Base Impacts</i>	<i>On-Base Impacts</i>	<i>Required Gate Closure</i>	<i>Merge Distance & Queue Spacing</i>	<i>Environmental Resource Impacts</i>
COA 1+	Minimal	Moderate for Enhancements	Minimal	Short Merge from Col Glenn	Lowest
COA 2	Requires I-675 ramp realignment, most coordination with local authorities	Moderate	Longest gate closure during construction	Ramp realignment provides larger queue spacing & merging distance	Impacts PFAS remediation site, some forested habitat, potential archaeological site
COA 3	Extensive Col Glenn Highway ramp realignment	Minimal	Phased to minimize	Minimal merge distance & sharp turn	Extensive forest removal, excavation/em bankment, & archaeological site impact

Table 2-2 Comparison of Environmental Consequences

Affected Environment	Gate 22B – New Gate/Road Realignment	New NMUSAF Café	Emergency Staging Area for FEMA Trailers	No Action Alternative
Airspace Management	The proposed New Gate and Road Realignment would have no impact on Airspace. The New Gate and entrance/exit roads fall outside the Runway 09/27 Clear Zone and within the north Transitional Surface, with the proposed new overwatch structure just outside. Entering vehicles would be temporarily located within the Transitional Surface as they await entry clearance, as is the case with the existing Gate 22B.	The proposed New NMUSAF Café would be located outside the Runway 09/27 aircraft safety zones. The proposed new construction would have no impact on Airspace.	The proposed temporary use of Wright Field as an emergency staging area for FEMA supply trailers would temporarily preclude use of Runway 09/27 for air traffic. FEMA use of Wright Field for actual emergency response events would be unscheduled and could interfere with other planned NMUSAF activities and special events. No permanent construction is proposed for FEMA trailer emergency staging, so there would be no long-term, permanent impact to Airspace.	There would be no change in airspace management.
Air Quality	Temporary emissions from construction/demolition equipment, earth movement, and construction/demolition workforce commuting would increase but be negligible relative to General Conformity Regulation (GCR) de minimis thresholds. Gate 22B operations emissions would be unchanged or lower than existing Gate 22B emissions with more efficient energy use and improved gate throughput. Potential low level insignificant foreseeable impacts with other concurrent Area B construction projects.	Temporary emissions from construction equipment, earth movement, and construction workforce commuting would increase but be negligible relative to GCR de minimis thresholds. New Café operations would result in negligible emissions increases over existing NMUSAF emissions. Potential low level insignificant foreseeable impacts with other concurrent Area B construction projects.	Temporary emissions increases would result from tractor-trailer supply deliveries, outgoing distribution trucks, FEMA staff and WPAFB observer vehicles, and power generators, but would not exceed GCR action thresholds. Depending on concurrence, could contribute to foreseeable impacts of Area B construction projects.	There would be no change in air emissions over baseline conditions.
Noise	Personnel working in the existing Gate 22B would experience occasional temporary noise impacts during construction of the new Gate 22B. Minimal changes in operational noise impacts would be anticipated. Other potentially concurrent, foreseeable Area B construction noise sources would not be located in the same vicinity or would be blocked by other existing buildings/terrain from causing noise impacts to the same receptors.	NMUSAF personnel and patrons in the adjacent NMUSAF buildings would experience occasional temporary noise impacts during construction of the New Café. Negligible changes in operational noise would be anticipated. Other potentially concurrent, foreseeable Area B construction noise sources would not be located in the same vicinity.	Temporary noise increases would result from tractor-trailer supply deliveries, outgoing distribution trucks, FEMA staff and WPAFB observer vehicles and power generators, but the only noise receptors close enough to incur perceptible changes in sound levels would be residences across Airway Road that are already subject to traffic noise. Other potentially concurrent, foreseeable Area B construction noise sources would include Gerlaugh Farm EUL development construction noise.	There would be no change to existing soundscape/noise environment.
Land Use	The New Gate 22B and road realignment would result in no direct change in on-base or off-base land use. The proposed road improvements to the north would result in a change in on-base circulation that would be addressed by the WPAFB land use planning program	The proposed New NMUSAF Café would be an extension of the existing NMUSAF facilities and located within the existing Museum site envelope. The Café would be consistent with existing land use and result in no effects to nearby land use on-base or off-base.	The proposed FEMA trailer emergency staging area on the Wright Field runways would be a temporary change in land use, allowed under terms of the Real Property Permit that would be issued by WPAFB. No permanent changes in land use would be anticipated. FEMA emergency staging exercises or events would potentially affect off-base land use to the south with additional traffic and commercial activity, but those changes would be temporary and not permanent.	There would be no change in land use.

Affected Environment	Gate 22B – New Gate/Road Realignment	New NMUSAF Café	Emergency Staging Area for FEMA Trailers	No Action Alternative
Cultural Resources	<p>The proposed location and construction of the new Gate 22B and road realignment/improvements are not expected to directly impact any known cultural resources in the vicinity. The principal known cultural resources are the Wright Field Historic District and several National Register of Historic Places (NRHP) eligible structures. None of this work is expected to infringe on the character of the Historic District or nearby NRHP eligible buildings. As agreed during consultation with the SHPO, project design drawings will be submitted for SHPO review once available.</p> <p>Prior cultural resource mapping identified two potential nearby archaeological sites. Current project documents do not anticipate any direct construction disturbance in these areas, but given their proximity, subsurface cultural artifacts could be encountered during construction. Contractors would observe standard WPAFB archaeological resource observation and reporting practices should any resources be encountered during construction.</p>	<p>The proposed New Café will be an exterior building addition connected directly to and accessed from the existing NMUSAF. As the existing NMUSAF is the architectural center piece of the Wright Field Historic District, the architectural character of the proposed Café will need to be consistent with that of the existing NMUSAF buildings. As agreed during consultation with the SHPO, architectural design drawings will be submitted for SHPO review once available. If the proposed AMC MILCON project is concurrent, potential foreseeable impacts to the Historic District character would need to be reviewed with the SHPO.</p>	<p>The proposed FEMA Trailer Emergency Staging Area is not anticipated to require any permanent modifications or construction that would impact the character of the Wright Field Historic District. FEMA's use of the staging area is expected to be temporary, and the area would revert to existing conditions following an exercise or emergency event. Temporary use of the Staging Area is not anticipated to result in any long-term, permanent adverse effect on the District. As agreed during consultation with the SHPO, if in the future permanent alterations are required, proposed design plans will be coordinated with the SHPO prior to construction.</p>	<p>With no new construction, no potential impacts to cultural resources.</p>
Biological/Natural Resources	<p>Limited existing environmental resources are located in proximity to the proposed Gate 22B New Gate/Road Realignment, and the road is heavily trafficked providing some constraints to wildlife presence. But significant wildlife habitat exists in forest stands to the east and north of the existing gate, and further northeast of the proposed new Gate 22B site. Wetland B1 is located directly east of the new gate with wetland vegetation and wildlife habitat, but it would not be directly impacted by the new gate construction. Much of the new gate and entry road footprint is north of Loop Road on existing mowed grass areas, with the new connector to existing Skyline Drive running north-south displacing a row of existing trees. Existing vegetation and potential wildlife habitat would be removed in these construction areas.</p>	<p>The proposed New Café would be located between two existing NMUSAF buildings, which is currently maintained lawn and sidewalks, so the proposed New Café would have no significant impact on natural vegetation, wildlife/habitat and threatened or endangered species.</p>	<p>The proposed FEMA Emergency Staging Area is located on the existing Area B/Wright Field Historic District runway, which is inactive, mowed and maintained grass and paved runway. Wildlife in this area would be limited to burrowing mammals and common songbirds that typically inhabit open space of this type. Existing limited wetlands are located at the east end of the runway and would be fenced off with orange snow/silt fence during FEMA exercises or emergency response activities. Other potential habitat west of the runways are beyond the WPAFB security fence so would not be directly affected by the proposed FEMA exercise or emergency response actions. No threatened or endangered species are known to be present on the proposed site. FEMA activities would be temporary, and the Wright Field site restored to prior conditions following use.</p>	<p>There would be no change to biological/natural resources.</p>

Affected Environment	Gate 22B – New Gate/Road Realignment	New NMUSAF Café	Emergency Staging Area for FEMA Trailers	No Action Alternative
	<p>No known threatened or endangered species or confirmed habitat has been identified in or near the Gate 22B site. A portion of a wooded forest stand located east of the existing Gate 22B and on the southern portion of the realigned entry to the new Gate 22B would require removal during construction of the Proposed Action. This wooded forest stand could potentially serve as habitat for the endangered Indiana Bat, the threatened northern long-eared bat and the proposed for listing Tricolored bat, or for bald eagles. Should MILCON (or other) funding be approved for Gate 22B design and construction, it will include a biological survey of the woods that would be conducted prior to initiating any construction to determine whether the woods serve as existing habitat. Prior to tree removal, all trees greater than or equal to 3 inches at breast height would be marked and inventoried. All tree removal required for construction would only be conducted between October 1 and March 31 and would be replaced in accordance with WPAFB Installation Facility Standard Section GO3.10.3</p>			

