ENVIRONMENTAL ASSESSMENT

ADDRESSING GATE COMPLEX CONSTRUCTION

AT

SCOTT AIR FORCE BASE, ILLINOIS

APRIL 2014

Report Documentation Page

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
AFB	Air Force Base
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AICUZ	Air Installation Compatible Use Zone
AM	morning
AMW	Air Mobility Wing
APE	Area of Potential Effect
AQCR	Air Quality Control Region
AST	aboveground storage tank
AT/FP	anti-terrorism/force-protection
BMP	best management practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CWA	Clean Water Act
dBA	A-weighted decibel
DISA	Defense Information System Agency
DNL	day-night average A-weighted sound level
DOD	Department of Defense
DOPAA	Description of the Proposed Action and Alternatives
EA	Environmental Assessment
ECF	entry control facilities
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
ft^2	square feet
FY	fiscal year
GHG	greenhouse gas
HAP	hazardous air pollutant
I-64	Interstate 64
IDEA	Installation Development Environmental Assessment
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
IL DOT	Illinois Department of Transportation
IL EPA	Illinois Environmental Protection Agency
JLUS	Joint Land Use Study
LBP	lead-based paint
LEED	Leadership in Energy and Environmental Design
LID	low-impact development
LOS	level of service
MBTA	Migratory Bird Treaty Act

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FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois

Introduction

Federal actions that potentially involve significant impacts on the environment must be reviewed in accordance with the National Environmental Policy Act (NEPA) and all other applicable laws. The U.S. Air Force (USAF) has completed an Environmental Assessment (EA) to address the potential environmental consequences associated with the USAF proposal to construct and operate a new access gate complex at Scott AFB, Illinois, and associated activities.

Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is twofold. First, the Proposed Action is to replace the existing Cardinal Creek Gate with a modern access gate complex that is capable of processing the increased number of vehicles accessing the installation following the construction of the proposed interchange with Interstate 64 (I-64). Second, the Proposed Action is to replace the commercial vehicle inspection facilities at the Mascoutah Gate with a facility at the Cardinal Creek Gate that meets all appropriate antiterrorism/force-protection (AT/FP) requirements.

The Proposed Action is needed because the existing Cardinal Creek Gate would not be able to accommodate the increased traffic volume following the construction of the new Rieder Road interchange with I-64. The substandard infrastructure at the existing Cardinal Creek Gate prevents the gate from being operated more than 4 hours per day and does not allow for bidirectional traffic flow. The Proposed Action is also needed because the commercial vehicle inspection facility at the Mascoutah Gate does not meet all appropriate AT/FP requirements. The Proposed Action is also needed to alleviate vehicle congestion at Scott AFB's other entry gates, improve on- and off-installation traffic flow in anticipation of new missions expected to result in additional personnel and future development on the northeastern portion of the installation, and shorten the distance that commercial vehicles must travel through the neighboring communities when accessing the installation from I-64.

Description of the Proposed Action

The proposed gate complex would be constructed approximately 800 feet to the northwest of Scott AFB's existing Cardinal Creek Gate. The proposed gate complex would consist of an identification check area; a gate house; a temporary kennel for military working dogs (MWDs); a truck-inspection search office; a cargo-transfer facility; a mobile vehicle and cargo inspection system; an over watch building; and a visitor center. All appropriate security infrastructure would be included in the design of the proposed gate complex so that it meets the most stringent AT/FP requirements. New signage, landscaping, pavements, parking, sidewalks, storm water drainage infrastructure, and lighting also would be included. Utility services would be extended from Scott AFB to the site of the proposed gate complex. An emergency generator would be installed to provide uninterrupted electrical service, as needed.

The access roads servicing the proposed gate complex would connect with the northern terminus of Pryor Drive at the location of the existing Cardinal Creek Gate. The Proposed Action would entail reconstructing and widening to two lanes in each direction Pryor Drive between the proposed gate complex and Golf Course Road. Reconstructing Pryor Drive would include replacing a badly deteriorated 48-inch storm water main that extends for approximately 2,100 feet under Pryor Drive from

just north of the installation boundary to Cardinal Creek. The intersection of Pryor Drive and Gunn Avenue would be improved by having a 4-way stop or traffic signal installed, and the 4-way stop at the intersection of Pryor Drive and Golf Course Road might need to be replaced with a traffic signal.

The proposed gate complex would be sited on agricultural property currently owned by St. Clair County and managed by MidAmerica Airport. Therefore, Scott AFB would acquire through purchase, lease, or easement up to 100 acres of county-owned property prior to the start of construction. The exact amount and precise location of the property to be acquired has not been determined; however, it is anticipated that all land within the footprint of the proposed buildings and roadways would be purchased and all land within the AT/FP setbacks would be obtained by easement. Appropriate adjustments would be made to the Scott AFB perimeter fence to encompass the property to be purchased. It is anticipated that approximately 100 feet of existing perimeter fence would be demolished.

The property proposed for acquisition is used for agricultural purposes but also contains two former schools with playgrounds, several parking areas, portions of Wherry Road and Scott School Road, and other impervious surfaces. Both schools would be demolished to meet the appropriate AT/FP standoff distances. The existing roadways, parking lots, and other impervious surfaces on the property proposed for acquisition also would be demolished (i.e., torn up and removed). These areas include approximately 5,000 feet of Wherry Road from Rieder Road to the existing Cardinal Creek Gate, the entire length of Scott School Road (i.e., approximately 3,100 feet), the parking areas adjacent to the two former schools, and the parking area directly to the northwest of the existing Cardinal Creek Gate. Demolition areas that do not overlap with the footprint of the proposed gate complex would be returned to a natural state or used for agriculture.

The proposed gate complex would be used 24 hours per day, 7 days per week for the inspection of privately owned vehicles (POVs). POVs would be processed in an identical manner as that currently employed at the Shiloh and Belleville Gates. Inspection of commercial vehicles at the proposed gate complex would follow similar hours (i.e., 6:00 a.m. to 4:00 p.m. Monday through Friday) and identical procedures as those currently employed at the Mascoutah Gate.

Once the proposed gate complex is in service, the Mascoutah Gate would become an emergency evacuation gate or a temporary use gate. Temporary use would mean limiting operation of the Mascoutah Gate to times when the Belleville Gate is closed due to construction activities or emergency situations. The existing truck inspection facility at the Mascoutah Gate would be converted into warehouse space.

Alternatives Considered

Two alternatives to the Proposed Action were considered: (1) modify Scott AFB's other existing gates to accommodate commercial vehicle traffic and additional traffic flow and (2) construct a new entry point to Scott AFB. Neither was determined to be a reasonable alternative and both have been eliminated from detailed analysis in this EA.

Description of the No Action Alternative

Council on Environmental Quality (CEQ) regulations require consideration of the No Action Alternative for all proposed actions. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential alternatives can be compared and consequently it is carried forward for further evaluation in the EA. The No Action Alternative would be 'no change' from current practices, or continuing with the present course of action until that action is changed.

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing Cardinal Creek Gate would continue to provide

supplemental access for light vehicles entering the installation from 6:00 a.m. to 8:00 a.m. and supplemental egress from 3:00 p.m. to 5:00 p.m. The Mascoutah Gate would continue to be Scott AFB's only truck inspection facility and would require commercial vehicles to take an indirect route to access the installation from I-64.

Summary of Anticipated Environmental Impacts

The Proposed Action and the No Action Alternative have been reviewed in accordance with the NEPA as implemented by the regulations of the Council on Environmental Quality and USAF regulation in 32 Code of Federal Regulation (CFR) 989, *Environmental Impact Analysis Process*. The analyses focused on the following environmental resources: noise, land use, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomic resources and environmental justice, infrastructure and traffic, hazardous materials and waste, and safety.

The Proposed Action would not result in significant effects on any resource area. Details of the potential environmental consequences can be found in the attached EA.

Finding

Based on the information and analysis presented in the attached EA, conducted in accordance with the requirements of the NEPA, the CEQ regulations, implementing regulations set forth in 32 CFR 989, as amended, and after a review of the agency comments submitted during the 30-day public comment period, I conclude that implementation of the Proposed Action will not result in significant impacts on the quality of the human or natural environment. For these reasons, a FONSI is approved and preparation of an Environmental Impact Statement is not warranted. This decision has been made after taking into account all submitted information, and considering a full range of practical alternatives that would meet project requirements and are within the legal authority of the USAF.

22 October 2014

KYLE J. KREMER, Colonel, USAF
Commander, 375th Air Mobility Wing (AMC)

DATE

Attachment: *Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois*

COVER SHEET

ENVIRONMENTAL ASSESSMENT ADDRESSING GATE COMPLEX CONSTRUCTION AT SCOTT AIR FORCE BASE, ILLINOIS

Responsible Agencies: U.S. Air Force (USAF), Air Force Civil Engineering Center, 375 Air Mobility Wing (AMW), and Department of Defense.

Affected Location: Scott Air Force Base (AFB), St. Clair County, Illinois.

Report Designation: Environmental Assessment (EA).

Abstract: This EA describes the USAF proposal to construct and operate a new access gate complex at Scott AFB, Illinois, for commercial and privately owned vehicles. The Proposed Action also includes widening and improving Pryor Drive from the installation boundary to Golf Course Road; replacing a storm water main under Pryor Drive; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for siting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

This EA analyzes and documents the potential environmental consequences associated with the Proposed Action and the No Action Alternative. No reasonable alternatives to the Proposed Action were analyzed because there are no other locations on Scott AFB or on adjoining properties that meet the necessary space requirements for an access gate complex. This EA aids in determining whether a Finding of No Significant Impact can be prepared or whether an Environmental Impact Statement is required.

ENVIRONMENTAL ASSESSMENT

ADDRESSING GATE COMPLEX CONSTRUCTION

AT

SCOTT AIR FORCE BASE, ILLINOIS

AIR FORCE CIVIL ENGINEERING CENTER
2261 Hughes Avenue, Suite 155
Joint Base San Antonio Lackland, Texas 78236-9853

APRIL 2014

ENVIRONMENTAL ASSESSMENT
ADDRESSING GATE COMPLEX CONSTRUCTION
AT
SCOTT AIR FORCE BASE, ILLINOIS

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1.1 Introduction

This Environmental Assessment (EA) addresses the U.S. Air Force's (USAF) proposal to construct and operate a modern access gate complex at Scott Air Force Base (AFB), Illinois. This EA analyzes the potential for significant environmental impacts associated with the Proposed Action and the No Action Alternative. The environmental documentation process associated with preparing this EA is being carried out in compliance with the National Environmental Policy Act (NEPA); the Council on Environmental Quality (CEQ) regulations implementing NEPA (Title 40 Code of Federal Regulations [CFR] Parts 1500–1508); Department of Defense (DOD) Directive 6050.1, *Environmental Considerations in DOD Actions*; and the USAF implementing regulation for NEPA, the *Environmental Impact Analysis Process* (EIAP), Air Force Instruction (AFI) 32-7061, which adopts Title 32 CFR §989, as amended, as the controlling document for EIAP.

1.2 Background

Scott AFB is in St. Clair County, Illinois, approximately 20 miles to the east of the City of St. Louis, Missouri (see **Figure 1-1**). The installation is adjoined by a mixture of commercial and residential properties to the south and west, MidAmerica Airport to the east, and agricultural land to the north. Interstate 64 (I-64) is to the north of the installation and serves as an artery for traffic coming from eastern Missouri or southeastern Illinois. Scott AFB does not directly connect with I-64; instead, Highways 4, 158, and 161 and Wherry Road are to the east, west, south, and north of the installation, respectively, and provide local access.

Scott AFB operates six vehicle access gates: the Shiloh Gate, Belleville Gate, Cardinal Creek Gate, Mascoutah Gate, Patriot's Landing Gate East, and Patriot's Landing Gate West. The current condition of each of these vehicle access gates is described as follows:

- The Shiloh and Belleville Gates are located off of Highways 158 and 161 and serve as the primary entrance and exit locations for light vehicles. The Shiloh Gate is open 24 hours per day, 7 days per week, and the Belleville Gate is open from 4:30 a.m. until 11:30 p.m. Traffic backups are common at both gates during periods of peak entry and exit. Traffic studies around Scott AFB and St. Clair County show that many intersections leading to these two gates will not be able to accommodate increases in traffic volume if additional personnel from new missions come to Scott AFB (SAFB 2013c). Both gates are in more densely populated portions of the installation, which limits future gate expansion.
- The Cardinal Creek Gate is a single-lane gate located at the southwestern terminus of Wherry Road and provides supplemental access for light vehicles entering the installation from 6:00 a.m. to 8:00 a.m. and supplemental egress from 3:00 p.m. to 5:00 p.m. The Cardinal Creek Gate is used only during these hours due to the extremely limited vehicle processing capabilities currently available. This gate lacks guard booths and canopies and has poor signage. The gate is considered a temporary facility. There also is a badly deteriorated storm water main that extends under Pryor Drive from the vicinity of the gate to Cardinal Creek. The poor condition of this storm water main has resulted in occasional flooding along Pryor Drive during rain events, which effectively closes the gate to traffic.

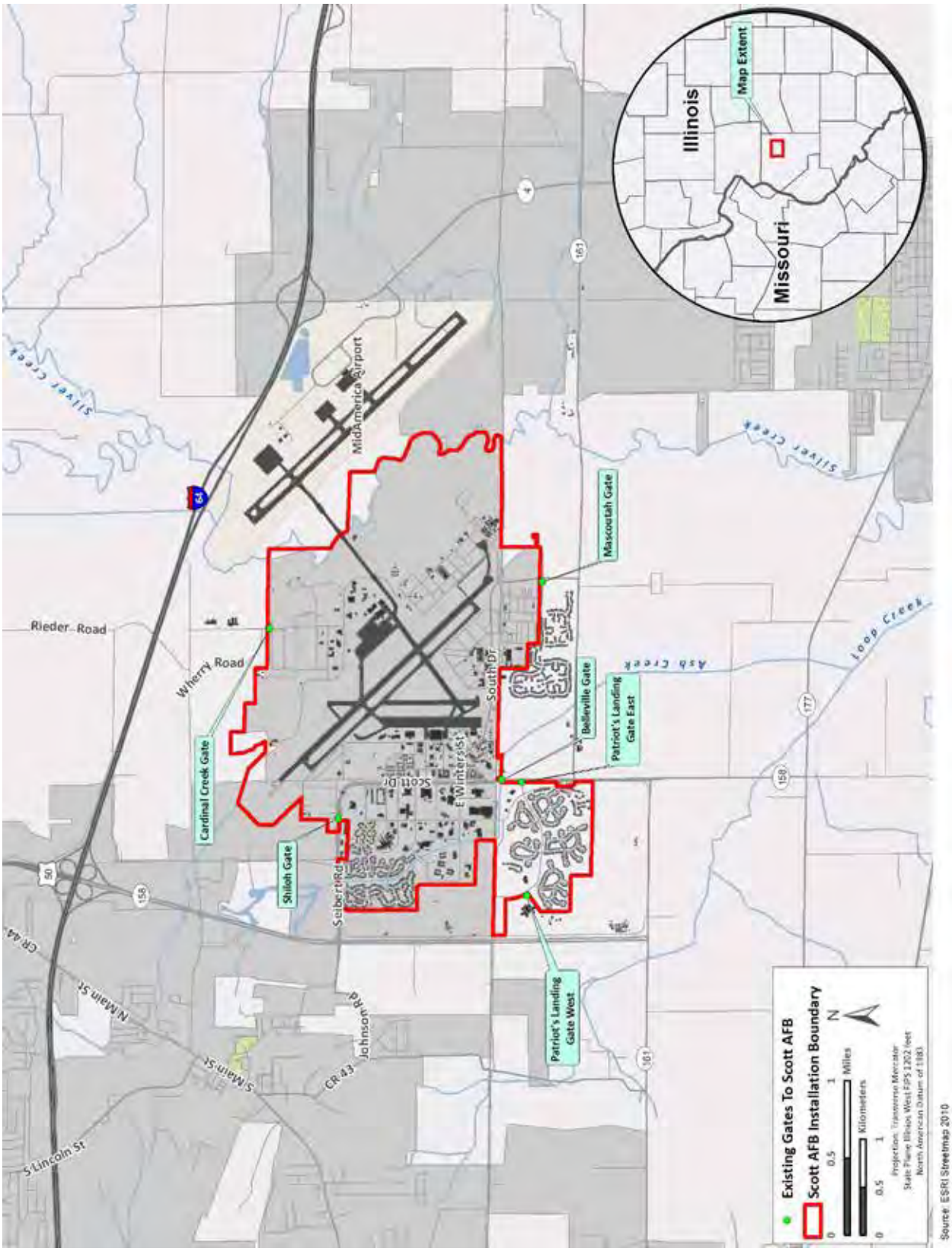

Figure 1-1. Scott AFB and Surrounding Area

- The Mascoutah Gate is on the southern side of Scott AFB and is accessed via Highway 161. This gate is used by commercial vehicles accessing the installation, and it has Scott AFB's only truck inspection facility. The Mascoutah Gate is open from 6:00 a.m. to 4:00 p.m. on Monday through Friday. The Mascoutah Gate does not meet all current anti-terrorism/force-protection (AT/FP) requirements for a truck inspection facility (SAFB 2013c). The Mascoutah Gate also requires truck traffic using I-64 to traverse an indirect route through the adjoining communities to access the installation.
- The Patriot's Landing Gate East and Patriot's Landing Gate West are temporary use gates that provide supplemental access to the Patriot's Landing Housing Area. The Patriot's Landing Gate East is located at the intersection of Patriot's Drive and Old State Route 158, which is just south of the Belleville Gate. This gate is open only during emergencies and at times when the Belleville Gate is closed for maintenance or nearby construction activities. The Patriot's Landing Gate West is located at Scott Elementary School to provide ingress and egress for parents that are dropping off and picking up children at the school. This gate is open only on days when school is in session.

The State of Illinois, in cooperation with St. Clair County, MidAmerica Airport, the Federal Aviation Administration (FAA), the Federal Highway Administration, and the Illinois Department of Transportation (IL DOT), plans to construct a new interchange from I-64 to Rieder Road to alleviate traffic issues throughout the region. The proposed interchange would provide a direct link between I-64 and the Cardinal Creek Gate, and it would reduce the amount of traffic and congestion on Highways 4, 158, and 161. The proposed interchange would also support future economic development initiatives at MidAmerica Airport. Construction of the proposed interchange is anticipated to begin during mid-2014.

1.3 Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is twofold. First, the Proposed Action is to replace the existing Cardinal Creek Gate with a modern access gate complex that is capable of processing the increased number of vehicles accessing the installation following the construction of the proposed interchange with I-64. Second, the Proposed Action is to replace the commercial vehicle inspection facilities at the Mascoutah Gate with a facility at the Cardinal Creek Gate that meets all appropriate AT/FP requirements.

The Proposed Action is needed because the existing Cardinal Creek Gate would not be able to accommodate the increased traffic volume following the construction of the new Rieder Road interchange with I-64. The substandard infrastructure at the existing Cardinal Creek Gate prevents the gate from being operated more than 4 hours per day and does not allow for bidirectional traffic flow. The Proposed Action is also needed because the commercial vehicle inspection facility at the Mascoutah Gate does not meet all appropriate AT/FP requirements. The Proposed Action is also needed to alleviate vehicle congestion at Scott AFB's other entry gates, improve on- and off-installation traffic flow in anticipation of new missions expected to result in additional personnel and future development on the northeastern portion of the installation, and shorten the distance that commercial vehicles must travel through the neighboring communities when accessing the installation from I-64.

1.4 Summary of Key Environmental Compliance Requirements

1.4.1 National Environmental Policy Act

The NEPA of 1969 (42 United States Code [U.S.C.] Section 4321–4347) is a Federal statute requiring the identification and analysis of potential environmental impacts associated with proposed Federal actions before those actions are taken. The intent of NEPA is to help decisionmakers make well-informed

decisions based on an understanding of the potential environmental consequences, and take actions to protect, restore, or enhance the environment. NEPA established the CEQ that was charged with the development of implementing regulations and ensuring Federal agency compliance with NEPA.

The CEQ regulations mandate that all Federal agencies use a prescribed structured approach to environmental impact analysis. This approach also requires Federal agencies to use an interdisciplinary and systematic approach in their decisionmaking process. This process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action.

The process for implementing NEPA is outlined in 40 CFR Parts 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*. The CEQ was established under NEPA to implement and oversee Federal policy in this process. The CEQ regulations specify that an EA be prepared to provide evidence and analysis for determining whether to prepare a Finding of No Significant Impact (FONSI) or whether the preparation of an Environmental Impact Statement (EIS) is necessary. An EA can aid in an agency's compliance with NEPA when an EIS is unnecessary and facilitate preparation of an EIS when one is required.

Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, states that the USAF will comply with applicable Federal, state, and local environmental laws and regulations, including NEPA. The USAF's implementing regulation for NEPA is EIAP, AFI 32-7061, which adopts Title 32 CFR §989, as amended, as the controlling document for EIAP.

This EA examines potential effects of the Proposed Action and No Action Alternative on 11 resource areas: noise, land use, air quality, geological resources, water resources, biological resources, cultural resources, socioeconomic resources and environmental justice, infrastructure, hazardous materials and wastes, and safety. These resources were identified as being potentially affected by the Proposed Action and No Action Alternative and include applicable elements of the human and natural environments that are prompted for review by Executive Order (EO), regulation, or policy. Upon completion of this EA, the USAF will determine whether the Proposed Action would result in significant impacts. If such impacts are predicted, then the USAF would need to decide whether to provide mitigation to reduce impacts below the level of significance, undertake the preparation of an EIS, or abandon the Proposed Action. This EA will also be used to guide the USAF in implementing the Proposed Action in a manner consistent with the USAF standards for environmental stewardship should the Proposed Action be approved for implementation.

1.4.2 Integration of Other Environmental Statutes and Regulations

To comply with NEPA, the planning and decisionmaking process for actions proposed by Federal agencies involves a study of other relevant environmental statutes and regulations. The NEPA process, however, does not replace procedural or substantive requirements of other environmental statutes and regulations. It addresses them collectively in the form of an EA or EIS, which enables the decisionmaker to have a comprehensive view of major environmental issues and requirements associated with a proposed action. According to CEQ regulations, the requirements of NEPA can be integrated "with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively."

1.4.3 Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), Native American Tribal Consultation, and Public Involvement

IICEP. NEPA requirements help ensure that environmental information is made available to the public during the decisionmaking process and prior to actions being taken. The premise of NEPA is that the

quality of Federal decisions will be enhanced if proponents provide information to the public and involve the public in the planning process. The Intergovernmental Coordination Act and EO 12372, *Intergovernmental Review of Federal Programs*, require Federal agencies to cooperate with and consider state and local views in implementing a Federal proposal. AFI 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning*, requires the USAF to facilitate agency coordination.

Through the IICEP process, Scott AFB notifies relevant Federal, state, and local agencies of the Proposed Action and alternatives and provides them with sufficient time to make known their environmental concerns specific to the Proposed Action. The IICEP process also provides the USAF the opportunity to cooperate with and consider state and local views in implementing a Federal proposal. All agencies contacted during the IICEP process and comments received are included in **Appendix A**.

Native American Tribal Consultation. EO 13175, *Consultation and Coordination with Indian Tribal Governments* (6 November 2000) directs Federal agencies to establish regular and meaningful relationships with affiliated federally recognized Native American tribal governments on a government-to-government basis. Additionally, Section 106 of the National Historic Preservation Act (NHPA) requires consultation with tribes whose interests might be impacted by activities on federally administered lands; thus, those tribes that are affiliated historically with the Scott AFB geographic region are invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. Tribes with cultural roots in an area might not currently reside in the region where the undertaking is proposed to occur due to a range of historical factors, especially the displacement of tribes from their original homelands during the 19th and 20th centuries. Effective consultation requires identification of tribes based on ethnographic and historical data and not simply a tribe's current proximity to a project area. The tribal consultation process is distinct from NEPA consultation or the IICEP processes and requires separate notification of all relevant tribes by Scott AFB. The timelines for tribal consultation are also distinct from those of intergovernmental consultations.

The goal of the tribal consultation process is not simply to consult on a particular undertaking but rather to build constructive relationships with appropriate Native American tribes. Consultation should lead to constructive dialogs in which the Native American tribes are active participants in the planning process. The Native American tribal government consultation materials for the Proposed Action are included in **Appendix A**.

Public Involvement. A Notice of Availability (NOA) for the Draft EA and Draft FONSI was published in the *Belleville News-Democrat* on 2 January 2014 announcing that these materials were made available to the public for a 30-day review period. Copies of the Draft EA and Draft FONSI were made available in the Belleville Public Library and the Scott AFB Library and on the Scott AFB Web site. The 30-day review period ended on 3 February 2014. Six members of the public offered comments by email correspondence. **Appendix A** contains a copy of the NOA, as it appeared in the *Belleville News-Democrat*, and the public comments received.

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2. Description of the Proposed Action and Alternatives

This section provides detailed information on the Proposed Action and alternatives considered, including the No Action Alternative. As discussed in **Section 1.4.1**, the NEPA process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a proposed action, as defined in **Section 1.3**. In addition, CEQ regulations also specify the inclusion of a No Action Alternative against which potential effects can be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in accordance with CEQ regulations.

2.1 Proposed Action

The Proposed Action is to replace the existing Cardinal Creek Gate with a modern access gate complex. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with I-64, and it would serve as the primary access point for vehicles coming to the installation via the new interchange. The proposed gate complex also would replace Scott AFB's existing commercial vehicle inspection facility at the Mascoutah Gate, which does not meet all appropriate AT/FP requirements and requires truck traffic using I-64 to travel an indirect route to the installation.

The proposed gate complex would be constructed approximately 800 feet to the northwest of Scott AFB's existing Cardinal Creek Gate, on agricultural property that currently is owned by St. Clair County and managed by MidAmerica Airport. The proposed gate complex would consist of an identification check area with three guard booths for incoming traffic and covered by a canopy; a gate house with indoor workstations and a temporary kennel for military working dogs (MWDs); a truck-inspection search office with a driver waiting area, offices, space for the storage of inspection equipment, and a radiation protection area for X-ray screening equipment; a cargo-transfer facility with space to remove and inspect cargo; a mobile vehicle and cargo inspection system (MVACIS); an overwatch building with controls to activate vehicle barrier systems; and a visitor center. All appropriate security infrastructure would be included in the design of the proposed gate complex so that it meets the most stringent AT/FP requirements for access-control points. New signage, landscaping, pavements, parking, sidewalks, and lighting also would be included (SAFB 2013c). **Figures 2-1** and **2-2** show the proposed layout for the gate complex.

The access roads servicing the proposed gate complex would connect with the northern terminus of Pryor Drive at the location of the existing Cardinal Creek Gate. To accommodate the increased volume of traffic, the Proposed Action would entail reconstructing and widening to two lanes in each direction Pryor Drive between the proposed gate complex and Golf Course Road. Reconstructing Pryor Drive would include replacing a badly deteriorated 48-inch storm water main that extends for approximately 2,100 feet under Pryor Drive from just north of the installation boundary to Cardinal Creek. Replacing this storm water main would alleviate the flooding that occasionally occurs along Pryor Drive during rain events and effectively closes the existing Cardinal Creek Gate. The Proposed Action would not include replacing the box culvert that carries Pryor Drive over Cardinal Creek because the culvert already is wide and strong enough to support four lanes of traffic. The intersection of Pryor Drive and Gunn Avenue would be improved by having a 4-way stop or traffic signal installed, and the 4-way stop at the intersection of Pryor Drive and Golf Course Road might need to be replaced with a traffic signal. The Proposed Action does not include road improvements to the north of the proposed gate complex, for which the State of Illinois and St. Clair County are responsible; impacts from this construction are evaluated in the cumulative impacts analysis of this EA.

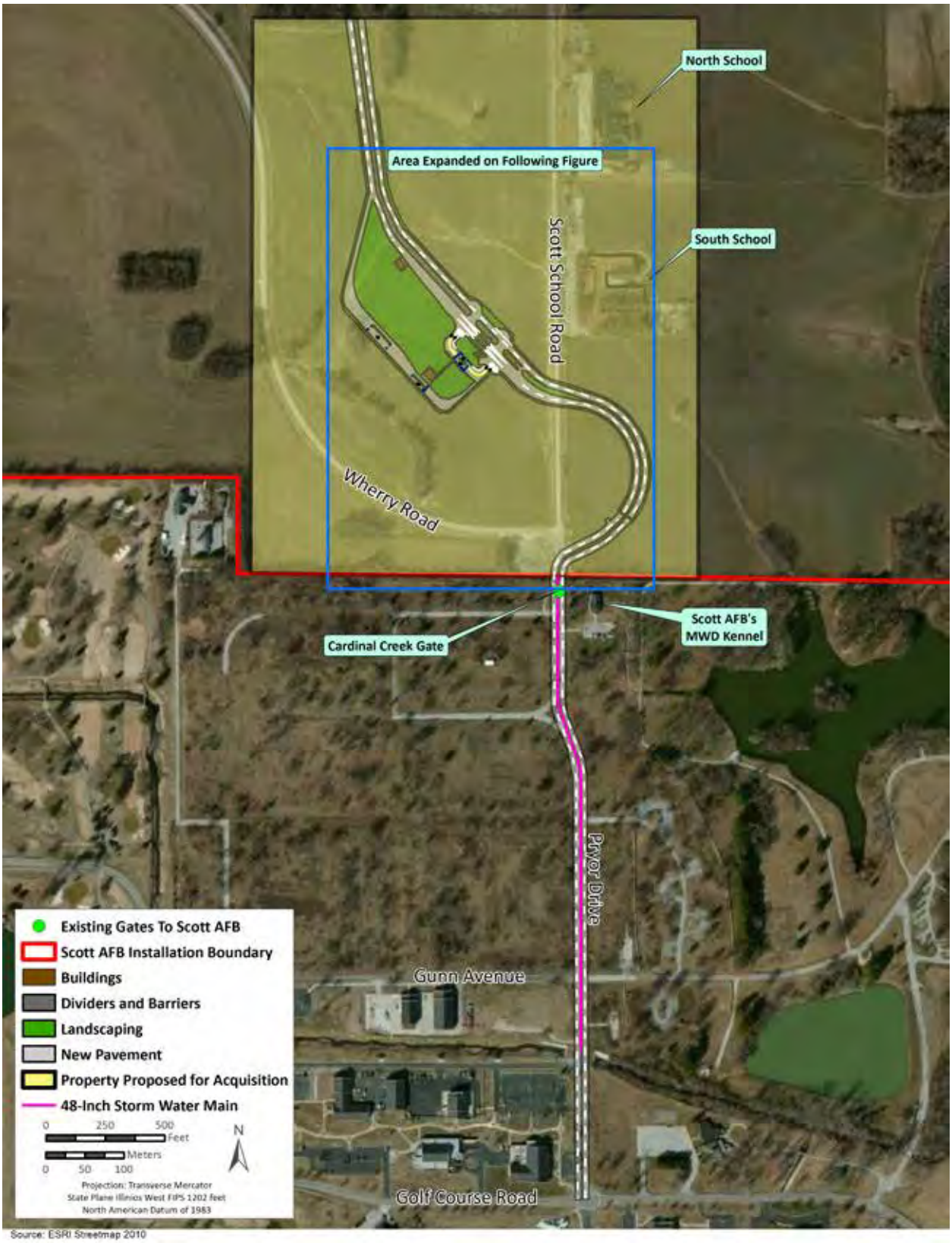


Figure 2-1. Proposed Layout for the Gate Complex and Land Acquisition

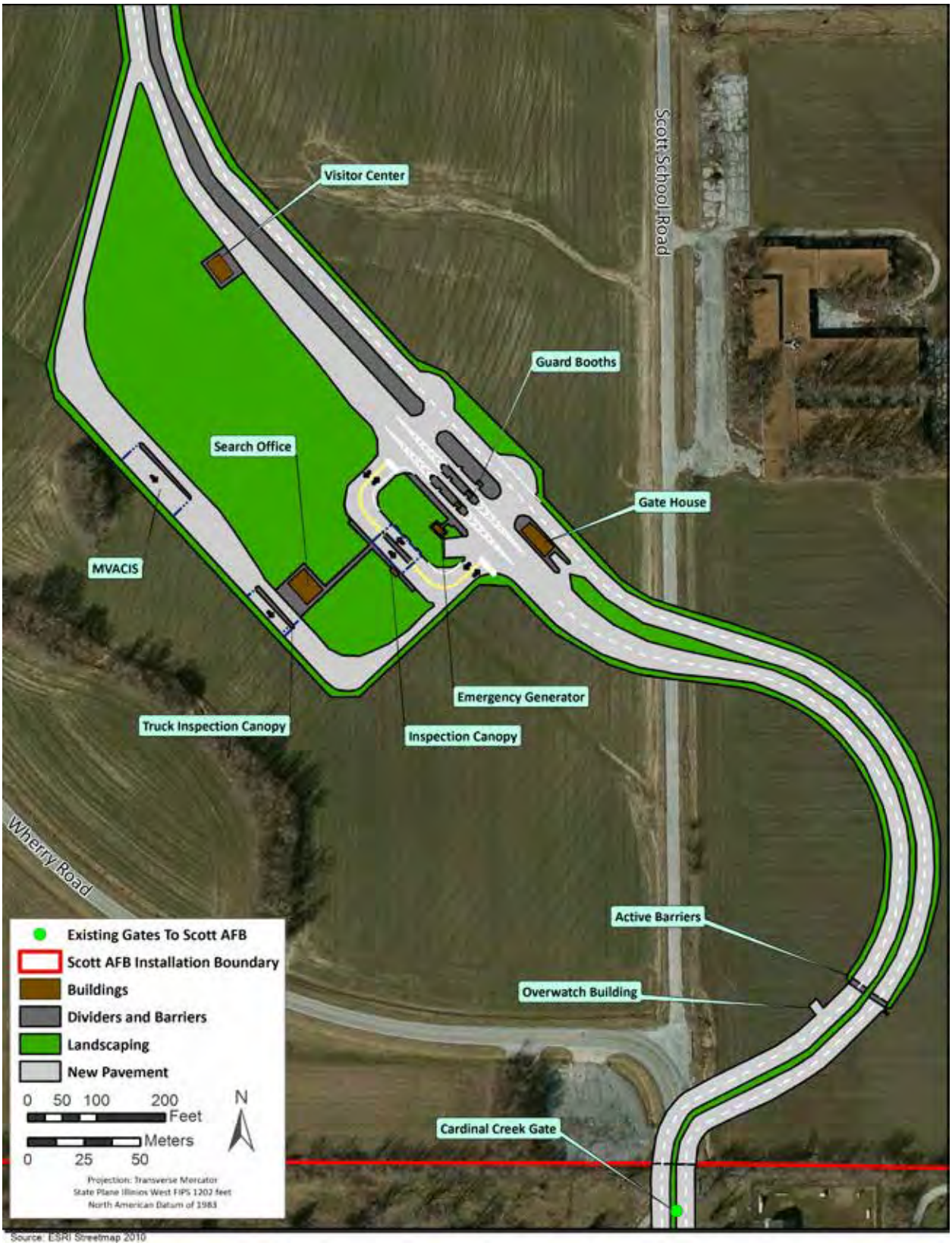


Figure 2-2. Detailed Depiction of the Proposed Layout for the Gate Complex

Utility service is not currently available to the site of the proposed gate complex; therefore, infrastructure upgrades would require extension to the site of all utilities including water, sanitary sewer, natural gas, electrical, and data transfer systems from Scott AFB. The utility conduits to be constructed are anticipated to extend underneath the proposed roadways and originate from the existing service at the northern terminus of Pryor Drive. An emergency generator would be installed adjacent to the guard booths to provide uninterrupted electrical service, as needed (SAFB 2013c). Appropriate storm water drainage infrastructure would be designed and constructed in accordance with Scott AFB's storm water management plans. The storm water drainage infrastructure would be designed with the goal of maintaining or restoring the natural hydrologic functions of the site, in accordance with the Energy Independence and Security Act (EISA) Section 438. The proposed gate complex would be designed to meet or exceed Leadership in Energy and Environmental Design (LEED) Silver criteria (SAFB 2013c).

The proposed gate complex would be sited on agricultural property currently owned by St. Clair County and managed by MidAmerica Airport. Therefore, Scott AFB would acquire through purchase, lease, or easement up to 100 acres of county-owned property prior to the start of construction. The exact amount and precise location of the property to be acquired has not been determined; however, it is anticipated that all land within the footprint of the proposed buildings and roadways would be purchased and all land within the AT/FP setbacks would be obtained by easement. This would equate to approximately 15 acres being purchased and approximately 85 acres under an easement agreement (SAFB 2013c).

Appropriate adjustments would be made to the Scott AFB perimeter fence to encompass the property to be purchased. New perimeter fence would be chain-link, approximately 7 feet in height. It would surround the new roads and buildings at approximately 30 feet distance. It is anticipated that approximately 100 feet of existing perimeter fence would be demolished.

The property proposed for acquisition is used for agricultural purposes but also contains two former schools with playgrounds, several parking areas, portions of Wherry Road and Scott School Road, and other impervious surfaces. While neither school is within the footprint of the proposed gate complex, both schools would be demolished to meet the appropriate AT/FP standoff distances (i.e., no structures permitted within 300 feet of the gate complex). The existing roadways, parking lots, and other impervious surfaces on the property proposed for acquisition also would be demolished (i.e., torn up and removed). These areas include approximately 5,000 feet of Wherry Road from Rieder Road to the existing Cardinal Creek Gate, the entire length of Scott School Road (i.e., approximately 3,100 feet), the parking areas adjacent to the two former schools, and the parking area directly to the northwest of the existing Cardinal Creek Gate. Demolition areas that do not overlap with the footprint of the proposed gate complex would be returned to a natural state or used for agriculture. Agricultural activities would be permitted no closer than 20 feet from the Scott AFB perimeter fence. **Figure 2-3** shows the approximate boundaries of the areas proposed for demolition.

Construction of the proposed gate complex would disturb an area measuring approximately 1,706,032 square feet (ft²) (39.2 acres). There would be a net decrease in impervious surfaces of approximately 289,243 ft² (6.6 acres) resulting from the demolition of the former schools, existing roads, and existing parking lots on the property proposed for acquisition. **Table 2-1** provides an estimated breakdown of the project footprint and the change in impervious surfaces from the various components of the Proposed Action. Construction and demolition of the proposed gate complex and associated infrastructure is expected to begin in 2018 and take approximately 12 months.

Figure 2-3. Areas Proposed for Demolition under the Proposed Action

Table 2-1. Estimated Footprint and Change in Impervious Surface from the Proposed Action

Component of Proposed Action	Estimated Square Footage	Change in Impervious Surface
Construction Activities		
Construct gate house	2,260 ft²	+2,260 ft²
Construct truck-inspection facility	11,722 ft²	+11,722 ft²
Construct cargo-transfer facility	4,004 ft²	+4,004 ft²
Construct overwatch building	205 ft²	+205 ft²
Construct visitor center	1,991 ft²	+1,991 ft²
Construct new roadways, sidewalks, parking areas, and other pavements	267,800 ft²	+267,800 ft²
Construct landscaping, dividers, and barriers	276,750 ft²	+41,275 ft²
Reconstruct and widen Pryor Drive to Golf Course Drive	261,400 ft²	+261,400 ft²
Demolition Activities		
Demolish the southern school	84,000 ft²	-84,000 ft²
Demolish the northern school	63,000 ft²	-63,000 ft²
Demolish Scott School Road (3,100 feet in length)	82,400 ft²	-82,400 ft²
Demolish Wherry Road from Rieder Road to installation boundary (5,000 feet in length)	248,700 ft²	-248,700 ft²
Demolish sidewalks, parking areas, playgrounds, and other pavement on the property proposed for acquisition	271,100 ft²	-271,100 ft²
Demolish Pryor Drive to Golf Course Road	130,700 ft²	-130,700 ft²
Total:	**1,706,032 ft²** (39.2 acres)	**-289,243 ft²** (-6.6 acres)

The final layout for the proposed gate complex had not been determined at this stage of project planning and undiscovered engineering constraints and other limitations might require the proposed gate complex to be constructed differently from that shown in **Figures 2-1** and **2-2**. All potential layouts for the proposed gate complex would be within the approximately 100-acre area proposed for acquisition where site conditions are identical, and the project footprint for all potential layouts would be no closer than 100 feet from archaeological site 11S1016 (see **Sections 3.7.2** and **4.7.2** for more information on this archaeological site). Additionally, all potential layouts would entail disturbance to approximately the same amount of space and changes to similar amounts of impervious surfaces as described in **Table 2-1**. As such, the Proposed Action considers these potential layouts for the proposed gate complex.

The proposed gate complex would be used 24 hours per day, 7 days per week for the inspection of privately owned vehicles (POVs). POVs would be processed in an identical manner as that currently employed at the Shiloh and Belleville Gates. Inspection of commercial vehicles at the proposed gate complex would follow similar hours (i.e., 6:00 a.m. to 4:00 p.m. Monday through Friday) and identical procedures as those currently employed at the Mascoutah Gate.

The Proposed Action would not alter staffing levels at the installation because any new positions at the proposed gate complex would be staffed using the installation's existing labor pool. The Proposed Action would not change the number of vehicles accessing the installation; however, in conjunction with the new

interchange to I-64, the Proposed Action would encourage traffic to use the proposed gate complex rather than the Shiloh and Belleville Gates and would help to reduce the amount of traffic on Highways 4, 158, and 161. Once the proposed gate complex is in service, the Mascoutah Gate would become an emergency evacuation gate or a temporary use gate. Temporary use would mean limiting operation of the Mascoutah Gate to times when the Belleville Gate is closed due to construction activities or emergency situations. The existing truck inspection facility at the Mascoutah Gate would be converted into warehouse space (SAFB 2013c).

2.2 Alternatives Considered but Eliminated from Detailed Study

Under the NEPA, the consideration and analysis of reasonable alternatives to the Proposed Action are required in an EA. Considering alternatives helps to avoid unnecessary impacts and allows for an analysis of reasonable ways to achieve the stated purpose. To warrant detailed evaluation in an EA, an alternative must be reasonable. For this Proposed Action, a reasonable alternative must meet the following selections standards:

- Accommodate the anticipated increase in traffic at the Cardinal Creek Gate following the construction of the new interchange with I-64
- Meet appropriate AT/FP standoff distances for a truck inspection facility and vehicle access gate
- Be located in proximity to a major off-installation roadway
- Limit demolition and reconstruction of gate infrastructure and other surrounding facilities.

Two alternatives to the Proposed Action, described in the following paragraphs, were considered. After applying these selection standards, neither was determined to be a reasonable alternative and both have been eliminated from detailed analysis in this EA.

2.2.1 Alternative 1: Modify Scott AFB's Other Existing Gates to Accommodate Commercial Vehicle Traffic and Additional Traffic Flow

Under Alternative 1, the USAF would modify Scott AFB's other existing gates (i.e., the Shiloh Gate, Belleville Gate, Mascoutah Gate, Patriot's Landing Gate East, or Patriot's Landing Gate West) to accommodate additional traffic flow and commercial vehicle traffic in accordance with appropriate AT/FP requirements. Due to the highly populated settings surrounding these five gates, extensive demolition and reconstruction of gate infrastructure and other surrounding facilities would be necessary to meet the appropriate AT/FP requirements. Modification of the Patriot's Landing Gate East and Patriot's Landing Gate West would be especially problematic because these gates access a housing area, and extensive demolition of housing, reconstruction of roadways, and possibly the relocation of Scott Elementary School would be necessary. Construction at any of these five gates would not address the anticipated increase in traffic at the Cardinal Creek Gate following the construction of the new interchange with I-64. As a result of all of these factors, Alternative 1 has been determined not to be a reasonable alternative, and this alternative has been eliminated from further detailed study in this EA.

2.2.2 Alternative 2: Construct a New Entry Point to Scott AFB

Under Alternative 2, the USAF would construct a new entry point to Scott AFB at a location not currently serviced by an access gate. A review of the installation boundary and surrounding community has not identified any locations that are in proximity to major off-installation roadways and meet the necessary AT/FP space requirements to construct a new access gate. As such, Alternative 2 has been determined

not to be a reasonable alternative, and this alternative has been eliminated from further detailed study in this EA.

2.3 No Action Alternative

CEQ regulations require consideration of the No Action Alternative. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and other potential action alternatives can be evaluated. The No Action Alternative would be "no change" from current practices, or continuing with the present course of action until that action is changed. The State of Illinois's proposal to construct a new interchange from I-64 to Rieder Road is a separate action from the Proposed Action and would occur under the No Action Alternative.

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing Cardinal Creek Gate would continue to provide supplemental access for light vehicles entering the installation from 6:00 a.m. to 8:00 a.m. and supplemental egress from 3:00 p.m. to 5:00 p.m. The Mascoutah Gate would continue to be Scott AFB's only truck inspection facility and would require commercial vehicles to take an indirect route to access the installation from I-64.

The No Action Alternative would not provide Scott AFB with an access gate capable of handling the anticipated increase in light vehicle traffic at the Cardinal Creek Gate following the construction of a new interchange with I-64. As such, the State of Illinois's proposed interchange with I-64 would not be fully utilized because the inadequate size and limited hours for the existing Cardinal Creek Gate would severely limit the number of vehicles that could access the installation via the proposed interchange. Reductions in vehicle congestion at Scott AFB's other gates and improvements to on- and off-installation traffic flow in anticipation of new missions that are expected to result in additional personnel and future development on the northeastern portion of the installation would not be realized under the No Action Alternative. The badly deteriorated storm water main that extends under Pryor Drive would not be replaced and occasional flooding would continue to occur on Pryor Drive during rain events and effectively close the existing Cardinal Creek Gate to traffic. Additionally, the No Action Alternative would not address the deficiencies from the Mascoutah Gate not meeting all current AT/FP requirements for a truck inspection facility. Truck traffic using I-64 would continue to traverse an indirect route through the adjoining communities to access the installation. While the No Action Alternative would not meet the purpose of and need for the action, as described in **Section 1.3**, the No Action Alternative will be analyzed in detail in this EA in accordance with CEQ regulations.

