Final

Youngstown Air Reserve Station
Vienna, Ohio

Environmental Assessment of the Construction of a New Entry Control Complex

June 2019

Prepared for:

Executive Summary

This environmental assessment (EA) was developed to evaluate the impacts of constructing a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, Ohio. The new Main Gate would include a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. This EA was prepared to evaluate the potential environmental consequences of the Proposed Action and alternatives in accordance with provisions of Title 32, *Code of Federal Regulations* (CFR), Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality's National Environmental Policy Act [NEPA] implementing regulations).

ES.1 Purpose and Need

The purpose of the Proposed Action is to provide a new permanent Main Gate for YARS that would accommodate the current mission and meet prescribed antiterrorism/force protection standards under the U.S. Department of Defense's Unified Facilities Criteria and Air Force Instruction (AFI) 10-245, *Antiterrorism*. The existing gate does not meet these standards, creating an increased security risk to the installation.

ES.2 Proposed Action

The Proposed Action includes the construction of a new Main Gate for YARS. The new Main Gate would serve as the primary means of ingress and egress for installation personnel and would serve limited commercial traffic. The proposed Main Gate would consist of a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, sidewalks, fencing, signage, parking, vehicle barrier systems, landscaping, and all associated infrastructure. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. Following construction, the existing gate/main entrance area would be closed (U.S. Air Force Reserve Command [AFRC], 2018).

The proposed project footprint would be approximately 5.6 acres in size, including an inspection bay approximately 3,475 square feet (sq. ft.) in size, a gate house approximately 190 sq. ft. in size, an overwatch facility approximately 50 sq. ft. in size, and a visitor center approximately 1,535 sq. ft. in size.

ES.3 Alternatives

ES.3.1 Alternatives Considered in Detail

Preferred Alternative

Alternative 1, the U.S. Air Force's (USAF's) Preferred Alternative, would involve the construction of the new Main Gate on a privately owned 42.35-acre parcel adjacent to and east of the existing main entrance. The USAF would acquire the land prior to construction. A new four-lane asphalt road with a divided median would be constructed from King Graves Road to the proposed gate house and then narrow to two lanes and intersect with Herriman/Twining Road. An existing segment of Perimeter Road would be removed during the reconfiguration of the entrance road. Perimeter Road would intersect the new entrance road north of the intersection with Herriman/Twining Road. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. During construction, additional areas within the parcel would be used for laydown and temporary construction vehicle access. King Graves Road would be widened to include two new turn lanes for traffic turning into the Main Gate from both directions along King Graves Road.

No Action Alternative

The No Action Alternative represents baseline conditions, which are used for comparison to future conditions that would exist under the Proposed Action. Under the No Action Alternative, the Proposed Action would not be implemented. A new Main Gate would not be constructed, and the existing gate, which does not meet current antiterrorism/force protection requirements, would continue to operate. This could result in a significant impact on the safety of those at YARS and within its vicinity.

ES.3.2 Alternatives Considered but Eliminated

Redesign and renovation of the existing main gate is not a viable option because the area lacks sufficient space for the expansion of facilities to meet current antiterrorism/force protection standards. Moving the gate farther south onto YARS is also not a viable option because there are buildings and infrastructure inside the existing main gate.

YARS considered constructing the new Main Gate along State Route 193, at the southeastern corner of the installation, east of the YARS firefighting training area. This land is privately owned and would require the owner to terminate existing leases on portions of the land prior to sale of the property to the USAF. There are residential structures, a small pond, and wetlands on the property. This alternative was eliminated due to site constraints that limit design flexibility for accommodating both privately owned vehicle traffic and commercial traffic. YARS could consider this site for an alternate gate in the future, which could be used as a secondary entrance to the installation, or to segregate privately-owned vehicle traffic from commercial traffic.

ES. 4 Summary of Environmental Consequences and Conservation Measures

This EA contains a comprehensive evaluation of the existing conditions and environmental consequences of implementing the Preferred Alternative and the No Action Alternative, as required by NEPA. Table ES-1 summarizes the impacts of the Preferred Alternative and No Action Alternative. An explanation of the impact terminology used in Table ES-1 is provided in Section 4, *Environmental Consequences*.

Table ES-1. Summary of Environmental Impacts for the Preferred Alternative and the No Action Alternative

Impact Category	Preferred Alternative Degree of Impact			No Action Alternative Degree of Impact			EA Section Where Details are Discussed
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Geologic Resources			X			X	Section 3.1.1
Topography		X				X	Section 3.1.2
Floodplains			X			X	Section 3.1.3
Wetlands			X			X	Section 3.1.4
Coastal Resources			X			X	Section 3.1.5
Utilities and Infrastructure		X				X	Section 3.1.6
Airspace			X			X	Section 3.1.7
Socioeconomics		X				X	Section 3.1.8
Environmental Justice			X			X	Section 3.1.9
Protection of Children			X			X	Section 3.1.10

Table ES-1. Summary of Environmental Impacts for the Preferred Alternative and the No Action Alternative

Impact Category	Preferred Alternative Degree of Impact			No Action Alternative Degree of Impact			EA Section Where Details are Discussed
	Significant	Insignificant	No Impact	Significant	Insignificant	No Impact	
Land Use		X				X	Sections 3.2.1 and 4.1.1
Soils		X				X	Sections 3.2.2 and 4.1.2
Water Resources		X				X	Sections 3.2.3 and 4.1.3
Biological Resources		X				X	Sections 3.2.4 and 4.1.4
Air Quality		X				X	Sections 3.2.5 and 4.1.5
Cultural Resources			X			X	Sections 3.2.6 and 4.1.6
Noise		X				X	Sections 3.2.7 and 4.1.7
Hazardous Materials and Solid Waste		X				X	Sections 3.2.8 and 4.1.8
Aesthetic and Visual Resources		X				X	Sections 3.2.9 and 4.1.9
Traffic and Transportation		X				X	Sections 3.2.10 and 4.1.10
Safety and Occupational Health		X		X			Sections 3.2.11 and 4.1.11

The following conservation measures would be implemented under the Preferred Alternative.

- Best management practices (BMPs) to reduce impacts from stormwater runoff would be used. These could include reseeding disturbed areas, incorporating low-maintenance plant species, installing sediment fencing, applying water to disturbed soil, and limiting soil disturbance only to areas where the construction is proposed. Detention basins would be incorporated into the design to manage large quantities of stormwater. An erosion and sedimentation pollution control plan would be developed in accordance with the stormwater management requirements of Trumbull County and the Ohio Environmental Protection Agency.
- BMPs to reduce impacts on air quality would be used, including applying water to, or using other stabilization measures on, areas of bare soil or soil piles; creating wind breaks; and covering dump trucks that transport materials that could become airborne.
- Contractors would maintain construction equipment in accordance with manufacturers' specifications to keep unnecessary noise impacts and air emissions to a minimum.
- If contaminated groundwater or soils were encountered during construction activities, the handling, storage, transportation, and disposal activities would be conducted in accordance with applicable federal, state, and local regulations, AFIs, and YARS management procedures.
- Construction would primarily occur on weekdays during daylight hours. Construction may also occur occasionally during daylight hours on weekends.
- Temporary fencing would be installed around the construction site to prevent unauthorized access to the active construction zone.
- Clearing of trees greater than 3 inches diameter at breast height would only be conducted between October 1 and March 31 to avoid impacts on the Indiana and northern long-eared bats.
- If any unanticipated discoveries of archaeological resources or cultural items occur, work would be temporarily halted at the discovery site until the appropriate notifications and consultations were

completed and procedures in place to minimize adverse effects and/or render disposition of cultural items.

- During construction, signs would be placed on King Graves Road to alert drivers to changes in traffic patterns and trucks entering and exiting the road.

ES.5 Public and Stakeholder Involvement

The NEPA process is designed to inform the public of the potential environmental consequences of the Proposed Action and involve them in the federal decision-making process. The Intergovernmental Coordination Act and Executive Order 12372, "Intergovernmental Review of Federal Programs," require federal agencies to cooperate with and consider state and local laws when implementing federal actions. Formal notification and opportunities for public participation, as well as informal coordination with government agencies and planners, are incorporated into the EA process. Section 5.2 of this EA contains a list of the federal, state, and local agencies that were invited to review and comment on the draft final EA and the draft final Finding of No Significant Impact (FONSI).

The draft final EA and draft final FONSI were made available to the public for review and comment for a period of 30 days. The public notice was published in the *Tribune Chronicle* and *Vindicator* newspapers. The draft final EA and draft final FONSI were made available at the Cortland Branch and the Howland Branch libraries, and on the internet at https://www.youngstown.afrc.af.mil/About/Public-Notice.

ES.6 Conclusion/Recommendation

Based on the findings of this EA, there would be no significant impact resulting from the Proposed Action's Preferred Alternative. A FONSI was prepared to accompany this EA, which concludes that preparation of an environmental impact statement is not required for this Proposed Action.

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Acronyms and Abbreviations

°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
910 AW	910th Airlift Wing
ACAM	Air Conformity Applicability Model
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AFRC	U.S. Air Force Reserve Command
APE	Area of Potential Effects
BLS	U.S. Bureau of Labor and Statistics
BMP	best management practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	*Code of Federal Regulations*
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRCP	Cultural Resources Contingency Plan
CWA	Clean Water Act
dB	decibel
dbh	diameter at breast height
DoD	U.S. Department of Defense
EA	environmental assessment
EBS	environmental baseline study
EIAP	Environmental Impact Analysis Process
EIS	environmental impact statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONPA	finding of no practicable alternative
FONSI	finding of no significant impact
FY	fiscal year
GHG	greenhouse gas
IPaC	Information, Planning, and Consultation

Jacobs	Jacobs Engineering Group Inc.
MBTA	Migratory Bird Treaty Act
MDNR	Minnesota Department of Natural Resources
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
ODJFS	Ohio Department of Job and Family Services
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
pCi/L	picocuries per liter of air
PM_{10}	particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 micrometers in diameter
ppm	parts per million
PSD	Prevention of Significant Deterioration
RONA	Record of Non-Applicability
SFS	Security Forces Squadron
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
sq. ft.	square feet
SR	State Route
TCPC	Trumbull County Planning Commission
UFC	Unified Facilities Criteria
U.S.C.	*United States Code*
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGCRP	U.S. Global Change Research Program
YARS	Youngstown Air Reserve Station

1. Introduction

This environmental assessment (EA) was developed to evaluate the impacts of constructing a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, Ohio. The new Main Gate would include a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. This EA was prepared to evaluate the potential environmental consequences of the Proposed Action and alternatives, in accordance with provisions of Title 32, *Code of Federal Regulations* (CFR), Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality [CEQ]'s National Environmental Policy Act [NEPA] implementing regulations).

1.1 Background

YARS occupies 321 acres of land in Trumbull County, Ohio, approximately 12 miles north of the City of Youngstown, Ohio and within Vienna Township (Figure 1-1). State Route (SR) 193, which leads into Youngstown, borders the east side of the installation. King Graves Road is to the north and SR 11 is approximately 0.75-mile to the west. The Youngstown-Warren Regional Airport borders the installation to the south and shares its runway with YARS.

YARS is home to the 910th Airlift Wing (910 AW) of the U.S. Air Force Reserve Command (AFRC). The 910 AW operates and maintains nine Lockheed C-130 transport and cargo aircraft. The wartime mission of the 910 AW is to provide tactical airlift support, including low-level infiltration, where aircrews deliver personnel and materials by airdrop and air-land techniques. The 910 AW is also responsible for operating and maintaining the U.S. Department of Defense (DoD)'s only large-area, fixed-wing aerial spray capability. This spray capability is used to control disease-carrying insects, pest insects, and undesirable vegetation, and to disperse oil spills in large bodies of water. Eight of the nine C-130 aircraft have been modified to transport the modular aerial spray system. During peacetime, the 910 AW is tasked with training and equipping reservists and assigned personnel to maintain readiness.

The 910 AW operates the installation and furnishes services and support to military personnel, civilian staff, family members, and the surrounding community. The major tenant organizations hosted by the 910 AW are the Navy Operational Support Center and Detachment 3, Maintenance Company, Combat Logistics Battalion 453 of the U.S. Marine Corps (U.S. Air Force [USAF], 2018).

1.2 Purpose and Need

The purpose of the Proposed Action is to provide a new permanent Main Gate for YARS that would accommodate the current mission and meet prescribed antiterrorism/force protection standards under DoD's Unified Facilities Criteria (UFC) and Air Force Instruction (AFI) 10-245, *Antiterrorism*. The existing gate does not meet these standards, creating an increased security risk to the installation.

1.3 Relevant Plans, Laws, and Regulations

A decision on whether to proceed with the Proposed Action depends on numerous factors, including mission requirements, regulatory requirements, and environmental considerations. In addressing environmental considerations, AFRC and YARS are guided by relevant statutes (and their regulations for implementation) and Executive Orders (EOs) that establish standards and provide guidance on environmental and natural resources management and planning.

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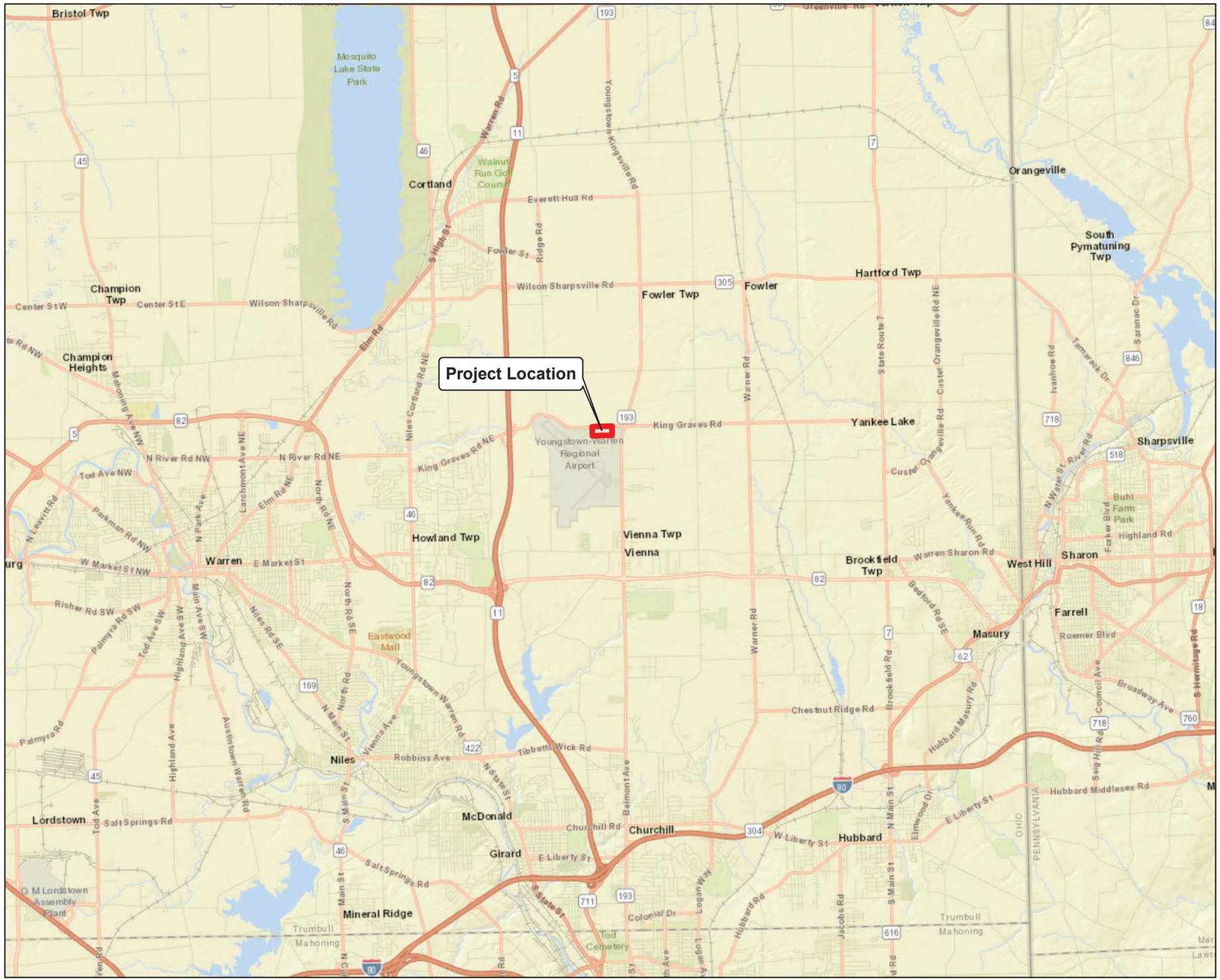

Figure 1-1.
General Location
Youngstown Air Reserve Station
Vienna, Ohio

1.4 Summary of Key Environmental Compliance Requirements

1.4.1 National Environmental Policy Act

NEPA (42 *United States Code* [U.S.C.] Sections 4321 through 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 decision makers make well-informed decisions, based on understandings of the potential environmental consequences, and take actions to protect, restore, or enhance the environment. NEPA established the CEQ, which was charged with developing and 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 analyses. This approach also requires federal agencies to use an interdisciplinary and systematic approach in their decision-making processes. The approach evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action.

The process for implementing NEPA is codified in 40 CFR Parts 1500 through 1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*. The CEQ was established to implement and oversee federal policy in this process. The CEQ regulations specify that an EA must 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. The EA can aid in an agency's compliance with NEPA when an EIS is unnecessary and facilitate the 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 its Environmental Impact Analysis Process (EIAP), 32 CFR Part 989, as amended.

1.4.2 Integration of Other Environmental Statutes and Regulations

To comply with NEPA, the planning and decision-making 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 decision maker 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" (40 CFR §1500.2 [c]).

Applicable federal statutes include the Clean Water Act (CWA), Clean Air Act (CAA), Coastal Zone Management Act, Fish and Wildlife Coordination Act of 1958, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Safe Drinking Water Act, Resource Conservation and Recovery Act, Migratory Bird Treaty Act of 1918 (MBTA), Migratory Bird Conservation Act, and the Water Resource Development Act. The NEPA analysis also considers compliance with EOs related to protection of wetlands, environmental justice, and management of floodplains and invasive species.

The CAA establishes federal policy to protect and enhance the quality of air resources to protect human health and the environment. The CAA requires that adequate steps be implemented to control the release of air pollutants and prevent significant deterioration of air quality. The Ohio Environmental Protection Agency (OEPA) has authority for compliance with the CAA.

The CWA of 1977 (33 U.S.C. §1344) and the Water Quality Act of 1987 (33 U.S.C. §1251, as amended) establish federal policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters and, where attainable, to achieve a level of water quality that provides for the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water. OEPA has authority for compliance with the CWA. OEPA regulations require that nonpoint source stormwater discharges related to the Proposed Action or alternatives comply with the requirements of a National Pollutant Discharge

Elimination System permit, including a stormwater pollution prevention plan detailing site-specific best management practices (BMPs). Section 404 of the CWA requires specific permitting for dredging and/or filling of wetlands. This portion of the Act is administered by the U.S. Army Corps of Engineers (USACE) with U.S. Environmental Protection Agency (EPA) oversight. Section 401 of the CWA requires certification of water quality for Section 404 discharges. OEPA administers the Section 401 program. However, a USACE CWA Section 404 permit for dredge and fill activities within waters of the United States is not anticipated for the Proposed Action. In addition to CWA requirements, USAF actions must comply with EO 11990, "Protection of Wetlands," and EO 11988, "Floodplain Management." When one or both of the above EOs apply, a finding of no practicable alternative (FONPA) must be completed if it is determined that there is no practicable alternative to implementing an action that would impact the wetland or floodplain. The FONPA finding is based on the NEPA analysis and documented in the NEPA decision document.

The ESA of 1973 (16 U.S.C. §1531) requires that federal agencies, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service, use their authority to assist in carrying out federal programs for the conservation of threatened or endangered species. These agencies also ensure that any project that is funded, authorized, or constructed by the federal government is not likely to jeopardize the continued existence of such threatened or endangered species, or result in the destruction or adverse modification of their habitat. Animals with a state designation of endangered, threatened, or of special concern are granted legal protection by the State of Ohio (Ohio Revised Code §1531.25). The USFWS was consulted regarding the potential for the Preferred Alternative to affect protected species or their habitats, and concurred with the USAF's determination that the project, as proposed, is not likely to adversely affect any federally listed species. The Ohio Department of Natural Resources (ODNR) requested a copy of the draft final EA for review.

Actions that could affect cultural resources are regulated under Section 106 of the NHPA of 1966 and the Advisory Council on Historic Preservation Regulations for compliance with Section 106, codified as 36 CFR 800. These regulations require that the effects of federal actions on cultural resources be considered and minimized. The State Historic Preservation Office (SHPO) regulates the preservation of cultural resources in Ohio and was consulted regarding potential cultural resources that could be affected by the Preferred Alternative. In a letter dated April 3, 2019, the SHPO determined that the undertaking would not affect properties listed or eligible for listing on the National Register of Historic Places (NRHP). Additionally, 14 federally recognized tribes that have ancestral ties to lands in northeastern Ohio were consulted, in accordance with Ohio SHPO's recommendation, under Section 106. These tribes are the Delaware Nation, Delaware Tribe of Indians, Miami Tribe of Oklahoma, Ottawa Tribe of Oklahoma, Wyandotte Nation, Cayuga Nation, Oneida Nation of New York, Oneida Nation of Wisconsin, Onondaga Nation, St. Regis Mohawk Tribe, Seneca Nation of Indians, Seneca-Cayuga Nation, Tonawanda Seneca Nation, and Tuscarora Nation. A response was received from the Delaware Nation requesting that work be halted, and the tribe notified immediately if archaeological sites or artifacts are discovered during construction.

1.4.3 Interagency Coordination and Public Involvement

NEPA ensures that environmental information is made available to the public during the decision-making process and prior to actions being taken. The premise of NEPA is that the quality of federal decisions will be enhanced if the proponents provide information on their actions to state and local governments and the public and involve these entities 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.

The SHPO, USFWS, OEPA, ODNR, EPA, Western Reserve Port Authority, Vienna Township, Trumbull County, Natural Resources Conservation Service (NRCS), and 14 federally recognized tribes were contacted during development of this EA to identify if they have issues relevant to the Proposed Action. Information provided has been incorporated into the EA. Copies of coordination and consultation letters are presented in Appendix A.

A notice was published in the *Tribune Chronicle* and *Vindicator* newspapers on February 15 and 16, 2019 to inform the public of the preparation of this EA. A notice of the availability of the draft final EA was published on April 26 and 27, 2019, to initiate the 30-day public review period for the draft final EA. Copies of the public notices are presented in Appendix B. No public or agency comments were received during the 30-day review period.

2. Description of Proposed Action and Alternatives

2.1 Proposed Action

The Proposed Action includes the construction of a new Main Gate for YARS. The new Main Gate would serve as the primary means of ingress and egress for installation personnel and would serve limited commercial traffic. The proposed Main Gate would consist of a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, sidewalks, fencing, signage, parking, vehicle barrier systems, landscaping, and all associated infrastructure. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. Following construction, the existing gate/main entrance area would be closed (AFRC, 2018).

Structures and features constructed as part of the new Main Gate would be designed to complement each other as well as match the existing architecture on YARS for consistency in appearance. The project would comply with antiterrorism/force protection requirements per DoD's UFC and AFI 10-245. Facilities would have sustainable principles, including Life Cycle cost-effective practices, that would be integrated into the design, development, and construction of the project in accordance with the Energy Policy Act (EPAct) of 2005, EOs 13423 and 13514, and other applicable laws and EOs.

The proposed project footprint would be approximately 5.6 acres in size, including an inspection bay approximately 3,475 square feet (sq. ft.) in size, a gate house approximately 190 sq. ft. in size, an overwatch facility approximately 50 sq. ft. in size, and a visitor center approximately 1,535 sq. ft. in size.

2.2 Alternatives

CEQ regulations require that all reasonable alternatives be evaluated under NEPA. Alternatives may be eliminated from detailed analysis in a NEPA document based on their infeasibility and operational constraints, technical constraints, or substantially greater environmental impacts relative to other alternatives under consideration. For this EA, only the Preferred Alternative and the No Action Alternative were analyzed. Because of the constraints of internal development at YARS and the adjacent Youngstown-Warren Regional Airport, no other alternatives were identified as feasible for the construction of a new Main Gate.

2.2.1 Alternatives Considered in Detail

2.2.1.1 Alternative 1 – Preferred Alternative

Alternative 1, the USAF's Preferred Alternative, would involve construction of the new Main Gate on a privately owned 42.35-acre parcel adjacent to and east of the existing main entrance (Figure 2-1). The USAF would acquire the land prior to construction. A new four-lane asphalt road with a divided median would be constructed from King Graves Road to the proposed gate house and then narrow to two lanes and intersect with Herriman/Twining Road. An existing segment of Perimeter Road would be removed during the reconfiguration of the entrance road. Perimeter Road would intersect the new entrance road north of the intersection with Herriman/Twining Road. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. During construction, additional areas within the parcel would be used for laydown and temporary construction vehicle access. King Graves Road would be widened to include two new turn lanes for traffic turning into the Main Gate from both directions along King Graves Road.

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The No Action Alternative represents baseline conditions, which are used for comparison to future conditions that would exist under the Proposed Action. Under the No Action Alternative, the Proposed Action would not be implemented. A new Main Gate would not be constructed and the existing gate,

which does not meet current antiterrorism/force protection requirements, would continue to operate. This could result in a significant impact on the safety of those at YARS and within its vicinity.

2.2.2 Alternatives Considered but Eliminated from Further Consideration

Redesign and renovation of the existing Main Gate is not a viable option because the area lacks sufficient space for expansion of facilities to meet current antiterrorism/force protection standards. Moving the gate farther south onto YARS is also not a viable option because there are buildings and infrastructure inside the existing main gate.

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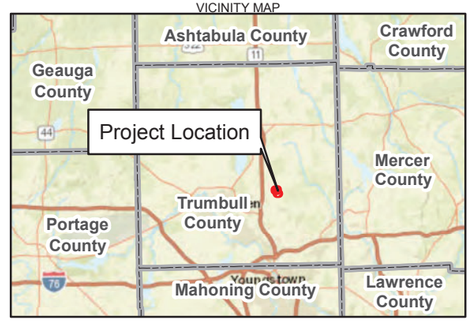

LEGEND

- Parcel Boundary
- Proposed Main Gate Approximate Project Area
- Proposed Approximate Detention Bansin

BASE MAP SOURCE:
ESRI, World Topographic online mapping

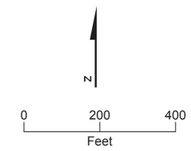

Figure 2-1.
Proposed Main Gate Project Area
Youngstown Air Reserve Station
Vienna, Ohio

3. Existing Environmental Conditions

3.1 Resources Eliminated from Further Consideration

3.1.1 Geologic Resources

YARS is within the Glaciated Appalachian Plateau region of Ohio. Primary bedrock in this area is interbedded shales and sandstones of the Middle Pennsylvania Allegheny Formation. Primary rock type is shale with secondary types including siltstone, sandstone, and limestone (AFRC, 2017). The Preferred Alternative would result in no impacts on geologic formations because construction of the Main Gate would require minimal grading and there would be no disturbance to underlying geologic formations.

3.1.2 Topography

Terrain in the Glaciated Appalachian Plateau region is characterized by smoothly rolling hills and broad, flat valleys. The topography within the parcel ranges from 1,187 feet above mean sea level to approximately 1,205 feet above mean sea level. The lowest point is in the northeastern corner and the highest is in the southcentral portion of the parcel (AFRC, 2017). The Preferred Alternative would result in negligible impacts on topography because the portion of the parcel where the new Main Gate would be constructed is relatively level and would require minimal grading.

3.1.3 Floodplains

The parcel is within an area mapped by the Federal Emergency Management Agency (FEMA) as being an “area of minimal flood hazard” (FEMA, 2019). The Preferred Alternative would result in no impacts on floodplains because the parcel is not within a 100-year or 500-year floodplain.

3.1.4 Wetlands

A wetland delineation of the 42-acre parcel was conducted in November 2018 (AFRC, 2019). Wetlands were identified in the woodlot and adjacent fallow agricultural fields. The majority of the parcel is fallow agricultural land dominated by upland vegetation with no indication of wetland hydrology. There is a small secondary growth woodlot on the southern part of the parcel adjacent to the YARS fence that contains no wetland areas. There is a larger woodlot in the northcentral portion of the parcel that contains both wetlands and upland areas. Representatives of the USACE Pittsburgh District Regulatory Branch and the OEPA conducted a site visit on April 11, 2019 and confirmed that wetlands are not present within the area proposed for construction of the new Main Gate (Appendix A). The Preferred Alternative would result in no direct or indirect impacts on wetlands because construction of the Main Gate would be to the west of the wetlands in the woodlot and fallow agricultural field, and stormwater from the Main Gate area would not be discharged into the wetlands.

3.1.5 Coastal Resources

Under the requirements and guidance of the Coastal Zone Management Act of 1972, as amended, federal actions that would occur within, or that would directly affect, a coastal zone of a state having an approved state Coastal Zone Management Plan must determine if, and to what extent, coastal zones will be impacted.

According to the ODNR Office of Coastal Management, Trumbull County is not included in a coastal management area. Based on the mapping files provided through the ODNR website and coastal management guidance documents, YARS is approximately 35 miles from the Lake Erie coastal zone (ODNR, 2019). Therefore, no direct or significant impacts on coastal resources would result from the Preferred Alternative, and the resource is not considered further in this EA.

3.1.6 Utilities and Infrastructure

Utility use at the proposed Main Gate would be similar to that of the existing main gate. Once the proposed Main Gate is operational, the existing main gate would be closed and most of the utility use at that gate would likely end, with the exception of electricity for outdoor and boundary fence lighting.

The heating and cooling system would be energy-efficient in accordance with ASHRAE 90.1-2016. Low-flow-type water fixtures and an instantaneous water heater would be used in the visitor center, the vehicle inspection facility, and the central delivery pickup area. Low-flow-type water fixtures are currently used in the existing main gate facilities; however, instantaneous water heaters are not. Therefore, the Preferred Alternative would result in negligible, long-term, direct beneficial impacts on utility use from the introduction of more energy-efficient systems and water-saving techniques.

New utility infrastructure would be constructed as part of the proposed Main Gate. Extension of utilities to the parcel would not result in outages or interruptions of service to adjacent owners or other users. Trumbull County provides water and wastewater service to the area. Domestic water would be obtained from the 8-inch water main along Perimeter Road. Sanitary sewer waste would be connected to the existing sanitary sewer system. Electricity would be provided through Ohio Edison via a substation west of the site along King Graves Road. Natural gas would be provided by Dominion Energy and would be obtained from the existing 6-inch main along Perimeter Road (AFRC, 2018). The Preferred Alternative would result in changes to the existing utility infrastructure but would not increase utility usage or negatively affect the existing distribution system.

3.1.7 Airspace

The Preferred Alternative would not result in a change in airspace configuration or usage. For this reason, airspace is not a resource considered further in this EA.

3.1.8 Socioeconomics

The unemployment rate for December 2018 in Trumbull County was 6.6 percent, which is higher than Ohio's state-wide unemployment rate of 4.8 percent (Ohio Department of Job and Family Services [ODJFS], 2019) and the national average of 3.9 percent (U.S. Bureau of Labor and Statistics [BLS], 2019). Implementation of the Preferred Alternative would have negligible, short-term, direct, beneficial impacts on the local economy during construction. Impacts would be beneficial because local labor and materials could potentially be used for construction of the new Main Gate. These impacts would be short-term and minor because of the limited duration and scope of construction activities. Negligible, short-term, indirect, beneficial impacts would be expected during construction as a result of incidental spending in the local area by construction workers employed by private construction contractors.