Affected Environment	Gate 22B – New Gate/Road Realignment	New NMUSAF Café	Emergency Staging Area for FEMA Trailers	No Action Alternative
Water Resources	<p>Located outside the 100-year floodplain and the Huffman Retarding Basin (HRB), as confirmed in consultation with the MCD. The new Gate 22B, entry road realignment and road improvements to the north will result in a net increase in impervious area over the existing, requiring storm water collection detention and treatment. Storm water treatment would include both quantity and quality to meet WPAFB Storm Water Management Plan and Section 438 of the Energy Independence and Security Act (EISA) requirements. The construction contractor would have to obtain coverage under the OEPA Construction General Permit (CGP) and prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for construction, removal of existing roadways and structures, and any temporary contractor laydown and parking areas. There would be no significant impacts to Wetland B1 from surface water runoff due to mitigation from BMPs. Construction in or near several earth fill disposal zones (EFDZs) and burial sites (BS) would require consultation with OEPA and USEPA, and preparation and approval of an OEPA Rule 513 plan to protect groundwater and runoff quality from potential displaced contaminants.</p>	<p>Located outside the 100-year floodplain and the HRB, as confirmed in consultation with the MCD. The New Café would trigger the EISA Section 438 requirement to maintain pre-construction runoff rates. NMUSAF has tentatively programmed a new 1,700 cubic foot swale or bioretention facility to meet this requirement. Total earth disturbance during construction could be less than the 1-acre trigger requiring OEPA CGP coverage and SWPPP if new construction laydown and parking is minimized. The selected contractor would work with WPAFB and NMUSAF to identify existing paved areas that could be used. The New Café site is not close enough to any Area B ERP sites to trigger an OEPA Rule 513 requirement.</p>	<p>Located outside the 100-year floodplain and the HRB, as confirmed in consultation with the MCD. The proposed use of the site is not anticipated to involve new construction of impervious surfaces, so would generate no permanent increase in storm water runoff. During FEMA use, many heavy vehicles, POVs and construction trailers would traverse the site, and while some would remain on existing paved runway surfaces, many would necessarily operate on grassed areas, creating potential to introduce significant sources of sediment into existing storm water drainage and downstream receiving water (such as Mad River, which is already water-quality limited for total suspended particulate). BMPs such as inlet protection measures for structural drainage inlets and hay bales or erosion control fence for surface swales would be installed to minimize sediment loading in runoff. ERP site BS 5 is located on the south side of the runways, just east of the Spinning Gate access point. Though no construction is planned, WPAFB would coordinate with OEPA to determine whether any protective measures were required to prevent surface damage from traffic and potential spread of subsurface contaminants</p>	<p>There would be no change in water resources over baseline conditions.</p>
Earth Resources	<p>Construction will require a significant amount of excavation and embankment – the selected contractor would be charged with selecting and implementing engineering measures and BMPs to stabilize slopes in these areas and to prevent erosion and sedimentation during and after construction. Proximity to multiple EFDZ and BS may require environmental precautions during construction in consultation with USEPA and OEPA.</p> <p>Short-term, construction vehicles would disturb the surface but impacts would be minimized by implementing BMPs to control erosion and sedimentation. Disturbed vegetation would be re-established following construction preventing long-term impacts.</p>	<p>Potential impacts from construction limited due to small footprint, limited area between existing NMUSAF buildings, and generally flat terrain. Erosion and sediment control BMPs would minimize impacts to site soils and drainage. Additional limited, temporary impacts could occur if new construction/installation laydown and parking is required, rather than use of existing paved areas.</p>	<p>No new excavation or construction is proposed to support use of the inactive Wright Field runways as FEMA emergency staging areas, and the site is effectively flat. Erosion and sediment controls would be utilized in the vicinity of existing stormwater drainage inlets and swales to prevent soils from entering runoff from vehicles travelling off the paved runways. Soil disturbance would be revegetated following FEMA demobilization from the site.</p>	<p>There would be no change to soils.</p>

Affected Environment	Gate 22B – New Gate/Road Realignment	New NMUSAF Café	Emergency Staging Area for FEMA Trailers	No Action Alternative
Infrastructure/ Utilities	<p>Construction and operation of the new Gate 22B and associated road realignments/improvements would not have a significant impact on existing utility systems. The new Gate 22B and roadway footprint will be a relocation of the existing, requiring extension and/or relocation of associated utilities (electrical, water, sanitary sewer, storm sewer and communications; natural gas is not used) with minimal additional load.</p> <p>If funding is secured to proceed with the new Gate 22B design, additional studies will be conducted and plans prepared to demonstrate that the construction and operation will not have significant impacts on the public roadways including I-675, Colonel Glenn Highway, Airway Road and their associated road network. During construction of the new Gate 22B and associated roadway, the existing Gate 22B may be shutdown totally or partially for a period of time, significantly re-routing traffic trying to enter WPAFB to other gates, or use of the existing gate may be partially shutdown while construction proceeds, impacting traffic flow onto the Base and impacting level-of-service (LOS) on area roadways. A construction phase traffic plan would be prepared and coordinated with Greene County, Montgomery County and ODOT to maintain acceptable LOS during the construction period. Potential traffic impacts could be exacerbated if Gate 22B construction was concurrent with multiple other foreseeable Area B and Area A construction projects (e.g., Intelligence Complex Expansion, Gate 15A modifications), since commercial construction vehicles would have to first access Gate 26A for an entry pass and then travel into Area B via the same roadways with degraded LOS.</p>	<p>Construction and operation of the new NMUSAF Café would not have a significant impact on existing Area B utility systems. The new café would require extension of existing utility systems (electrical, water, sanitary sewer, natural gas, communications) into the new addition, effectively transferring existing utility demand, with a slight expansion, to the new Café. A new swale or bioretention facility would be installed across the existing driveway from the new Café site. No impacts on traffic would be anticipated. Availability of the new Café facilities would be expected to generate new event demand that would increase traffic, but typically not during peak traffic hours.</p>	<p>Implementation of the Emergency Staging Area for FEMA Trailers would have limited impacts to Area B utility infrastructure. During an actual FEMA emergency response, electricity would be required to power FEMA office trailers, FEMA supply trailers requiring refrigeration or climate control, and for area lighting. The proposed FEMA staging area contains underground electrical service and two ground-level transformers, but temporary connections would be required to supply temporary construction-type power. No water or sanitary sewer infrastructure exists in the proposed FEMA staging area, so temporary portable water supply and sanitary facilities would be provided and serviced daily over the course of the emergency response event.</p> <p>During an actual FEMA emergency response, a large undefined number of vehicles (generally tractor trailers, smaller commercial delivery vehicles or military vehicles) would access WPAFB to deliver supplies, distribute supplies, and to staff the response action. Over the course of an operating day, this flow of traffic into and off the Base would presumably flow semi-continuously and require defined flow patterns onto and off the Base to maintain smooth operation and to minimize potential impacts to local roadways. Access to the proposed FEMA staging area would be via the Spinning Road Secondary Gate off Airway Road/Colonel Glenn Highway. Traffic flow patterns and security measures would be coordinated between FEMA, WPAFB and local authorities to minimize potential impacts when a decision was made to conduct an emergency response action.</p>	<p>There would be no change to existing infrastructure/utilities.</p>
Hazardous Materials/Waste	<p>Temporary construction impacts from use of hazardous materials, generation of hazardous waste and use/storage of fuel for construction equipment would be minimized by adherence to WPAFB plans and procedures. Existing Gate 22B asbestos-containing material, lead-based paint, and other facility hazardous materials would be surveyed, identified and abated in accordance with WPAFB, federal and state standards prior to demolition. Construction within EFDZs and BSs would be conducted in accordance with OEPA-approved Rule 513 procedures to prevent release of hazardous constituents to groundwater, site soils/runoff, and off-site soil disposal.</p>	<p>Temporary construction impacts from use of hazardous materials, generation of hazardous waste and use/storage of fuel for construction equipment would be minimized by adherence to WPAFB plans and procedures. Connections to existing utilities would be identified during detailed design and any need for hazardous materials abatement identified. The proposed New Café location is not near any existing ERP sites.</p>	<p>No new construction is anticipated as part of the FEMA Trailer Emergency Staging Area, so no use of hazardous materials or generation of hazardous waste would be anticipated. Operation of the staging area would involve many motor vehicles on a daily basis, some leaks of fuel or oils could occur from tractor-trailers or other vehicles. A spill response kit would be maintained at the FEMA Staging Area to facilitate rapid response to any releases and minimize potential threats to existing storm drainage or soils and subsurface. Conduct of operations in the Emergency Staging Area would require power supply to temporary storage and office facilities, and to refrigerated tractor-trailers. No use of generators to supply temporary power is anticipated, so no refueling or transfer of fuel is anticipated.</p>	<p>There would be no change in hazardous materials and waste management activities.</p>