2.4 Decision to be Made and Identification of the Preferred Alternative

In this EA, Scott AFB is evaluating the Proposed Action to determine if it would result in any significant impacts. If such impacts are identified, Scott AFB would provide mitigation to reduce impacts to below the level of significance, undertake the preparation of an EIS addressing the Proposed Action, or abandon the Proposed Action. This EA will also be used to guide Scott AFB in implementing the Proposed Action, should it be approved, in a manner consistent with USAF standards for environmental stewardship. The Preferred Alternative is the Proposed Action as set forth in **Section 2.1**.

3. Affected Environment

Section 3 describes the environmental resources and conditions most likely to be affected by the Proposed Action and provides information to serve as a baseline from which to identify and evaluate potential environmental and socioeconomic impacts that could result from the Proposed Action. Baseline conditions represent current conditions. The potential environmental impacts of the Proposed Action and the No Action Alternative on the baseline conditions are described in **Section 4**. In compliance with NEPA, CEQ guidelines, and USAF guidance in 32 CFR Part 989, as amended, the description of the affected environment focuses on those resources and conditions potentially subject to impacts.

3.1 Noise

3.1.1 Definition of the Resource

Sound is defined as a particular auditory effect produced by a given source, for example the sound of rain on a rooftop. Noise and sound share the same physical aspects, but noise is considered a disturbance while sound is defined as an auditory effect. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. It can be readily identifiable or generally nondescript. Human response to increased sound levels varies according to the source type, characteristics of the sound source, distance between source and receptor, receptor sensitivity, and time of day. How an individual responds to the sound source will determine if the sound is viewed as music to one's ears or as annoying noise. Affected receptors are specific (e.g., schools, churches, or hospitals) or broad areas (e.g., nature preserves or designated districts) in which occasional or persistent sensitivity to noise above ambient levels exists.

Noise Metrics. Although human response to noise varies, measurements can be calculated with instruments that record instantaneous sound levels in decibels. A-weighted decibel (dBA) is used to characterize sound levels that can be sensed by the human ear. "A-weighted" denotes the adjustment of the frequency range to what the average human ear can sense when experiencing an audible event. The threshold of audibility is generally within the range of 10 to 25 dBA for normal hearing. **Table 3-1** compares common sounds and shows how they rank in terms of the effects of hearing. As shown, a whisper is normally 30 dBA and considered to be very quiet while an air conditioning unit 20 feet away is considered an intrusive noise at 60 dBA. Noise levels can become annoying at 80 dBA and very annoying at 90 dBA. To the human ear, each 10 dBA increase seems twice as loud (USEPA 1981).

Federal Regulations. Day-night average A-weighted sound level (DNL) is the designated metric of the Federal government for measuring noise and its impacts on humans. According to the USAF, FAA, and the 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 75 dBA DNL, "normally unacceptable" in regions exposed to noise between 65 and 75 dBA DNL, and "normally acceptable" in areas exposed to noise of 65 dBA DNL or less. The Federal Interagency Committee on Noise developed land use compatibility guidelines for noise in terms of DNL (FICON 1992). For outdoor activities, the U.S. Environmental Protection Agency (USEPA) recommends 55 dBA DNL 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).

The Federal government has 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. Under the Noise Control Act of 1972, the Occupational Safety and

Table 3-1. Sound Levels and Human Response

Noise Level (dBA)	Common Sounds	Effect
10	Just audible	Negligible*
30	Soft whisper (15 feet)	Very quiet
50	Light auto traffic (100 feet)	Quiet
60	Air conditioning unit (20 feet)	Intrusive
70	Noisy restaurant or freeway traffic	Telephone use difficult
80	Alarm clock (2 feet)	Annoying
90	Heavy truck (50 feet) or city traffic	Very annoying Hearing damage (8 hours)
100	Garbage truck	Very annoying*
110	Pile drivers	Strained vocal effort*
120	Jet takeoff (200 feet) or automobile horn (3 feet)	Maximum vocal effort
140	Carrier deck jet operation	Painfully loud

Source: FICON 1992

Note: *HDR extrapolation

Health Administration (OSHA) established workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period. The highest allowable sound level to which workers can be constantly exposed is 115 dBA and exposure to this level must not exceed 15 minutes within an 8-hour period. The standards limit instantaneous exposure, such as impact noise, to 140 dBA. If noise levels exceed these standards, employers are required to provide hearing protection equipment that will reduce sound levels to acceptable limits (29 CFR Part 1910.95).

AFI 31-202, *Military Working Dog Program*, specifies the requirements for the USAF MWD program. AFI 31-202 states that MWD kennels require minimal noise levels. Kennels are not to be located near runways, taxiways, engine test cells, small arms ranges, or other areas where the time weighted overall average sound pressure level for any 24-hour period exceeds 75 adjusted dBA.

State Regulations. Noise regulations for the State of Illinois are provided in Title 35 of the Illinois Administrative Code, Subtitle H: Noise (State of Illinois 2002). The code includes limits for several types of noise-producing activities; however, these limits do not apply to construction equipment.

Local Regulations. Scott AFB is in an unincorporated area of St. Clair County. Per Chapter 40 of the St. Clair County Code of Ordinances, "noise emanating from any use shall not be of such volume or frequency as to be unreasonably offensive at or beyond the property lines. Unreasonably offensive noises, due to intermittence, beat frequency, or shrillness shall be muffled so as not to become a nuisance to adjacent uses" (St. Clair County 2006). However, a person or business may obtain a permit from the county to create loud noises.

Construction Sound Levels. Building demolition and construction work can cause an increase in sound that is well above the ambient level. A variety of sounds are emitted from loaders, trucks, saws, and other work equipment. **Table 3-2** lists noise levels associated with common types of construction equipment. Construction equipment usually exceeds the ambient sound levels by 20 to 25 dBA in an urban environment and up to 30 to 35 dBA in a quiet suburban area.

Table 3-2. Predicted Noise Levels for Construction Equipment

Construction Category and Equipment	Predicted Noise Level at 50 feet (dBA)
Clearing and Grading	
Bulldozer	80
Grader	80–93
Truck	83–94
Roller	73–75
Excavation	
Backhoe	72–93
Jackhammer	81–98
Building Construction	
Concrete mixer	74–88
Welding generator	71–82
Pile driver	91–105
Crane	75–87
Paver	86–88

Source: USEPA 1971

3.1.2 Existing Conditions

The ambient noise environment at Scott AFB and the area of the Proposed Action is affected mainly by military operations and automobile traffic. The military operations that can affect the noise environment include aircraft traffic, aircraft maintenance activities, and weapons training.

In March 2010, an Air Installation Compatible Use Zone (AICUZ) study was completed for the installation (SAFB 2010a). The 65 to 80+ dBA DNL noise contours from the 2010 AICUZ Study extend north and south from the Scott AFB and MidAmerica Airport runway centerlines and parallel the runways. The area of the Proposed Action is not encompassed by the noise contours from the Scott AFB or MidAmerica Airport runways.

Vehicle use associated with military operations at Scott AFB consists of passenger and military vehicles and delivery and fuel trucks. Passenger vehicles compose most of the vehicles present at Scott AFB and the surrounding community roadways.

Considering the military operations and vehicle traffic at and adjacent to Scott AFB, the ambient sound environment around Scott AFB generally resembles an urban atmosphere. The area of the Proposed Action also generally resembles an urban environment due to the noise from automobile traffic on Pryor Drive, Wherry Road, and I-64 and aircraft using the Scott AFB and MidAmerica Airport airfields. But, the area of the Proposed Action is noticeably quieter than the heavily urbanized portions of Scott AFB.

3.2 Land Use

3.2.1 Definition of the Resource

The term "land use" refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local

zoning laws. However, there is no nationally recognized convention or uniform terminology for describing land use categories. As a result, the meanings of various land use descriptions, "labels," and definitions vary among jurisdictions. 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 land use categories resulting from human activity. Descriptive terms often used include residential, commercial, industrial, agricultural, institutional, and recreational.

Two main objectives of land use planning are to ensure orderly growth and compatible uses among adjacent property parcels or areas. According to Air Force Pamphlet 32-1010, *Land Use Planning*, land use planning is the arrangement of compatible activities in the most functionally effective and efficient manner (USAF 1998). The highest and best uses of real property are obtained when compatibility among land uses fosters societal interest. Tools supporting land use planning within the civilian sector include written master plans/management plans, policies, and zoning regulations. The USAF comprehensive planning process also uses functional analysis, which determines the degree of connectivity among installation land uses and between installation and off-installation land uses, to determine future installation development and facilities planning.

In appropriate cases, the location and extent of a proposed action needs to be evaluated for its potential effects on a project site 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. Other relevant factors include matters such as existing land use at the project site, the types of land uses on adjacent properties and their proximity to a proposed action, the duration of a proposed activity, and its permanence.

3.2.2 Existing Conditions

Scott AFB is located on unincorporated land in the northeastern portion of St. Clair County, Illinois, approximately 20 miles east of the City of St. Louis, Missouri (see **Figure 1-1**). MidAmerica Airport is collocated with Scott AFB and adjoins the installation to the east-northeast. Under a joint use agreement, MidAmerica Airport and Scott AFB share airfield facilities, including an air traffic control tower staffed by USAF personnel, and are connected by Taxiway G.

Off-Installation Land Use. The proposed gate complex would be built within unincorporated St. Clair County and, therefore, would fall under the provisions of the Scott Airport Overlay Zone, Scott AFB-MidAmerica St. Louis Airport Planning Influence Area, and the St. Clair County's Zoning Ordinance. These plans provide the County Board and Zoning Board of Appeals with policy guidelines to assist in decision making for future infrastructure projects, zoning and development review matters, and the provision of services to county residents and businesses. The area of the Proposed Action is within the Installation Perimeter Buffer Area, as identified in the plan, which includes all land that falls within 1,500 feet of Scott AFB. The plan recommends that applications for development activity with the Installation Perimeter Buffer Area be sent to Scott AFB for compatibility review (St. Clair County 2011).

Due to the economic importance of Scott AFB and MidAmerica Airport, St. Clair County in cooperation with Scott AFB, MidAmerica Airport, and surrounding jurisdictions prepared the *Scott Air Force Base/MidAmerica St. Louis Airport Joint Land Use Study* (JLUS) to clarify land use compatibility guidance and develop tools to prevent encroachment and land-use conflicts related to aviation and training activities. The JLUS identifies the land to the north of Scott AFB that encompasses the area of the Proposed Action to be vacant farmland (SAFB 2008).

The land use categories for the portions of the Proposed Action that are off-installation are agriculture and government (St. Clair County 2011). Farming currently takes place on and around the site for the proposed gate complex; the government category is associated with the two former schools.

On-Installation Land Use. The Scott AFB *Installation Development Plan* summarizes the existing land uses on Scott AFB. It classifies each portion of Scott AFB into one of 10 land use categories: Administrative, Aircraft Operations and Maintenance, Airfield, Community, Housing Accompanied, Housing Unaccompanied, Maintenance, Medical, Open Space, and Outdoor Recreation (SAFB 2011a). The land use category for the portion of the Proposed Action that is on-installation is Open Space. However, the Scott AFB MWD kennel (Building 5490) adjoins the northernmost end of Pryor Drive approximately 125 feet to the east and the Maintenance land use category immediately adjoins the southern portion of Pryor Drive to the west. Future planned land uses outlined in the *Installation Development Plan* for the land adjacent to Pryor Drive include administrative, industrial, and open space (SAFB 2011a).

3.3 Air Quality

3.3.1 Definition of the Resource

In accordance with Federal Clean Air Act (CAA) requirements, the air quality in a given region or area is measured by the concentration of criteria pollutants in the atmosphere. The air quality in a region is a result not only of the types and quantities of atmospheric pollutants and pollutant sources in an area, but also surface topography, the size of the topological "air basin," and the prevailing meteorological conditions.

Ambient Air Quality Standards. Under the CAA, the USEPA developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to affect human health and the environment. The NAAQS represent the maximum allowable concentrations for ozone (O_3), which is measured as nitrogen oxides [NO_x] and volatile organic compounds [VOC]; carbon monoxide (CO); nitrogen dioxide (NO_2); sulfur dioxide (SO_2); respirable particulate matter (including particulate matter equal to or less than 10 microns in diameter [PM_{10}] and particulate matter equal to or less than 2.5 microns in diameter [$PM_{2.5}$]); and lead (Pb) (40 CFR Part 50). The CAA also gives the authority to states to establish air quality rules and regulations. The State of Illinois has adopted the NAAQS and promulgated additional State Ambient Air Quality Standards (SAAQS) for criteria pollutants. In some cases, the SAAQS are more stringent than the Federal primary standards. **Table 3-3** presents the NAAQS and SAAQS.

Attainment Versus Nonattainment and General Conformity. The USEPA classifies the air quality in an air quality control region (AQCR), or in subareas of an AQCR, according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. Areas within each AQCR are therefore designated as either "attainment," "nonattainment," "maintenance," or "unclassified" for each of the six criteria pollutants. Attainment means that the air quality within an AQCR is better than the NAAQS; nonattainment indicates that criteria pollutant levels exceed NAAQS; maintenance indicates that an area was previously designated nonattainment but is now attainment; and an unclassified air quality designation by USEPA means that there is not enough information to appropriately classify an AQCR, so the area is considered attainment. The USEPA has delegated the authority for ensuring compliance with the NAAQS in the State of Illinois to the Illinois Environmental Protection Agency (IL EPA), Bureau of Air. In accordance with the CAA, each state must develop a State Implementation Plan (SIP), which is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS.

Table 3-3. National and State Ambient Air Quality Standards

Pollutant	Averaging Time	Primary Standard		Secondary Standard
		Federal	State	
CO	8-hour (1)	9 ppm (10 mg/m^3)	Same as Federal	None
	1-hour (1)	35 ppm (40 mg/m^3)	Same as Federal	None
Pb	Rolling 3-Month Average (2)	0.15 µg/m^3 (3)	Same as Federal	Same as Primary
NO_2	Annual (4)	53 ppb (5)	50 ppb	Same as Primary
	1-hour (6)	100 ppb	None	None
PM_{10}	24-hour (7)	150 µg/m^3	Same as Federal	Same as Primary
$PM_{2.5}$	Annual (8)	12 µg/m^3	15 µg/m^3	15 µg/m^3
	24-hour (6)	35 µg/m^3	Same as Federal	Same as Primary
O_3	8-hour (9)	0.075 ppm (10)	Same as Federal	Same as Primary
SO_2	1-hour (11)	75 ppb (12)	None	None
	3-hour (1)	None	0.5 ppm	0.5 ppm
	24-hour	None	0.14 ppm	None
	Annual mean	None	0.03 ppm	None

Sources: USEPA 2012a, State of Illinois 2013

Notes: Parenthetical values are approximate equivalent concentrations.

1. Not to be exceeded more than once per year.
2. Not to be exceeded.
3. Final rule signed 15 October 2008. The 1978 standard for Pb (1.5 µg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. The USEPA designated areas for the new 2008 standard on 8 November 2011.
4. Annual mean.
5. The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of cleaner comparison to the 1-hour standard.
6. 98th percentile, averaged over 3 years.
7. Not to be exceeded more than once per year on average over 3 years.
8. Annual mean, averaged over 3 years.
9. Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years.
10. Final rule signed 12 March 2008. The 1997 O_3 standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, USEPA revoked the 1-hour O_3 standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour O_3 standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.
11. 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
12. Final rule signed 2 June 2010. The 1971 annual (0.3 ppm) and 24-hour (0.14 ppm) SO_2 standards were revoked in that same rulemaking. However, these standards remain in effect until 1 year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

Key: ppm = parts per million; ppb = parts per billion; mg/m^3 = milligrams per cubic meter; µg/m^3 = micrograms per cubic meter

The General Conformity Rule applies only to significant Federal actions in nonattainment or maintenance areas. This rule requires that any Federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a Federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones toward achieving compliance with the NAAQS.

Federal Prevention of Significant Deterioration. Federal Prevention of Significant Deterioration (PSD) regulations apply in attainment areas to a major stationary source (i.e., source with the potential to emit 250 tons per year [tpy] of any regulated pollutant), and a significant modification to a major stationary source (i.e., change that adds 10 to 40 tpy to the major stationary source's potential to emit depending on the pollutant). Additional PSD major source and significant modification thresholds apply for greenhouse gases (GHGs), as discussed in the Greenhouse Gas Emissions subsection. PSD permitting can also apply to a proposed project if all three of the following conditions exist: (1) the proposed project is a modification with a net emissions increase to an existing PSD major source, and (2) the proposed project is within 10 kilometers of national parks or wilderness areas (i.e., Class I Areas), and (3) regulated stationary source pollutant emissions would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1 milligrams per cubic meter (mg/m^3) or more (40 CFR 52.21[b][23][iii]). A Class I area includes national parks larger than 6,000 acres, national wilderness areas and national memorial parks larger than 5,000 acres, and international parks. PSD regulations also define ambient air increments, limiting the allowable increases to any area's baseline air contaminant concentrations, based on the area's Class designation (40 CFR 52.21[c]).

Title V and Other CAA Requirements. Title V of the CAA Amendments of 1990 requires states and local agencies to permit major stationary sources. A Title V major stationary source has the potential to emit regulated air pollutants and hazardous air pollutants (HAPs) at levels equal to or greater than Major Source Thresholds. Major Source Thresholds vary depending on the attainment status of an ACQR. The purpose of the permitting rule is to establish regulatory control over large, industrial-type activities and monitor their impact on air quality.

Section 112 of the CAA lists HAPs and identifies stationary source categories that are subject to emissions control or work practice requirements. Section 111 of the CAA lists stationary source categories that are subject to new source performance standards if the applicable equipment is constructed, reconstructed, or modified after specified dates.

Greenhouse Gas Emissions. GHGs are gaseous emissions that trap heat in the atmosphere. These emissions occur from natural processes and human activities. The most common GHGs emitted from human activities include carbon dioxide (CO_2), methane, and nitrous oxide. Human-caused GHGs are produced primarily by the burning of fossil fuels and through industrial and biological processes. On 22 September 2009, the USEPA issued a final rule for mandatory GHG reporting from large GHG emissions sources in the United States. The purpose of the rule is to collect comprehensive and accurate data on CO_2 and other GHG emissions that can be used to inform future policy decisions. In general, the threshold for reporting is 25,000 metric tons or more of CO_2 equivalent emissions per year but excludes mobile source emissions. The regulation of GHG emissions under the PSD and Title V permitting programs was initiated by a USEPA rulemaking issued on 3 June 2010 known as the GHG Tailoring Rule (75 Federal Register 31514). GHG emissions thresholds for the permitting of stationary sources are an increase of 75,000 tpy of CO_2 at existing major sources and facility-wide emissions of 100,000 tpy of CO_2 for a new source or a modification of an existing minor source. The 100,000 tpy of CO_2 threshold defines a major GHG source for both construction (PSD) and operating (Title V) permitting, respectively.

EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, was signed in October 2009 and requires agencies to set goals for reducing GHG emissions. One requirement within

EO 13514 is the development and implementation of an agency Strategic Sustainability Performance Plan (SSPP) that prioritizes agency actions based on lifecycle return on investment. Each SSPP is required to identify, among other things, "agency activities, policies, plans, procedures, and practices" and "specific agency goals, a schedule, milestones, and approaches for achieving results, and quantifiable metrics" relevant to the implementation of EO 13514. The DOD's SSPP was originally released to the public on 26 August 2010; it has been updated annually since 2010. This implementation plan describes specific actions that the DOD will take to achieve its individual GHG reduction targets, reduce long-term costs, and meet the full range of goals of the EO. All SSPPs segregate GHG emissions into three categories: Scope 1, Scope 2, and Scope 3 emissions. Scope 1 GHG emissions are those directly occurring from sources that are owned or controlled by the agency. Scope 2 emissions are indirect emissions generated in the production of electricity, heat, or steam purchased by the agency. Scope 3 emissions are other indirect GHG emissions that result from agency activities but from sources that are not owned or directly controlled by the agency. The GHG goals in the DOD SSPP include reducing Scope 1 and Scope 2 GHG emissions by 34 percent by 2020, relative to Fiscal Year (FY) 2008 emissions, and reducing Scope 3 GHG emissions by 13.5 percent by 2020, relative to FY 2008 emissions.

3.3.2 Existing Conditions

Scott AFB is located in St. Clair County, Illinois, which is within the Metropolitan St. Louis Interstate AQCR. St. Clair County has been designated as unclassified/attainment for all criteria pollutants except 8-hour O_3 and $PM_{2.5}$. O_3 is classified as marginal nonattainment, and $PM_{2.5}$ is classified as nonattainment (USEPA 2012b). According to 40 CFR Part 81, no Class I areas are located within 10 kilometers of Scott AFB.

Scott AFB has a Federally Enforceable State Operating Permit to operate emissions sources consisting of jet fuel storage tanks, diesel emergency power generators, a diesel-powered emergency fire suppression system, natural gas-fired boilers and heaters, gasoline storage tanks and dispensing operations, a propylene glycol storage tank, an indoor shooting range, one sulfur dioxide generator, and the installation's wastewater treatment plant (IEPA 2010). **Table 3-4** summarizes Scott AFB's potential to emit and 2012 actual air emissions.

Table 3-4. Potential and Actual Emissions at Scott AFB

	NO_x (tpy)	**VOC (tpy)**	**CO (tpy)**	**SO_x (tpy)**	**PM_{10} (tpy)**	**$PM_{2.5}$ (tpy)**	**CO_2 (tpy)**
Potential to Emit	65.4	8.48	30.0	5.08	3.68*	3.68*	NA
2012 Actual Emissions	16.35	7.22	10.35	0.62	0.58	0.58	2,102.80

Sources: IEPA 2010, SAFB 2012c

Key: NA = not applicable

Note: * Scott AFB's operating permit limits does not distinguish the potential to emit for PM_{10} and $PM_{2.5}$ but provides total particle matter.

3.4 Geological Resources

3.4.1 Definition of the Resource

Geological resources consist of the Earth's surface and subsurface materials. Within a given physiographic province, these resources typically are described in terms of geology, topography and physiography, soils, and, where applicable, geologic hazards and paleontology.

Geology is the study of the Earth's composition and provides information on the structure and configuration of surface and subsurface features. Such information derives from field analysis based on observations of the surface and borings to identify subsurface composition.

Topography and physiography pertain to the general shape and arrangement of a land surface, including its height and the position of its natural and human-made features.

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. In appropriate cases, soil properties must be examined for their compatibility with particular construction activities or types of land use.

Prime farmland and other important farmland (unique farmland, farmland of statewide importance, and farmland of local importance) are protected under the Farmland Protection Policy Act (FPPA) of 1981. Prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The soil qualities, growing season, and moisture supply are needed for a well-managed soil to produce a sustained high yield of crops in an economic manner. The land could be cropland, pasture, rangeland, or other land, but not urban built-up land or water. The intent of the FPPA is to minimize the extent that Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. The FPPA also ensures that Federal programs are administered in a manner that, to the extent practicable, will be compatible with private, state, and local government farmland protection programs and policies.

The implementing procedures of the FPPA and Natural Resources Conservation Service (NRCS) require Federal agencies to evaluate the adverse effects (direct and indirect) of their activities on prime and unique farmland and farmland of statewide and local importance, and to consider alternative actions that could avoid adverse effects. Determination of whether an area is considered prime or unique farmland, and potential impacts associated with a proposed action, is based on preparation of the farmland conversion impact rating form AD-1006 for areas where prime farmland soils occur and by applying criteria established at Section 658.5 of the FPPA (7 CFR 658). The NRCS is responsible for overseeing compliance with the FPPA and has developed the rules and regulations for implementation of the FPPA (see 7 CFR Part 658, 5 July 1984).

St. Clair County requires a Land Evaluation and Site Assessment form to be completed prior to farmland being converted to other uses. The Land Evaluation and Site Assessment System is intended to provide St. Clair County with a consistent review process that assists in decisions on whether specific tracts of agricultural land should be converted to other uses. Also, this system is intended to be a significant factor in that determination by the Board of Appeals and the St. Clair County Board for approval of the conversation.

Geologic hazards are defined as a natural geologic event that can endanger human lives and threaten property. Examples of geologic hazards include earthquakes, landslides, rock falls, ground subsidence, and avalanches.

3.4.2 Existing Conditions

Geology. The stratigraphic sequence in the region consists of approximately 50- to 100-foot-thick deposits of Cenozoic (Quaternary) unconsolidated sediments overlying Paleozoic sedimentary bedrock. The Cenozoic unconsolidated materials consist of eolian, alluvial, and glacial deposits. The underlying bedrock consists primarily of low permeability, Pennsylvanian-age shale with thin, discontinuous beds of sandstone and limestone (SAFB 2011c).

The geologic units of St. Clair County include Paleozoic sedimentary rocks and Cenozoic unconsolidated materials. Glacial and alluvial deposits ranging in thickness from 50 feet to 125 feet dominate surficial geology. Underlying the glacial and alluvial deposits is the Pennsylvanian-age layers of shale, siltstone, sandstone, limestone, claystone, and coal, lying approximately 85 feet below ground surface. The Pennsylvanian strata are approximately 265 feet thick. Water-yielding Chesterian Series sandstones lie beneath the Pennsylvanian strata. The Herron No. 6 coal bed, with an average thickness of 6 to 7 feet, lies 90 to 200 feet below the surface (SAFB 2011c).

Topography. The area of the Proposed Action lies on the Springfield Plain subdivision of the Till Plains section of the Central Lowlands Physiographic Province and is on the western end of the Silver Creek Valley Basin. The Silver Creek Valley Basin is generally characterized by flat topography to gently rolling hills. The area proposed for acquisition has an elevation ranging from 440 feet above mean sea level to the east to approximately 510 feet above MSL to the west. The area of the Proposed Action occurring on-installation is relatively flat, between 430 and 440 feet above mean sea level (SAFB 2011c).

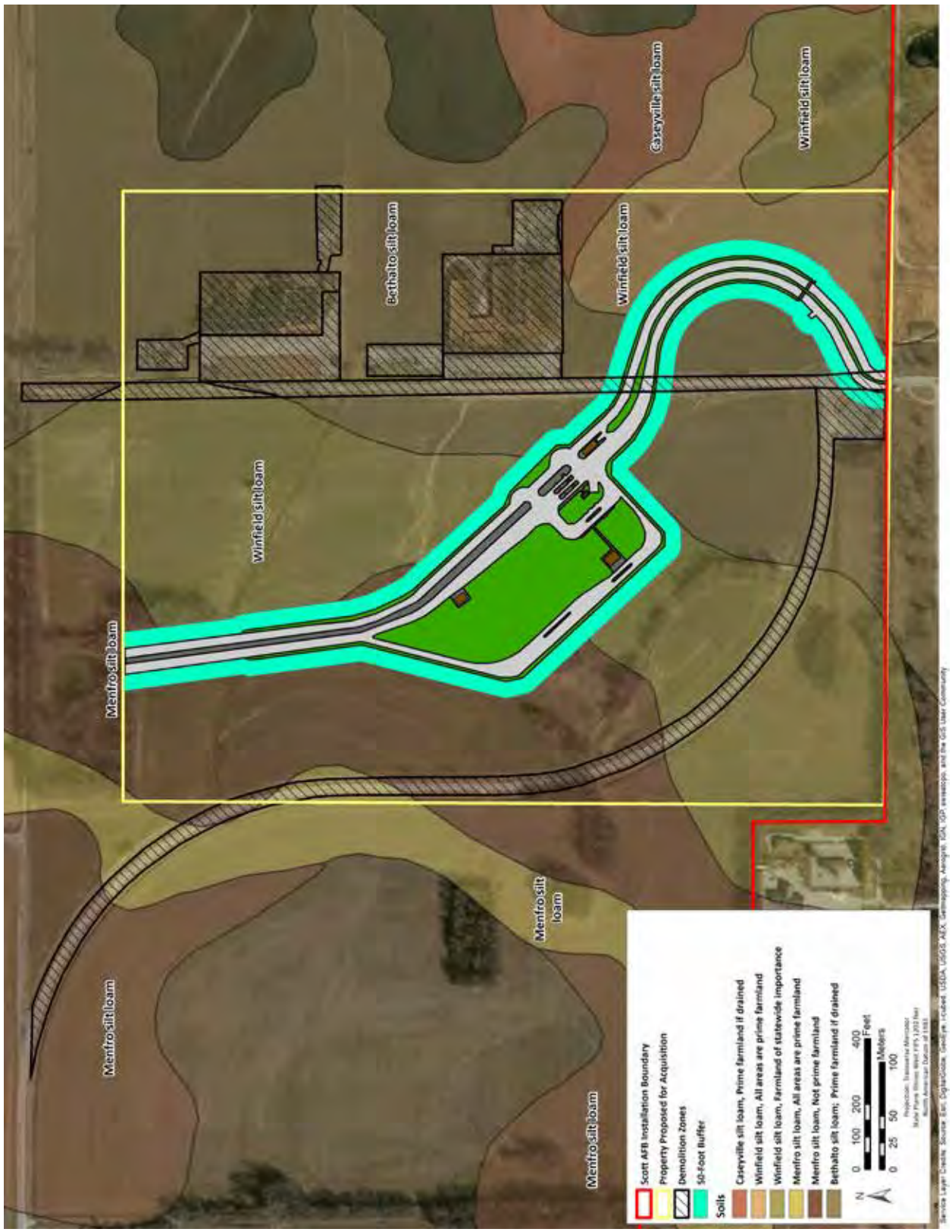
Soils. Three soil types are within a 50-foot radius of the footprint of the proposed gate complex: Menfro silt loam (6.60 acres), Bethalto silt loam (5.06 acres), and two subtypes of the Winfield silt loam (6.70 and 1.34 acres, respectively) (USGS 2013). Menfro soils consist of very deep, well-drained, moderately permeable soils formed in thick loess deposits on upland ridge tops, back slopes, and benches adjacent to the Missouri and Mississippi rivers and their major tributaries. Bethalto series consist of deep, poorly drained, moderately permeable soils and are formed in loess on till plains. Winfield series consist of very deep, moderately well-drained, moderately permeable soils formed in loess. These soils are on ridge tops and side slopes of hills and on terraces. The Menfro silt loam is not considered prime farmland, Bethalto silt loam is considered to be prime farmland if drained, and one of the Winfield silt loams subtypes is considered to be farmland of statewide importance (6.70 acres) and the other prime farmland (1.34 acres) (USDA 2013). **Figure 3-1** shows the soil types in the footprint of the proposed gate complex and within a 50-foot radius.

The NRCS rates soils for the capacity of the soil to support a load, or structure, without movement and on properties that affect excavation and construction costs. Soils with a "somewhat limited" rating indicate that the soil has features that are moderately favorable for structures and limitations can be minimized with special planning, design, or installation. A "very limited" rating indicates that the soil has one or more features that are unfavorable for the specified use and cannot be overcome without soil reclamation, special design, or expensive procedures.

Soils with shallow saturation zones have high water tables that can compress when subject to a heavy load, such as a large structure or subsidence. Shrink-swell potential is the capacity for the soil to expand and contract with the absorption of water, which can damage foundations of buildings.

The Bethalto silt loam is rated very limited for dwellings without basements due to the high depth of the saturation zone and moderate shrink swell potential. The Menfro silt loam and Winfield silt loam are rated somewhat limited for dwellings without basements due a moderate shrink-swell potential (USGS 2013).

According to the USDA, the two former schools, including their associated parking areas, and the existing roadways (i.e., Scott School Road and Wherry Road), which are proposed for demolition lie on land composed of the Bethalto silt loam, Menfro silt loam, Winfield silt loam, and Caseyville silt loam. The Bethalto silt loam, which is prime farmland if drained, composes 11.92 acres; the Menfro silt loam composes 4.8 acres (2.84 acres are prime farmland and 1.96 acres are not prime farmland); and the Winfield silt loam, which is farmland of statewide importance, composes 1.36 acres. A small amount of Caseyville silt loam (approximately 0.03 acres, considered prime farmland) is also present (USDA 2013).



Note: Natural and recognizable soil patterns are assumed to have been lost from the area of the Proposed Action that would occur on Scott AFB. As such, this area is not shown on this figure.

Figure 3-1. Soil Types in the Vicinity of the Proposed Gate Complex

While the USDA has identified these soil types within the footprint of the demolition areas, this analysis assumes that all natural and recognizable soil patterns within the footprint of the demolition areas were lost during the construction of this infrastructure. **Figure 3-1** shows the soil types, according to the USDA, in the areas where demolition would occur.

The portion of the Proposed Action that would occur on Scott AFB (i.e., to reconstruct and widen Pryor Drive) would occur on soils that were heavily modified in the 1950s and 1990s during the construction and subsequent demolition of the Cardinal Creek housing complex. As such, natural and recognizable soil patterns are assumed to have been lost from this area. Soil contamination associated with Environmental Restoration Program (ERP) site SS-25 (former Base Housing) has been identified along Pryor Drive and is discussed in **Sections 3.10** and **3.11**.

Geologic Hazards. The Proposed Action area lies within Seismic Zone IX, which contains the New Madrid Fault Zone that extends from Cairo, Illinois, on the Ohio River southward through New Madrid, Missouri. The New Madrid Fault Zone is the most active seismic area east of the Rocky Mountains with almost weekly tremors and, on rare occasions, small earthquakes measuring 3.0 to 4.0 or more on the Richter scale. The most recent significant earthquake in southern Illinois occurred in April 2008 and measured 5.4 on the Richter scale. The epicenter was approximately 110 miles east of Scott AFB (SAFB 2011c).

Earthquake hazard maps show the levels of horizontal shaking that have a 2 in 100 chance of being exceeded in a 50-year period. Shaking is expressed as a percentage of the force of gravity (percent g) and is proportional to the hazard faced by a particular type of building. In general, little or no damage is expected at values less than 10 percent g, moderate damage could occur at 10 to 20 percent g, and major damage could occur at values greater than 20 percent g. The 2008 United States National Seismic Hazards Map shows that the region of Scott AFB has a seismic hazard rating of 20 to 30 percent g (USGS 2009).

3.5 Water Resources

3.5.1 Definition of the Resource

Water resources are natural and man-made sources of water that are available for use by and for the benefit of humans and the environment. Water resources relevant to Scott AFB include groundwater, surface water, wetlands, and floodplains. Hydrology consists of the redistribution of water through the processes of evapotranspiration, surface runoff, and subsurface flow. Hydrology results primarily from (1) temperature and total precipitation that determine evapotranspiration rates, (2) topography that determines rate and direction of surface flow, and (3) soil and geologic properties that determine rate of subsurface flow and recharge to the groundwater reservoir.

Groundwater consists of subsurface hydrologic resources. It is an essential resource that functions to recharge surface water and is used for drinking, irrigation, and industrial processes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, recharge rate, and surrounding geologic formations. Groundwater quality and quantity are regulated under several different programs. The Federal Underground Injection Control regulations, authorized under the Safe Drinking Water Act (SDWA), require a permit for the discharge or disposal of fluids into a well. The Federal Sole Source Aquifer regulations, also authorized under the SDWA, protect aquifers that are critical to water supply.

Surface water resources generally consist of wetlands, lakes, rivers, and streams. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale.

Waters of the United States are defined within the Clean Water Act (CWA), as amended, and jurisdiction is addressed by the USEPA and the U.S. Army Corps of Engineers (USACE). These agencies assert jurisdiction over (1) traditional navigable waters, (2) wetlands adjacent to navigable waters, (3) nonnavigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-around or have continuous flow at least seasonally, and (4) wetlands that directly abut such tributaries. Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredge or fill into waters of the United States including wetlands. Encroachment into waters of the United States and wetlands requires a permit from the state and the Federal government. Any encroachment into wetlands or other waters of the United States resulting in displacement or movement of soil or fill materials has the potential to be viewed as a violation of the CWA if an appropriate permit has not been issued by USACE.

A water body can be deemed impaired if water quality analyses conclude that exceedances of CWA water quality standards occur. The CWA also mandated the National Pollutant Discharge Elimination System (NPDES) program, which requires a permit for any discharge of pollutants into waters of the United States.

The USEPA issued a Final Rule for the CWA concerning technology-based Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development point source category. All NPDES storm water permits issued by the USEPA or states must incorporate requirements established in the Final Rule. This Rule went into effect 1 February 2010 and is being phased in over four years. All new construction sites (greater than 1 acre) are required to meet the non-numeric effluent limitations and to design, install, and maintain effective erosion and sedimentation controls, including the following:

- Control storm water volume and velocity to minimize erosion
- Minimize the amount of soil exposed during construction activities
- Minimize the disturbance of steep slopes
- Minimize sediment discharges from the site
- Provide and maintain natural buffers around surface waters
- Minimize soil compaction and preserve topsoil where feasible.

In addition, construction site owners and operators that disturb 1 or more acres of land are required to use best management practices (BMPs) to ensure that soil disturbed during construction activities does not pollute nearby water bodies. Effective 1 August 2011, construction activities disturbing 20 or more acres began to comply with the numeric effluent limitation for turbidity in addition to the non-numeric effluent limitations. On 2 February 2014, construction site owners and operators that disturb 10 or more acres of land are required to monitor discharges to ensure compliance with effluent limitations as specified by the permitting authority. The USEPA's limitations are based on its assessment of what specific technologies can reliably achieve. Permittees can select management practices or technologies that are best suited for site-specific conditions.

Construction activities, such as clearing, grading, trenching, and excavating, disturb soils and sediment. If not managed properly, disturbed soils and sediments can easily be washed into nearby water bodies during storm events resulting in reduced water quality. Section 438 of the EISA (42 U.S.C. 17094) establishes into law new storm water design requirements for Federal construction projects that disturb a "footprint" of greater than 5,000 ft² of land. EISA Section 438 requirements are independent of storm water requirements under the CWA. The project footprint consists of all "horizontal hard surface" and disturbed areas associated with project development. Under these requirements, predevelopment site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Predevelopment hydrology shall be modeled or

calculated using recognized tools and must include site-specific factors such as soil type, ground cover, and ground slope. Site design shall incorporate storm water retention and reuse technologies such as bioretention areas, permeable pavements, cisterns/recycling, and green roofs to the maximum extent technically feasible.

Post-construction analyses would be conducted to evaluate the effectiveness of the as-built storm water reduction features (DOD 2010a). These regulations were incorporated into applicable DOD Unified Facilities Criteria in April 2010, which stated that low-impact development (LID) features would need to be incorporated in new construction activities to comply with the restrictions on storm water management promulgated by EISA Section 438. LID is a storm water management strategy designed to maintain site hydrology and mitigate the adverse impacts of storm water runoff and nonpoint source pollution. LIDs can manage the increase in runoff between pre- and post-development conditions on the project site through interception, infiltration, storage, or evapotranspiration processes before the runoff is conveyed to receiving waters. Examples of the methods include bioretention, permeable pavements, cisterns/recycling, and green roofs (DOD 2010b). Additional guidance is provided in the USEPA's *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (USEPA 2009a).

Wetlands are also protected under EO 11990, *Protection of Wetlands*, the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands. This order directs Federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands. In furtherance of NEPA, agencies shall avoid undertaking or assisting in new construction in wetlands unless there is no practical alternative.

Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill materials into the waters of the United States, including wetlands deemed to be jurisdictional. Per Section 401 of the CWA, any applicant for a Federal license or permit to conduct any activity, including the construction or operation of facilities that could result in any discharge into the navigable waters, is required to provide the licensing or permitting agency a water quality certification from the state in which the discharge originates or will originate.

As a result of the above-mentioned state and Federal regulations, it is the responsibility of the USAF to work with the USACE to identify jurisdictional waters of the United States (including wetlands) occurring on USAF installations that have the potential to be impacted by installation activities. Such impacts include construction of roads, buildings, runways, taxiways, navigation aids, and other appurtenant structures; or activities as simple as culvert crossings of small intermittent streams, rip-rap placement in stream channels to curb accelerated erosion, and incidental fill and grading of wet depressions. Small impacts on jurisdictional waters of the United States will require the use of Nationwide Permits and often pre-construction notification to the USACE. Larger impacts might require an individual permit from the USACE.

Floodplains are areas of low-level ground along rivers, stream channels, or coastal waters. The living and nonliving parts (e.g., vegetation and soil) of natural floodplains interact with each other to create dynamic systems in which each component helps to maintain the characteristics of the environment that supports it. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and a diversity of plants and animals. Floodplains provide a broad area to inundate and temporarily store floodwaters. This reduces flood peaks and velocities and the potential for erosion. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body (FEMA 1986).

Floodplains are subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding typically hinges on local topography, the frequency of precipitation events, and the size of the watershed

above the floodplain. Flood potential is evaluated by the Federal Emergency Management Agency (FEMA), which defines the 100-year floodplain. The 100-year floodplain is the area that has a 1 percent chance of inundation by a flood event in a given year. Certain facilities inherently pose too great a risk to be constructed in either the 100- or 500-year floodplain, such as hospitals, schools, or storage buildings for irreplaceable records. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety.

EO 11988, *Floodplain Management*, requires Federal agencies to determine whether a proposed action would occur within a floodplain. This determination typically involves consultation of FEMA Flood Insurance Rate Maps (FIRMs), which usually contain enough general information to determine the relationship of the project area to nearby floodplains. EO 11988 directs Federal agencies to avoid floodplains unless the agency determines that there is no practicable alternative.

In accordance with EO 11990 and EO 11988, construction of new facilities within areas containing wetlands or within the 100-year floodplain is avoided, where practicable. In accordance with EOs 11988 and 11990, a Finding of No Practicable Alternative (FONPA) must be prepared and approved by Headquarters Air Mobility Command for all projects impacting wetland and floodplain areas.

3.5.2 Existing Conditions

Groundwater. Scott AFB lies in an area of western Illinois that lacks aquifers of regional significance. No drinking water wells are in use at the installation. Scott AFB and surrounding communities purchase water supplies from the Illinois American Water Company municipal water distribution system, which obtains its water supply from the Mississippi River. However, domestic and agricultural users within about 10 miles of the installation obtain a limited amount of water from shallow aquifers (SAFB 2011c). The significant hydrogeologic units present in the area include alluvium containing sand and gravel lenses, sand and gravel layers within the glacial deposits, and sandstone or other permeable strata within the bedrock. Water quality varies greatly, with water from the surficial deposits usually of slightly better quality than water from the bedrock units. Precipitation is the primary source of groundwater recharge in the area (SAFB 2011c).

The shallow groundwater at Scott AFB is classified by the IL EPA as Class 1 Groundwater [i.e., groundwater that meets the Class I potable resource groundwater criteria set forth in the board regulations adopted pursuant to the Illinois Groundwater Protection Act (415 Illinois Administrative Code 5/57.2)] (SAFB 2011b).

Surface Water. Scott AFB is in the Lower Kaskaskia Watershed, which drains central and southwestern Illinois (SAFB 2009). There are three main creeks that flow through the installation, including Silver Creek, Cardinal Creek, and Ash Creek. Silver Creek, a tributary of the Kaskaskia River (which eventually drains into the Mississippi River), is approximately 0.25 miles east of the two former schools proposed for demolition and drains approximately 60 percent of surface runoff from the installation (SAFB 2011c). The IL EPA rates the water quality of Silver Creek near Scott AFB (i.e., Assessment Unit numbers IL_OD-07 and IL_ODF-OF-C1) as "fully supporting" aquatic life, but it has not been assessed for other designated uses (IEPA 2012). Cardinal Creek is a natural creek that drains the northern portions of the installation and has been channelized through Scott AFB, joining Silver Creek north of Taxiway G. Cardinal Creek is approximately 0.34 miles southwest of the Cardinal Creek Gate, and Pryor Drive crosses this feature on a box culvert (see **Figure 3-2**). No IL EPA water quality data are available for Cardinal Creek. The remainder of the installation is drained into Ash Creek to the south, which is outside of the project area.

Figure 3-2. Water Resources Surrounding the Proposed Action

Other surface water features near the Proposed Action include Scott Lake, Cardinal Lake, and the installation golf course ponds (SAFB 2011c). Scott Lake, a 15-acre surface water impoundment, is approximately 0.13 miles east of the existing Cardinal Creek Gate. Cardinal Lake is a 6.5-acre surface water impoundment just south of Scott Lake. Both lakes are fed by natural surface drainage (SAFB 2009). A substantial percentage of land use at Scott AFB consists of surfaces that are impervious to water infiltration, such as asphalt, concrete, or buildings/facilities. Drainage from these areas is directed by surface topography and perimeter curbing to enclosed storm sewers. Runoff is managed in accordance with the 2012 Scott AFB *Final Storm Water Pollution Prevention Plan* (SWPPP) (SAFB 2004). The Scott AFB SWPPP is an engineering and management strategy prepared specifically for Scott AFB to improve the quality of storm water runoff and thereby improve the quality of the receiving waters. The SWPPP also works to minimize storm water runoff thereby enhancing infiltration and subsequent ground water recharge. This plan ensures implementation of BMPs and delineates monitoring, training, and documentation requirements of Scott AFB's NPDES storm water permit. The plan includes notification, permit application, and erosion-control requirements for any construction activity that will cause a disturbance through clearing, grading, or excavating greater than one acre at the installation.

Wetlands and Floodplains. Scott AFB has identified approximately 378 acres of wetlands on the installation, with approximately 375 acres identified as Section 404 jurisdictional wetlands (SAFB 2011c). Cardinal Creek and Silver Creek have been identified as waters of the United States. There are no wetlands within the project area; however, Cardinal Creek runs through a culvert under Pryor Drive, which is adjacent to the southern terminus of the damaged storm water main proposed for replacement. Additionally, freshwater forested/shrub and freshwater emergent wetlands associated with Silver Creek, lacustrine wetlands associated with Scott Lake, and freshwater emergent wetlands associated with Cardinal Lake are within approximately 0.25, 0.10, and 0.13 miles, respectively, of the project area (USFWS 2013a).

According to the Scott AFB Final Floodplain Survey (SAFB 2009) and the FEMA FIRM FM17163C0240D, effective 5 November 2003, the project area is within floodplain Zone X (unshaded) and adjacent to Zone AE (FEMA 2013). Zone X (unshaded) areas are depicted as areas of minimal flood hazard, generally above the 500-year floodplain. Zone AE represents high-risk areas within the 100-year floodplain that have defined base flood elevations.