No permanent jobs would be generated, and no new personnel would come to YARS as part of the Preferred Alternative. There would be no change in the local economy once construction is complete as compared to existing conditions. Therefore, socioeconomic resources are not considered further in this EA.

3.1.9 Environmental Justice

EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires federal agencies to consider disproportionately high adverse effects on the human or environmental health to minority and low-income populations resulting from implementation of a proposed action.

According to the U.S. Census Bureau's (USCB) 2018 estimates for Trumbull County, 87.2 percent of residents are reported to be "white alone, not Hispanic or Latino," and the county has a poverty rate of 14 percent (USCB, 2018). The Preferred Alternative would take place on property used for agricultural purposes adjacent to the existing gate. Low-income and minority populations would not be impacted because the Preferred Alternative would not result in housing relocations, significant changes in

employment opportunities, or disproportionate environmental health or safety risks to minority or low-income populations in the vicinity of YARS. Therefore, environmental justice is not analyzed further in this EA.

3.1.10 Protection of Children

EO 13045, "Protection of Children from Environmental Health Risks and Safety Risks," states that each federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

Implementation of the Preferred Alternative would not result in environmental health or safety risks that would affect children. The nearest schools are Currie Elementary School (3.2 miles northwest), Old Neal Middle School (3.3 miles northeast), and Mathews Local School (3.4 miles southeast). There are no residences within the project area. The nearest residences are located within 0.3-mile of the proposed new Main Gate, north and northwest of YARS along King Graves Road; however, it is not known whether children reside in these homes. Access to construction areas would be controlled, thereby limiting unauthorized access by any person, including children. Because there would be no health or safety risks to children, protection of children is not considered further in the EA.

3.2 Resources Considered in Detail

3.2.1 Land Use

3.2.1.1 Definition of Resource

Land use classifications characterize the natural and/or human activities that occur at, or are planned for, a given location. Natural land uses include open grassland, forest, open water, or other undeveloped areas. Developed land uses generally are classified as residential, commercial, industrial, airfield, or other types of development. Comprehensive plans, policies, and zoning ordinances regulate the type and extent of land uses allowable in specific areas, and often protect sensitive resources.

3.2.1.2 Existing Environment

Along the northern portion of the parcel, King Graves Road follows the boundary between Vienna and Fowler Townships. The parcel is south of King Graves Road in Vienna Township. Most of the parcel is fallow agricultural land with a small secondary growth woodlot on the southern part of the parcel adjacent to the YARS fence and a larger woodlot in the northcentral portion of the parcel. Land to the east is fallow agricultural land. YARS is to the south and west. Land to the north of King Graves Road is in Fowler Township and is used for agricultural, residential, and limited commercial purposes (Trumbull County Auditor's Office, 2019). A significant forested area also exists immediately north of the parcel.

3.2.2 Soils

3.2.2.1 Definition of Resource

Soils are the unconsolidated surface materials that form from underlying bedrock or other parent material.

3.2.2.2 Existing Environment

Four soil types have been mapped within the subject property by the U.S. Department of Agriculture's (USDA's) NRCS. The defined soil types in the area are Wadsworth silt loam, 2 to 6 percent slopes (64 percent); Rittman silt loam, 2 to 6 percent slopes (16 percent); Wadsworth silt loam, 0 to 2 percent slopes (13 percent); Rawson silt loam, 2 to 6 percent slopes (3 percent); Udorthents, loamy (3 percent), and Haskins loam 0 to 2 percent slopes (1 percent) (NRCS, 2019). None of these soil types are classified

as hydric soils; however, Haskins and Wadsworth soils have hydric inclusions. Rawson silt loam and Rittman silt loam are considered prime farmland. Haskins loam and Wadsworth silt loam are considered prime farmland if drained. In a letter dated March 13, 2019, NRCS determined the soils on the parcel are not prime, unique, statewide, or locally important farmland (see Appendix A).

3.2.3 Water Resources

3.2.3.1 Definition of Resource

Water resources include both surface water and groundwater. Surface water resources include lakes, rivers, streams, and wetlands (discussed in Section 3.1.4). These resources can be important to economic, ecological, recreational, and human health resources. Stormwater is included in the surface water analysis because it has the potential to flow into connected surface waters and impact surface water quality.

Groundwater includes subsurface hydrologic resources. Groundwater properties are often described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition. Stormwater flows, defined as runoff from precipitation that are increased by impervious surfaces, may introduce sediments and other contaminants into the water resource environment.

3.2.3.2 Existing Environment

There are no streams or rivers onsite. A small pond is on the northcentral portion of the parcel. Outflow from this pond enters a stream north of King Graves Road. The eastern portion of the parcel drains to South Branch Yankee Run, a tributary of Yankee Run. The western portion of the parcel drains to Spring Run, a tributary to Lower Mosquito Creek. Yankee Run and Lower Mosquito Creek are both listed as impaired waters by the OEPA (OEPA, 2019a).

Drinking water supply in Vienna Township is provided indirectly from the Meander Reservoir (Trumbull County Planning Commission [TCPC], 2009). For those sections of Vienna Township that are not connected to the municipal water supply, groundwater is obtained from Sandy and Sandy Shale Bedrock Aquifers; Sandstone and Sandy Shale Bedrock Aquifers; and the Massillon, Berea, and Sharon Sandstone Bedrock Aquifers. A perched seasonal high-water table is at a depth of 18 to 36 inches during extended wet periods (TCPC, 2009).

3.2.4 Biological Resources

3.2.4.1 Definition of Resource

Biological resources consist of plants and animals and their habitats. These resources provide aesthetic, recreational, and socioeconomic benefits to society. This section describes the plant and animal species that occur, or are likely to occur, in the project area.

Three federal laws are applicable to the analysis of biological resources for the project:

- The MBTA, as amended, implements various treaties and conventions between the United States and Canada, Japan, Mexico, and Russia for the protection of migratory birds. Under the MBTA, taking, killing, or possessing listed birds is unlawful, unless permitted by regulation.
- The Bald and Golden Eagle Protection Act of 1940, as amended, provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds.
- The ESA, as amended, requires the government to protect threatened and endangered plants and animals (listed species) and the habitats upon which they depend. The ESA requires federal agencies to ensure that any action it authorizes, funds, or conducts does not adversely impact listed species or “destroy or adversely modify” critical habitat for that species. “Critical habitat” is defined as a specific geographic area that contains features for the conservation of an endangered species and may require special management and protection.

3.2.4.2 Existing Environment

Vegetation and Wildlife. Most of the parcel consists of fallow agricultural fields. Vegetation within the upland fields includes red fescue (*Festuca rubra*), Canada goldenrod (*Solidago canadensis*), and reed canary grass (*Phalaris arundinacea*). Wooded uplands in the central portion of the parcel include American beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), northern red oak (*Quercus rubra*), multiflora rose (*Rosa multiflora*), and buckthorn (*Rhamnus cathartica*). The wooded parcel near the YARS fence includes black cherry, bush honeysuckle (*Lonicera maackii* or *L. morrowii*), northern red oak, American beech, eastern red cedar (*Juniperus virginiana*), and bull briar (*Smilax rotundifolia*). Emergent wetland vegetation includes soft rush (*Juncus effusus*), Pennsylvania smartweed (*Persicaria pensylvaniica*), dark green bulrush (*Scirpus atrovirens*), velvet panicgrass (*Dichanthelium scoparium*), and sensitive fern (*Onoclea sensibilis*). Forested wetlands include silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), northern red oak, arctic raspberry (*Rubus arcticus*), northern spicebush (*Lindera benzoin*), poison ivy (*Toxicodendron radicans*), Virginia chain fern (*Woodwardia virginica*), and fall panicgrass (*Panicum dichotomiflorum*). The pond contained yellow water-lily (*Nuphar lutea*).

Animals identified on the parcel include white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), gray squirrel (*Sciurus carolinensis*), raccoon (*Procyon lotor*), great blue heron (*Ardea herodias*), and red-tailed hawk (*Buteo jamaicensis*). Unidentified vole/mouse tracks and tracks likely from a meadow jumping mouse, based on habitat and spacing of the jumps, were noted. Several unidentified songbirds were also seen.

Three bird species protected under the MBTA, the bald eagle (*Haliaeetus leucocephalus*), red-headed woodpecker (*Melanerpes erythrocephalus*), and wood thrush (*Hylocichla mustelina*), are known to occur in the vicinity of the parcel (USFWS, 2019a). It is highly unlikely that the bald eagle would occur on the parcel because there is no foraging habitat for the eagle on or within the immediate vicinity of the parcel. It is possible that the woodpecker or thrush could forage or nest on the parcel.

Federally Listed Threatened or Endangered Species and Critical Habitat. The USFWS Information, Planning, and Consultation (IPaC) Trust Resource Report prepared for the project indicates four federally listed species: the Indiana bat (endangered, *Myotis sodalis*), the northern long-eared bat (threatened, *Myotis septentrionalis*), the eastern massasauga (threatened, *Sistrurus catenatus*), and the clubshell (endangered, *Pleurobema clava*) have the potential to occur in the vicinity of the 42-acre parcel (USFWS, 2019b).

Eastern massasauga live in wet habitats including prairies, marshes, and low areas near water but also will use the adjacent uplands (USFWS, 2016). There is potential habitat on the 42-acre parcel for the eastern massasauga within the wetlands and adjacent uplands.

The clubshell prefers clean, loose sand and gravel in medium to small rivers (USFWS, 2018). There are no streams or rivers on the property, therefore, there is no habitat for the clubshell on the 42-acre parcel.

The Indiana bat hibernates in caves during the winter, but in the summer months prefers to roost under loose tree bark on dead or dying trees (USFWS, 2006). The northern long-eared bat prefers habitats similar to the Indiana bat, but commonly roosts in smaller trees than the Indiana bat in summer. The northern long-eared bat hibernates in caves in the winter months and prefers to roost in crevices of dead or living trees in the summer months (USFWS, 2015a). There is potential summer habitat for the northern long-eared bat and the Indiana bat within the wooded portions on the 42-acre parcel.

The USFWS's IPaC Trust Resource Report indicates that there are no federally designated critical habitats on or in the vicinity of the parcel (USFWS, 2019b).

State-Listed Threatened or Endangered Species. According to the ODNR Division of Wildlife website, there are 30 state protected animal species and 14 protected plant species in Trumbull County (ODNR, 2016a; 2016b). Table 3-1 lists a subset of these species. The Indiana bat (state-listed endangered), northern long-eared bat (state species of concern), and eastern massasauga (state candidate species) are discussed above under federally listed species and are not discussed again here. Four fish species

and six bivalves are listed as state endangered, threatened, or species of concern. These species require rivers or streams. There are no rivers or streams on the 42-acre parcel and therefore no habitat for these species. Therefore, these species are not discussed further in this section.

Table 3-1. State-Listed Species in Trumbull County, Ohio

Common Name	Scientific Name	State Status	Preferred Habitat	Habitat Present on 42-acre Parcel?
Caddisfly	*Psilotreta indecisa*	Threatened	Small, sand- and gravel-bottomed creeks (Hilsenhoff, 1975)	No
Allegheny crayfish	*Orconectes obscurus*	Species of Concern	Clear streams with gravel bottoms (NatureServe, 2018)	No
Great Lakes crayfish	*Orconectes propinquus*	Species of Concern	Small streams, large rivers, ponds, lakes (USFWS, 2015b)	Yes
Amphibians				
Eastern hellbender	*Cryptobranchus alleganiensis*	Endangered	Large, swift flowing streams (ODNR, 2012)	No
Four-toed salamander	*Hemidactylium scutatum*	Species of Concern	Boggy woodland ponds and swamps (ODNR, 2012)	No
Birds				
Northern harrier	*Circus cyaneus*	Endangered	Hunts over fields, cropland, prairies, wet meadows, and marshes; nests on the ground in large grasslands (ODNR, 2018b)	Yes
Northern bobwhite	*Colinus virginianus*	Species of Concern	Open country with brushy thickets, scattered trees, grasslands, fields, and pastures (ODNR, 2013)	Possible
Bobolink	*Dolichonyx oryzivorus*	Species of Concern	Hayfields, with lots of legumes; grass meadows (ODNR, 2013)	No
Mammals				
Big brown bat	*Eptesicus fuscus*	Species of Concern	Found in a variety of habitats, including fields, forest openings, urban and/or suburban areas, and around water (ODNR, 2016c)	Yes
Red bat	*Lasiurus borealis*	Species of Concern	Roost among the foliage in forests, forest edges, hedgerows, or in tree bark (ODNR, 2016c)	Yes
Hoary bat	*Lasiurus cinereus*	Species of Concern	Roost in the summer in the foliage of deciduous and coniferous forests (ODNR, 2016c)	Yes
Little brown bat	*Myotis lucifugus*	Species of Concern	Roost in summer in trees, bat boxes, barns, and buildings (ODNR, 2016c)	Yes
Tri-colored bat	*Perimyotis subflavus*	Species of Concern	Roost in summer in open forests near water (ODNR, 2016c)	Yes
Deer mouse	*Peromyscus maniculatus*	Species of Concern	Forests, grasslands, brushlands, agricultural fields, and deserts (ODNR, 2016c)	Yes
Black bear	*Ursus americanus*	Endangered	Heavily wooded habitats, ranging from swamps and wetlands to dry upland hardwood and coniferous	No

Table 3-1. State-Listed Species in Trumbull County, Ohio

Common Name	Scientific Name	State Status	Preferred Habitat	Habitat Present on 42-acre Parcel?
			forests; prefers wooded cover with a dense understory (ODNR, 2016c)	
Star-nosed mole	*Condylura cristata*	Species of Concern	Low, wet soil near lakes or streams (ODNR, 2016c)	No
Ermine	*Mustela erminea*	Species of Concern	Open woodlands, brushy areas, grasslands, wetlands, and farmlands (ODNR, 2016c)	Yes
Plants				
Bug-on-a-stick	*Buxbaumia aphylla*	Threatened	Decaying wood, humus, sometimes shallow acid soil and soil depressions on rock outcrops, mainly in well-illuminated to somewhat shaded sites (Flora of North America, 2007)	No
Vernal water-starwort	*Callitriche verna*	Threatened	Shallow quiet water or on muddy shores (ODNR, 1984a)	No
Necklace sedge	*Carex projecta*	Threatened	Diverse variety of moist situations in sun or semi-shade; meadows, stream banks, clearings in wet woods, thickets (ODNR, 1981b)	No
Speckled wood-lily	*Clintonia umbellulata*	Threatened	Variety of mature, mesic woods, often with hemlocks; tolerant of deep shade; ravines, slopes (ODNR, 1981a)	No
Simple Willow-herb	*Epilobium strictum*	Threatened	Wet, semi-open to open situations: swamps, bogs, mossy thickets, sedge marshes, and wet meadows (ODNR, 1984b)	Yes
Appalachian quillwort	*Isoetes engelmannii*	Endangered	In open sun in shallow bodies of water; pond margins, ditches (ODNR, 1983a)	No
Yellow vetchling	*Lathyrus ochroleucus*	Threatened	dry upland woods, thickets, wooded slopes, and rocky banks (ODNR, 1982)	Yes
One-coned club-moss	*Lycopodium lagopus*	Endangered	Openings in woodlands (mostly secondary woods) and fields (ODNR, 2000)	Yes, but species does not occur within the habitat on the parcel (not observed during site visit)
Spotted pondweed	*Potamogeton pulcher*	Endangered	Peaty or muddy, acid waters or shores (ODNR, 1983b)	Yes
Keeled bur-reed	*Sparganium androcladum*	Threatened	Variety of wet, open to semi-open situations: muddy or peaty shores, swamps, marshes, or shallow water (ODNR, 1983c)	Yes
Walter's St. John's-wort	*Triadenum walteri*	Threatened	Swamp woods, buttonbush swamps, thickets and streambanks (ODNR, 1994)	No

Table 3-1. State-Listed Species in Trumbull County, Ohio

Common Name	Scientific Name	State Status	Preferred Habitat	Habitat Present on 42-acre Parcel?
Velvet-leaved blueberry	*Vaccinium myrtilloides*	Endangered	Usually acidic soils in moist woods, swamps, clearings and, rarely, dry upland woods (ODNR, 1984c)	Yes
Hobblebush	*Viburnum alnifolium*	Threatened	Woods near swamps, stream banks, dense shaded hemlock woods and ravines (ODNR, 1981c)	No
Highbush-cranberry	*Viburnum trilobum (opulus* var. *americanum)*	Threatened	Moist soil in openings in lowland forests, at the margins of wetlands, and in mixed shrub swamps, or openings in hardwood swamps or tamarack swamps (Minnesota Department of Natural Resources [MDNR], 2011)	Yes

There is potential habitat for 10 of the state-protected animal species and seven state-protected plant species on the 42-acre parcel (Table 3-1).

3.2.5 Air Quality

3.2.5.1 Definition of Resource

Under the authority of the CAA, EPA has established nationwide air quality standards to protect public health and welfare. These federal standards, known as National Ambient Air Quality Standards (NAAQS) and shown in Table 3-2, represent the maximum allowable atmospheric concentrations for six criteria pollutants: ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide (SO_2), lead, and particulate matter (which includes respirable particulate matter less than or equal to 10 micrometers in diameter [PM_{10}] and respirable particulate matter less than or equal to 2.5 micrometers in diameter [$PM_{2.5}$]).

Table 3-2. National Ambient Air Quality Standards

Criteria Pollutant	Federal Standard (Averaging Period)[a]
CO	35 ppm (1 hour)
	9 ppm (8 hours)
Nitrogen dioxide	0.100-ppm (1 hour)
	0.053-ppm (annual arithmetic mean)
Ozone	0.070-ppm (8 hours)
$PM_{2.5}$	12 $\mu g/m^3$ (annual arithmetic mean)
	35 $\mu g/m^3$ (24 hours)[b]
PM_{10}	150 $\mu g/m^3$ (24 hours)

Table 3-2. National Ambient Air Quality Standards

Criteria Pollutant	Federal Standard (Averaging Period)[a]
SO_2	0.5-ppm (3 hours, secondary standard)
	0.075-ppm (1 hour)[b]
Lead	0.15-μg/m^3 (rolling 3-month average)

Source: EPA, 2016a
μg/m^3 = microgram per cubic meter
ppm = parts per million, by volume

Notes:
[a] National standards other than ozone, particulate matter, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The ozone standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, is equal to or less than the standard.

[b] To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 parts per billion.

Under the CAA, the country is classified into attainment, nonattainment, and maintenance areas. Any area not meeting the NAAQS is designated as nonattainment for the specific pollutant or pollutants, whereas areas that meet the NAAQS are designated as attainment areas. Maintenance areas are those areas that were previously designated as nonattainment and subsequently re-designated to attainment, subject to development of a maintenance plan.

Under the EPA New Source Review (NSR) program, stationary sources of air pollution are required to have permits before construction of the source begins. NSR Prevention of Significant Deterioration (PSD) permit approval would be required if the proposed project was either a new source, with the potential to emit 250 tons per year or more of an attainment pollutant, or an existing major source of emissions, making a major modification in an attainment area and resulting in a net emissions increase above specified levels. Nonattainment NSR approval would be required if the proposed project was a new stationary source or major source of emissions, making a major modification in a nonattainment area with potential to emit nonattainment pollutants in excess of the NSR thresholds.

The CAA General Conformity Rule (40 CFR, Parts 6, 51, and 93) requires federal agencies to make written conformity determinations for federal actions in or affecting nonattainment or maintenance areas. If the emissions of a criteria pollutant (or its precursors) do not exceed the *de minimis* level, then the federal action has minimal air quality impact and, therefore, the action is determined to conform for the pollutant under study; no further analysis is necessary.

Greenhouse gases (GHGs) are compounds that may contribute to accelerated climate change by altering the thermodynamic properties of the earth's atmosphere. GHGs consist of CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, and perfluorocarbons (EPA, 2010). Under the EPA Mandatory Reporting Rule, facilities that emit 25,000 metric tons or more per year of carbon dioxide equivalent (CO_2e) emissions must submit annual reports to the EPA. For purposes of NEPA analysis, the USAF has established a *de minimis* significance threshold of 75,000 tons per year CO_2e (U.S. Air Force Civil Engineer Center [AFCEC], 2016).

3.2.5.2 Existing Environment

Criteria Pollutants. The parcel is located in Trumbull County, Ohio. Trumbull County is in attainment with all NAAQS.

Climate Conditions and Trends. The average high temperature for Youngstown, Ohio, is 81 degrees Fahrenheit (°F) in the hottest month of July, and an average low temperature of 19°F in the coldest month of January. Youngstown has average annual precipitation of 38.91 inches per year. The wettest month of the year is July, with an average rainfall of 4.29 inches (U.S. Climate Data, 2019).

Ohio is in the Midwest climate region of the United States, where trending climate variation is expected to contribute to increased springtime flooding and more severe summer droughts, increased algal blooms in surface water bodies, reduced agricultural yields, and health impacts resulting from heat exposure. In addition, increased heat and drought are expected to lead to increased wildfires throughout the region (EPA, 2016b). Annual average temperatures are projected to rise by as much as 4.9°F by 2065 and 8.5°F by 2100. Summertime heat waves are projected to become longer and hotter, creating an increase in the demand for electricity-based cooling; it could also affect urban infrastructure through decreased efficiencies in electric power generation due to higher temperatures. Trending climate variation in the region could affect forest composition due to increases in pest outbreaks and competition with invasive species, and the Great Lakes' water quality, species diversity, and beach health (U.S. Global Change Research Program [USGCRP], 2014).

3.2.6 Cultural Resources

3.2.6.1 Definition of Resource

Cultural resources are defined as prehistoric or historic districts, sites, buildings, structures, or objects considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological resources, historic architectural or engineering resources, and other traditional resources.

Section 106 of the NHPA requires that federal agencies identify any historic properties that are listed or eligible for listing in the NRHP that could be affected by a proposed action. The NRHP is a list of America's historic properties. It identifies districts, sites, buildings, structures, and objects that are significant in American history, architecture, engineering, and culture.

As defined in the Advisory Council on Historic Preservation's regulations for implementing Section 106 of the NHPA, the Area of Potential Effects (APE) for a project is the "geographic area or areas within which an undertaking may directly or indirectly cause changes in the character of or use of historical properties, if any such properties exist" (36 CFR §800.16[d]). The APE is defined based upon the potential for effect, which may differ for aboveground resources (historic structures and landscapes) and subsurface resources (archaeological sites). In addition to the actual site of the undertaking, the APE includes other areas where the undertaking could cause changes in land use, traffic patterns, or other aspects that could affect historic properties. Different project factors may produce more than one APE for a given undertaking. Factors with potential to cause changes are noise, vibration, visual setting, traffic, atmospheric conditions, construction activities, indirect impacts, and cumulative impacts.

3.2.6.2 Existing Environment

The 42-acre parcel consists of two and one-half tax parcels used for agricultural purposes as farmland. Historical aerial photographs show structures on the parcel from approximately 1938 to 2011. Features of these structures were confirmed with the property owner, and included a house, barn, and several storage sheds for farming machinery and equipment. According to the property owner, these structures were no longer used circa 2007. The structures were demolished sometime after 2011 as there were none observed during a May 2017 visual site inspection conducted as part of an environmental baseline survey. A drinking water well associated with the former house was also decommissioned (AFRC, 2017).

In January 2017, YARS completed a Cultural Resources Contingency Plan (CRCP) to assist facility personnel in managing the discovery of any unidentified cultural resource on the base property. The CRCP references four previous cultural resources investigations that have occurred within the base. None of these previous surveys identified cultural resources within the installation boundaries.

Jacobs conducted a literature review for the project on January 24, 2019 using the Ohio SHPO online mapping database. The literature review identified six archaeological surveys and one historic resources survey that have been conducted within a 1-mile radius of the project (Study Area); however, none were conducted on the 42-acre project area. There are two archaeological sites and four architectural resources documented within the Study Area, none of the previously recorded archaeological or architectural resources were located within the 42-acre project area.

Fourteen federally recognized tribes with ancestral ties to lands in northeastern Ohio were consulted under Section 106. These tribes include the Delaware Nation, Delaware Tribe of Indians, Miami Tribe of Oklahoma, Ottawa Tribe of Oklahoma, Wyandotte Nation, Cayuga Nation, Oneida Nation of New York, Oneida Nation of Wisconsin, Onondaga Nation, St. Regis Mohawk Tribe, Seneca Nation of Indians, Seneca-Cayuga Nation, Tonawanda Seneca Nation, and Tuscarora Nation.

3.2.7 Noise

3.2.7.1 Definition of Resource

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with human activities. Public annoyance is the most common impact associated with exposure to elevated noise levels.

Sound is created by acoustic energy, which produces pressure waves that travel through air and are sensed by the eardrum. Because the range of sound pressure ratios varies over many orders of magnitude, a base-10 logarithmic scale is used to express sound levels in dimensionless units of decibels (dB). Sound travels in waves; there are also varying frequencies associated with each sound event. The human ear does not respond equally to all frequencies. To obtain accurate measurements and descriptions of noise that are relevant to the human receptors, noise frequencies are filtered or weighted to most closely approximate the average frequency response of the human ear. This weighting is called the “A” scale on sound-level meters and is the scale that is used for noise analyses. Decibel units described in this manner are referred to as “A-weighted” dB. As sound intensity tends to fluctuate with time, a method is required to describe a noise source, such as a highway or airport, in a steady state condition. The descriptor most commonly used in environmental noise analysis is the equivalent steady state sound level. This value is representative of the same amount of acoustic energy that is contained in a time-varying sound measurement over a specified period.

3.2.7.2 Existing Environment

Vienna Township is a rural area with agricultural, residential, commercial, and industrial areas. Noise sources around the parcel include the Youngstown-Warren Regional Airport to the south and vehicle traffic along King Graves Road. King Graves Road is a two-lane paved road that runs east/west along the northern boundary of the parcel, with Fowler Township to the north and Vienna Township to the south. The closest house is approximately 200 feet from the proposed Main Gate, north of King Graves Road and the property is zoned as “cash – grain or general farm” (Trumbull County Auditor’s Office, 2019).

3.2.8 Hazardous Materials and Solid Waste

3.2.8.1 Definition of Resource

This section describes the affected environment associated with hazardous materials used or stored at the considered locations. A hazardous material is defined in 49 CFR §171.8 as a “substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has been designated as hazardous under U.S.C. Title 49 Section 5103.”

For purposes of this EA, “hazardous material” refers to any item or agent (biological, chemical, or physical) that has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.

Issues associated with hazardous materials typically center around waste streams; underground storage tanks; aboveground storage tanks; and the storage, transport, use, and disposal of pesticides, fuels, lubricants, and other industrial substances. When such materials are improperly used, they can threaten the health and well-being of wildlife species, habitats, soil and water systems, and humans. The threshold level of significance for impacts resulting from hazardous materials includes a release of hazardous materials or a violation of local, state, or federal hazardous materials regulations.

Radon is considered to be part of the affected environment associated with hazardous materials. The Indoor Radon Abatement Act of 1988 established a long-term goal that indoor air be as free from radon as the ambient air outside buildings. In general, elevated indoor radon gas concentrations may present public health concerns. EPA established a mitigation action level of 4 picocuries per liter of air (pCi/L).

3.2.8.2 Existing Environment

An environmental baseline study (EBS) conducted on the parcel determined the parcel to be “an area or real property where no storage (as defined by 40 CFR Parts 264 and 265), release, or disposal of hazardous substances or petroleum products or their derivatives has occurred into the environment or structures or disposed on the subject property (including no migration of these substances from adjacent properties).” The EBS did not identify any air or water quality issues or presence of lead-based paint, asbestos, or polychlorinated biphenyls. The parcel is located in an area with a predicted indoor average radon concentration that is greater than 2 pCi/L of air and less than 4 pCi/L of air (AFRC, 2017).

The EBS noted that agricultural uses of the property included pesticide application and recommended soil sampling prior to YARS acquiring the parcel to confirm that potential contaminant levels are below commercial/industrial thresholds. Additionally, a septic system was formerly located at the property; however, no records confirming the removal of the septic system were located by the property owner. The EBS recommended that the removal of the septic system be confirmed (AFRC, 2017).

YARS maintains a Hazardous Material Management Plan that identifies responsibilities and procedures for managing hazardous materials at YARS. The overall objective of the plan is to ensure hazardous materials are purchased, stored and handled in a manner that minimizes the impact on the environment and complies with all applicable environmental, safety and occupational health standards. The plan applies to all 910 AW organizations, tenants, and contractors that store or use hazardous materials on YARS. YARS maintains an Integrated Pest Management Plan that identifies responsibilities and procedures for managing pesticide at YARS. Once the 42-acre parcel is acquired and incorporated into YARS, all installation plans would apply to activities on the parcel.

3.2.9 Aesthetics and Visual Resources

3.2.9.1 Definition of Resource

Visual resources refer to the natural and constructed features that give a particular environment its aesthetic qualities. In undeveloped areas, land forms, water surfaces, and vegetation are the primary components that characterize the landscape. Constructed elements, such as buildings, fences, and streets, also may be visible. These may dominate the landscape or be relatively unnoticeable. Attributes used to describe the visual resource value of an area include any significant views or vistas, landscape character, perceived aesthetic value, and uniqueness.

In developed areas, the natural landscape is likely to provide a background for the more obvious constructed features. The size, forms, materials, and functions of buildings, structures, roadways, and infrastructure, along with surrounding landscape features, define the visual context of an area. These features form observers’ overall impressions of an area’s visual character. Some urbanized areas or developments prescribe standards or design guidelines for achieving or preserving visual quality. In urban areas, there may be ordinances or zoning provisions that guide physical development.

In nonurban contexts, laws, such as the National Wild and Scenic Rivers Act, and management objectives, protect scenic quality of some special areas. Federal land managers also clarify the scenic value of lands in accordance with federal land management regulations.

3.2.9.2 Existing Environment

Views into the parcel include mostly fallow agricultural land, wooded areas, and a small pond. Views from the parcel include YARS recreational facilities and the existing main gate to the west, agricultural land and small forested areas to the south and east, and forested land, a single residence, and warehouses to the north.

3.2.10 Traffic and Transportation

3.2.10.1 Definition of Resource

Ground transportation resources generally include the roadway and street systems surrounding the affected environment.

3.2.10.2 Existing Environment

The 42-acre parcel is south of King Graves Road, west of SR 193 and east of State Highway 11. King Graves Road and SR 193 are both two-lane paved roads. State Highway 11 is a four-lane divided highway. A large number of vehicles enter the main gate during the week with a much smaller number of vehicles entering the main gate on non-training weekends.

A vastly increased number of vehicles enter the existing main gate on reservist training weekends. Approximately 80 percent of those entering come from State Highway 11 and approximately 20 percent from SR 193 (YARS, 2018). Vehicles can back up for some distance along eastbound King Graves Road for an extended period of time during training weekend mornings (YARS, 2018).

3.2.11 Safety and Occupational Health

3.2.11.1 Definition of Resource

Safety and occupational health is the promotion and maintenance of the physical, mental, and social well-being of workers by controlling risk to the highest degree protecting the safety, health, and welfare of people engaged in work or employment.

3.2.11.2 Existing Environment

There are numerous health and emergency service providers in the area surrounding YARS. Routine medical care and mental health care providers can be accessed in the nearby cities of Warren and Youngstown, Ohio. The nearest emergency medical treatment facilities are 24-hour Level III Trauma Centers located at St. Joseph Warren Hospital and Trumbull Regional Medical Center, approximately 10 and 11 miles southwest of the parcel, respectively.

The 910th Civil Engineer Fire Department provides emergency medical services, hazardous materials incident response, and fire protection service to the installation, and has mutual aid agreements with every fire department in Trumbull County, along with Youngstown, Austintown, and Mahoning County's Hazardous Materials Unit. Military police provide 24-hour law enforcement and security operations on YARS.