Affected Environment	Gate 22B – New Gate/Road Realignment	New NMUSAF Café	Emergency Staging Area for FEMA Trailers	No Action Alternative
Safety and Occupational Health	<p>The new Gate 22B replacement contractor would be responsible for preparing and implementing a construction health and safety plan (HASP) to maintain construction contractor safety as well as the public that would continue to access Area B via existing Gate 22B over the course of construction. The HASP would include standard operating procedures (SOPs) for all construction activities using methods and procedures implemented on public roadwork construction projects. Temporary rerouting of entry and exit traffic would be necessary where existing and new gate/road footprints overlap. Daily work zones would be established and demarcated with hazard cones, flags, fencing or jersey barriers to restrict access between public traffic and construction activities. “Spotters” would be assigned to control movement of construction equipment and crew in proximity to existing/temporarily relocated gate operations. Safety hazards to the construction crew and to the public could be minimized by curtailing construction activities during morning and evening peak traffic hours, and by scheduling as much construction as possible during second and/or third shift operating hours when existing Gate 22B is closed.</p> <p>Following construction completion and commissioning, a demolition contractor would proceed with demolition of existing Gate 22B. The contractor would be required to develop a Demolition Plan, associated SOPs and HASPs for each type and stage of demolition and to protect nearby new Gate 22B personnel and facilities.</p> <p>The New Gate 22B would be designed to meet UFC standards for worker safety in security/access control points and for AT/FP requirements.</p>	<p>Contractors would be required to establish and maintain safety programs, develop HASPs, and adhere to SOPs. Any potential adverse impacts to the health and safety of nearby NMUSAF personnel or patrons would be minimized by clearly identifying the work zone and prohibiting access to unauthorized individuals. Specific work plans and exclusion areas would need to be established to make connections to existing NMUSAF utilities, some of which may be located in the existing building interior spaces.</p> <p>Per the “Final NMUSAF Master Plan” (WPAFB April 2022), the existing NMUSAF does not meet UFC 4-010-01, <i>DoD Minimum Antiterrorism Standards for Buildings</i> that require a 108-foot standoff distance between exterior walls and POV roadways and parking lots, and a larger standoff (213 feet) at the Museum entrance atrium and theater. A separate project is being developed to address these deficiencies. Because the proposed New NMUSAF Café site is located between two existing NMUSAF buildings and within the NMUSAF exterior footprint, it will not aggravate the existing AT/FP standoff deficiencies. No adverse effect to AT/FP would be expected as a result of constructing the New NMUSAF Café.</p>	<p>FEMA would be required to develop and implement a HASP for all use of the existing Area B Runway 09/27 to stage emergency supply trailers. At a minimum, the HASP would need to establish traffic control procedures to ensure vehicle and pedestrian safety, safety requirements for temporary lighting, safety requirements for provision of temporary power (temporary utility power), and health procedures for provision of temporary sanitary facilities (water and sewer). The FEMA HASP would have to be reviewed and approved by WPAFB prior to any on-site activities.</p> <p>The UFC 4-010-01, <i>DoD Minimum Antiterrorism Standards for Buildings</i> apply to permanent existing and new construction. FEMA use of the Area B Runway 09/27 to stage emergency supply trailers is not expected to include any new construction. Access into the area would be via the Spinning Gate off Airway Road to the south, rather than through secure Base ECPs such as Gate 22B. An interior security fence separates the emergency staging area from other secure portions of Area B, so no adverse effects to WPAFB AT/FP would be expected. FEMA would be required to develop and implement a temporary security provision to ensure AT/FP security of FEMA personnel, DAF observers, and the public during emergency staging events.</p>	There would be no change in safety and occupational health activities.
Socioeconomics	<p>A short-term beneficial impact would be expected on the local economy from jobs and revenue generated by construction activities. Negligible, if any, long-term socioeconomic impacts would result from operation of the proposed new Gate 22B. Gate staffing would increase by less than 10 personnel with an additional POV gate and the new CVI facility, increasing jobs and payroll nominally. Operation of the new CVI facility should improve commercial delivery vehicle access to Area B (since commercial vehicles must currently enter Gate 26A in Area A for inspection and a gate pass, and then enter Area B by another gate), and should result in improved operating efficiencies for local area delivery services.</p> <p>No direct or indirect impacts to children would be anticipated.</p>	<p>A short-term beneficial impact would be expected on the local economy from jobs and revenue generated by construction activities. Negligible long-term socioeconomic impacts would result from operation of the proposed new NMUSAF Café. Staffing could increase slightly from the existing Valkyrie café, and some additional Café jobs may result from larger or more frequent events staged at the new Café. The new Café would be expected to retain more NMUSAF visitors who might otherwise leave the Museum for meals, increasing revenue slightly.</p> <p>No direct or indirect impacts to children would be anticipated.</p>	<p>Use of the emergency staging area for FEMA trailers would not be expected to result in significant socioeconomic impacts as no permanent construction is anticipated or permanent changes in employment. During FEMA emergency events, a temporary influx of additional population (participants, management or observers) would occur in Area B that would include lodging, meals, fuel and incidental expenses for those personnel in the local WPAFB economy. Additional local expenditures would be for temporary facilities such as office trailers, sanitary facilities, and traffic control.</p> <p>Children in the local neighborhoods across Airway Road would be subjected to temporary increases in truck traffic and congestion, including air emissions, noise and safety hazards.</p>	There would be no change to socioeconomic conditions.

Table 3-1
DoD Past, Present, and Reasonably Foreseeable Actions – Area B

+	Description	Planned Year of Implementation	Potential Resources Affected
Acquisition Management Complex	MILCON	FY 2026 – 2030	Noise, Air Quality, Earth Resources, Occupational Health and Safety, Traffic/Transportation, Infrastructure/Utilities
Advanced Materials Research Laboratory - Consolidate to Accelerate (C2A)	MILCON	FY 2026 – 2030	Noise, Air Quality, Earth Resources, Water Resources, Cultural Resources, Occupational Health and Safety, Hazardous Materials/Waste, Infrastructure
Human Performance Wing Laboratory	MILCON	FY 2027 in FY 2025 FYDP	Noise, Air Quality, Earth Resources, Occupational Health and Safety, Traffic/Transportation, Infrastructure/Utilities
Hilltop EUL Mixed Use Development	EUL	FY 2026 – 2030	Noise, Air Quality, Earth Resources, Water Resources, Cultural Resources, Occupational Health and Safety, Hazardous Materials/Waste, Infrastructure/Utilities
Gerlaugh Farm EUL Office Development	EUL	FY 2030 – 2035	Noise, Air Quality, Earth Resources, Water Resources, Cultural Resources, Occupational Health and Safety, Hazardous Materials/Waste, Infrastructure/Utilities
AFIT Research Laboratory	MILCON	FY 2026 – 2030	Noise, Air Quality, Earth Resources, Water Resources, Occupational Health and Safety, Hazardous Materials/Waste, Infrastructure/Utilities
Air Force Test Center Building F/20004 Modernization and Addition	MILCON	FY 2026 – 2030	Noise, Air Quality, Earth Resources, Water Resources, Cultural Resources, Occupational Health and Safety, Hazardous Materials/Waste, Infrastructure/Utilities
F/20014 (Aircraft Research Engineering)	Demolition; Connecting Tunnel between F/20011, F/20014, and F/20015	FY 2026	Noise, Air Quality, Earth Resources, Occupational Health and Safety, Hazardous Materials/Waste, Traffic/Transportation, Infrastructure/Utilities
F/20477 (Hazardous Waste Storage & Transfer)	Demolition	FY 2027	Noise, Air Quality, Earth Resources, Occupational Health and Safety, Hazardous Materials/Waste, Traffic/Transportation, Infrastructure/Utilities

+	Description	Planned Year of Implementation	Potential Resources Affected
F/20016 (Administrative) F/20091 (Weather Office); F/20039 (Audio-Visual Facility) F/20168 (Air University Professional/ Technical) F/20196 (Research & Development Storage Facility)	Demolition	FY 2029	Noise, Air Quality, Earth Resources, Cultural Resources (F/20016), Occupational Health and Safety, Hazardous Materials/Waste, Traffic/Transportation, Infrastructure/Utilities

Table 3-2

Gate 22B – New Gate/Road Realignment Emissions

Pollutant	Action Emissions (ton/yr)	General Conformity	
		Threshold (ton/yr)	Exceedance (Yes of No)
VOC	0.273	100	No
NOx	0.991	100	No
CO	1.937		
SOx	0.003		
PM ₁₀	0.975		
PM _{2.5}	0.038		
Pb	0.000		
CO _{2e}	264 (mton/yr)	68,039 (mton/yr)	No

Table 3-3
New NMUSAF Café Emissions

Pollutant	Action Emissions (ton/yr)	General Conformity	
		Threshold (ton/yr)	Exceedance (Yes of No)
VOC	0.119	100	No
NO _x	0.535	100	No
CO	1.003		
SO _x	0.001		
PM ₁₀	0.419		
PM _{2.5}	0.021		
Pb	0.000		
CO _{2e}	148 (mton/yr)	68,039 (mton/yr)	No

Table 3-4
Emergency Staging Area for FEMA Trailers Emissions

Pollutant	Action Emissions (ton/yr)	General Conformity	
		Threshold (ton/yr)	Exceedance (Yes of No)
VOC	0.306	100	No
NO _x	1.332	100	No
CO	2.675		
SO _x	0.007		
PM ₁₀	0.052		
PM _{2.5}	0.044		
Pb	0.000		
CO _{2e}	672 (mton/yr)	68,039 (mton/yr)	No

Table 3-5
Total Emissions for All Proposed Actions

Pollutant	Action Emissions (ton/year)	General Conformity	
		Threshold (ton/year)	Exceedance (Yes of No)
VOC	0.698	100	No
NO _x	2.858	100	No
CO	5.615		
SO _x	0.011		
PM ₁₀	1.446		
PM _{2.5}	0.103		
Pb	0.000		
CO _{2e}	1,084 (mton/yr)	68,039 (mton/yr)	No

**Table 3-6
Ambient Noise Sampling Site Data**

Sampling Site No.	Leq (1hr) (dBA)	L10 (dBA)	L50 (dBA)	L90 (dBA)	Date of Sampling	Time of Day of Sampling	Weather
1	53.1	57.6	47.2	41.9	12/7/2021	1530-1630	24°F, winds 0-2.5 mph; mostly cloudy; light snow during a portion of sampling
2	62.3	65.5	61.2	53.3	12/8/2021	1055-1155	31°F; winds 2.5-4 mph; mostly clear skies
3	66.3	69.6	65.5	55.9	12/8/2021	1250-1350	37°F; winds 0-6 mph; mostly clear skies
4	62.9	65.3	62.3	57.5	12/8/2021	1400-1500	38°F; winds 0-4 mph; mostly clear skies