3.6 Biological Resources

3.6.1 Definition of the Resource

Biological resources include native or naturalized plants, animals, and their habitats (e.g., forests and grasslands) in which they exist. Protected and sensitive biological resources include federally listed (endangered or threatened), proposed, and candidate species designated by the U.S. Fish and Wildlife Service (USFWS). Federal species of concern are not protected by law; however, these species may become listed, and therefore are given consideration when addressing impacts of an action on biological resources. Sensitive habitats include those areas designated by the USFWS as critical habitat protected by the Endangered Species Act (ESA), and sensitive ecological areas as designated by state or Federal rulings. Sensitive habitats also include wetlands, plant communities that are unusual or of limited distribution, and important seasonal use areas for wildlife (e.g., migration routes, breeding areas, crucial summer and winter habitats).

Under the ESA (16 U.S.C. 1536), an "endangered species" is defined as any species in danger of extinction throughout all or a significant portion of its range. A "threatened species" is defined as any species likely to become endangered in the foreseeable future. The USFWS also maintains a list of species considered to be candidates for possible listing under the ESA. Although "candidate species"

receive no statutory protection under the ESA, the USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and might warrant protection under the ESA. It is USAF policy to provide protection of candidate and state-listed species where practical and not in conflict with USAF mission objectives.

The Illinois Department of Natural Resources oversees the protection and management of state-protected species under the Illinois Endangered Species Protection Act (520 Illinois Compiled Statutes 10/1-11). Under this Act, the Endangered Species Protection Board determines those species to be state-listed as endangered or threatened for Illinois.

3.6.2 Existing Conditions

Vegetation. Natural vegetative communities within the project area have been highly modified by past development, and vegetation can be characterized into three types: agriculture, urban upland, and lowland woodlots. Agricultural fields cover the majority of the property proposed for acquisition and the entire area within the footprint of the proposed gate complex. Crops grown here typically consist of corn (*Zea mays*) or soybean (*Glycine max*) plantings. The urban upland community typically consists of manicured lawns and associated landscaping and trees. This area is located along Pryor Drive on Scott AFB. Lowland woodlots are scattered throughout the project area in low areas where drainage patterns precludes agricultural development. The predominant species in these woodlots are silver maple (*Acer saccharinum*), box elder (*Acer negundo*), eastern cottonwood (*Populus deltoides*), American elm (*Ulmus americana*), and green ash (*Fraxinus pennsylvanica*). Amur honeysuckle (*Lonicera maackii*) is established and is a prominent component of the understory. Developed areas with no vegetation (i.e., within the footprint of the two former schools and pavement areas) compose a portion of the project area.

Wildlife. The project area supports a relatively low diversity of wildlife given its size and location within an agricultural matrix. Common mammals in the area include white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and eastern gray and fox squirrel (*Sciurus carolinensis* and *S. niger*) (SAFB 2010b). Common bird species include the downy woodpecker (*Picoides pubescens*), northern cardinal (*Cardinalis cardinalis*), common grackle (*Quiscalus quiscula*), and white-breasted nuthatch (*Sitta carolinensis*). Common migratory songbirds include the indigo bunting (*Passerina cyanea*) and common yellowthroat (*Geothylipis trichas*) (SAFB 2005).

Protected and Sensitive Species. **Table 3-5** lists special status species occurring or potentially occurring in St. Clair County. No designated critical habitat is located on or near the project area. It is the policy of the USAF to treat any state-listed species with the same protection afforded federally listed species whenever practicable (AFI 32-7064). The portions of this project located outside the Federal reservation would be subject to the Illinois Endangered Species Protection Act and could require an incidental take permit. Under Section 3 of the Illinois Endangered Species Protection Act, it is unlawful to

1. Possess, take, transport, sell, offer for sale, give or otherwise dispose of any animal or the product thereof of any animal species which occurs on the Illinois List (a list of species of animals and plants listed by the Endangered Species Protection Board)
2. Deliver, receive, carry, transport or ship in interstate or foreign commerce plants listed as endangered by the Federal government without a permit issued by the Illinois Department of Natural Resources
3. Take plants on the Illinois List without the express written permission of the landowner
4. Sell or offer for sale plants or plant products of endangered species on the Illinois List.

Table 3-5. Threatened and Endangered Species Documented or Likely to Occur in St. Clair County with Assessment of Potential for Occurrence on the Project Area

Common Name	Scientific Name	Status	Potential for Occurrence
Birds			
Bald eagle	*Haliaeetus leucocephalus*	D	Low. Very limited habitat on installation.
Barn owl	*Tyto alba*	SE	Low. No habitat present on project area. Prefers grasslands and open fields.
Black-crowned night heron	*Nycticorax nycticorax*	SE	Possible. No habitat present on project area. Wetlands and bottomland forest present nearby on installation, so any sightings would involve transient individuals.
Common moorhen	*Gallinula chlorpus*	SE	Low. No habitat present on project area. Prefers deep open marshes.
Least bittern	*Ixobrychus exilis*	ST	Possible. Wetlands and marshes present nearby on installation. No habitat present on project area, so any sightings would involve transient individuals.
Least tern	*Sterna antillarum*	FE	Low. Not known on the project area. Prefers bare alluvial and dredged spoil islands.
Little blue heron	*Egretta caerulea*	SE	Possible. Documented on installation during 2001 bird survey, 2004 habitat survey, and 2005 wetland survey. Breeding potential of this species at Scott AFB is unknown. Very limited habitat on project area. Sightings would likely involve transient individuals.
Loggerhead shrike	*Lanius ludovicianus*	ST	Low. Not known on the project area. Prefers open areas with windrows of trees and brush.
Northern harrier	*Circus cyaneus*	SE	Low. No known nests or sightings in the project area. Nests on ground. Prefers foraging over meadows, open fields, and prairies.
Short-eared owl	*Asio flammeus*	SE	Low. No known nests or sightings in the project area. Nests on ground. Prefers meadows, open fields, and prairies.
Snowy egret	*Egretta thula*	SE	Possible. Documented on installation during 2001 bird survey, 2004 habitat survey, and 2005 wetland survey. Breeding potential of this species at Scott AFB is unknown. Very limited habitat on project area. Sightings would likely involve transient individuals.
Yellow-crowned night heron	*Nyctanasa violacea*	SE	Low. No habitat present on project area. Wetlands and bottomland forest present nearby on installation, so any sightings would involve transient individuals.

Common Name	Scientific Name	Status	Potential for Occurrence
Crustaceans			
Illinois cave amphipod	*Gammarus acherondytes*	FE	Low. No habitat present on project area. Prefers karst caves and streams.
Mammals			
Indiana bat	*Myotis sodalis*	FE	Possible. Upland and lowland wooded areas. Indiana bats have been documented at Scott AFB.
Northern Long-eared bat	*Myotis septentrionalis*	PFE	Possible. Upland and lowland wooded areas. Northern Long-eared bats have been documented at Scott AFB.
Fish			
Pallid sturgeon	*Scaphirynchus albus*	FE	Low. No habitat present on project area. Prefers large rivers.
Plants			
Eastern prairie fringed orchid	*Platanthera leucophaea*	FT	Low. Not known on project area. Occurs in open wetlands. No habitat present on proposed project area.
Decurrent false aster	*Boltonia decurrens*	FT	Low. Not known on the project area. Occurs on sunlit floodplains and open wetlands. No habitat present on proposed project area.
Buffalo clover	*Trifolilum reflexum*	ST	Low. Not known on the project area. Occurs on dry mesic savannas, flatwoods, and prairies.
Green trillium	*Trillium viride*	SE	Low. Not known on the project area. Very limited habitat on project area. Prefers bottomland forests.
Snails			
Hydrobiid cave snail	*Fontigens antroecetes*	SE	Low. No habitat present on the project area.

Sources: USFWS 2013b, IDNR 2013

Key: FE = Federally Endangered; FT = Federally Threatened; PFE = Proposed as Federally Endangered; SE = State Endangered; ST = State Threatened; D = Delisted.

Under Section 5.5 of the Illinois Endangered Species Protection Act, the Illinois Department of Natural Resources may authorize, under prescribed terms and conditions, any taking otherwise prohibited by Section 3 if that taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

One federally listed endangered species, the Indiana bat (*Myotis sodalis*), and one species proposed for listing as federally endangered, the Northern Long-eared Bat (*Myotis septentrionalis*), have been documented nearby on Scott AFB (SAFB 2007a). These bat species primarily reside in the Silver Creek floodplain and bottomland riparian forest at Scott AFB, which provides adequate roosting and foraging habitat for a number of bat species (SAFB 2010b). Suitable habitat for the remaining federally listed species does not occur on the project area and, as a result, these species are unlikely to be present (SAFB 2005, Martin et al. 2002).

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*. Suitable habitat for the state-listed short-eared owl (*Asio flammeus*), black-crowned night heron (*Nycticorax nycticorax*), yellow-crowned night heron (*Nyctanasa violacea*), least bittern (*Ixobrychus exilis*), and loggerhead shrike (*Lanius ludovicianus*) exists on Scott AFB; however, none of these species has been recorded at or near the installation. Two other state-listed bird species, the little blue heron (*Egretta caerulea*) and the snowy egret (*Egretta thula*), have been documented during bird surveys in 2001 at Scott and Cardinal lakes, in 2004 habitat surveys at Scott Lake and the deepwater swamp south of the MidAmerica Airport taxiway, and during the 2005 wetland delineation activities (SAFB 2010b, SAFB 2005). As nesting and breeding potential could not be determined by these surveys, a breeding bird survey has been recommended. No other state-listed bird species have been observed on the installation (SAFB 2005). In addition, no suitable habitat exists in the project area for state-listed plants and snails (see **Table 3-5**).

Although no longer federally listed, the bald eagle (*Haliaeetus leucocephalus*) remains protected under the Bald and Golden Eagle Protection Act. This species is typically attracted to large open-water bodies, which are present nearby on the installation. However, as suitable habitat does not exist on the project area, any bald eagle occurrences would likely involve transient individuals.

3.7 Cultural Resources

3.7.1 Definition of the Resource

Cultural resources include a variety of heritage- or culture-related resources that are the subject of certain Federal laws, regulations, EOs, and other requirements. Typically, cultural resources are divided into archaeological resources, architectural resources, and traditional cultural properties. Archaeological sites are places on the landscape where prehistoric or historic human activity has left physical evidence of those activities. In general, these traces of human activity must be at least 50 years old to qualify as archaeological sites that are potentially eligible for nomination to the National Register of Historic Places (NRHP), the United States' official list of cultural resources worthy of preservation that was established by the NHPA. Architectural resources include standing buildings, bridges, and other structures. In general, architectural resources must be at least 50 years old to qualify for nomination to the NRHP. More recent structures, such as Cold War-era resources, might warrant protection if they have the potential to gain significance in the future or if they meet exceptional significance criteria. Traditional cultural properties are a special category of cultural resources that hold traditional cultural significance to a group such as a Native American Tribe. This category of resources can encompass archaeological resources, structures, neighborhoods, prominent topographic features, habitat, plants, animals, and minerals that people consider essential for the preservation of a traditional culture. A traditional cultural property is ascribed an intangible cultural element or value that is linked to a specific geographic location.

Several Federal laws and regulations govern protection of cultural resources, including the NHPA of 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 (NAGPRA) (1990). The NHPA sets forth national policy to identify and preserve properties of state, local, and national significance. The NHPA established the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs), and the NRHP. Section 106 of the NHPA is implemented by regulations of the ACHP, 36 CFR Part 800.

These Federal laws and DOD policy call for consultation with Native American Tribes (1) when proposing undertakings that could affect sites of traditional religious or cultural importance to a Native American Tribe; (2) when becoming aware of an inadvertent discovery or planned activity that has resulted or could result in the intentional excavation or inadvertent discovery of human remains, funerary

objects, sacred objects, or objects of cultural patrimony on Federal lands or lands administered for the benefit of Native American Tribes; (3) when proposing an action that might affect a long-term or permanent change in Native American Tribes' access to places of cultural or religious importance; (4) when proposing an action that might substantially burden a Native American Tribe's exercise of religion; or (5) when proposing an action that might affect a property or place of traditional religious and cultural importance to a Native American Tribe or the tribe's subsistence practices.

An Area of Potential Effect (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." For the purposes of this analysis, the APE is defined as the property proposed for acquisition and the construction areas along Pryor Drive. Within the APE, areas within the footprint of construction would be of greatest concern for impacts on cultural resources.

3.7.2 Existing Conditions

The Proposed Action would take place in an area with a long record of human occupation that has left a large number of archaeological sites and historic structures near the project area. Scott AFB is on the uplands adjacent to the Mississippi River floodplain, an area that has been settled since the Paleoindian period (10,000 to 8,000 B.C.) when populations focused on hunting and gathering for survival. The Paleoindian period was followed by the Early Archaic period (8,000 to 5,000 B.C.), which is very poorly documented or understood in the Mississippi River floodplain but that is characterized by a continuation of a hunter-gatherer economy. Use of the uplands decreased during the successive Middle Archaic period (5,000 to 3,000 B.C.), but the size and number of sites increased during the Late Archaic period (3,000 to 800 B.C.). Pottery first appeared in the Early Woodland period (800 to 100 B.C.), while burial mounds first appeared in the Middle Woodland period (100 B.C. to 300 A.D.). Full-fledged villages appeared during the Late Woodland period (300 to 1100 A.D.), and maize cultivation became a critical food source during the Early Mississippian period (900 to 1350 A.D.) as populations became increasingly sedentary. The Late Mississippian period (1350 to 1500 A.D.) brought increasing socio-political complexity, as evidenced by the enormous complex of Cahokia, 20 miles northeast of Scott AFB. The Protohistoric period is defined by appearance of trade goods, introduced disease, and, in 1673, European explorers in the region. European-American settlement began by 1700, with most colonists coming from Virginia and other southern states, although German immigrants dominated the population in the late 1800s. The land now occupied by Scott AFB was farmland until 1917, when construction began at Scott Field. The airfield was established as a station for Lighter-Than-Air craft in 1921, a role it held until 1937. In 1938, Scott Field was expanded dramatically, and in 1940 the installation became host to the Air Corps Radio School. In 1947, Scott Field was renamed Scott AFB with the formation of the USAF.

The APE and an area extending 1 mile in radius have been comprehensively surveyed for archaeological resources by multiple archaeological investigations. The APE is within 1 mile of approximately 66 archaeological sites, according to information in the Illinois Inventory of Archaeological Sites, the state's online Geographic Information System application for site location data. However, only six of those archaeological sites are in the APE. Those six archaeological sites were among 27 sites that were resurveyed and evaluated for NRHP eligibility by the Illinois State Archaeological Survey in 2012 (Koldehoff 2013). Five of the six sites in the APE were determined not eligible for listing in the NRHP under any criteria: sites 11S828 (Scheid and Whitty 2012a), 11S1004 (Scheid and Whitty 2012b), 11S1005 (Scheid and Whitty 2012c), 11S1017 (Scheid and Whitty 2012d), and 11S1018 (Scheid and Whitty 2012e). Of these sites, 11S1004, 11S1017, and 11S1018 are within the footprint of construction and 11S828 and 11S1005 are 25 and 150 feet from the construction footprint, respectively. The Illinois State Archaeological Survey determined that the remaining site in the APE, 11S1016 (Scheid et al. 2012), is eligible for listing in the NRHP because of the information potential. This site is approximately 125 feet to the west of the construction footprint.

As of 2012, all standing structures on Scott AFB built before 1946 and 59 structures built between 1946 and 1989 had been evaluated for NRHP eligibility (SAFB 2012d). These efforts have identified 107 NRHP-eligible structures that contribute to the Scott Field Historic District. The district was added to the NRHP in 1994 (Koldehoff 2013). This historic district is approximately 1 mile south-southwest of the APE. The south school, that would be demolished under the Proposed Action, was built in 1953 and expanded in 1956, while the north school, that would also be demolished under the Proposed Action, was built in 1968 and expanded in 1986 (Aronberg 1998). The former schools and other standing structures in and near the APE were evaluated in 2012 by the Illinois State Archaeological Survey and found to be ineligible for listing on the NRHP (Koldehoff 2013).

Scott AFB has consulted with 15 federally recognized Native American tribes under EO 13175, *Consultation and Coordination With Indian Tribal Governments* (9 November 2000), and complies with the DOD Plan of Action on tribal consultation (SAFB 2012d). To date, the only identified federally recognized tribes with historical ties to the area to have a stated interest in activities at Scott AFB are the Peoria Tribe of Indians of Oklahoma and the Osage Nation. Both tribes were contacted regarding this Proposed Action. Correspondence with the tribes is included in **Appendix A**. There are no known traditional cultural properties at Scott AFB (SAFB 2012d) or in the APE.

3.8 Socioeconomics and Environmental Justice

3.8.1 Definition of the Resource

Socioeconomic Resources. Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly characteristics of population and economic activity. Regional birth, death, immigration, and emigration rates affect population levels. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these fundamental socioeconomic indicators typically result in changes to additional socioeconomic indicators, such as housing availability and the provision of public services. Socioeconomic data at county, state, and national levels permit characterization of baseline conditions in the context of regional, state, and national trends.

Demographics and employment characteristics data provide key insights into socioeconomic conditions that might be affected by a proposed action. Demographics identify the population levels and the changes in population levels of a region over time. Demographic data might also be obtained to identify a region's characteristics in terms of race, ethnicity, poverty status, educational attainment level, and other broad indicators. Data on employment characteristics identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on personal income in a region can be used to compare the "before" and "after" effects of any jobs created or lost as a result of a proposed action. Data on industrial or commercial growth or growth in other sectors of the economy provide baseline and trend line information about the economic health of a region. Socioeconomic data shown in this section are presented at census tract, county, state, and national levels to characterize baseline socioeconomic conditions in the context of regional and state trends.

Environmental Justice. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires that Federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons benefits, or subject persons to discrimination because of their race, color, or national origin. The EO was created to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from

industrial, municipal, and commercial operations or the execution of Federal, state, tribal, and local programs and policies.

Environmental justice concerns include race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. Such information aids in evaluating whether a proposed action would render vulnerable any of the groups targeted for protection in the EO.

3.8.2 Existing Conditions

For the purposes of this socioeconomic analysis, four different spatial levels were considered, as appropriate: (1) the Region of Influence (ROI), which consists of census tracts 5038 and 5039.04 (i.e., the census tracts that entirely encompass the Proposed Action area); (2) St. Clair County; (3) the State of Illinois; and (4) the United States.

Demographics. The population of census tract 5038 decreased 53.6 percent from 2000 to 2010, but the population of census tract 5039.04 increased 18.7 percent during the same time period. The decrease in population for census tract 5038, which comprises only Scott AFB, results from a decade-long effort to reduce the number of housing units on Scott AFB. For census tract 5039.04, which comprises of the region immediately surrounding Scott AFB, the increase in population partially results from the recent construction of new off-base housing for military personnel. It should be noted that the boundaries for census tract 5039.04 changed between 2000 and 2010; therefore, this population comparison is imprecise. Population growth also was experienced in St. Clair County (5.5 percent), Illinois (3.3 percent), and the United States (9.7 percent) from 2000 to 2010. **Table 3-6** displays population data for these regions (U.S. Census Bureau 2007, U.S. Census Bureau 2010).

Table 3-6. Population Estimates for 2000 and 2010

Location	2000	2010	Percent Change 2000 to 2010
Census Tract 5038	2,782	1,292	-53.6
Census Tract 5039.04*	8,751	10,394	18.7
St. Clair County	256,082	270,056	5.5
Illinois	12,419,293	12,830,632	3.3
United States	281,421,906	308,745,538	9.7

Sources: U.S. Census Bureau 2007, U.S. Census Bureau 2010

Note: * The boundaries for census tract 5039.04 changed between 2000 and 2010.

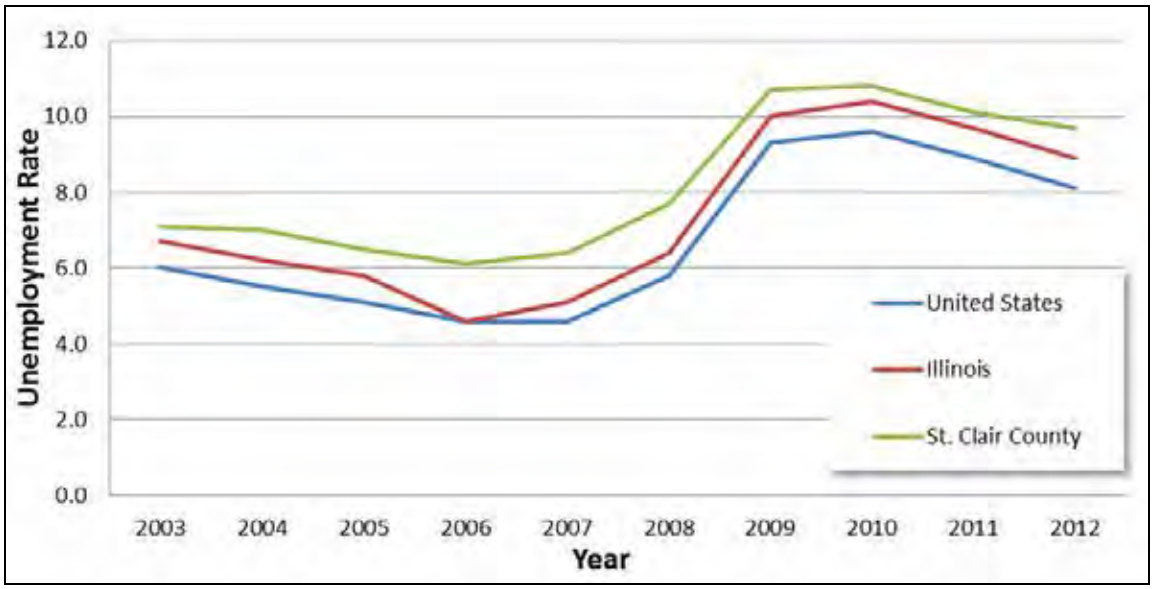
Employment Characteristics. Census tracts 5038 and 5039.04 contain larger percentages of persons employed within the armed forces (17.5 percent and 21.8 percent, respectively) when compared to St. Clair County (2.1 percent), the State of Illinois (0.2 percent), and the United States (0.5 percent). Within census tracts 5038 and 5039.04, St. Clair County, the State of Illinois, and the United States, the dominate industry for employment is the educational, health and social services industry (i.e., census tract 5038: 70.9 percent; census tract 5039.04: 24.2 percent; St. Clair County: 24.4 percent; Illinois: 22.1 percent; United States: 22.5 percent). Employment characteristics are displayed in **Table 3-7**.

Yearly unemployment rates for St. Clair County have been about 1 percent higher than the national unemployment rates since 2003 and have been 0.5 percent to 1 percent higher than the unemployment rates for the State of Illinois. Unemployment rates are presented graphically in **Figure 3-3** (U.S. Census Bureau 2011).

Table 3-7. Overview of Employment by Industry

Industry	Census Tract 5038	Census Tract 5039.04	St. Clair County	Illinois	United States
Population 16 years and over in labor force	1,108	5,941	208,154	10,029,404	241,302,749
Percent of population employed within the armed forces	17.5	21.8	2.1	0.2	0.5
Agriculture, forestry, fishing and hunting, and mining	6.4	1.5	0.9	1.1	1.9
Construction	0	6.5	5.3	5.7	6.8
Manufacturing	4.8	8.3	8.7	12.8	10.8
Wholesale trade	0	2.7	2.2	3.3	2.9
Retail trade	0.3	10.9	11.4	10.9	11.5
Transportation and warehousing, and utilities	0	4.1	6.6	5.9	5.1
Information	0	1.3	1.8	2.2	2.3
Finance, insurance, real estate, and rental and leasing	0	4.0	7.0	7.7	6.9
Professional, scientific, management, administrative, and waste management services	15.0	7.5	10.0	11.0	10.5
Educational, health and social services	70.9	24.2	24.4	22.1	22.5
Arts, entertainment, recreation, accommodation and food services	0	13.4	10.0	8.7	9.0
Other services (except public administration)	0	2.0	4.9	4.8	4.9
Public administration	2.6	13.4	6.7	3.9	4.9

Source: U.S. Census Bureau 2011



Source: BLS 2013

Figure 3-3. Unemployment Rates 2003 to 2012

Environmental Justice. The environmental justice baseline conditions are presented for the following: (1) the ROI, which consists of census tracts 5038 and 5039.04 (i.e., the census tracts that entirely encompass the Proposed Action area), (2) St. Clair County, (3) the State of Illinois, and (4) the United States. The environmental justice ROI represents locales where effects, including noise, odor, and traffic, from the Proposed Action could affect off-installation minority and low-income populations. Data for St. Clair County is included in the analysis to provide communities of comparison. Data for Illinois and the United States are included to provide larger-scale baseline conditions and additional levels for comparison.

Census tracts 5038 and 5039.04 have a lower or similar percentage of people reporting their race as non-white (19.1 percent and 27.7 percent, respectively) when compared to St. Clair County (35.4 percent), Illinois (28.5 percent), and the United States (27.6 percent). The Hispanic or Latino population (5.9 percent for both census tracts) is similar to that of St. Clair County (3.3 percent) but lower than those of Illinois (15.8 percent) and the United States (16.3 percent) (U.S. Census Bureau 2010).

The percentage of the population under the poverty level in census tracts 5038 and 5039.04 (0 percent and 3.1 percent, respectively) is lower than the corresponding percentage in St. Clair County (13.1 percent), Illinois (9.6 percent), and the United States (10.5 percent). The median household income within census tract 5038 is $91,723, which is much greater than those of St. Clair County ($50,106), Illinois ($56,576), and the United States ($52,762), and the median household income within census tract 5039.04 is $59,386, which is slightly greater than those of St. Clair County, Illinois, and the United States (U.S. Census Bureau 2011). (The high median household income for census tract 5038 likely is because this census tract covers Scott AFB only.) **Table 3-8** summarizes race, ethnicity, and income data for the area surrounding the Proposed Action.

Table 3-8. Minority and Low-Income Characteristics

	Census Tract 5038	Census Tract 5039.04	St. Clair County	Illinois	United States
Total Population	1,292	10,394	270,056	12,830,632	308,745,538
Percent White	81.9	75.9	64.6	71.5	72.4
Percent Black or African American	11.3	14.8	30.5	14.5	12.6
Percent American Indian and Alaska Native	0.2	0.2	0.2	0.3	0.9
Percent Asian	2.3	2.9	1.2	4.6	4.8
Percent Native Hawaiian and Other Pacific Islander	0.1	0.2	0.1	0.0	0.2
Percent Other Race	0.8	1.3	1.2	6.7	6.2
Percent Two or More Races	3.4	4.6	2.2	2.3	2.9
Percent Hispanic or Latino *	5.9	5.9	3.3	15.8	16.3
Median Household Income in the past 12 months (2010 inflation adjusted dollars)	$91,723	$59,386	$50,109	$56,576	$52,762
Percent of Population Living Below Poverty	0	3.1	13.1	9.6	10.5

Sources: U.S. Census Bureau 2010, U.S. Census Bureau 2011

Notes: * Hispanic and Latino denote a place of origin.

3.9 Infrastructure and Traffic

3.9.1 Definition of the Resource

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. Both availability and capacity to support population growth and development are essential to the economic growth of an area.

This section addresses transportation and utilities infrastructure that occurs in proximity to the Proposed Action and that could reasonably be impacted by its implementation. Transportation systems consist of roadways, highways, and public transit networks. The transportation system in proximity to Scott AFB is assessed generally, from both a regional and local perspective. Traffic conditions and travel patterns within and in the vicinity of Scott AFB are included as focal points for this discussion. Available capacity and performance of the transportation system indicate the conditions that commuters and other travelers encounter. Generally, traffic relates to changes in the numbers of vehicles on the roadways and highways as result of implementing a proposed action. This analysis also addresses traffic volume in and near the Scott AFB entry control facilities (ECFs) (i.e., gates). Analysis of traffic operations evaluated peak morning (AM) traffic hours of 6:00 to 8:00 a.m., mid-afternoon (MID) hours between 11:00 a.m. and 1:00 p.m., and evening (PM) hours between 3:00 p.m. and 5:00 p.m. Particular emphasis was placed on the intersections immediately reached upon entry or exit of the installation. On-installation, traffic volume data were modeled to determine level of service (LOS) or ability for an intersection to manage the flow of traffic efficiently. LOS analysis of the volume of traffic off-installation is not conducted as part of this EA; however, recent transportation studies for the installation have provided information on the traffic conditions on roads and intersections within the vicinity of the installation. Utilities discussed in this section include the electrical, liquid fuel, natural gas, and water supplies; sanitary sewer and wastewater systems; solid waste management; storm water management; and communications systems upon which the installation relies for routine function.

3.9.2 Existing Conditions

This section provides a brief overview and comments on the existing general conditions of the infrastructure components, both on- and off-installation, considered directly relevant to the Proposed Action and located in the vicinity of the Cardinal Creek Gate.

Transportation. The primary regional access road to the installation is I-64, which runs from the St. Louis area to southeast Illinois. Four secondary traffic arteries surround Scott AFB: Highway 158 (to the west), Highway 161 (to the south), Highway 4 (to the east), and Wherry Road (to the north). **Figure 1-1** illustrates the network access roadways within and surrounding Scott AFB. The installation is accessible by POV, commercial/industrial trucks, public transportation, biking, and walking. MetroBus service is available to/from and within Scott AFB. The MetroLink Red Line, which runs from Lambert International Airport through the downtown portions of St. Louis, terminates immediately to the west of Scott AFB at the Shiloh-Scott Station. Passengers with proper installation access credentials can then enter the installation through a pedestrian gate. MetroBus operates two on-installation bus routes to transport passengers from the Shiloh-Scott Station around the installation. Long-term plans include the extension of the MetroLink Red Line to MidAmerica Airport along a route to the north of Scott AFB (Trapp 2014).

Six ECFs are used to access the installation by vehicle: the Shiloh Gate, Belleville Gate, Mascoutah Gate, Cardinal Creek Gate, Patriot's Landing Gate East, and Patriot's Landing Gate West. These ECF are described as follows:

- The Shiloh Gate is the installation's main gate. Most traffic using the Shiloh Gate comes from I-64 and exits the interstate at Exit 19 and proceeds south along Highway 158 (Air Mobility Drive) to Seibert Road. The Shiloh Gate is open 24 hours per day, 7 days per week. Scott Drive (the main arterial on base) is a four-lane roadway that extends from the Shiloh Gate through the heavily developed western portion of the installation to the Belleville Gate.
- The Belleville Gate is the second-most used entry point. It is open from 4:30 a.m. to 11:30 p.m. and is accessible via Highway 161 on the southwest side of Scott AFB.
- The Mascoutah Gate is on the southern side of the installation near the Lincoln Housing area. This gate is primarily used by commercial/industrial vehicles (heavy trucks) accessing Scott AFB and provides the installation's only truck inspection facility. Vehicles using this gate must travel south on Highway 158 to Highway 161 East, approximately 3 miles beyond the Seibert Road turnoff for the Shiloh Gate, or exit I-64 at Exit 23 and travel south on Highway 4 to Highway 161 West.
- The Cardinal Creek Gate is a single-lane gate along the northern boundary of the installation near the intersection of Wherry Road and Pryor Road. Unlike the other gates, the Cardinal Creek Gate is not immediately accessible by a major road or highway. Therefore, it currently serves as an indirect entry or exit gate for the installation. This gate is a single-lane, temporary facility with limited vehicle processing capabilities. It provides one-way supplemental access for light vehicle traffic entry from 6:00 a.m. to 8:00 a.m. and exit from 3:00 p.m. to 5:00 p.m. Because these are the only hours of operation, the Cardinal Creek Gate primarily serves as a shortcut for personnel accessing the eastern portions of the installation.
- The Patriot's Landing Gate East and the Patriot's Landing Gate West are temporary use gates that provide supplemental access to the Patriot's Landing Housing Area and Scott Elementary School. Located just south of the Belleville Gate, the Patriot's Landing Gate East is open only during emergencies or when the Belleville Gate is closed for maintenance or nearby construction activities. Located on the southwestern border of the installation, the Patriot's Landing Gate West is open only when school is in session.

On the installation, Scott Drive is the primary roadway from which two-lane secondary roads (e.g., Golf Course Road, Winters Street, and Birchard Street) branch off. Golf Course Road, East Drive, and South Drive compose a half-circle of secondary roads that allow traffic to reach destinations on the eastern portion of the installation.

The State of Illinois plans to construct a new interchange from I-64 to Rieder Road to alleviate traffic issues throughout the region. The proposed interchange would provide a direct link between I-64 and the Cardinal Creek Gate. Construction of the proposed interchange is anticipated to begin during mid-2014.

Traffic Volume and Capacity. The Military Surface Deployment and Distribution Command Transportation and Engineering Agency (SDDCTEA) conducted traffic engineering and planning studies to determine existing traffic conditions for the major on-installation roadways and intersections at Scott AFB. Analyses used *Synchro* traffic modeling and analysis software. AM and PM peak hour traffic volumes and lane configurations were programmed into *Synchro* to determine intersection LOSs. LOS is a quality measure describing operational conditions within a traffic stream, generally in terms of speed, travel time, freedom to maneuver, and traffic interruptions or delays. Based upon assessment of these quality measures, the operational condition of a roadway or intersection typically falls within one of six

LOS categories. **Table 3-9** lists the intersection conditions associated with each operational category. **Table 3-10** provides the most recent peak hour LOSs for the on-installation intersections immediately accessed following entry of each gate.

Table 3-9. LOS Categories and Associated Operating Conditions

LOS Category	Operating Condition	Queuing Delay (seconds per vehicle)
A	Free-flowing traffic; minor disruptions to flow absorbed without change to speed; little or no traffic delay.	Less than 10
B	Little traffic congestion; minor disruptions to flow with less freedom to maneuver; brief traffic delays.	10 to 20
C	Moderate traffic congestion; moderate disruptions with travel speeds reduced to accommodate traffic; average traffic delays.	20 to 35
D	Approachable, unstable traffic flow with increasing congestion; moderate disruption with restricted movement; long traffic delays.	35 to 55
E	Unstable traffic flow, congested; speeds highly variable/unpredictable with minimal space to accommodate uniform traffic flow; very long traffic delays.	55 to 80
F	Heavy traffic congestion that affects other intersections, stop-and-go; vehicle speeds less than 30 miles per hour	Greater than 80

Table 3-10. LOS for On-Installation Post-Gate Intersections

ECF	On-Installation Intersection	Overall LOS		
		AM	MID	PM
Shiloh Gate	Scott Drive at Butch Drive/Golf Course Road	B	B	F*
Belleville Gate	Scott Drive at Winters Street	E*	F*	F*
Mascoutah Gate	Superior Street at Illinois Street	A	A	A
Cardinal Creek Gate	Pryor Road at Gunn Avenue	A	A	A

Source: SAFB 2007c

Note: * Indicates immediate action was recommended to alleviate the existing heavy congestion and increase road safety.

The SDDCTEA studies determined that the installation's major roadways are generally sufficient to accommodate transiting vehicles. However, for the Shiloh and Belleville gates specifically, heavy traffic volumes during the AM and PM peak hours of commute result in noticeable congestion and substantial traffic queuing both off-installation, in the residential/commercial areas immediately adjacent to the installation, and on-installation, at the intersections reached immediately subsequent to gate entry. The most recent traffic counts for the ECFs indicate that more than 250 vehicles can be queued at any one time at the Shiloh and Belleville Gates (SAFB 2013d). **Table 3-11** summarizes the average weekday traffic counts for the main entry and exit roadways of the installation.

Table 3-11. Average Weekday Traffic Counts for Scott AFB ECFs

ECF	Recording Location	Description of Function	Traffic Count Number (Percent Use)	
			Inbound (AM)	Outbound (PM)
Shiloh	Scott Drive	Main installation gate	9,093 (56)	9,294 (54)
Belleville	Scott Drive	Major access gate	5,713 (35)	6,596 (39)
Mascoutah	Mascoutah Street	Temporary access gate; commercial/ cargo truck traffic and inspections	403 (2)	513 (3)
Cardinal Creek	Pryor Drive	Temporary access gate; inbound/ outbound lane and time-of-day use restrictions	947 (6)	673 (4)

Sources: SAFB 2007c, SAFB 2013d.

Notes: Traffic counts for the Shiloh, Belleville, and Cardinal Creek Gates were recorded during March 2013 (SAFB 2013d). Traffic counts for the Mascoutah Gate were recorded during November 2005 (SAFB 2007c).

Utilities. Scott AFB is supported by extensive utility infrastructure, which is described in the following subsections. No functional utility infrastructure has been identified at the site of the proposed gate complex.

Electrical Supply. The installation's electricity is purchased from Direct Energy and distributed by Ameren Illinois. The installation receives power via three 34.5-kilovolt electrical feeds (SAFB 2011a). Electricity service currently is available along Pryor Drive and is presumed to be available, but is currently deactivated, to the two former schools.

Liquid Fuel Supply. The majority of Scott AFB's liquid fuel is supplied by the 375th Logistics Readiness Squadron and stored in aboveground storage tanks (ASTs) and underground storage tanks (USTs) in proximity to the airfield and associated ramps. No liquid fuel pipelines, hydrants, ASTs, or USTs are in the vicinity of the Proposed Action.

Natural Gas Supply. Ameren Illinois provides natural gas services to the installation. The installation is heated via individual facility boilers fueled by natural gas (SAFB 2011a). Natural gas service currently is available along Pryor Drive and is presumed to be available, but is currently deactivated, to the two former schools. A natural gas pipeline also crosses perpendicularly under Wherry Road immediately to the north of the installation.

Water Supply. Scott AFB's water supply system is owned and operated by Illinois-American Water. Illinois-American Water delivers water to Scott AFB through two water mains measuring 12 and 16 inches, respectively. On-installation, water is transported through the installation's water distribution system and is stored in three ASTs. The average daily water demand for Scott AFB in 2005 was approximately 2.0 million gallons per day (mgd), which is approximately 47 percent of the water supply capacity, and daily water demand for peak periods was approximately 3.15 mgd, which is 74 percent of available capacity. All water delivered to the installation originates from the Mississippi River and is treated off-installation prior to delivery onto the installation (SAFB 2007b). Water service currently is available along much of Pryor Drive and is presumed to be available, but is currently deactivated, to the two former schools.

Wastewater System. Scott AFB owns and operates its own sanitary sewer and wastewater treatment system. Wastewater generated on-installation is transported through a series of mains and lift stations to the installation's wastewater treatment plant (WWTP). The WWTP is designed to handle an average of

2.0 mgd of inflow and a temporary maximum of 3.0 mgd during storm events. Wastewater effluent discharges and application of sludge materials onto agricultural lands are currently permitted under the NPDES Permit IL0026859 and in accordance with IL EPA Water Pollution Control Permit 2010-SC-0711, respectively (IEPA 2007, IEPA 2009b). Wastewater service currently is available along Pryor Drive and was available at one time to the two former schools. An out-of-service wastewater pumping building is located between the two former schools.

Solid Waste. The Solid Waste Management Plan at Scott AFB follows required solid waste management requirements stipulated by Air Force Instruction 32-7042, *Waste Management*. All non-recyclable municipal solid waste is collected and disposed of in landfills off-installation. Recyclable materials are processed at the on-installation recycling center in accordance with the Scott AFB comprehensive *Qualified Recycling Program*. Industrial recycling occurs as needed. Construction, demolition, and yard wastes are managed with individual construction contracts.

Storm Water System. The installation's storm water drainage is provided by a series of storm sewers and open channels. A storm water main extends under Pryor Drive from the vicinity of the existing Cardinal Creek Gate to Cardinal Creek to the south, and it is badly deteriorated. The poor condition of this storm water main has resulted in flooding along Pryor Drive during rain events, which effectively closes the gate to traffic. Another drainage culvert transports storm water under the exercise yard at the MWD kennel and into a wetland area associated with Scott Lake.

Scott AFB possesses a valid NPDES permit for storm water discharges from industrial activities (ILR002659) issued on 3 April 2009 and expiring on 30 April 2014 (IEPA 2009a). The NPDES permit for small municipal separate storm sewer systems (IRL40) has been effective since 1 March 2009 and expires 30 March 2014 (IEPA 2009b). The installation also operates in accordance with its comprehensive Storm Water Pollution Prevention Plan (SAFB 2004).

Communications System. Fiber optic cable is installed throughout the installation to facilitate data transfer between buildings and twisted pair copper cable is installed to facilitate in-building conductivity. Manhole and conduit systems provide communications support for use on-installation through buried communications infrastructure. Service and infrastructure are available to support a wide range of communication requirements such as voice, data, video, wireless, land mobile radio, aircraft communications, and security systems on the installation. Communications infrastructure is not known to be available to the immediate vicinity of the Proposed Action.

3.10 Hazardous Materials and Wastes

3.10.1 Definition of the Resource

Hazardous materials are defined by 49 CFR 171.8 as "hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions" in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR Parts 105–180.

Hazardous waste is defined by the Resource Conservation and Recovery Act (RCRA) at 42 U.S.C. §6903(5), as amended by the Hazardous and Solid Waste Amendments, as "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or

disposed of, or otherwise managed." Certain types of hazardous wastes are subject to special management provisions intended to ease the management burden and facilitate the recycling of such materials. These are called universal wastes and their associated regulatory requirements are specified in 40 CFR Part 273.

Special hazards are those substances that might pose a risk to human health and are addressed separately from other hazardous substances. Special hazards include asbestos-containing material (ACM), polychlorinated biphenyls (PCBs), and lead-based paint (LBP). The USEPA is given authority to regulate these special hazard substances by the Toxic Substances Control Act (TSCA) Title 15 U.S.C. Chapter 53. The USEPA has established regulations regarding asbestos abatement and worker safety under 40 CFR Part 763 with additional regulation concerning emissions (40 CFR Part 61). Whether from Pb abatement or other activities, depending on the quantity or concentration, the disposal of the LBP waste is potentially regulated by the RCRA at 40 CFR 260. The disposal of PCBs is addressed in 40 CFR Parts 750 and 761.

Evaluation of hazardous materials and wastes focuses on USTs; ASTs; and the presence, storage, transport, handling, and use of pesticides, herbicides, fuels, solvents, oils, lubricants, ACMs, PCBs, and LBP. Evaluation might also extend to the 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 a release of hazardous materials or wastes, the extent of contamination varies based on the contaminant and the type of soil, topography, and water resources.

3.10.2 Existing Conditions

Hazardous Materials, Hazardous Wastes, and Petroleum Products. No hazardous materials, hazardous wastes, or petroleum products currently are delivered, used, generated, or stored in the area of the Proposed Action (SAFB 2013a).

Environmental Contamination. Two environmental contamination areas, known as ERP Site SS-25 and Parcel 99, have been identified on the area of the Proposed Action. These contamination areas are described as follows:

- ***ERP Site SS-25.*** ERP Site SS-25 (former Base Housing) is an area of pesticide-impacted soil resulting from the former use of chlordane to control termites at a former base housing area from approximately 1960 until the late 1980s. Remedial action has not yet been conducted at ERP Site SS-25. The anticipated remedy is for land use controls to restrict future soil disturbance until soil excavation and removal can be undertaken to permanently remediate the contamination. There is no evidence of groundwater contamination at ERP Site SS-25 (SAFB 2011d). This ERP site partially overlaps with Pryor Drive, which would be widened under the Proposed Action.
- ***Parcel 99.*** Parcel 99 is the site of a former gasoline and automobile service station, with several former USTs and with documented soil contamination, immediately to the north of Scott AFB. Parcel 99 adjoins the access road that would service the proposed gate complex and is within the AT/FP standoff.

  Numerous environmental investigations and some remedial actions have been taken on Parcel 99. The most recent remedial action was conducted in 1997 when St. Clair County removed four, out-of-service, 2,000-gallon gasoline USTs; one, out-of-service, 550-gallon heating oil UST; and 684.9 cubic yards of contaminated soil from the property. The IL EPA has not provided a no further action required determination. St. Clair County reports that all necessary physical

remedial actions have been completed, but the site remains open pending the submittal of certain administrative paperwork (SAFB 2013a).

No other areas of environmental contamination have been identified within or adjoining the area of the Proposed Action. None of Scott AFB's other ERP sites are proximate to the area of the Proposed Action (SAFB 2011d). Several former USTs have been documented within the area of the Proposed Action; however, there are no indications that these former USTs, apart from those associated with Parcel 99, have resulted in environmental contamination (SAFB 2013a).

Asbestos-Containing Material. Asbestos is regulated by the USEPA under the CAA; TSCA; and Comprehensive Environmental Response, Compensation, and Liability Act. The USEPA has established that any material containing more than 1 percent asbestos by weight is considered an ACM. Friable ACM is any material containing more than 1 percent asbestos, and that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Nonfriable ACM is any ACM that does not meet the criteria for friable ACM. Illinois has its own program and guidelines to manage ACM.

AFI 32-1052, *Facilities Asbestos Management,* provides the direction for asbestos management at USAF installations. It requires installations to develop an asbestos management plan for the purpose of maintaining a permanent record of the status and condition of ACM in installation facilities, and to document asbestos management efforts. In addition, the instruction requires installations to develop an asbestos operating plan detailing how the installation accomplishes asbestos-related projects. Building materials in older buildings (pre-1980) are assumed to contain asbestos; however, asbestos is still used in some construction materials today. Asbestos exists in a variety of forms and can include siding, ceiling tiles, floor tiles, floor tile mastic, roofing materials, joint compound, wallboard, thermal system insulation, boiler gaskets, paint, and other materials. If asbestos is disturbed, fibers can become friable. Common sense measures, such as avoiding damage to walls and pipe insulation, help keep the fibers from becoming airborne.

A survey for ACMs was conducted at the two former schools in 1998. The ACM survey identified pipefittings, pipe insulation, floor tile, roofing material, and ceiling tiles within both former schools as ACMs. These materials were identified as nonfriable ACMs and did not represent threats to building occupants; however, special handling procedures during building demolition were recommended for the pipefittings and pipe insulation because these materials would become friable during demolition (Aronberg 1998).