YARS has a joint Bird/Wildlife Aircraft Strike Hazard Program with the Youngstown-Warren Regional Airport. This program implements measures to minimize the hazard caused by interactions of birds or wildlife and aircraft. All contractors performing construction activities at YARS are responsible for complying with applicable safety requirements, including U.S. Occupational Safety and Health Administration regulations.

4. Environmental Consequences

This section identifies the potential environmental consequences of the Preferred Alternative and No Action Alternative for land use, soils, water resources, biological resources, air quality, cultural resources, noise, hazardous materials and solid waste, aesthetic and visual resources, traffic and transportation, and safety and occupational health.

Three categories of potential environmental consequences (impacts or effects) were evaluated: direct, indirect, and cumulative. A direct impact is the result of the Preferred Alternative and occurs at the same time and place. An indirect impact is caused by the Preferred Alternative and "[is] later in time or farther removed in distance, but [is] still reasonably foreseeable" (40 CFR Part 1508). Cumulative effects are the result of incremental impacts of the Preferred Alternative, when added to other past, present, and reasonably foreseeable future actions, regardless of which agency, person, or private entity undertakes such actions.

In the following sections, the duration of each impact is described either as short-term, such as limited to the construction period or immediately thereafter, or long-term, which includes operational impacts that recur through time or continue well beyond the period of construction. Types of impacts can be beneficial or adverse. Beneficial impacts improve the resource or issue analyzed. Adverse impacts negatively affect the resource or issue analyzed. The intensity of a potential impact refers to its severity and takes into account the level of controversy associated with impacts on human health; whether the action establishes a precedent for further actions with significant effects; the level of uncertainty about projected impacts; and the extent to which the action threatens to violate federal, state, or local environmental protection laws or constrain future activities. Potential beneficial impacts are discussed separately from potential adverse impacts. The thresholds of change for the intensity of impacts are defined as follows:

- Negligible: When the impact is localized and not measurable at the lowest level of detection
- Minor: When the impact is localized and slight, but detectable
- Moderate: When the impact is readily apparent and appreciable
- Major: When the impact is severely or significantly disruptive to current conditions

Intensities that are classified as negligible, minor, or moderate are considered to be insignificant impacts in this analysis. Significant impacts are those categorized as "major." Measures that would be implemented to avoid or minimize potential impacts on the environment, including those that would otherwise be significant, are also presented.

4.1 Environmental Consequences

4.1.1 Land Use

The threshold level for significant impacts on land use is defined as actions that negatively affect or displace an existing land use on or near the project area or alter the suitability of an area for its current, designated, or formally planned use.

4.1.1.1 Preferred Alternative

The Preferred Alternative would have a minor, long-term, direct adverse impact on the land use of the 42-acre parcel because agricultural land would be converted to developed land used by YARS. The proposed land use as an entry gate for YARS would be compatible with the surrounding land use and would not impact surrounding land use.

Indirect impacts on land use are not expected because use of the 42-acre parcel for the Main Gate would not conflict with existing land use or future land use in the immediate area.

4.1.1.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on existing land use would be anticipated.

4.1.2 Soils

The threshold level of significance for soils is a substantial loss of soil and/or an increased potential for erosion of soils to a level where standard sediment and erosion control measures would not prevent the erosion.

The threshold level of significance for farmland soils is the conversion of an area containing prime farmland designated by NRCS as having a scope of greater than 160 on the Farmland Conversion Rating Form.

4.1.2.1 Preferred Alternative

The Preferred Alternative would have a minor, long-term, direct adverse impact on soils on the 42-acre parcel. The site is already relatively level and will require little grading for site development. There is no plan to bring soils onto the parcel and there is no need to remove soils from the parcel. BMPs would be incorporated into the project to reduce impacts on soils. These could include installing silt fencing, applying water to disturbed soil, and limiting soil disturbance only to areas where the construction is proposed. An erosion and sedimentation pollution control plan would be developed in accordance with the requirements of Trumbull County and OEPA.

The Preferred Alternative would have a moderate, long-term, direct adverse impact on farmland soils on the 42-acre parcel. Construction of the new Main Gate would convert soils classified as farmland soils to developed area. A Farmland Conversion Impact Rating Form (AD-1006 Form) was prepared and provided to the NRCS for review. If a project scores 160 or above, the NRCS recommends finding another option. The score for this project was 155. The NRCS determined that the parcel does not contain prime, unique, statewide, or local important farmland (see Appendix A).

BMPs to control stormwater and prevent soil erosion during construction would prevent offsite impacts from scour or sedimentation. Therefore, indirect impacts on soils, including farmland soils, are not expected as a result of the Preferred Alternative.

4.1.2.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on soils including farmland soils use would be anticipated.

4.1.3 Water Resources

The threshold level of significance for surface water would be an activity that results in violation of state water quality criteria, constitutes a violation of federal or state discharge permits, and/or consists of an unpermitted placement of structures inside of the normal high watermark.

The threshold level of significance for groundwater would be a release of contamination that creates concentrations that exceed the federal or state standards or results in drinking water demand that exceeds aquifer capacity.

4.1.3.1 Preferred Alternative

The Preferred Alternative would have no direct impacts on existing surface water resources because there would be no disturbance to the pond and no stormwater would be diverted to the pond on the parcel.

The Preferred Alternative would have a minor, short-term, direct adverse impact on stormwater during construction from increased erosion from soil disturbances. These impacts would be minimized through implementation of an erosion and sedimentation pollution control plan in accordance with the stormwater management requirements of Trumbull County and OEPA. The construction contractor would obtain a General Construction Stormwater Discharge Permit from OEPA. BMPs would be incorporated into the project. For example, disturbed areas that are unpaved would be reseeded; landscape design would incorporate low-maintenance plant species; stormwater from impervious areas would be treated for water quality and quantity; and sediment fencing, check dams, and inlet protection would be incorporated. The roads and the new Main Gate would include stormwater controls that prevent changes to site hydrology following construction.

The Preferred Alternative would have a negligible, long-term, direct adverse impact on stormwater. The proposed project footprint would be approximately 5.6 acres in size, most of which would be impervious surface. Detention basins would be incorporated into the project design to manage stormwater associated with the disturbed areas onsite. The disturbed areas would be graded so that stormwater would drain to the stormwater detention basins which would both allow for infiltration into the ground and sediment settling. There would be no impact on the pond because it would not be disturbed and stormwater would not be discharged into the pond. Stormwater flow on undisturbed portions of the parcel would continue to be of the same velocity and volume as current conditions. There would be no impacts to water quality of downstream receiving waters after implementation of stormwater BMPs.

The Preferred Alternative could have a minor, short-term, indirect adverse impact on groundwater during construction if groundwater is encountered during excavation, grading, and other land-disturbing activities. Any dewatering necessary during such activities would be conducted using standard methods and would have no effect on groundwater quality or flow. If contaminated groundwater is encountered during dewatering, it would be managed in accordance with all applicable laws and regulations. The Preferred Action is anticipated to require a minimal increase in the amount of water required to operate the Main Gate.

4.1.3.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on water resources would be anticipated.

4.1.4 Biological Resources

The threshold level of significance for natural and biological resources is defined by any of the following: (1) potential “take” of a federal or state threatened or endangered species; (2) loss or impairment of sensitive or other native habitats or riparian corridors, such that the loss or impairment of habitat negatively affects the population of a species; (3) the take of birds in violation of the MBTA that could result in an enforcement action against the 910 AW; or (4) introduction or spread of invasive or otherwise undesirable non-native species.

4.1.4.1 Preferred Alternative

Vegetation and Wildlife. The Preferred Alternative would have a minor, long-term, direct adverse impact on vegetation and wildlife from the conversion of the fallow agricultural field and wooded areas to developed and landscaped areas. Some mortality to small wildlife would be expected for those animals that could not vacate the area during construction. Most of the area to be converted is fallow agricultural area and does not contain diverse or native plants or habitat and would not be expected to support substantial numbers of wildlife. The Preferred Alternative would have a minor, long-term, indirect adverse impact on wildlife from the loss of habitat or from displacement or other disturbance from noise and increased human activity. Disturbed areas that would not be developed would be seeded with an appropriate grass seed mix. Up to 0.8-acre of trees in the upland woods in the southern portion of the parcel could be removed (AFRC, 2018). Trees removed would be replaced onsite if possible. Because of the availability of similar habitat types on adjacent and nearby properties and the small amount of habitat that would be lost, these adverse impacts are not expected to be significant.

The Preferred Alternative could have a minor, long-term, direct benefit to vegetation through the elimination of a potential seed source for invasive weedy species. If allowed to remain fallow, pioneer species, including exotic invasive species such as Canada thistle (*Cirsium arvense*) could become established and spread. Development and maintained landscaping would prevent establishment of such species on the parcel.

Implementing the Preferred Alternative would have no direct impact on nesting migratory birds protected under the MBTA. The three migratory species of migratory birds that are likely to occur in the area (USFWS, 2019a) are tree nesting birds. Trees would not be cleared between April 1 and September 30 as a protection measure established for the Indiana bat (see below). Therefore, birds nesting during the same time would also be protected. Vegetation would not be removed during this time without conducting a preconstruction survey to determine whether nesting birds are present. If nesting migratory birds are found during the preconstruction survey, those areas of the Preferred Alternative construction site containing nesting birds would not be disturbed or cleared until the young have naturally vacated the nest. Through coordination with the USFWS, a buffer would be established around each nest to minimize the potential for nest abandonment resulting from nearby construction activity. Areas within this buffer would not be cleared until after young have fledged.

The Preferred Alternative would result in negligible, indirect, long-term adverse impacts on migratory bird nesting and foraging habitat from the conversion of fallow agricultural field and wooded areas to developed and landscaped areas. Impacts would be negligible because of the availability of similar habitat types on adjacent and nearby properties and the small amount of habitat that would be lost.

Federally Listed Threatened or Endangered Species and Critical Habitat. There are no streams or rivers on the property; therefore, there is no habitat for the clubshell and the Preferred Alternative would have **no effect** on the clubshell.

There is potential summer habitat for the northern long-eared bat within the wooded portions on the 42-acre parcel; therefore, the Final 4(d) Rule project key for the north long-eared bat was followed. Section 4(d) of the ESA allows the USFWS to create special rules for species listed as threatened or endangered that provide flexibility in implementing the ESA. The 4(d) Rule for northern long-eared bats tailors protection to the areas that have been affected by white-nose syndrome during the bat's sensitive life stages. There is no winter habitat on the parcel; the Preferred Alternative would not purposefully take northern long-eared bats. The 42-acre parcel is within the White-nosed Syndrome Zone, but the Preferred Alternative would not affect caves, mines, or entrances or the environment of a hibernaculum. The Preferred Alternative would include approximately 0.8-acre of tree removal, but no tree clearing would occur between April 1 and September 30 as a protection measure established for the Indiana bat (see below); therefore, there would be no tree clearing during the period when northern long-eared bats may be present. The tree clearing would result in indirect effect on the northern long-eared bat due to habitat alteration. Therefore, the Proposed Action **may affect but is not likely to adversely affect** the northern long-eared bat.

There is potential summer habitat for the Indiana bat within the wooded portions on the 42-acre parcel. There is no winter habitat on the parcel. Clearing of trees greater than 3 inches diameter at breast height (dbh) would only be conducted between October 1 and March 31. The tree clearing would result in indirect effect to the Indiana bat due to habitat alteration. Therefore, the Preferred Alternative **may affect but is not likely to adversely affect** the Indiana bat.

There is potential habitat on the 42-acre parcel for the eastern massasauga within the wetlands and adjacent uplands. It is unlikely that the eastern massasauga would occur within the limits of disturbance because that area is an agricultural field that was in production for years and only recently allowed to go fallow. Oldfield habitat is poorly developed and is not suitable for the snake or to support large numbers of prey. Therefore, the Preferred Alternative **may affect but is not likely to adversely affect** the eastern massasauga.

In a letter dated March 18, 2019, the USFWS concurred with the USAF's determination that the project, as proposed, is not likely to adversely affect any federally listed species. This concurrence was based on

the commitment to cut all trees greater than 3 inches dbh only between October 1 and March 31 to avoid adverse effects on the Indiana and northern long-eared bats.

State-Listed Threatened or Endangered Species. There is potential habitat for 10 of the state protected animal species on the 42-acre parcel. For one species, the Great Lakes crayfish, the habitat would not be disturbed by the Preferred Alternative; therefore, there would be no impacts on the crayfish. There is potential foraging habitat for the northern harrier, but no nesting habitat; therefore, there would be no direct impacts on this species. There is potential habitat for the five bats listed in Table 3-1 within the area to be disturbed. Trees would only be cleared between October 1 and March 31 as a protection measure established for the Indiana bat; therefore, there would be no tree clearing during the period when the other bats may be present. There is potential habitat for the northern bobwhite and the ermine within the area to be disturbed.

The Preferred Alternative could have a minor, short-term, indirect adverse impact on the northern bobwhite from limited to temporary displacement of foraging activities during construction. There are not any hedgerows on the parcel, so nesting is unlikely.

The Preferred Alternative could have a minor, short-term, indirect adverse impact on the ermine from limited to temporary displacement of foraging activities during construction. No ermine tracks were observed in the snow on the 42-acre parcel during a time when prey (small rodents) were observed. If ermine were present on the 42-acre site, their tracks would have been observed as they are not hibernators.

There is potential habitat for seven state-protected plant species on the 42-acre parcel (Table 3-1). Habitat for six of these would not be disturbed by the Preferred Alternative; therefore, there would be no impacts on those six species. Potential habitat for the seventh species, the yellow vetchling, occurs within the area to be disturbed. If present, the vetchling could occur in the small wooded area on the southern portion of the parcel. This area is directly adjacent to YARS and there are no known threatened or endangered species on the installation (AFRC, 2008). Therefore, it is highly unlikely that the vetchling would occur within the woodlot. YARS will consult with ODNR regarding the yellow vetchling prior to ground disturbing activities.

4.1.4.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on biological resources would be anticipated.

4.1.5 Air Quality

The threshold level of significance for air quality is defined as a violation of an ambient air quality standard or regulatory threshold.

4.1.5.1 Preferred Alternative

Criteria Pollutants. Air quality impacts associated with the Preferred Alternative were evaluated based on whether emissions would be localized, and whether a reasonable potential exists for a violation of an ambient air quality standard or regulatory threshold.

Implementation of the Preferred Alternative at YARS would result in minor, short-term, direct adverse impacts on overall air quality from construction activities. The operation of various equipment during construction activities would create exhaust emissions and generate dust and other particles in the air during the execution of the Preferred Alternative. Mobile source emissions also would be generated from vehicular traffic.

Construction and operational emissions (including those associated with comfort heating of the new Main Gate facilities) were estimated using the USAF's Air Conformity Applicability Model (ACAM) (Version 5.0). Construction activities include construction of approximately 5,250 square feet at YARS. Table 4-1

summarizes the Preferred Alternative's projected total air emissions from construction activities. A copy of the calculations used to develop these estimates is in Appendix C.

Operational emissions would include comfort heating for the new Main Gate facilities. Operational emissions were based on the square footage of the new Main Gate facilities only and do not account for emissions from the existing main gate structures. Table 4-2 summarizes the Preferred Alternative's projected total air emissions from operational activities at the new Main Gate. A copy of the calculations used to develop these estimates is in Appendix C.

Based on the estimated emissions listed in Tables 4-1 and 4-2, the emissions from construction and operational activities associated with the Preferred Alternative would be well below regulatory thresholds. Therefore, the Preferred Alternative would not be subject to PSD or NSR requirements. Analysis indicates that emissions would be below the *de minimis* thresholds under EPA's General Conformity Rules. A Record of Non-Applicability (RONA) would be used to document that the Preferred Alternative is in an area in attainment with all NAAQS and is exempt from general conformity requirements. Appendix C contains the RONA and detailed emission calculations.

Table 4-1. Proposed Action Construction Emissions

Emission Source	Emissions for 2020 (tons per year)					
	VOC	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Construction Emissions	0.090	0.519	0.597	0.001	4.88	0.026
Total Emissions	**0.090**	**0.519**	**0.597**	**0.001**	**4.88**	**0.026**
de minimis levels (tons per year)[a]	100	100	100	100	100	100
Threshold Exceeded for Any Activity?	No	No	No	No	No	No
Emission Source	**Emissions for 2021 (tons per year)**					
	VOC	**CO**	**NO_x**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions	0.223	1.05	0.934	0.002	0.045	0.045
Total Emissions	**0.223**	**1.05**	**0.934**	**0.002**	**0.045**	**0.045**
de minimis levels (tons per year)	100	100	100	100	100	100
Thresholds Exceeded for Any Activity?	No	No	No	No	No	No
Emission Source	**Emissions for 2022 (tons per year)**					
	VOC	**CO**	**NO_x**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions	0.001	0.008	0.009	0.000	0.001	0.001
Total Emissions	**0.001**	**0.008**	**0.009**	**0.000**	**0.001**	**0.001**
de minimis levels (tons per year)	100	100	100	100	100	100
Thresholds Exceeded for Any Activity?	No	No	No	No	No	No

Source: Appendix C

[a] *de minimis* levels are based on 40 CFR §93.153.

Table 4-2. Proposed Action Operational Emissions

Emission Source	Emissions for 2023 (tons per year)					
	VOC	CO	NO_X	SO_2	PM_{10}	$PM_{2.5}$
Operational Emissions	0.001	0.008	0.009	0.000	0.001	0.001
Total Emissions	**0.001**	**0.008**	**0.009**	**0.000**	**0.001**	**0.001**
de minimis levels (tons per year)[a]	100	100	100	100	100	100
Threshold Exceeded for Any Activity?	No	No	No	No	No	No

Source: Appendix C

[a] *de minimis* levels are based on 40 CFR §93.153.

BMPs would be implemented to reduce potential impacts on air quality. These control measures could include applying water to, or using other stabilization measures on, areas of bare soil or soil piles; creating wind breaks; and covering dump trucks that transport materials that could become airborne. Additionally, contractors would be required to maintain construction equipment in accordance with manufacturers' specifications to reduce exhaust emissions. EPA provided additional a "Construction Emission Control Checklist," which includes additional BMPs for consideration during the USAF's construction planning (see Appendix A).

Climate Change and GHGs. The Proposed Action would generate GHG emissions from construction- and operation-related activities. Construction of the proposed new Main Gate would result in a short-term, insignificant increase in GHG emissions. Estimated peak GHG emissions resulting from the Preferred Alternative would be 219 tons CO_2e for construction in 2020, which is well below EPA's 25,000 metric-ton-per-year threshold for mandatory reporting and the USAF *de minimis* threshold of 75,000 tons per year (AFCEC, 2016). Therefore, long-term, negligible, adverse impacts on climate change as a result of GHG emissions at YARS would be expected from implementation of the Preferred Alternative. No indirect impacts would be anticipated.

The changing climate is not anticipated to impact future operations at the new Main Gate or cause an increase in the impacts associated with the Preferred Alternative. YARS is not located in a coastal region or along a tidally influenced river reach. Therefore, sea level rise from climate change would not impact the new Main Gate. Future increased flood elevations, or an increase in the frequency and volume of flash flooding, are not expected to have impacts on buildings and infrastructure constructed under the Preferred Alternative because the Preferred Site is above the 100-year flood elevation.

4.1.5.2 No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions. Therefore, no impacts on air quality would occur.

4.1.6 Cultural Resources

The threshold level for significant impacts on cultural resources would adversely affect any historic property that is eligible for or listed in the NRHP or has been identified by a federally recognized Native American tribe as a sacred site.

4.1.6.1 Preferred Alternative

The Preferred Alternative would have no adverse impacts on cultural resources. Information gathered during the literature review suggests that there is a moderate-to-high probability of finding new historic-period archaeological sites, especially in association with the Alderman Farmstead. Previous cultural resources investigations surrounding YARS indicate a low probability that significant prehistoric deposits

would be present. Following Section 106 consultation, the SHPO determined that the proposed undertaking (Preferred Alternative) would not affect properties listed in or eligible for listing in the NRHP.

During Section 106 consultation, one tribe responded. The Delaware Nation requested that work be halted, and the tribe notified immediately if any archaeological sites or artifacts are discovered during construction.

If any unanticipated discoveries of archaeological resources or cultural items occur, work would be temporarily halted at the discovery site, the YARS Environmental Program Director would be contacted, and all appropriate measures would be implemented to avoid disturbance. YARS would immediately inform the SHPO and any associated tribes of the discovery and invite the parties to consult on the procedures to minimize adverse effects and/or render disposition of cultural items.

Indirect impacts on cultural resources are not expected as a result of the Preferred Alternative.

4.1.6.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on cultural resources would be anticipated.

4.1.7 Noise

Assessing impacts of noise involves several factors, including frequency, content, time of day during which noise occurs, duration, and loudness of the noise. A proposed action could have a significant effect on noise if noise-sensitive areas experience a long-term increase in noise exposures at or above a long-term equivalent A-weighted sound level of 70 dB over a 24-hour period is the noise level known to cause hearing loss with prolonged exposure (EPA, 1974). However, short-term exposures to elevated noise levels would not cause significant effects.

4.1.7.1 Preferred Alternative

The Preferred Alternative would have a minor, short-term, direct adverse impact on noise receptors during construction. The nearest residence is directly north of the parcel, across King Graves Road. The construction period would last approximately 12 to 18 months. Noise levels at the residence would be greatest during alteration of King Graves Road and the access road leading to the new Main Gate, and less when the construction activities occur farther south, closer to the YARS boundary. Construction activities would occur primarily during weekdays during daylight hours, though construction may also occur occasionally during daylight hours on weekends. Noise from construction vehicles would cease once construction is complete.

The Preferred Alternative would have a negligible, long-term, direct impact on noise receptors. Although the traffic noise of vehicles entering and leaving through the new Main Gate would be closer to the houses, the noise levels would decrease because there would be less idling of vehicles during traffic backups.

Indirect impacts on the noise environment are not expected as a result of the Preferred Alternative because noise effects would be confined to the construction period and the immediate area of the gate during operations.

4.1.7.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on the noise environment would be anticipated.

4.1.8 Hazardous Materials and Solid Waste

The threshold for a significant impact would be: (1) noncompliance with applicable federal and state regulations as a result of the Preferred Alternative; (2) disturbance or creation of contaminated sites resulting in adverse effects on human health or the environment; and (3) established management policies, procedures, and handling capacities unable to accommodate the proposed activities.

4.1.8.1 Preferred Alternative

The Preferred Alternative would result in minor, short-term, direct, adverse effects resulting from the use of hazardous materials and/or generation of hazardous waste and solid waste. There would be an increase in construction debris. Solid waste generated from the proposed construction activities would consist of building materials such as solid pieces of concrete, metals, and lumber. The construction contract would require the contractor to handle disposal of all hazardous materials and solid waste in accordance with applicable federal, state, and local regulations and requirements, including the YARS Hazardous Materials Management Plan. The Lordstown Construction Recovery is the only construction and demolition debris landfill licensed in Trumbull County (OEPA, 2019b). The facility accepts building materials but does not accept hazardous waste or building components containing hazardous materials. Contractors would be required to recycle construction and demolition debris, to the maximum extent practicable, thereby diverting the debris from landfills. USAF regulations prohibit the use of asbestos and lead-based paints for new construction.

The Preferred Alternative would not require significant amounts of pesticide application. Pesticides may be used in quantities required to protect new structures from insect infestations and limited weed control. Application would be conducted in accordance with product labels and USAF standards, including compliance any pesticide applicator licensing requirements. Quantities of pesticide application are anticipated to be less than the historical amounts required for agricultural operations.

Once construction is complete, use of hazardous materials and generation of solid waste would return to levels comparable with operation of the existing gate. Indirect impacts from the use or generation of hazardous materials and solid waste are not expected as a result of the Preferred Alternative.

4.1.8.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on human health or the environment from the use or generation of hazardous materials and solid waste would be anticipated. Pesticide use related to agricultural activities would likely continue at current application rates.

4.1.9 Aesthetics and Visual Resources

The threshold level for significant impacts on visual resources is defined as a change in the viewshed that causes it to be dominated by views that are inconsistent with the existing visual character of the area.

4.1.9.1 Preferred Alternative

The Preferred Alternative would result in minor, short-term, direct, adverse impacts on visual resources during construction of the new Main Gate. Adverse impacts on visual resources could occur during construction from stockpiles of materials, construction vehicles onsite, and partially constructed buildings. These impacts would be temporary and would end after completion of the construction activities.

Following construction, the Preferred Alternative would result in minor, long-term, direct impacts on visual resources because of the changes associated with an undeveloped area becoming a developed site. This impact may be viewed as adverse or beneficial, depending on an individual's preferences. From a visual perspective, this change could be perceived as a beneficial impact on the overall visual quality by replacing fallow, weedy overgrowth with new construction and maintained landscape, or adverse if a viewer prefers a consistently natural environment.

From the residential property to the north, the view would include the new Main Gate to the south/southwest and would continue to include undeveloped field and forested areas to the south/southeast. The design for the new Main Gate will include lighting consistent with installation security standards and will include measures to reduce light visible from adjacent properties. Visual impacts would not be significant because the proposed construction would not dominate the viewshed and would be consistent with the existing features visible within YARS, such as the existing gate and recreational facilities, as seen from the residential property. The view from the warehouses to the north would not change substantially since the forested area on the parcel is not part of the development plan for the new Main Gate. Indirect impacts on visual resources are not expected as a result of construction or operation of the new Main Gate.

4.1.9.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on visual resources would occur.

4.1.10 Traffic and Transportation

The threshold level for significant impacts on ground transportation would be a disruption in traffic flow on adjacent roadways or other surrounding roads. Factors considered in determining whether a significant traffic-related impact could occur include the extent to which the considered alternatives would result in: (1) an increase in vehicle trips that would disrupt or alter local traffic patterns; (2) lane closures or other impediments to traffic; (3) activities that would create potential traffic safety hazards; (4) increased conflict with pedestrian and bicycle routes or fixed-route transit; and (5) parking demand that exceeds the supply.

4.1.10.1 Preferred Alternative

The Preferred Alternative would have a minor, short-term, direct adverse impact on traffic on King Graves Road during construction from an increase in construction-related vehicular traffic and temporary lane closures and traffic pattern alterations. This would end after construction of the new Main Gate is completed. During construction, installation traffic would continue to enter and leave through the existing gate. This gate would be closed to regular traffic after the new Main Gate is operational.

The Preferred Alternative would have a minor, long-term, direct beneficial impact on traffic along King Graves Road because it would ease traffic congestion along King Graves Road during peak entry times and reduce potential traffic safety hazards. The amount of traffic entering and exiting the new Main Gate would not change. After construction of the new Main Gate is complete, vehicles entering through the Main Gate would not back up along King Graves Road during peak entry times. Vehicles leaving the installation would not back up within the installation during peak travel.

The 910th Civil Engineer Fire Department has a mutual aid agreement with the surrounding communities and needs to be able to leave the installation quickly in order to respond to local emergencies (Small, personal communication, 2019). Current congestion at the gate could deter the Fire Department from leaving quickly. Efficiencies in movement provided by the new Main Gate would allow the Fire Department to be able to leave the installation without being delayed by exiting traffic.

Indirect impacts on traffic or transportation are not expected as a result of the Preferred Alternative.

4.1.10.2 No Action Alternative

No new construction or development activities are proposed under the No Action Alternative. Therefore, no impacts on human health or the environment from traffic or transportation would be anticipated. There would continue to be backups along King Graves Road during peak entry times into YARS.

4.1.11 Safety and Occupational Health

The threshold for a significant impact would be one that would: (1) substantially increase risks associated with the safety of construction personnel, contractors, or the local community; (2) substantially hinder the ability to respond to an emergency; or (3) introduce a new health or safety risk for which the installation is not prepared or does not have adequate management and response plans in place.

4.1.11.1 Preferred Alternative

Implementation of the Preferred Alternative would have no impact on the availability, capabilities, or capacity of emergency services available on YARS or neighboring communities. The Preferred Alternative would have short-term, minor, direct, adverse impacts on worker safety and occupational health during construction. All construction contractors are required to follow and implement U.S. Occupational Safety and Health Administration standards, and applicable DoD and USAF regulations, to establish and maintain safety procedures.

A temporary secure perimeter fence would be installed around the construction area with a construction access gate. During construction, signs would be placed on King Graves Road to alert drivers to changes in traffic patterns and trucks entering and exiting the road.

Once constructed, the Preferred Alternative would have long-term, moderate, direct, beneficial impacts on the overall safety of YARS staff and the surrounding community by increasing security measures to meet current antiterrorism/force protection standards. The intent of these standards is to reduce collateral damage and the scope and severity of mass casualties in buildings or portions of buildings owned, leased, privatized, or otherwise occupied, managed, or controlled by or for DoD in the event of a terrorist attack.

4.1.11.2 No Action Alternative

Implementation of the No Action Alternative would not result in a change in current conditions. Therefore, no impacts on occupational health would occur. However, the present increased risk associated with YARS' existing main gate not meeting antiterrorism/force protection standards under the DOD's UFC and AFI 10-245 would continue to exist. This could result in a significant impact on the safety of those at YARS and within its vicinity.

4.2 Cumulative Effects

This section presents the recent, present, and foreseeable future projects that were considered during the assessment of cumulative effects of each alternative. Cumulative effects can result from individually insignificant, but collectively significant, actions taking place over a period of time. Among the principles of cumulative effects analysis discussed in the CEQ's guide Considering Cumulative Effects under the National Environmental Policy Act, it is stated: "…for cumulative effects analysis to help the decision maker and inform interested parties, it must be limited through scoping to effects that can be evaluated meaningfully" (CEQ, 1997).

The potential for cumulative effects on the environment from the Preferred Alternative was evaluated by reviewing historical aerial photos to identify recent actions, and by reviewing ongoing and planned actions that could affect the same environmental resources as the Preferred Alternative. Actions considered included construction projects that are underway or are programmed to occur in the near future. Cumulative effects were not analyzed for resources that were eliminated from further consideration. Cumulative effects are detailed in Section 4.2.2 for each resource area that was considered in detail.

4.2.1 Recently Completed Actions, Ongoing Actions, and Planned Actions

The Youngstown-Warren Regional Airport has a number of sites that are available for future development for several types of hangars or airport-related facilities. One area, a 1-acre site on the eastern portion of the airport along SR 193 is being leased by the Western Reserve Port Authority to a tenant corporate

aircraft operator for near-future aircraft hangar development (Youngstown-Warren Regional Airport, 2019a).

Recent renovations at the airport include resurfacing of the taxiways with edge lights and centerline markings; replacement of components along the entire airfield electrical distribution system, and a new electrical vault capable of easy expansion (Youngstown-Warren Regional Airport, 2019b).

The Western Reserve Port Authority is planning to extend Runway 5/23 using property the Port Authority owns to the north of the existing runway.

Trumbull County is proposing to realign King Graves Road to provide additional buffer along the end of the northwest end of Runway 14/32 (Small, personal communication, 2019).

Vienna Township is planning a sewer extension project along SR 193. The expansion would run along SR 193 from south to north and would not cross King Graves Road (Small, personal communication, 2019).

Proposed projects on YARS include:

- Construction of an alternate gate in fiscal year (FY) 2022. This would serve as a secondary entrance to the installation and could allow segregated access for privately-owned vehicles and commercial traffic.
- Widening of the existing assault strip in FY 2024. The existing assault strip is parallel and west of the main runway at the airport. This project would add 15 feet of asphalt on each side of the assault strip.
- Minor construction at the Security Forces Squadron (SFS) complex in FY 2023. The existing SFS complex includes a training building and firing range. This project would include construction of a new building for personnel relocating from another building on YARS. The proposed location for the new building is on the eastern side of the installation, in the general vicinity of the SFS complex.