**Table 3-7
Proposed Construction Equipment and Associated Noise for Gate 22B Project**

Construction Equipment	L _{Amax} dB at 50 ft distance	L _{Amax} dB at 1800 feet
Backhoe	77.6	46.4
Dozer	81.7	50.5
Front end loader	79.1	48.0
Grader	85.0	53.9
Tractor	84.0	52.9

**Table 3-8
Proposed Construction Equipment and Associated Noise for NMUSAF Café Project**

Construction Equipment	L _{Amax} dB at 50 ft distance	L _{Amax} dB at 2000 feet
Backhoe	77.6	45.5
Dozer	81.7	49.6
Front end loader	79.1	47.1
Grader	85.0	53.0
Tractor	84.0	52.0

**Table 3-9
Proposed Construction Equipment and Associated Noise West of FEMA Project**

Construction Equipment	L _{Amax} dB at 50 ft distance	L _{Amax} dB at 1556 feet	L _{Amax} dB at 847 feet
Flat Bed Truck	84.0	44.4	49.7

Table 3-10
Proposed Construction Equipment and Associated Noise South of FEMA Project

Construction Equipment	LA_{max} dB at 50 ft distance	LA_{max} dB at 905 feet
Flat Bed Truck	84.0	49.1

Table 3-11
State and Federal Listed Species Occurring at WPAFB

Common Name	Scientific Name	Federal Status	State Status
Indiana Bat	<i>Myotis sodalis</i>	Endangered	Endangered
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Threatened	Threatened
Eastern Massasauga Rattlesnake (EMR)	<i>Sistrurus catenatus</i>	Threatened	Threatened
Clubshell (subfossil)	<i>Pleurobema clava</i>	Endangered	Endangered
Rayed Bean	<i>Villosa fabalis</i>	Endangered	Endangered
Snuffbox	<i>Epioblasma triquetra</i>	Endangered	Endangered

Source: WPAFB 2022f.

Table 3-12
WPAFB & Vicinity Economic and Demographic Characteristics

Census Tract	2803	OHIO	2001.04	2101.01	2101.02	911	908	907
Location (from Area B)	WPAFB	State	East	Southeast	South	Southwest	Southwest	Southwest
Total Population	1,871	11.8M	5,665	3,231	2,311	2,786	1,443	1,286
Male	53.2 %	49.3 %	54.4 %	45.0 %	56.5 %	48.2 %	49.1 %	46.9 %
Female	46.8%	50.7 %	45.5 %	55.0 %	43.5 %	51.8 %	50.9 %	53.1 %
White	64.4 %	79.6 %	71.8 %	81.2 %	78.6 %	87.1 %	95.1 %	81.2 %
Black	22.4 %	12.3 %	15.6 %	3.3 %	4.8 %	7.0 %	1.0 %	3.7 %
Hispanic	7.8 %	4.1 %	5.7 %	4.7 %	1.4 %	5.9 %	0.0 %	5.7 %
Asian	3.5 %	2.4 %	4.8 %	8.6 %	2.9 %	3.2 %	0.0 %	3.3 %
Other	1.9 %	1.6 %	2.1 %	2.2 %	12.3 %	0.6 %	3.9 %	6.1 %
Median Age	22	39.4	22.2	34.5	31.6	26.1	43.2	45.1
Percent Under 18 years	25.0 %	22.3 %	2.5 %	11.7 %	25.0 %	29.6 %	23.5 %	17.7 %
Employed	34.5 %	59.9 %	57.8 %	70.3 %	54.4 %	42.2 %	54.1 %	57.7 %
Under Poverty Threshold – Families	7.4 %	625.9K	36.5 %	3.6 %	8.5%	1.7 %	15.9 %	21.4 %
Median Household Income	\$ 64,063	\$ 61,938	\$ 36,962	\$97,538	\$ 88,578	\$ 65,284	\$ 54,250	\$ 49,366

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates (2017 – 2021)

Appendix A
IICEP Correspondence and Public Notices

Miami Conservancy District Consultation Letters



February 27, 2025

38 E. MONUMENT AVE
DAYTON, OHIO 45402
(937) 223-1271
mcdwater.org

BOARD OF DIRECTORS

Mark G. Rentschler
Michael H. van Haaren
Beth G. Whelley

GENERAL MANAGER

MaryLynn Lodor

Mr. Darryn Warner
88 CEG/CEIEA
1450 Littrell Road, Building 22
Wright-Patterson AFB, OH 45433-5209

Re: Huffman Storage Basin, WPAFB, 3 Projects in Area B

Dear Mr. Warner:

We have reviewed the proposed actions involving Gate 22B, new National Museum of the U.S. Air Force Café and the Emergency Staging area for FEMA Trailers within Area B of WPAFB.

The proposed projects are located downstream of the Huffman Dam and would have no impact on the Huffman Storage Basin.

Thank you for the opportunity to review and comment on your projects.

If you have any further questions please contact me at (937) 223-1278, ext. 3230 or by email at rfarrier@mcdwater.org.

Sincerely,

Roxanne H. Farrier
Property Administrator

cc: Don O'Connor

Ohio Department of Natural Resources Consultation Letters



**Department of
Natural Resources**

ohiodnr.gov

Mike DeWine, Governor
Jim Tressel, Lt. Governor
Mary Mertz, Director

Office of Real Estate & Land Management

Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

March 20, 2025

Darryn Warner
United States Air Force
1450 Littrell Road, Building 22
Wright-Patterson Air Force Base, Ohio 43229

Re: 25-0322 - WPAFB Area B Improvements

Project: The proposed project involves reconfiguring the existing entry control point by constructing a new gate house and realigning the road, constructing a New National Museum of the US Air Force Café, and the creation of an emergency staging area for FEMA trailers.

Location: The proposed project is located in Beaver Creek Township, Greene County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

Natural Heritage Database: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. Records searched date from 1980.

Please note that Ohio has not been completely surveyed, and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, and the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has

been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH \geq 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#)." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.

Federally Endangered

clubshell (*Pleurobema clava*)

snuffbox (*Epioblasma triquetra*)

rayed bean (*Villosa fabalis*)

Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the tonguetied minnow (*Exoglossum laurae*), a state threatened fish. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact this species.

Historically the eastern massasauga (*Sistrurus catenatus*), a state endangered, and federally threatened snake species is known from the Wright-Patterson Air Force base. The eastern massasauga uses a range of habitats including wet prairies, fens, and other wetlands, as well as adjacent drier upland habitat. While the eastern massasauga has not been observed in some time, any projects in suitable habitat should consider this species.

The project is within the range of the smooth greensnake (*Opheodrys vernalis*), a state endangered species. This species is primarily a prairie inhabitant but also found in marshy meadows and roadside

ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

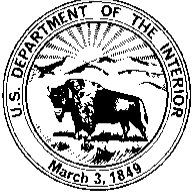
If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer [website](#) can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew (Environmental Services Administrator) at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

U.S. Fish and Wildlife Service Consultation Letters

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994



February 26, 2025

Project Code: 2025-0060742

Dear Mr. Warner:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse effects to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

The Service has reviewed your project description and concurs with your determination that the project, as proposed, is not likely to adversely affect the federally endangered Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*), and the proposed endangered tricolored bat (*Perimyotis subflavus*) for Project 2: new National Museum of the U.S. Air Force café and Project 3: emergency staging area for FEMA Trailers. This is based on the commitment to cut all trees ≥ 3 inches diameter at breast height only between October 1 and March 31 in order to avoid adverse effects to the Indiana bat, northern long-eared bat, and tricolored bat.

As the amount of tree clearing required for Project 1: Gate 22B New Gate/Road Realignment, is currently unknown, we cannot complete consultation for this project at this time. Once final project designs have been developed and the amount of unavoidable tree clearing is known we will be able to complete consultation.

This concludes consultation for Projects 2 and 3 as required by section 7(a)(2) of the ESA. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

State Historic Preservation Office (SHPO) Consultation Letters



March 24, 2025

In reply, please refer to:
2025-GRE-64197

Steven Byington, CRM
88 CEG/CEIEA
1450 Littrell Road
Wright-Patterson Air Force Base, Ohio 45433-5209

RE: Area B Projects – Environmental Assessment
Wright-Patterson Air Force Base, Greene County, Ohio

Dear Mr. Byington:

This letter is in response to correspondence received on February 26, 2025. Our comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated regulations at 36 CFR Part 800.

Wright-Patterson Air Force Base (WPAFB) is preparing an Environmental Assessment (EA) in accordance with the requirement of the National Environmental Policy Act (NEPA) of 1969 to address environmental impacts associated with three new projects to be located in Area B at WPAFB. WPAFB is seeking informal consultation with Ohio's State Historic Preservation Office regarding the following proposed projects:

- Project 1: Gate 22 B – New Gate/Road Realignment
- Project 2: New National Museum of the U.S. Air Force (NMUSAF) Café
- Project 3: Emergency Staging Area for Federal Emergency Management Agency (FEMA) Trailers

The Area of Potential Effects for all three projects include the Wright Field Historic District. It is our understanding that project design/architectural drawings for Projects 1 and 2 will be submitted to our office once they are available.

Project 3 is not anticipated to require any permanent modifications or construction that would impact the significance or integrity of Wright Field Historic District. FEMA's use of the staging area is expected to be temporary, and the area would revert to existing conditions following an exercise or emergency event. It is our understanding that proposed design plans will be coordinated with our office prior to construction if permanent alterations are required.