Since the ACM survey in 1998, both former schools have fallen into severe disrepair. In February 2013, it was observed that the many floor tiles had become brittle after separating from the base material, ceiling tiles had fallen to the floor, and pipe insulation had been forcibly removed. **Figures 3-4** and **3-5** show examples of such deterioration. Based on these observations, it is presumed that all of the nonfriable ACMs identified during the 1998 ACM survey have deteriorated to such degree that they are now considered friable ACMs. These ACMs now represent a threat to building occupants and require special handling during demolition (SAFB 2013a).

Lead-Based Paint. Pb is a heavy, ductile metal commonly found simply as metallic Pb or in association with organic compounds, oxides, and salts. It was commonly used in house paint for several years. The Federal government banned the use of most LBP in 1978. Therefore, it is assumed that all structures constructed prior to 1978 could contain LBP. Paint chips that fall from the exterior of buildings can contaminate the soil if the paint contains Pb.

There is no record of LBP testing being conducted at the two former schools; however, both buildings were constructed prior to 1978, before the Federal government banned the use of LBPs. As such, it is

Figure 3-4. Floor and Ceiling Tile Deterioration in the Southern Former School
(Photograph taken February 2013)

Figure 3-5. Floor and Ceiling Tile and Pipe Insulation Deterioration in the Northern Former School
(Photograph taken February 2013)

assumed that LBP is present in both former schools. Both buildings have extensive peeling of paint on most surfaces (SAFB 2013a). **Figure 3-6** shows an example of paint deterioration in the southern former school.

Polychlorinated Biphenyls. PCBs are a group of organic compounds used as dielectric and coolant fluids in equipment such as transformers, capacitors, fluorescent light ballasts, electric motors, and hydraulic systems. PCBs are managed and regulated in accordance with the USEPA's TSCA of 1976 (40 CFR 761). Chemicals classified as PCBs were widely manufactured and used in the United States throughout the 1950s and 1960s. The production of PCBs was banned in the United States in 1979.

Most major equipment, components, and transformers with PCB concentrations of 500 parts per million (ppm) or greater have been removed from service or are refilled with non-PCB oils at Scott AFB. The installation has obtained "PCB-free" status in April 1996 (SAFB 2011a).

The ceiling-mounted florescent lamp fixtures used throughout the two former schools have been documented to contain PCBs (Aronberg 1998). Many of these florescent lamp fixtures, with ballast materials still in place, were observed in the two former schools in February 2013. Some florescent lamp fixtures had been removed from the ceiling and were observed on the floor (SAFB 2013a). **Figure 3-7** shows an example of a florescent lamp fixture on the floor of the northern former school.

3.11 Safety

3.11.1 Definition of the Resource

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Human health and safety addresses both workers' health and public safety during facility demolition and construction, and during subsequent operation of newly constructed facilities.

Construction site safety is largely a matter 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 onsite military and civilian workers are safeguarded by numerous DOD and USAF regulations designed to comply with standards issued by OSHA and the 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.

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 location of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of extremely noisy environments. 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 process creates unsafe environments for nearby populations. Extremely noisy environments can also mask verbal or mechanical warning signals such as sirens, bells, or horns.

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health Program*, implements AFPD 91-3, *Occupational Safety and Health*, by outlining AFI 91-301. The purpose of AFI 91-301 is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. In conjunction with the USAF Mishap Prevention Program

Figure 3-6. Paint Deterioration in the Southern Former School
(Photograph taken February 2013)

Figure 3-7. A Fluorescent Lamp Fixture on the Floor of the Northern Former School
(Photograph taken February 2013)

(AFI 21-202), these standards ensure all USAF workplaces meet Federal safety and health requirements. This instruction applies to all USAF activities.

OSHA aims to ensure safe and healthy working conditions by setting and enforcing safe workplace standards. The National Institute for Occupational Safety and Health (NIOSH) also has guidelines and recommendations to ensure safety and prevention of work-related illnesses and injuries.

3.11.2 Existing Conditions

All contractors performing demolition and construction activities at Scott AFB are responsible for following ground safety regulations and workers compensation programs and are required to conduct demolition and 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 Material 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 chemicals (e.g., asbestos, Pb, hazardous materials), physical hazards (e.g., noise propagation, falls), and biological agents (e.g., infectious waste, wildlife, poisonous plants); to recommend and evaluate controls (e.g., prevention, administrative, engineering) 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.

Two areas of documented environmental contamination are within the area of the Proposed Action: ERP Site SS-25 and Parcel 99. ERP Site SS-25 (former Base Housing) is an area of pesticide-impacted soil resulting from the former use of chlordane to control termites at a former base housing area. This ERP site partially overlaps with Pryor Drive, which would be widened under the Proposed Action. Parcel 99 is the former location of a gasoline station with documented soil contamination. This site immediately adjoins the access road that would service the proposed gate complex and is within the AT/FP standoff. See **Section 3.10** for additional details regarding ERP Site SS-25 and Parcel 99.

Both of the former schools, which are proposed for demolition, are in extremely poor condition with significant structural deterioration. Their poor condition represents active safety hazards to persons who enter the buildings, which includes both authorized personnel and trespassers, and results from a lack of maintenance and occasional vandalism over a period of nearly 15 years. During a visual inspection of the buildings in February 2013, the roof of the southern school had failed in numerous places creating gaping holes that were allowing rainwater to enter the building. In some places, the rainwater infiltration was so bad that entire sections of wall had eroded away leaving only rusty rebar (see **Figure 3-8**). Many ceiling tiles had fallen to the floor (see **Figure 3-4**) and virtually all windows were broken. The northern school was in slightly better condition; however, the ceiling had collapsed in areas (see **Figure 3-5**). Both of the former schools were constructed prior to 1978; therefore, they are assumed to contain LBP, and both buildings have extensive peeling of paint on most surfaces (see **Figure 3-6**). ACM sampling has identified non-friable ACMs to be present at both former schools. These ACM are in the floor and ceiling tiles, pipe insulation, and other construction materials and have deteriorated to such degree that they are assumed to be friable (see **Figures 3-4** and **3-5**). See **Section 3.10** for additional details regarding the LBP and ACMs at the former schools.

Potential safety concerns also exist from Scott AFB's existing truck inspection facility at the Mascoutah Gate not meeting all current AT/FP requirements for a truck inspection facility. Rectifying these potential safety concerns is one of the reasons behind why this Proposed Action is needed.

Figure 3-8. Damage to the Roof and Walls of the Southern Former School from Rainwater Infiltration
(Photograph taken February 2013)

4. Environmental Consequences

Section 4 presents an evaluation of the environmental effects that could result from implementing the Proposed Action or the No Action Alternative. This section focuses on impacts considered potentially significant. The general approach followed throughout this section is to describe briefly the range of impacts that would occur and then provide a discussion of impacts that are considered significant.

The specific criteria for evaluating the potential environmental effects of the Proposed Action or No Action Alternative are discussed in the following text, identified by resource area. The significance of an action is also measured in terms of its context and intensity. The context and intensity of potential environmental effects are described in terms of duration, whether they are direct or indirect, the magnitude of the impact, and whether they are adverse or beneficial, as summarized as follows:

- ***Short-term or long-term.*** In general, short-term effects are those that would occur only with respect to a particular activity, for a finite period, or only during the time required for construction or installation activities. Long-term effects are those that are more likely to be persistent and chronic.
- ***Direct or indirect.*** A direct effect is caused by an action and occurs around the same time at or near the location of the action. An indirect effect is caused by an action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action.
- ***Negligible, minor, moderate, or significant.*** These relative terms are used to characterize the magnitude or intensity of an impact. Negligible impacts are generally those that might be perceptible but are at the lower level of detection. A minor effect is slight, but detectable. A moderate effect is readily apparent. Significant effects are those that, in their context and due to their magnitude (severity), have the potential to meet the thresholds for significance set forth in CEQ regulations (40 CFR 1508.27) and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the policies set forth in NEPA. Significance criteria are presented for each resource area.
- ***Adverse or beneficial.*** An adverse effect is one having unfavorable or undesirable outcomes on the man-made or natural environment. A beneficial effect is one having positive outcomes on the man-made or natural environment.

The Proposed Action would not result in significant effects on any resource area. The following sections break down by resource area the non-significant effects that would result from the Proposed Action.

4.1 Noise

4.1.1 Evaluation Criteria

Noise impact analyses typically evaluate potential changes to the existing noise environment that would result from implementation of a proposed action. Potential changes in the acoustical environment can be beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels or reduce the ambient sound level), negligible (i.e., if the total number of sensitive receptors to unacceptable noise levels is essentially unchanged), or adverse (i.e., if they result in increased sound exposure to unacceptable noise levels or ultimately increase the ambient sound level). Projected noise effects were evaluated qualitatively for the alternatives considered. For this project, construction noise is considered a nuisance if it exceeds 80 dBA at a property boundary.

4.1.2 Environmental Consequences

Proposed Action

Construction Noise. Implementation of the Proposed Action would result in short-term, minor, adverse effects on the noise environment from equipment that would be used during demolition and construction. Individual equipment used for demolition and construction activities would be expected to result in noise levels comparable to those shown in **Table 3-2**. Noise from demolition and construction activities varies depending on the type of equipment being used, the area that the action would occur in, and the distance from the noise source. To predict how these activities would impact adjacent populations, noise from the probable equipment was estimated. For example construction and demolition (i.e., clearing and grading) usually involves several pieces of equipment (e.g., bulldozers and trucks) that can be used simultaneously. Under the Proposed Action, the cumulative noise from the equipment, during the busiest day, was estimated to determine the total impact of noise from construction and demolition activities at a given distance. Examples of expected cumulative demolition and construction noise during daytime hours at specified distances are shown in **Table 4-1**. These sound levels were estimated by adding the noise from several pieces of equipment and then calculating the decrease in noise levels at various distances from the source of the noise.

Table 4-1. Estimated Noise Levels from Construction and Demolition Activities

Distance from Noise Source	Estimated Noise Level
50 feet	90 to 94 dBA
100 feet	84 to 88 dBA
150 feet	81 to 85 dBA
200 feet	78 to 82 dBA
400 feet	72 to 76 dBA
800 feet	66 to 70 dBA
1,200 feet	< 64 dBA

The nearest facility to the proposed work area is the MWD kennel located approximately 125 feet from Pryor Drive. It is anticipated that personnel and MWDs would experience noise levels of approximately 82 to 86 dBA outside of the MWD kennel during the brief phase of construction when Pryor Drive is reconstructed. During the longer phase of construction when the proposed gate complex is constructed approximately 1,000 feet away, personnel and MWDs would experience noise levels of approximately 64 to 68 dBA. AFI 31-202 states that MWD kennels are not to be sited where the time weighted overall average sound pressure level for any 24-hour period exceeds 75 adjusted dBA. Therefore, during the phase of construction when Pryor Drive is reconstructed, the area outside of the MWD kennel would be temporarily exposed to noise levels above this threshold. Noise would remain below this threshold during all other phases of construction. Other military facilities are to the west of the southern portion of Pryor Drive, approximately 250 feet away. Anticipated construction noise levels would be approximately 76 to 80 dBA outside of these facilities.

Interior noise levels would depend on the amount of sound proofing a facility has and additional soundproofing could be installed at some facilities to further reduce noise levels. For example, Scott AFB might construct a sound barrier between Pryor Drive and the MWD kennel or retrofit the kennel to limit noise intrusion. Such actions would reduce the amount of noise experienced at the MWD kennel and prevent noise from reaching the level of significance.

Noise generation would last only for the duration of demolition and construction activities and could be minimized through measures such as the restriction of these activities to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.), and the use of equipment exhaust mufflers. The short-term increase in noise levels resulting from the Proposed Action would not cause significant adverse effects on the surrounding populations.

Operational Impacts. While the number of vehicles accessing the installation would not increase, the Proposed Action is anticipated to reduce on- and off-installation traffic at the Shiloh, Mascoutah, and Belleville Gates and increase traffic on Pryor Drive in the general vicinity of the proposed gate complex. While the surrounding land use is generally open space and there are no residential communities nearby, the Proposed Action could result in long-term, negligible, adverse effects on the noise environment adjacent to Pryor Drive and the proposed gate complex due to increased vehicle traffic. This increase in vehicle noise is not expected to exceed the 75 dBA noise threshold at MWD facilities, as stated in AFI 31-202. There would be a slight reduction in noise at Scott AFB's other gates due to the reduction in traffic at these locations.

The use of a backup electrical generator could produce noise levels above existing noise levels; however, backup generator use would be limited to emergency situations and equipment testing. Noise levels from the emergency generator would vary depending on the type of generator and the way that it is installed; however, an average noise level at 50 feet is 72 dBA (University of Washington 2005). Because the generator would only be used for emergency situations and equipment testing, short-term, minor, adverse effects would occur. Noise from the emergency generator would not exceed the 75 dBA noise threshold at MWD facilities, as stated in AFI 31-202.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.1.2** would continue. Therefore, no direct or indirect impacts on noise would occur from the No Action Alternative.

4.2 Land Use

4.2.1 Evaluation Criteria

The significance of potential land use effects is based on the level of land use sensitivity in areas affected by a proposed action and the compatibility of a proposed action with existing conditions. A proposed action could have a significant effect with respect to land use if any the following were to occur:

- Be inconsistent or in noncompliance with existing land use plans or policies
- Preclude the viability of existing land use
- Preclude continued use or occupation of an area
- Be incompatible 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
- Create adverse visual intrusions or visual contrasts affecting the quality of a landscape.

4.2.2 Environmental Consequences

Proposed Action

Short-term, negligible, adverse effects on land use would occur as a result of the Proposed Action. Demolition and construction activities would generate nuisance noises, dust, and higher levels of traffic in the vicinity of the proposed gate complex, which could affect the MWD kennel at the northern end of Pryor Drive. However, these effects would be temporary in nature, occur during regular business hours, and would not place significant burdens on nearby land uses. Furthermore, a sound barrier could be constructed between the kennel and Pryor Drive to reduce the effects of noise on the kennel. Military personnel, workers, and visitors who use the existing Cardinal Creek Gate might be required to enter the installation through other locations, which would cause an inconvenience for those using nearby facilities. However, Scott AFB has other gates that would be used as alternative entrance points, and the existing Cardinal Creek Gate currently is only available during periods of peak traffic demand.

Long-term, minor, adverse and beneficial effects on land use would occur as a result of the Proposed Action. The footprint of the proposed gate complex, which is currently used as farmland, would be permanently unavailable for farming after it is incorporated into Scott AFB. According to Air Force Pamphlet 32-1010, security gates are typically designated in the Administrative land use category; therefore, the land use category for the land within the footprint of the proposed gate complex would be Administrative. This land use category would be compatible with nearby land uses on Scott AFB. Agricultural land outside of the proposed gate complex footprint (i.e., more than 20 feet from the Scott AFB perimeter fence) would still be used for farming purposes. Beneficial effects from the Proposed Action would include removing 6.6 acres (net) of structures and pavement. Removal of these impervious surfaces would make this land available for new land uses, which likely would be agricultural purposes. Land use for this area would change from government to open space/agricultural.

In summary, the Proposed Action would be consistent with the recommendations in the Comprehensive Plan of St. Clair County, the Scott AFB Installation Development Plan, and the JLUS. It would not conflict with existing or future land uses in the Overlay Zone, Scott AFB-MidAmerica St. Louis Airport Planning Influence Area, or St. Clair County's Zoning Ordinance.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.2.2** would continue. Therefore, no direct or indirect impacts on land use would occur from the No Action Alternative.

4.3 Air Quality

4.3.1 Evaluation Criteria

The environmental consequences on local and regional air quality conditions from a proposed Federal action are determined based upon the increases or decreases in regulated air pollutant emissions, and upon existing conditions and ambient air quality. The evaluation criteria are dependent on whether the proposed action is located in an attainment, nonattainment, or maintenance area for criteria pollutants. Other evaluation criteria include whether Major New Source Review (NSR) air quality construction permitting is triggered or Title V operating permitting is triggered. Major NSR air quality permitting is

divided into Nonattainment Major NSR for nonattainment pollutants and PSD permitting for attainment pollutants. All of these evaluation criteria are discussed in the following paragraphs, as applicable.

Attainment Area Pollutants. The attainment area pollutants for the location of this Proposed Action are CO, NO_2 (measured as NO_x) SO_2, Pb, and PM_{10}. The impact in NAAQS "attainment" areas would be considered significant if the net increases in these 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 SIP
- Cause an increase of 250 tpy of any attainment criteria pollutant (i.e., CO, NO_2 [measured as NO_x], SO_2, Pb, and PM_{10}) from stationary plus mobile source emissions[1].

Although the 250 tpy stationary plus mobile source threshold is not a regulatory driven threshold, it is being applied as a conservative measure of significance in attainment areas. The rationale for this conservative threshold is that it is consistent with the threshold for a PSD major source in attainment areas.

Nonattainment or Maintenance Area Pollutants. The nonattainment and maintenance area pollutants for the location of this Proposed Action are $PM_{2.5}$ and O_3 (measured as NO_x and VOCs). Effects on air quality in NAAQS "nonattainment" areas are considered significant if the net changes in these project-related pollutant emissions result in any of the following scenarios:

- Cause or contribute to a violation of any national or state ambient air quality standard
- Increase the frequency or severity of a violation of any ambient air quality standard
- Delay the attainment of any standard or other milestone contained in the SIP.

For Federal actions in nonattainment or maintenance areas, the General Conformity Rule applies. With respect to the General Conformity Rule, effects on air quality might be considered significant if the proposed Federal action emissions exceed *de minimis* threshold levels established in 40 CFR 93.153(b) for individual nonattainment pollutants or for pollutants for which the area has been redesignated as a maintenance area. In addition, if a facility has a specific general conformity budget listed in the SIP, a proposed action that results in an exceedance of that budget would be considered a significant effect on air quality. Scott AFB is not specifically listed in the Illinois SIP as having a specific SIP budget.

Table 4-2 presents the General Conformity *de minimis* thresholds, by regulated pollutant. As shown in this table, *de minimis* thresholds vary depending on the severity of the nonattainment area classification.

Note that stationary emissions sources subject to NSR air permitting, including minor NSR, are not required to be counted towards the General Conformity *de minimis* thresholds. The reasoning for this is that by meeting the criteria and going through the approval process with the appropriate Federal, state, or local air quality permitting authority, these emissions sources are demonstrating that they are in conformity with the SIP. Following is a discussion of what level of stationary source emissions would have significant air permitting impacts.

[1] The Pb threshold would be 250 tpy, but because emissions sources at an AFB have such low Pb emissions, a comparison to this threshold was not considered necessary.

Table 4-2. Conformity *de minimis* Emissions Thresholds

Pollutant	Status	Classification	*de minimis* Limit (tpy)
O_3 (measured as NO_x or VOCs)	Nonattainment	Extreme Severe Serious Moderate/marginal (inside ozone transport region) All others	10 25 50 50 (VOCs)/100 (NO_x) 100
	Maintenance	Inside ozone transport region Outside ozone transport region	50 (VOCs)/100 (NO_x) 100
CO	Nonattainment/ maintenance	All	100
PM_{10}	Nonattainment	Serious Moderate No Special Classification	70 100 100
	Maintenance	All	100
$PM_{2.5}$ (measured directly, or as SO_2, or NO_x, or VOC as significant precursors)	Nonattainment/ maintenance	All	100
SO_2	Nonattainment/ maintenance	All	100
NO_x	Nonattainment/ maintenance	All	100
VOC	Nonattainment/ maintenance	All	100
Pb	Nonattainment/ maintenance	All	25

Source: 40 CFR 93.153, as of 9 January 2012

Nonattainment Major NSR Permits. The following factor was considered in determining the significance of air quality impacts with respect to Nonattainment Major NSR permitting requirements:

- If the net increase in stationary source emissions qualifies as a Nonattainment Major NSR major source. This major source threshold varies from 10 tpy to 100 tpy for nonattainment pollutants depending on the severity of the nonattainment classification and the pollutant (40 CFR 51.165).

PSD and Title V Permits. The following factors were considered in determining the significance of air quality impacts with respect to PSD permitting requirements prior to construction:

- If the net increase in stationary source emissions qualifies as a PSD major source. This includes 250 tpy emissions per attainment pollutant (40 CFR 52.21[b][1] and 40 CFR 52.21[a][2]), or 100,000 tpy emissions of GHGs.
- If the net increase in stationary source emissions qualifies as a significant modification to an existing PSD major stationary source, (i.e., change that adds 10 to 40 tpy of regulated pollutants

to the PSD major source's potential to emit depending on the pollutant, or adding 75,000 tpy of GHGs).

- If the Proposed Action occurs within 10 kilometers of a Class I area and if it would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1 $\mu g/m^3$ or more (40 CFR 52.21[b][23][iii] and 40 CFR 52.21[a][2]).

The following factor was considered in determining the significance of air quality impacts with respect to Title V operating permit requirements (40 CFR 71.2 and 40 CFR 71.3):

- If the increase in stationary source emissions under the Proposed Action qualifies as a Title V major source by itself, or the resulting stationary source emissions after the change exceed the Title V thresholds. This includes the potential to emit 100 tpy for regulated pollutants (lower thresholds apply in nonattainment areas and depend on the pollutant and severity of nonattainment), or 10 tpy of any individual HAP, or 25 tpy of all HAPs combined, or 100,000 tpy of GHGs.

Only operational emissions increases were evaluated for PSD and Title V permitting impacts as construction activity emissions are typically not subject to the above significance criteria for these permit programs.

4.3.2 Environmental Consequences

Proposed Action

Emissions Estimates. Short-term, minor, adverse effects on air quality would result from the construction and demolition component of the Proposed Action. The construction and demolition activities associated with the Proposed Action would generate air pollutant emissions from site-disturbing activities such as grading, filling, compacting, and trenching and operation of construction and demolition equipment. Construction and demolition activities would also generate particulate emissions as fugitive dust from ground-disturbing activities and from the combustion of fuels in construction and demolition equipment. Fugitive dust emissions would be greatest during the initial site preparation activities and would vary from day to day depending on the work phase, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from a work site is proportional to the area of land being worked and the level of activity. Construction and demolition workers commuting daily to and from the work site in their personal vehicles would also result in criteria pollutant emissions. Emissions from construction and demolition activities would be produced only for the duration of work activities, which, for the purposes of this air quality analysis, is assumed to be 240 workdays or 12 calendar months.

Construction and demolition activities would incorporate BMPs and environmental control measures (e.g., frequent use of water for dust-generating activities) to minimize fugitive particular matter emissions. Additionally, the construction and demolition vehicles are assumed to be well-maintained and could use diesel particle filters to reduce emissions.

Long-term, negligible, adverse effects on air quality would result from the operational component of the Proposed Action. Day-to-day operations would generate air emissions as combustion products from the burning of diesel fuel for an emergency electrical generator. One emergency generator would be installed and is assumed to have 200 kilowatts of electrical output capacity and be used for a maximum of 500 hours per year. The addition of this emergency generator would be incorporated, where necessary, into Scott AFB's Federally Enforceable State Operating Permit. A construction permit for the proposed

emergency generator would likely not be necessary as the rated power output is assumed to be less than the permitting threshold of 1,118 kilowatts (1,500 horsepower) (Title 35 of Illinois Administrative Code, Part 201).

No other stationary source air emissions would be produced from the Proposed Action. Air emissions would be produced from heating the gatehouse, search office, and the other small buildings proposed for construction with natural gas. However, because these buildings are relatively small in size, air emissions from heating are insignificant and have not been quantitatively included in this air quality analysis. Both former schools are vacant with no active heating or utility services; therefore, the demolitions of these buildings would not reduce operational air emissions.

The Proposed Action would not change the number of personnel or vehicles accessing the installation; however, it would improve traffic flow by shortening the distance that some vehicles must travel and reducing travel time to access the installation. Improvements to traffic flow would decrease air emissions from vehicles, which would be a long-term, negligible beneficial effect.

Air emissions from the Proposed Action and applicable significance criteria are summarized in **Table 4-3**. **Appendix B** contains detailed calculations and the assumptions used to estimate the air emissions associated with the Proposed Action. In summary, the yearly net change in air emissions from the Proposed Action would be below all applicable significance criteria.

General Conformity. As stated in **Section 3.3.2**, St. Clair County has been designated as unclassified/attainment for all criteria pollutants except 8-hour O_3 and $PM_{2.5}$. O_3 is classified as marginal nonattainment, and $PM_{2.5}$ is classified as nonattainment. Based on this designation, the General Conformity Rule requirements are potentially applicable for O_3 and $PM_{2.5}$. **Table 4-3** compares the estimated annual emissions from the Proposed Action to the *de minimis* threshold limits established for the St. Clair County. Air emissions from the Proposed Action are well below *de minimis* threshold limits; therefore, a General Conformity determination is not required.

Nonattainment NSR, PSD, and Title V Air Permitting. Nonattainment NSR permitting would be evaluated based on increases in O_3 (measured as NO_x and VOCs) and $PM_{2.5}$ air emissions from stationary sources. As noted in **Table 4-3**, the yearly installationwide NO_x, VOC, and $PM_{2.5}$ air emissions following the addition of the emergency generator would be less than 100 tpy, which is the nonattainment major source threshold for these nonattainment pollutants under nonattainment NSR permitting. As such, nonattainment NSR permitting would not be applicable to the Proposed Action.

For PSD permitting, emissions of attainment pollutants from stationary sources would increase Scott AFB's potential to emit; however, the increase would not be enough for the installation to reach the PSD major source threshold of 250 tpy for each PSD pollutant. In conclusion, PSD permitting is not expected to be triggered for the Proposed Action. In addition, Title V permitting also is not expected to be triggered, as Scott AFB's potential to emit would not reach 100 tpy for any criteria pollutant. Refer to the Greenhouse Gas Emissions subsection with regard to GHG emissions impacts on Title V and PSD applicability.

Greenhouse Gas Emissions. Short- and long-term, negligible, adverse effects on GHG emissions would result from the Proposed Action. The Proposed Action would contribute directly to emissions of GHGs from the combustion of fossil fuels. Because CO_2 emissions account for approximately 92 percent of all GHG emissions in the United States, they are used for analyses of GHG emissions in this assessment.

Table 4-3. Estimated Air Emissions Resulting from the Proposed Action

Activity	NO_x tpy	VOC tpy	CO tpy	SO_2 tpy	PM_{10} tpy	$PM_{2.5}$ tpy	CO_2 tpy
Air Emission Estimates							
Combustion	22.641	1.554	9.184	1.837	1.425	1.382	2,631.784
Fugitive Dust	-	-	-	-	61.414	6.141	-
Haul Truck On-Road	0.737	0.069	0.394	0.002	0.024	0.022	190.983
Construction Commuter	0.186	0.191	1.837	0.003	0.022	0.014	264.366
Total Construction Year Emissions (2018)	**23.564**	**1.813**	**11.415**	**1.842**	**62.884**	**7.560**	**3,087.133**
Emergency Generator	2.510	0.205	0.541	0.165	0.176	0.176	93.328
Subsequent Operational Years Increase (2019+)	**2.510**	**0.205**	**0.541**	**0.165**	**0.176**	**0.176**	**93.328**
Potential to Emit for Scott AFB after the Proposed Action (only stationary sources)	67.910	8.685	30.541	5.245	3.856	3.856	NA
Significance Criteria							
Attainment Area Pollutants Significance Criteria(1) (Stationary Source plus Mobile Source Emissions)	NA[1]	NA[1]	250	250	250	NA[1]	NA[2]
Nonattainment and Maintenance Area Pollutants Significance Criteria (1) (General Conformity Rule *de minimis* Limits for St. Clair County)	100	100	NA[3]	NA[3]	NA[3]	100	NA[2]
Nonattainment NSR Permit Significance Criteria (2)	100	100	NA[3]	NA[3]	NA[3]	100	NA[2]
PSD Permit Significance Criteria (2)	NA[1]	NA[1]	250	250	250	NA[1]	75,000
Title V Permit Criteria(2)	100	100	100	100	100	100	100,000

Notes:

(1) = Criteria apply to the increase in construction emissions and stationary source emissions, but independently because they occur in different years.

(2) = Criteria only apply to stationary source emissions.

NA[1] = Not applicable due to nonattainment pollutant.

NA[2] = Not applicable for CO_2 emissions.

NA[3] = Not applicable due to attainment pollutant.

The U.S. Department of Energy, Energy Information Administration estimates that in 2010 gross CO_2 emissions in the State of Illinois's were 230.4 million metric tons and in the entire United States were 5,631.3 million metric tons (U.S. DOE/EIA 2013). **Table 4-4** summarizes the anticipated amount of CO_2 emissions by year from the Proposed Action and provides the percentage contribution to statewide and national GHG inventories. The Proposed Action would represent a negligible contribution towards statewide and national GHG inventories.

Table 4-4. Estimated CO_2 Emissions from the Proposed Action

Year	CO_2 (metric tpy)	Percent of Illinois 2010 CO_2 emissions	Percent of the United States' 2010 CO_2 Emissions
Construction Year	2,800.03	0.00122	0.000050
Subsequent Years	84.65	0.000037	0.000002

In 2012, Scott AFB's generated 2,102.80 tpy (1,907.24 metric tpy) of CO_2 (SAFB 2012c). The yearly increase in installationwide GHG emissions (i.e., 84.64 metric tpy) from the addition of the emergency generator would not cause Scott AFB to exceed the 75,000 or 100,000 tpy PSD and Title V permitting thresholds.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.3.2** would continue. The existing Cardinal Creek Gate would remain in service. The existing traffic conditions on Scott AFB and the surrounding region would remain, and there would be no change in air emissions from vehicles accessing the installation. Therefore, no direct or indirect impacts on air quality would occur from the No Action Alternative.

4.4 Geological Resources

4.4.1 Evaluation Criteria

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 effects of a proposed action on geological resources. Generally, adverse effects can be avoided or minimized if proper construction techniques, erosion-control measures, and structural engineering design are incorporated into project development. A proposed action could have a significant effect with respect to geological resources if any of the following were to occur:

- Alteration of the lithology, stratigraphy, and geological structure that control groundwater quality, distribution of aquifers and confining beds, and groundwater availability
- Changes to the soil composition, structure, or function within the environment.

4.4.2 Environmental Consequences

Proposed Action

Geology. No effects on geology would occur from the Proposed Action. No geological resources would be disturbed during construction, demolition, or land disturbing activities.

Topography. Long-term, negligible, adverse effects would occur on the natural topography as a result of construction, demolition, and land-disturbing activities (i.e., grading, excavating, and recontouring). These effects would not change the general topography of the area and, therefore, would not be significant. Furthermore, the natural topography has already been altered due to previous agricultural and human development activities.

Soils. Short- and long-term, minor, adverse effects on soils would occur from the implementation of the Proposed Action. Adverse effects would result from the compaction, disturbance, and erosion of soil during construction and demolition activities. Compaction of soils from foot and vehicle traffic would disturb and modify soil structure. The loss of soil structure due to compaction could change drainage patterns but could be managed with soil decompaction methods. Soil productivity, which is the capacity of the soil to produce vegetative biomass, would decline in disturbed areas and be eliminated in areas within the footprint of the proposed buildings, pavements, and roadways. Implementation of environmental control measures during construction and demolition activities would minimize these impacts.

Long-term, minor, adverse effects on prime farmland and farmland of statewide importance would result from the implementation of the Proposed Action. Approximately 6.40 acres of prime farmland and approximately 6.70 acres of farmland of statewide importance would be removed from agricultural use. These areas would be removed from agriculture use because they would be within the installation's modified perimeter fence (i.e., the perimeter fence would be placed 30 feet beyond the footprint of construction) and the 20-foot setback outside of the perimeter fence where agriculture would not be permitted. The proposed demolition of the two former schools, parking areas, and roadways would introduce approximately 18.11 acres of new land for agricultural development; however, these new agricultural areas would not represent new prime farmland or farmland of statewide importance, as any natural soil conditions likely were lost during the construction of the infrastructure. Prime farmland and farmland of statewide importance would not be affected from the construction and demolition activities that are proposed on Scott AFB because these areas are not available for agricultural use.

The NRCS and the Illinois Department of Agriculture completed a Farmland Conversion Impact Rating form (Form AD-1006) for the Proposed Action. The impact rating for the conversion of farmland at the project site was rated to be 176 out of 300 (see **Appendix C**). Sites with a rating of 176 are in the low to moderate range for farmland protection, and only sites with ratings exceeding 225 should be retained for agricultural use. The Illinois Department of Agriculture determined that the Proposed Action complies with the Illinois Farmland Preservation Act.

Site-specific soil testing would be conducted prior to construction to determine if limitations based on shrink-swell potential, slope, depth to saturated zone, and flooding exist and to determine appropriate BMPs and environmental control measures to offset potential adverse effects. BMPs and environmental control measures could include installing silt fencing and sediment traps, applying water to disturbed soil, and revegetating disturbed areas as soon as possible after the disturbance, as appropriate. In the event of a spill of hazardous materials, the installation's spill prevention, control, and countermeasure (SPCC) Plan would be followed to contain and clean up the spill quickly.

Geologic Hazards. Long-term, minor, adverse effects on humans and property would occur in the event of earthquake activity. Any new construction under the Proposed Action would be designed consistent with requirements established in Unified Facilities Criteria 3-310-03, *Seismic Design for Buildings*, and EO 12699, *Seismic Safety*, which would reduce the potential for adverse effects on humans associated with structural failure during or following a seismic event.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions, as discussed in **Section 3.4.2,** would continue. Therefore, no direct or indirect impacts on geological resources would occur from the No Action Alternative.

4.5 Water Resources

4.5.1 Evaluation Criteria

Evaluation criteria for effects on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. A proposed action could have a significant effect with respect to water resources if any the following were to occur:

- Substantially reduce water availability or supply to existing users
- Overdraft groundwater basins
- Exceed safe annual yield of water supply sources
- Substantially affect water quality adversely
- Endanger public health by creating or worsening health hazard conditions
- Threaten or damage unique hydrologic characteristics
- Violate established laws or regulations adopted to protect water resources.

The potential effect of flood hazards on a proposed action is important if such an action occurs in an area with a high probability of flooding.

4.5.2 Environmental Consequences

Proposed Action

Groundwater. Short-term, negligible, adverse effects on groundwater would occur. Soil compaction and disturbance from vehicle traffic during construction and demolition activities could result in temporary, localized changes in drainage patterns, as compacted soil reduces infiltration and can inhibit growth of vegetation. It is also possible that construction equipment could leak, or spills could occur during construction and demolition activities. In the event of a spill or leak of fuel or other contaminants, there could be adverse effects on groundwater because contaminants could seep through soils and into the underlying groundwater. Construction and demolition personnel would follow appropriate BMPs to protect against potential petroleum or hazardous material spills. Good housekeeping, maintenance of equipment, and containment of fuels and other potentially hazardous materials would be conducted to minimize the potential for a release of these fluids into groundwater. All fuels and other potentially hazardous materials would be contained and stored appropriately and construction activities would not be expected to require groundwater for dust suppression. There remains the possibility that a spill or leak

could occur, but implementation of the BMPs identified in the SWPPP would minimize the potential for and extent of associated contamination.

Surface Water. Under the CWA Final Rule described in **Section 3.5.1**, projects that would disturb more than 1 acre of land would be required to use BMPs to ensure that soil disturbed during construction activities does not pollute nearby water bodies. Additionally, a construction site activity storm water NPDES permit would be obtained from the IL EPA Division of Water Pollution Control.

Long-term, negligible, adverse effects on surface water would occur due to permanent removal of vegetation. The removal of vegetation could increase storm water volume and velocity entering drainage channels because of reduced water absorption. This increased runoff could affect the surface water quality of receiving water bodies, particularly Silver Creek and Scott Lake. However, replanting vegetation and adherence to standard engineering practices, applicable codes and ordinances, and the Scott AFB SWPPP would reduce storm water runoff-related impacts.

Short-term, negligible, adverse effects on surface water could occur from temporarily increased soil erosion from ground disturbances and potential leaks or spills of petroleum or hazardous materials during construction activities. Long-term, minor, beneficial effects on surface water would occur from the overall decrease in impervious surfaces from implementing the Proposed Action. Additionally, storm water design requirements would maintain predevelopment hydrology or restore predevelopment hydrology to the extent feasible through erosion- and sediment-control BMPs. Neither the short- nor long-term effects would be significant.

Reconstruction of the storm water main along Pryor Drive would result in long-term, minor, beneficial effects on surface water due to the reduced risk of flooding and the increased efficiency of the storm water system on the installation, which would limit erosion and ponding.

Wetlands and Floodplains. Long-term, negligible effects on wetlands would occur from the Proposed Action. While mitigation measures would not be required, effects on adjacent wetlands and other water resources would be minimized or avoided through design, siting, and proper implementation of appropriate environmental protection measures and BMPs. Proper implementation of these measures and BMPs would ensure that no adverse effects on surrounding wetlands or other waters of the United States would occur. A decrease in impervious surfaces and the repair of a storm water main along Pryor Drive would reduce flooding and more effectively manage storm water runoff. Although no wetlands or waters of the United States appear to exist on or near the construction areas off-installation, correspondence with regulatory and resource agencies, including the USACE St. Louis District and the IL EPA, prior to commencing any groundbreaking activities would be completed and permits would be obtained, as necessary. Replacement of the storm water main along Pryor Drive near Cardinal Creek would be reviewed by applicable agencies, including USACE and the IL EPA, to determine if the activity is regulated under Section 404 of the CWA.

The Proposed Action is adjacent to the 100-year floodplain. Long-term, negligible, adverse effects on floodplains would occur from increases in soil erosion and potential leaks or spills. The Proposed Action would follow erosion- and sediment-control measures as identified in the Scott AFB SWPPP. Additionally, long-term, minor, beneficial effects on floodplains would be expected from a reduction in impervious surfaces. The decrease in impervious surfaces would reduce storm water runoff and reduce the risk of flooding during rain events.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.5.2** would continue. The proposed demolition activities would not occur, so a reduction in impervious surface would not be realized. The badly deteriorated storm water main beneath Pryor Drive would not be replaced, so flooding along Pryor Drive would continue to occur during significant rain events. Therefore, while the No Action Alternative would not result in direct effects, the existing inefficiencies and storm water management problems would continue to occur.

4.6 Biological Resources

4.6.1 Evaluation Criteria

The significance of effects on biological resources is based on the following:

- The importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource
- The proportion of the resource that would be affected relative to its occurrence in the region
- The sensitivity of the resource to proposed activities
- The duration of ecological ramifications
- The "taking" of threatened or endangered species
- Jeopardizing threatened or endangered species habitat.

Effects on biological resources would be significant if species or habitats of concern are adversely affected. Effects would also be considered significant if disturbances cause reductions in population size or distribution of a species of concern.

Ground disturbance and noise associated with construction can directly or indirectly cause adverse effects on biological resources. Direct effects from ground disturbance are evaluated by identifying the types and locations of potential ground-disturbing activities in correlation to important biological resources. Habitat removal and damage or degradation of habitats might be adverse effects associated with ground-disturbing activities.

4.6.2 Environmental Consequences

Proposed Action

Vegetation. The Proposed Action would result in long-term, minor, adverse effects on vegetation due to permanent tree removal. The exact locations of the trees that would be removed have not been determined at this stage of project planning but might include those in the small copses on the property to be acquired, those immediately surrounding the two former schools proposed for demolition, and those along Pryor Drive. The total acreage for tree removal is estimated to be less than 5 acres. All trees and native vegetation removed by construction and demolition would be replaced, as applicable. Tree replacement would take place on Scott AFB or on the project area as part of landscaping.

Wildlife. The Proposed Action would result in short-term, negligible to minor, adverse effects on wildlife due to disturbances from noise associated with demolition and construction activities and heavy equipment use. Loud noise events could cause wildlife to engage in escape or avoidance behaviors, resulting in short-term, negligible, adverse effects. The permanent loss of urban upland and agricultural communities would have negligible effects on residential wildlife, because these areas do not currently

provide quality habitat and because of the high level of human activity. The permanent loss of lowland woodlot communities would have a minor adverse effect on residential wildlife, due to permanent removal of habitat. However, most wildlife species in the proposed project area would quickly relocate to adjacent habitat.

Some dead trees provide habitat for wildlife species (e.g., birds and bats), which would be lost through the removal of trees associated with the Proposed Action. Most cavity nesters or other birds that use these trees as nesting substrate are anticipated to be migratory birds as listed in 50 CFR 10.13 and would be protected under the MBTA (16 U.S.C. 703–712) as amended, and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*. The MBTA and EO 13186 require Federal agencies to minimize or avoid impacts on migratory birds. BMPs are recommended for the reduction or avoidance of impacts on potential cavity nesters when trees are removed under the Proposed Action. These BMPs are described in the Protected and Sensitive Species subsection.

Erosion and runoff from construction activities could increase the amount of sedimentation to wetlands and streams and could impact the production of insects associated with aquatic habitats and wildlife species that use this prey base. Adverse effects on aquatic resources would be avoided through design and BMPs. These measures would minimize movement of sediment to streams that could provide insect prey for wildlife species.

Scott AFB is encouraged to monitor facilities slated for demolition for bat species that establish maternity colonies in anthropogenic structures, such as big brown (*Eptesicus fuscus*), little brown (*Myotis lucifugus*) and evening bats (*Nycticeius humeralis*) if such activities are slated for May through July, when non-volant juveniles could be present.

Protected and Sensitive Species. The Proposed Action would not have any effect on Federal- or state-listed species or sensitive habitat. The federally endangered Indiana bat and the proposed as federally endangered Northern Long-eared bat are only expected to roost within the Silver Creek bottomland riparian forest on Scott AFB, which would not be disturbed by the Proposed Action. However, any tree outside of this area, with appropriate structural characteristics (i.e., diameter at breast height is greater than 5 inches with exfoliating bark), could be occupied by these species (Kurta 2005), so tree-clearing activities associated with the Proposed Action could result in the direct loss of individuals. Adverse effects on the Indiana bat and the Northern Long-eared bat would be avoided by following seasonal tree cutting restrictions. All trees would be removed or trimmed between October 15 to March 31, when these bats are occupying swarming and hibernation habitat and are not present near the installation (USFWS 2007). All trees and vegetation impacted by the Proposed Action would be replaced. Tree replacement would take place on Scott AFB or on the project area as part of landscaping. Replacement plantings would occur at a 2:1 ratio and include tree species preferred by the Indiana bat (USFWS 2011).

Erosion and runoff from construction activities could increase the amount of sedimentation to wetlands and streams and could impact the production of insects associated with the Indiana bat and Northern Long-eared bat's prey base. Adverse effects on aquatic resources would be avoided through design and BMPs. These measures would minimize movement of sediment to streams that could provide insect prey for the bats.

The MBTA and EO 13186 require Federal agencies to minimize or avoid impacts on migratory birds listed in 50 CFR 10.13. If design and implementation of a Federal action cannot avoid measurable adverse impacts on migratory birds, EO 13186 requires the responsible agency to consult with the USFWS and obtain a Migratory Bird Depredation Permit. Demolition and construction activities

associated with the Proposed Action would be conducted in a manner to avoid adverse effects on migratory birds to the extent practicable.

The following BMPs are recommended for reduction or avoidance of impacts on migratory birds that could occur within the project areas:

- Any groundbreaking construction activities would be performed before migratory birds return to Scott AFB or after all young have fledged to avoid incidental take.
- If construction is scheduled to start during the period when migratory birds are present (April 15 through August 1), a site-specific survey for nesting migratory birds would be performed immediately prior to construction.
- If nesting birds are found during the survey, buffer areas would be established around nests. Construction would be deferred in buffer areas until birds have left the nest. Confirmation that all young have fledged would be made by a qualified biologist.

The project area lacks suitable habitat for the bald eagle; therefore, the occurrence of an individual is unlikely. However, because the bald eagle remains protected under the MBTA and the Bald and Golden Eagle Protection Act, Scott AFB would follow any applicable National Bald Eagle Management Guidelines as published by the USFWS in May 2007.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.6.2** would continue. Therefore, no direct or indirect impacts on biological resources would occur from the No Action Alternative.

4.7 Cultural Resources

4.7.1 Evaluation Criteria

Potential impacts on cultural resources were assessed by (1) identifying the nature and importance of the resource in potentially affected areas and (2) identifying activities that could directly or indirectly affect the resource by applying the criteria in 36 CFR Section 800.5. Under Section 106 the agency official determines the historic properties within the APE and the nature of the effects on them. As part of the EA process, NEPA requires an assessment of potential impacts on cultural resources and aspects of the "human environment," which is defined as "the natural and physical (built) environment and the relationship of people with that environment" (40 CFR Part 1508.14). Under Section 106 of the NHPA, Federal agencies are required to evaluate the potential effect of an undertaking on historic properties that are within the proposed project's APE. The Federal agency official is charged with providing the ACHP an opportunity to comment in accordance with its regulations, 36 CFR Part 800. In accordance with EO 12372, *Intergovernmental Review of Federal Programs*, and Section 106 and 36 CFR Part 800, determinations regarding the potential effects of an undertaking on historic properties are presented to the SHPO for concurrence. Native American Tribes and the public are consulted in this process. Cultural resources not evaluated for NRHP eligibility are considered eligible for compliance purposes until such evaluation is completed and a formal determination of NRHP eligibility is made. In summary, the criteria of adverse effects described at 36 CFR 800.5 is appropriate for assessing impacts on cultural resources under the NHPA and the NEPA.

4.7.2 Environmental Consequences

Proposed Action

The Proposed Action might have indirect, adverse effects on one NRHP-eligible archaeological site in the APE: Site 11S1016, a residential 19th-century farmstead site, approximately 125 feet to the southwest of the footprint of the proposed gate complex. The proximity of Site 11S1016 to the proposed gate complex has the potential to expose the site to vandalism and looting during construction. Scott AFB would monitor construction to ensure that personnel do not disturb the site; during construction, access to the area would be carefully monitored and restricted. This potential for indirect adverse effects would end with the completion of construction. The 125-foot distance between the site and the construction footprint is expected to be sufficient to protect the site from direct effects.