4.2.2 Cumulative Effects

4.2.2.1 Land Use

The Preferred Alternative would contribute to minor, long-term, adverse, cumulative effects on land use from the combined conversion of open space to developed land. The new Main Gate would be compatible with surrounding land uses. Expansion of the runway would result in changes to noise and safety restrictions on adjacent parcels but would not impact activities associated with the Preferred Alternative. The sewer extension would provide properties along SR 193 with domestic wastewater collection service. This could lead to further development along this corridor, and more transition from open space to developed areas. Construction of an alternate gate could further change land use from open space to developed space depending on the proposed location of the alternate gate. Widening the assault strip and the construction of a new building at the SFS complex could result in minor changes to small areas of land including a change from maintained grass to developed land.

4.2.2.2 Soils

The Preferred Alternative would contribute to minor long-term adverse cumulative impacts on soils from the construction of new developed areas for the planned projects listed in the previous section. Soils, including those designated as prime farmland, would be graded, compacted, shifted to other areas, and/or paved over. Impacts would not be significant because of the small scale of these projects in comparison to the abundance of open space and farmland in the area.

4.2.2.3 Water Resources

The Preferred Alternative would contribute to minor adverse effects on shallow groundwater from a potential for spills to contaminate the shallow groundwater. The potential for petroleum products from

construction equipment at all three project sites could add to the potential for leaks from the sewer system during construction, Groundwater is not used as a drinking water source in Trumbull County so no impacts on aquifers is expected.

The Preferred Alternative would contribute to negligible, long-term adverse impacts on stormwater from the increase in impervious areas. All ongoing and planned construction and demolition projects would require appropriate BMPs and stormwater controls, no significant impacts from individual projects would be expected, and any cumulative impacts would be expected to be short-term and negligible.

4.2.2.4 Biological Resources

The Preferred Alternative would contribute to minor, long-term, adverse, cumulative effects on biological resources from the conversion of open space to developed land. The incremental contribution to other projects would not be significant because the runway is proposed on previously cleared or developed land with minimal value to wildlife and vegetation and the sewer extension would occur near or within the existing road right-of-way, which also has minimal value to wildlife and vegetation. The developable properties on the airport are already disturbed and do not provide biological resources. Impacts associated with the construction at the SFS complex would be analyzed once a site is identified and details of the project have been determined; these impacts would be expected to be similar to the impacts associated with the Preferred Alternative.

4.2.2.5 Air Quality

Construction activities and operational activities (comfort heating of the new Main Gate facilities) related to the Preferred Alternative would cause minor, adverse, cumulative effects on air quality when combined with other planned, ongoing, or recently completed projects in the area. These cumulative effects would not be significant because the scope of this project would not increase air pollutants to levels that exceed regulatory thresholds. The emissions would be temporary, localized, and eliminated after the activity is completed. These emissions would quickly dissipate as they are transported from the activity source, thereby preventing significant contribution to cumulative impacts on air quality.

The Preferred Alternative would result in short-term cumulative effects on air quality from the generation of fugitive dust when combined with other planned construction projects in the area. Impacts would not be significant because dust suppression techniques would be used during construction to minimize impacts from dust.

The limited amount of GHG emissions from the Preferred Alternative would not contribute significantly to climate change, but any emission of GHGs represents an incremental increase in global GHG concentrations.

4.2.2.6 Cultural Resources

The Preferred Alternative would not contribute to cumulative impacts on cultural resources. Section 106 consultation with the SHPO and applicable federally recognized tribes would be completed prior to initiation of groundbreaking activities. Inadvertent discoveries of cultural resources would be handled in accordance with the YARS Cultural Resources Management Plan.

4.2.2.7 Noise

The Preferred Alternative would contribute to minor, short-term, adverse, cumulative effects on the noise environment if the timing of other planned, ongoing, and recently completed projects in the area overlap with the timing of the construction of the new Main Gate. Other construction projects include construction of a new building approximately 0.2-mile south, an alternate gate approximately 0.5-mile southeast (depending on the location of land acquired), a road realignment 0.2-mile to the west and runway extension and sewer line extension 0.3- and 0.4-mile to the southeast, respectively, of the parcel. Impacts on the noise environment from these construction projects would be temporary and intermittent and would

occur during daylight hours and primarily on weekdays, though construction may also occur occasionally during daylight hours on weekends. Therefore, cumulative noise impacts would not be significant.

4.2.2.8 Hazardous Materials and Solid Waste

The Preferred Alternative would contribute to minor, short-term, adverse cumulative impacts associated with the use of hazardous materials and disposal of hazardous waste during construction activities. However, impacts would not be significant because the use of hazardous materials or generation of hazardous waste would not result in a release of hazardous waste or a violation of local, state, or federal hazardous materials regulations.

The Preferred Alternative would contribute to minor adverse cumulative impacts on solid waste when added to other construction and demolition projects in the vicinity. However, the construction waste generation would be temporary and would not be significant.

4.2.2.9 Aesthetics and Visual Resources

The Preferred Alternative would contribute to minor, short-term, adverse cumulative impacts on visual resources during construction from stockpiles of materials, construction vehicles onsite, and partially constructed buildings.

The Preferred Alternative would contribute to minor, long-term cumulative impacts on visual resources because of the changes associated with undeveloped areas becoming developed sites. Whether these impacts are considered adverse or beneficial is subjective and depends on an individual's preferences for developed or natural landscape. Visual impacts from the new Main Gate and other planned and proposed projects would occur on different roads and different areas of the installation and would not be seen at the same time because of distance, a rise in elevation, and woods between the areas.

4.2.2.10 Traffic and Transportation

The Preferred Alternative would contribute to moderate, short-term, adverse, cumulative effects on traffic if the timing of other planned, ongoing, and recently completed projects in the area overlaps with the timing of the construction of the new Main Gate. If construction were to occur on all projects at the same time, there could be moderate impacts on the local traffic along King Graves Road and SR 193. During the King Graves Road realignment, portions of King Graves Road and other surrounding roads could be closed temporarily, roads could have slower traffic from closed lanes, and detours could be used. During the sewer extension or alternate gate construction, shoulders or lanes on SR 193 could also be temporarily closed. Road, lane, or shoulder closures and possible detours could result in delays for local traffic including the traffic entering and exiting YARS. YARS, the Western Reserve Port Authority, Trumbull County, and Vienna Township would coordinate to minimize these impacts.

After construction is complete, the Preferred Alternative would contribute beneficially to traffic in the area because there would no longer be delays along King Graves Road during peak entry times at the YARS new Main Gate.

4.2.2.11 Safety and Occupational Health

The Preferred Alternative, when combined with other ongoing, planned, or reasonably foreseeable future projects would not contribute to short-term cumulative impacts related to construction worker safety and occupational health because the impacts experienced are limited to the individual construction zones. Emergency response times could potentially be impacted if simultaneous projects resulted in multiple lane closures or detours. Traffic-related cumulative impacts on safety would be minimized through coordination of route closures and proper signage to warn motorists of altered traffic patterns, speed limits, and construction vehicles entering and exiting the road.

The Preferred Alternative would contribute beneficially to the long-term safety of those at and within the vicinity of YARS because the new Main Gate would comply with current antiterrorism standards.

5. List of Preparers, Agencies Contacted, and Distribution

5.1 Preparers

Table 5-1. List of Preparers

Name	Education and Experience	Primary Responsibilities
Andrea Naccarato/Jacobs	B.S., Biology (minors in Chemistry and Geography-Environmental Studies), Radford University, 1993 19 years of experience in NEPA project management	Project Manager
Sara Jackson/Jacobs	B.S. Environmental Studies, Virginia Commonwealth University, 1999 19 years of NEPA and environmental experience for DoD and other federal agencies	Project Environmental Planner, responsible for preparation of EA text
Laura Haught/Jacobs	B.S., Biology, George Mason University, 1998 20 years of experience in NEPA projects for DoD, federal and state agencies, and private clients	Project Biologist, responsible for preparation of EA text
Ron Vaughn/Jacobs	M.S., Civil Engineering, University of Texas, 1993; B.S., Chemical Engineering, University of Michigan, 1984 29 years of experience in source emission testing, air emission inventories, and air quality issues	Project Engineer, primarily responsible for air quality analysis
Rich Reaves/Jacobs	Ph.D., Wetland and Wildlife Ecology, Purdue University, 1995; B.S., Wildlife Ecology and Resource Management, University of Wyoming, 1986 25 years of experience in NEPA analysis, environmental permitting, ecological surveys, and mitigation design	Senior technical review and quality assurance of the EA

5.2 Agencies Contacted

U.S. Environmental Protection Agency, Region 5

U.S. Fish and Wildlife Service

Ohio Ecological Services Office

National Resources Conservation Service

Cortland Service Center

Cayuga Nation of New York

Oneida Nation of New York

Oneida Nation of Wisconsin

Onondaga Nation

Saint Regis Mohawk Tribe

Seneca Nation of Indians

Seneca-Cayuga Nation

Tonawanda Seneca Nation

Tuscarora Nation

Delaware Nation

Delaware Tribe of Indians

Miami Tribe of Oklahoma

Ottawa Tribe of Oklahoma

Wyandotte Nation

State Historic Preservation Officer

Ohio History Connection

Ohio Environmental Protection Agency

Ohio Department of Natural Resources

Vienna Township

Trumbull County Planning Commission

Western Reserve Port Authority

Northeast Ohio Development & Finance Authority

5.3 Distribution

The draft final EA was made available for public and agency review for a period of 30 days at Cortland Branch and the Howland Branch libraries and online at https://www.youngstown.afrc.af.mil/About/Public-Notice. Additionally, the ODNR was provided a link to the draft final EA for review. A copy of the Notice of Availability is included in Appendix B.

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Appendix A
Coordination Letters and Responses

Letters Sent

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

4 March 2019

MEMORANDUM FOR DISTRIBUTION

FROM: 910 MSG/CEV
3976 King Graves Road Unit 37
Vienna OH 44473-5912

SUBJECT: Preparation of an Environmental Assessment for the 910th Airlift Wing, Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. The EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate). The need for the Proposed Action is described in the attached final Description of Proposed Action and Alternatives (DOPAA) (Attachment 1).

2. This memorandum and the attached DOPAA are being sent as part of the scoping process for the 910th Airlift Wing Main Gate EA. The intent of the EA is to address the potential environmental impacts of constructing and operating the new Main Gate at YARS.

3. We are sending the DOPAA for your input, so that we can address and analyze the issues of concern in the EA. We respectfully request your review and comments in accordance with Executive Order 12372, "Intergovernmental Review of Federal Programs." Please provide written comments or information regarding the action at your earliest convenience, but no later than 30 days from the receipt of this memorandum. Also enclosed is a listing of the federal, state, and local agencies that have been contacted (Attachment 2). If there are any additional agencies you think should review and comment on the proposal, please provide us with the appropriate contact information so that we may include them in our scoping efforts.

4. Please let us know if your agency is interested in receiving a link to the draft EA that will be available for government and public comment in April 2019.

5. Written comments should be submitted to: 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road Unit 12, Vienna, OH 44473-5912; or by email at: 910aw.pa@us.af.mil. If you have any questions, please contact Mr. White at (330) 609-1236. Thank you for your assistance.

WILLIAM FINK
Chief of Environmental Engineering

2 Attachments:
1. DOPAA
2. Distribution List

Attachment 1
DOPAA

Final

Youngstown Air Reserve Station
Vienna, Ohio

Description of the Proposed Action and Alternatives for the Environmental Assessment of the Construction of a New Entry Control Complex

February 2019

Prepared for:
U.S. Air Force Reserve Command

Contents

Figures

Acronyms and Abbreviations

AFI	Air Force Instruction
AFRC	Air Force Reserve Command
AW	Airlift Wing
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	*Code of Federal Regulations*
CWA	Clean Water Act
DoD	Department of Defense
EA	environmental assessment
EIAP	Environmental Impact Analysis Process
EIS	environmental impact statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act
ESA	Endangered Species Act
FONPA	finding of no practicable alternative
FONSI	finding of no significant impact
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
OEPA	Ohio Environmental Protection Agency
SHPO	State Historic Preservation Office
sq. ft.	square feet
SR	State Route
UFC	Unified Facilities Criteria
U.S.C.	*United States Code*
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USFWS	U.S. Fish and Wildlife Service
YARS	Youngstown Air Reserve Station

1. Introduction

This environmental assessment (EA) was developed to evaluate the impacts of constructing a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, Ohio. The new Main Gate would include a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. This EA was prepared to evaluate the potential environmental consequences of the Proposed Action and alternatives, in accordance with provisions of Title 32, *Code of Federal Regulations* (CFR), Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality's [CEQ] National Environmental Policy Act [NEPA] implementing regulations).

1.1 Background

YARS occupies 321 acres of land in Trumbull County, Ohio, approximately 12 miles north of the City of Youngstown, Ohio and within Vienna Township (Figure 1-1). State Route (SR) 193, which leads into Youngstown, borders the eastern side of the installation. King Graves Road is to the north and SR 11 is approximately 0.75-mile to the west. The Youngstown-Warren Regional Airport borders the installation to the south and shares its runway with YARS.

YARS is home to the 910 Airlift Wing (AW) of the U.S. Air Force Reserve Command (AFRC). The 910 AW operates and maintains nine Lockheed C-130 transport and cargo aircraft. The wartime mission of the 910 AW is to provide tactical airlift support including low-level infiltration, where aircrews deliver personnel and materials by airdrop and air-land techniques. The 910 AW is also responsible for operating and maintaining the Department of Defense (DoD)'s only large-area, fixed-wing aerial spray capability. This spray capability is used to control disease-carrying insects, pest insects, and undesirable vegetation, and to disperse oil spills in large bodies of water. Eight of the nine C-130 aircraft have been modified to transport the modular aerial spray system. During peacetime, the 910 AW is tasked with training and equipping reservists and assigned personnel to maintain readiness.

The 910 AW operates the installation and furnishes services and support to military personnel, civilian staff, family members, and the surrounding community. The major tenant organizations hosted by the 910 AW are the Navy Operational Support Center and Detachment 3, Maintenance Company, Combat Logistics Battalion 453 of the U.S. Marine Corps (U.S. Air Force [USAF], 2018).

1.2 Purpose and Need

The purpose of the Proposed Action is to provide a new permanent Main Gate for YARS that would accommodate the current mission and meet prescribed antiterrorism/force protection standards under DoD's Unified Facilities Criteria (UFC) and Air Force Instruction (AFI) 10-245, *Antiterrorism*. The existing gate does not meet these standards, creating an increased security risk to the installation.

1.3 Relevant Plans, Laws, and Regulations

A decision on whether to proceed with the Proposed Action depends on numerous factors, including mission requirements, regulatory requirements, and environmental considerations. In addressing environmental considerations, AFRC and YARS are guided by relevant statutes (and their regulations for implementation) and Executive Orders (EOs) that establish standards and provide guidance on environmental and natural resources management and planning.

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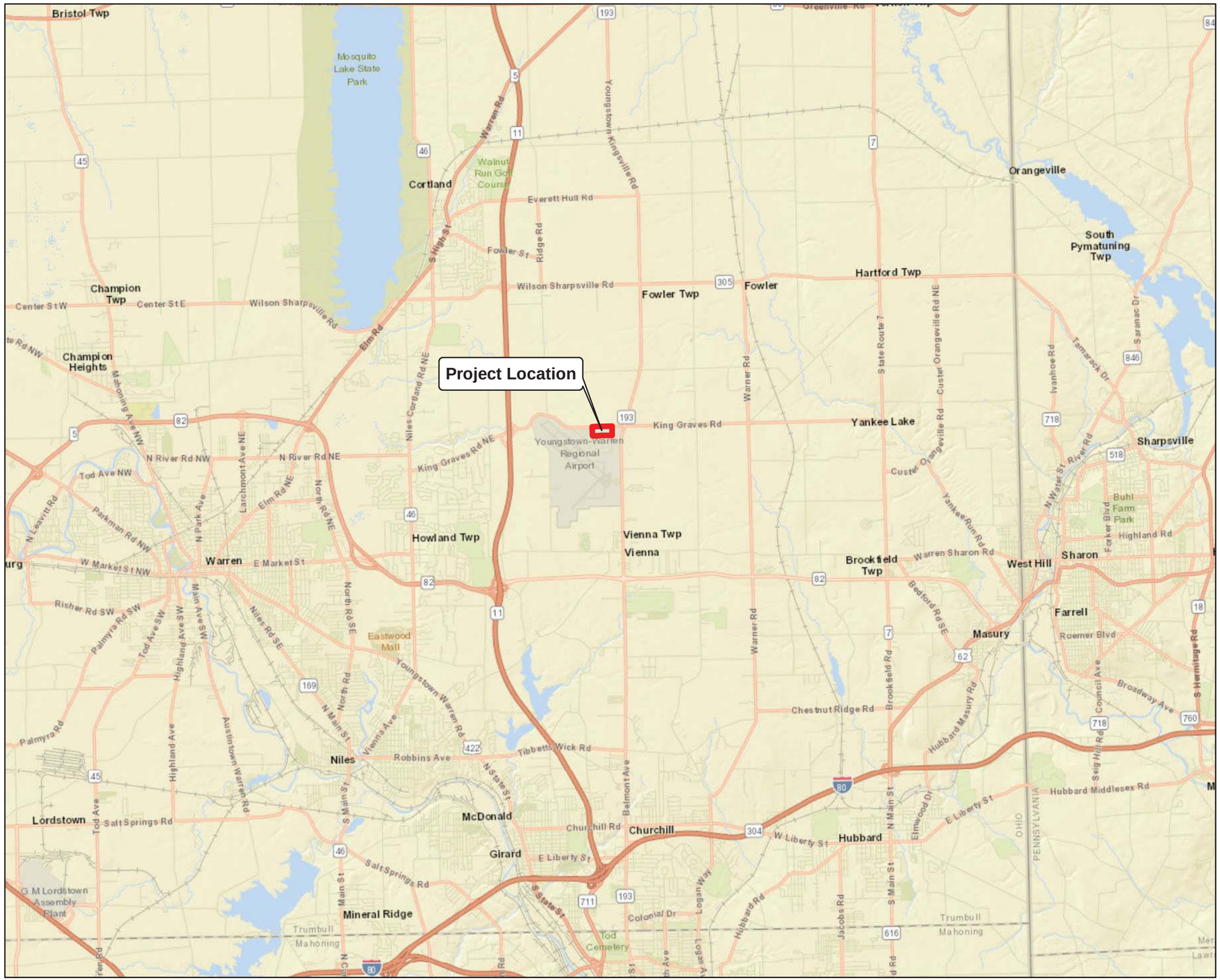


LEGEND

Parcel Boundary

BASE MAP SOURCE:
ESRI, World Street Map, online mapping

N

0 5,000 10,000
Feet

Figure 1-1.
General Location
Youngstown Air Reserve Station
Vienna, Ohio

1.4 Summary of Key Environmental Compliance Requirements

1.4.1 National Environmental Policy Act

NEPA (42 *United States Code* [U.S.C.] Sections 4321 through 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 decision makers make well-informed decisions, based on understandings of the potential environmental consequences, and take actions to protect, restore, or enhance the environment. NEPA established the CEQ, which was charged with developing and 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 analyses. This approach also requires federal agencies to use an interdisciplinary and systematic approach in their decision-making processes. The approach evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action.

The process for implementing NEPA is codified in Title 40 CFR, Parts 1500 through 1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*. The CEQ was established to implement and oversee federal policy in this process. The CEQ regulations specify that an EA must 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. The 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 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 its Environmental Impact Analysis Process (EIAP), 32 CFR Part 989, as amended.

1.4.2 Integration of Other Environmental Statutes and Regulations

To comply with NEPA, the planning and decision-making 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 decision maker 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" (40 CFR §1500.2 [c]).

Applicable federal statutes include the Clean Water Act (CWA), Clean Air Act (CAA), Coastal Zone Management Act, Fish and Wildlife Coordination Act of 1958, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Safe Drinking Water Act, Resource Conservation and Recovery Act, Migratory Bird Treaty Act, Migratory Bird Conservation Act, and the Water Resource Development Act. The NEPA analysis also considers compliance with EOs related to protection of wetlands, environmental justice, and management of floodplains and invasive species.

The CAA establishes federal policy to protect and enhance the quality of air resources to protect human health and the environment. The CAA requires that adequate steps be implemented to control the release of air pollutants and prevent significant deterioration of air quality. The Ohio Environmental Protection Agency (OEPA) has authority for compliance with the CAA.

The CWA of 1977 (33 U.S.C. §1344) and the Water Quality Act of 1987 (33 U.S.C. §1251, as amended) establish federal policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters and, where attainable, to achieve a level of water quality that provides for the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water. OEPA has authority for compliance with the CWA. OEPA regulations require that nonpoint source stormwater discharges related to the Proposed Action or alternatives comply with the requirements of a National Pollutant Discharge Elimination System permit, including a stormwater pollution prevention plan detailing site-specific best

management practices. Section 404 of the CWA requires specific permitting for dredging and/or filling of wetlands. This portion of the Act is administered by the U.S. Army Corps of Engineers (USACE) with U.S. Environmental Protection Agency oversight. Section 401 of the CWA requires certification of water quality for Section 404 discharges. OEPA administers the Section 401 program. However, a USACE CWA Section 404 permit for dredge and fill activities within waters of the United States is not anticipated for the Proposed Action. In addition to CWA requirements, USAF actions must comply with EO 11990, "Protection of Wetlands," and EO 11988, "Floodplain Management." When one or both of the above EOs apply, a finding of no practicable alternative (FONPA) must be completed if it is determined that there is no practicable alternative to implementing an action which would impact the wetland or floodplain. The FONPA finding is based on the NEPA analysis and documented in the NEPA decision document.

The ESA of 1973 (16 U.S.C. §1531) requires that federal agencies, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service, use their authority to assist in carrying out federal programs for the conservation of threatened or endangered species. These agencies also ensure that any project that is funded, authorized, or constructed by the federal government is not likely to jeopardize the continued existence of such threatened or endangered species, or result in the destruction or adverse modification of their habitat. Animals with a state designation of endangered, threatened, or of special concern are granted legal protection by the State of Ohio (Ohio Revised Code 1531.25). USFWS was consulted regarding the potential for the Preferred Alternative to affect protected species or their habitats.

Actions that could affect cultural resources are regulated under Section 106 of the NHPA of 1966 and the Advisory Council on Historic Preservation Regulations for compliance with Section 106, codified as 36 CFR 800. These regulations require that the effects of federal actions on cultural resources be considered and minimized. The State Historic Preservation Office (SHPO) regulates the preservation of cultural resources in Ohio and was consulted regarding potential cultural resources that could be affected by the Proposed Action. Additionally, 14 federally recognized tribes that have ancestral ties to lands in northeastern Ohio were consulted, in accordance with Ohio SHPO's recommendation, under Section 106. These tribes include the Delaware Nation, Delaware Tribe of Indians, Miami Tribe of Oklahoma, Ottawa Tribe of Oklahoma, Wyandotte Nation, Cayuga Nation, Oneida Nation of New York, Oneida Nation of Wisconsin, Onondaga Nation, St. Regis Mohawk Tribe, Seneca Nation of Indians, Seneca-Cayuga Nation, Tonawanda Seneca Nation, and Tuscarora Nation.

1.4.3 Interagency Coordination and Public Involvement

NEPA ensures that environmental information is made available to the public during the decision-making 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 on their actions to state and local governments and the public and involve these entities 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.

The SHPO, USFWS, OEPA, Ohio Department of Natural Resources, Western Reserve Port Authority, Vienna Township, Trumbull County, Natural Resources Conservation Service, and 14 federally recognized tribes were contacted during development of this EA to identify if they have issues relevant to the Proposed Action. Information provided has been incorporated into the EA. Copies of coordination and consultation letters are presented in Appendix A.

A notice was published in the *Tribune Chronicle* and *Vindicator* newspapers to inform the public of the preparation of this EA. A notice of the availability of the draft EA will be published to initiate the 30-day public review period for the draft EA. Public and agency comments received during the 30-day review period will be considered in developing the final EA.

2. Description of Proposed Action and Alternatives

2.1 Proposed Action

The Proposed Action includes the construction of a new Main Gate for YARS. The new Main Gate would serve as the primary means of ingress and egress for installation personnel and would serve limited commercial traffic. The proposed Main Gate would consist of a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, sidewalks, fencing, signage, parking, vehicle barrier systems, landscaping, and all associated infrastructure. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. Following construction, the existing gate/main entrance area would be closed (AFRC, 2018).

Structures and features constructed as part of the new Main Gate would be designed to complement each other as well as match the existing architecture on YARS for consistency in appearance. The project would comply with antiterrorism/force protection requirements per DoD's UFC and AFI 10-245. Facilities would have sustainable principles, to include Life Cycle cost effective practices that would be integrated into design, development, and construction of the project in accordance with Energy Policy Act (EPAct) of 2005 and EOs 13423 and 13514 and other applicable laws and EOs.

The proposed project footprint would be approximately 5.6 acres in size, including an inspection bay approximately 3,475 square feet (sq. ft.) in size, a gate house approximately 190 sq. ft. in size, an overwatch facility approximately 50 sq. ft. in size, and a visitor center approximately 1,535 sq. ft. in size.

2.2 Alternatives

CEQ regulations require that all reasonable alternatives be evaluated under NEPA. Alternatives may be eliminated from detailed analysis in a NEPA document based on being unfeasible and based on operational constraints, technical constraints, or substantially greater environmental impacts relative to other alternatives under consideration. For this EA, only the Preferred Alternative and the No Action Alternative are analyzed. Because of the constraints of internal development at YARS and the adjacent Youngstown-Warren Regional Airport, no other alternatives were identified as feasible for construction of a new Main Gate.

2.2.1 Alternatives Considered in Detail

2.2.1.1 Alternative 1 – Preferred Alternative

Alternative 1, which is the USAF's Preferred Alternative, would involve the construction of the new Main Gate on a privately owned 42.35-acre parcel adjacent to and east of the existing main entrance (Figure 2-1). The USAF would acquire the land prior to construction. A new four-lane asphalt road with a divided median would be constructed from King Graves Road to the proposed gate house and then narrow to two lanes and intersect with Perimeter/Twining Road. An existing segment of Perimeter Road would be removed during the reconfiguration of the intersection. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. During construction, additional areas within the parcel would be used for laydown and temporary construction vehicle access. King Graves Road would be widened to include two new turn lanes for traffic turning into the Main Gate from both directions.

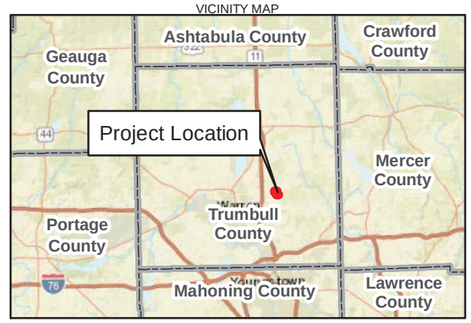
2.2.1.2 No Action Alternative

The No Action Alternative represents baseline conditions, which are used for comparison to future conditions that would exist under the Proposed Action. Under the No Action Alternative, the Proposed Action would not be implemented. A new Main Gate would not be constructed and the existing gate, which does not meet current antiterrorism/force protection requirements, would continue to operate.

2.2.2 Alternatives Considered but Eliminated from Further Consideration

Redesign and renovation of the existing Main Gate is not a viable option because the area lacks sufficient space for the expansion of facilities to meet current antiterrorism/force protection standards. Moving the gate farther south onto YARS is also not a viable option because there are buildings and infrastructure inside the existing main gate.

YARS considered constructing the new Main Gate along SR 193, at the southeastern corner of the installation, east of the YARS firefighting training area. This land is privately owned and would require the owner to terminate existing leases on portions of the land prior to sale of the property to the USAF. There are residential structures, a small pond, and wetlands on the property. This alternative was eliminated due to site constraints that limit design flexibility for accommodating both privately owned vehicle traffic and commercial traffic. YARS could consider this site for a commercial gate in the future, which would segregate the privately-owned vehicle traffic from the commercial traffic.



LEGEND

Parcel Boundary

Proposed Main Gate Project Area

BASE MAP SOURCE:
ESRI, World Topographic online mapping

N

0 200 400
Feet

Figure 2-1.
Proposed Main Gate Project Area
Youngstown Air Reserve Station
Vienna, Ohio

3. References

U.S. Air Force (USAF). 2018. “910th Airlift Wing Mission Briefing, Youngstown Air Reserve Station, Ohio (YARS).” June 6. https://www.youngstown.afrc.af.mil/.

U.S. Air Force Reserve Command (AFRC). 2018. *Charrette Report: Relocate Main Gate, Youngstown Air Reserve Station, Ohio*. Prepared by Stantec Consulting Services, Inc. 18 October.

Attachment 2
Distribution List

Entry Control Complex (Main Gate) Environmental Assessment – Youngstown Air Reserve Station
Interagency and Intergovernmental Coordination List

Federal Agency Contacts

Cathy Stepp, Regional Administrator
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Boulevard
Chicago, Illinois 60604
(312) 886-3000

State and Local Contacts

Laura Stevenson, Director
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049
(614) 644-2782

Pete Pizzulo, Zoning Inspector
Vienna Township
P.O. Box 593
Vienna, Ohio 44473
(330) 394-2319

Heidi Brown, Trustee
Vienna Township
P.O. Box 593
Vienna, Ohio 44473
(330) 394-2319

Phil Pegg, Trustee
Vienna Township
P.O. Box 593
Vienna, Ohio 44473
(330) 394-2319

Richard Dascenzo, Jr., Trustee
Vienna Township
P.O. Box 593
Vienna, Ohio 44473
(330) 394-2319

Daniel E. Polivka, President
Trumbull County Planning Commission

185 East Market Street NE, Suite A-2nd Floor
Warren, Ohio 44481
(330) 675-2480

John Moliterno, Executive Director
Western Reserve Port Authority
Northeast Ohio Development & Finance Authority
240 North Champion Street
Youngstown, OH 44503
(234) 228-9696

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

04 March 2019

MEMORANDUM FOR NRCS SERVICE CENTER OFFICE
ATTENTION: KARA MACDOWELL
Cortland Service Center
520 West Main Street Suite 3
Cortland OH 44410-1070

FROM: 910 MSG/CEV
3976 King Graves Road Unit 37
Vienna, OH 44473-5912

SUBJECT: Farmland Conversion Impact Rating Review Request for the 910th Airlift Wing, Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. The EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate), which will be designed to meet current antiterrorism/force protection requirements.

2. Due to space constraints, constructing the new Main Gate will require the acquisition of additional land outside of, and adjacent to, the YARS fenceline. YARS is in Trumbull County, Ohio, approximately 12 miles north of the city of Youngstown, Ohio, and within Vienna Township. An approximately 42-acre parcel to the northeast of the installation was identified for possible acquisition. Latitude/longitude for the center of the parcel is 41°16'15.59"N, 80°40'15.00"W.

3. The majority of the parcel is fallow agricultural land dominated by upland vegetation and with no indication of wetland hydrology. There is a small second-growth woodlot on the southern part of the parcel adjacent to the YARS fenceline that contains no wetland areas. There is a larger woodlot in the north-central portion of the parcel that contains both wetland and upland areas. Two wetlands were identified on the parcel. One is a large wetland complex associated with the larger woodlot and the immediately surrounding fallow areas, with eight distinct subareas. The other wetland is a small, isolated depression in the southwestern corner of the large woodlot that appears to have been created during previous earthmoving activities. **Soils on the parcel include Wadsworth silt loam, Rittman silt loam, Rawson silt loam, and Haskins loam, which are classified as prime farmland soils**.

4. The Description of the Proposed Action and Alternatives (DOPAA) (Attachment 1) includes additional information about the project, including aerial photographs of the parcel and a general site location boundary.