We look forward to further coordination regarding Projects 1 and 2 in Area B of WPAFB. Following the submission of project plans, our office will be able to provide formal concurrence with effect determinations. If you have any questions, please do not hesitate to contact me at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink that reads "Joy Williams".

Joy Williams, Senior Project Reviews Manager
Resource Protection and Review

"Please be advised that this is a Section 106 decision. This review decision may not extend to other SHPO programs."

RPR Serial No: 1107660

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org


**Notice of Availability/Early Public
Notice (as applicable)**

EARLY PUBLIC NOTICE PROPOSED ACTION NEAR A WETLA



EARLY PUBLIC NOTICE Proposed Action near a Wetland Area B Improvements Wright-Patterson Air Force Base (WPAFB), Ohio The U.S. Department of the Air Force is providing early public notice in Accordance with EO 11990 and 44 CFR § 9.8 for proposed projects that may affect a wetland. The Environmental Assessment (EA) is titled Area B Improvements at WPAFB, Ohio. The proposed action is to implement: Project 1: Gate 22 B New Gate/Road Realignment Project 2: New National Museum of the U.S. Air Force Café Project 3: Emergency Staging Area for Federal Emergency Management Agency (FEMA) Trailers Due to the presence of an adjacent small wetland area to the Gate 22 B project, a Finding of No Practicable Alternative (FONPA) section is included in the Finding Of No Significant Impact and the EA. The public comment period ends on January 25, 2026. Written comments or inquiries can be mailed to: 88 ABW / Public Affairs 5135 Pearson Road, Building 10, Room 252 WPAFB, OH 45433 Email to: 88abw.pa@us.af.mil. 12-26/2025

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Order no: 90216377
Publication: 3021-Fairborn Daily Herald
Start Date: 12/26/2025
Expires: 12/26/2025

EARLY PUBLIC NOTICE Proposed Action near a Wetland Area B Improvements Wright-Patterson Air Force Base (WPAFB), Ohio The U.S. Department of the Air Force is providing early public notice in Accordance with EO 11990 and 44 CFR § 9.8 for proposed projects that may affect a wetland. The Environmental Assessment (EA) is titled Area B Improvements at WPAFB, Ohio. The proposed action is to implement: + Project 1: Gate 22 B - New Gate/Road Realignment + Project 2: New National Museum of the U.S. Air Force Café + Project 3: Emergency Staging Area for Federal Emergency Management Agency (FEMA) Trailers Due to the presence of an adjacent small wetland area to the Gate 22 B project, a Finding of No Practicable Alternative (FONPA) section is included in the Finding Of No Significant Impact and the EA. The public comment period ends on January 25, 2026. Written comments or inquiries can be mailed to: 88 ABW / Public Affairs 5135 Pearson Road, Building 10, Room 252 WPAFB, OH 45433 Email to: 88abw.pa@us.af.mil. PUB:December 26, 2025 90216377

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Legals : Legals

Order no: 90216377
Publication: 3001-Xenia Gazette
Start Date: 12/26/2025
Expires: 12/26/2025

EARLY PUBLIC NOTICE Proposed Action near a Wetland Area B Improvements Wright-Patterson Air Force Base (WPAFB), Ohio The U.S. Department of the Air Force is providing early public notice in Accordance with EO 11990 and 44 CFR § 9.8 for proposed projects that may affect a wetland. The Environmental Assessment (EA) is titled Area B Improvements at WPAFB, Ohio. The proposed action is to implement: + Project 1: Gate 22 B - New Gate/Road Realignment + Project 2: New National Museum of the U.S. Air Force Café + Project 3: Emergency Staging Area for Federal Emergency Management Agency (FEMA) Trailers Due to the presence of an adjacent small wetland area to the Gate 22 B project, a Finding of No Practicable Alternative (FONPA) section is included in the Finding Of No Significant Impact and the EA. The public comment period ends on January 25, 2026. Written comments or inquiries can be mailed to: 88 ABW / Public Affairs 5135 Pearson Road, Building 10, Room 252 WPAFB, OH 45433 Email to: 88abw.pa@us.af.mil. PUB:December 26, 2025 90216377

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Appendix B
ACAM Summary Reports

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: WRIGHT-PATTERSON AFB
State: Ohio
County(s): Montgomery ; Greene
Regulatory Area(s): Dayton-Springfield, OH

b. Action Title: Project 1: WPAFB Gate 22B – New Gate/Road Realignment

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The Proposed Action consists of:

- Construction of a new Gatehouse, canopy, ID checkpoint, 8 guardbooths, CVI facility, Visitor Control Center, and Overwatch.
- Construction and paving of new roadways, including 13th Street widening, 3 new traffic circles, two additional inbound lanes.
- Site grading and trenching.
- Demolition of current Gatehouse (F/20220), guardbooths, canopy, and 0.2 miles of Loop Road.
- Personnel

The alternative is a No Action Alternative.

f. Point of Contact:

Name: Alea Smith
Title: Contractor
Organization: Oneida ESC Group
Email: adsmith@oesegroup.com
Phone Number: 405-517-4266

2. Analysis: Total reasonably foreseeable net change in direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" (highest annual emissions) and "steady state" (no net gain/loss in emission stabilized and the action is fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

All emissions estimates were derived from various sources using the methods, algorithms, and emission factors from the most current *Air Emissions Guide for Air Force Stationary Sources*, *Air Emissions Guide for Air Force Mobile Sources*, and/or *Air Emissions Guide for Air Force Transitory Sources*. For greater details of this analysis, refer to the Detail ACAM Report.

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

applicable
 not applicable

Conformity Analysis Summary:

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Dayton-Springfield, OH			
VOC	0.273	100	No
NOx	0.991	100	No
CO	1.937		
SOx	0.003		
PM 10	0.975		
PM 2.5	0.038		
Pb	0.000		
NH3	0.008		

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Dayton-Springfield, OH			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		

The Criteria Pollutants (or their precursors) with a General Conformity threshold listed in the table above are pollutants within one or more designated nonattainment or maintenance area/s for the associated National Ambient Air Quality Standard (NAAQS). These pollutants are driving this GCR Applicability Analysis. Pollutants exceeding the GCR thresholds must be further evaluated potentially through a GCR Determination.

The pollutants without a General Conformity threshold are pollutants only within areas designated attainment for the associated NAAQS. These pollutants have an insignificance indicator for VOC, NOx, CO, SOx, PM 10, PM 2.5, and NH3 of 250 ton/yr (Prevention of Significant Deterioration major source threshold) and 25 ton/yr for Pb (GCR de minimis value). Pollutants below their insignificance indicators are at rates so insignificant that they will not cause or contribute to an exceedance of one or more NAAQSs. These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Refer to the *Level II, Air Quality Quantitative Assessment Insignificance Indicators* for further details.

None of the annual net change in estimated emissions associated with this action are above the GCR threshold values established at 40 CFR 93.153 (b); therefore, the proposed Action has an insignificant impact on Air Quality and a General Conformity Determination is not applicable.

Alea Smith, Contractor
Name, Title

Apr 17 2025
Date

**AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)**

AIR CONFORMITY APPLICABILITY MODEL REPORT

GREENHOUSE GAS (GHG) EMISSIONS

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to estimate GHG emissions associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the GHG emissions analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: WRIGHT-PATTERSON AFB
State: Ohio
County(s): Montgomery ; Greene
Regulatory Area(s): Dayton-Springfield, OH

b. Action Title: Project 1: WPAFB Gate 22B – New Gate/Road Realignment

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The Proposed Action consists of:

- Construction of a new Gatehouse, canopy, ID checkpoint, 8 guardbooths, CVI facility, Visitor Control Center, and Overwatch.
- Construction and paving of new roadways, including 13th Street widening, 3 new traffic circles, two additional inbound lanes.
- Site grading and trenching.
- Demolition of current Gatehouse (F/20220), guardbooths, canopy, and 0.2 miles of Loop Road.
- Personnel

The alternative is a No Action Alternative.

f. Point of Contact:

Name: Alea Smith
Title: Contractor
Organization: Oneida ESC Group
Email: adsmith@oescgroup.com
Phone Number: 405-517-4266

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action's start through the action's "steady state" (SS, net gain/loss in emission stabilized and the action is fully implemented) of emissions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO₂ equivalents (CO₂e). The CO₂e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming

AIR CONFORMITY APPLICABILITY MODEL REPORT

GREENHOUSE GAS (GHG) EMISSIONS

impacts between different gases; the higher the GWP, the more that gas contributes to climate change in comparison to CO₂. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO₂e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO₂e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO₂e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected steady state of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e	Threshold	Exceedance
2026	263	0.01113151	0.00345998	264	68,039	No
2027 [SS Year]	0	0	0	0	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. <https://statesummaries.ncics.org/downloads/>).

State's Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	199,548,422	802,236	39,448	232,464,728
2027 [SS Year]	0	0	0	0

U.S. Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	5,136,454,179	25,626,912	1,500,708	6,251,695,230
2027 [SS Year]	0	0	0	0

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (Rtba.e., global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQSs, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

AIR CONFORMITY APPLICABILITY MODEL REPORT GREENHOUSE GAS (GHG) EMISSIONS

However, the affected area (context) of GHG/climate change is global. Therefore, the intensity or degree of the proposed action's GHG/climate change effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG and climate change effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where the action will occur) and U.S. annual emissions. The following table provides a relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	CH4	N2O	CO2e
2026-2027	State Total	399,096,843	1,604,473	78,896	464,929,455
2026-2027	U.S. Total	10,272,908,358	51,253,823	3,001,415	12,503,390,459
2026-2027	Action	263	0.011132	0.00346	264
Percent of State Totals		0.00006595%	0.00000069%	0.00000439%	0.00005687%
Percent of U.S. Totals		0.00000256%	0.00000002%	0.00000012%	0.00000211%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000028%.*

* Global value based on the U.S. emitting 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, <https://www.c2es.org/content/international-emissions>).