The proposed gate complex would have no direct or indirect effects on the five archaeological sites within the APE determined not eligible for listing in the NRHP under any criteria. These sites are discussed as follows:

- The construction footprint would be approximately 25 feet east of Site 11S828, a prehistoric and historic artifact scatter. This site has been found not eligible for listing on the NRHP due to its lack of information potential (Scheid and Whitty 2012a). Therefore, construction with the site boundaries would not represent an effect on cultural resources.
- The construction footprint would cover a portion of Site 11S1004, a prehistoric artifact scatter. Recent testing of this site observed no cultural material and no indications of subsurface cultural deposits (Scheid and Whitty 2012b). Therefore, the lack of cultural materials within the site boundaries would mean that Site 11S1004 would suffer no direct or indirect adverse effects from the Proposed Action.
- The construction footprint would be approximately 150 feet west of Site 11S1005, a prehistoric and 19th-century artifact scatter. Recent testing of this site observed no cultural material and no indications of subsurface cultural deposits (Scheid and Whitty 2012c). Therefore, the lack of cultural materials within the site boundaries would mean Site 11S1005 would suffer no direct or indirect adverse effects from the Proposed Action.
- The construction footprint would cover a portion of Site 11S1017, a prehistoric and 19th-century artifact scatter. Recent testing of the site observed no cultural material and no indications of subsurface cultural deposits (Scheid and Whitty 2012d). Therefore, the lack of cultural materials within the site boundaries would mean that Site 11S1017 would suffer no direct or indirect adverse effects from the Proposed Action.
- The construction footprint would cover a portion of Site 11S1018, a prehistoric and historic artifact scatter. Recent testing found that the site is not eligible for listing on the NRHP (Scheid and Whitty 2012e). Therefore, Site 11S1018 would suffer no direct or indirect adverse effects from the Proposed Action.

Because the Scott Field Historic District is 1 mile from the APE, the district and its contributing structures would experience no direct or indirect adverse or beneficial effects from the Proposed Action. In addition, the determination that the two former schools are ineligible for listing on the NRHP (Koldehoff 2013) means that their demolition would not represent an effect on cultural resources.

Scott AFB consulted with the SHPO regarding potential effects on cultural resources from this Proposed Action. The SHPO determined that no adverse effects on any historic properties would occur from this

Proposed Action as long as the gate complex is constructed at least 128 feet away from Site 11S1016 and the SHPO is provided with the final design plans. **Appendix D** contains documentation of the correspondence with the SHPO.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.7.2** would continue and none of the cultural resources described would be disturbed. Therefore, no direct or indirect impacts on cultural resources would occur from the No Action Alternative.

4.8 Socioeconomics and Environmental Justice

4.8.1 Evaluation Criteria

Construction expenditures are assessed in terms of direct effects on the local economy and related effects on other socioeconomic resources. The magnitude of potential impacts can vary greatly, depending on the location of a proposed action. For example, implementation of an action that creates ten employment positions might go unnoticed in an urban area, but could have considerable impacts in a rural region. If potential socioeconomic changes were to result in substantial shifts in population trends or a decrease in regional spending or earning patterns, those effects would be considered adverse. A proposed action could have a significant effect with respect to the socioeconomic conditions in the surrounding ROI if the following were to occur:

- Change the local business volume, employment, personal income, or population that exceeds the ROI's historical annual change
- Adversely affect social services or social conditions, including property values, school enrollment, county or municipal expenditures, or crime rates
- Disproportionately impact minority populations or low-income populations.

4.8.2 Environmental Consequences

Proposed Action

Socioeconomics. Short-term, minor, beneficial effects on socioeconomic resources would occur from the Proposed Action. It is assumed that equipment and supplies necessary to complete the proposed construction activities would be obtained locally, and local contractors would be used. The use of local construction workers would produce increases in local sales volumes, payroll taxes, and the purchases of goods and services, which would be beneficial to the local economy. The demand for construction and demolition workers would be minor and would not outstrip the local supply of workers. The Proposed Action would not change the number of personnel at the installation; therefore, no long-term effects on socioeconomic resources would occur from the operation of the proposed gate complex.

Environmental Justice. No disproportional effects on minority or low-income populations would occur as a result of the Proposed Action because there are no significant minority or low-income populations within the ROI. Furthermore, no residences are located nearby to the work areas.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.8.2** would continue. Therefore, no direct or indirect impacts on socioeconomics and environmental justice would occur from the No Action Alternative.

4.9 Infrastructure and Traffic

4.9.1 Evaluation Criteria

Evaluation of impacts is based on the capacity and compatibility of the Proposed Action with the existing infrastructure network. A significant or major impact might be determined if any of the following would result from implementing the Proposed Action:

- Substantial disruption of airfield access or operations
- Increase in traffic volumes or delays to levels that impair a roadway's handling capacity or increase traffic safety hazards
- Reduction in the intersection and state or Federal highway functions
- Substantial increase in vehicle queue length or disruption of traffic operations
- Substantial disruption of utility supplies or increase in demand that would adversely impact capacity to support operations or normal community functions.

4.9.2 Environmental Consequences

Proposed Action

Transportation. Long-term, moderate, beneficial effects on transportation infrastructure would occur from the Proposed Action. The proposed gate complex would alleviate on- and off-installation traffic congestion at the Shiloh and Belleville gates. The reduction in traffic volume at these gates would improve the roadway and intersection LOSs by reducing queuing distances and associated traffic delays. Furthermore, the proposed gate complex and the improvements to Pryor Drive would provide the infrastructure to accommodate potential traffic increases from planned future development on the northern and eastern portions of Scott AFB. The new gate complex also would provide a more direct route for commercial and cargo truck traffic transporting materials to the installation, which are currently indirectly routed past residential areas to the Mascoutah Gate. **Table 4-5** summarizes the projected average weekday traffic counts for the Shiloh, Belleville, and Cardinal Creek Gates after implementation of the Proposed Action.

Although traffic volume on the roads leading to the proposed Cardinal Creek Gate would increase substantially under the Proposed Action, the area to the north of Scott AFB is generally undeveloped with no residential development, and the State of Illinois plans to construct a new interchange from I-64 to Rieder Road. This interchange would provide direct access between the proposed Cardinal Creek Gate and I-64.

No impacts would occur from the conversion of the Mascoutah Gate to an emergency evacuation gate or a temporary use gate, which would effectively close it to daily use. The projected average weekday traffic volumes summarized in **Table 4-5** include the closure of the Mascoutah Gate. The Shiloh and Belleville Gates would still experience a net reduction in traffic after the closure of the Mascoutah Gate.

Table 4-5. Projected Weekday Traffic Counts at Scott AFB's ECFs from the Proposed Action

ECF	Total Traffic		Change in Traffic	
	Inbound	Outbound	Inbound	Outbound
Shiloh	5,784	6,113	-3,309 (-36.4%)	-3,181 (-34.2%)
Belleville	5,089	5,379	-825 (-10.9%)	-1,474 (-18.5%)
Cardinal Creek	5,283	5,584	+4,135 (+557.9%)	+4,654 (+829.7%)

Methodology: Survey Question 4 on page 3-11 of the January 2012 *Draft Final Transportation Engineering Study* (SAFB 2012a) provides a percentage breakdown of potential inbound installation traffic at the Shiloh, Belleville, Cardinal Creek, and Mascoutah Gates during the morning peak period after the new Cardinal Creek Gate is constructed. These percentages have been applied to the latest average weekday inbound and outbound traffic counts for these four gates (SAFB 2007c and SAFB 2013d). Because the Mascoutah Gate would close under the Proposed Action, this analysis assumes that half of the Mascoutah Gate's projected traffic volume consists of automobiles, which would be diverted through the Belleville Gate (i.e., the nearest gate), and the other half consists of truck traffic, which would use the new truck inspection facility at the Cardinal Creek Gate.

Utilities. Short-term, negligible, adverse and long-term, minor, adverse and beneficial effects on utilities would occur from the Proposed Action. Construction activities could interrupt existing utility service for short periods of time (e.g., electric or communications service could be temporarily lost while new facilities are connected). The proposed increase in the amount of building space would slightly increase the demand for all utilities including electricity, natural gas, water, sanitary sewer and wastewater treatment, and communications services. However, because there would not be an increase in personnel on the installation, the long-term increases in utility demand would be minor. Because utility service is not currently available to the site of the proposed gate complex, construction activities would entail extending Scott AFB's utility network to the site. Utility conduits would be constructed underneath the proposed access roadway and originate from the existing service at the northern terminus of Pryor Drive. The extension of such service would represent a long-term, beneficial effect on the installation. An IL EPA Division of Public Water Supply permit would be obtained for the water main extension. An emergency generator would be installed adjacent to the guard booths to provide uninterrupted electrical service, as needed.

Implementation of the Proposed Action would result in short- and long-term, adverse effects as a result of increased solid waste generation. As indicated in **Table 4-6**, approximately 12,427 tons of construction and demolition debris would be generated during the implementation of the Proposed Action. Although solid waste would be generated only during construction and demolition, landfill disposal of that waste would be a permanent impact. It is USAF policy to reduce construction and demolition debris by 50 percent, annually. It is anticipated that much of the clean debris could be recycled instead of landfilled.

Table 4-6. Anticipated Generation of Construction and Demolition Debris

Proposed Activities	Project Size (ft^2)	Multiplier (pounds/ft^2)	Total Waste Generated	
			Pounds	U.S. Tons
Demolition	147,000	158	23,226,000	11,613
Construction	20,182	4.34	87,589	44
Pavement (Construction and Demolition)	1,538,850	1	1,538,850	770
			Total	**12,427**

Source: USEPA 2009b

The proposed gate complex would be designed to meet or exceed LEED Silver criteria. To manage the potential for adverse impacts on storm water management, the new queuing lanes, facilities, parking lots, and storm water drainage infrastructure would be designed and constructed in accordance with Scott AFB's storm water management plans. Where feasible, measures would be taken to minimize areas of impervious surface through shared parking, decked or structured parking, or other measures as appropriate. Replacement of the storm water main under Pryor Drive would result in immediate and long-term, moderate, beneficial effects by reducing the potential for flooding. All storm water infrastructure would be designed with the goal of maintaining or restoring the natural hydrologic functions of the site, in accordance with the EISA Section 438.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.9.2** would continue. Most notably the existing Cardinal Creek Gate would continue to provide supplemental access for light vehicles entering the installation from 6:00 a.m. to 8:00 a.m. and supplemental egress from 3:00 p.m. to 5:00 p.m. and the Mascoutah Gate would remain open, continue to be Scott AFB's only truck inspection facility, and require commercial vehicles to take an indirect route to access the installation from I-64.

The No Action Alternative would not provide Scott AFB with an access gate capable of handling the anticipated increase in light vehicle traffic at the Cardinal Creek Gate following the construction of a new interchange with I-64. As such, the State of Illinois's proposed interchange with I-64 would not be fully utilized because the inadequate size and limited hours for the existing Cardinal Creek Gate would severely limit the number of vehicles that could access the installation via the proposed interchange. The existing LOS would remain, and the reduction in vehicle congestion at Scott AFB's other gates and improvements to on- and off-installation traffic flow would not occur. Truck traffic using I-64 would continue to traverse an indirect route through the adjoining communities to access the installation. The No Action Alternative would not change utility demand; however, the badly deteriorated storm water main beneath Pryor Drive would not be replaced, and flooding would continue to occur during significant rain events. Therefore, while the No Action Alternative would not result in direct effects on infrastructure, the existing adverse conditions would continue.

4.10 Hazardous Materials and Wastes

4.10.1 Evaluation Criteria

Impacts on hazardous materials or hazardous waste would be considered significant if a proposed action resulted in noncompliance with applicable Federal or state regulations, or increased the amounts generated or procured beyond current Scott AFB waste management procedures, permits, and capacities. Impacts on the ERP would be considered significant if a proposed action disturbed or created contaminated sites resulting in negative effects on human health or the environment, or if a proposed action made it substantially more difficult or costly to remediate existing contaminated sites.

4.10.2 Environmental Consequences

Proposed Action

Hazardous Materials, Hazardous Wastes, and Petroleum Products. Short-term, negligible to minor, adverse effects on hazardous materials, hazardous wastes, and petroleum products would occur from the

construction and demolition activities associated with the Proposed Action. Construction and demolition activities would require the delivery and use of very minimal amounts of hazardous materials and petroleum products and would generate very minimal amounts of hazardous wastes. Contractors would be responsible for the management of hazardous materials, hazardous wastes, and petroleum products during construction and demolition activities. These products would be handled in accordance with Federal, state, and local regulations and would not be expected to increase the risks of exposure to workers and the public.

Long-term, negligible to minor, adverse effects on hazardous materials, hazardous wastes, and petroleum products would occur from the use of the proposed gate complex. Operation of the proposed gate complex would require the delivery, storage, and use of minimal amounts of hazardous materials and petroleum products to support normal operations. The proposed facility would use a backup electrical generator, which would store and require infrequent deliveries of diesel fuel and lubricants. The use of the proposed gate complex would also generate very minimal amounts of hazardous wastes from normal operations.

Environmental Contamination. Long-term, minor to moderate, beneficial effects associated with the clean up of ERP Site SS-25 and Parcel 99 would result from the Proposed Action. Both of these contamination sites would undergo appropriate remedial actions prior to the start of construction activities. Because ERP Site SS-25 is on Scott AFB property and the soil contamination at this site resulted from past USAF activities, it would be the responsibility of the USAF to take the appropriate remedial actions. Such remedial actions could include soil excavation and removal. USAF policy prohibits Scott AFB from entering into any type of acquisition agreement (i.e., purchase, lease, or easement) for property that currently is contaminated. Therefore, in order for Scott AFB to acquire any portion of Parcel 99, the owner (i.e., St. Clair County) would need to conduct all remaining remedial actions as required by the IL EPA for Parcel 99 to obtain a no further action required determination. The Proposed Action would necessitate the respective responsible parties to complete these remedial actions.

Asbestos-Containing Material. Short-term, minor, adverse effects associated with ACMs would occur during the demolition of the two former schools. Both former schools were documented to contain nonfriable ACMs, which are now assumed to be friable; therefore, both buildings would need to be surveyed for asbestos by a certified demolition contractor to ensure appropriate measures are taken to reduce potential exposure to, and release of, asbestos. All friable ACMs would be removed prior to demolition and disposed of at a USEPA-approved landfill. The IL EPA would be notified of demolition, as appropriate. Demolition contractors would wear appropriate personal protective equipment. Contractors would be required to adhere to all Federal, state, and local regulations, as applicable. Long-term, negligible, beneficial effects would occur from reducing the potential for human exposure to and maintenance of ACMs due to the demolition of the two former schools.

USAF regulations restrict the use of ACMs for new construction. AFI 32-1023 requires that a substitution study be conducted whenever the use of an ACM in construction, maintenance, or repair is considered. If it is determined that the ACM is superior in cost and performance characteristics, and has minimal actual or potential health hazards, then the ACM should be used. In all other cases non-ACM should be used.

Lead-Based Paint. Short-term, minor, adverse effects associated with LBP would occur during the demolition of the two former schools. Both former schools are assumed to contain LBP due to their ages; therefore, both buildings would need to be surveyed for LBP by a contractor prior to demolition activities. Buildings containing LBP can be demolished without removing the LBP; however, all LBP-contaminated construction debris would be disposed of at a USEPA-approved landfill. The IL EPA would be notified of demolition, as appropriate. Demolition contractors would need to take appropriate safety precautions.

Contractors would be required to adhere to all applicable Federal, state, and local regulations. Long-term, negligible, beneficial effects would occur from reducing the potential for human exposure to and maintenance of LBP due to demolition of the former schools.

Polychlorinated Biphenyls. Long-term, negligible, beneficial effects would occur from the removal of the PCB-containing florescent lamp fixtures in the two former schools. Any potential PCB-containing equipment not labeled PCB-free or missing date-of-manufacture labels within the former schools would be removed and handled in accordance with applicable Federal and state regulations. PCB-containing materials would be transported and disposed of at a hazardous waste disposal facility.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.10.2** would continue. The No Action Alternative would not provide the impetus to clean up ERP Site SS-25 and Parcel 99, and the ACMs, LBP, and PCBs known and suspected to be within the two former schools would remain in place. Therefore, while the No Action Alternative would not result in direct effects on hazardous materials and wastes, the existing adverse conditions would continue.

4.11 Safety

4.11.1 Evaluation Criteria

Any increase in safety risks would be considered an adverse effect on safety. A proposed action could have a significant effect with respect to health and safety if it resulted in any of the following:

- A substantial increase in risks associated with the safety of construction personnel, contractors, or the local community
- A substantial hindrance of the ability to respond to an emergency
- A new health or safety risk for which the installation is not prepared or does not have adequate management and response plans in place.

4.11.2 Environmental Consequences

Proposed Action

Short-term, minor, adverse effects on construction safety would occur from the Proposed Action. Adverse effects on construction safety would result from the slight increase in the risks associated with construction and demolition activities. During all phases of construction and demolition, safety standards required by OSHA and NIOSH would be followed. Workers would be required to wear personal protective equipment such as ear protection, steel-toed boots, hard hats, gloves, and other appropriate safety gear. Construction and demolition areas would be fenced and appropriately marked with signs and placards. Construction equipment and associated trucks transporting material to and from the construction site would be directed to roads and streets that carry the least traffic.

ERP Site SS-25 and Parcel 99 could be impacted by the Proposed Action. Contaminated soil could be encountered by workers in these areas and have short-term, minor, adverse impacts on safety. If contaminated material is encountered during construction or demolition, work would be halted and appropriate authorities would be contacted to ensure that any contaminated material is managed in

accordance with applicable ERP and state regulations. Remediation of ERP Site SS-25 and Parcel 99 would be required prior to construction; therefore, it is unlikely that contamination material would be discovered during construction. See **Section 4.10** for more information on impacts regarding hazardous materials and waste.

During construction and demolition activities, Pryor Drive might need to be closed, which could result in short-term, minor, adverse effects on emergency response and evacuation. Other nearby roadways would be maintained to allow emergency response vehicles access to all facilities, and Scott AFB's other gates would serve as evacuation routes. Improvements to Pryor Drive and the Cardinal Creek Gate would improve traffic flow, which could result in faster response times for emergency vehicles and better evacuation routes. Such improvements would be a long-term, minor, beneficial effect.

Short-term, minor, adverse effects on safety would occur during the demolition of the two former schools because of the likely presence of LBP and the confirmed presence of ACMs. To minimize these minor adverse effects, demolition contractors would adhere to all applicable Federal, state, and local regulations during demolition. Long-term, minor, beneficial effects on safety would occur from the demolition of the two former schools by removing all safety hazards associated with such. Authorized personnel and trespassers would no longer be subjected to the safety hazards associated with these two poorly maintained structures.

Long-term, moderate, beneficial effects on safety would result from the operation of the proposed truck inspection facility and the closure of the existing truck inspection facility at the Mascoutah Gate. The most stringent AT/FP requirements would be incorporated into the design of the proposed truck inspection facility, which would limit safety concerns to neighboring populations. Closure of the existing truck inspection facility would eliminate the current AT/FP requirement deficiencies.

No Action Alternative

Under the No Action Alternative, the USAF would not construct and operate a new commercial vehicle and POV access gate complex at Scott AFB. The existing conditions as discussed in **Section 3.11.2** would continue. The safety hazards associated with the two former schools would remain under the No Action Alternative, and the No Action Alternative would not address the deficiencies from the Mascoutah Gate not meeting all current AT/FP requirements for a truck inspection facility. Therefore, while no direct impacts on safety would occur from the No Action Alternative, the existing adverse conditions would continue.

5. Cumulative Effects, Best Management Practices, and Adverse Effects

5.1 Cumulative Effects

CEQ regulations stipulate that the cumulative effects analysis in an EA should consider the potential environmental effects resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). CEQ guidance in considering cumulative effects affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with a proposed action. The scope must consider other projects that coincide with the location and timetable of a proposed action and other actions. Cumulative effects analyses must also evaluate the nature of interactions among these actions (CEQ 1997).

5.1.1 Projects Identified with the Potential for Cumulative Effects

The scope of the cumulative effects analysis involves both timeframe and geographic extent in which effects could be expected to occur, and a description of what resources could be cumulatively affected. For the purposes of this analysis, the temporal span of the Proposed Action is 2 years, beginning with construction in 2018 and continuing through the beginning of gate operations in 2019. For most resources, the spatial area for consideration of cumulative effects is Scott AFB and areas immediately around Scott AFB. An effort was undertaken to identify projects at Scott AFB and in the areas surrounding the installation for evaluation in the context of the cumulative effects analysis. This was further developed through review of public documents and information gained from the coordination with various applicable agencies.

Past Actions at Scott AFB

Past activities are those actions that occurred within the geographic scope of cumulative effects that have shaped the current environmental conditions of the project area. Scott AFB, formerly Scott Field, was originally used as a flight-training field beginning in 1917. It is one of the oldest continuous-service USAF installations. The installation's boundaries have increased more than five times in size since its initial construction, and the facilities and infrastructure have undergone several major periods of construction and reconstruction to accommodate student training loads and new missions and commands (SAFB 2012d). For many resource areas, such as biological resources and hazardous materials and waste, the effects of past actions are now part of the existing environment and are included in the description of the affected environment.

Present and Reasonably Foreseeable Future Actions at Scott AFB

Construction, demolition, and infrastructure upgrades are a continuously occurring activity at Scott AFB. As needed due to aging infrastructure or to enable the military mission, old buildings are removed, existing facilities are repaired and expanded, and new facilities are constructed, resulting in better land use function and organization. In 2012, HQ AMC and 375 Air Mobility Wing (AMW) prepared an Installation Development EA (IDEA) and FONSI/FONPA analyzing notable demolition, construction, infrastructure, and natural infrastructure management projects that are planned at Scott AFB between 2012 and 2017 (SAFB 2012b). These installation development activities include the largest planned projects in scope and are believed to encompass the upper range of potential impacts on the natural and man-made environment. **Table 5-1** summarizes the projects proposed in the IDEA. Projects C2, Construct New Defense Information System Agency (DISA) Facility; I1, Construct Civil Engineering Open Storage Yard; and NI1, Remove Airfield Tree Violations, are the closest projects (within approximately 3,000 feet) to the Proposed Action. The locations of these three projects are shown in **Figure 5-1**.

Table 5-1. IDEA Project Descriptions

Project Description (Project Number)	FY	Project Area (ft^2)	Change in Impervious Surface (ft^2)
Facilities Demolition Projects			
D1. Demolish Old Service Station, Building 48 (VDYD090158)	Complete	910	- 910
D2. Demolish James Gym (Building 1987), Buildings 1984 and 1985, 1986, the outdoor pool (Facility 6303), and associated pavements in support of the construction of the proposed modern fitness center (VDYD080130B)	2017/8	72,596	- 63,410
D3. Demolish 21 Buildings (i.e., Buildings 512, 513, 514, 515, 516, 517, 519, 520, 521, 522, 523, 528, 530, 531, 533, 542, 543, 546, 549, 552, and 6354) in Support of the Base Civil Engineering and Contracting Complex (VDYD111242)	2017/8	84,668	- 84,668
Demolition Total Square Feet [1]		*158,174*	*- 148,988*
Facilities Construction Projects			
C1. Construct and Operate Explosive Ordnance Proficiency Range, with appropriate barricades, holding areas, fences, and access roads (VDYD101141)	On-going	888	+888
C2. Construct New DISA Facility to replace current outdated facility (VDYD597032) [2]	Contract Awarded	164,048	+54,682
C3. Construct New Fitness Facility, with associated parking and pavements (VDYD080130B)	2017/8	103,166	+51,583
C4. Construct U.S. Transportation Command Mission Planning Center, with necessary parking and infrastructure (VDYD101207)	2014	218,507	+72,835
C5. Construct Joint Cyber Facility (VDYD101053)	2016	52,000	+52,000
C6. Construct Consolidated Base Civil Engineering and Contracting Complex, which consolidates functions currently spread out in 26 different facilities (VDYD111242)	2017/8	120,600	+120,600
Construction Total Square Feet [1]		*659,209*	*+352,588*
Infrastructure Improvement Projects			
I1. Construct Civil Engineering Open Storage Yard, including an asphalt-paved roadway providing access from Pryor Drive (VDYD102004) [2]	Complete	31,500	+31,500
I2. Construct Communications Infrastructure for DISA and other future development (Project No. TBD)	2014	221,760	No change
I3. Construct Aircraft Deicing Pad, which would include an underground storage tank, a drainage system, and permanent lighting (VDYD070134)	2017	90,000	+90,000
Infrastructure Improvement Total Square Feet [1]		*343,260*	*+121,500*

Project Description (Project Number)	FY	Project Area (ft^2)	Change in Impervious Surface (ft^2)
Natural Infrastructure Management Projects			
NI1. Remove Airfield Tree Violations, which includes removing or trimming approximately 255 trees, most of which are at the golf course between Golf Course Road and the airfield (VDYD070142) [2]	2016	2,150,000	No change
NI2. Remove Log Jam from Silver Creek (part of VDYD131168)	2015	1,000	No change
NI3. Improve Foraging Habitat for Indiana Bat by establishing management zones and conducting periodic tree thinning and planting (part of VDYD280620 and VDYD280641)	2014/5	TBD	No change
Natural Infrastructure Management Total Square Feet [1]		*2,151,000*	*No change*
IDEA Total Square Feet [1]		**3,311,643**	**+325,100**

Sources: SAFB 2012b, Collingham 2013

Key:

ft^2 = square feet

FY = Fiscal Year

TBD = to be determined

Notes:

1. Changes in impervious surfaces are not necessarily equivalent to the project area square footage because some facilities proposed for demolition are multiple stories, and many new facilities would be multiple stories. Furthermore, some infrastructure improvement and natural infrastructure management projects would disturb area but not add impervious surfaces.
2. Projects C2, Construct New DISA Facility; I1, Construct Civil Engineering Open Storage Yard; and NI1, Remove Airfield Tree Violations, are the closest projects (within approximately 3,000 feet) to the Proposed Action. The planned schedules for Projects C2, I1, and NI1 suggest they will be complete prior to implementation of the Proposed Action.

Many other installation development projects are planned and reasonably foreseeable at Scott AFB and would be completed at Scott AFB as funding becomes available, in addition to those identified in **Table 5-1**. Most of these other projects are much smaller in scope than those summarized in **Table 5-1** and would be expected to have negligible to minor environmental and socioeconomic effects. Other present or reasonably foreseeable projects within approximately 3,000 feet of the Proposed Action include the following, which are also shown on **Figure 5-1**:

- Repair MWD Kennel Drainage, Parking Lot, and Fence (Building 5490), on-going (SAFB 2013b)
- Demolish Carport (Building 5540) (completed) (Project D6, SAFB 2012b)
- Construct Addition to and Renovate Building 5008, Squadron Operations Facility, anticipated FY 2016 (Project C30, SAFB 2012b)
- Construct Water Storage Tower, anticipated FY 2014 (Project I9, SAFB 2012b)
- Construct Cable Duct to Building 5498, anticipated FY 2014 (Project I16, SAFB 2012b)
- Move Existing Jog Path Outside the Clear Zone, anticipated FY 2018 (Project I18, SAFB 2012b)
- Replace Golf Course Clubhouse Electrical Feeders (completed) (Project I19, SAFB 2012b).

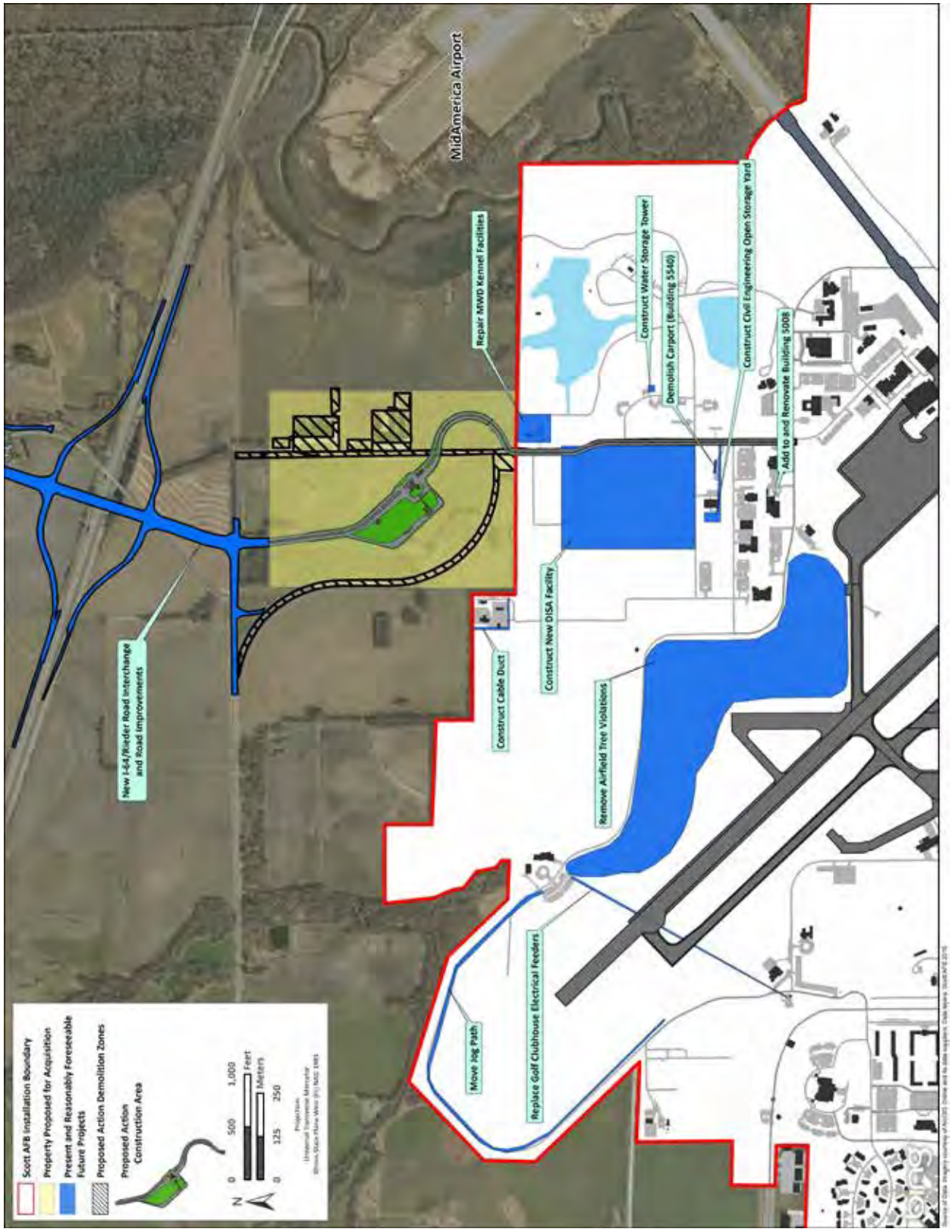


Figure 5-1. Present and Reasonably Foreseeable Future Projects for Cumulative Effects Analysis

All demolition and construction activities generally would be expected to result in some increased noise, increased air emissions, potential for erosion and transport of sediment into surface water bodies, generation of small amounts of hazardous materials and wastes, and generation of construction and demolition waste. All demolition and construction activities generally would be expected to result in short-term job creation and materials procurement. These types of short-term, construction-related effects would occur regardless of project location and are not constraints to development. In the absence of unique constraints, the potential for environmental effects of a demolition or construction project smaller in scope than those analyzed in detail in the IDEA (i.e., those identified in **Table 5-1**) would be expected to result in less than significant environmental effects.

Actions Outside Scott AFB

As described in **Section 1.2**, the State of Illinois plans to construct a new interchange connecting I-64 with Rieder Road to alleviate traffic issues throughout the region (i.e., I-64 Exit 21). This new interchange, shown on **Figure 5-1**, would connect the proposed Cardinal Creek Gate with I-64 via Rieder Road and relieve congestion, complement and support future economic development, and improve safety in the project corridor (Kaskaskia 2011). Provisions for future vehicle access to MidAmerica Airport are possible. Construction for this project is currently planned from 2014 to 2018 (IDOT 2012). Appropriate NEPA documentation for this action has recently been accomplished (Kaskaskia 2013).

A 5.3-mile extension of the MetroLink Red Line from the Shiloh-Scott Station to MidAmerica Airport has been proposed. Preliminary plans indicate that future service would extend through the swath of land between Scott AFB and I-64, and a crossing of Rieder Road or the access road to the new Cardinal Creek Gate would be necessary. A possible timeframe for the service extension has not been established. Currently, there is insufficient passenger traffic at MidAmerica Airport to warrant the service extension (Trapp 2014); therefore, this project is not considered in detail in the cumulative effects analysis.

There are preliminary plans to construct a new business park adjacent to MidAmerica Airport, which shares runway use with the 375 AMW and adjoins Scott AFB on the northeast (Kelley 2013). The operations of Covenant Aerospace, Inc.'s new business park would be centered on constructing cargo airplanes. The new business park would be south of I-64, along Highway 4 in Mascoutah; upon completion, the business park could create approximately 2,200 jobs. The plans for this new business park are too preliminary and speculative to consider in detail in the cumulative effects analysis at this time, though the new I-64/Rieder Road Interchange and associated roadway improvements could facilitate new development in the area off Scott AFB in the long-term.

5.1.2 Cumulative Effects Analysis

A cumulative effects analysis must be conducted within the context of the resource areas. The magnitude and context of the effect on a resource area depends on whether the cumulative effects exceed the capacity of a resource to sustain itself and remain productive (CEQ 1997). **Table 5-2** discusses potential cumulative effects that could occur as a result of implementing the Proposed Action and other past, present, and reasonably foreseeable future actions. No significant adverse cumulative effects were identified in the cumulative effects analysis.

5.2 Unavoidable Adverse Effects

Unavoidable adverse effects would result from implementation of the Proposed Action. As discussed in detail in **Section 4**, the Proposed Action would result in short-term, adverse effects associated with construction and demolition activities, including increased noise, increased air emissions, minor interruptions to traffic flow, use and generation of small amounts of hazardous materials and wastes, and generation of construction and demolition waste. None of these effects would be significant.

Table 5-2. Summary of Potential Cumulative Effects

Past Actions	Current Background Activities	Proposed Action	Present & Reasonably Foreseeable Future Actions	Cumulative Effects
Noise				
Military training and development activities have occurred at Scott AFB since 1917.	Scott AFB is affected mainly by military aircraft operations and automobile traffic. The ambient sound environment resembles an urban atmosphere.	Short-term, minor, adverse effects would occur from construction and demolition noise. Long-term, negligible, adverse effects could occur from changes in traffic patterns, though increases in traffic and traffic noise overall would not occur. Long-term, negligible, adverse effects could occur from operation of heating and cooling equipment and back-up generators.	Installation development activities would generate short-term, minor, adverse noise. Noise would be limited to the areas of active demolition or construction. The new I-64 interchange and associated local road construction would increase traffic noise surrounding the new roadways.	The noise environment on-installation would be similar to existing conditions. The Proposed Action would have a negligible contribution to the noise environment. No significant adverse cumulative effects are expected.
Land Use				
Military training and development activities have occurred at Scott AFB since 1917.	Land use at Scott AFB is guided by the Installation Development Plan (SAFB 2011a) to ensure safe, compatible development. Off-installation land use is guided by the JLUS for Scott AFB and MidAmerica Airport (SAFB 2008).	Short-term, negligible to minor, adverse effects would occur from temporary construction and demolition disturbances. Demolition activities could possibly restore some areas for agricultural purposes. The Proposed Action would be compatible with existing and future land uses on- and off-installation.	Planned demolition projects would remove old, outdated facilities and make disturbed land available for new construction. Installation development activities would be compatible with existing and future land uses. The new I-64 interchange could spur off-installation development and change land uses in the long-term.	The Proposed Action and other planned projects are compatible with existing and future land uses. No significant adverse cumulative effects are expected.

Past Actions	Current Background Activities	Proposed Action	Present & Reasonably Foreseeable Future Actions	Cumulative Effects
Air Quality				
Historically, air quality in the Metropolitan St. Louis Interstate AQCR has been adversely affected by anthropogenic sources.	Scott AFB is within a marginal O_3 nonattainment area and a $PM_{2.5}$ nonattainment area. All other criteria pollutants are in attainment or unclassified.	Short-term, minor, adverse effects would occur from operating equipment and ground-disturbance during construction and demolition activities. Long-term, negligible effects would occur from backup generator operations.	Installation development activities would generate short-term, minor, adverse criteria pollutant emissions. Overall facility space would increase, but older, more emissive equipment would be replaced with newer, cleaner equipment. Long-term increases in air emissions would be minor, if at all, due to the long-term increase in facility space. The new I-64 interchange would generate criteria pollutant emissions during construction. Long-term estimates of increases in air emissions are not known but would not be expected to be significant because the new interchange would change local traffic patterns but would not be expected to increase regional vehicle traffic substantially.	There would be no appreciable change from the existing conditions. No significant adverse cumulative effects are expected.
Geological Resources				
Soils and localized topography at Scott AFB have undergone modifications as a result of development and military activities.	Some areas immediately off-installation are used for farming. Prime farmland and soils of statewide importance are present.	Short- and long-term, minor, adverse effects would occur as a result of soil disturbance, compaction, and modifications during construction and demolition activities. Prime farmland and soils of statewide importance would be lost during construction, though greater areas of these would be made available through demolition.	Installation development activities have the potential for short- and long-term, minor, adverse effects from soil disturbance, compaction, and modifications. Activities on-installation would not affect prime farmland because these areas are not considered available for farm use. The new I-64 interchange would have soil and topographic disturbances as a result of grading, clearing, and construction.	Cumulative development could result in localized minor changes to topography, soil conditions, and groundwater infiltration. No significant adverse cumulative effects are expected.

Past Actions	Current Background Activities	Proposed Action	Present & Reasonably Foreseeable Future Actions	Cumulative Effects
Water Resources				
Installation development activities have had minor effects on groundwater and surface water quality.	Nutrients and siltation from agricultural operations are the primary nonpoint sources of water pollution into surface water bodies.	Short- and long-term, negligible, adverse effects would occur from soil compaction, soil disturbance, and vegetation removal during construction and demolition activities.	The IDEA identified that implementation of all planned installation development could increase impervious surfaces by as much as 6.1 acres by 2017. Several IDEA projects could directly affect floodplains or wetlands, though most of these projects are not proximal to the Proposed Action, except D6. Project D6 (Demolish Carport/Building 5540) actually decreased impervious surfaces in the floodplain and has already been completed. The new I-64 interchange would result in soil compaction, soil disturbance, vegetation removal, and increases in impervious surfaces.	Post-construction hydrological conditions would be expected to remain comparable to preconstruction hydrological conditions, which would reduce the potential for long-term, adverse, cumulative effects on water quality and flood conditions. No significant adverse cumulative effects are expected.
Biological Resources				
Natural vegetative communities have been highly modified by past development and agriculture operations.	Approximately 96 percent (102 acres) of the proposed project area consists of agricultural fields, lawn/landscaping, or developed areas. The proposed project area supports a low diversity of wildlife.	Short- and long-term, minor, adverse effects on vegetation and wildlife from noise and tree removal during construction and demolition. The permanent removal of approximately 5 acres of trees would have minor, long-term, adverse effects on vegetation and wildlife. Trees would be removed according to seasonal restrictions. All trees and vegetation impacted by the Proposed Action would be replaced, likely on areas of Scott AFB that are not part of the project area.	The majority of the planned IDEA projects would occur within improved areas of Scott AFB, which would primarily affect non-forested upland and urban upland communities that are modified, landscaped, or mowed regularly. Several projects would require the permanent removal of trees, including Project NI1 (Remove Airfield Tree Violations), which is proximal to the Proposed Action. In consultation with USFWS, the IDEA projects are not likely to affect the Indiana bat adversely. The new I-64 interchange would generate noise and require the removal of trees. Effects on threatened and endangered species are not expected if trees are removed according to seasonal restrictions (Collingham 2012).	Projects that result in the permanent removal of trees would contribute to long-term, minor, adverse, cumulative effects on vegetation, and wildlife; all trees and affected vegetation would be replaced or relocated, if possible. Cumulative effects on threatened and endangered species are not expected. No significant adverse cumulative effects are expected.

Past Actions	Current Background Activities	Proposed Action	Present & Reasonably Foreseeable Future Actions	Cumulative Effects
Cultural Resources				
The area including and surrounding Scott AFB has a long history of human occupation, and there are numerous archaeological resources in the vicinity. Scott AFB has an extensive NRHP-listed historic district, the Scott Field Historic District.	Scott AFB continues to meet its stewardship responsibilities toward cultural resources under Section 110 of the NHPA.	No direct effects on archaeological sites, architectural resources including the Scott Field Historic District, or traditional cultural properties are expected. Access to Site 11S1016 would be restricted during construction.	Some of the Proposed Action and future planned activities involve demolition and construction activities that have the potential to impact negatively NRHP-listed buildings in the Scott Field Historic District. The new I-64 interchange would have adverse effects on one NRHP-eligible archaeological site (Site 11S1098). A Memorandum of Agreement is being prepared to mitigate adverse effects. Four other NRHP-eligible archaeological sites within the I-64 interchange project area would fall under the protection of a 1999 Memorandum of Agreement protecting resources at MidAmerica Airport (Koldehoff 2013).	Cumulative effects would range from negligible to minor. Impacts would be reduced below the threshold of significance by implementation of measures developed in consultation with the SHPO.
Socioeconomics and Environmental Justice				
Military training and development activities have occurred at Scott AFB since 1917. Development immediately surrounding Scott AFB is limited according to joint land-use agreements.	Scott AFB contributes substantially to the local economy.	Short-term, minor, beneficial effects would be expected from the procurement of goods and services during construction and demolition activities. No long-term effects are expected. No disproportionate effects on low-income or minority populations are expected.	Installation development activities would result in short-term, minor, beneficial effects from the procurement of goods and services. The new I-64 interchange would increase the procurement of goods and services during construction. In the long-term, the new interchange could spur the growth of new businesses, increasing local jobs and tax revenues.	Cumulatively, installation development activities would have short-term, minor to moderate, beneficial effects on the local community through the procurement of goods and services. Construction-related expenditures would not generate any long-lasting cumulative benefits. No significant adverse cumulative effects are expected.

Past Actions	Current Background Activities	Proposed Action	Present & Reasonably Foreseeable Future Actions	Cumulative Effects
Infrastructure and Traffic				
Infrastructure systems supporting the military have been established, maintained, and improved since 1917.	Infrastructure systems are well-developed and maintained and improved as needed.	Long-term, beneficial effects on the on- and off-installation transportation network are expected by alleviating traffic congestion at current gates, improving the road network around the proposed Cardinal Creek Gate for future uses, and providing more direct access to the airfield for delivery trucks. Short-term, negligible, adverse effects on utilities could occur during construction and demolition activities, including slightly increased demand and possible infrequent service interruptions.	Installation development activities would result in long-term, minor to moderate, beneficial effects on infrastructure and transportation systems by improving reliability, safety, and capacity. The new I-64 interchange is expected to result in long-term, major, beneficial effects on the local transportation network by providing a more direct route to Scott AFB and making other areas more attractive for new businesses centered on air cargo or military support.	Roadway improvements would be cumulatively beneficial for those traveling to and in the vicinity of Scott AFB. No significant adverse cumulative effects are expected.
Hazardous Materials and Wastes				
Hazardous wastes and materials and 45 ERP sites occur at Scott AFB as a result of its historic use as a military installation.	All hazardous wastes and materials and clean-up sites are managed in accordance with applicable laws and regulations.	Short-term, negligible to minor, adverse effects on hazardous materials and wastes would occur during construction and demolition activities. Long-term, negligible to minor, adverse effects would be expected from gate operations. Long-term, minor to moderate, beneficial effects could occur from the clean up of ERP Site SS-25 and Parcel 99 and the removal of ACM, LBP, and PCBs associated with the closed schools.	Installation development projects would require the use of small quantities of hazardous materials and generate small quantities of hazardous wastes, resulting in short-term, negligible, adverse effects. The new I-64 interchange would require the use of hazardous materials and generate some hazardous wastes during construction.	There would be no appreciable change from the existing conditions. No significant adverse cumulative effects are expected.

Past Actions	Current Background Activities	Proposed Action	Present & Reasonably Foreseeable Future Actions	Cumulative Effects
Safety				
Safety concerns resulting from historic military uses include areas of contamination and potential for munitions.	Areas of known safety concerns include contaminated areas (i.e., ERP sites), munitions areas (i.e., military munitions response program and quantity-distance [QD] arcs), and the airfield. Scott AFB is secured from general public access.	Short-term, negligible to minor, adverse effects from slightly increased risk of a safety mishap during construction and demolition activities. Long-term, beneficial effects would be expected from providing better truck inspection facilities and a more direct and safe route for truck deliveries. The new gate would provide improved installation security.	Installation development activities would result in short-term, negligible to minor, adverse effects during construction. Activities planned within QD arcs, ERP sites, or other areas of greater safety risks would comply with all safety criteria and are coordinated with the appropriate safety personnel. The new I-64 interchange is expected to provide a more direct route to Scott AFB. This would be safer than the existing route because it would avoid transiting residential and commercial zones with numerous busy intersections.	The Proposed Action and the new interchange would be cumulatively beneficial by improving installation security and providing better access to Scott AFB and MidAmerica Airport. No significant adverse cumulative effects are expected.

5.3 Compatibility of the Proposed Action and Alternatives with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls

The USAF would acquire the Proposed Action project area from St. Clair County. As discussed in **Sections 3.2** and **4.2**, this area is used for agricultural purposes and is within a development buffer that ensures no land uses incompatible with the military are present. Parcel 99 must undergo remediation prior to its purchase. The Proposed Action would be consistent with the recommendations in the Comprehensive Plan of St. Clair County, the Scott AFB Installation Development Plan, and the JLUS and would not conflict with existing or future land uses on Scott AFB. Some agricultural land outside of the Cardinal Creek Gate could still be used for farming purposes following implementation of the Proposed Action.

5.4 Relationship Between the Short-term Use of the Environment and Long-term Productivity

Short-term uses of the biophysical components of human environment include direct construction-related disturbances and direct effects associated with an increase in activity that occurs over a period of less than 5 years. Long-term uses of human environment are those effects occurring over a period of more than 5 years, including permanent resource loss.

The Proposed Action would not result in an intensification of land use in the surrounding area off-installation. Development of the Proposed Action would not represent a significant loss of open space. The long-term beneficial effects of implementing the Proposed Action and other planned installation development activities would support the ongoing and future training missions and other readiness training and operational assignments.