5. We respectfully request that you review the Farmland Conversion Rating Form (Attachment 2) and provide your response at your earliest convenience, but no later than 30 days from the receipt of this memorandum. Please address questions or comments to 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road Unit 12, Vienna, OH 44473-5912; or by email at: 910aw.pa@us.af.mil. If you have any questions, please contact Mr. White at (330) 609-1236. Thank you for your assistance.

W. E. Fink

WILLIAM FINK
Chief of Environmental Engineering

2 Attachments:
1. DOPAA
2. NRCS Rating Form

Attachment 1
DOPAA

Please refer to the DOPAA provided in Attachment 1 of the first letter, “Memorandum for Distribution,” dated 4 March 2019.

Attachment 2
NRCS Rating Form

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request	
Name of Project Youngstown ARS Main Gate	Federal Agency Involved U.S. Dept of Defense	
Proposed Land Use Military Operations	County and State Trumball County, Ohio	
PART II *(To be completed by NRCS)*	Date Request Received By NRCS	Person Completing Form:

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	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS	

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	6			
B. Total Acres To Be Converted Indirectly	26			
C. Total Acres In Site	30			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide Important or Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)				

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	5			
3. Percent Of Site Being Farmed	(20)	100			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	15			
6. Distance To Urban Support Services	(15)	0			
7. Size Of Present Farm Unit Compared To Average	(10)	5			
8. Creation Of Non-farmable Farmland	(10)	10			
9. Availability Of Farm Support Services	(5)	5			
10. On-Farm Investments	(20)	0			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	155	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland *(From Part V)*	100	0	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	155	0	0	0
TOTAL POINTS ***(Total of above 2 lines)***	260	155	0	0	0

Site Selected: A	Date Of Selection 1/31/2019	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection:

Name of Federal agency representative completing this form: Laura Haught/Jacobs Engineering, Inc.	Date: 1/31/2019

(See Instructions on reverse side) **Form AD-1006 (03-02)**

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map**,** or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.

Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \text{ X } 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

04 March 2019

MEMORANDUM FOR OHIO DEPARTMENT OF NATURAL RESOURCES
ATTENTION: JOHN KESSLER
Office of Real Estate & Land Management
2045 Morse Road Building E-2
Columbus OH 43229-6693

FROM: 910 MSG/CEV
3976 King Graves Road Unit 37
Vienna, OH 44473-5912

SUBJECT: Environmental Review Request for the 910th Airlift Wing, Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. The EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate), which will be designed to meet current antiterrorism/force protection requirements.

2. Due to space constraints, constructing the new Main Gate will require the acquisition of additional land outside of, and adjacent to, the YARS fenceline. YARS is in Trumbull County, Ohio, approximately 12 miles north of the city of Youngstown, Ohio, and within Vienna Township. An approximately 42-acre parcel to the northeast of the installation was identified for possible acquisition. Latitude/longitude for the center of the parcel is 41°16'15.59"N, 80°40'15.00"W.

3. The majority of the parcel is fallow agricultural land dominated by upland vegetation and with no indication of wetland hydrology. There is a small second-growth woodlot on the southern part of the parcel adjacent to the YARS fenceline that contains no wetland areas. There is a larger woodlot in the north-central portion of the parcel that contains both wetland and upland areas. Two wetlands were identified on the parcel. One is a large wetland complex associated with the larger woodlot and the immediately surrounding fallow areas, with eight distinct subareas. The other wetland is a small, isolated depression in the southwestern corner of the larger woodlot that appears to have been created during previous earthmoving activities.

4. The Proposed Action is in the early planning stages, but it is expected that wetlands on the 42-acre parcel would be avoided. It is possible that some tree clearing would occur, likely along the fenceline, but not within the wetland area. An early estimate for the amount of clearing that would be required is approximately 0.8-acre. Stormwater management and sediment and erosion control measures would be incorporated into the project. For example, disturbed areas that are unpaved would be reseeded; landscape design would incorporate low-maintenance plant species; stormwater from impervious areas would be treated for water quality and quantity; and sediment fencing, check dams, and inlet protection would be incorporated. The roads and the Main Gate would include stormwater controls that prevent changes to site hydrology following construction.

5. The Description of the Proposed Action and Alternatives (DOPAA) (Attachment 1) includes additional information about the project, including aerial photographs of the parcel and a general site

location boundary. The wetland delineation map and site photographs are included to aid in the review process (Attachments 2 and 3). Please note that the U.S. Army Corps of Engineers has not yet conducted a jurisdictional determination of the wetland boundaries. We respectfully request your environmental review of this project in accordance with Executive Order 12372, "Intergovernmental Review of Federal Programs." Please provide written comments or information regarding the action at your earliest convenience, but no later than 30 days from the receipt of this memorandum.

6. Please let us know if your agency is interested in receiving a link to the draft EA that will be available for government and public comment in April 2019.

7. Please address questions or comments to 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road Unit 12, Vienna, OH 44473-5912; or by email at: 910aw.pa@us.af.mil. If you have any questions, please contact Mr. White at (330) 609-1236. Thank you for your assistance.

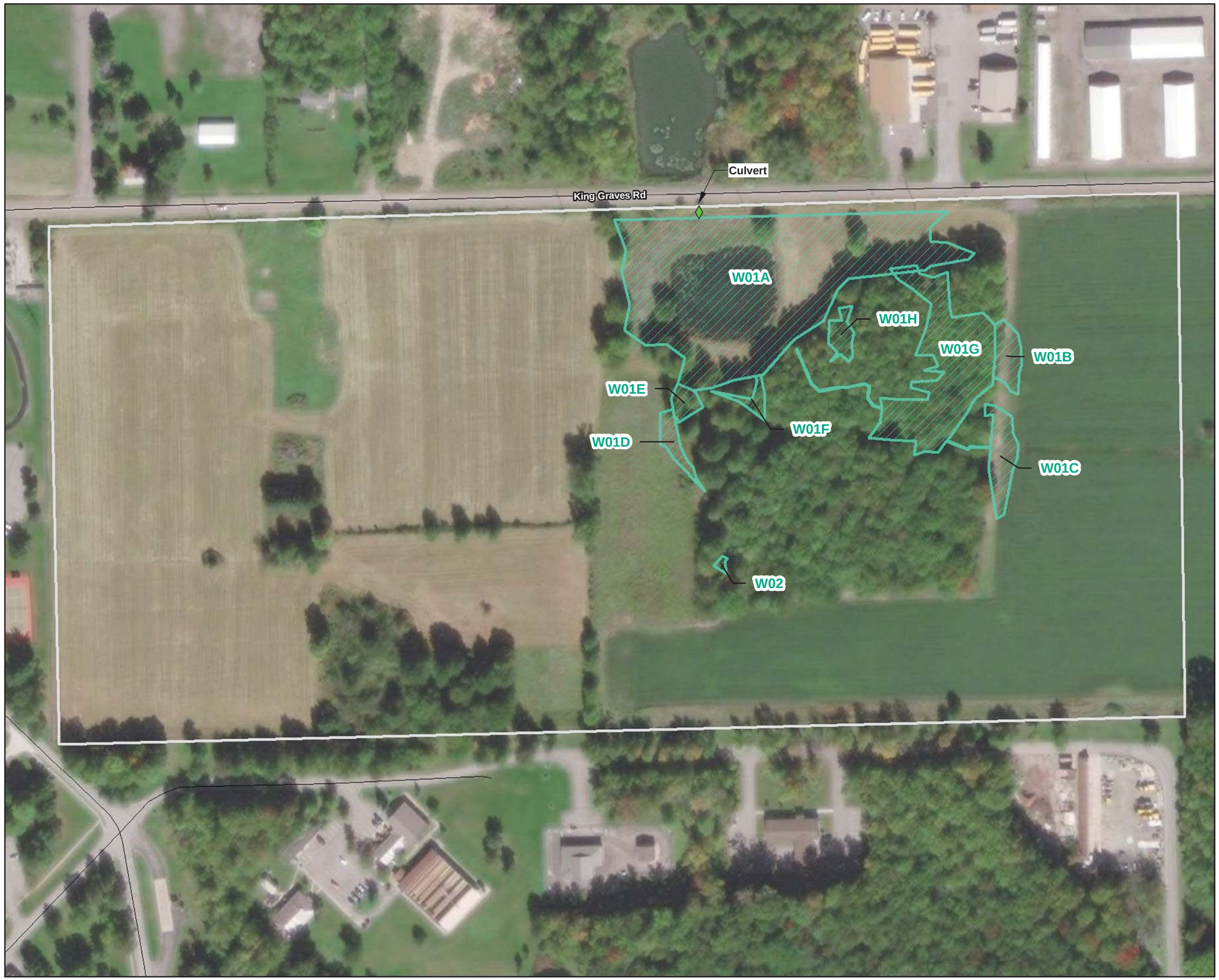
WILLIAM FINK
Chief of Environmental Engineering

3 Attachments:
1. DOPAA
2. Wetland Delineation Map
3. Site Photographs

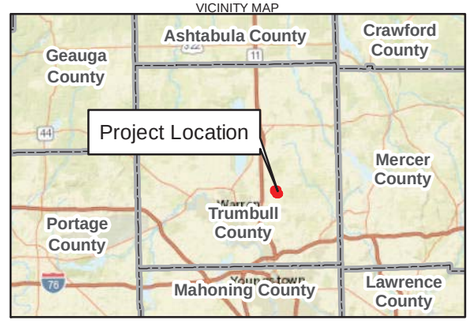
Attachment 1
DOPAA

Please refer to the DOPAA provided in Attachment 1 of the first letter, “Memorandum for Distribution,” dated 4 March 2019.

Attachment 2
Wetland Delineation Map



VICINITY MAP



LEGEND

- Delineated Wetland
- Parcel Boundary

BASE MAP SOURCE:
ESRI, World Topographic online mapping

N

0 87.5 175
Feet

Attachment 2
Wetland Delineation Map
Youngstown Air Reserve Station
Vienna, Ohio

Attachment 3
Site Photographs

Southern Woodlot – Entirely Uplands

Typical Fallow Field Upland

W01A – Open Water

W01A – At Interface with Northern Woodlot

W01B

W01C

W01D

W01E

W01F

W01G – Southern Boundary

W01G – Northwestern Boundary

W01H

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

04 March 2019

MEMORANDUM FOR OHIO STATE HISTORIC PRESERVATION OFFICER
ATTENTION: BURT LOGAN
Executive Director & CEO, Ohio History Connection
800 E. 17th Avenue
Columbus, OH 43211-2474

FROM: 910 MSG/CEV
3976 King Graves Road Unit 37
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality's NEPA implementing regulations).

2. Impacts to cultural resources from federal projects are regulated through legislation, including Section 106 of the National Historic Preservation Act of 1966 (as amended), and 36 CFR Part 800, which is administered by the Advisory Council on Historic Preservation. Additionally, at the state level, cultural resources are governed by Ohio Revised Code, Sections 149:51-149:54. Because the project is a federal undertaking, Section 106 compliance will be required. NEPA must also consider impacts to cultural resources.

3. On behalf of YARS, Jacobs Engineering Group Inc. (Jacobs) conducted a cultural resources desktop literature review for the new Main Gate. The purpose of this review was to assess the probability of significant cultural resources within the project area and to make recommendations for cultural resources compliance.

4. PROJECT DESCRIPTION. The project includes the construction of a new Main Gate for YARS on a 17.14-hectare (42.35-acre) parcel (referred to as the project area), situated adjacent to the facility to the east (Attachment 1, Figure 1). YARS does not currently own the parcel but is in negotiations for acquisition of the land. The parcel, previously referred to as the "Alderman Farm Parcel," consists of two and one-half tax parcels utilized for agricultural purposes as farm land. Historical aerial photographs show structures on the Alderman Farm Parcel property from approximately 1938 to 2011. Features of these structures were confirmed with the property owner, which included a house, barn, and several storage sheds for farming machinery and equipment. According to the property owner, these structures were no longer used circa 2007. The structures were demolished sometime after 2011 as there were none observed during a May 2017 visual site inspection conducted as part of an environmental baseline survey. A drinking water well associated with the former house was also decommissioned (AFRC, 2017).

5. The new Main Gate would serve as the primary means of ingress and egress for installation personnel and would serve limited commercial traffic. The proposed Main Gate would consist of a gate house with a covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, sidewalks, fencing, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. Following construction, the existing gate/main entrance area would be closed.

6. Structures and features constructed as part of the new Main Gate would be designed to complement each other as well as match the existing architecture on YARS for consistency in appearance. The project would comply with antiterrorism/force protection requirements per the U.S. Department of Defense's Unified Facilities Code and AFI 10-245. Facilities would have sustainable principles, to include Life Cycle cost-effective practices that would be integrated into the design, development, and construction of the project in accordance with the Energy Policy Act (EPAct) of 2005, Executive Orders (EO) 13423 and 13514, and other applicable laws and EOs.

7. While the parcel to be purchased for the project measures 17.14 hectares (42.35 acres), the proposed project footprint would be approximately 2.27 hectares (5.6 acres) in size, which includes an inspection bay measuring approximately 323 square meters (3,475 square feet), a gate house measuring approximately 18 square meters (190 square feet), an overwatch facility approximately 5 square meters (50 square feet) in size, and a visitor center measuring approximately 143 square meters (1,535 square feet).

8. AREA OF POTENTIAL EFFECTS. For the purpose of this cultural resources desktop review, the Area of Potential Effects (APE), which considers both direct and indirect project impacts, is limited to the area within or immediately adjacent to the 17.14-hectare (42.35-acre) parcel, as well as the existing YARS facility (see Attachment 1, Figure 2).

9. YARS sits on lands that are historically associated with several Native American tribes. The tribes to be contacted for the project are:

a. Delaware Nation
b. Delaware Tribe of Indians
c. Miami Tribe of Oklahoma
d. Ottawa Tribe of Oklahoma
e. Wyandotte Nation
f. Cayuga Nation
g. Oneida Nation of New York
h. Oneida Nation of Wisconsin
i. Onondaga Nation
j. St. Regis Mohawk Tribe
k. Seneca Nation of Indians
l. Seneca-Cayuga Nation
m. Tonawanda Seneca Nation
n. Tuscarora Nation

10. EXISTING CULTURAL RESOURCES CONTINGENCY PLAN. In January 2017, YARS completed a Cultural Resources Contingency Plan (CRCP) to assist facility personnel in managing the discovery of any unidentified cultural resource on the base property (see Attachment 2). The CRCP references four previous cultural resources investigations that have occurred within the base (Brenner 1977; Murphy 1989; Resource Applications, Inc. 1996; Davis et al. 1996). None of these previous surveys identified cultural resources within

the base boundaries. These investigations are discussed further below. The CRCP concludes with procedures for dealing with unanticipated cultural resources discoveries on the base.

11. PREVIOUSLY RECORDED CULTURAL RESOURCES. Jacobs conducted a literature review for the project on January 24, 2019 using the Ohio Historic Preservation Office online mapping database, which includes the Ohio Archaeological Inventory, Ohio Historic Inventory (OHI), National Register of Historic Places (NRHP), NRHP Determinations of Eligibility (DOE) files, Ohio Genealogical Society (OGS) Cemetery Registry files, and previously conducted cultural resources surveys. The dual purpose of the review was to locate previously recorded cultural resources within the APE and to provide information on the expected types and locations of sites within the project vicinity. Research focused on the project area, as well as a 1.6-kilometer (1-mile) radius centered on the project (Study Area).

12. Six archaeological surveys and one historic resources survey have been conducted within 1.6 kilometers (1 mile) of the project. There are two archaeological sites and four architectural resources documented within the Study Area (Attachment 1, Figure 3). None of the previously recorded archaeological sites or architectural resources are within the project area. At the time it was recorded, the Beckett Aviation Hangar was not eligible for inclusion on the NRHP.

a) Archaeological Resources. Two previously identified archaeological sites (33TR246 and 33TR268) are within the Study Area (Attachment 1, Figure 3). Site 33TR0246 was identified as an historic archaeological site, likely associated with a former building location, recorded as OHI #TRU205019, the Alkire Farm. According to Weller (2011), the site is not considered to be significant, and no further work was recommended. Site 33TR246 is well outside of the project area, east of State Route (SR) 193, and will not be affected by the project. Site 33TR0268 was identified during the 2015 Phase I survey for the King Graves Road realignment project (Mustain 2015). This site consists of a single historic artifact. Mustain noted that due to the lack of artifacts and associated archaeological deposits, a recommendation for NRHP eligibility could not be made. This site is located well outside the project area, north of the facility, at the northeast corner of the intersection of Ridge Road and County Road (CR) 158. Neither of these sites was recommended eligible for listing on the NRHP, and no further work was recommended.

b) Architectural Resources. The OHI lists four previously recorded architectural resources within the Study Area, including three single dwellings/barns associated with farmsteads and one aviation hangar (Table 1). The Beckett Aviation Company Hangar was recorded during the 1996 DOE for the adjacent Youngstown-Warren Regional Airport. At the time it was recorded, the Beckett Hangar was determined not eligible for inclusion on the NRHP. The remaining OHI-listed resources are all recorded as early-to-mid-nineteenth-century single dwellings or barns. All three of these resources are located on SR 193, east of the YARS facility (see Attachment 1, Figure 3). Note: The current name of the airport is Youngstown-Warren Regional Airport; however, some historical documents and maps refer to it as the Youngstown-Warren Municipal Airport.

c) Table 1: OHI-Listed Resources in the Study Area

OHI Number	Resource Name	Address	Resource Type	Date
TRU0204919	Beckett Aviation Company Hangar	Youngstown-Warren Municipal Airport	Air-Related	1940
TRU0205019	Alkire Farm/Sherman Leet Farm/James Warren Leet Farm	1814 SR 193	Single Dwelling/Barn	1830

OHI Number	Resource Name	Address	Resource Type	Date
TRU0205119	Clarence Leet Farm	1817 SR 193	Single Dwelling/Barn	1860
TRU0205219	Robert G. Plyler Farm/Edwin Griffin Farm	1918 SR 193	Single Dwelling/Barn	1830

d) Previous Cultural Resources Studies. Six archaeological surveys and one historic architecture survey were identified within 1.6 kilometers (1 mile) of the project APE (Table 2). None of the previous cultural resources surveys occurred within the project area. Of these, four of the previous archaeological surveys and the historic architecture survey occurred within the Youngstown-Warren Regional Airport property and a portion of one previous survey (13351) is within the YARS facility (Armstrong 1996; Blank 1984; Davis et al. 1996; Resource Applications, Inc. 1996; White 1976). The archaeological surveys that were completed within the Youngstown-Warren Regional Airport are primarily associated with improvements to the airport facilities. These included three Phase I investigations and one Phase II investigation. None of these surveys identified any archaeological resources within the YARS facility.

The remaining two previous archaeological surveys were associated with road improvements for King Graves Road and for improvements to a sewer line along SR 193 (Mustain 2015 and Weller 2011). The 2011 Weller survey identified one archaeological site, Site 33TR246, which is an historic site likely associated with the former Alkire Farm (OHI #TRU205019) location. This site was recommended not eligible for the NRHP. The 2015 ASC Group Inc. Phase I survey identified two archaeological sites—one prehistoric isolated find (33TR267) and one historic-period isolated find (33TR268). Neither archaeological site was evaluated for NRHP eligibility due to the lack of subsurface deposits and the narrowness of the survey area (Mustain 2015).

e) Table 2: Previous Surveys Within the Study Area

Ref. No.	Author/Year	Title
13351	Resource Applications, Inc. 1996	Final Report for Archaeological Survey, Youngstown Air Reserve Station, Vienna, Ohio
13475	Davis et al. 1996	Cultural Resource Investigations, Youngstown-Warren Regional Airport, Vienna and Fowler Townships, Trumbull County, Ohio
15693	Blank 1984	Results of a Phase I and II Archaeological Survey of the Shortfield Takeoff and Landing Zone, and Proposed relocation of Ridge Road at the Youngstown Municipal Airport, Vienna Township, Trumbull County, Ohio.
15696	White 1976	An Archaeological Assessment of the ILS/MALSR System Right-Of-Way Located at the 32 End of Runway 14/32, Youngstown Municipal Airport, Trumbull County, Ohio.

Ref. No.	Author/Year	Title
18530	Weller 2011	Phase I Archaeological Survey for the Approximately 5.43 km (3.37 mi) Long Little Squaw Creek Sanitary Sewer Interceptor Project (Phase 4) in Vienna Township, Trumbull County, Ohio
19948	Mustain 2015	Phase I Archaeological Survey for TRU-CR 158-2.24 (PID 81430), the Proposed Realignment of King Graves Road (CR 158) in Fowler and Vienna Townships, Trumbull County, Ohio
H00315	Armstrong 1996	Determination of Eligibility: Youngstown-Warren Regional Airport. Vienna & Fowler Townships, Trumbull County, Ohio

f) Historic Mapping. In addition to a review of previously recorded cultural resources, Jacobs reviewed online historic mapping. Historic atlases from 1830, 1840, and 1850 (OGS), 1874 (Everts), and 1899 (The American Atlas Company) illustrate that the project area and the surrounding Vienna Township were largely rural and dominated by agricultural activities.

In addition to the historic atlases, the 1914 Archaeological Map of Ohio was consulted (Mills 1914). Similar to other maps of its time (e.g., Guernsey 1932), this map depicts archaeological resources at a county-wide scale. The Mills map provides an overview of sites across the counties but limits the locational accuracy of these features.

In Trumbull County, Mills' map does not depict any archaeological resources within the current project area. The map does list a total of 30 prehistoric archaeological sites in Trumbull County, including mounds, village sites, and burials distributed along the Mahoning and Grand Rivers and Pymatuning Creek.

13. CONCLUSIONS AND RECOMMENDATIONS. The literature review identified seven cultural resources surveys within the 1.6-kilometer (1-mile) radius of the project, with two historic archaeological sites and four architectural resources. None of the previously recorded resources were located within the project area, and none of the previous cultural resources surveys intersects the current project area. Of the cultural resources surveys conducted within the Study Area, two identified new archaeological sites. However, these sites were isolated finds or low-density sites, both of which are outside of the project area. The four previous cultural resources surveys within the Youngstown-Warren Regional Airport and YARS facility did not identify any archaeological resources; one architectural resource was identified within the Youngstown-Warren Regional Airport.

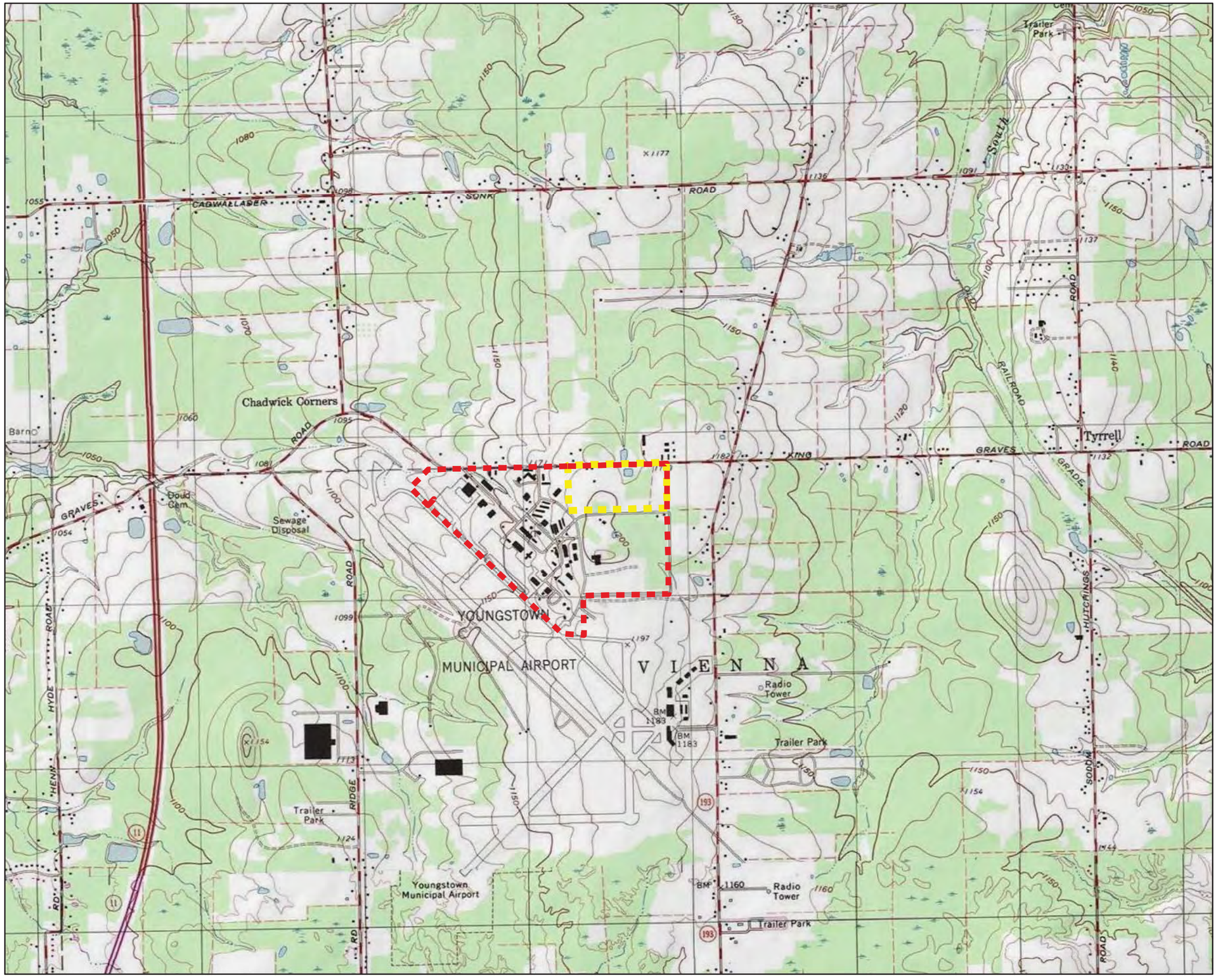
The 42-acre project area has not been subjected to a Phase I archaeological survey and there are known historic occupations located within the project APE. Information gathered during the records review suggests that there is a moderate-to-high probability of finding new historic-period archaeological sites, especially in association with the Alderman Farmstead. Previous cultural resources investigations surrounding YARS indicate a low probability that significant prehistoric deposits will be present.

14. We respectfully request that you provide formal comments on the undertaking within 30 days of receipt of this letter. Please address questions or comments to 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road Unit 12, Vienna, OH 44473-5912; or by email at: 910aw.pa@us.af.mil. If you have any questions, please contact Mr. White at (330) 609-1236. Thank you for your assistance.

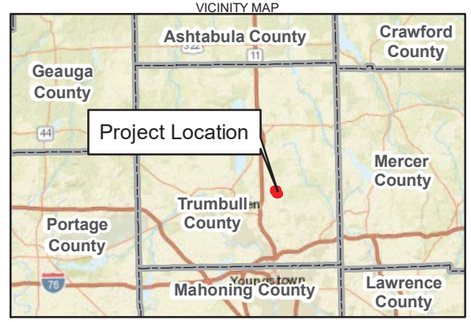
WILLIAM FINK
Chief of Environmental Engineering

2 Attachments:
1. Figures
2. CRCP

Attachment 1
Figures



VICINITY MAP



LEGEND

Parcel Boundary

Area of Potential Effects

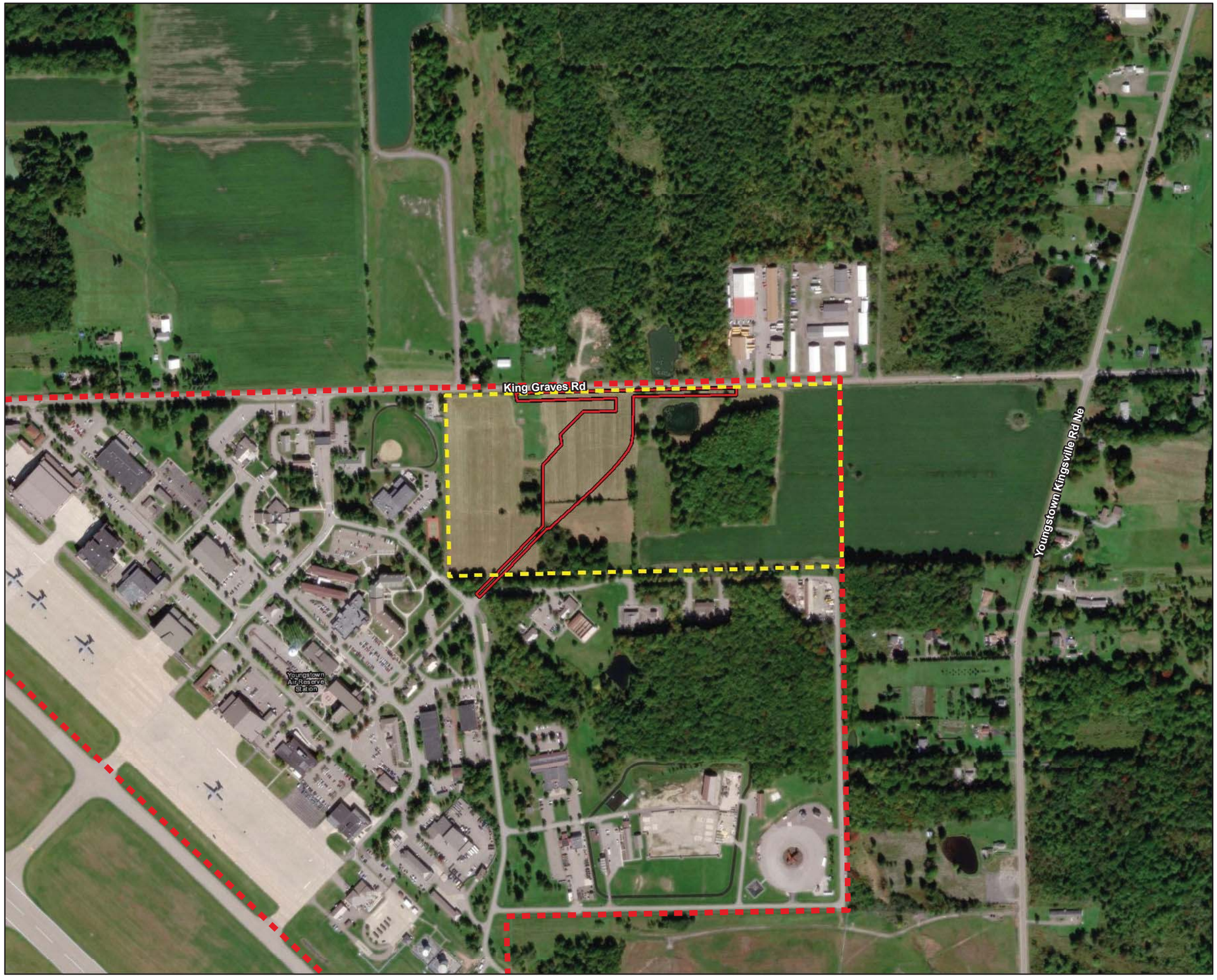
BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle:
Cortland, OH (published 1980)