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: WRIGHT-PATTERSON AFB
State: Ohio
County(s): Greene ; Montgomery
Regulatory Area(s): Dayton-Springfield, OH

b. Action Title: Project 1: WPAFB New NMUSAF Café

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The Proposed Action consists of:

- Construction of new NMUSAF Cafe
- Increased personnel

The alternative is a No Action Alternative.

f. Point of Contact:

Name: Alea Smith
Title: Contractor
Organization: Oneida ESC Group
Email: adsmith@oescgroup.com
Phone Number: 405-517-4266

2. Analysis: Total reasonably foreseeable net change in direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" (highest annual emissions) and "steady state" (no net gain/loss in emission stabilized and the action is fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

All emissions estimates were derived from various sources using the methods, algorithms, and emission factors from the most current *Air Emissions Guide for Air Force Stationary Sources*, *Air Emissions Guide for Air Force Mobile Sources*, and/or *Air Emissions Guide for Air Force Transitory Sources*. For greater details of this analysis, refer to the Detail ACAM Report.

applicable
 not applicable

Conformity Analysis Summary:

2026

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Dayton-Springfield, OH			
VOC	0.119	100	No
NOx	0.535	100	No
CO	1.003		
SOx	0.001		
PM 10	0.419		
PM 2.5	0.021		
Pb	0.000		
NH3	0.004		

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Dayton-Springfield, OH			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		

The Criteria Pollutants (or their precursors) with a General Conformity threshold listed in the table above are pollutants within one or more designated nonattainment or maintenance area/s for the associated National Ambient Air Quality Standard (NAAQS). These pollutants are driving this GCR Applicability Analysis. Pollutants exceeding the GCR thresholds must be further evaluated potentially through a GCR Determination.

The pollutants without a General Conformity threshold are pollutants only within areas designated attainment for the associated NAAQS. These pollutants have an insignificance indicator for VOC, NOx, CO, SOx, PM 10, PM 2.5, and NH3 of 250 ton/yr (Prevention of Significant Deterioration major source threshold) and 25 ton/yr for Pb (GCR de minimis value). Pollutants below their insignificance indicators are at rates so insignificant that they will not cause or contribute to an exceedance of one or more NAAQSs. These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Refer to the *Level II, Air Quality Quantitative Assessment Insignificance Indicators* for further details.

None of the annual net change in estimated emissions associated with this action are above the GCR threshold values established at 40 CFR 93.153 (b); therefore, the proposed Action has an insignificant impact on Air Quality and a General Conformity Determination is not applicable.

Alea Smith, Contractor

Apr 17 2025

Name, Title

Date

AIR CONFORMITY APPLICABILITY MODEL REPORT GREENHOUSE GAS (GHG) EMISSIONS

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to estimate GHG emissions associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the GHG emissions analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: WRIGHT-PATTERSON AFB
State: Ohio
County(s): Greene ; Montgomery
Regulatory Area(s): Dayton-Springfield, OH

b. Action Title: Project 1: WPAFB New NMUSAF Café

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The Proposed Action consists of:

- Construction of new NMUSAF Cafe
- Increased personnel

The alternative is a No Action Alternative.

f. Point of Contact:

Name: Alea Smith
Title: Contractor
Organization: Oneida ESC Group
Email: adsmith@oescgroup.com
Phone Number: 405-517-4266

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action's start through the action's "steady state" (SS, net gain/loss in emission stabilized and the action is fully implemented) of emissions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO₂ equivalents (CO₂e). The CO₂e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP, the more that gas contributes to climate change in comparison to CO₂. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

AIR CONFORMITY APPLICABILITY MODEL REPORT GREENHOUSE GAS (GHG) EMISSIONS

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO₂e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO₂e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO₂e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected steady state of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e	Threshold	Exceedance
2026	147	0.00622704	0.00155724	148	68,039	No
2027 [SS Year]	0	0	0	0	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. <https://statesummaries.ncics.org/downloads/>).

State's Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	199,548,422	802,236	39,448	232,464,728
2027 [SS Year]	0	0	0	0

U.S. Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	5,136,454,179	25,626,912	1,500,708	6,251,695,230
2027 [SS Year]	0	0	0	0

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (Rtba.e., global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQSs, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

However, the affected area (context) of GHG/climate change is global. Therefore, the intensity or degree of the proposed action's GHG/climate change effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has

AIR CONFORMITY APPLICABILITY MODEL REPORT GREENHOUSE GAS (GHG) EMISSIONS

significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG and climate change effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where the action will occur) and U.S. annual emissions. The following table provides a relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	CH4	N2O	CO2e
2026-2027	State Total	399,096,843	1,604,473	78,896	464,929,455
2026-2027	U.S. Total	10,272,908,358	51,253,823	3,001,415	12,503,390,459
2026-2027	Action	147	0.006227	0.001557	148
Percent of State Totals		0.00003689%	0.00000039%	0.00000197%	0.00003179%
Percent of U.S. Totals		0.00000143%	0.00000001%	0.00000005%	0.00000118%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000016%.*

* Global value based on the U.S. emitting 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, <https://www.c2es.org/content/international-emissions>).

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: WRIGHT-PATTERSON AFB
State: Ohio
County(s): Greene ; Montgomery
Regulatory Area(s): Dayton-Springfield, OH

b. Action Title: Project 3: FEMA Emergency Staging Area

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The proposed action is estimated to last 3 months and assumes:

- 40 tractor-trailers per day dropping off supplies;
- 50 personnel during the day and 25 at night with an approximate two round trips per day per person (assumed 40 miles per day); and
- No use of on-site power generators.

The alternative is a No Action Alternative.

f. Point of Contact:

Name: Alea Smith
Title: Contractor
Organization: Oneida ESC Group
Email: adsmith@oescgroup.com
Phone Number: 405-517-4266

2. Analysis: Total reasonably foreseeable net change in direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" (highest annual emissions) and "steady state" (no net gain/loss in emission stabilized and the action is fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

All emissions estimates were derived from various sources using the methods, algorithms, and emission factors from the most current *Air Emissions Guide for Air Force Stationary Sources*, *Air Emissions Guide for Air Force Mobile Sources*, and/or *Air Emissions Guide for Air Force Transitory Sources*. For greater details of this analysis, refer to the Detail ACAM Report.

applicable
 not applicable

Conformity Analysis Summary:

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Dayton-Springfield, OH			
VOC	0.306	100	No
NOx	1.332	100	No
CO	2.675		
SOx	0.007		
PM 10	0.052		
PM 2.5	0.044		
Pb	0.000		
NH3	0.014		

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Dayton-Springfield, OH			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		

The Criteria Pollutants (or their precursors) with a General Conformity threshold listed in the table above are pollutants within one or more designated nonattainment or maintenance area/s for the associated National Ambient Air Quality Standard (NAAQS). These pollutants are driving this GCR Applicability Analysis. Pollutants exceeding the GCR thresholds must be further evaluated potentially through a GCR Determination.

The pollutants without a General Conformity threshold are pollutants only within areas designated attainment for the associated NAAQS. These pollutants have an insignificance indicator for VOC, NOx, CO, SOx, PM 10, PM 2.5, and NH3 of 250 ton/yr (Prevention of Significant Deterioration major source threshold) and 25 ton/yr for Pb (GCR de minimis value). Pollutants below their insignificance indicators are at rates so insignificant that they will not cause or contribute to an exceedance of one or more NAAQSs. These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Refer to the *Level II, Air Quality Quantitative Assessment Insignificance Indicators* for further details.

None of the annual net change in estimated emissions associated with this action are above the GCR threshold values established at 40 CFR 93.153 (b); therefore, the proposed Action has an insignificant impact on Air Quality and a General Conformity Determination is not applicable.

Alea Smith, Contractor
Name, Title

Apr 17 2025
Date

AIR CONFORMITY APPLICABILITY MODEL REPORT

GREENHOUSE GAS (GHG) EMISSIONS

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to estimate GHG emissions associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the GHG emissions analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: WRIGHT-PATTERSON AFB
State: Ohio
County(s): Greene ; Montgomery
Regulatory Area(s): Dayton-Springfield, OH

b. Action Title: Project 3: FEMA Emergency Staging Area

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The proposed action is estimated to last 3 months and assumes:

- 40 tractor-trailers per day dropping off supplies;
- 50 personnel during the day and 25 at night with an approximate two round trips per day per person (assumed 40 miles per day); and
- No use of on-site power generators.

The alternative is a No Action Alternative.

f. Point of Contact:

Name: Alea Smith
Title: Contractor
Organization: Oneida ESC Group
Email: adsmith@oescgroup.com
Phone Number: 405-517-4266

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action's start through the action's "steady state" (SS, net gain/loss in emission stabilized and the action is fully implemented) of emissions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO₂ equivalents (CO₂e). The CO₂e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP, the more that gas contributes to climate change in comparison to CO₂. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

AIR CONFORMITY APPLICABILITY MODEL REPORT GREENHOUSE GAS (GHG) EMISSIONS

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO₂e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO₂e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO₂e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected steady state of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e	Threshold	Exceedance
2026	670	0.02822835	0.00630465	672	68,039	No
2027 [SS Year]	0	0	0	0	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. <https://statesummaries.ncics.org/downloads/>).