5.5 Irreversible and Irretrievable Commitments of Resources

The irreversible environmental changes that would result from implementation of the Proposed Action involve the consumption of material resources, energy resources, and human resources. The use of these resources is considered to be permanent. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that use 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 timeframe (e.g., energy and minerals).

Biological Habitat. The Proposed Action would result in the minimal loss of vegetation and wildlife habitat. This loss would not be significant.

Material Resources. Material resources used for the Proposed Action include building materials (for construction of facilities), concrete and asphalt (for parking lots and roads), and various material supplies (for infrastructure) and would be irreversibly lost. Most of the materials that would be consumed are not in short supply, would not limit other unrelated construction activities, and would not be considered significant.

Energy Resources. No significant effects would be expected on energy resources used as a result of the Proposed Action, though any energy resources consumed would be irretrievably lost. These include petroleum-based products (e.g., gasoline and diesel fuel) and electricity. During construction, gasoline and diesel fuel would be used for the operation of construction vehicles. During operation, gasoline or diesel fuel would be used for the operation of privately owned and government-owned vehicles.

Electricity would be used by operational activities. Consumption of these energy resources would not place a significant demand on their availability in the region.

Human Resources. The use of human resources for construction and operation is considered an irretrievable loss, only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action and alternatives represent employment opportunities, and is considered beneficial.

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6. List of Preparers

This EA has been prepared by HDR under the direction of AFCEC, HQ AMC, and Scott AFB. The individuals who contributed to the preparation of this document are as follows.

Louise Baxter
M.P.A. Public Administration
B.S. Political Science
Years of Experience: 10

David Boyes, REM, CHMM
M.S. Natural Resources
B.S. Applied Biology
Years of Experience: 36

Michael Church, Ph.D.
Ph.D. Anthropology (Archaeology focus)
M.A. Anthropology (Archaeology focus)
B.A. English
Years of Experience: 10

Timothy Didlake
B.S. Earth Sciences
Years of Experience: 6

Rod Dossey
B.S. Ecology
Years of experience: 20

Nicolas Frederick
M.S. Biology
B.S. Psychology
Years of Experience: 4

Leigh Hagan
M.E.S.M. Environmental Science and Management
B.S. Biology
Years of Experience: 9

Rebecca Hartless
B.S. Civil/Environmental Engineering
Years of Experience: 11

Cheryl Myers
Graphics and Document Formatting
A.A.S. Nursing
Years of Experience: 22

Margie Nowick
M.S. History and Historical Archaeology
M.S. Historic Preservation
B.A. Anthropology
Years of Experience: 32

Deborah Peer
M.S. Environmental Science
B.S. Zoology
B.S. Wildlife Science
Years of Experience: 13

Steven Peluso, CHMM, CPEA
B.S. Chemical Engineering
Years of Experience: 28

Tanya Perry
B.S. Environmental Science
B.A. Communications
Years of Experience: 13

Patrick Solomon
M.S. Geography
B.S. Geography
Years of Experience: 19

John Timpone
M.S. Biology
B.S. Biology
Years of Experience: 11

Matthew Valdin
M.S. Environmental Science and Management
B.S. Environmental Science/Studies
Years of Experience: 1

Jeffrey Weiler
M.S. Resource Economics/Environmental Management
B.A. Political Science
Years of Experience: 38

Mary Young
B.S. Environmental Science
Years of Experience: 10

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APPENDIX A

INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING (IICEP), NATIVE AMERICAN TRIBAL CONSULTATION, AND PUBLIC NOTICE DOCUMENTATION

IICEP Distribution List and Correspondence for the Description of the Proposed Action and Alternatives (DOPAA)

A DOPAA for this EA was made available to the agencies listed below for a 30-day review period on 22 July 2013. A signed example copy of the IICEP distribution letter, the letter sent to the Illinois Historic Preservation Agency, and comments received are included on the following pages.

Federal

U.S. Army Corps of Engineers
Attn: Ms. Susan L. Horneman
St. Louis District
1222 Spruce Street
St. Louis, MO 63103-2822

USEPA Region 5
NEPA Implementation Section
Mr. Ken Westlake
77 West Jackson Blvd.
Mail Code B-19J
Chicago, IL 60604

U.S Fish and Wildlife Service
Marion Illinois Sub-Office
Mr. Matt Mangan
8588 Route 148
Marion, IL 62959

U.S Fish and Wildlife Service
Marion Illinois Sub-Office
Mr. Phillip Rodgers
8588 Route 148
Marion, IL 62959

Federal Aviation Administration
Chicago Airports District Office 614
Gary Wilson, Program Manager
2300 East Devon Avenue
Des Plains, IL 60018

USDA-NRCS
Mr. Ronald Ziehm
Assistant State Conservationist (Area 1)
502 Comfort Drive, Suite D
Marion, IL 62959

USDA-NRCS
St. Clair County Field Office
Mr. John F. Harryman, District Conservationist
2031 Mascoutah Avenue
Belleville, IL 62220

State of Illinois

Illinois Department of Natural Resources
Region IV Office
4521 Alton Commerce Pkwy.
Alton, IL 62002

Illinois Department of Natural Resources
Division of Ecosystems and Environment
Mr. Todd Rettig
1 Natural Resources Way
Springfield, IL 62702-1271

Illinois Environmental Protection Agency
Mr. Jerry Kuhn
1021 North Grand Avenue East
Springfield, IL 62794-9276

Illinois Historic Preservation Agency
Attn: Ms. Anne Haaker
1 Old State Capitol Plaza
Springfield, IL 62701-1512

St. Clair County

St. Clair County
Ms. Anne Markezich
Director of Building and Zoning/Mapping & Platting Dept.
#10 Public Square, 5th Floor
Belleville, IL 62220

St. Clair County Dept. of Roads and Bridges
Mr. James Fields, P.E.
1415 North Belt West
Belleville, IL 62226

St. Clair County Economic Development Department
Mr. Terry Beach
19 Public Square, Suite 200
Belleville, IL 62220

Local Communities

Ms. Emily Fultz, A.I.C.P.
Director of Economic Development & Planning
101 South Illinois Street
Belleville, IL 62220

Mr. Cody Hawkins
City Manager
City of Mascoutah
3 West Main Street
Mascoutah, IL 62258

Mr. Ted K. Shekell, AICP
Planning Director
255 South Lincoln
O'Fallon, IL 62269

Mr. Norm Etling, P.E.
Village Engineer
1 Park Drive
Shiloh, IL 62269

Mr. Richard Wilkin
Mayor, City of Lebanon
312 West St. Louis Street
Lebanon, IL 62254

MidAmerica Airport

Mr. Daniel Trapp, P.E.
Airport Engineer
9768 Airport Boulevard
Mascoutah, IL 62258

Distribution letter for the DOPAA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

22 Jul 13

MEMORANDUM FOR DISTRIBUTION

FROM: Department of the Air Force
375 Air Mobility Wing (Air Mobility Command)
Civil Engineering Squadron/Installation Management Flight (CES/CEI)
701 Hangar Road
Building 531
Scott AFB, Illinois 62225

SUBJECT: Description of Proposed Action and Alternatives (DOPAA) for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

1. The 375 Air Mobility Wing (AMW) is proposing to construct and operate a new vehicle access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles accessing the installation from Interstate 64. The proposed gate complex would replace Scott AFB's existing commercial vehicle inspection facility near the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

2. The Environmental Impact Analysis Process for the Proposed Action is being conducted by the 375 AMW in accordance with the Council on Environmental Quality guidelines pursuant to the requirements of the National Environmental Policy Act of 1969. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation by reviewing the attached DOPAA and solicit your comments and any potential environmental concerns your office would like to have addressed in the EA. Appendix A of the attached DOPAA contains the distribution list of those Federal, state, and local agencies that have been contacted. If there are any additional agencies that you feel should review and comment on the proposal, please include them in your distribution of this letter and the attached materials.

3. Please provide any comments within 30 days from the date shown on this letter by mail to 375 AMW Public Affairs Office, Attn: Ms. Christine Spargur, 101 Heritage Drive, Scott Air Force Base, Illinois, 62225; by telephone to (618) 256-4241; or by email to christine.spargur@us.af.mil.

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4. If members of your staff have any questions, please call or email the project point-of-contact, Mr. Brian Collingham, at (618) 256-2465 or brian.collingham.1@us.af.mil.

RAYMOND R. DECK, GS-13, DAFC
Chief, Installation Management Flight

Attachments:

1. *Description of Proposed Action and Alternatives for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois*

Letter to the SHPO for the DOPAA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

Department of the Air Force
375 CES/CEIEC
701 Hangar Road -- Building 531
Scott AFB, IL 62225-5035

JUL 24 2013

Illinois Historical Preservation Agency
#1 Old State Capital Plaza
Springfield, IL 62701-1507
Attn: Ms. Anne Haaker

SUBJECT: Description of Proposed Action and Alternatives (DOPAA) for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Ms Haaker:

The 375 Air Mobility Wing (AMW) is proposing to construct and operate a new vehicle access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles accessing the installation via the new interchange. The proposed gate complex also would replace Scott AFB's existing commercial vehicle inspection facility at the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

Scott AFB is providing you with this DOPAA and requests you provide any comments on the proposed undertakings that have a potential to affect properties of cultural or historic significance no later than 30 days of the receipt of this correspondence. Any issues that you identify will be addressed in the Environmental Assessment. When the comment period has ended, preparation of the Environmental Assessment will commence.

Thank you very much for your interest in the Cardinal Creek Gate project. This project is very

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important to the overall mission of Scott AFB. Should you have any questions or concerns please feel free to contact me at cindy.nolan@us.af.mil or at (618) 256-2492.

Sincerely,

CINDY NOLAN, P.G.
Conservation Management

Enclosure: *Description of Proposed Action and Alternatives for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois*

Comments received on the DOPAA from agencies
From the USFWS

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Marion Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959
(618) 997-3344

August 7, 2013

Mr. Raymond R. Deck
375 AMW Public Affairs Office
101 Heritage Drive
Scott AFB, Illinois 62225

Attn: Ms. Christine Spargur

Dear Mr. Deck:

Thank you for your July 22, 2013, letter requesting review of the Description of Proposed Action and Alternatives (DOPAA) for an Environmental Assessment (EA) addressing Gate Complex Construction at Scott Air Force Base, St Clair County, Illinois. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*); the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq.*) and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 et seq.).

Our technical assistance website at the link below provides Section 7 consultation guidance for Federal agencies and their applicants (i.e. project proponents). From there you can go through the step-by-step instructions for the section 7(a)(2) consultation process. You will find information on threatened and endangered species and list of species by county along with other information on the consultation process. By following the instructions, you can determine what your action area is, whether listed species may be found within the action area, and if the project may affect listed species.

http://www.fws.gov/midwest/endangered/section7/s7process/index.html

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of the proposed project. Therefore, we are furnishing you the following list of species which have ranges that include the project area and have included background information for each species in an attachment:

Classification	Common Name (Scientific Name)	Habitat
Endangered	Indiana bat	Caves, mines (hibernacula);

	(*Myotis sodalis*)	small stream corridors with well-developed riparian woods; upland and bottomland forests
Endangered	Least tern (*Sterna antillarum*)	Bare alluvial and dredge spoil islands
Endangered	Illinois cave amphipod (*Gammarus acherondytes*)	Karst caves & streams
Endangered	Pallid sturgeon (*Scaphirhynchus albus*)	Large rivers
Threatened	Decurrent false aster (*Boltonia decurrens*)	Disturbed alluvial soils
Threatened	Eastern prairie fringed orchid (*Platanthera leucophaea*)	Mesic to wet prairies

There is no designated critical habitat in the project area at this time.

Although the bald eagle has been removed from the threatened and endangered species list, it continues to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The Service developed the National Bald Eagle Management Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute "disturbance," which is prohibited by the BGEPA. The Service is unaware of any bald eagle nests in the proposed project area; however, if a bald eagle nest is found in the project area or vicinity of the project area then our office should be contacted and the guidelines implemented. A copy of the guidelines is available at:

http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/NationalBaldEagleManagementGuidelines.pdf

Thank you for the opportunity to provide information concerning threatened and endangered species. We look forward to reviewing the EA for the proposed project. If you have any questions, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Biologist in Charge

FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES INFORMATION FOR ST. CLAIR COUNTY, ILLINOIS

The endangered **Indiana bat** (*Myotis sodalis*) has been noted as occurring in several Illinois counties and has been documented at Scott AFB. Potential habitat for this species occurs statewide, therefore, Indiana bats are considered to potentially occur in any area with forested habitat. Indiana bats migrate seasonally between winter hibernacula and summer roosting habitats. Winter hibernacula include caves and abandoned mines. Females emerge from hibernation in late March or early April to migrate to summer roosts. Females form nursery colonies under the loose bark of trees (dead or alive) and/or in cavities, where each female gives birth to a single young in June or early July. A single colony may utilize a number of roost trees during the summer, typically a primary roost tree and several alternates. Some males remain in the area near the winter hibernacula during the summer months, but others disperse throughout the range of the species and roost individually or in small numbers in the same types of trees as females. The species or size of tree does not appear to influence whether Indiana bats utilize a tree for roosting provided the appropriate bark structure is present.

During the summer, Indiana bats frequent the corridors of small streams with well-developed riparian woods, as well as mature bottomland and upland forests. They forage for insects along stream corridors, within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields), along the borders of crop lands, along wooded fence rows, and over farm ponds and in pastures. To avoid impacting the species, tree clearing activities should not occur during the period of April 1 to September 30. If a proposed action occurs within a 5-mile radius of a winter hibernacula, tree clearing should be prohibited from April 1 to November 15. If it is necessary to clear trees during this time frame, surveys may be necessary to determine if Indiana bats are present. A search for this species should be made prior to cave impacting activities.

The **least tern** (*Sterna antillarum*) is listed as endangered and occurs in several Illinois counties along the Mississippi and Ohio Rivers. It nests on bare alluvial or dredge spoil islands and sand/gravel bars in or adjacent to rivers, lakes, gravel pits and powerplant cooling ponds. It nests in colonies with other least terns and sometimes with the piping plover. This species forages in shallow water areas along the river and in backwater areas, such as side channels and sloughs. Foraging habitat must be located in close proximity to nesting habitat.

The **Illinois cave amphipod** (*Gammarus acherondytes*) is listed as endangered in Monroe and St. Clair Counties, Illinois. It is currently known to occur in only a few cave streams of the Illinois sinkhole plain in southwestern Illinois. The contamination of groundwater is probably the greatest threat to this species.

The endangered **pallid sturgeon** (*Scaphirhynchus albus*) is found in the Mississippi River downstream of Melvin Price Locks and Dam. Pallid sturgeon are adapted to large rivers with extensive micro-habitat diversity, turbid water, braided channels, irregular flows and flood cycles. Little is known of its micro-habitat preferences, however, it is suspected that sand/gravel bars and the mouths of major tributaries may be utilized for spawning. This species feeds on aquatic invertebrates and small fish.

The **decurrent false aster** (*Boltonia decurrens*) is listed as threatened and is known to occur in several Illinois counties in the floodplain of the Illinois and Mississippi River. It is considered to potentially occur in any county bordering the Illinois River and Jersey, Madison and St. Clair Counties bordering the Mississippi River. It occupies disturbed alluvial soils in the floodplains of these rivers. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law.

The **eastern prairie fringed orchid** (*Platanthera leucophaea*) is listed as threatened and occurs in several Illinois counties. It occupies wet grassland habitats. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage or removal of this species from Federal land or any other lands in knowing violation of State law or regulation, including State criminal trespass law. This species should be searched for whenever wet prairie remnants are encountered.

From the IL EPA

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217)782-2829
PAT QUINN, GOVERNOR LISA BONNETT, DIRECTOR

AUG 05 2013

Ms. Christine Spargur
Department of the Air Force
Headquarters 375th Air Mobility Wing
101 Heritage Drive
Scott Air Force Base, Illinois 62225

RE: Environmental Assessment for Construction of Gate Complex at Scott Air Force Base

Dear Ms. Spargur:

The Agency has no objections to the project: however, a construction site activity stormwater NPDES permit is required for the demolition and construction activities for this project. If you have any questions please contact Al Keller at 217-7872-0610. In addition a Division of Public Water Supply permit is required if the utility extensions involve the water main. You may contact David Cook at 217-782-9470 with questions.

Also, demolition, asbestos and lead paint should be addressed before actual repairs are performed to ensure proper abatement is done if needed. If demolition and/or abatement is needed notification will be required 10 working days prior to the project start date. Please contact Ron Robeen with any questions at 217-782-2113.

In addition, solid and hazardous waste must be properly disposed of or recycled.

Sincerely,

Lisa Bonnett

Lisa Bonnett
Director

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Mall St., Collinsville, IL 62234 (618)346-5120
9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
5407 N. University St., Arbor 113, Peoria, IL 61614 (309)693-5462
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601 (312)814-6026

From MidAmerica Airport

St. Clair County
9555 Air Terminal Drive, Ste 100
Mascoutah, IL 62258-5501
Tel (618) 566-5200
Fax (618) 566-5299
Toll Free 1-877-643-2637

August 19, 2013

Ms. Christine Spargur
375 AMW Public Affairs Office
101 Heritage Drive
Scott Air Force Base, Illinois 62225

Christine.spargur@us.af.mil *(original sent electronically, no hardcopy to be mailed)*

Re: July 2013 DOPAA for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Ms. Spargur:

Below are MidAmerica St. Louis Airport's comments on the subject document:

- There is a need for clear, direct coordination with St. Clair County and MidAmerica St. Louis Airport in order to ensure the property owner abides by IDOT and Federal Aviation Administration regulations and grant assurances. Scott AFB needs to specifically write a letter to the St. Clair County Board Chairman to request coordination for this project and initial discussions before any further activity may proceed. St. Clair County did give license approval to review grounds north of the Cardinal Creek gate. However, there is to be NO assumption of approval nor expectation that the suggested USAF gate, with the intentioned property use, is available until direct conversations with the St. Clair County Chairman and his offices begin.
- Subject property described for purchase, lease, or easement as "agricultural property that currently is owned by St. Clair County and managed by MidAmerica Airport" is Airport Property, designated on the airport Federal Aviation Administration directed Airport Layout Plan, subject to FAA grant assurances. Release of subject property by FAA and the IDOT Division of Aeronautics will be a lengthy process that should be adequately accommodated in the project schedule.
- Any and all costs associated with this project will be the sole responsibility of the USAF.
- A portion of the property described was the site of a former service station where underground storage tanks were removed. Prior to action for transfer or lease of land, resolution of NFR letter for IEMA #962472/LPC #1630105243 on Parcel 99 (Parcel ID 09-02-0-300-011) will be required. Submittal of a Corrective Action Report to IEPA is required to resolve this issue. Depending on final project design there may be more EPA or IHPA requirements.
- Coordinate with IDOT and St. Clair County Highway Department on the appropriate terminus of the gate complex.
- To date, casual information or communications with respect to this project conveyed by members of the airport, the airport's staff or the County, should not be construed as approval or coordination on any item presented in this DOPAA.

The airport and the County do look forward to working with Scott AFB on this proposal. There may be further requirements as final design of this project becomes apparent. Please contact me at 618.566.5240, director@flymidamerica.com, should you have any questions or require additional information.

Regards,

M. Tim Cantwell
Airport Director

cc: The Honorable Mark A. Kern, Chairman, St. Clair County Board
Mr. Richard Sauget, Chairman, St. Clair County Public Building Commission

From the SHPO

Illinois Historic Preservation Agency

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

St. Clair County PLEASE REFER TO: IHPA LOG #010072513
Scott Air Force Base
North and South Schools on West side of Scott School Road, Pryor Dr. and Wherry Road
USAF
Demolition and New Construction of New Vehicle Access Gate Complex

August 12, 2013

Cindy Nolan
Department of the Air Force
375 CES/CEAN
701 Hangar Road - Bldg. 531
Scott AFB, IL 62225-5035

Dear Ms. Nolan:

Thank you for requesting comments from our office concerning the possible effects of the referenced project on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and it's implementing regulations, 36 CFR 800: "Protection of Historic Properties".

To assess the architectural resources we need the addresses of, images of, and date of construction of the two schools on Scott School Road.

Archaeological resources within the area of project effect appear to consist of sites 11S828, 1004, 1005, 1016 1017 and 1008.

Only archaeological site 11S1016 is eligible for listing on the National Register of Historic Places under criterion "d" for its ability to contribute to scientific knowledge of the past. If construction of the gate can't avoid this site the undertaking will constitute an adverse effect.

Preservation of significant sites is always our preference. If your project will not affect the site, then we can concur with a determination of "no historic properties affected" for this project. If your project can not avoid "adverse effects" to the potentially eligible site(s), you may request initiation of a Memorandum of Agreement (MOA) which must be signed by IHPA (SHPO) and the Federal Agency. The MOA will include a Data Recovery Plan for archaeological excavation, analysis of the site, a written final report and plans for artifact curation.

A COPY OF THIS LETTER SHOULD BE PROVIDED TO THE PROFESSIONAL ARCHAEOLOGICAL CONTRACTOR WHOSE SERVICES ARE OBTAINED TO CONDUCT THE INVESTIGATIONS TO ENSURE THAT THEIR REPORT IS CONNECTED TO YOUR PROJECT PAPERWORK.

Please let us know how you wish to proceed. If you have any question please contact Joe Phillippe at (217) 785-1279.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer

AEH/JSP

C: Brad Koldelhoff IDOT.

* The third paragraph of this letter contains a typographical error. The letter incorrectly identifies site 11S1008 as within the area of potential effect. The letter meant to identify site 11S1018.

Letter from the USEPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 16 2013

REPLY TO THE ATTENTION OF:

E-19J

Christine Spargur
375th Air Mobility Wing
Office of Public Affairs
101 Heritage Drive
Scott Air Force Base, Illinois 62225

Re: Description of the Proposed Action and Alternatives for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, St. Clair County, Illinois

Dear Ms. Spargur:

The U.S. Environmental Protection Agency has reviewed the referenced project scoping document (scoping document) prepared by the 375th Air Mobility Wing (375 AMW) pursuant to our authorities under the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The proposed project involves construction and operation of a new access gate complex near the existing cardinal gate at Scott Air Force Base. Pryor Drive, from the installation boundary to Golf Course Road, will be widened and improved to allow commercial vehicle access through the gate complex. Two school buildings will be demolished, and new structures associated with the gate complex will be constructed.

Part of our review of this document included an analysis of environmental issues using EPA's GIS-based tracking programs, EJSCREEN and NEPAssist. We determined there were no issues that warranted specific comment. We do, however, have some recommendations that we believe will assist the development of the draft environmental assessment (EA), including comments on water quality, green infrastructure, wetlands, air quality strategies, demolition of buildings, erosion control, and consultation records, as stated below.

Water Quality
The EA should describe how the proposed action may affect Clean Water Act (CWA) Section 303(d) listed water bodies and their listing status as impaired. We recommend that this section of the document discuss current impairments, and how the proposed action may affect, either positively or detrimentally, the impairment. A list of nearby impaired streams can be found at http://www.epa.gov.[1]

[1] A list of Illinois impaired waterbodies can be found at:
http://ofmpub.epa.gov/waters10/attains_state.control?p_state=IL

Green Infrastructure

We are pleased to see 375 AMW propose implementation of green infrastructure using guidelines set forth by Section 438 of the Energy Independence and Security Act, and also guidelines from Leadership in Energy and Environmental Design (LEED). Recent studies have indicated that installing "green" stormwater systems is often more cost efficient than traditional "gray" stormwater systems.[2] We strongly encourage on-site green stormwater management via use of bioswales, rain gardens, or retention ponds. We also recommend the proposed project be constructed to have "no net gain" for stormwater surface discharge off-site, which can be achieved via use of green infrastructure.

Recent studies in northern climates have indicated that permeable pavement is often less expensive than traditional concrete and storm sewer use, requires no special maintenance, and is not as susceptible to freeze-thaw cycles compared to traditional concrete, if built correctly. For a great example of a successful permeable pavement project, see the Morton Arboretum's answers to commonly-asked technical questions, at: http://www.mortonarb.org/sustainable-practices/porous-pavement.html. If use of these types of materials is not feasible, the EA should include a discussion explaining why they cannot be used.

We recommend 375 AMW consider using energy-efficient building materials and utilize solar energy or other forms of renewable energy, where applicable, when constructing new structures.

Wetlands

The EA should discuss how sequencing established by the CWA Section 404(b)(1) guidelines was applied, namely, avoidance first, then demonstration of impact minimization, then mitigation for unavoidable, minimized impacts. The EA should provide information on how the CWA Section 404(b)(1) guidelines have been applied with regard to both stream and wetland impacts. Please also provide discussion of proposed mitigation for unavoidable, minimized, stream impacts.

Air Quality Strategies

The area surrounding Scott Air Force Base is currently in air quality non-attainment for particulate matter – 2.5 microns ($PM_{2.5}$) or less (1997 standard), and non-attainment for the 1-hour and 8-hour ozone standards. As a measure to avoid compounding existing air quality non-attainment, we recommend 375 AMW consider implementing a voluntary anti-idle policy for internal combustion vehicles and equipment used during the construction phase of this project. Reduced emissions via an anti-idle policy will reduce particulate matter concentrations, and will benefit local residents and construction workers with respiratory issues. An anti-idle policy will also help reduce greenhouse gas emissions.[3] An enclosure entitled *Diesel Green Sheet* provides

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[2] See *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices* at: http://water.epa.gov/polwaste/green/costs07_index.cfm

[3] See: *Potential for Reducing Greenhouse Gas Emissions in the Construction Sector*, found at: http://www.epa.gov/sectors/pdf/construction-sector-report.pdf

some helpful tips on how to reduce diesel emissions by using best available control technology (BACT).

Demolition of Buildings
The EA should explain whether the two schools shown on Figure 2.1 are proposed to be demolished as part of the proposed project. The EA should explain whether or not the schools are currently being used, and whether or not demolition of the two buildings can be avoided, given existing anti-terrorism/force-protection setback requirements. The EA should also explain how demolition will comply with Federal and state regulations concerning proper management of asbestos-containing materials, lead-based paint, and polychlorinated biphenyls (PCBs).

If demolition of the two schools is to occur, we recommend pavement (asphalt, concrete, or cement) and other structural materials be reclaimed for future use for this project, or elsewhere. We also recommend reuse or recycling of other used construction material, such as metals.

Erosion Control
Reseeding of exposed soils with native grasses and/or plants should be performed as soon as possible in accordance with best management practices (BMPs).

Consultation Records
EPA recommends attaching consultation documents regarding historic resources (Illinois Historic Preservation Agency), wetlands (U.S. Army Corps of Engineers), and Federal and state threatened and endangered species (U.S. Fish and Wildlife Service and the Illinois Department of Natural Resources) with the EA.

We are available to discuss these comments on the scoping document at your convenience. Please feel free to contact Mike Sedlacek of my staff at 312-886-1765, or by email at sedlacek.michael@epa.gov.

Sincerely,

Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Encl: Diesel Green Sheet

Diesel Green Sheet

Exposure to diesel exhaust by construction workers, and those nearby a construction site can have serious health implications. For this reason, the United State Environmental Protect Agency (U.S. EPA) recommends Best Available Diesel Retrofit Control Technology (BACT) on all construction projects that undergo NEPA reviews. Typically BACT requirements can be met through the retrofit of all diesel powered equipment with diesel oxidation catalysts or diesel particulate filters, in addition to other strategies or technologies (for example, cleaner burning fuels or anti-idling policies) . The statement below is reflective of a study U.S. EPA completed on diesel exhaust health effects:

Long-term (i.e., chronic) inhalation exposure to diesel exhaust is likely to pose a lung cancer hazard to humans, as well as damage the lung in other ways depending on exposure. Diesel exhaust is listed as a human carcinogen in California and a likely human carcinogen by U.S. EPA. Short-term (i.e., acute) exposures can cause irritation and inflammatory symptoms of a transient nature, these being highly variable across the population. The assessment also indicates that evidence for exacerbation of existing allergies and asthma symptoms is emerging. U.S. EPA recognizes that diesel exhaust, as a mixture of many constituents, also contribute to ambient concentrations of several criteria air pollutants including nitrogen oxides and fine particles, as well as other air toxics[4].

Though we recommend BACT for all diesel powered equipment on all construction sites, the following criteria can make a construction project a higher priority for clean diesel strategies and technologies:

1) Non-attainment status of county in which project is being conducted, or non-attainment status of nearby (especially downwind) counties.
2) Proximity to residential areas, especially sensitive populations such as children and the elderly.
3) Proximity to environmental justice areas.
4) Size of project, and duration of the project.
5) Projects involving large amounts of excavation of soil, or soil removal, which tend to require the use of substantial amounts of diesel equipment at high loads for long periods of time.

[4] U.S. Environmental Protection Agency (EPA). (2002) Health assessment document for diesel engine exhaust. Prepared by the National Center for Environmental Assessment, Washington, DC, for the Office of Transportation and Air Quality; EPA/600/8-90/057F. Available from: National Technical Information Service, Springfield, VA; PB2002-107661, and http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060

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Native American Tribal Consultation Distribution List and Correspondence for the DOPAA

In accordance with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* and its implementing instruction Department of Defense Instruction 4710.02, *DoD Interactions with Federally Recognized Tribes*, Scott AFB will endeavor to build a lasting government-to-government relationship with affiliated, federally recognized tribes.

To date, the only identified federally recognized tribes with historical ties to the area to have a stated interest in activities at Scott AFB are the Peoria Tribe of Indians of Oklahoma and the Osage Nation. Therefore, the DOPAA was made available to these tribes. Signed copies of the letters sent to these tribes and comments received are included on the following pages.

Peoria Tribe of Indians of Oklahoma
Mr. Frank Hecksher
Special Projects/NAGPRA Manager
118 S. Eight Tribes Trail
Miami, OK 74354

Osage Nation
Mr. James Munkres
Tribal Historic Preservation Office
627 Grandview
Pawhuska, OK 74056

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Letter to the Peoria Tribe of Indians of Oklahoma for the DOPAA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

Department of the Air Force
375 CES/CEIEC
701 Hangar Road -- Building 531
Scott AFB, Illinois 62225-5035

JUL 24 2013

Peoria Tribe of Indians of Oklahoma
Mr. Frank Hecksher
Special Projects/NAGPRA Manager
118 S. Eight Tribes Trail
Miami, OK 74354

SUBJECT: Description of Proposed Action and Alternatives (DOPAA) for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Mr. Hecksher:

The 375 Air Mobility Wing (AMW) is proposing to construct and operate a new vehicle access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles accessing the installation via the new interchange. The proposed gate complex also would replace Scott AFB's existing commercial vehicle inspection facility at the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

In accordance with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, Scott AFB is providing you with this DOPAA to solicit comments on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribe. Please accept this letter to initiate consultation with your tribe regarding this action. Any issues that you identify will be addressed in the Environmental Assessment.

The Peoria Tribe of Indiana of Oklahoma is invited to provide any written comments regarding the proposed action at your earliest convenience. When the comment period has ended, currently 6 Sep 13, preparation on the Environmental Assessment will commence.

ENABLING COMBAT POWER

Scott AFB values any comments that you may have. We appreciate this opportunity to foster our working relationship with Peoria Tribe of Indians of Oklahoma.

Sincerely,

CINDY NOLAN, P.G.
Conservation Management

Enclosure: *Description of Proposed Action and Alternatives for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois*

Letter to the Osage Nation for the DOPAA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

Department of the Air Force
375 CES/CEAN
701 Hangar Road – Building 531
Scott AFB, Illinois 62225-5035

JUL 2 4 2013

Osage Nation
Mr. James Munkres
627 Grandview
Pawhuska, OK 74056

SUBJECT: Description of Proposed Action and Alternatives (DOPAA) for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Mr. Munkres:

The 375 Air Mobility Wing (AMW) is proposing to construct and operate a new vehicle access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles accessing the installation via the new interchange. The proposed gate complex also would replace Scott AFB's existing commercial vehicle inspection facility at the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

In accordance with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, Scott AFB is providing you with this DOPAA to solicit comments on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribe. Please accept this letter to initiate consultation with your tribe regarding this action. Any issues that you identify will be addressed in the Environmental Assessment.

The Osage Nation is invited to provide any written comments regarding the proposed action at your earliest convenience. When the comment period has ended, currently 6 Sep 13, preparation on the Environmental Assessment will commence.

ENABLING COMBAT POWER

Scott AFB values any comments that you may have. We appreciate this opportunity to foster our working relationship with the Osage Nation.

Sincerely,

CINDY NOLAN, P.G.
Conservation Management

Enclosure: *Description of Proposed Action and Alternatives for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois*

Comments received on the DOPAA from the Native American Tribes
Response from the Peoria Tribe of Indians of Oklahoma

PEORIA TRIBE OF INDIANS OF OKLAHOMA
118 S. Eight Tribes Trail (918) 540-2535 FAX (918) 540-2538
P.O. Box 1527
MIAMI, OKLAHOMA 74355

CHIEF
John P. Froman

SECOND CHIEF
Jason Dollarhide

July 30, 2013

375 AMW Public Affairs Office
Attn: Christine Spargur
101 Heritage Drive
Scott Air Force Base, IL 62225

RE: Description of Proposed Action and Alternatives (DOPAA) for an Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Thank you for providing notice of the referenced project. The Peoria Tribe does not have any comments at this time.

The Peoria Tribe of Indians of Oklahoma is currently unaware of any documentation directly linking Indian Religious Sites to the project location. In the event any items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered during construction, the Peoria Tribe requests notification and further consultation.

The Peoria Tribe has no objection at this time to the proposed project. However, if any human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, the construction should stop immediately, and the appropriate persons, including state and tribal NAGPRA representatives contacted.

John P. Froman
Chief

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IICEP Distribution List and Correspondence for the Draft EA

The Draft EA and Draft FONSI were made available to the agencies listed below for a 30-day review period on 2 January 2014. A signed example copy of the IICEP distribution letter, the letter sent to the Illinois Historic Preservation Agency, and comments received are included on the following pages.

Federal

U.S. Army Corps of Engineers
Attn: Ms. Susan L. Horneman
St. Louis District
1222 Spruce Street
St. Louis, MO 63103-2822

USEPA Region 5
NEPA Implementation Section
Mr. Ken Westlake
77 West Jackson Blvd.
Mail Code B-19J
Chicago, IL 60604

U.S Fish and Wildlife Service
Marion Illinois Sub-Office
Mr. Matt Mangan
8588 Route 148
Marion, IL 62959

U.S Fish and Wildlife Service
Marion Illinois Sub-Office
Mr. Phillip Rodgers
8588 Route 148
Marion, IL 62959

Federal Aviation Administration
Chicago Airports District Office 614
Gary Wilson, Program Manager
2300 East Devon Avenue
Des Plains, IL 60018

USDA-NRCS
Mr. Ronald Ziehm
Assistant State Conservationist (Area 1)
502 Comfort Drive, Suite D
Marion, IL 62959

USDA-NRCS
St. Clair County Field Office
Mr. John F. Harryman, District Conservationist
2031 Mascoutah Avenue
Belleville, IL 62220

Federal Highway Administration
Illinois Division
Mr. Matt Fuller
3250 Executive Park Drive
Springfield, IL 62703

State of Illinois

Illinois Department of Natural Resources
Region IV Office
4521 Alton Commerce Pkwy.
Alton, IL 62002

Illinois Department of Natural Resources
Division of Ecosystems and Environment
Mr. Todd Rettig
1 Natural Resources Way
Springfield, IL 62702-1271

Illinois Environmental Protection Agency
Mr. Jerry Kuhn
1021 North Grand Avenue East
Springfield, IL 62794-9276

Illinois Historic Preservation Agency
Attn: Ms. Anne Haaker and Mr. Joe Phillippe
1 Old State Capitol Plaza
Springfield, IL 62701-1512

Illinois Department of Transportation
District 8
1102 Eastport Plaza Drive
Collinsville, IL 62234-6198

St. Clair County

St. Clair County
Ms. Anne Markezich
Director of Building and Zoning/Mapping & Platting Dept.
#10 Public Square, 5th Floor
Belleville, IL 62220

St. Clair County Dept. of Roads and Bridges
Mr. James Fields, P.E.
1415 North Belt West
Belleville, IL 62226

St. Clair County Economic Development Department
Mr. Terry Beach
19 Public Square, Suite 200
Belleville, IL 62220

St. Clair County Public Building Commission
Mr. Richard A. Sauget, Chairman
#10 Public Square
Belleville, IL 62220

Local Communities

Ms. Emily Fultz, A.I.C.P.
Director of Economic Development & Planning
101 South Illinois Street
Belleville, IL 62220

Mr. Cody Hawkins
City Manager
City of Mascoutah
3 West Main Street
Mascoutah, IL 62258

Mr. Ted K. Shekell, AICP
Planning Director
255 South Lincoln
O'Fallon, IL 62269

Mr. Norm Etling, P.E.
Village Engineer
1 Park Drive
Shiloh, IL 62269

Mr. Richard Wilkin
Mayor, City of Lebanon
312 West St. Louis Street
Lebanon, IL 62254

MidAmerica Airport

Mr. Daniel Trapp, P.E.
Airport Engineer
9768 Airport Boulevard
Mascoutah, IL 62258

Distribution letter for the Draft EA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

2 January 2014

MEMORANDUM FOR DISTRIBUTION

FROM: Department of the Air Force
375 Air Mobility Wing (Air Mobility Command)
Civil Engineering Squadron/Installation Management Flight (CES/CEI)
701 Hangar Road
Building 531
Scott AFB, Illinois 62225

SUBJECT: Draft Environmental Assessment (EA) Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

1. The 375 Air Mobility Wing (AMW) has initiated an EA addressing the construction and operation of a new access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles coming to the installation via the new interchange. The proposed gate complex would replace Scott AFB's existing commercial vehicle inspection facility near the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; replacing a storm water main under Pryor Drive; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

2. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation and solicit comments on the attached Draft EA and Draft FONSI. Appendix A of the attached Draft EA contains the distribution list of those Federal, state, and local agencies that have been contacted. If there are any additional agencies that you feel should review and comment on these documents, please include them in your distribution of this letter and the attached materials.

3. Please provide any comments within 30 days from the date shown on this letter by mail to 375 AMW Public Affairs Office, Attn: Ms. Christine Spargur, 101 Heritage Drive, Scott Air Force Base, Illinois, 62225; by telephone to (618) 256-4241; or by email to christine.spargur@us.af.mil.

4. If members of your staff have any questions, please call or email the project point-of-contact, Mr. Brian Collingham, at (618) 256-2465 or brian.collingham.1@us.af.mil.

ENABLING RAPID GLOBAL MOBILITY

RAYMOND R. DECK, GS-13, DAFC
Chief, Installation Management Flight

Attachment:

1. *Draft Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois* with Draft FONSI

Letter to the SHPO for the Draft EA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

2 January 2014

Department of the Air Force
375 CES/CEIEC
701 Hangar Road – Building 531
Scott AFB, IL 62225-5035

Ms. Anne Haaker and Mr. Joe Phillippe
Illinois Historical Preservation Agency
#1 Old State Capitol Plaza
Springfield, IL 62701-1507

Re: IHPA Log #010072513, Scott Air Force Base Cardinal Creek Gate Expansion

Subject: Draft Environmental Assessment (EA) Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Ms. Haaker and Mr. Phillippe:

The 375 Air Mobility Wing (AMW) has initiated an EA addressing the construction and operation of a new access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles coming to the installation via the new interchange. The proposed gate complex would replace Scott AFB's existing commercial vehicle inspection facility near the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; replacing a storm water main under Pryor Drive; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

The area that Scott AFB proposes to acquire to construct the proposed gate complex includes six archaeological sites; only one of which (i.e., Site 11S1016) was found eligible for listing on the NRHP by the Illinois State Archaeological Survey. This site is approximately 125 feet southwest of the construction footprint; therefore, construction of the gate is anticipated to have no adverse effects to the site. This finding is further discussed in correspondence submitted to your office under separate cover on 10 December 2013.

In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we request your participation and solicit comments on the attached Draft EA and Draft FONSI. Appendix A of the attached Draft EA contains the distribution list of those Federal, state, and local agencies that have been contacted. If there are any additional agencies that you feel should review

ENABLING RAPID GLOBAL MOBILITY

and comment on these documents, please include them in your distribution of this letter and the attached materials.

Please provide any comments within 30 days from the date shown on this letter by mail to 375 AMW Public Affairs Office, Attn: Ms. Christine Spargur, 101 Heritage Drive, Scott Air Force Base, Illinois, 62225; by telephone to (618) 256-4241; or by email to christine.spargur@us.af.mil.

If members of your staff have any questions, please call or email the project point-of-contact, Mr. Brian Collingham, at (618) 256-2465 or brian.collingham.1@us.af.mil.

KEITH J BRUMLEY
Cultural Resources Manager

Enclosure: *Draft Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois* with Draft FONSI

Comments received on the Draft EA from agencies
From MidAmerica Airport

MidAmerica ST. LOUIS AIRPORT

St. Clair County
9656 Air Terminal Drive, Ste 100
Mascoutah, IL 62258-3501
Tel. (618) 566-5200
Fax (618) 566-5299
Toll Free 1-877-643-2637

January 7, 2014

Ms. Christine Spargur
375 AMW Public Affairs Office
101 Heritage Drive
Scott Air Force Base, Illinois 62225

Christine.spargur@us.af.mil *(original sent electronically, no hardcopy to be mailed)*

Re: January 2014 Draft Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Ms. Spargur:

Below are MidAmerica St. Louis Airport's comments on the subject document:

- Reiterate our 08/19/13 comment requesting Scott AFB specifically write a letter to the St. Clair County Board Chairman to request coordination for this project and initial discussions before any further activity may proceed.
- Clarify whether site 11S1018 or 11S1008 is within the project area. An 08/12/13 IHPA letter identifies site 11S1008 and other documentation refers to site 11S1018.
- JLUS should be updated as a result of this project to accommodate the changes to the Protection Area.
- Appraisals will be required to allow purchase, lease, or easement of the subject Airport property. Be reminded that the costs and schedule implications of these appraisals will need to be included in this project.
- Reference Section 3.9.2, Existing Conditions, Transportation. Make mention of the planned extension of the MetroLink Red line which would travel near the proposed gate.
- Reference to the Covenant development should be deleted as this development is in a very conceptual stage.
- Coordinate with IDOT and St. Clair County Highway Department on the appropriate terminus of the gate complex.

The airport and the County do look forward to working with Scott AFB on this proposal. There may be further requirements as final design of this project becomes apparent. Please contact me at 618.566.5240, director@flymidamerica.com , should you have any questions or require additional information.

Regards,

M. Tim Cantwell
Airport Director

cc: The Honorable Mark A. Kern, Chairman, St. Clair County Board
Mr. Richard Sauget, Chairman, St. Clair County Public Building Commission

www.flymidamerica.com

From the Illinois Environmental Protection Agency

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217)782-2829

PAT QUINN, GOVERNOR LISA BONNETT, DIRECTOR

JAN 15 2013

375 AMW Public Affairs Office
Attn: Ms. Christine Spargur
101 Heritage Drive
Scott Air Force Base, Illinois 62225

RE: Draft Environmental Assessment for Construction of Gate Complex at Scott Air Force Base

Dear Ms. Spargur:

The Agency has no objections to the project; however a construction site activity stormwater NPDES permit is required for this project from the Division of Water Pollution Control. You may contact Al Keller at 217-782-0610 with questions. In addition, a Division of Public Water Supply permit is required for the water main extension. You may contact David Cook at 217-782-9470 with questions.

Demolition, asbestos and lead paint should be addressed before actual repairs are performed to ensure proper abatement is done if needed. If demolition and/or abatement is needed, notification will be required 10 working days prior to the project start date. Please contact Ron Robeen with any questions at 217-524-0229.

In addition, solid and hazardous waste must be properly disposed of or recycled.

Sincerely,

Lisa Bonnett

Lisa Bonnett
Director

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Mall St., Collinsville, IL 62234 (618)346-5120

9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
5407 N. University St., Arbor 113, Peoria, IL 61614 (309)693-5462
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601 (312)814-6026

From the St. Clair County Department of Roads & Bridges

ST. CLAIR COUNTY
Department of Roads & Bridges
1415 North Belt West
Belleville, IL 62226-5999

(618) 233-1392
FAX No. (618) 233-0996

James V. Fields, P.E.
County Engineer

File: Draft EA Addressing Gate Complex Construction at SAFB
Section 09-00365-01-PV
FAI Route 64/Rieder Road Interchange
St. Clair County, IL

January 8, 2014

Ms. Christine Spargur
375 AMW Public Affairs Office
101 Heritage Drive
Scott Air Force Base, IL 62225

Dear Ms. Spargur:

This department has completed its review of the Draft Environmental Assessment (EA) Addressing Gate Complex Construction at Scott Air Force Base received on January 2, 2014.

Below are this departments comments on the subject document:

- St. Clair County's proposed Interchange project on I-64 at Rieder Road ends approximately 200 feet south of the proposed intersection of Wherry Road and Rieder Road. See attached Exhibit B and Plan sheets. The proposed Gate Complex shown on Figure 3-2 in the Draft EA indicates your road improvements ending approximately 430 feet south of our proposed improvements. Therefore, the proposed Gate Complex road improvements will need to be extended approximately 430 feet north to meet the County's project.

- Revise Figures 2-1, 2-3, 3-1, 3-2 and 5-1 to show the County's proposed project and extend the proposed Gate Complex road improvements to meet the County's project.