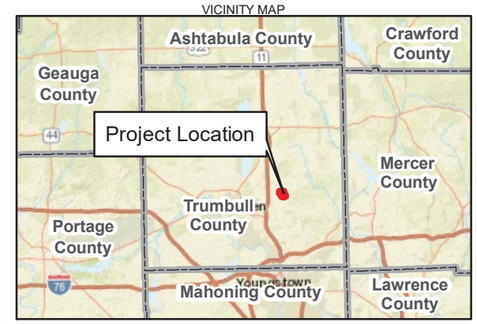
N

0 1,000 2,000
Feet

0 305 610
Meters

Figure 1.
Project Location
Youngstown Air Reserve Station
Vienna, Ohio





LEGEND

Name

- Parcel Boundary
- Approximate Project Footprint
- Area of Potential Effects

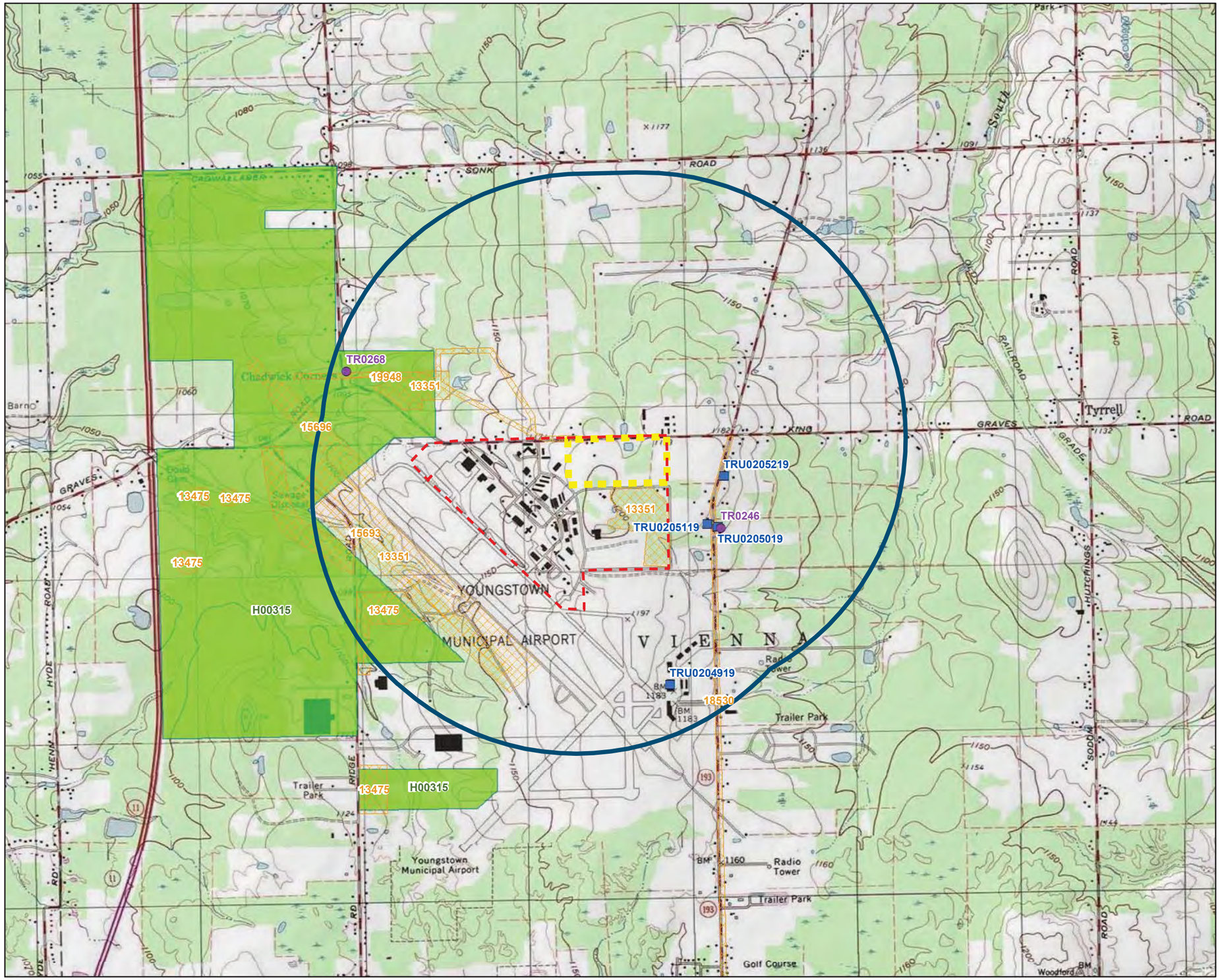
BASE MAP SOURCE:
Esri World Imagery Layer, 2014

N

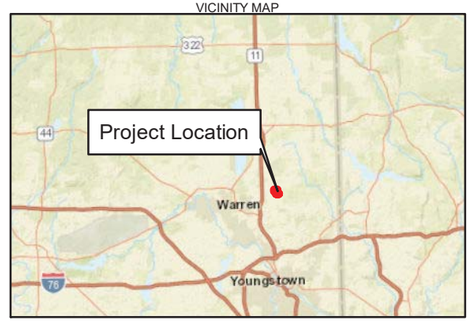
0 250 500
Feet

0 75 150
Meters

Figure 2.
Project Overview
Youngstown Air Reserve Station
Vienna, Ohio



VICINITY MAP



LEGEND

- Archaeological Site
- OHI Structure
- Phase I Archaeological Survey
- Architectural Resources Survey
- Study Area (1-mile radius)
- Parcel Boundary
- Area of Potential Effects

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle:
Cortland, OH (published 1980)

N

0 1,000 2,000
Feet

0 305 610
Meters

Figure 3.
Known Cultural Resources
Youngstown Air Reserve Station
Vienna, Ohio

Attachment 2
Cultural Resources Contingency Plan

HEADQUARTERS 910 AIRLIFT WING
Air Force Reserve Command
Youngstown Air Reserve Station
3976 King Graves Rd, Unit 37
Vienna, OH 44473-5937

CULTURAL RESOURCES CONTINGENCY PLAN

25 JANUARY 2017

PREPARED BY: 910 MSG/CEV

APPROVAL:

WILLIAM E. FINK
Environmental Engineer

25 January 2017
DATE

TABLE OF CONTENTS

RECORD OF CHANGES

All changes posted to this plan will be recorded on this page and filed at the end of the plan.

CHANGE	DATE OF CHANGE	DATE POSTED	PERSON POSTING CHANGE

RECORD OF REVIEW

DATE	REVIEWED BY	ORGANIZATION	REMARKS
15 MAY 2008	John Tarantine	910 MSG/CEV	Revised Plan Document
15 SEP 2009	Max Shifflet	910 MSG/CEV	Plan Review
29 SEP 2010	Max Shifflet	910 MSG/CEV	Plan Review
25 JAN 2017	William Fink	910 MSG/CEV	Plan Review

CHAPTER 1

1.0 INTRODUCTION

1.1 Executive Summary: The Cultural Resources Contingency Plan (CRCP) has been developed to assist base personnel in handling the discovery of an unidentified cultural resources on the base property. While it is not likely that a cultural resource will be discovered on base, it is important that base personnel and contractors take the appropriate actions in the event that a potential cultural resource is discovered. This will help to preserve cultural resources such as artifacts, archeological sites, and other historic findings.

1.2 Background: Four surveys have been conducted which relate to cultural resources. On 13 APR 77, Mr. William Brenner with Eastgate Development and Transportation Agency, performed a brief historical inventory of the base property. This survey revealed that there were no buildings, structures or sites of historical significance on base. In NOV 95, Resource Applications, Inc. performed a Phase I historic buildings survey of the base property. This survey identified no resources or activities that would require properties to be included on the National Register of Historic Places. On 15 APR 89, Mr. James Murphy who is a state certified archeologist performed an updated cultural resources survey. He reviewed archeological maps at the Ohio Historical Society which revealed no known archeological sites on or near the base. The Ohio Historical Inventory Files were also reviewed and no structures on base were listed. In NOV 95, Resource Applications, Inc. conducted a Phase I archaeological survey of the base property. No archaeological sites, prehistoric or historic, were identified during the survey.

1.3 Definition: A Cultural Resource, related to this plan, is defined as any historic, archeological, or Native American property of interest such as artifacts or human remains

1.4 References: The following is a list of laws related to cultural resources:

1.4.1 National Historic Preservation Act (NHPA)

1.4.2 Native American Graves Protection and Repatriation Act (NAGPRA)

1.4.3 Archeological Resource Protection Act (ARPA)

1.4.5 American Indian Religious Freedom Act (AIRFA)

1.4.6 AFI 32-7065 Cultural Resources Management

1.5 Responsibilities: The following organizations have responsibilities under the CRCP.

1.5.1 Base Civil Engineer (BCE): The BCE will ensure that construction activities are monitored and that any potential cultural item which is found is not disturbed. The BCE will make the site off-limits and preserve the finding until a determination of the significance of the finding can be made.

1.5.2 Environmental Engineer (CEV): The Environmental Engineer will report any finding of a potential cultural item. This office will also coordinate the mitigation of the finding, if required.

1.5.3 Base Contracting (LGC): The Base Contracting Office will ensure that each contractor involved in excavation on base is aware of the requirements in Section 2.1 and will immediately notify the Environmental Engineer's office if a contractor discovers a potential cultural resource.

CHAPTER 2

2.0 PROCEDURES

2.1 Protective Measures: Should a potential cultural resource be discovered on base, the following steps should be taken.

2.1.1 If the resource was discovered during excavation, immediately stop the excavation to prevent any further damage to the resource.

2.1.2 Base personnel will contact the Environmental Engineering Office (CEV) at ext. 1316 or 1557 to report the finding. Contractors will immediately notify the Contracting Officer, who will notify the Environmental Engineer.

2.1.2 Take appropriate actions to make the site off-limits to restrict access of unauthorized personnel who could damage or remove the resource.

2.2 Reporting Requirements:

2.2.1 After inspecting the site, the Environmental Engineer will contact the Departmental Consulting Archeologist, Archeology Assistance Division, National Park Service, Washington D.C. 20013-7127, to determine the significance of the resource.

2.2.2 The Environmental Engineer will also notify the Federal Historic Preservation Officer representative through the MAJCOM.

2.2.3 The Environmental Engineer will also notify the Ohio Historic Preservation Office, 567 East Hudson Street, Columbus, Ohio 43211-1030.

2.3 Mitigation Measures: The appropriate mitigation measures will be determined in coordination with the National Park Service. These mitigation measures can include limiting the project scope, repairing the property, or canceling, redesigning, or relocating a project but will depend on the significance and location of the resource.

APPENDIX A

DISTRIBUTION LIST

ORGANIZATION	OFFICE SYMBOL
Civil Engineering	CEA
Environmental Engineering	CEV
Base Contracting	LGC
Base Plans Office	XP

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

04 March 2019

MEMORANDUM FOR U.S. FISH AND WILDLIFE SERVICE
ATTENTION: ANGELA BOYER, ENDANGERED SPECIES COORDINATOR
4625 Morse Rd Suite 104
Columbus, OH 43230

FROM: 910 MSG/CEV
3976 King Graves Road Unit 37
Vienna OH 44473-5912

SUBJECT: Section 7 Coordination for the 910th Airlift Wing, Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. The EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate), which will be designed to meet current antiterrorism/force protection requirements.

2. Due to space constraints, constructing the new Main Gate will require the acquisition of additional land outside of, and adjacent to, the YARS fenceline. YARS is in Trumbull County, Ohio, approximately 12 miles north of the city of Youngstown, Ohio, and within Vienna Township. An approximately 42-acre parcel to the northeast of the installation was identified for possible acquisition. Latitude/longitude for the center of the parcel is 41°16'15.59"N, 80°40'15.00"W.

3. Most of the parcel is fallow agricultural land dominated by upland vegetation and with no indication of wetland hydrology. There is a small approximately 1.25-acre second-growth woodlot on the southern part of the parcel adjacent to the YARS fenceline that contains no wetland areas. There is a larger woodlot (approximately 7.2 acres) in the north-central portion of the parcel that contains both wetland and upland areas. Two wetlands were identified on the parcel. One is a large wetland complex associated with the larger woodlot and the immediately surrounding fallow areas, with eight distinct subareas. The other wetland is a small, isolated depression in the southwestern corner of the larger woodlot that appears to have been created during previous earthmoving activities.

4. The Proposed Action is in the early planning stages, but it is expected that wetlands on the 42-acre parcel would be avoided. It is possible that some tree clearing would occur, likely along the fenceline, but not within the wetland area. An early estimate for clearing that would be required is approximately 0.8-acre within the 1.25-acre small wooded area. Stormwater management and sediment and erosion control measures would be incorporated into the project. For example, disturbed areas that are unpaved would be reseeded; landscape design would incorporate low-maintenance plant species; stormwater from impervious areas would be treated for water quality and quantity; and sediment fencing, check dams, and inlet protection would be incorporated. The roads and the Main Gate would include stormwater controls that prevent changes to site hydrology following construction.

5. The Description of the Proposed Action and Alternatives (DOPAA) (Attachment 1) includes additional information about the project, including aerial photographs of the parcel and a general site location boundary. The wetland delineation map and site photographs are included to aid in the review

process (Attachments 2 and 3). Please note that the U.S. Army Corps of Engineers has not yet conducted a jurisdictional determination of the wetland boundaries.

6. The U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) Trust Resource Report prepared for the project indicates four federally listed species: the Indiana bat (*Myotis sodalis*; endangered), the northern long-eared bat (*Myotis septentrionalis*; threatened), the eastern massasauga (*Sistrurus catenatus*; threatened), and the clubshell (*Pleurobema clava*; endangered). These species have the potential to occur in the vicinity of the 42-acre parcel (Attachment 4). There are no streams or rivers on the property; therefore, there is no habitat for the clubshell and the Proposed Action would have **no effect** on the clubshell.

7. There is potential summer habitat for the northern long-eared bat within the wooded portions on the 42-acre parcel; therefore, the Final 4(d) Rule project key was followed. There is no winter habitat on the parcel. The Proposed Action would not purposefully take northern long-eared bats. The 42-acre parcel is within the White-nosed Syndrome Zone but will not affect caves or mines or entrances or the environment of a hibernaculum. The Proposed Action would include approximately 0.8-acre of non-hazardous tree removal. Based on the results presented in the IPaC Trust Resource Report, there are no known occupied maternity roost trees on or within 150 feet of the proposed tree removal. Therefore, the Proposed Action is **not likely to adversely affect** the northern long-eared bat.

8. There is potential summer habitat for the Indiana bat within the wooded portions on the 42-acre parcel. There is no winter habitat on the parcel. Tree clearing would only be conducted between October 1 and March 31. Therefore, the Proposed Action is **not likely to adversely affect** the Indiana bat.

9. There is potential habitat on the 42-acre parcel for the eastern massasauga within the wetlands and adjacent uplands. It is unlikely that the eastern massasauga would occur within the limits of disturbance because that area is an agricultural field that has been in production for years and is therefore not hospitable for the snake or its prey. Therefore, the Proposed Action is **not likely to adversely affect** the eastern massasauga.

10. The AFRC respectfully requests concurrence with our determination within 30 days from receipt of this letter. Please direct all correspondence to: 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road, Vienna, OH 44473; or by email at: 910aw.pa@us.af.mil. If you have any questions, please contact Mr. White at (330) 609-1236. Thank you for your assistance.

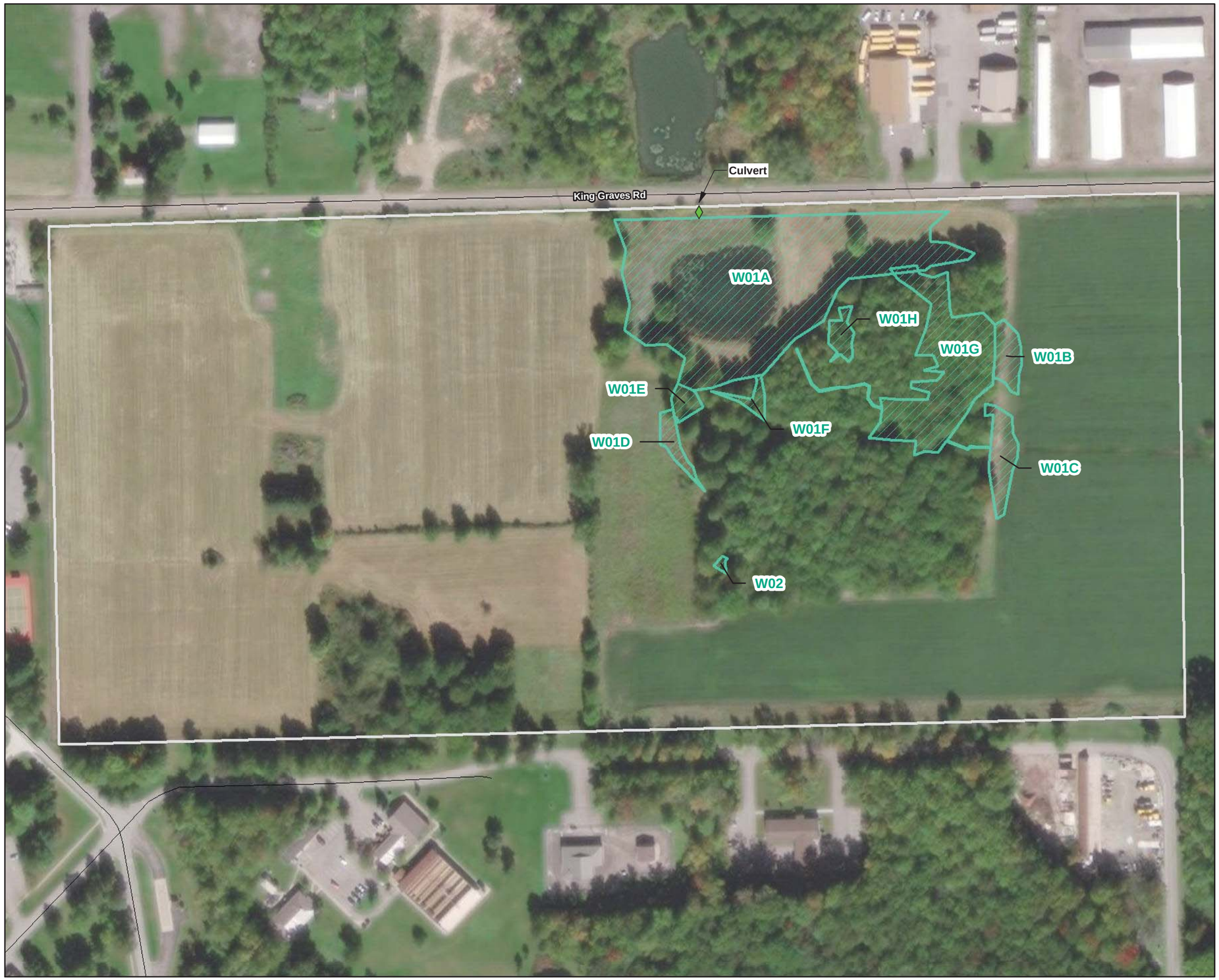
WILLIAM FINK
Chief of Environmental Engineering

4 Attachments:
1. DOPAA
2. Wetland Delineation Map
3. Site Photographs
4. USFWS IPaC Trust Resource Report

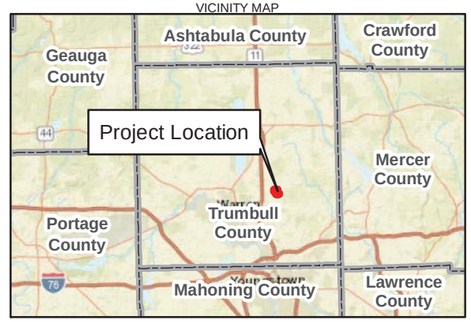
Attachment 1
DOPAA

Please refer to the DOPAA provided in Attachment 1 of the first letter, “Memorandum for Distribution,” dated 4 March 2019.

Attachment 2
Wetland Delineation Map



VICINITY MAP



LEGEND

- Delineated Wetland
- Parcel Boundary

BASE MAP SOURCE:
ESRI, World Topographic online mapping

N

0 87.5 175
Feet

Attachment 2
Wetland Delineation Map
Youngstown Air Reserve Station
Vienna, Ohio

Attachment 3
Site Photographs

Southern Woodlot – Entirely Uplands

Typical Fallow Field Upland

W01A – Open Water

W01A – At Interface with Northern Woodlot

W01B

W01C

W01D

W01E

W01F

W01G – Southern Boundary

W01G – Northwestern Boundary

W01H

Attachment 4
USFWS IPaC Trust Resource Report

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
Phone: (614) 416-8993 Fax: (614) 416-8994

In Reply Refer To:
Consultation Code: 03E15000-2019-SLI-0472
Event Code: 03E15000-2019-E-00525
Project Name: YARS

January 29, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit http://www.fws.gov/migratorybirds/AboutUS.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
(614) 416-8993

Project Summary

Consultation Code: 03E15000-2019-SLI-0472

Event Code: 03E15000-2019-E-00525

Project Name: YARS

Project Type: DEVELOPMENT

Project Description: YARS Main Gate

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/41.270896156011034N80.67056904455507W

Counties: Trumbull, OH

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Eastern Massasauga (=rattlesnake) *Sistrurus catenatus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2202	Threatened

Clams

NAME	STATUS
Clubshell *Pleurobema clava*	Endangered

Population: Wherever found; Except where listed as Experimental Populations
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/3789

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

13 March 2019

MEMORANDUM FOR PITTSBURGH DISTRICT CORPS OF ENGINEERS
William S. Moorhead Federal Building
1000 Liberty Avenue
Regulatory Branch, Suite 2200
Pittsburgh, PA 15222

FROM: 910 MSG/CEV
3976 King Graves Road Unit 37
Vienna, Ohio 44473-5912

SUBJECT: Jurisdictional Determination Request for the 910th Airlift Wing, Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are planning to construct and operate a new Entry Control Complex (Main Gate) to meet current antiterrorism/force protection requirements.

2. YARS is in Trumbull County, Ohio, approximately 12 miles north of the city of Youngstown, Ohio, and within Vienna Township.

3. Due to space constraints, constructing a new entry control point will require the acquisition of additional land outside of, and adjacent to, the YARS fenceline. An approximately 42-acre parcel to the northeast of the installation was identified for possible acquisition. Latitude/longitude for the center of the parcel is 41°16'15.59"N, 80°40'15.00"W.

4. A wetland delineation was conducted on this parcel and the identified features were mapped. The majority of the parcel is fallow agricultural land dominated by upland vegetation with no indication of wetland hydrology. There is a small second-growth woodlot on the southern part of the parcel adjacent to the YARS fenceline that was determined to be upland forest. There is a larger woodlot in the north-central portion of the parcel that contains both wetland and upland areas. Two wetlands were identified on the parcel associated with this larger woodlot. One is a large forested/emergent wetland complex associated with the larger woodlot and the immediate surrounding fallow areas, with eight distinct subareas. The other is a small, isolated depression in the southwestern corner of the larger woodlot that appears to have been created during previous earthmoving activities.

5. The Proposed Action is in the early planning stages, but it is expected that wetlands on the 42-acre parcel will be avoided.

6. The Wetland Delineation Report (Attachment 1) includes additional information about the project site, including aerial photographs of the parcel, a general site location boundary, wetland delineation map, and site photographs. A figure showing the proposed location of the Main Gate is provided as Attachment 2. A survey plat map of the 42-acre parcel is provided as Attachment 3.

7. We request a final jurisdictional determination to allow the planning process to adequately consider regulated waters and the means to avoid or minimize impacts to those waters. The jurisdictional

determination request form is attached (Attachment 4). If you have any questions, or would like to conduct a site visit, please contact 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road, Unit 12, Vienna, OH 44473; or by phone at: (330)-609-1236; or by email at: 910aw.pa@us.af.mil. Thank you for your assistance.

WILLIAM FINK
Chief of Environmental Engineering

4 Attachments:
1. Wetland Delineation Report
2. Proposed Action Figure
3. Survey Plat Map
4. Jurisdictional Determination Request Form

Attachment 1
Wetland Delineation Report

Final

Youngstown Air Reserve Station
Vienna, Ohio

Wetland Delineation Report
Proposed New Main Gate, 42-Acre Site

February 2019

Prepared for:
U.S. Air Force Reserve Command

Contents

Acronyms and Abbreviations

CWA	Clean Water Act
Jacobs	Jacobs Engineering Group Inc.
NRCS	Natural Resources Conservation Service
OEPA	Ohio Environmental Protection Agency
ORAM	Ohio Rapid Assessment Method
PEM	palustrine emergent wetlands
PFO	palustrine forested wetlands
PSS	palustrine scrub-shrub
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
YARS	Youngstown Air Reserve Station

1. Project Description

The Youngstown Air Reserve Station (YARS) is considering the construction of a new Main Gate for the installation that would meet antiterrorism/force protection requirements. Due to space constraints, constructing new entry control points will require the acquisition of additional land outside of, and adjacent to, the YARS fenceline. YARS is in Trumbull County, Ohio, approximately 12 miles north of the city of Youngstown, Ohio, and within the city of Vienna (Figure 1-1). An approximately 42-acre parcel to the northeast of the installation was identified for possible acquisition and was evaluated for the presence of wetlands and other waters of the United States (Figure 1-2). The wetland delineation field activities and results are presented in this report.

1.1 Methods

The Jacobs Engineering Group Inc. (Jacobs) field team conducted a protocol delineation of waters of the United States in undeveloped areas of the project area on November 8 and 9, 2018, to identify and map ponds, wetlands, and streams on the parcel. Before delineating the waters on the parcel, Jacobs reviewed available secondary source information to assess site conditions and identify potential locations of wetlands and other regulated waters. Secondary sources included the historical aerial photography available through Google Earth, the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS, 2018), and the Cortland, Ohio 7.5-minute U.S. Geological Survey (USGS) topographic map (USGS, 1992).

Wetland boundaries were mapped using a mapping-grade (sub-meter accuracy) Trimble global positioning system receiver. Jacobs conducted the fieldwork in the project area in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (Regional Supplement; U.S. Army Corps of Engineers [USACE], 2012a).

No field data were collected after snowfall began on November 9, 2018. All data were collected on November 8, 2018, and all flagging to indicate wetland boundaries was placed on November 8. Because of a loss of battery power, the digital mapping was completed on November 9, 2018. Jacobs returned to the site and recorded the locations of the boundary flagging placed on November 8. A second site visit was conducted on January 22, 2019, to complete the recording of the boundary flagging.

The USACE and the U.S. Environmental Protection Agency jointly define wetlands as “[t]hose areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Environmental Laboratory, 1987). Wetlands within the project area were classified according to *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979).

No non-wetland waters were identified on the parcel. Therefore, streams, ponds, and impoundments are not discussed in this report.

1.1.1 Hydrophytic Vegetation

Hydrophytic (wetland) vegetation includes those plants typically adapted for life in saturated soil conditions. To determine whether wetland vegetation was present, percent vegetative cover and plant indicator status for dominant species were identified. The percent cover for species in all vegetative layers (tree, sapling, shrub, herbaceous, and woody vine) was estimated to determine the dominant vegetation and characterize each plant community sampled. Dominant species within the sample area were classified using percent cover within the plot. Plant wetland indicator status was determined using the 2016 National Wetland Plant List (Lichvar et al., 2016). The regional wetland indicator status and dominance of each individual plant species was used to determine whether a predominance of wetland plants existed within the sample plot. Plant wetland indicator status categories are defined in Table 1-1. Under normal conditions, if more than 50 percent of the dominant species within a sample plot are

Obligate wetland, Facultative Wetland, or Facultative, the hydrophytic vegetation criterion is satisfied (USACE, 2012a). In Section 1.2, *Results*, wetland indicator status is provided parenthetically for each species discussed.

Table 1-1. Plant Indicator Status Categories

Indicator Category	Indicator Symbol	Definition
Obligate Wetland	OBL	Almost always is a hydrophyte; rarely in uplands
Facultative Wetland	FACW	Usually is a hydrophyte but occasionally found in uplands
Facultative	FAC	Commonly occurs as either a hydrophyte or non-hydrophyte
Facultative Upland	FACU	Occasionally is a hydrophyte but usually occurs in uplands
Obligate Upland	UPL	Rarely is a hydrophyte; almost always in uplands

Source: USACE, 2012b.

1.1.2 Hydric Soils

Hydric soils form under conditions with sufficient saturation, flooding, or ponding during the growing season to develop anaerobic conditions in the upper portion (between 0 and 12 inches, depending on percolation rates and soil depths) of the soil profile. Hydric soils were identified using field observations to determine hydric soil indicators, as defined in the Regional Supplement (USACE, 2012a) and the *Field Indicators of Hydric Soils in the United States, Version 8.1* (NRCS, 2017). Soil colors were determined using a Munsell Color Chart (Munsell Color Company, 2000). A positive hydric soil indicator, as defined in the Regional Supplement (USACE, 2012a), had to be documented for an area to meet the hydric soil criterion.

1.1.3 Wetland Hydrology

Wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season (Environmental Laboratory, 1987). Primary field indicators for wetland hydrology are described in the Regional Supplement (USACE, 2012a).

The Jacobs field team identified whether positive indicators of wetland hydrology were present within all areas examined. In accordance with the protocols, Jacobs documented at least one primary wetland hydrology indicator or two secondary hydrology indicators to verify an area met the wetland hydrology criterion (Environmental Laboratory, 1987; USACE, 2012a).

1.1.4 Wetland Classification

Following the determination of wetland vegetation, hydric soil conditions, and hydrologic regime, wetland communities were classified according to the U.S. Fish and Wildlife Service (USFWS) classification system (Cowardin et al., 1979). The Palustrine System is defined as “nontidal wetlands dominated by trees, shrubs, persistent emergent, emergent mosses or lichens…”. This system includes vegetated wetlands such as marshes, swamps, bogs, fens, and prairies and can be adjacent to lakes, streams, rivers, or estuaries. Palustrine emergent wetlands (PEM) are characterized by erect, rooted, herbaceous hydrophytes, excluding lichens and mosses; palustrine scrub-shrub (PSS) wetlands by woody vegetation less than 20 feet tall; and palustrine forested wetlands (PFO) by woody vegetation 20 feet tall or taller.

Wetland and upland field data forms are provided in Appendix A. A photographic log of the site is provided in Appendix B.

The Ohio Environmental Protection Agency (OEPA) developed the Ohio Rapid Wetland Assessment Method (ORAM) for categorizing the functions and values of wetlands. Through ORAM, wetlands are evaluated based on numeric criteria and their quality is categorized as low (Category 1), moderate (Category 2), or high (Category 3) (Table 1-2). Permitting and mitigation requirements vary among the

three wetland classes. At present, ORAM Version 5.0 (OEPA, 2001) is in use. Each wetland or wetland complex was evaluated using ORAM. The ORAM evaluation sheets are provided in Appendix C.

Table 1-2. Ohio Rapid Assessment Method V. 5.0 Category Assignments Based on Score

Quantitative Score	Category[a]
0 – 29.9	Category 1
30 – 34.9	Category 1–2 Gray Zone
35 – 44.9	Modified Category 2
45 – 59.9	Category 2
60 – 64.9	Category 2–3 Gray Zone
65 - 100	Category 3

[a] Scores in gray zones are automatically assigned to the higher category unless a detailed analysis is conducted.

1.2 Results

The majority of the parcel is fallow agricultural land dominated by upland vegetation and with no indication of wetland hydrology. There is a small second-growth woodlot on the southern part of the parcel adjacent to the YARS fenceline that contains no wetland areas. There is a larger woodlot in the north-central portion of the parcel that contains both wetland and upland areas. Two wetlands were identified on the parcel (Figure 1-3). One is a large wetland complex associated with the larger woodlot and the immediate surrounding fallow areas, with eight distinct subareas. Each subarea was mapped separately. The wetland complex is designated as W01. The other wetland is a small, isolated depression in the southwestern corner of the larger woodlot that appears to be have been created during previous earthmoving activities. It is designated as W02. The wetland complex was evaluated as a single wetland for determining its ORAM score and category. Table 1-3 lists the identified wetlands, including the eight subareas of W01, and presents the USFWS classification, ORAM score and category, and a brief description of the wetlands.