State's Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	199,548,422	802,236	39,448	232,464,728
2027 [SS Year]	0	0	0	0

U.S. Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	5,136,454,179	25,626,912	1,500,708	6,251,695,230
2027 [SS Year]	0	0	0	0

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (Rtba.e., global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQSs, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

However, the affected area (context) of GHG/climate change is global. Therefore, the intensity or degree of the proposed action's GHG/climate change effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has

AIR CONFORMITY APPLICABILITY MODEL REPORT GREENHOUSE GAS (GHG) EMISSIONS

significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG and climate change effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where the action will occur) and U.S. annual emissions. The following table provides a relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	CH4	N2O	CO2e
2026-2027	State Total	399,096,843	1,604,473	78,896	464,929,455
2026-2027	U.S. Total	10,272,908,358	51,253,823	3,001,415	12,503,390,459
2026-2027	Action	670	0.028228	0.006305	672
Percent of State Totals		0.00016779%	0.00000176%	0.00000799%	0.00014456%
Percent of U.S. Totals		0.00000652%	0.00000006%	0.00000021%	0.00000538%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000072%.*

* Global value based on the U.S. emitting 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, <https://www.c2es.org/content/international-emissions>).

Appendix C
Ambient Noise Study
Wright-Patterson Air Force Base – Area B

Ambient Noise Study

Wright-Patterson Air Force Base- Area B

Dayton, Ohio

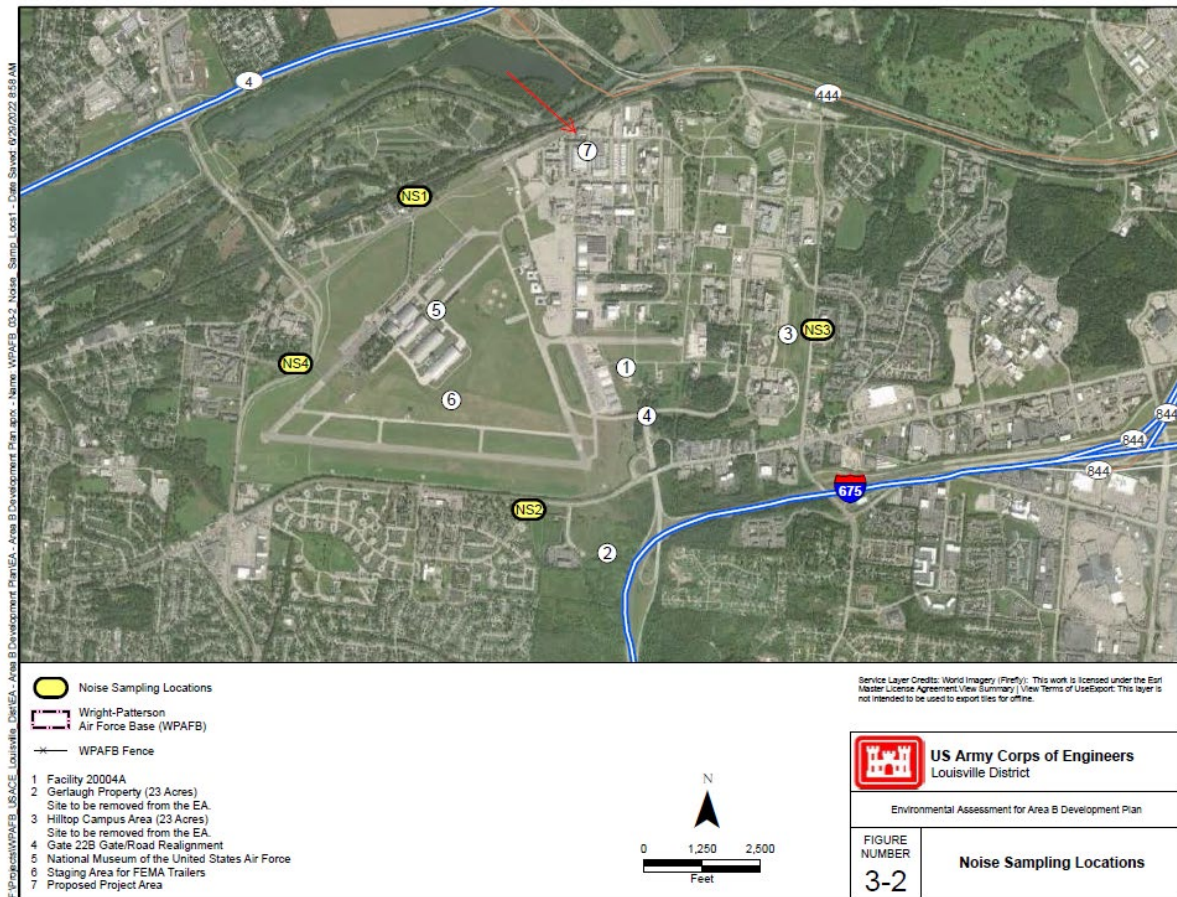
Purpose of the Study

SRS-Alliant JV was contracted to develop an Environmental Assessment (EA) for the Area B Development Plan at Wright-Patterson Air Force Base (WPAFB) in Dayton, Ohio. The scope of work (SOW) included performing an ambient noise study for the No Action Alternative. This report is a description of that study and the findings. The results of the study will be incorporated into the environmental consequences section of the before-mentioned EA. However, the study and the results are also useful for other assessments for proposed actions on the installation.

Methods

Site Selection: Location of noise sampling sites was based on the six project locations as originally stated in the SOW. Through contract modification, two project sites were removed from consideration (project sites 2 and 3) and one additional site was added (project site 7), as shown in **Figure 1**. Sample locations were then determined based on the nearest residences to each project site. Since project site 7 was added after the ambient noise study was performed, it was determined that the site was reasonably close to the other sample locations, and it was unnecessary to collect additional noise data. **Figure 1** illustrates the approximate locations of the project sites and the sample locations relative to Area B, Wright-Patterson AFB.

Sampling Equipment: The contractor leased a single Larson Davis Class 1 Integrating Sound Level Meter (SLM)/Analyzer, microphone, preamplifier, windscreen and tripod. Data were downloaded to a Dell Latitude 4700 laptop. The microphone was calibrated prior to the collection of noise data. The SLM with a microphone and windscreen was mounted to a tripod and the microphone was positioned approximately 6 feet above the ground. An example of a noise sampling station is shown in **Figure 2** below. A Garmin eTrex10 was used to obtain latitude and longitude for each location. An Extech 45160 Anemometer was used to collect wind velocity and air temperature data.



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Figure 1: Site Location Map



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Figure 2: SLM Station



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Figure 3: SLM Closeup

37 **Ambient Noise Sampling:** One hour of ambient noise sampling was collected at each of the four
 38 sites. Weather and location data were noted for each site. Significant noise sources contributing
 39 to the ambient level were noted during each sampling event. Data were downloaded to the
 40 laptop using the G4 Larson Davis Utility 4.6.5.0 x64 and subsequently viewed in Excel
 41 spreadsheets.

42 **Equipment Information**

- 43 • SLM: Larson Davis Class 1 831C (Serial Number 0010730)
- 44 • Preamplifier: PRM831 (Serial Number 023946)
- 45 • Microphone: 377B02 (Serial Number 327157)
- 46 • Calibrator: Larson Davis Cal200
- 47 • GPS: Garmin eTrex 10 (Serial Number 530143294)
- 48 • Anemometer: Extech 45160 (Serial Number A084763)

49 **Sampling Sites**

Sampling Site	Longitude	Latitude	Address	Environmental noise sources
1	-84.10822	39.78859	5915 Huberville Ave. Dayton, OH	Some automobiles along Springfield Rd; high altitude commercial aircraft; and jogger on nearby trail
2	-84.10086	39.77061	21 Gladecress Circle, Riverside, OH	Passing autos; barking dogs
3	-84.7866	39.78153	2348 National Rd, Beavercreek Township, OH	Constant flow of automobiles on National Rd.
4	-84.11909	39.77858	5173 Northcliff Dr., Dayton, OH	Fairly constant flow of automobiles on Springfield Rd

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Figure 4: Sampling Site #1



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Figure 5: Sampling Site #2



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Figure 6: Sampling Site #3



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Figure 7: Sampling Site #4

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62 **Results**

Sampling Site No.	L _{eq} (dBA)	L ₁₀ (dBA)	L ₅₀ (dBA)	L ₉₀ (dBA)	Date	Time of Day	Weather
1	53.1	57.6	47.2	41.9	12/7/2021	1530-1630	24°F; winds 0-2.5 mph; mostly cloudy; light snow during a portion of sampling
2	62.3	65.5	61.2	53.3	12/8/2021	1055-1155	31°F; winds 2.5-4 mph; mostly clear skies
3	66.3	69.6	65.5	55.9	12/8/2021	1250-1350	37°F; winds 0-6 mph; mostly clear skies
4	62.9	65.3	62.3	57.5	12/8/2021	1400-1500	38°F; winds 0-4 mph; mostly clear skies

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65 **Discussion**

66 Ambient noise, sometimes referred to as background noise, is a topic of study that started in
 67 1970’s where Schafer (1977) describes the sonic (or sound) environment. He introduced the
 68 concept of “soundscapes”. Kull (2006) explains that a study of soundscapes is a multi-
 69 disciplined acoustic description of various types of ecosystems. A soundscape is actually part of
 70 a continuum of soundscapes from completely natural environments (without any human
 71 sounds contributing to the ambient level) to completely urban soundscapes, where human
 72 noise-causing events overwhelmingly contribute to the ambient noise levels. Most soundscapes
 73 fall somewhere in between these two extreme examples. The purpose of this study was to
 74 sample the ambient noise level near residences surrounding Area B, Wright-Patterson AFB.
 75 These levels can then be treated as a baseline for any additional construction noise of the
 76 Proposed Action.