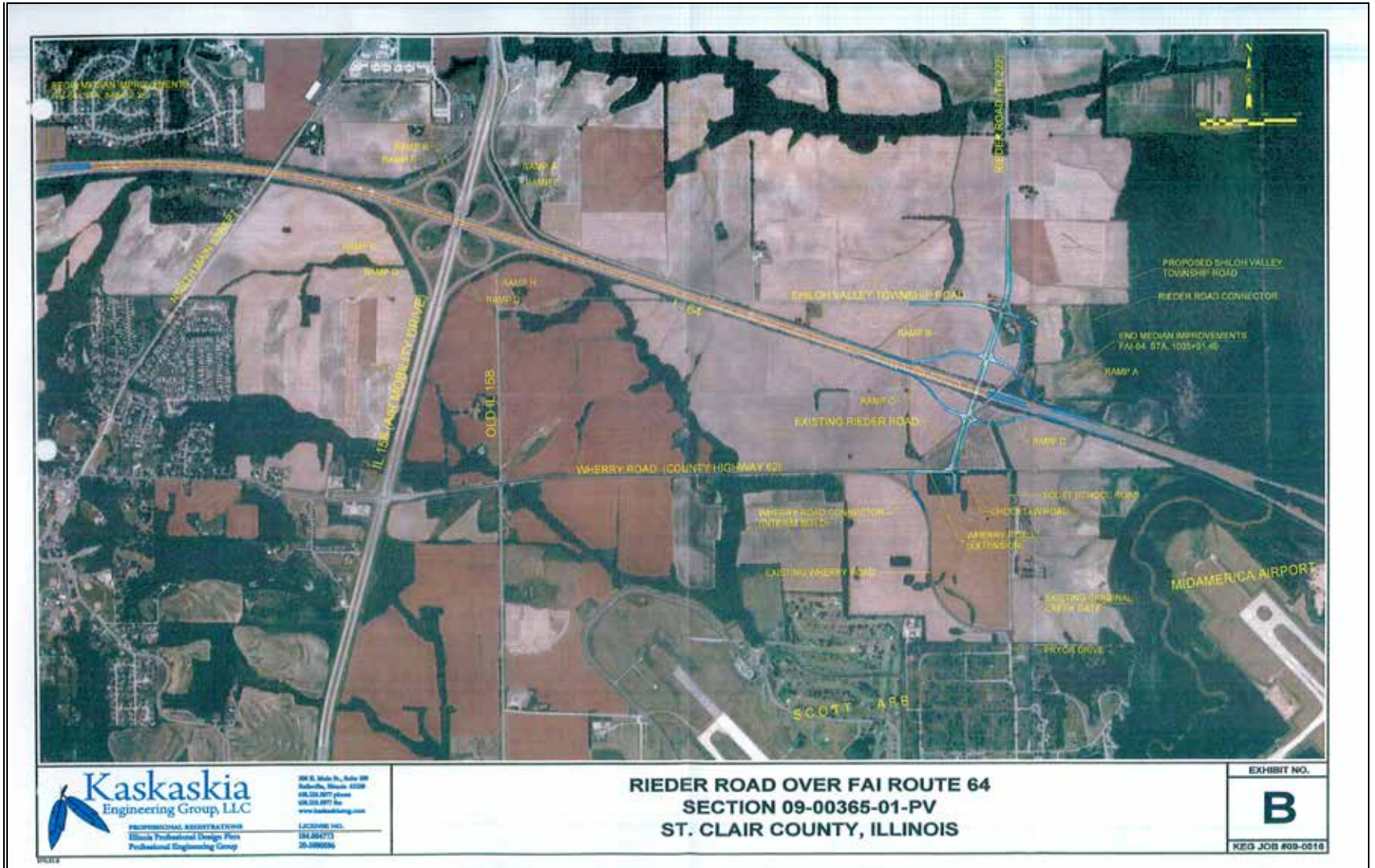
If you have any questions or require additional information, feel free to contact this office.

Very truly yours,

James V. Fields, P.E.
County Engineer

By Thomas L. Holdener
Thomas L. Holdener, P.E.
Engineer of Design

TH
enc.
Cc: Dan Trapp, MidAmerica St. Louis Airport
36501 Draft EA Gate Complex, Comments 1-8-14



Kaskaskia Engineering Group, LLC

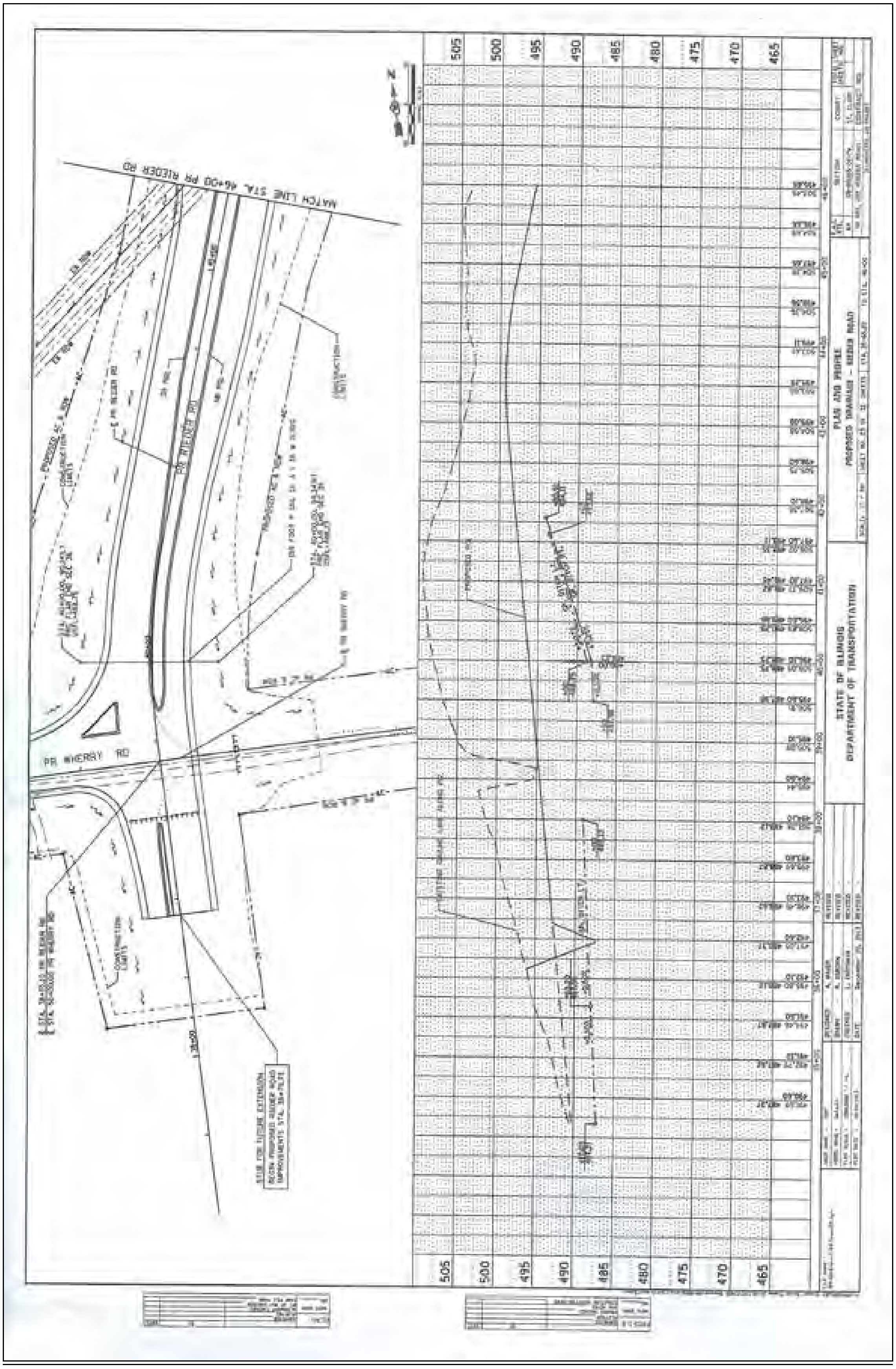
PROFESSIONAL REGISTRATIONS
Illinois Professional Design Firm
Professional Engineering Group

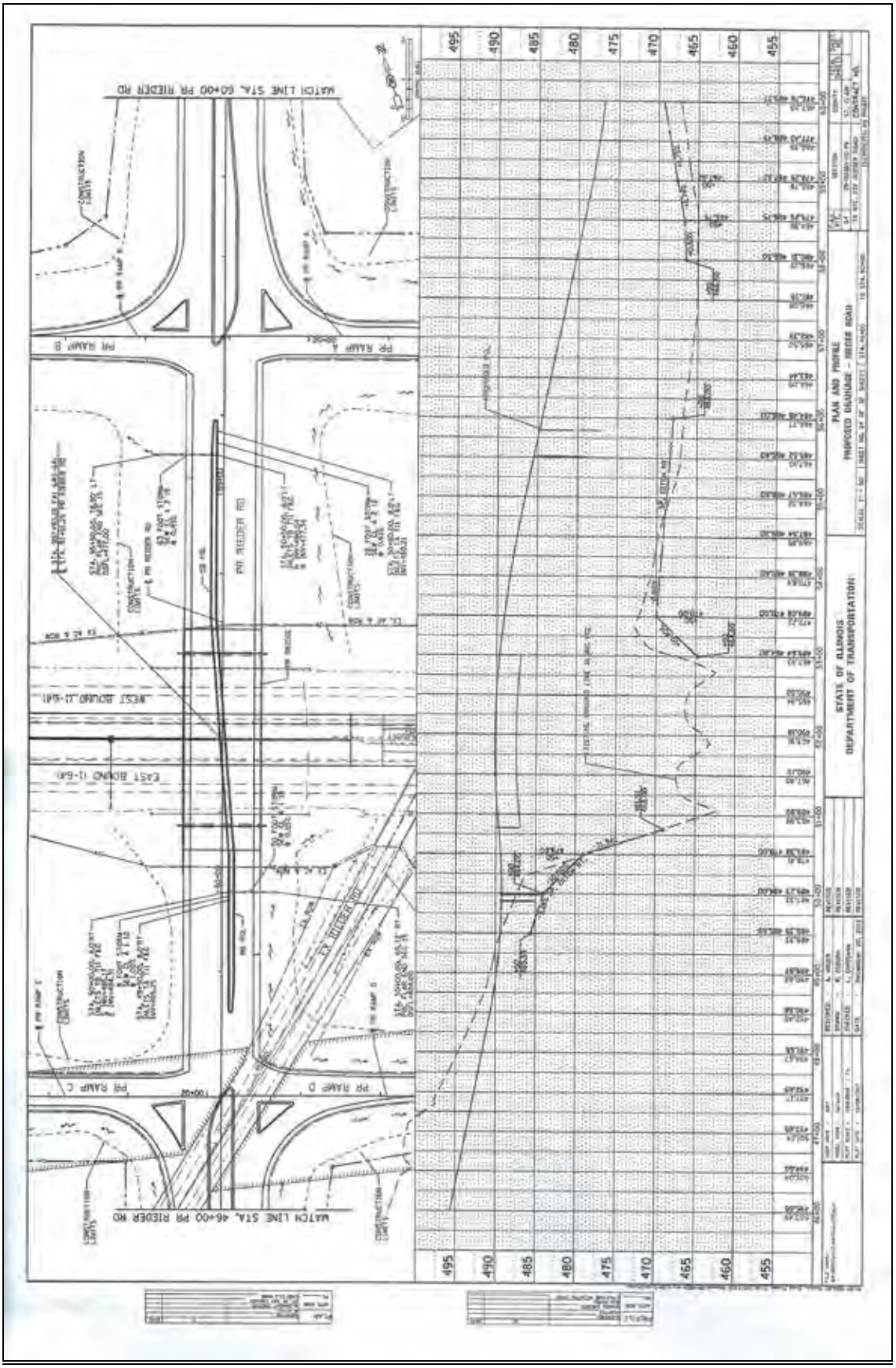
LICENSE NO.
184.004273
20-3000594

RIEDER ROAD OVER FAI ROUTE 64
SECTION 09-00365-01-PV
ST. CLAIR COUNTY, ILLINOIS

EXHIBIT NO.
B
KEG JOB #09-0516


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED HIGHWAY PLANS
F.A.I. ROUTE 64 (I–64)
WITH
TR 222 (RIEDER ROAD)
SECTION: 09–00365–01–PV
PROJECT NO:
PROPOSED INTERCHANGE AND WIDENING
ST. CLAIR COUNTY
C–9x–xxx–xx
FOR INDEX OF SHEETS, SEE SHEET NO. 2
CONTRACT NO.
BEGIN MEDIAN IMPROVEMENTS
℄ STA. 848+72.28 FAI 64 (I–64)
END IMPROVEMENTS
℄ STA. 62+79.08 RIEDER RD.
BEGIN IMPROVEMENTS
℄ STA. 36+76.73 RIEDER RD.
END MEDIAN IMPROVEMENTS
℄ STA. 1035+91.87 FAI 64 (I–64)
END IMPROVEMENTS
℄ STA. 1021+85.10 FAI 64 (I–64)
N
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
APPROVED
PASSED
RELEASING FOR BID BASED ON LIMITED REVIEW
PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS
Kaskaskia
Engineering Group, LLC
Revised 12-20-13


MATCH LINE STA. 46+00 PR RIEDER RD
PR WHERRY RD
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLAN AND PROFILE
PROPOSED DRAINAGE - RIEDER ROAD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PR RAMP B
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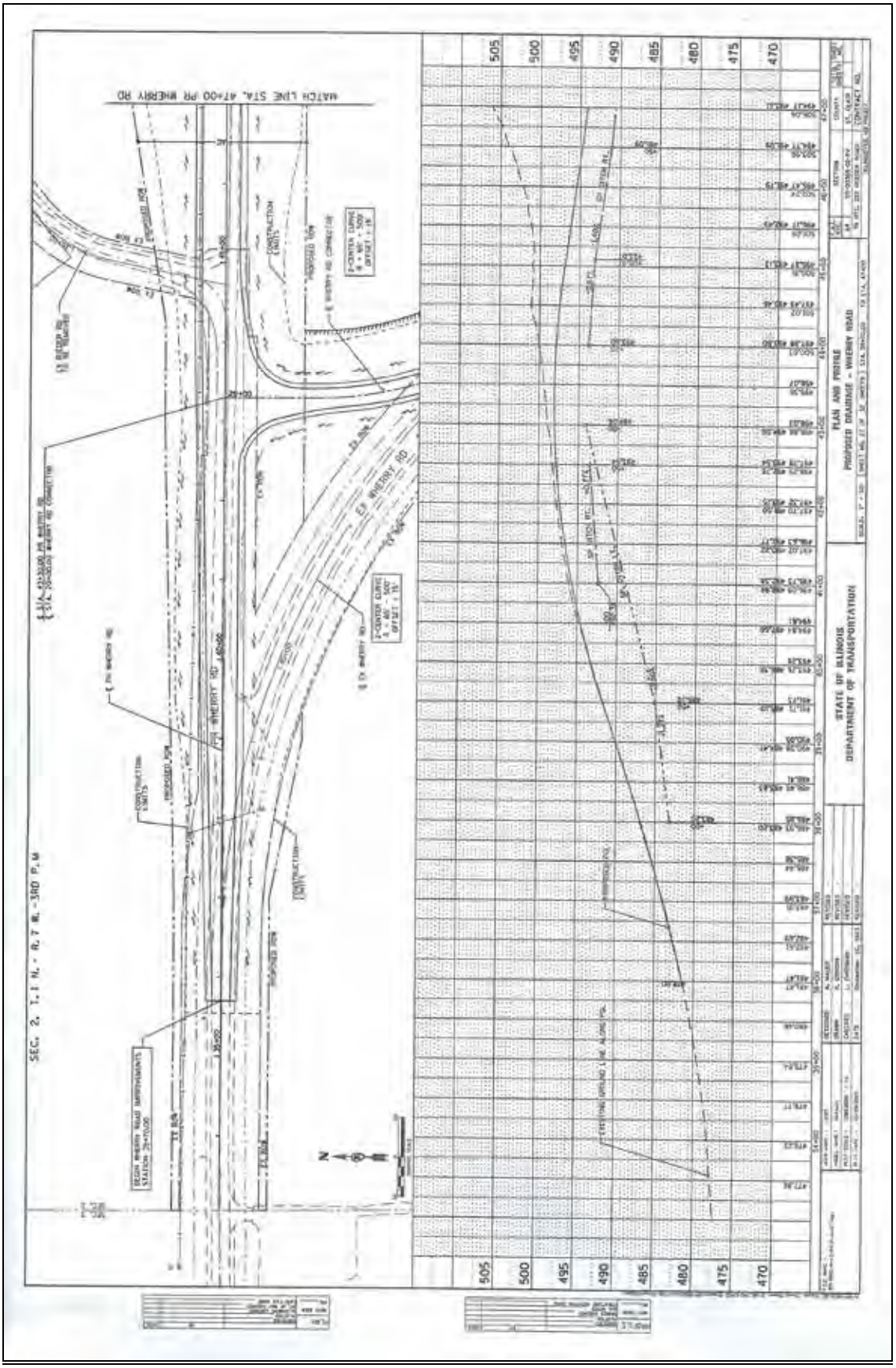
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLAN AND PROFILE
PROPOSED DRAINAGE - WHERRY ROAD
SEC. 2, T.11 N., R.7 W., 3RD P.M.
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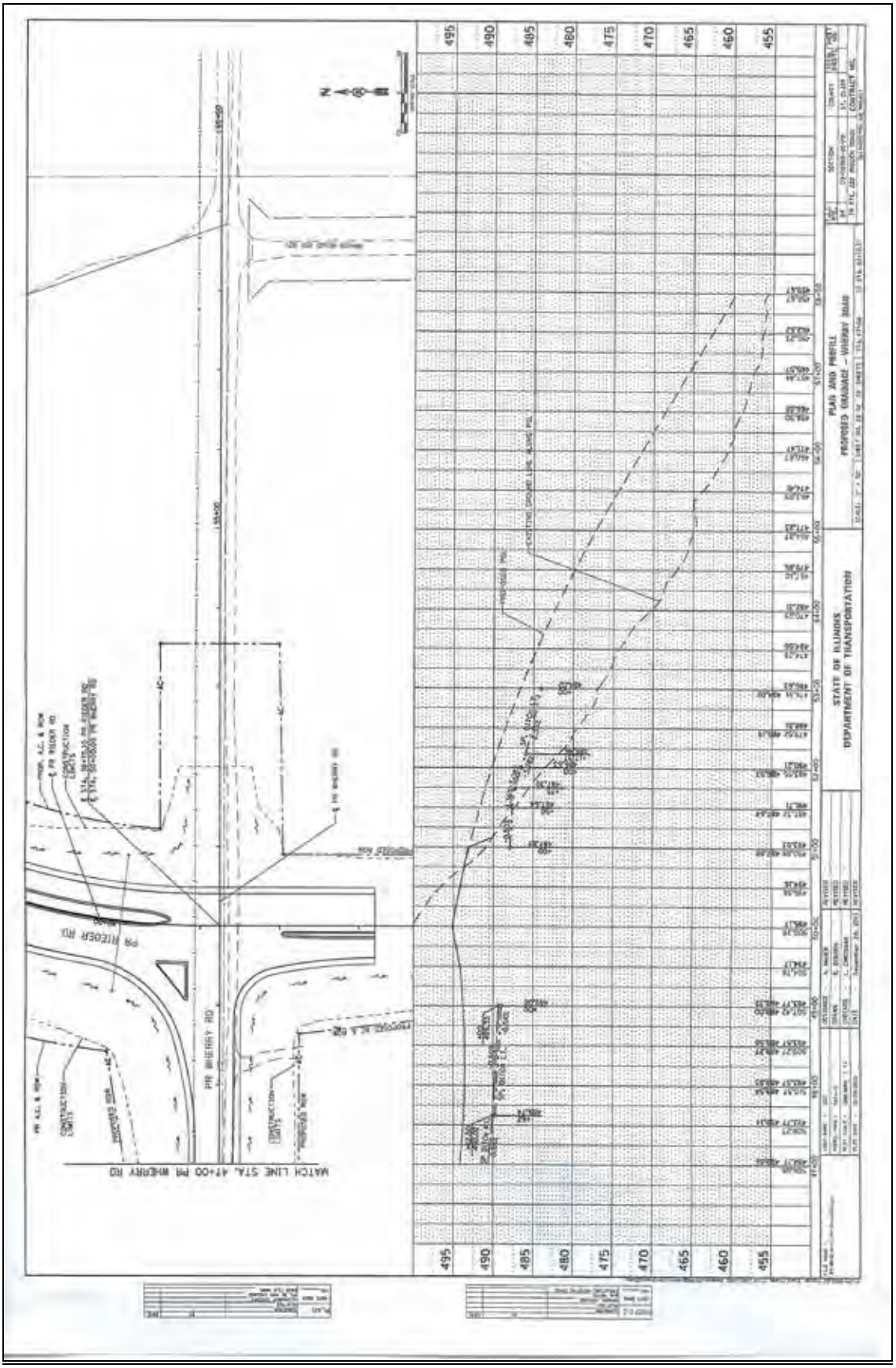
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLAN AND PROFILE
PROPOSED DRAINAGE - WHERRY ROAD
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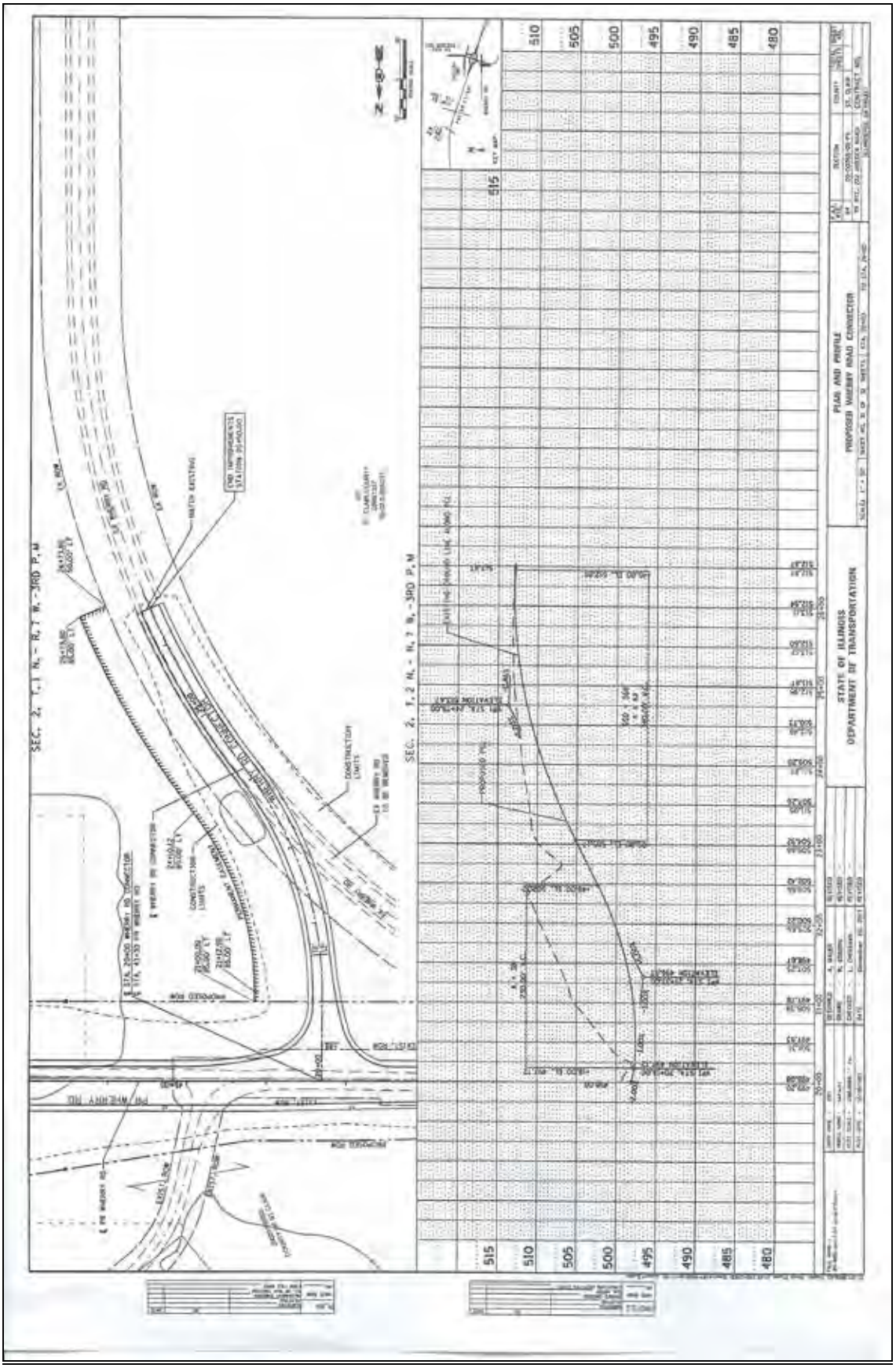
EXISTING GROUND LINE ALONG PR
PROPOSED PR


SEC. 2, T.1 N., R.7 W.-3RD P.M.
SEC. 2, T.2 N., R.7 W.-3RD P.M.
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLAN AND PROFILE
PROPOSED WABASH ROAD CONNECTOR
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From the U.S. Army Corps of Engineers, St. Louis District

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO
ATTENTION OF:

January 30, 2014

Regulatory Branch
File Number: 2013-450

Mr. Raymond Deck
Department of the Air Force
374 Air Mobility Wing
Civil Engineering Squadron/Intallation Mgt. Flight (CES/CEI)
701 Hangar Road
Building 531
Scott Air Force Base, Illinois 62225

Dear Mr. Deck:

We have reviewed the Draft Environmental Assessment relative to the Gate Complex Construction at Scott Air Force Base, St. Clair County, Illinois. The project is located near Cardinal Creek, a tributary to Silver Creek, which is a tributary to the Kaskaskia River.

Section 404 of the Clean Water Act assigns responsibility to the Secretary of the Army to administer a permit program to regulate the placement of dredged or fill material into waters of the United States. The placement of any dredged or fill material into waters of the United States below ordinary high water elevation, or in wetlands adjacent to these waters, must be authorized by a Section 404 permit.

Based upon a review of the Draft Environmental Assessment for the construction activities relative to the modern access gate complex at the Cardinal Creek Gate location at Scott Air Force Base as well as U.S. Geological Survey 7.5-minute topographical map, National Wetland Inventory maps, soil surveys as well as other materials in the submittal, we have determined that no wetlands or waters of the United States would appear to be impacted by your proposed development. **However, detailed development plans should be submitted once a final project design has been determined.** It is possible that a permit would be required for any construction activities within the nearby creek or ditches, however, the activities would likely be authorized by existing Nationwide Permits.

This determination is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other Federal, state or local approvals before beginning work.

You are reminded that although your proposal does not need a Section 404 permit, based on your submitted plans, any revisions to your proposal may be subject to Section 404 and require subsequent authorization from this office.

The St. Louis District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to go to our Customer Service Survey found on our web site at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey.

If you have any questions, please contact me at (314) 331-8582. Please include the following identification number with any future inquiries regarding this project: 2013-450.

Sincerely,

Keith A. McMullen
Illinois Section Chief
Regulatory Branch

Copies Furnished:

Heacock, IEPA
Diedrichsen, IDNR

From the USFWS

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Marion Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959
(618) 997-3344

February 4, 2014

Mr. Raymond R. Deck
375 AMW Public Affairs Office
101 Heritage Drive
Scott AFB, Illinois 62225

Attn: Ms. Christine Spargur

Dear Mr. Deck:

Thank you for your January 2, 2014, letter requesting review of the Draft Environmental Assessment (EA) addressing Gate Complex Construction at Scott Air Force Base, St Clair County, Illinois. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq.*) and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 et seq.).

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of the proposed project. The list for the proposed project area includes the endangered Indiana bat (*Myotis sodalis*), endangered least tern (*Sterna antillarum*), endangered Illinois cave amphipod (*Gammarus acherondytes*), endangered pallid sturgeon (*Scaphirhynchus albus*), threatened decurrent false aster (*Boltonia decurrens*), threatened eastern prairie fringed orchid (*Platanthera leucophaea*), and proposed as endangered northern long-eared bat (*Myotis septentrionalis*). There is no designated critical habitat in the project area at this time.

Information in the EA indicates that suitable habitat does not exist in the project area for the least tern, Illinois cave amphipod, pallid sturgeon, decurrent false aster, and eastern prairie fringed orchid; therefore, you have determined the proposed project would not have any effect on these species. Based on the information provided, the Service concurs that the proposed project is not likely to adversely affect any of these species. Information in the EA indicates that tree clearing may be necessary for the proposed project and that any tree clearing would occur between October 15 and March 31 to avoid direct impacts to the Indiana bat. In addition, any trees removed would be replaced at a 2:1 ratio and include tree species preferred by the Indiana bat. Based on the minimal amount of habitat proposed to be impacted and proposed tree clearing

dates, the Service concurs that the proposed project is not likely to adversely affect the Indiana bat. The Service does recommend that any tree clearing be minimized or avoided if possible to reduce impacts to potential habitat for the Indiana bat.

The northern long-eared bat (*Myotis septentrionalis*) is currently proposed for listing under the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). The final listing decision for the NLEB is expected in October 2014. At this time, no critical habitat has been proposed for the NLEB. The entire state of Illinois is within the known range of the NLEB. During the summer, NLEBs typically roost singly or in colonies in cavities, underneath bark, crevices, or hollows of both live and dead trees and/or snags (typically ≥3 inches dbh). Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on presence of cavities or crevices or presence of peeling bark. It has also been occasionally found roosting in structures like barns and sheds (particularly when suitable tree roosts are unavailable). They forage for insects in upland and lowland woodlots and tree lined corridors. During the winter, NLEBs predominately hibernate in caves and abandoned mine portals. Additional habitat types may be identified as new information is obtained.

Species proposed for listing are not afforded protection under the ESA; however as soon as a listing becomes effective, the prohibition against jeopardizing its continued existence and "take"[1] applies regardless of an action's stage of completion. If the agency retains any discretionary involvement or control over on-the-ground actions that may affect the species after listing, section 7 applies. Therefore, we are providing review at this time to avoid potential project delays should the species be listed. The avoidance and minimization measures for the Indiana bat are also applicable to the northern long-eared bat; therefore, the Service concurs that the proposed project is also not likely to adversely affect the northern long-eared bat.

Additional information regarding NLEB and conference procedures can be found at (http://www.fws.gov/midwest/endangered/mammals/nlba/index.html).

Should this project be modified or new information indicate listed or proposed species may be affected, consultation or additional coordination with this office, as appropriate, should be initiated.

Thank you for the opportunity to review the EA. If you have any questions, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Morgan

Matthew T. Morgan
Biologist in Charge

From the Illinois Department of Natural Resources

Illinois Department of
Natural Resources
One Natural Resources Way Springfield, Illinois 62702-1271
http://dnr.state.il.us

Pat Quinn, Governor
Marc Miller, Director

January 23, 2014

375 AMW Public Affairs Office
Attn: **Ms. Christine Spargur**
101 Heritage Drive
Scott Air Force Base, Illinois 62225

Project Name
Scott Air Force Base Gate Complex Construction Environmental Assessment

Dear Ms. Spargur,

Thank you for the opportunity to comment on the Draft *Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois* (January 2014). The proposed project involves construction of a new gate complex and road widening near the existing Cardinal Creek Gate. The project will also include demolition of existing roads and two abandoned schools in the vicinity of the project, with tree-clearing activities occurring around the construction and demolition sites.

Indiana bat (*Myotis sodalis*) can be found in the vicinity of this project. The Department recognizes and concurs with the mitigation efforts proposed for this project involving seasonal tree clearing and replacement. The Department follows the mitigation ratios established by the US Fish and Wildlife Service (USFWS) and therefore agrees with the planned mitigation for this project.

The Department would also request that conservation measures be adapted for any Northern Long-eared Bats (*Myotis septentrionalis*) that may be found in the vicinity of your project (please refer to previous bat surveys done at Scott Air Force Base). In October 2013 the USFWS initiated efforts to list Northern Long-eared Bat as federally endangered. Conservation measures were created similar to those for Indiana Bat with tree clearing avoidance periods during the months of April through mid-November. Before any work is done please coordinate with the USFWS to adapt all Northern Long-eared Bat habitat regulations.

Thank you again for the opportunity to comment. Please contact me at 217-524-0501 if I can be of further assistance.

Sincerely,

Stefanie Fitzsimons
Impact Assessment
Office of Realty and Environmental Planning
IL Department of Natural Resources

From the SHPO

Illinois Historic
Preservation Agency

FAX 217/524-7525

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

St. Clair County
Scott Air Force Base
North and South Schools on West side of Scott School Road, Pryor Dr. and Wherry Road
USAF
Demolition and New Construction of New Vehicle Access Gate Complex

PLEASE REFER TO: IHPA LOG #010072513

January 27, 2014

Keith Brumley
Scott Air Force Base
Building 531
701 Hangar Road
Scott AFB, IL 62225

Dear Mr. Brumley:

Thank you for the opportunity to review the Draft Environmental Assessment and we have no other comments other than your avoidance of archaeological site 11S1016. When the final plans become available we should like to review them.

If you have any question please contact Joe Phillippe at (217) 785-1279.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer

AEH:JSP

c: Cindy Nolan, Department of the Air Force

Native American Tribal Consultation Distribution List and Correspondence for the Draft EA

In accordance with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* and its implementing instruction Department of Defense Instruction 4710.02, *DoD Interactions with Federally Recognized Tribes*, Scott AFB will endeavor to build a lasting government-to-government relationship with affiliated, federally recognized tribes.

To date, the only identified federally recognized tribes with historical ties to the area to have a stated interest in activities at Scott AFB are the Peoria Tribe of Indians of Oklahoma and the Osage Nation. Therefore, the Draft EA and Draft FONSI were made available to these tribes. Signed copies of the letters sent to these tribes are included on the following pages. No comments from the tribes were received.

Peoria Tribe of Indians of Oklahoma
Mr. Frank Hecksher
Special Projects/NAGPRA Manager
118 S. Eight Tribes Trail
Miami, OK 74354

Osage Nation
Mr. James Munkres
Tribal Historic Preservation Office
627 Grandview
Pawhuska, OK 74056

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Letter to the Peoria Tribe of Indians of Oklahoma for the Draft EA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

2 January 2014

Department of the Air Force
375 CES/CEIEC
701 Hangar Road – Building 531
Scott AFB, IL 62225-5035

Peoria Tribe of Indians of Oklahoma
Mr. Frank Hecksher
Special Projects/NAGPRA Manager
118 S. Eight Tribes Trail
Miami, OK 74354

SUBJECT: Draft Environmental Assessment (EA) Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Mr. Hecksher:

The 375 Air Mobility Wing (AMW) has initiated an EA addressing the construction and operation of a new access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles coming to the installation via the new interchange. The proposed gate complex would replace Scott AFB's existing commercial vehicle inspection facility near the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; replacing a storm water main under Pryor Drive; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

In accordance with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, Scott AFB is providing you with this Draft EA and Draft FONSI to solicit comments on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribe. Please accept this letter to initiate consultation with your tribe regarding this action.

Please provide any written comments or information regarding the action no later than 30 days of the receipt of this correspondence. Thank you for your participation. We appreciate this opportunity to foster our working relationship with Peoria Tribe of Indians of Oklahoma.

KEITH J BRUMLEY
Cultural Resources Manager

Enclosure: *Draft Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois* with Draft FONSI

ENABLING RAPID GLOBAL MOBILITY

Letter to the Osage Nation for the Draft EA

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

2 January 2014

Department of the Air Force
375 CES/CEIEC
701 Hangar Road – Building 531
Scott AFB, IL 62225-5035

Osage Nation
Tribal Historic Preservation Office
627 Grandview
Pawhuska, OK 74056

SUBJECT: Draft Environmental Assessment (EA) Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Dear Sir or Madam:

The 375 Air Mobility Wing (AMW) has initiated an EA addressing the construction and operation of a new access gate complex at Scott AFB, Illinois. The proposed gate complex would be designed in conjunction with the State of Illinois proposal to construct a new interchange to connect Scott AFB with Interstate 64, and it would serve as the primary access point for vehicles coming to the installation via the new interchange. The proposed gate complex would replace Scott AFB's existing commercial vehicle inspection facility near the Mascoutah Gate. Other activities associated with construction include widening and improving Pryor Drive from the installation boundary to Golf Course Road; replacing a storm water main under Pryor Drive; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for sitting the proposed gate complex and establishing appropriate anti-terrorism/force-protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

In accordance with Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, Scott AFB is providing you with this Draft EA and FONSI to solicit comments on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribe. Please accept this letter to initiate consultation with your tribe regarding this action.

Please provide any written comments or information regarding the action no later than 30 days of the receipt of this correspondence. Thank you for your participation. We appreciate this opportunity to foster our working relationship with Osage Nation.

KEITH J BRUMLEY
Cultural Resources Manager

Enclosure: *Draft Environmental Assessment Addressing Gate Complex Construction at Scott Air Force Base, Illinois* with Draft FONSI

ENABLING RAPID GLOBAL MOBILITY

Public Involvement Correspondence

The Notice of Availability was published in the *Belleville News-Democrat* on 2 January 2014 announcing a 30-day public review period for the Draft EA and Draft FONSI. Copies of the Draft EA and Draft FONSI were made available in the Belleville Public Library and the Scott AFB Library and on the Scott AFB Web site. Six members of the public offered comments by email correspondence.

A copy of the Notice of Availability and the public comments are included on the following pages.

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Notice of Availability

CERTIFICATE OF PUBLICATION

STATE OF ILLINOIS)
COUNTY OF ST. CLAIR) ss

This is to certify that the undersigned Jay Tebbe is the president and publisher of the NEWS-DEMOCRAT a public and English secular newspaper of general circulation, which has been regularly published daily in the City of Belleville, County of St. Clair and State of Illinois, for at least one year prior to the first publication of the notice hereinafter mentioned, and that a notice of which the annexed is a true printed copy, has been published in said newspaper **ONCE**, the publication thereof having been made in the issue of said newspaper, published on **January 2, 2014**.

JAY TEBBE
President and Publisher

By
His Authorized Agent

Publisher's fee: **$606.00**

ACCOUNT ID: 6299600
AD NUMBER: 701558

Notice of Availability

Draft Environmental Assessment (EA) Addressing Gate Complex Construction at Scott Air Force Base (AFB), Illinois

Scott AFB announces the availability of and invites public comments on the Draft EA evaluating the potential environmental consequences from the construction and operation a new access gate complex at Scott AFB, Illinois (the Proposed Action).

The proposed gate complex would be constructed in conjunction with the State of Illinois's proposal to construct a new interchange on Interstate 64 at Rieder Road. The Proposed Action also includes associated actions needed to support the proposed gate complex, such as widening and improving Pryor Drive from the installation boundary to Golf Course Road; replacing a storm water main under Pryor Drive; extending utility services from Scott AFB to the proposed gate complex; acquiring through purchase, lease, or easement up to 100 acres of property from St. Clair County for siting the proposed gate complex and establishing appropriate anti-terrorism/force protection setbacks; and demolishing two former schools, their associated infrastructure, and pavement on the property to be acquired.

The results, as found in the EA, show that the Proposed Action would not have an adverse impact on the environment, indicating that a Finding of No Significant Impact (FONSI) would be appropriate.

Scott AFB invites public participation through the solicitation of comments on the Draft EA and Draft FONSI. Hardcopies of the Draft EA and Draft FONSI are available for review at the following libraries:

Belleville Public Library
121 East Washington St.
Belleville, IL 62220

Scott AFB Library
510 Ward Drive
Building 1940
Scott AFB, IL 62225

The document is also available for download at: **www.scott.af.mil**

Written comments on the Draft EA are invited and will be accepted for 30 days from the publication of this notice. Please provide comments using one of the following methods:

a) By U.S. Mail: **375 AMW Public Affairs Office, Attn: Christine Spargur, 101 Heritage Drive, Scott AFB, IL 62225**

b) By Email: **Christine.Spargur@us.af.mil**

c) By Telephone: **618-256-4241**

When submitting comments, please include your name and address, and identify your comments as for the Gate Complex EA.

Public Comments Received

From Commenter 1

From: Mary Campbell
Sent: Sunday, February 02, 2014 4:03 PM
To: SPARGUR, CHRISTINE K GS-09 USAF AMC 375 AMW/PA
Subject:

I just read my email today regarding the Cardinal Creek gate. MY VOTE IS NO! We need to preserve what we have and not just keep mindlessly pouring concrete over it.

Mary Ann Campbell

From Commenter 2

From: Linda
Sent: Sunday, February 02, 2014 1:02 PM
To: SPARGUR, CHRISTINE K GS-09 USAF AMC 375 AMW/PA
Subject: New gate - cardinal creek

Ms. Spargur:

I am opposed to the new gate. I do not want my tax dollars used to put in a new interchange. The waste of public money at the mid-America airport, which was a gift to SAFB is collossal and it is enough!

Thank you.

Linda Wegrzyn

From Commenter 3

From: John Stellyes
Sent: Friday, January 31, 2014 10:02 AM
To: SPARGUR, CHRISTINE K GS-09 USAF AMC 375 AMW/PA
Subject: New Scott Gate & 64 interchange

Dear Christine,

I heard that you were the person to give my opinion (correct me if I'm wrong). As a registered voter and the wife of a husband who works at SAFB, and we own our home off Scott Troy Road, I really don't see the need for a new gate (Cardinal Creek) at SAFB nor do I see a need for a new I64 interchange 2 miles east of the existing SAFB/Rt. 50 exchange. Surely, the money could be utilized more effectively elsewhere. The evidence doesn't support the need for either the gate or the interchange.

Please record my opinion as a tax payer in St. Clair County.

Respectfully,

Dr. Laurita Stellyes

From Commenter 4

From: Annette Bland
Sent: Thursday, January 30, 2014 11:46 AM
To: SPARGUR, CHRISTINE K GS-09 USAF AMC 375 AMW/PA
Subject: New Gate

I do not feel that a new gate is necessary for S.A.F.B

The gates that exists now are adequate enough to handle the traffic and you can't be serious about another interchange that is ONLY 2 miles away from the current.

I can't see my tax dollars going to something that is not needed.

Thank you for your time.

Annette Bland

From Commenter 5

From: David Roth
Sent: Thursday, January 30, 2014 1:23 PM
To: SPARGUR, CHRISTINE K GS-09 USAF AMC 375 AMW/PA
Subject: Cardinal Creek Gate

Christine, I am opposed to the new Cardinal Creek Gate on the grounds that its construction would mean the construction of a I-64 interchange near Rieder Road. There is already an interchange with in two miles. This looks like an attempt to get the County, State and Federal government to pay for a entrance to the defunct air port, which Scott currently uses. The only people to benefit from this is Air Force base itself. Our tax dollars can be better used.

Dave Roth

From Commenter 6

From: Richard Skillings
Sent: Friday, January 31, 2014 8:19 AM
To: SPARGUR, CHRISTINE K GS-09 USAF AMC 375 AMW/PA
Subject: Cardinal Creek Gate Complex Draft EA

Having examined documents relating to this project over the last 2 years, I believe I can objectively assess the wisdom of this project. While a 24-hour gate may be nice to have for workers on the east side of the base, including those who move into the new DISA facility, and while it may seem to solve problems with commercial traffic using the Mascoutah gate, its construction is not necessary for base security or to meet future transportation needs. Other much less expensive solutions to the issues are available. Indeed, this project may well fall under the Fraud, Waste, and Abuse program. Specific comments justifying my opinion are listed in the following discussion.

I saw the original notice in the Belleville News-Democrat on 1-2-14 and have been studying the FONSI and Draft EA since that time. To complete a thorough review and provide a complete set of comments in the allotted time is not possible for the layman. Consequently, I will provide only the most important observations I found in the limited time available.

Draft EA.

Comments on para 1.2, Background, and 1.3, Purpose and Need

There are a number of dubious statements in this material which, if corrected and presented honestly, should raise serious questions about the stated purpose and the need for the project.

The statement about traffic backups at the gates (called "congestion" later in the study) is factual; however, there is an implied suggestion that it is a problem. That is not so, and is an exaggeration, at best. Let's remember that gates are designed to stop and slow traffic in the interest of security; that's what they do. It's a tradeoff between convenience and protection that everyone expects and accepts. By looking at traffic entering other DOD facilities employing 13,000 +/- personnel, examiners will find such backups are normal. In addition, there are other ways to speed traffic through the gates, if that's the intent-encouraging St Clair and Madison county transit authorities to establish ride shares or improved bus service, for example. If commuters discern a congestion problem, they will use these new opportunities. However, my numerous experiences are that even at the worst times (6:30 - 8:00am), a 10-15 minute wait will get a driver from the signals at Siebert Road/Rt 158 onto the base. My observation is that actions by AF executives have worked to slow traffic, not speed it up (taking off hats, scanning ID cards, reassigning traffic control staff, etc). But, even if traffic were sped through the gates, movement on the base would be disrupted, with the resulting delays ending up the same; that alone is not sufficient to justify a new gate. Lastly, it's my opinion that the DOD response to the terrorist threat at SAFB is disproportionate to the actual threat, which lies primarily where civilians gather and not where the military operates; a reasoned approach to security may well show that some security measures could be relaxed with very, very little risk to the base population or operations.

The traffic studies mentioned (in order to claim that intersections will not be able to handle an increase in traffic) actually do not prove the claim.

The improvement to the Siebert Road/Rt 158 intersection is indicative of prudent and cost-effective ways of correcting traffic congestion. IDOT has fixed many a location by adding turn lanes, new signals, and so on, as means to overcome congested intersections. Another example is the Rt158/US 50 intersection

to the north of the base. These projects are irrelevant as justification for a new gate complex for the base, however..

If the arguments presented pertained to the area's roads themselves, and not just the intersections, then it might be more relevant. But the facts show that those roads have handled the increased traffic experienced from growth in the Shiloh-O'Fallon areas west and northwest of the base without creating any congestion. A 2005 study of a protected corridor along IL158 showed that the capacity of area roads could even handle significantly more vehicles than it carries (at Level of Service C) now.

There's also the statement about new missions at SAFB. The 2005 BRAC realignment did add personnel, but the sequester and recent budget cuts eliminated personnel, so there are actually fewer people using the current gate complex. The likelihood is that trend will continue. Moreover, there is no appetite in Congress to agree to the DOD's call for a new round of BRAC reductions. Until the DOD can prove that more closures will save money, unlike the 2005 BRAC which is expected to cost billions more than it will save in the out years, Congress will not entertain a proposal to begin another BRAC effort. Both Democrats and Republicans have made that clear. (Sen Durbin is one outspoken critic.) In other words, adding new personnel and increasing traffic will not occur. Even the Present and Foreseeable projects do not list an increase in personnel. Therefore, this unjustified speculation adds no value to the argument, and would be correctly used to argue against the upgrade.