Table 1-3. Wetlands Identified on the Parcel

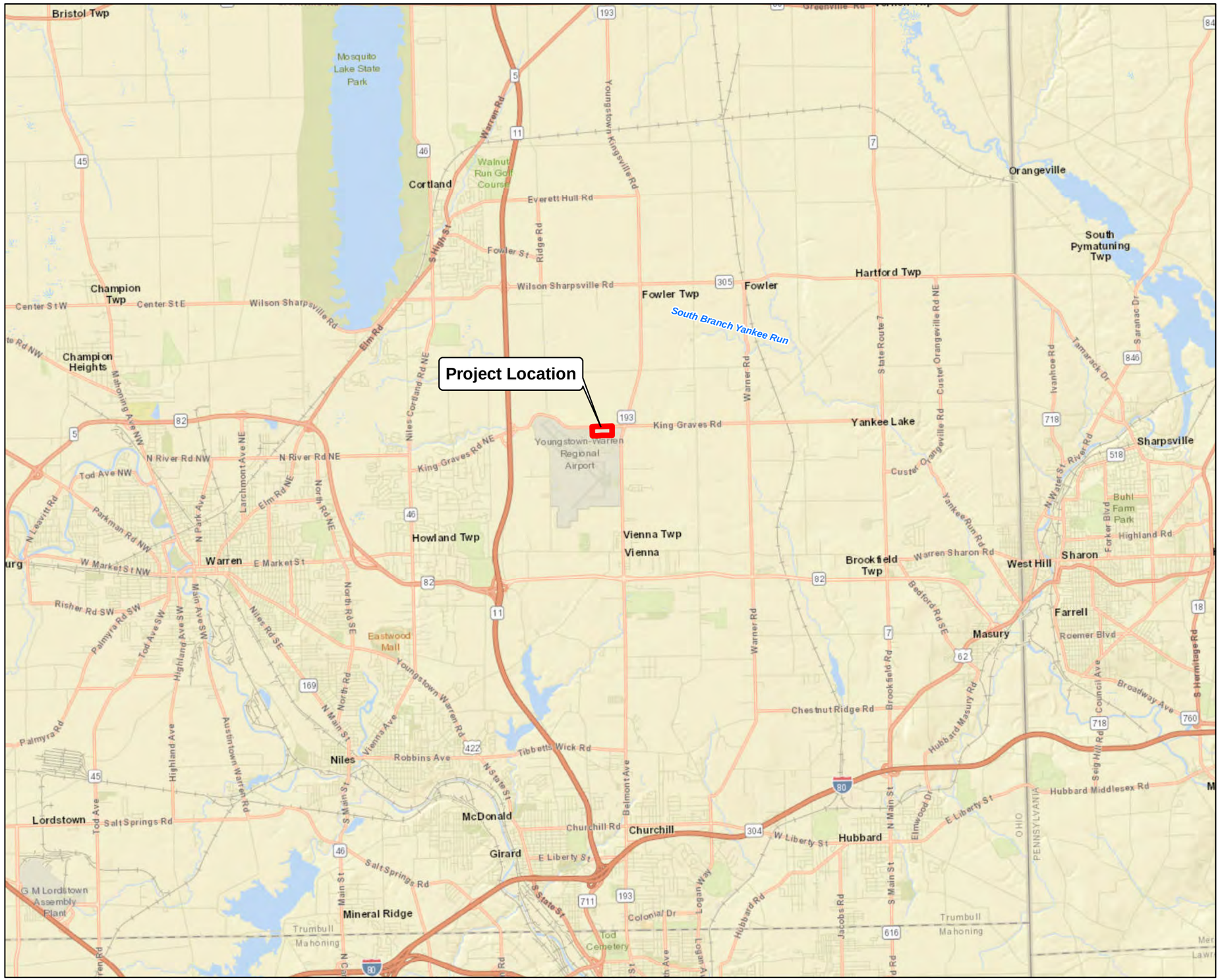
Wetland Identifier (Acreage)	USFWS Classification	ORAM Score/ Category[a]	Description
W01A (2.54 acres of 3.82-acre wetland complex)	PEM	45.5 Category 2[b]	Emergent wetland adjacent to the periphery of the woodlot on its north side. Water flows from this wetland to the north through a culvert into an unnamed perennial tributary of the South Branch of Yankee Run. The culvert passes through a berm that creates an unconsolidated bottom area within W01A. The bottom area contains spatterdock (*Nuphar lutea*) and open water. Wetland is dominated by soft rush, pinkweed, hardstem bulrush (*Scirpus atrovirens*), and broom rosette grass.
W01B (0.095-acre of 3.82-acre wetland complex)	PEM		Emergent wetland adjacent to the periphery of the woodlot on its northeast side. Connected through surface hydrology to an unnamed perennial tributary of the South Branch of Yankee Run via surface flow through W01H and W01A.
W01C (0.154-acre of 3.82-acre wetland complex)	PEM		Emergent wetland adjacent to the periphery of the woodlot on its east side. Connected through surface hydrology to an unnamed perennial tributary of the South Branch of Yankee Run via surface flow through W01G and W01A.

Table 1-3. Wetlands Identified on the Parcel

Wetland Identifier (Acreage)	USFWS Classification	ORAM Score/ Category[a]	Description
W01D (0.069-acre of 3.82-acre wetland complex)	PEM		Emergent wetland adjacent to the periphery of the woodlot on the west side. Connected through surface hydrology to an unnamed perennial tributary of the South Branch of Yankee Run via surface flow through W01A. The wetland is dominated by reed canary grass and soft rush.
W01E (0.052-acre of 3.82-acre wetland complex)	PFO		Forested wetland on the west side of the woodlot that has a surface flow connection to W01A and ultimately to an unnamed perennial tributary of the South Branch of Yankee Run. The wetland is dominated by silver maple (*Acer saccharinum*) in the canopy layer. European buckthorn (*Rhamnus cathartica*) is the dominant shrub and the understory is dominated by soft rush and broom rosette grass.
W01F (0.049-acre of 3.82-acre wetland complex)	PFO		Forested wetland on the west side of the woodlot that has a surface flow connection to W01A and ultimately to an unnamed perennial tributary of the South Branch of Yankee Run. The wetland is dominated by silver maple in the canopy layer with no dominant shrubs. The understory is dominated by broom rosette grass and blackberry (*Rubus arcticus*).
W01G (0.079-acre of 3.82-acre wetland complex)	PFO		Forested wetland on the east side of the woodlot that has a surface flow connection to W01A and ultimately to an unnamed perennial tributary of the South Branch of Yankee Run. Wetland is dominated by silver maple and red maple (*Acer rubrum*) in the canopy layer. Spicebush (*Lindera benzoin*) is the dominant shrub species. The understory is dominated by broom rosette grass and sensitive fern (*Onoclea sensibilis*).
W01H (0.068-acre of 3.82-acre wetland complex)	PFO		Forested wetland on the north side of the woodlot that has a surface flow connection to W01A and ultimately to an unnamed perennial tributary of the South Branch of Yankee Run. The wetland is dominated by silver maple and red maple (*Acer rubrum*) in the canopy layer. There are no dominant shrub species. The understory is dominated by broom rosette grass and sensitive fern.
W02 (0.007-acre)	PSS	29 Category 1	Small hydrologically isolated depression in the woodlot in the southeast corner. Has substantial grass groundcover (fall panic grass [*Panicum dichotomoflorum*] and broom rosette grass [*Dichanthelium scoparium*]) and does not exhibit characteristics of a vernal pool. Canopy cover is provided by overhanging trees, but no trees are rooted within the wetland.

[a] W02 was scored as a single wetland because it is isolated from other waters.

[b] A single ORAM score and category is provided for the entire W01 complex, which includes subareas A through H. All subareas of W01 are hydrologically connected via unbroken surface connections.



LEGEND

Parcel Boundary

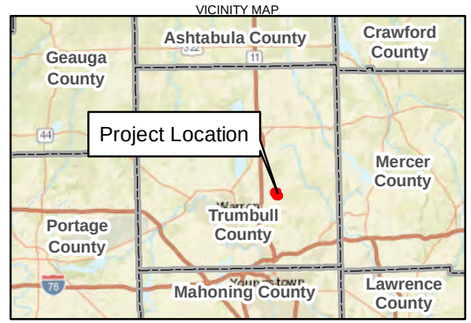
BASE MAP SOURCE:
ESRI, World Street Map, online mapping

N

0 5,000 10,000
Feet

Figure 1-1.
General Location
Youngstown Air Reserve Station
Vienna, Ohio

JACOBS



LEGEND

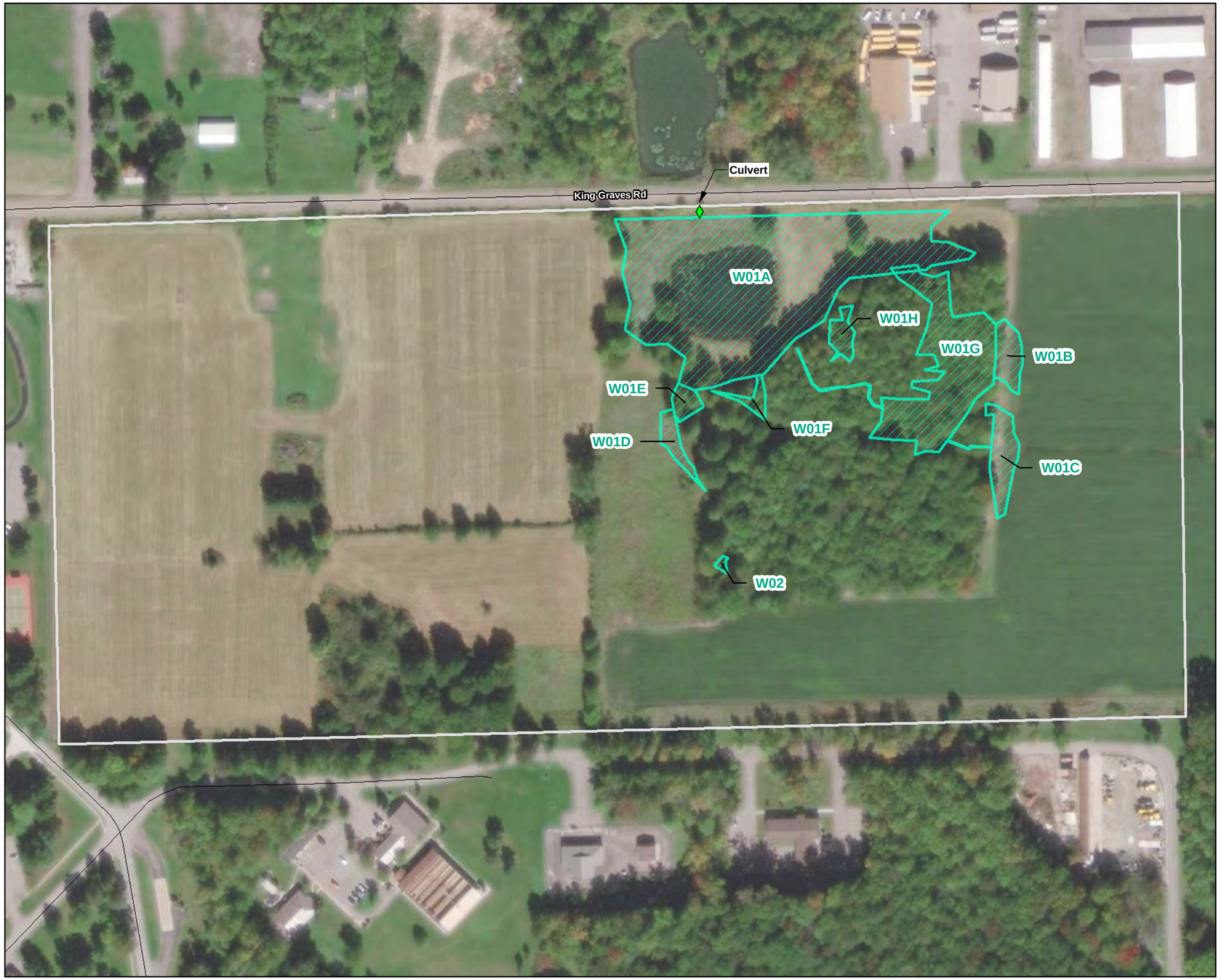
Parcel Boundary

BASE MAP SOURCE:
ESRI, World Topographic online mapping

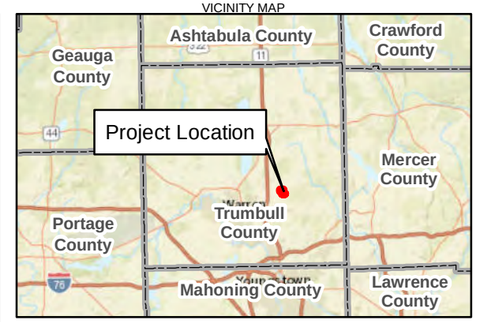
N

0 200 400
Feet

Figure 1-2.
Project Area
Youngstown Air Reserve Station
Vienna, Ohio



VICINITY MAP



LEGEND

Delineated Wetland

Parcel Boundary

BASE MAP SOURCE:
ESRI, World Topographic online mapping

N

0 87.5 175
Feet

Figure 1-3.
Wetland Delineation Map
Youngstown Air Reserve Station
Vienna, Ohio

2. Regulatory Overview

Temporary disturbances or permanent impacts to wetlands or other waters regulated under the Clean Water Act (CWA) during construction of a new entry gate would require YARS to obtain a permit from the USACE Pittsburgh District Regulatory Division, pursuant to Section 404 of the CWA. In addition, YARS would need to obtain a water quality certification under Section 401 of the CWA from the OEPA 401 Water Quality Certification and Isolated Wetland Permitting Section.

Under current ownership, the isolated wetlands on the parcel would be subject to regulation under the OEPA 401 Water Quality Certification and Isolated Wetland Permitting Section. However, if the land is transferred to federal ownership, these waters may not be subject to regulation.

2.1 Federal Jurisdictional Waters Determination

Jurisdictional waters are those waters, including wetlands, that are subject to regulation under Section 404 of the CWA or that are navigable waters, as defined under the Rivers and Harbors Act. This section presents Jacobs' opinion regarding the jurisdictional status of the waters identified in the survey. This assessment is based on the current approach to determine jurisdictional status and does not reflect possible changes if the 2018 Waters of the United States Rule becomes effective.

Only USACE can make an official jurisdictional determination, and its decision may differ from the opinion of Jacobs. The rationale for whether each feature is likely to be considered jurisdictional upon review by USACE is presented as follows:

- It is the opinion of Jacobs that the wetland complex W01, including all subareas A through H, is a federal jurisdictional water because of the continuous surface hydrological connection with the unnamed perennial tributary of the South Branch of Yankee Run.
- It is the opinion of Jacobs that W02 is not a federal jurisdictional water because it is isolated and has no hydrologic connection to other waters.

2.2 Waters of the State Determination

All waters identified on the parcel are classified as waters of the State, because they either meet federal jurisdictional requirements or are regulated in Ohio as isolated wetlands.

2.3 Permitting

If W01 or any of its subareas are encroached upon by future development at YARS, CWA Section 404 permitting through USACE would be necessary. Whether an individual or general permit would be required would depend on the magnitude of the encroachment. If the encroachment is minimal, the work may be authorized without the need to submit a preconstruction notification to USACE.

In addition to a CWA Section 404 permit, CWA Section 401 water quality certification from the OEPA may be required unless the encroachment is authorized under a general permit for which water quality certification has been waived.

If W02 is encroached upon by future development at YARS, an Ohio Isolated Wetlands Permit from the OEPA could be required.

3. References

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Appendix A
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: UPL01

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271960 Long: -80.668308 Datum: WGS 84

Soil Map Unit Name: Wadsworth Silt Loam, 2 - 6 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No x	**Is the Sampled Area within a Wetland?**	**Yes** _____ **No** x
Hydric Soil Present?	Yes _____	No x	If yes, optional Wetland Site ID:	
Wetland Hydrology Present?	Yes _____	No x		

Remarks: (Explain alternative procedures here or in a separate report.)

Isolated depression that does not connect to other water features.

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): surface

Wetland Hydrology Present? Yes _____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators were observed.

VEGETATION – Use scientific names of plants.

Sampling Point: UPL01

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5 m)			
1. Festuca rubra	45	Y	FACU
2. Solidago canadensis	50	Y	FACU
3. Phalaris arundinacea	5	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		
Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	5	x 2 =	10
FAC species		x 3 =	
FACU species	95	x 4 =	380
UPL species		x 5 =	
Column Totals:	100 (A)		390 (B)

Prevalence Index = B/A = 3.9

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 2	10YR 4/3	100					loam	
2 to 8	10 YR 3/3	100					clay loam	
8 to 14	10 YR 2/2	90	7.5 R 6/6	10	C	M	sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)

Depleted Matrix (F3)

- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

Soils did not match the mapped type.

No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: UPL02

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.270480 Long: -80.669847 Datum: WGS 84

Soil Map Unit Name: Udorthents, loamy NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No x	**Is the Sampled Area within a Wetland?**	**Yes** _____ **No** x
Hydric Soil Present?	Yes _____	No x		
Wetland Hydrology Present?	Yes _____	No x	If yes, optional Wetland Site ID: _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): surface

Wetland Hydrology Present? Yes _____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No wetland hydrology indicators were observed.

VEGETATION – Use scientific names of plants.

Sampling Point: UPL02

Tree Stratum (Plot size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus serotina	30	Y	FACU
2. Quercus rubra	25	Y	FACU
3.			
4.			
5.			
6.			
7.			
	55 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 m)			
1. Rosa multiflora	5	N	FACU
2. Rhamnus cathartica	55	Y	FAC
3.			
4.			
5.			
6.			
7.			
	60 = Total Cover		
Herb Stratum (Plot size: 5 m)			
1. Solidago canadensis	20	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 = Total Cover		
Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species 55	x 3 = 165
FACU species 80	x 4 = 320
UPL species	x 5 =
Column Totals: 135 (A)	485 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** x

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 2	10YR 4/3	100					loam	
2 to 12	10 YR 3/2	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** x

Remarks:

Soils did not match the mapped type.

No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01A

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271956 Long: -80.668344 Datum: WGS 84

Soil Map Unit Name: Wadsworth silt loam, 0 - 2 percent slopes & Wadsworth silt loam, 2 - 6 percent slopes NWI classification: PEM, with included POW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No ____	**Is the Sampled Area within a Wetland?** **Yes** x **No** ____
Hydric Soil Present?	Yes x	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes x	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- x High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes X	No ____	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Drains to an unnamed tributary of South Branch.

VEGETATION – Use scientific names of plants.

Sampling Point: W01A

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: entire wetland)			
1. Juncus effusus	30	Y	FACW
2. Persicaria pensylvaniica	20	Y	FACW
3. Scirpus atrovirens	20	Y	OBL
4. Dichanthelium scoparium	30	Y	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	80	x 2 =	160
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	100 (A)		180 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- x 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

Asclepias incarnata, Phalaris arundinacea, and multiple wetland-adpated carices occur in the wetland but were not in the sample plot.

Contains a large open water area with Nuphar lutea. Small area of upland adjacent to the open water area is included in the mapped wetland area.

SOIL

Sampling Point: W01A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 2	10YR 4/3	100					loam	
2 to 8	10 YR 4/1	80	7.5 R 6/6	20	C	M & PL	clay loam	
below 8	Water							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

Soils did not match the mapped type.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01B

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271554 Long: -80.668019 Datum: WGS 84

Soil Map Unit Name: Wadsworth silt loam, 0 - 2 percent slopes & Wadsworth silt loam, 2 - 6 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 2
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Connects through PFO (W18) to W12, which drains to an unnamed tributary of South Branch.

VEGETATION – Use scientific names of plants.

Sampling Point: W01B

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: entire wetland)			
1. Juncus effusus	40	Y	FACW
2. Scirpus atrovirens	20	Y	OBL
3. Dichanthelium scoparium	40	Y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	80	x 2 =	160
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	100 (A)		180 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- x 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W01B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 2	10YR 4/3	100					loam	
2 to 12	10 YR 4/1	80	7.5 R 6/6	20	C	M & PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

Soils did not match the mapped type.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01C

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271150 Long: -80.668054 Datum: WGS 84

Soil Map Unit Name: Wadsworth silt loam, 0 - 2 percent slopes & Wadsworth silt loam, 2 - 6 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No ____	**Is the Sampled Area within a Wetland?** **Yes** x **No** ____
Hydric Soil Present?	Yes x	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes x	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 2

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Connects through PFO (W16) to W12, which drains to an unnamed tributary of South Branch.

VEGETATION – Use scientific names of plants.

Sampling Point: W01C

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		

Herb Stratum (Plot size: entire wetland)			
1. Phalaris arundinacea	100	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 100	x 2 = 200
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 100 (A)	200 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- x 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W01C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 2	10YR 4/3	100					loam	
2 to 12	10 YR 4/1	80	7.5 R 6/6	20	C	M & PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

Soils did not match the mapped type.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01D

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.270969 Long: -80.670165 Datum: WGS 84

Soil Map Unit Name: Wadsworth silt loam, 0 - 2 percent slopes & Wadsworth silt loam, 2 - 6 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No ____	**Is the Sampled Area within a Wetland?** **Yes** x **No** ____
Hydric Soil Present?	Yes x	No ____	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes x	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

Isolated feature that does not connect to other water features.

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 2

Water Table Present? Yes ____ No X Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W01D

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: entire wetland)			
1. Phalaris arundinacea	60	Y	FACW
2. Juncus effusus	35	Y	FACW
3. Onoclea sensibilis	5	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species 100	x 2 = 200
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: 100 (A)	200 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- x 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W01D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 to 2	10YR 4/3	100					loam	
2 to 12	10 YR 4/1	80	7.5 R 6/6	20	C	M & PL	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

Soils did not match the mapped type.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01E

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271187 Long: -80.670154 Datum: WGS 84

Soil Map Unit Name: Wadsworth Silt Loam, 0 - 2 percent slopes NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 1
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Connects to W12, which drains north to a tributary of South Branch.

VEGETATION – Use scientific names of plants.

Sampling Point: W01E

Tree Stratum (Plot size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharinum	35	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	35 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 m)			
1. Rhamnus cathartica	15	y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5 M)			
1. Dichanthelium scoparium	25	Y	FACW
2. Juncus effusus	15	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40 = Total Cover		
Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	75	x 2 =	150
FAC species	15	x 3 =	45
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	90 (A)		195 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- x 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W01E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/1	100					loam	
1 - 12	10 YR 4/2	70	7.5 R 4/6	30	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:_____

Depth (inches):_____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01F

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271344 Long: -80.669615 Datum: WGS 84

Soil Map Unit Name: Wadsworth Silt Loam, 0 - 2 percent slopes NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 1
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Connects to W12, which drains north to a tributary of South Branch.

VEGETATION – Use scientific names of plants.

Sampling Point: W01F

Tree Stratum (Plot size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharinum	40	Y	FACW
2. Quercus rubra	5	N	FACU
3.			
4.			
5.			
6.			
7.			
	45	= Total Cover	

Sapling/Shrub Stratum (Plot size: 10 m)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5 M)			
1. Dichanthelium scoparium	30	Y	FACW
2. Rubus arcticus	15	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	= Total Cover	

Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	85	x 2 =	170
FAC species	5	x 3 =	15
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	90 (A)		185 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [x] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W01F

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/1	100					loam	
1 - 12	10 YR 4/2	70	7.5 R 4/6	30	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:_____

Depth (inches):_____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01G

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271409 Long: -80.668087 Datum: WGS 84

Soil Map Unit Name: Wadsworth Silt Loam, 0 - 2 percent slopes NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 1
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Contains a 3 to 4 foot wide channel that leads in from W17 and continues north to connect with W12, which drains north to a tributary of South Branch.

VEGETATION – Use scientific names of plants.

Sampling Point: W01G

Tree Stratum (Plot size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharinum	35	Y	FACW
2. Acer rubrum	20	Y	FAC
3.			
4.			
5.			
6.			
7.			
	55	= Total Cover	

Sapling/Shrub Stratum (Plot size: entire wetland)			
1. Lindera benzoin	10	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	

Herb Stratum (Plot size: entire wetland)			
1. Onoclea sensibilis	25	Y	FACW
2. Dichanthelium scoparium	25	Y	FACW
3. Scirpus atrovirens	10	N	OBL
4. Woodwardia virginica	5	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	

Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	95	x 2 =	190
FAC species	20	x 3 =	60
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	130 (A)		265 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- x 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W01G

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/1	100					loam	
1 - 12	10 YR 4/2	70	7.5 R 4/6	30	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:_____

Depth (inches):_____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W01H

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.271645 Long: -80.669159 Datum: WGS 84

Soil Map Unit Name: Wadsworth Silt Loam, 0 - 2 percent slopes NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 1
Water Table Present?	Yes _____	No _____	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Receives flow form W19 and drains to W12, which drains north to a tributary of South Branch.

VEGETATION – Use scientific names of plants.

Sampling Point: W01H

Tree Stratum (Plot size: 10 m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	25	Y	FAC
2. Acer saccharimum	20	Y	FACW
3.			
4.			
5.			
6.			
7.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	
Herb Stratum (Plot size: 5 m)			
1. Dichanthelium scoparium	15	Y	FACW
2. Onoclea sensibilis	10	Y	FACW
3. Woodwardia virginica	5	N	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30	= Total Cover	
Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	45	x 2 =	90
FAC species	25	x 3 =	75
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	75 (A)		170 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [x] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No**

Remarks: (Include photo numbers here or on a separate sheet.)

While canopy covers the wetland, no trees are rooted within the wetland

SOIL

Sampling Point: W01H

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/1	100					loam	
1 - 12	10 YR 4/2	70	7.5 R 4/6	30	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Youngstown ARS 42 Acre Site City/County: Trumbull County Sampling Date: 11-08-2018

Applicant/Owner: U.S. Air Force Reserve Command State: OH Sampling Point: W02

Investigator(s): Rich Reaves/Rob Price Section, Township, Range: T4N, R2W - no identified Section Number

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): < 2

Subregion (LRR or MLRA): LRR R Lat: 41.270480 Long: -80.669857 Datum: WGS 84

Soil Map Unit Name: Wadsworth Silt Loam, 2 - 6 percent slopes NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No x (If no, explain in Remarks.)

Are Vegetation no, Soil X, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes x	No _____	**Is the Sampled Area within a Wetland?** **Yes** x **No** _____
Hydric Soil Present?	Yes x	No _____	If yes, optional Wetland Site ID: _____
Wetland Hydrology Present?	Yes x	No _____	

Remarks: (Explain alternative procedures here or in a separate report.) Isolated depression that does not connect to other water features, dense herbaceous vegetation so not a vernal pool.

Precipitation ~10 inches above normal for year, 0.5 inch above normal for preceding month, & 0.35 inch of precipitation the day prior to field work.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- x Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 1

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): surface

Wetland Hydrology Present? **Yes** x **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Depression that appears to accumulate runoff and snowmelt.

VEGETATION – Use scientific names of plants.

Sampling Point: W02

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: entire wetland)			
1. Lindera benzoin	1	N	FACW
2. Rhamnus cathartica	1	N	FAC
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: entire wetland)			
1. Panicum dichotomiflorum	45	Y	FACW
2. Dichanthelium scoparium	45	Y	FACW
3. Rubus sp	10	N	not classified
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80 = Total Cover		
Woody Vine Stratum (Plot size:)			
1. none			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	91	x 2 =	182
FAC species	1	x 3 =	3
FACU species		x 4 =	
UPL species	10	x 5 =	50
Column Totals:	102 (A)		235 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

- x 1 - Rapid Test for Hydrophytic Vegetation
- x 2 - Dominance Test is >50%
- x 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

While canopy covers the wetland, no trees are rooted within the wetland

SOIL

Sampling Point: W02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/1	100					loam	
1 - 12	10 YR 4/2	70	7.5 R 4/6	30	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:_____

Depth (inches):_____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

Appendix B
Site Photographs

Southern Woodlot – Entirely Uplands

Typical Fallow Field Upland

W01A – Open Water

W01A – At Interface with Northern Woodlot

W01B

W01C

W01D

W01E

W01F

W01G – Southern Boundary

W01G – Northwestern Boundary

W01H

Appendix C
ORAM for Wetlands Data Forms

Version 5.0	**Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization**	
	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Richard Reaves	
Date: 12-24-2018	
Affiliation: Jacobs, Contractor for U.S. Air Force Reserve Command	
Address: 6600 Peachtree Dunwoody Rd. 400 Embassy Row, Suite 600 Atlanta, Georgia 30328	
Phone Number: 678-530-4285	
e-mail address: richard.reaves@jacobs.com	
Name of Wetland: unnamed, designated as W01	
Vegetation Communit(ies): PFO/PEM	
HGM Class(es):	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	
USGS Quad Name Cortland OH	
County	
Township	
Section and Subsection	
Hydrologic Unit Code	
Site Visit	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland: unnamed, designated as W01 - includes mapped W01A through W01H	
Wetland Size (acres, hectares): 3.82 ac / 1.55 ha	

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

Comments, Narrative Discussion, Justification of Category Changes:

Wetland area at a topographic low on the property that includes forested, emergent, and open water components.

Connects to perennial stream/wetland complex to the north via a culvert under King Graves Road. The culvert and roadway provide a distinct break such that the onsite wetland is evaluated as a separate wetland that the downstream wetland north of King Graves Road.

Area mapped as wetland includes a discontinuous upland area adjacent to the open water area (which appears to be man-made). Intermittently, portions of the perimeter of the open water are contiguous with emergent wetland while other areas are mounded and dominated by upland vegetation. The amount of upland area was small relative to the size of the wetland and completely within the wetland area, so it was not mapped separately.

W01 contained eight distinct areas that were connected by direct surface water connections.

Final score :	45	**Category:**	2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	X	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap . The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).		NO Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?		NO Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?		NO Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?		NO Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?		NO Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?		NO Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?		NO Go to Question 8a
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?		NO Go to Question 8b

8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?		NO Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?		NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?		
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?		
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?		
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.		NO Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).		NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: 42-acre Site, W01	**Rater(s):** Reaves	**Date:** 12-24-18

Metric 1. Wetland Area (size).

3 (max 6 pts.) | 3 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [x] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

7 (max 14 pts.) | 10 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [X] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

13 (max 30 pts.) | 23 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [X] other Historical timber harvest

Metric 4. Habitat Alteration and Development.

12 (max 20 pts.) | 35 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [x] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [X] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [x] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [x] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

35 (subtotal this page)

last revised 1 February 2001 jjm

Site: 42-acre Site, W01	**Rater(s):** Reaves	**Date:** 12-24-18

35
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 33 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

10 (max 20 pts.) | 45 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [1] Shrub
- [2] Forest
- [ ] Mudflats
- [1] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [3] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [-1] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [1] Vegetated hummucks/tussucks
- [1] Coarse woody debris >15cm (6in)
- [1] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

45

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3	
	Metric 2. Buffers and surrounding land use	7	
	Metric 3. Hydrology	13	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	10	
	TOTAL SCORE	45	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10		NO	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11		NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5		NO	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range		If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?		NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?		NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category
Category 2

End of Ohio Rapid Assessment Method for Wetlands.

Version 5.0	**Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization**	
	Background Information Scoring Boundary Worksheet Narrative Rating Field Form Quantitative Rating ORAM Summary Worksheet Wetland Categorization Worksheet	Ohio EPA, Division of Surface Water Final: February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Richard Reaves	
Date: 12-24-2018	
Affiliation: Jacobs, Contractor for U.S. Air Force Reserve Command	
Address: 6600 Peachtree Dunwoody Rd. 400 Embassy Row, Suite 600 Atlanta, Georgia 30328	
Phone Number: 678-530-4285	
e-mail address: richard.reaves@jacobs.com	
Name of Wetland: unnamed, designated as W02	
Vegetation Communit(ies): PEM/PSS	
HGM Class(es):	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	
USGS Quad Name Cortland OH	
County	
Township	
Section and Subsection	
Hydrologic Unit Code	
Site Visit	
National Wetland Inventory Map	
Ohio Wetland Inventory Map	
Soil Survey	
Delineation report/map	

Name of Wetland: unnamed, designated as W02	
Wetland Size (acres, hectares): 0.007 ac / 0.003	

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

Comments, Narrative Discussion, Justification of Category Changes:

Isolated depression within edge of woodlot - appears to be result of historical earthmoving related to the adjacent farm field.