77 This study used LA_{eq} as the sound level metric to measure the ambient noise. LA_{eq} represents
 78 the A-weighted equivalent continuous sound pressure level. The SLM used in the survey was
 79 programmed to collect 1-second LA_{eq}’s for one hour at each sampling location and then provide
 80 an average LA_{eq} for that hour. The LA_{eq(1hr)} for the four sampling locations ranged from 53.1-
 81 66.3 dBA. The Results Table also lists the L₁₀, L₅₀, and L₉₀ levels. L₁₀ is the level of noise exceeded
 82 10% of the surveyed time. L₉₀ is the noise exceeded 90% of the time. Typically, the L₉₀ is
 83 considered the background level for a soundscape. From the Results Table, L₁₀ ranged from

84 57.6 to 69.6 dBA. Contrasting that with the L₉₀ level that ranged from 41.9 to 55.9 dBA. For a
85 comparison, King et al. (2012) reported LAeqs ranging from 56.0 – 64.1 dBA during the
86 mornings and afternoons for two neighborhoods in Nova Scotia, Newfoundland, Canada. One
87 site was more residential and the other mixed residential and commercial. Their L₉₀ levels
88 ranged from 43.9 to 54.6 dBA. Lee et al. (2014) measured ambient noise levels for three US
89 cities, Atlanta, Los Angeles, New York City. The mean noise levels measured 69.2, 66.4, and 65.1
90 dBA respectively. These references can give the reader confidence that the ambient levels of
91 the current study align with other urban areas.

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93 References

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95 King, Gavin, Marek Roland-Mieszkowski, Timothy Jason, and Daniel G. Rainham. 2012. Noise
96 Levels Associated with Urban Land Use. *Journal of Urban Health* 89 (6): 1017-1030.

97 Kull, Robert C. 2006. Natural and Urban Soundscapes: The Need for a Multi-Disciplinary
98 Approach. *Acta Acustica United with Acustica*. 92: 898-902.

99 Lee, Eunice Y., Michael Jerrett, Zev Ross, Patricia F. Coogan, and Edmund Y. W. Seto. 2014.
100 Assessment of Traffic-related Noise in Three Cities in the United States. *Environmental Research*
101 132: 182-189.

102 Schafer, R. M. 1977. *Our Sonic Environment and the Soundscape: The Tuning of the World*.
103 *Destiny Books*, Rochester, Vermont.

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Appendix D
Existing Gate 22B Traffic Conditions
[Excerpted from Woolpert, *Gate 22B Planning Charrette*
Report – Wright-Patterson Air Force Base, Intermediate (65%)
Submittal, September 8, 2023]

2.3.6 Communications

AT&T and other providers run a fiber and copper line to Area B from the outside of the installation along Colonel Glenn Highway by Gate 22B, which has a current fiber line connection. The cabling is routed through concrete encased conduit about 4 to 5 feet underground. The current connection can handle the additional equipment needed for Gate 22B. The line comes along the old alignment path into the wooded area east of the gatehouse to a connection point before turning west and connecting at the gatehouse.

Gate 1B is connected to fiber via a line that runs along Ninth Street to a connection point at Loop Road West and Centennial Blvd. This line proceeds along the gate entrance road and to the water wells along the fence line.

Spinning Road Gate does not have fiber optic or copper lines near the site. That area would have to be fed by the existing fiber and copper lines that are in the middle of the runway at Wright Field and that come from the east of Gate 22B to a connection point. This existing service is sufficient for the addition of a CVI facility.

Immediately north of the gate, traffic splits east or west on Loop Road, a high capacity four lane roadway that provides access into various parts of Area B. The March 2023 traffic counts showed 52% of the vehicles turning right, headed up the hill to the east side of Area B. This is different from the 2018 traffic count that showed about 62% of vehicles turning right.

Colonel Glenn Highway is an east-west public arterial along the south side of Area B, with an ADT of 20,900 vehicles per day (vpd). It provides access to Woodman Drive (west boundary of the base) and National Road along the east side of Area B. Gate 19B, the other current major gate to Area B, is off National Road. West of Gate 22B, Colonel Glenn Highway changes name to Airway Road and traffic drops to 16,400 vpd.

The Spinning Road Gate is at Airway Road, a public road outside the fence line. Once inside, a gravel perimeter road runs alongside the Wright Field runway and can be connected to Loop Road. Gate 1B is located off Springfield Street, a public road. Once past the gatehouse, vehicles can go left or right on Loop Road West or straight on Ninth Street.

2.4 ROAD NETWORK

Gate 22B is located immediately north of the I-675/ Area B/Colonel Glenn Highway, with the ramps leading directly into the gate. Most of the traffic using the gate is from the south, approaching on northbound I-675 with a long, two-lane ramp providing 5,000 feet of queue approaching the gate. The southbound exit ramp merges into the northbound ramp, but with substantially lower traffic volumes and queue length. Ramps linking Colonel Glenn Highway and Gate 22B are between I-675 and the gatehouse, complicating weaving and merging traffic flow. Average Daily Traffic (ADT) volumes are shown in Table 2.1.

Table 2.1: Historical Traffic Growth at Gate 22B

YEAR	ADT (DAILY)	PEAK AM
2014	7,532	2,302
2018	8,538	2,519
2023	6,930	2,101

Sources; 2014- MVRPC, 2018- LJB Inc. and 2023- Woolpert. Inbound Only

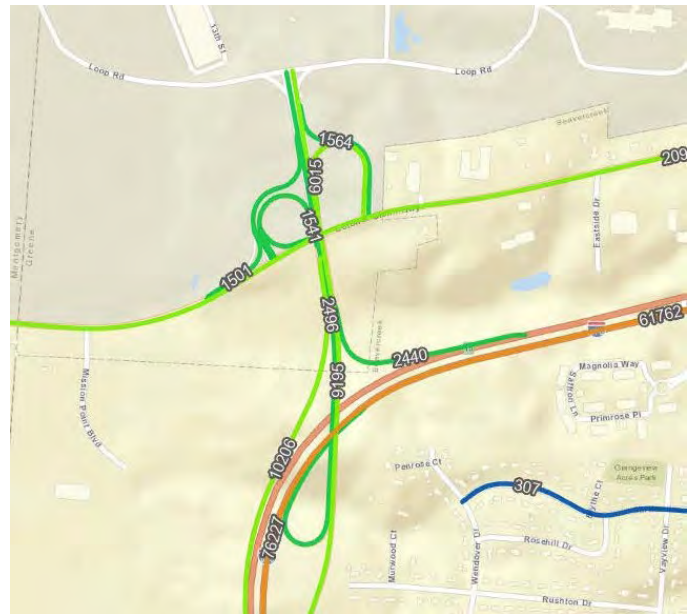


Loop Road Looking East

Gate 1B is located on the north side of Area B, off Springfield Street. It is a major public vehicle gate that was closed in 2021 and is not currently in use. The gate itself has three entry lanes, on a five-lane roadway. It connects to Loop Road, on the northwest corner of Area B.

Springfield Street is a two-lane road with added turn lanes approaching Gate 1B. It serves 18,400 vpd (2021 count). It connects to Harshman Road to the west, and National Road to the east, after merging with SR 444. East of Gate 1B, Springfield Street is limited by a 100-year-old railroad overpass (Norfolk and Southern Railroad), on a severe skew. The road is very narrow under this bridge and has been struck repeatedly by trucks in the past.

The I-675/Grange Hall Road interchange, immediately east of the Area B/Colonel Glenn interchange, also provides access to Area B. Grange Hall Road is renamed National Road north of Colonel Glenn, providing access to Gate 22B or 19B (off National). This interchange is a partial cloverleaf, with ramps to the east (westbound exit and eastbound entrance), but no access to the west. The City of Beavercreek, along with ODOT are beginning a study to complete this interchange, providing access to the west. The close spacing (0.7 miles) will need to resolve weaving between the two interchanges, but the added access could provide substantial traffic benefits including added flexibility in accessing the base and improved connection between Colonel Glenn Highway and I-675, reducing this traffic near Gate 22B.



Traffic Counts for Inbound and Outbound Gate 22B Traffic

2.4.1 Traffic Counts

During the 9 March 2023 traffic count at Gate 22B, approximately 7,000 inbound vehicles came through the gate, and about 2,100 cars during the 07:00–08:00 peak hour. After proceeding from the gate, the split of vehicles going left or right on Loop Road was about even during the day of the count and during the observation on 23 March 2023. During the 9 March 2023 traffic count, at its peak, the backup was about 220 vehicles and extended up the I-675 off-ramp to the I-675 mainline (5,000 feet). During the AM Peak, Security Forces block access to Gate 22B for outbound traffic, and the traffic signal is turned to flash to allow free-flow entry after the gate. Traffic counts at each proposed gate location are summarized in Table 2.1.

Table 2.2: Traffic Counts

ROADWAY	2023 ADT	AM PEAK TOTAL	AM INBOUND	AM OUTBOUND	PM PEAK	PM INBOUND	PM OUTBOUND
GATE 22B	13,393	2,101	2,101	0	1,946	88	1,858
COL GLENN	20,943	1,351	-	-	2,217	-	-
GATE 19B	6,274	1,638	1,446	192	1,391	192	1,199
NATIONAL	13,510	1,114	-	-	1,573	-	-
SPRINGFIELD	18,399	165	-	-	207	-	-
SPINNING/AIRWAY	16,409	1,129	-	-	1,674	-	-