A comprehensive Transportation Study, published for SAFB in June 2007, examined future needs for the base, given recommendations from the 2005 BRAC. The Shiloh gate was constructed to meet the recommendations in the study. However, the study's conclusion was that the then-existing Cardinal Creek gate could accommodate all new traffic (up to 65% of the increase due to new tenants) with morning operations only. That has worked in the 6 years since for the few fulltime staff working on the east side of the base That study also mentioned a "discussion" surrounding the Reider Road interchange, but made no recommendation, established no requirement, nor even discussed connecting the base to that interchange. The Access Justification Report prepared for St Clair County (which falsely claimed that the 2007 SAFB transportation study provided the "substantial" justification for a new interchange) may have tempted base leadership to ignore their own study's conclusions and rewrite their requirement so as to enable the county's plan. I can only imagine such a cooperative effort.

I understand that another base transportation study was completed recently; however, my request to review it has been delayed well past the due date of these comments. I surmise that the new study was contracted by base leaders because they did not like the 2007 study conclusions and wanted to buy a second, more appropriate opinion. Call me cynical, but if the new conclusions mirrored the 2007 conclusion, there would be no "need" established and no proposal to expand the Cardinal Creek gate, so I assume they differ. What were the odds of that?

The storm water drain under Pryor Drive may not be damaged as indicated. A few years ago, The Kiiian Corporation completed a contract for several hundred thousand dollars to repair that drainage.

The discussion of truck traffic (including that in para 3.9.2) should be more in-depth, and should include a cost-benefit analysis. Most long-distance freight haulers move N-S along IL4 to-from warehousing outside Mascoutah. There is little E-W freight movement, except that destined for the base. Highways IL161, US50, and IL 177 are not freight routes. Tankers and other freight destined for SAFB and coming from the east could exit I-64 onto IL4 and then reach the Mascoutah gate along IL161(the indirect route mentioned?), passing only a few Lincoln housing units nearby. A new route using Reider Road and a Cardinal Creek gate would not eliminate the AT/FP problem completely, either. And, the last time I talked to CE planners, tankers could use Wherry Road and a much smaller version of the proposed

Cardinal Creek gate to access the base. Lastly, requiring haulers to use this new gate would likely cause them to charge more because of the added time to get around the runway to make deliveries.

Comments on para 2.1, Proposed Action.

There is a statement that the Mascoutah gate would be closed, but the modeling done to ascertain where traffic would go after the Cardinal Gate complex is finished shows that the Mascoutah gate would remain open and handle 5% of both inbound and outbound traffic. That conflict needs to be resolved. If the Mascoutah gate does remain open, then the implied manpower impacts are wrong, as well.

The new facilities that would be constructed at the gate, along with the increased number of operating hours suggest an significant increase in security and administrative/support personnel would be necessary. Despite the claim near the end of this paragraph that "The Proposed Action would not alter staffing levels at the installation," adding new staff appears unavoidable. Merely staffing one fulltime position requires 5 manpower positions. The list of functions at the gate, together with the expected volumes, suggest as many as 22 new positions, even doing double duty (10 for guards at three booths (not all manned 24hr/day); 5 for a position in the gate house; 2 for part-time workers in the truck inspection station; 5 for the visitor center and overwatch; and perhaps others to manage the storage facilities).

The gate complex is referred to as both "modern" and meeting "the most stringent AT/FP requirements." I submit the actual threat to SAFB does not warrant such construction. The Shiloh and Belleville gates are much different even after modernization; this one could be, as well.

There is a presumption that traffic will increase substantially at the Cardinal Creek gate. Table 4.5 even projects one third of all vehicles will use this gate. That defies common sense. I cannot know the model inputs used to come to this finding, but I must question whether it is "garbage in, garbage out." Specifically, the model predicts 688 more vehicles will leave the base each day than will have entered at the beginning! It also predicts that the Cardinal Creek gate volume will exceed the volume of the Belleville gate by 32% (that's 5,000 more vehicles entering/exiting the gate each day) and approach the volume of the Shiloh gate. I strongly believe that defies anything a reasonable person would conclude Where will all these vehicles come from, and where are they going once on base? Consider this: of the roughly 10,000 full time employees at the base, perhaps 90% work on the west side of the base, served by the Shiloh and Belleville gates. The 2,400 part-time personnel (ANG and AFRES most of whom do not commute daily) along with DISA and other small unit staffs (making up the other 10% of full time workers) work the east side of the base, served by the Cardinal Creek gate. It takes approximately 10 minutes to travel from the Cardinal Creek gate, around the runway, to the west side work areas when there is little to no traffic. It may be more than that during rush hour. That's true for workers going past the golf course toward the clinic or those going past the shooting range toward HQ 375th, AMC or USTRANSCOM. Even when traffic is "congested" at the gates, workers originating in Lebanon (or east of there), Troy, or O'Fallon will save no time by entering the Cardinal Creek gate if they work on the west side of the base. Most of those workers will not find that driving to a new I-64 interchange any faster than driving along Reider Road or Wherry Road to get to the gate, now. I suggest that model inputs are dubious, making the output values appear both overly optimistic and highly questionable. Data and evaluations from both IDOT and the MPO show there is no congestion along IL4, IL161, or IL158, so reducing traffic along those highways is not only unnecessary, but it's also not the job of the USAF to do it-even as a byproduct. Using that as justification for the gate is deceptive at best, and fraudulent at worst.

Comments on para 2.2, Alternatives

The stated standards (the set of statements would better be called "criteria") seem to have been selected in order to accommodate the preferred alternative. It should not be necessary to require the gate to be

"located in proximity to a major.roadway," for example. Certainly the existing gates, which meet the needs of the existing workforce, are not. The "limit demolition" criteria would be met better by adding gates to either the Shiloh or Belleville complexes, yet that's a rejected alternative. The "accommodate the anticipated increase in traffic." criteria is not so much a standard as it is a restatement of the purpose; and its underlying assumption is invalid, as well. These weaknesses suggest that the entire analysis of the alternatives is flawed. It reads like the authors had to do something only because the NEPA requires it, and created a plausible discussion that means little, except to fill a square.

The first alternative mentions all existing gates except the Mascoutah gate. If altering the others warrants discussion, then upgrading that gate must be addressed, as well. For example, the gate could be moved farther to the east, thus avoiding AT/FP problems that might now exist. As written, the argument against modifying any existing gate is not compelling; the justification must be more revealing and strengthened to be convincing. Cost comparisons should also be required.

Especially telling is the discussion of the "No Action Alternative." After stating the obvious, the fundamental reason for rejecting it is that ".the [county's] proposed interchange.would not be fully utilized..." That is merely a weakness of the interchange proposal.

FONSI:

My comments mirror those in the EA, with some additional elaboration.

The purpose and need statements are largely hyperbole. The new interchange will only put more traffic into the gate if the gate built. Otherwise, the same people who use the gate each workday morning will continue to use that gate. Even diverting commercial vehicles to the existing Cardinal Creek gate would not overload it, so if money can be saved by shortening the haulers' time, then it may well make sense to upgrade the gate for that purpose, while closing the Mascoutah gate. The second stated purpose is to replace the commercial vehicle inspection station. That could be accomplished at a relocated Mascoutah gate if there's no benefit to redirecting them to Cardinal Creek.

There is an expectation that development will occur to the northeast. The facts belie that expectation. Not only have dozens of studies shown that economic development does not follow highway construction, but the East-West Gateway Council (MPO for the St Louis region which includes MidAmerica Airport and SAFB) reported that despite spending billions (with a B), there has been no regional economic development in the last 20 years-merely a shuffle of economic activity among competing communities. The Shiloh retail development along Frank Scott Pkwy is an illustration of that, as Fairview Hts, Belleville, and O'Fallon lost sales tax revenue to Shiloh. In addition, the Illinois Department of Commerce and Economic Opportunity projects no growth for at least the next 20 years. To cite potential new development as justification in any way for this project is wrong, and should be removed from the document. As I wrote earlier, the case on economic development can be used more appropriately to argue against this project.

The fact that the alternatives analysis was exactly 8 words and was summarily dismissed reflects the absence of rigor even in the EA, and leads one to conclude that the end was determined before the examination and assessment process began.

Other Comments:

EA, Table 3-6 shows population changes from the 2000-2010 census, indicating a 5.5% increase in St Clair County. That's used to help substantiate future growth and transportation needs, and thus bolster the case for this gate. However, data since 2010 shows the county is losing people. A more relevant

determinant would be long=term growth and projections for population and employment. Data for the period 1970-2010 shows no population growth at all. As previously mentioned, Illinois does not expect the population (and resultant market/economic growth) in St Clair County to change in the next 20 years. The US Census Bureau extends that 30 years to 2040, and a study by the University of Utah extends that to the end of this century. Any conclusions about new needs which are based on growth are false. Instead, the conclusion should be that growth projections militate against the new gate's need.

EA, Table 3-10 shows that congestion arises after vehicles get on base. IDOT has solved many such problems with the addition of turn lanes (as has been done in part at the Scott Drive/Winter St intersection), better signaling, etc. These solutions can still be applied at the two cited intersections, although I personally do not find the flow to be particularly annoying, especially in view of the slowdowns that occur in front of HQ AMC and at Scott Dr/Birchard St. In toto, traffic on the base moves reasonably well compared to other densely populated communities, in my opinion.

While county leadership, and Mr Cantwell at MidAmerica Airport, try to build it into a worthwhile business endeavor, the FAA and others (such as Boeing, Airbus, and airline consultants) predict very little growth in the future of air cargo. Not surprisingly, trying to find a niche in the transport of perishables has proven difficult at best; to make such a venture worth the cost to the citizens will be impossible. The sheer size of the fleet of 747's needed to transit the airport may well preclude that from ever happening. So, while operating the joint-use facility under the terms of the joint-use agreement may require SAFB to extend some benefits to MidAmerica Airport, those benefits should not include building an access gate that is not truly necessary, and which will benefit only a few.

Conclusion:

Because of the weakness in the underlying project and a justification based more on rhetoric than facts, I request the need, purpose, and justification for the Cardinal Creek gate complex, as provided in the Draft EA and FONSI, be audited and examined by some higher authority or an outside agency, such as the Defense Audit Agency or AF/IG. That office must objectively validate the project's credibility in light of guidance set forth for MCP appropriations, as well as the President's comments on Defense spending in his State of the Union message on 28 Jan 14. I do not believe it can withstand objective scrutiny.

Sincerely,

Richard L. Skillings

APPENDIX B

SUMMARY OF AIR EMISSIONS CALCULATIONS

Summary	Summarizes total emissions by calendar year
Combustion	Estimates emissions from non-road equipment exhaust.
Fugitive	Estimates particulate emissions from construction activities including earthmoving, vehicle traffic, and windblown dust.
Grading	Estimates the number of days of site preparation, to be used for estimating heavy equipment exhaust and earthmoving dust emissions.
Haul Truck On-Road	Estimates emissions from haul trucks hauling fill materials to the job site.
Construction Commuter	Estimates emissions for construction workers commuting to the site.
Diesel Generator	Estimates emissions from the operation of an emergency generator using diesel as fuel.

Air Emissions from the Proposed Action

		NO_x (ton)	VOC (ton)	CO (ton)	SO_2 (ton)	PM_{10} (ton)	$PM_{2.5}$ (ton)	CO_2 (ton)
Construction Year	Combustion	22.641	1.554	9.184	1.837	1.425	1.382	2,631.784
	Fugitive Dust	-	-	-	-	61.414	6.141	-
	Haul Truck On-Road	0.737	0.069	0.394	0.002	0.024	0.022	190.983
	Construction Commuter	0.186	0.191	1.837	0.003	0.022	0.014	264.366
	Total	***23.564***	***1.813***	***11.415***	***1.842***	***62.884***	***7.560***	***3,087.133***
Subsequent Operation Years	Emergency Generator	2.510	0.205	0.541	0.165	0.176	0.176	93.328
	Total	***2.510***	***0.205***	***0.541***	***0.165***	***0.176***	***0.176***	***93.328***

Note: Total $PM_{10}/_{2.5}$ fugitive dust emissions are assuming USEPA 50% control efficiencies.

Construction Year	CO_2 emissions converted to metric tons =	***2,800.03***	***metric tons***	
Subsequent Operation Years	CO_2 emissions converted to metric tons =	***84.65***	***metric tons***	
	State of Illinois's CO_2 emissions =	***230,400,000***	***metric tons***	*(U.S. DOE/EIA 2013)*
	United States' CO_2 emissions =	***5,631,300,000***	***metric tons***	*(U.S. DOE/EIA 2013)*
Construction Year	Percent of Illinois's CO_2 emissions =	***0.00122%***		
Subsequent Operation Years	Percent of Illinois's CO_2 emissions =	***0.000037%***		
Construction Year	Percent of USA's CO_2 emissions =	***0.000050%***		
Subsequent Operation Years	Percent of USA's CO_2 emissions =	***0.000002%***		

Source: U.S. Department of Energy, Energy Information Administration (U.S. DOE/EIA). 2013. *Table 1. Summary of State Energy-related Carbon Dioxide Emissions (1990-2010)*. Available online: <http://www.eia.gov/environment/emissions/state/state_emissions.cfm>. Data released 31 January 2013. Data accessed 20 June 2013.

Combustion Emissions

Combustion Emissions of VOC, NO_x, SO_2, CO, $PM_{2.5}$, $PM_{10,}$ and CO_2 due to Construction and Demolition

	General Construction and Demolition Activities	Area Disturbed		Source and Assumptions
1.)	Construct gate house	2,260	ft²	Table 2-1
2.)	Construct truck-inspection facility	11,722	ft²	Table 2-1
3.)	Construct cargo-transfer facility	4,004	ft²	Table 2-1
4.)	Construct overwatch building	205	ft²	Table 2-1
5.)	Construct Visitor's Center	1,991	ft²	Table 2-1
6.)	Construct new roadways, sidewalks, parking areas, and other pavements	267,800	ft²	Table 2-1
7.)	Construct landscaping, dividers, and passive barriers	276,750	ft²	Table 2-1
8.)	Reconstruct and widen Pryor Drive to Golf Course Drive	261,400	ft²	Table 2-1
9.)	Demolish the southern school	84,000	ft²	Table 2-1
10.)	Demolish the northern school	63,000	ft²	Table 2-1
11.)	Demolish Scott School Road	82,400	ft²	Table 2-1
12.)	Demolish Wherry Road from Rieder Road to the installation boundary	248,700	ft²	Table 2-1
13.)	Demolish sidewalks, parking areas, playgrounds, and other pavement on the property proposed for acquistion	271,100	ft²	Table 2-1
14.)	Demolish Pryor Drive to Golf Course Road	130,700	ft²	Table 2-1
	Total Building Construction Area:	20,182	ft²	(1-5)
		0.463	acres	
	Total Building and Roadway Demolition Area:	879,900	ft²	(9-14)
		20.200	acres	
	New Roadway Construction Area	529,200	ft²	(6, 8)
		12.149	acres	
	Total Disturbed Area:	1,706,032	ft²	(1-14)
		39.165	acres	
	Construction Duration:	12	months	
	Annual Construction Activity:	240	days	Assumes 4 weeks per month, 5 days per week of work.

Emission Factors Used for Construction Equipment

References: Guide to Air Quality Assessment, SMAQMD, 2004; and U.S. EPA NONROAD Emissions Model, Version 2005.0.0
Emission factors are taken from the NONROAD model and were provided to HDR by Larry Landman of the Air Quality and Modeling Center (Landman.Larry@epamail.epa.gov) on 12/14/07. Factors provided are for the weighted average US fleet for CY2007.
Assumptions regarding the type and number of equipment are from SMAQMD Table 3-1 unless otherwise noted.

Grading

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO_2 (lb/day)
Bulldozer	1	13.597	0.957	5.502	1.017	0.895	0.868	1456.904
Motor Grader	1	9.689	0.726	3.203	0.797	0.655	0.635	1141.647
Water Truck	1	18.356	0.894	7.004	1.635	0.996	0.966	2342.975
Total per 10 acres of activity	3	41.641	2.577	15.710	3.449	2.546	2.469	4941.526

Paving

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO_2 (lb/day)
Paver	1	3.831	0.374	2.055	0.281	0.350	0.340	401.932
Roller	1	4.825	0.443	2.514	0.374	0.434	0.421	536.074
Truck	2	36.712	1.788	14.009	3.271	1.992	1.932	4685.951
Total per 10 acres of activity	4	45.367	2.606	18.578	3.926	2.776	2.693	5623.957

Demolition

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO_2 (lb/day)
Loader	1	13.452	0.992	5.579	0.949	0.927	0.899	1360.098
Haul Truck	1	18.356	0.894	7.004	1.635	0.996	0.966	2342.975
Total per 10 acres of activity	2	31.808	1.886	12.584	2.585	1.923	1.865	3703.074

Building Construction

Equipment[d]	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c] (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO_2 (lb/day)
Stationary								
Generator Set	1	2.381	0.317	1.183	0.149	0.227	0.220	213.059
Industrial Saw	1	2.618	0.316	1.966	0.204	0.325	0.315	291.920
Welder	1	1.124	0.378	1.504	0.078	0.227	0.220	112.393
Mobile (non-road)								
Truck	1	18.356	0.894	7.004	1.635	0.996	0.966	2342.975
Forklift	1	5.342	0.560	3.332	0.399	0.554	0.537	572.235
Crane	1	9.575	0.665	2.393	0.651	0.500	0.485	931.929
Total per 10 acres of activity	6	39.396	3.130	17.382	3.116	2.829	2.744	4464.512

Note: Footnotes for tables are on following page

Architectural Coatings

Equipment	No. Reqd.[a] per 10 acres	NO_x (lb/day)	VOC[b] (lb/day)	CO (lb/day)	SO_2[c]	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO_2 (lb/day)
Air Compressor	1	3.574	0.373	1.565	0.251	0.309	0.300	359.773
Total per 10 acres of activity	1	3.574	0.373	1.565	0.251	0.309	0.300	359.773

a) The SMAQMD 2004 guidance suggests a default equipment fleet for each activity, assuming 10 acres of that activity, (e.g., 10 acres of grading, 10 acres of paving, etc.). The default equipment fleet is increased for each 10 acre increment in the size of the construction project. That is, a 26 acre project would round to 30 acres and the fleet size would be three times the default fleet for a 10 acre project.

b) The SMAQMD 2004 reference lists emission factors for reactive organic gas (ROG). For the purposes of this worksheet ROG = VOC. The NONROAD model contains emissions factors for total HC and for VOC. The factors used here are the VOC factors.

c) The NONROAD emission factors assume that the average fuel burned in nonroad trucks is 1100 ppm sulfur. Trucks that would be used for the Proposed Action will all be fueled by highway grade diesel fuel which cannot exceed 500 ppm sulfur. These estimates therefore over-estimate SO2 emissions by more than a factor of two.

d) Typical equipment fleet for building construction was not itemized in SMAQMD 2004 guidance. The equipment list above was assumed based on SMAQMD 1994 guidance.

PROJECT-SPECIFIC EMISSION FACTOR SUMMARY

Source	Equipment Multiplier*	Project-Specific Emission Factors (lb/day)						
		NO_x	VOC	CO	SO_2**	PM_{10}	$PM_{2.5}$	CO_2
Grading Equipment	4	166.565	10.308	62.840	13.797	10.182	9.877	19766.105
Paving Equipment	1	45.367	2.606	18.578	3.926	2.776	2.693	5623.957
Demolition Equipment	2	63.615	3.771	25.168	5.170	3.846	3.731	7406.147
Building Construction	1	39.396	3.130	17.382	3.116	2.829	2.744	4464.512
Air Compressor for Architectural Coating	1	3.574	0.373	1.565	0.251	0.309	0.300	359.773
Architectural Coating**			11.578					

*The equipment multiplier is an integer that represents units of 10 acres for purposes of estimating the number of equipment required for the project.

**Emission factor is from the evaporation of solvents during painting, per "Air Quality Thresholds of Significance", SMAQMD, 1994

Example: SMAQMD Emission Factor for Grading Equipment NOx = (Total Grading NOx per 10 acre)*(Equipment Multiplier)

Summary of Input Parameters

	Total Area (ft^2)	Total Area (acres)	Total Days	
Grading:	1,706,032	39.165	6	(from "Grading" worksheet)
Paving:	529,200	12.149	58	
Demolition:	879,900	20.200	505	
Building Construction:	20,182	0.463	240	
Architectural Coating	20,182	0.463	20	(per SMAQMD "Air Quality of Thresholds of Significance", 1994)

NOTE: The 'Total Days' estimate for paving is calculated by dividing the total number of acres by 0.21 acres/day, which is a factor derived from the 2005 MEANS Heavy Construction Cost Data, 19th Edition, for 'Asphaltic Concrete Pavement, Lots and Driveways - 6" stone base', which provides an estimate of square feet paved per day. There is also an estimate for 'Plain Cement Concrete Pavement', however the estimate for asphalt is used because it is more conservative. The 'Total 'Days' estimate for demolition is calculated by dividing the total number of acres by 0.02 acres/day, which is a factor also derived from the 2005 MEANS reference. This is calculated by averaging the demolition estimates from 'Building Demolition - Small Buildings, Concrete', assuming a height of 30 feet for a two-story building; from 'Building Footings and Foundations Demolition - 6" Thick, Plain Concrete'; and from 'Demolish, Remove Pavement and Curb - Concrete to 6" thick, rod reinforced'. The 'Total Days' estimate for building construction is assumed to be 240 days.

Total Project Emissions by Activity (lbs)

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Grading Equipment	999.389	61.848	377.038	82.785	61.092	59.260	118,596.632
Paving	2,631.303	151.132	1,077.549	227.693	161.014	156.183	326,189.497
Demolition	32,125.654	1,904.373	12,709.603	2,610.729	1,942.420	1,884.147	3,740,104.411
Building Construction	9,455.116	751.154	4,171.754	747.924	678.970	658.601	1,071,482.802
Architectural Coatings	71.481	239.027	31.308	5.023	6.186	6.001	7,195.467
Total Emissions (lbs):	**45,282.944**	**3,107.533**	**18,367.253**	**3,674.153**	**2,849.683**	**2,764.192**	**5,263,568.810**

Results: Total Project Annual Emission Rates

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
Total Project Emissions (lbs)	45,282.944	3,107.533	18,367.253	3,674.153	2,849.683	2,764.192	5,263,568.810
Total Project Emissions (tons)	22.641	1.554	9.184	1.837	1.425	1.382	2,631.784

Construction Fugitive Dust Emissions

Construction Fugitive Dust Emission Factors

	Emission Factor	Units	Source
Construction and Demolition Activities	0.190	ton PM_{10}/acre-month	MRI 1996; EPA 2001; EPA 2006
New Road Construction	0.420	ton PM_{10}/acre-month	MRI 1996; EPA 2001; EPA 2006

$PM_{2.5}$ Emissions

$PM_{2.5}$ Multiplier	0.100	(10% of PM_{10} emissions assumed to be $PM_{2.5}$)	EPA 2001; EPA 2006
Control Efficiency	0.500	(assume 50% control efficiency for PM_{10} and $PM_{2.5}$ emissions)	EPA 2001; EPA 2006

New Roadway Construction (0.42 ton PM_{10}/acre-month)

Duration of Construction Project	12	months
Area	12.149	acres

General Construction and Demolition Activities (0.19 ton PM_{10}/acre-month)

Duration of Project	12	months
Area	27.016	acres

	Project Emissions (tons/year)			
	PM_{10} uncontrolled	**PM_{10} controlled**	**$PM_{2.5}$ uncontrolled**	**$PM_{2.5}$ controlled**
New Roadway Construction	61.230	30.615	6.123	3.061
General Construction Activities	61.597	30.799	6.160	3.080
Total	**122.827**	**61.414**	**12.283**	**6.141**

Construction Fugitive Dust Emission Factors

General Construction Activities Emission Factor

0.190 ton PM_{10}/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The area-based emission factor for construction activities is based on a study completed by the Midwest Research Institute (MRI) Improvement of Specific Emission Factors (BACM Project No. 1), March 29, 1996. The MRI study evaluated seven construction projects in Nevada and California (Las Vegas, Coachella Valley, South Coast Air Basin, and the San Joaquin Valley). The study determined an average emission factor of 0.11 ton PM_{10}/acre-month for sites without large-scale cut/fill operations. A worst-case emission factor of 0.42 ton PM_{10}/acre-month was calculated for sites with active large-scale earth moving operations. The monthly emission factors are based on 168 work-hours per month (MRI 1996). A subsequent MRI Report in 1999, Estimating Particulate Matter Emissions From Construction Operations, calculated the 0.19 ton PM_{10}/acre-month emission factor by applying 25% of the large-scale earthmoving emission factor (0.42 ton PM_{10}/acre-month) and 75% of the average emission factor (0.11 ton PM_{10}/acre-month). The 0.19 ton PM_{10}/acre-month emission factor is referenced by the EPA for non-residential construction activities in recent procedures documents for the National Emission Inventory (EPA 2001; EPA 2006). The 0.19 ton PM_{10}/acre-month emission factor represents a refinement of EPA's original AP-42 area-based total suspended particulate (TSP) emission factor in Section 13.2.3 Heavy Construction Operations. In addition to the EPA, this methodology is also supported by the South Coast Air Quality Management District as well as the Western Regional Air Partnership (WRAP) which is funded by the EPA and is administered jointly by the Western Governor's Association and the National Tribal Environmental Council. The emission factor is assumed to encompass a variety of non-residential construction activities including building construction (commercial, industrial, institutional, governmental), public works, and travel on unpaved roads. The EPA National Emission Inventory documentation assumes that the emission factors are uncontrolled and recommends a control efficiency of 50% for PM_{10} and $PM_{2.5}$ in PM nonattainment areas.

New Road Construction Emission Factor

0.420 ton PM_{10}/acre-month Source: MRI 1996; EPA 2001; EPA 2006

The emission factor for new road construction is based on the worst-case conditions emission factor from the MRI 1996 study described above (0.42 tons PM_{10}/acre-month). It is assumed that road construction involves extensive earthmoving and heavy construction vehicle travel resulting in emissions that are higher than other general construction projects. The 0.42 ton PM10/acre-month emission factor for road construction is referenced in recent procedures documents for the EPA National Emission Inventory (EPA 2001; EPA 2006).

$PM_{2.5}$ Multiplier **0.100**

$PM_{2.5}$ emissions are estimated by applying a particle size multiplier of 0.10 to PM_{10} emissions. This methodology is consistent with the procedures documents for the National Emission Inventory (EPA 2006).

Control Efficiency for PM_{10} and $PM_{2.5}$ **0.500**

The EPA National Emission Inventory documentation recommends a control efficiency of 50% for PM_{10} and $PM_{2.5}$ in PM nonattainment areas (EPA 2006). Wetting controls will be applied during project construction.

References:

EPA 2001. *Procedures Document for National Emissions Inventory, Criteria Air Pollutants, 1985-1999.* EPA-454/R-01-006. Office of Air Quality Planning and Standards, United States Environmental Protection Agency. March 2001.

EPA 2006. *Documentation for the Final 2002 Nonpoint Sector (Feb 06 version) National Emission Inventory for Criteria and Hazardous Air Pollutants.* Prepared for: Emissions Inventory and Analysis Group (C339-02) Air Quality Assessment Division Office of Air Quality Planning and Standards, United States Environmental Protection Agency. July 2006.

MRI 1996. *Improvement of Specific Emission Factors (BACM Project No. 1).* Midwest Research Institute (MRI). Prepared for the California South Coast Air Quality Management District, March 29, 1996.

Grading Schedule

Estimate of time required to grade a specified area.

Input Parameters
Construction area: 39.165 acres/yr (from Combustion Worksheet)
Qty Equipment: 12.000 (calculated based on 3 pieces of equipment for every 10 acres)

Assumptions.
Terrain is mostly flat.
An average of 6" soil is excavated from one half of the site and backfilled to the other half of the site; no soil is hauled off-site or borrowed.
200 hp bulldozers are used for site clearing.
300 hp bulldozers are used for stripping, excavation, and backfill.
Vibratory drum rollers are used for compacting.
Stripping, Excavation, Backfill and Compaction require an average of two passes each.
Excavation and Backfill are assumed to involve only half of the site.

Calculation of days required for one piece of equipment to grade the specified area.

Reference: Means Heavy Construction Cost Data, 19th Ed., R. S. Means, 2005.

Means Line No.	Operation	Description	Output	Units	Acres per equip-day)	equip-days per acre	Acres/yr (project-specific)	Equip-days per year
2230 200 0550	Site Clearing	Dozer & rake, medium brush	8.000	acre/day	8.000	0.125	39.165	4.896
2230 500 0300	Stripping	Topsoil & stockpiling, adverse soil	1,650	cu. yd/day	2.045	0.489	39.165	19.147
2315 432 5220	Excavation	Bulk, open site, common earth, 150' haul	800	cu. yd/day	0.992	1.008	19.583	19.746
2315 120 5220	Backfill	Structural, common earth, 150' haul	1,950	cu. yd/day	2.417	0.414	19.583	8.101
2315 310 5020	Compaction	Vibrating roller, 6 " lifts, 3 passes	2,300	cu. yd/day	2.851	0.351	39.165	13.736
TOTAL								65.626

Calculation of days required for the indicated pieces of equipment to grade the designated acreage.

(Equip)(day)/yr: 65.626
Qty Equipment: 12.000
Grading days/yr: 5.469

Haul Truck Emissions

Emissions from hauling excavation material, demolition materials, and construction supplies are estimated in this spreadsheet.

Emission Estimation Method:
United States Air Force (USAF). 2009. *Air Emission Factor Guide to Air Force Mobile Sources. Methods for Estimating Emissions of Air Pollutants For Mobile Sources at U.S. Air Force Installations.* December 2009.

Assumptions:
Haul trucks carry 20 cubic yards of material per trip.
The average distance from the project site to the materials source is 15 miles; therefore, a haul truck will travel 30 miles round trip.
Estimated number of trips required by haul trucks = total amount of material/20 cubic yards per truck
Assumes soil would not need to be hauled to or from the site.

Amount of Building Materials =	2,990	cubic yards	Assumes 4 cubic feet of building material are needed per square foot of building space
Amount of Paving Material =	19,600	cubic yards	Assumes 1 cubic foot of pavement material is needed per square foot of new pavement
Amount of Building Debris =	21,778	cubic yards	Assumes 4 cubic feet of demolition debris is generated per square foot of building space
Amount of Pavement Debris =	27,144	cubic yards	Assumes 1 cubic foot of pavement debris is generated per square foot of pavement

Number of trucks required =	3,576	heavy duty diesel haul truck trips
Miles per trip =	30	miles

Heavy Duty Diesel Vehicle (HDDV) Average Emission Factors (grams/mile)

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
HDDV	**6.23**	**0.58**	**3.33**	**0.02**	**0.20**	**0.19**	**1615.20**

Notes:
Assumes Haul Trucks are Class 8b (HDDV8b; >60,000 lbs Gross Vehicle Weight)
Scott AFB is located at a low altitude (<5,000 feet above sea level)
Construction assumed to occur in Calendar Year 2015, and construction vehicles are assumed to be on average 10 years old (Model Year 2005).
Emission factors for all pollutants are from USAF 2009, Appendix A, On-Road Vehicle Emission Factors, electronic pages 458-464.

HDDV Haul Truck Emissions

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
lbs	**1473.283**	**137.160**	**787.485**	**4.730**	**47.296**	**44.932**	**381965.680**
tons	**0.737**	**0.069**	**0.394**	**0.002**	**0.024**	**0.022**	**190.983**

Example Calculation: NO_x emissions (lbs) = 30 miles per trip * 5,021 trips * NO_x emission factor (g/mile) * lb/453.6 g

Construction Commuter Emissions

Emissions from construction workers commuting to the job site are estimated in this spreadsheet.

Emission Estimation Method: Emission factors from the South Coast Air Quality Management District (SCAQMD) EMFAC 2007 (v 2.3) Model (on-road) were used. These emission factors are available online at http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html.

Assumptions:
Passenger vehicle emission factors for scenario year 2012 are used.

The average roundtrip commute for a construction worker =	40	miles
Number of construction days =	240	days
Number of construction workers (daily) =	50	people

Passenger Vehicle Emission Factors for Year 2012 (lbs/mile)

NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
0.00078	0.00080	0.00765	0.00001	0.00009	0.00006	1.10153

Source: South Coast Air Quality Management District. EMFAC 2007 (ver 2.3) On-Road Emissions Factors. Last updated April 24, 2008. Available online: <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>. Accessed 16 November 2011.
Notes:
The SMAQMD 2007 reference lists emission factors for reactive organic gas (ROG). For purposes of this worksheet ROG = VOC.

Construction Commuter Emissions

	NO_x	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	CO_2
lbs	**372.398**	**382.214**	**3674.278**	**5.149**	**43.100**	**27.598**	**528732.190**
tons	**0.186**	**0.191**	**1.837**	**0.003**	**0.022**	**0.014**	**264.366**

Example Calculation: NO_x emissions (lbs) = 40 miles/day * NO_x emission factor (lb/mile) * number of construction days * number of workers

Calculates Air Emissions from an Emergency Generator

Assumptions:
Number of Generators: 1
Generator Power Rating: 200 kilowatts (This is a conservative estimate based on likely power demand.)
Generator Fuel: Diesel

Generator Kilowatts		Conversion from kW to Btu/hr	Engine Btu/hr (Assume 30% efficiency converting mechanical to electrical power)	Engine MMBtu/hr
200		3414.4	2,276,284	2.28

Diesel Industrial Engine Emission Factors from AP-42, Section 3.3	NOx	CO	TOC	PM-10	SO_2	CO_2
	lb/MMBtu	lb/MMBtu	lb/MMBtu	lb/MMBtu	lb/MMBtu	lb/MMBtu
Emission Factor	4.41	0.95	0.36	0.31	0.29	164

Source: USEPA 1996. AP-42. Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines. Table 3.3-1. Page 3.3-6.

Assume max. 500 hrs/yr	NOx	CO	TOC	PM-10	SO_2	CO_2
	(lbs/yr)	(lbs/yr)	(lbs/yr)	(lbs/yr)	(lbs/yr)	(lbs/yr)
Emissions (lbs/yr)	5,019.21	1,081.23	409.73	352.82	330.06	186,655.28

	NOx	CO	TOC	PM-10	SO_2	CO_2
	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)	(tons/yr)
Emissions (tons/yr)	**2.510**	**0.541**	**0.205**	**0.176**	**0.165**	**93.328**

Total Organic Compounds (TOCs) have been used in place of VOCs for this anaylsis
500 hour/year was used as a conservative assumption for generator use. It is equivalent to the USEPA guidance for calculating potential to emit for emergency generators.

APPENDIX C

FORM AD-1006 FARMLAND CONSERVATION IMPACT RATING

Illinois Department of Agriculture

Pat Quinn, Governor
Robert F. Flider, Director

Bureau of Land and Water Resources

State Fairgrounds • P.O. Box 19281 • Springfield, IL 62794-9281 • 217/782-6297 • TDD 217/524-6858 • Fax 217/557-0993

January 24, 2014

Mr. Timothy Didlake
HDR
375 East Elm Street, Suite 110
Conshohocken, Pennsylvania 19428

Re: Scott Air Force Base
New North Gate Entrance – 17.9 acres
St. Clair County, Illinois
U.S. Department of Defense Funds

Dear Mr. Didlake:

The Illinois Department of Agriculture (IDOA) has examined the above-referenced project for its potential impact to agricultural land in order to determine its compliance with the Illinois Farmland Preservation Act (505 ILCS 75/1 et seq.). Our analysis also relates to the federal Farmland Protection Policy Act (7 USC 4201 et seq.) which specifies that federal actions affecting farmland conversion shall be consistent with state and local programs to protect farmland.

The project involves a new, modern vehicle access gate complex to be constructed ±800 ft northwest of the existing Cardinal Creek Gate along the northern boundary of Scott AFB. Designed in conjunction with the Illinois' upcoming construction of the new Rieder Road interchange that will connect Scott AFB with Interstate 64, the gate complex will serve as the primary access point for vehicles via the new interchange.

The new gate complex will be constructed on 17.9 acres of land owned by St. Clair County; it is zoned and planned for Scott Airport Overlay Zone use. The project includes an identification check area with guard booths, a gate house, a truck inspection search office, a cargo transfer facility, and a mobile vehicle and cargo inspection system and a visitor center. Also included are new signage, landscaping, pavements, parking, sidewalks and lighting. Structures to be demolished near the gate complex consist of two former schools/playgrounds/ parking areas and portions of Wherry Road and Scott School Road.

The new gate entrance will be constructed on property owned by St. Clair County. It is zoned and planned for non-ag use as part of the overlay zone for both Scott AFB and MidAmerica Airport. Its development results in the permanent conversion of 17.9 agricultural acres to a non-agricultural use. Because the project site is appropriately zoned for non-ag use by the County and the site secured a low rating through Illinois' Land Evaluation and Site Assessment System, the IDOA has determined the project complies with the Illinois Farmland Preservation Act.

Enclosed are two copies of the USDA Natural Resources Conservation Service Form AD-1006. One copy is to be included in the project's Environmental Assessment; the other is for your files.

Sincerely,

Steven D. Chard, Acting Chief
Bureau of Land and Water Resources

SDC:JL
Enclosures - 2
cc: Cameron Stine, St. Clair County SWCD: Agency project file

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 11/1/13
Name Of Project Gate complex construction at Scott AFB	Federal Agency Involved US Air Force - Scott AFB
Proposed Land Use Administrative	County And State St. Clair County, IL
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 11/4/12

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply – do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated N/A	Average Farm Size 372
Major Crop(s) Corn, soybeans, wheat, hay	Farmable Land In Govt. Jurisdiction Acres: 29,633,500 % 97		Amount Of Farmland As Defined in FPPA Acres: 27,695,900 % 91	
Name Of Land Evaluation System Used Illinois	Name Of Local Site Assessment System Statewide		Date Land Evaluation Returned By NRCS 1/3/14	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	17.9			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	17.9	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	5.7			
B. Total Acres Statewide And Local Important Farmland	12.2			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	50.7			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	80	0	0	0
PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points			
1. Area In Nonurban Use				
2. Perimeter In Nonurban Use				
3. Percent Of Site Being Farmed				
4. Protection Provided By State And Local Governme				
5. Distance From Urban Builtup Area				
6. Distance To Urban Support Services				
7. Size Of Present Farm Unit Compared To Average				
8. Creation Of Nonfarmable Farmland				
9. Availability Of Farm Support Services				
10. On-Farm Investments				
11. Effects Of Conversion On Farm Support Services				
12. Compatibility With Existing Agricultural Use				
TOTAL SITE ASSESSMENT POINTS	160	0	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland *(From Part V)*	100	80	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	300 280	89%	0	0
TOTAL POINTS *(Total of above 2 lines)*	300 280	80 176	0	0

See the attached
Illinois LESA System
Site Assessment **Site Specific** Factors

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ■

Reason For Selection:

(See Instructions on reverse side)

This form was electronically produced by National Production Services Staff

Form AD-1006 (10-83)

Scott Air Force Base
St. Clair County, Illinois
Department of Defense Funds

PART VI-A **Illinois Site Assessment Criteria**	**Maximum Points**	**Site A**
1. Land Use on the Site	20	20
2. Adjacent Land Use	20	12
3. General Character of Area within 1.5 Miles of Site	20	10
4. Distance to City	20	8
5. Zoned Use of Proposed Site	20	0
6. Zoned Use of Land Adjacent to Proposed Site	20	0
7. Planned Land Use of Proposed Site	20	20
8. Compatibility of Proposed Use with Surrounding Land Uses	20	10
9. Alternative Sites Proposed on Less Productive Land	10	10
10. Availability of Central Water System	10	1
11. Availability of Central Waste Disposal System (Sewer)	10	1
12. Transportation	10	4
TOTAL SITE ASSESSMENT POINTS	**200**	**96**
PART VII		
Relative Value of Farmland	100	80
Total Site Assessment	200	96
TOTAL ILLINOIS LESA POINTS	**300**	**176**

* *The Illinois LESA System applies the **225 point cutoff** when evaluating state and federally funded projects. Site or Corridor alternatives receiving **175 or fewer points** have a **low rating** for protection, and it is not necessary to evaluate additional alternatives. Those alternatives receiving **176 to 225 points** are in the **moderate range** for protection. In most cases, alternatives **exceeding the 225 point level should be retained for agricultural use**, and an alternate site should be utilized for the intended project. Selecting the alternative with the lowest total points will usually protect the best farmland located in the most agriculturally viable areas. LESA also serves to maintain and promote the agricultural industry in Illinois.*

JL

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APPENDIX D

DOCUMENTATION OF SHPO CONSULTATION ON ARCHAEOLOGICAL SITE 11S1016

Letter to the SHPO regarding Archaeological Site 11S1016

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 375TH AIR MOBILITY WING (AMC)

10 Dec 2013

Department of the Air Force
375 CES/CEIEC
701 Hangar Road – Building 531
Scott AFB, IL 62225-5035

Ms. Anne Haaker and Mr. Joe Phillippe
Illinois Historical Preservation Agency
#1 Old State Capitol Plaza
Springfield, IL 62701-1507

Re: IHPA Log #010072513, Scott Air Force Base Cardinal Creek Gate Expansion

Dear Ms. Haaker and Mr. Phillippe:

Thank you for your comments on August 12, 2013 regarding the proposed Cardinal Creek Gate construction project at Scott Air Force Base. This letter and its enclosures are intended to address those comments and allow for a Finding of No Significant Impact for the project's environmental assessment.

Under the Proposed Action, the two former schools on Scott School Road, just to the north of Wherry Road, would be demolished. According to a 1998 Phase I and Phase II Environmental Site Assessment (Aronberg 1998), the south school was built in 1953 and expanded in 1956 (see Figure 1 and Figure 2), and the north school was built in 1968 and expanded in 1986 (see Figure 3 and Figure 4). The two former school buildings and other standing structures in and near the Area of Potential Effect were evaluated in 2012 by the Illinois State Archaeological Survey and found to be ineligible for listing on the NRHP (Koldehoff 2013). This finding received SHPO concurrence in January 2013. The demolition of the two schools, therefore, is not anticipated to represent an adverse effect to historic structures.

The area that Scott AFB proposes to acquire to construct the proposed gate complex includes six archaeological sites; only one of which (i.e., Site 11S1016) was found eligible for listing on the NRHP by the Illinois State Archaeological Survey (Koldehoff 2013) (see Figure 5). This site is approximately 125 feet southwest of the construction footprint (see Figure 6); therefore, construction of the gate is anticipated to have no adverse effects to the site. Prior correspondence with your office regarding this project showed the gate complex as covering a portion of Site 11S1016. Those depictions did not consider environmental or engineering considerations, and Scott AFB has subsequently adjusted the gate complex construction footprint to avoid Site 11S1016. This modified location will be used for all future version of the environmental assessment.

Lastly, I want to let you know that since our last correspondence, I have replaced Cindy Nolan as point-of-contact for cultural resources issues at Scott Air Force Base. All future correspondences should be directed to me at the address above. If you should have any questions or concerns, please feel free to contact me at keith.brumley@us.af.mil or at (618) 256-2167.

Sincerely,

KEITH J BRUMLEY
Cultural Resources Manager

Enclosures: 6 figures

ENABLING RAPID GLOBAL MOBILITY

Figure 1. South school, built in 1953, view northeast from Scott School Road.

Figure 2. South school, view southeast from Scott School Road.

Figure 3. North school, built in 1968, view to northeast from Scott School Road.

Figure 4. North school, view to southeast from Scott School Road.

* Figures 5 and 6 of the SHPO letter have been removed from the EA for sensitivity purposes.

Response from the SHPO regarding the letter sent on 10 December 2013

Illinois Historic Preservation Agency

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

St. Clair County
Scott Air Force Base
North and South Schools on West side of Scott School Road, Pryor Dr. and Wherry Road
USAF
Demolition and New Construction of New Vehicle Access Gate Complex

PLEASE REFER TO: IHPA LOG #010072513

December 19, 2013

Keith Brumley
Scott Air Force Base
Building 531
701 Hangar Road
Scott AFB, IL 62225

Dear Mr. Brumley:

Thank you for requesting comments from our office concerning the possible effects of the referenced project on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

Our staff has reviewed the specifications and assessed the impact of the project as submitted by your office. We have determined, with the following conditions, that this project, as proposed, will have no adverse effect on any Historic Properties.

1. The gate will stay approximately 128 feet away from site 11S1016 and we will be provided with final plans to confirm this.

If you have further questions, please contact Joe Phillippe at 217/785-1279.

Sincerely,

Anne E. Haaker

Anne E. Haaker
Deputy State Historic
Preservation Officer

AEH:JSP

A teletypewriter for the speech/hearing impaired is available at 217-524-7128. It is not a voice or fax line.

¬ *continued from inside of front cover*

mg/m^3	milligrams per cubic meter
mgd	million gallons per day
MID	mid-afternoon
MVACIS	mobile vehicle and cargo inspection system
MWD	military working dog
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NO_2	nitrogen dioxide
NOA	Notice of Availability
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
O_3	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyls
percent g	force of gravity
PM	evening
PM_{10}	particulate matter equal to or less than 10 microns in diameter
$PM_{2.5}$	particulate matter equal to or less than 2.5 microns in diameter
POV	privately owned vehicles
ppb	parts per billion
ppm	parts per million
PSD	Prevention of Significant Deterioration
QD	quantity-distance
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SAAQS	State Ambient Air Quality Standards
SDDCTEA	Surface Deployment and Distribution Command Transportation and Engineering Agency
SDWA	Safe Drinking Water Act
SHPO	State Historical Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
SPCC	spill prevention, control, and countermeasure
SSPP	Strategic Sustainability Performance Plan
SWPPP	Storm Water Pollution Prevention Plan
tbd	to be determined
tpy	tons per year
TSCA	Toxic Substances Control Act
U.S.C.	United States Code
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
VOC	volatile organic compound
WWTP	wastewater treatment plant