Extensive herbaceous cover indicates inundation is brief and that understory is only weakly influenced by canopy cover.

No trees rooted in the depression - all trees are rooted in adjacent upland but provide canopy over the small wetland.

Final score :	29	**Category:**	1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	X	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap . The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).		NO Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?		NO Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?		NO Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?		NO Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?		NO Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?		NO Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?		NO Go to Question 8a
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?		NO Go to Question 8b

8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?		NO Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?		NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?		
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?		
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?		
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.		NO Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).		NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: 42-acre Site, W02	**Rater(s):** Reaves	**Date:** 12-24-18

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 4 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [X] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

11 (max 30 pts.) | 15 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [x] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [X] other Historical timber harvest

Metric 4. Habitat Alteration and Development.

11 (max 20 pts.) | 26 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [x] Recovered (6)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [x] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [x] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

26 (subtotal this page)

last revised 1 February 2001 jjm

Site: 42-acre Site, W02	**Rater(s):** Reaves	**Date:** 12-24-18

26
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 26 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

3 (max 20 pts.) | 29 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [1] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [1] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [x] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

30

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	29	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

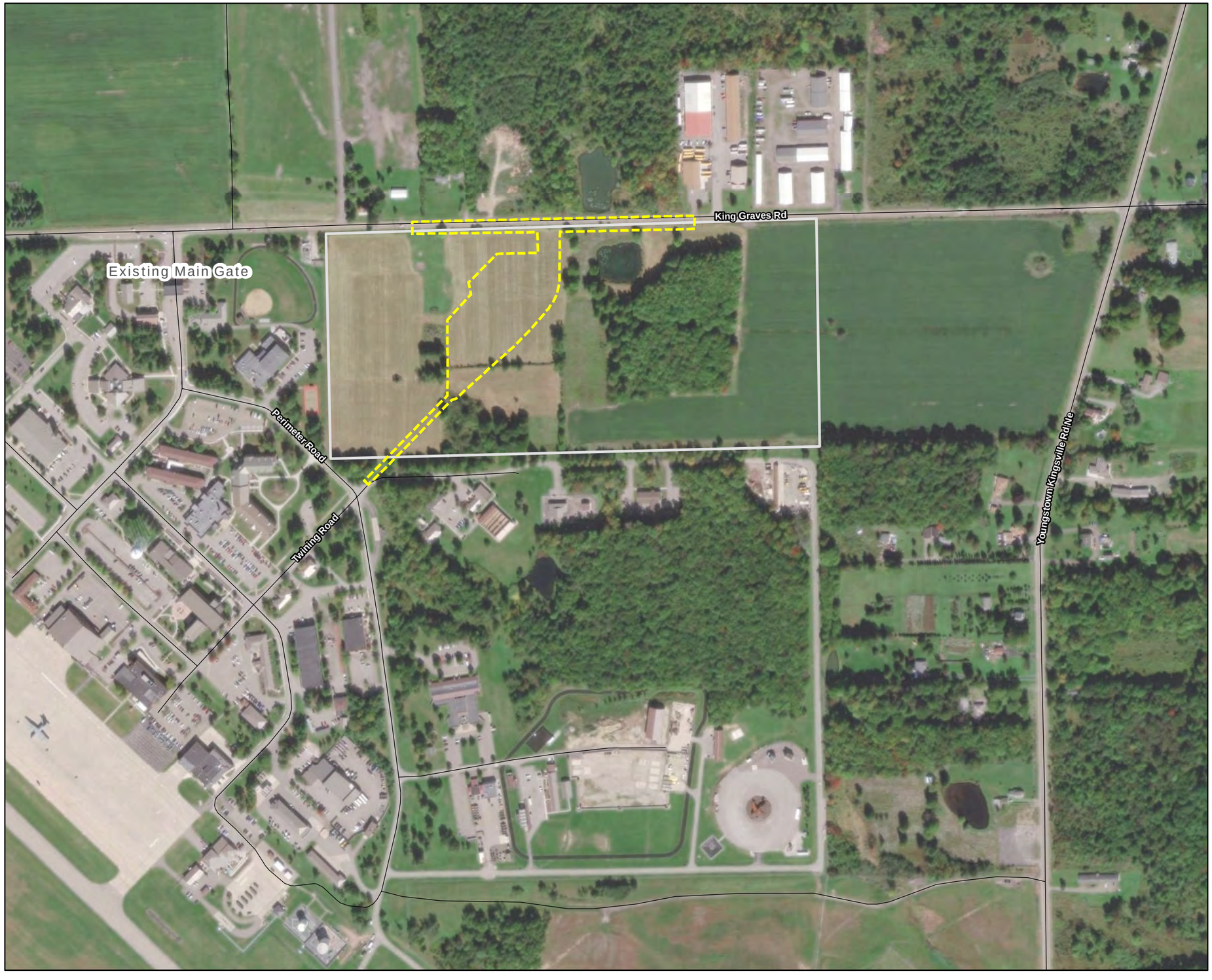
Wetland Categorization Worksheet

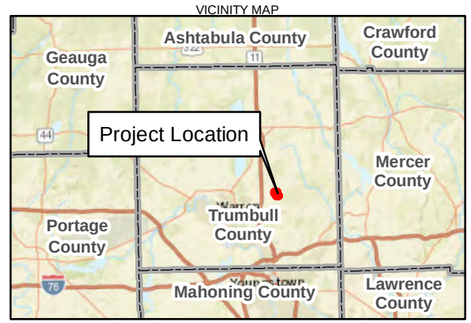
Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10		NO	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11		NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5		NO	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range		If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?		NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?		NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category
Category 1

End of Ohio Rapid Assessment Method for Wetlands.

Attachment 2
Proposed Action Figure





LEGEND

Parcel Boundary

Proposed Main Gate Project Area

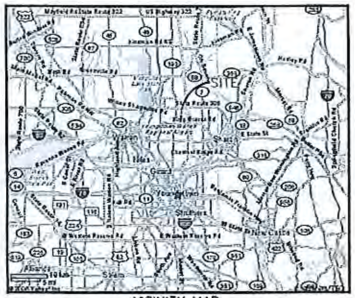
BASE MAP SOURCE:
ESRI, World Topographic online mapping

N

0 200 400
Feet

Figure 2-1.
Proposed Main Gate Project Area
Youngstown Air Reserve Station
Vienna, Ohio

Attachment 3
Survey Plat Map



VICINITY MAP
(NOT TO SCALE)

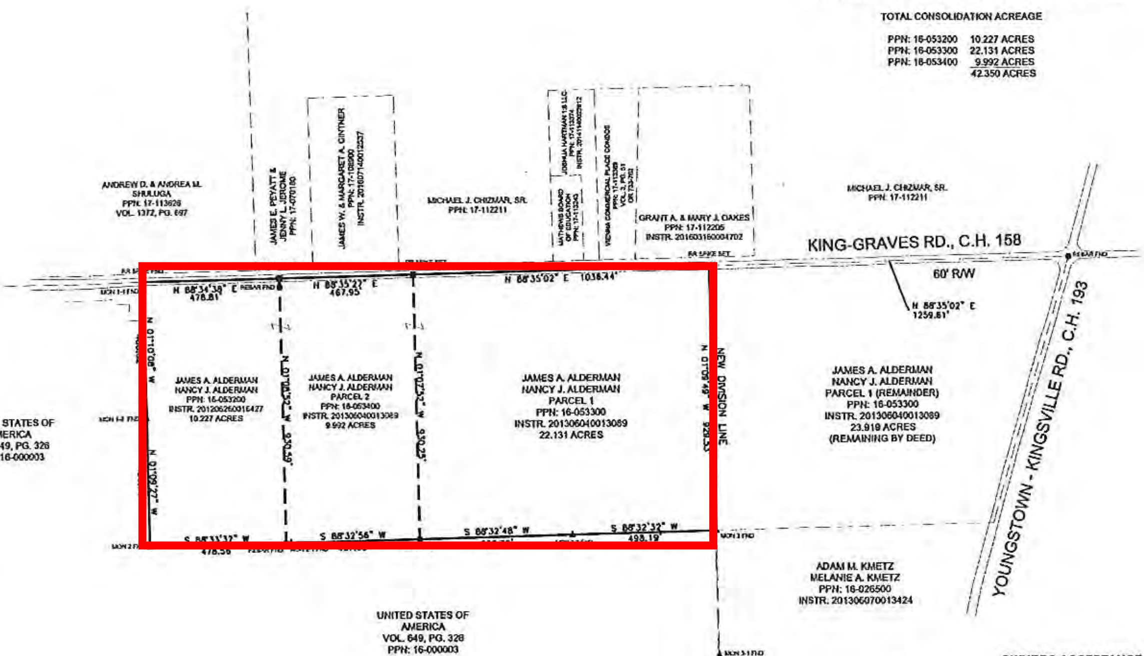
PURPOSE OF PLAT

THE PURPOSE OF THIS PLAT IS TO DIVIDE THE WESTERN PORTION OF PARCEL 1 PPN 16-053300 FROM THE ORIGINAL PARCEL, AND TO CONSOLIDATE THE NEW PARCEL WITH TWO ADDITIONAL PARCELS WEST OF PARCEL 1 DESIGNATED AS PPN 16-053200 AND PPN 16-053400. ALL PARCELS NOW OWNED BY JAMES A. AND NANCY J. ALDERMAN.

TOTAL CONSOLIDATION ACREAGE

PPN: 16-053200	10.227 ACRES
PPN: 16-053300	22.131 ACRES
PPN: 16-053400	9.992 ACRES
	42.350 ACRES

THE BEARING SYSTEM SHOWN HEREON IS BASED UPON GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE (3401) NAD 1983 U.S. SURVEY FEET



APPROVALS

APPROVED THIS ____ DAY OF ________, 20__

DIRECTOR TRUMBULL COUNTY PLANNING COMMISSION

APPROVED THIS ____ DAY OF ________, 20__

TRUMBULL COUNTY ENGINEER

APPROVED THIS ____ DAY OF ________, 20__

TRUMBULL COUNTY SANITARY ENGINEER

APPROVED THIS ____ DAY OF ________, 20__

TRUMBULL COUNTY BOARD OF HEALTH

APPROVED THIS ____ DAY OF ________, 20__

TOWNSHIP ZONING INSPECTOR

APPROVED THIS ____ DAY OF ________, 20__

TRUMBULL COUNTY AUDITOR

APPROVED THIS ____ DAY OF ________, 20__

TRUMBULL COUNTY RECORDER

SURVEYOR'S CERTIFICATION

I DO HEREBY CERTIFY THAT I HAVE SURVEYED THE PREMISES AND PREPARED THE ATTACHED PLAT IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 4733-37 OF THE OHIO ADMINISTRATIVE CODE AND THE DIMENSIONS OF THE LOTS AND ROADS ARE IN FEET AND DECIMAL PARTS THEREOF, ALL OF WHICH ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IRON MONUMENTS OR PINS AS INDICATED HEREON SHALL BE SET IN PLACE BEFORE FINAL INSPECTION AND ACCEPTANCE OF THE IMPROVEMENTS BY THE TRUMBULL COUNTY ENGINEER.

Warren A. Ilig 12/14/17
WARREN A. ILLG, P.S.#7822 DATE

STATE OF OHIO WARREN ARTHUR ILLG S-7822 REGISTERED PROFESSIONAL SURVEYOR

OWNERS ACCEPTANCE

I (WE), THE UNDERSIGNED OWNER(S)____________ OF THE LAND SHOWN HEREIN, HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS MY (OUR)____________ A SUBDIVISION CONTAINING LOTS ____ THROUGH ____ BOTH INCLUSIVE, AND DO HEREBY ACCEPT THIS PLAT OF SAME. THE UNDERSIGNED FURTHER AGREE(S) THAT ANY USE OR IMPROVEMENTS MADE ON THIS LAND SHALL BE MADE IN ACCORDANCE WITH ALL EXISTING VALID ZONING, PLATTING, HEALTH AND OTHER LAWFUL RULES AND REGULATIONS FOR THE BENEFIT OF HIMSELF AND ALL OTHER SUBSEQUENT OWNERS OR ASSIGNS TAKING TITLE FROM, UNDER, OR THROUGH THE UNDERSIGNED. EASEMENTS ARE RESERVED WHERE INDICATED ON THE PLAT FOR PUBLIC UTILITY PURPOSES ABOVE AND BENEATH THE SURFACE OF THE GROUND. IN WITNESS WHEREOF THE UNDERSIGNED HEREUNTO SET HIS (THEIR) HAND(S) THIS ____ DAY OF ________, 20__.

OWNER ____________ WITNESS ____________

OWNER ____________ WITNESS ____________

CERTIFICATION

BEFORE ME, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE PERSONALLY APPEARED THE ABOVE SIGNED ____________ WHO ACKNOWLEDGED THAT THEY ARE THE OWNERS OF THE LAND SHOWN ON THE ACCOMPANYING SUBDIVISION PLAT AS SHOWN ABOVE, AND THAT THE SIGNING OF THE ABOVE CERTIFICATE IS THEIR OWN FREE AND DEED FOR THE PURPOSES THEREIN EXPRESSED.

IN WITNESS THEREOF I HAVE HEREUNTO SET MY HAND AND AFFIXED MY OFFICIAL SEAL THIS ____ DAY OF ________, 20__.

____________ NOTARY PUBLIC

MY COMMISSION EXPIRES ____________

LEGEND

- ▲ COE MONUMENT FOUND
- ● REBAR OR RR SPIKE FOUND
- ⊕ 5/8" X 30" REBAR SET #7822
- ■ RR SPIKE SET

0' 200' 400' 600'
SCALE: 1" = 200'

GRW PROJECT NO. 2762-004
CLIENT PROJECT NO. XXXX

GRW engineering | architecture | geospatial
www.grwinc.com

DIVISION & CONSOLIDATION PLAT
YOUNGSTOWN JOINT AIR RESERVE STATION
VIENNA CENTER, TRUMBULL COUNTY, OHIO
VIENNA TOWNSHIP
SECTION 32, TOWNSHIP 4, RANGE 2

REVISIONS

DATE: NOV. 4, 2016
SCALE: 1" = 200'
SHEET NO. 1 OF 1

Exhibit B

Attachment 4
Jurisdictional Determination Request Form

Request for a Jurisdictional Determination

This form can be used when you want to determine if areas on your property fall under regulatory requirements of the U.S. Army Corps of Engineers (USACE). Please supply the following information and supporting documents described below. This form can be filled out online and then printed. It **must be signed by the property owner** to be considered a formal request. Submitting this request authorizes the US Army Corps of Engineers to field inspect the property site, if necessary, to help in the determination process. The printed form and supporting documents should be mailed to:

Pittsburgh, Regulatory Division
U.S. Army Corps of Engineers, Pittsburgh District
1000 Liberty Avenue
Pittsburgh, PA 15222

Please contact us at 412-395-7155 if you need any assistance with filling out this form.

Location and Information about Property to be subject to a Jurisdictional Determination

Property Address/Location: King Graves Road

City (name) or Unincorporated: Vienna Township State: OH Zip: 44473

County: Trumball Township name: Vienna

Lat/Long in Decimal Degrees: 41°16'15.59" °N 80°40'15.00" °W

Size of Property in Acres: 42 (Include a survey of the property)

Prior or related USACE project number: None

Is the property subject to a conservation easement or deed restriction? (☐Yes or ■No)
If yes, please explain and submit details of the project area.

Was the property a site for mitigation pursuant to a project previously permitted by USACE? (☐Yes or ■No) If yes, please explain and submit details of the project area.

Is the property neighboring/adjacent to/bordering a project previously permitted by the USACE? (☐Yes or ■No) If yes, please explain and submit the name of the project, the permittee's name and/or address, and Corps permit number, if available:

Property Owner Contact Information:

Property Owner Name: James and Nancy Alderman

Mailing Address: 3895 King Grave Road

City: Vienna State: OH Zip: 44473

Daytime Telephone: 330 647 3252 Fax: _____

E-Mail Address: _____

If the person requesting the Jurisdictional Determination is **not** the Property Owner, please also supply the Requestor's contact information here:

Requestor Name: William Fink/Youngstown Air Reserve Station

Mailing Address: _____

City: Vienna State: OH Zip: 44473

Daytime Telephone: 330-609-1557 Fax: _____

E-Mail Address: william.fink@us.af.mil

Please provide a map with the Latitude and Longitude for each water including wetlands; and/or copy of the plat of survey identifying the physical boundaries of the property. Additionally, if you have any of the following information, please include it with your request: wetland delineation, relevant maps, drain tile survey, topographic survey, and site photographs.

If you are considering doing work on the property, please identify on the required site map, plat of survey, or in a separate drawing: the footprint, location, and type of potential work. It will assist us in the determination process and reduce unnecessary delays of processing subsequent permits, if required.

I hereby certify that the information contained in the Request for a Jurisdictional Determination is accurate and complete:

Signature of Property Owner: Date:

James A Alderman 27 Mar 2019

DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR CAYUGA NATION OF NEW YORK
ATTENTION: CLINT HALFTOWN
Nation Representative
66 West Genesee Street
Alburn, NY 13021

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna, Ohio 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR ONEIDA NATION OF NEW YORK
ATTENTION: RAY HALBRITTER
Nation Representative
5218 Patrick Road
Verona, NY 13421

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna, Ohio 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR ONEIDA NATION OF WISCONSIN
ATTENTION: TEHASSI HILL
Chairman
2514 West Mason Street
Green Bay, WI 54303

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna, Ohio 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR ONONDAGA NATION
ATTENTION: SIDNEY HILL
Chief
4040 Route 11
Nedrow, NY 13120

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna, Ohio 44472-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR SAINT REGIS MOHAWK TRIBE
ATTN: BEVERLY COOK, MICHAEL CONNORS, AND ERIC THOMPSON
Chiefs
412 State Route 37
Akwesasne, NY 13655

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR SENECA NATION OF INDIANS
ATTENTION: RICKEY ARMSTRONG, SR.
President
90 Ohi:Yo' Way
Salamanca, NY 14779

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR SENECA-CAYUGA NATION
ATTENTION: WILLIAM FISHER
Chief
23701 South 655 Road
Grove, Oklahoma 74344

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR TONAWANDA SENECA NATION
ATTENTION: ROGER HILL
Chief
7027 Meadville Road
Basom, New York 14013

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR TUSCARORA NATION
ATTENTION: LEO HENRY
Chief
2006 Mt. Hope Road
Lewistown, NY 14092

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR DELAWARE NATION
ATTENTION: DEBORAH DOTSON
President
103 W. Broadway
Anadarko, OK 73005

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR DELAWARE TRIBE OF INDIANS
ATTENTION: CHESTER BROOKS Chief
Roosevelt Hall, Room 212
1 Kellog Drive
Emporia, KS 66807

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

1. The U.S. Air Force Reserve Command (AFRC) and Youngstown Air Reserve Station (YARS) are preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969. This EA will analyze the potential impacts and environmental consequences associated with the construction and operation of a new Entry Control Complex (Main Gate) at YARS, located in Vienna Township, Trumbull County, Ohio. The EA will evaluate potential environmental consequences of the Proposed Action and alternatives in accordance with the provisions of Title 32, *Code of Federal Regulations* (CFR) Part 989, and 40 CFR Parts 1500 through 1508 (Council on Environmental Quality NEPA implementing regulations). We invite your tribe to consult pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended.

2. PROJECT DESCRIPTION. The project includes the construction of a new Main Gate for YARS on a 17.14-hectare (42.35-acre) parcel (referred to as the project area), situated adjacent to the facility to the east (Attachment 1, Figure 1). YARS does not currently own the parcel but is in negotiations for acquisition of the land. The parcel, previously referred to as the "Alderman Farm Parcel," consists of two and one-half tax parcels used for agricultural purposes as farm land. Historical aerial photographs show structures on the Alderman Farm Parcel property from approximately 1938 to 2011. Features of these structures were confirmed with the property owner, which included a house, barn, and several storage sheds for farming machinery and equipment. According to the property owner, these structures were no longer used circa 2007. The structures were demolished sometime after 2011 as there were none observed during a May 2017 visual site inspection conducted as part of an environmental baseline survey. A drinking water well associated with the former house was also decommissioned (AFRC, 2017).

3. The new Main Gate would serve as the primary means of ingress and egress for installation personnel and would serve limited commercial traffic. The proposed Main Gate would consist of a gate house with a covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, sidewalks, fencing, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. Parking areas with associated ingress and egress lanes would be constructed for commercial vehicle inspection and for the visitor center. Following construction, the existing gate/main entrance area would be closed.

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR MIAMI TRIBE OF OKLAHOMA
ATTENTION: DOUGLAS LANKFORD
Chief
202 South Eight Tribes Trail
Miami, OK 74354

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR OTTAWA TRIBE OF OKLAHOMA
ATTENTION: ETHEL E. COOK
Chief
13 South Highway 69A
Miami, OK 74354

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

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DEPARTMENT OF THE AIR FORCE
AIR FORCE RESERVE COMMAND

20 March 2019

MEMORANDUM FOR WYANDOTTE NATION
ATTENTION: BILLY FRIEND
Chief
64790 E. Hwy 60
Wyandotte, OK 74370

FROM: 910 AW/CC
3976 King Graves Road Unit 10
Vienna OH 44473-5912

SUBJECT: Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

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the project in accordance with the Energy Policy Act (EPAct) of 2005, Executive Orders (EOs) 13423 and 13514, and other applicable laws and EOs.

5. While the parcel to be purchased for the project measures 17.14 hectares (42.35 acres), the proposed project footprint would be approximately 2.27 hectares (5.6 acres) in size, which includes an inspection bay measuring approximately 323 square meters (3,475 square feet), a gate house measuring approximately 18 square meters (190 square feet), an overwatch facility approximately 5 square meters (50 square feet) in size, and a visitor center measuring approximately 143 square meters (1,535 square feet).

6. AREA OF POTENTIAL EFFECTS. On behalf of YARS, Jacobs Engineering Group Inc. (Jacobs) conducted a cultural resources desktop literature review for the new Main Gate. The purpose of this review was to assess the probability of identifying cultural resources within the project area and to make recommendations for cultural resources compliance. For the purpose of this literature review, the Area of Potential Effects (APE), which considers both direct and indirect project impacts, is limited to the area within or immediately adjacent to the 17.14-hectare (42.35-acre) parcel, as well as the existing YARS facility (see Attachment 1, Figure 2).

7. EXISTING CULTURAL RESOURCES CONTINGENCY PLAN. In January 2017, YARS completed a Cultural Resources Contingency Plan (CRCP) to assist facility personnel in managing the discovery of an unidentified cultural resource on the base property (see Attachment 2). The CRCP references four previous cultural resources investigations that have occurred within the base (Brenner 1977; Murphy 1989; Resource Applications, Inc. 1996; Davis et al. 1996). None of these previous surveys identified cultural resources within the base boundaries. These investigations are discussed further below. The CRCP concludes with procedures for dealing with unanticipated cultural resources discoveries on the base.

8. PREVIOUSLY RECORDED CULTURAL RESOURCES. Jacobs conducted a literature review for the project on January 24, 2019 using the Ohio Historic Preservation Office online mapping database, which includes the Ohio Archaeological Inventory, Ohio Historic Inventory (OHI), National Register of Historic Places (NRHP), NRHP Determinations of Eligibility (DOE) files, Ohio Genealogical Society (OGS) Cemetery Registry files, and previously conducted cultural resources surveys. The dual purpose of the review was to locate previously recorded cultural resources within the APE and to provide information on the expected types and locations of sites within the project vicinity. Research focused on the project area, as well as a 1.6-kilometer (1-mile) radius centered on the project (Study Area).

9. Six archaeological surveys and one historic resources survey have been conducted within 1.6 kilometers (1 mile) of the project. There are two archaeological sites and four architectural resources documented within the Study Area (Attachment 1, Figure 3). None of the previously recorded archaeological sites or architectural resources are within the project area.

a. Archaeological Resources. Two previously identified archaeological sites (33TR246 and 33TR268) are within the Study Area (Attachment 1, Figure 3). Site 33TR0246 was identified as an historic archaeological site, likely associated with a former building location, recorded as OHI #TRU205019, the Alkire Farm. According to Weller (2011), the site is not considered to be significant, and no further work was recommended. Site 33TR246 is well outside of the project area, east of State Route (SR) 193, and will not be affected by the project. Site 33TR0268 was identified during the 2015 Phase I survey for the King Graves Road realignment project (Mustain 2015). This site consists of a single historic artifact. Mustain noted that due to the lack of artifacts and associated archaeological

deposits, a recommendation for NRHP eligibility could not be made. This site is located well outside the project area, north of the facility, at the northeast corner of the intersection of Ridge Road and County Road (CR) 158. Neither of these sites was recommended eligible for listing on the NRHP, and no further work was recommended.

b. Architectural Resources. The OHI lists four previously recorded architectural resources within the Study Area, including three single dwellings/barns associated with farmsteads and one aviation hangar (Table 1). The Beckett Aviation Company Hangar was recorded during the 1996 DOE for the Youngstown-Warren Regional Airport. At the time it was recorded, the Beckett Hangar was determined not eligible for inclusion on the NRHP. The remaining OHI-listed resources are all recorded as early-to-mid-nineteenth-century single dwellings or barns. All three of these resources are located on SR 193, east of the YARS facility (see Attachment 1, Figure 3). Note: The current name of the airport is Youngstown-Warren Regional Airport, some historical documents and maps refer to it as the Youngstown-Warren Municipal Airport.

c. Table 1: OHI-Listed Resources in the Study Area

OHI Number	Resource Name	Address	Resource Type	Date
TRU0204919	Beckett Aviation Company Hangar	Youngstown-Warren Municipal Airport	Air-Related	1940
TRU0205019	Alkire Farm/Sherman Leet Farm/James Warren Leet Farm	1814 SR 193	Single Dwelling/Barn	1830
TRU0205119	Clarence Leet Farm	1817 SR 193	Single Dwelling/Barn	1860
TRU0205219	Robert G. Plyler Farm/Edwin Griffin Farm	1918 SR 193	Single Dwelling/Barn	1830

d. Previous Cultural Resources Studies. Six archaeological surveys and one historic architecture survey were identified within 1.6 kilometers (1 mile) of the project APE (Table 2). None of the previous cultural resources surveys occurred within the project area. Of these, four of the previous archaeological surveys and the historic architecture survey occurred within the Youngstown-Warren Regional Airport property and a portion of one previous survey (13351) is within the YARS facility (Armstrong 1996; Blank 1984; Davis et al. 1996; Resource Applications, Inc 1996; White 1976). The archaeological surveys that were completed within the Youngstown-Warren Regional Airport are primarily associated with improvements to the airport facilities. These included three Phase I investigations and one Phase II investigation. None of these surveys identified any archaeological resources within the YARS facility.

The remaining two previous archaeological surveys were associated with road improvements for King Graves Road and for improvements to a sewer line along SR 193 (Mustain 2015 and Weller 2011). The 2011 Weller survey identified one archaeological site, Site 33TR246, which is an historic site likely associated with the former Alkire Farm (OHI #TRU205019) location. This site was recommended not eligible for the NRHP. The 2015 ASC Group Inc. Phase I survey identified two archaeological sites—one prehistoric isolated find (33TR267) and one historic-period isolated find

(33TR268). Neither archaeological site was evaluated for NRHP eligibility due to the lack of subsurface deposits and the narrowness of the survey area (Mustain 2015).

e. Table 2: Previous Surveys Within the Study Area

Ref. No.	Author/Year	Title
13351	Resource Applications, Inc. 1996	Final Report for Archaeological Survey, Youngstown Air Reserve Station, Vienna, Ohio
13475	Davis et al. 1996	Cultural Resource Investigations, Youngstown-Warren Regional Airport, Vienna and Fowler Townships, Trumbull County, Ohio
15693	Blank 1984	Results of a Phase I and II Archaeological Survey of the Shortfield Takeoff and Landing Zone, and Proposed relocation of Ridge Road at the Youngstown Municipal Airport, Vienna Township, Trumbull County, Ohio.
15696	White 1976	An Archaeological Assessment of the ILS/MALSR System Right-Of-Way Located at the 32 End of Runway 14/32, Youngstown Municipal Airport, Trumbull County, Ohio.
18530	Weller 2011	Phase I Archaeological Survey for the Approximately 5.43 km (3.37 mi) Long Little Squaw Creek Sanitary Sewer Interceptor Project (Phase 4) in Vienna Township, Trumbull County, Ohio
19948	Mustain 2015	Phase I Archaeological Survey for TRU-CR 158-2.24 (PID 81430), the Proposed Realignment of King Graves Road (CR 158) in Fowler and Vienna Townships, Trumbull County, Ohio
H00315	Armstrong 1996	Determination of Eligibility: Youngstown-Warren Regional Airport. Vienna & Fowler Townships, Trumbull County, Ohio

f. Historic Mapping. In addition to a review of previously recorded cultural resources, Jacobs reviewed online historic mapping. Historic atlases from 1830, 1840, and 1850 (OGS), 1874 (Everts), and 1899 (The American Atlas Company) illustrate that the project area and the surrounding Vienna Township were largely rural and dominated by agricultural activities.

In addition to the historic atlases, the 1914 Archaeological Map of Ohio was consulted (Mills 1914). Similar to other maps of its time (e.g., Guernsey 1932), this map depicts archaeological resources at a county-wide scale. The Mills map provides an overview of sites across the counties but limits the locational accuracy of these features.

In Trumbull County, Mills' map does not depict any archaeological resources within the current project area. However, the map does list a total of 30 prehistoric archaeological sites in Trumbull

County, including mounds, village sites, and burials distributed along the Mahoning and Grand Rivers and Pymatuning Creek.

10. CONCLUSIONS AND RECOMMENDATIONS. In accordance with the National Historic Preservation Act of 1966, as amended, and to ensure that we account for effects of the proposed project on properties listed in or eligible for listing in the National Register of Historic Places, the AFRC and YARS are initiating Section 106 consultation with your tribe pursuant to 36 CFR §800.2.

The literature review identified seven cultural resources surveys within the 1.6-kilometer (1-mile) radius of the project, with two historic archaeological sites and four architectural resources. None of the previously recorded resources were located within the project area, and none of the previous cultural resources surveys intersects the current project area.

Of the cultural resources surveys conducted within the Study Area, two identified new archaeological sites. However, these sites were isolated finds or low-density sites, both of which are outside of the project area. The four previous cultural resources surveys within the YARS facility did not identify any archaeological resources; however, one architectural resource was identified within the facility.

The 42-acre project area has not been subjected to a Phase I archaeological survey and there are known historic occupations located within the project APE. Information gathered during the records review suggests that there is a moderate-to-high probability of finding new historic-period archaeological sites, especially in association with the Alderman Farmstead. However, much of the area has been previously disturbed through decades of agricultural production. Previous cultural resources investigations surrounding YARS indicate a low probability that significant prehistoric deposits will be present.

No Traditional Cultural Properties, sacred sites, or sites of religious or cultural importance have been identified in the project area or its environs. If your tribe has any special knowledge of such resources, please provide specific comments so that we can take measures to ensure that the project will avoid, minimize, or mitigate effects on such properties.

If any unanticipated discoveries of archaeological resources or "cultural items" subject to the provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) occur, work would be temporarily halted at the discovery site, the YARS Installation Environmental Program Director would be contacted, and all appropriate measures would be implemented to avoid disturbance, as detailed in the CRCP. YARS would immediately inform you of the discovery and invite you to consult on the procedures to minimize adverse effects and/or render disposition of NAGPRA cultural items.

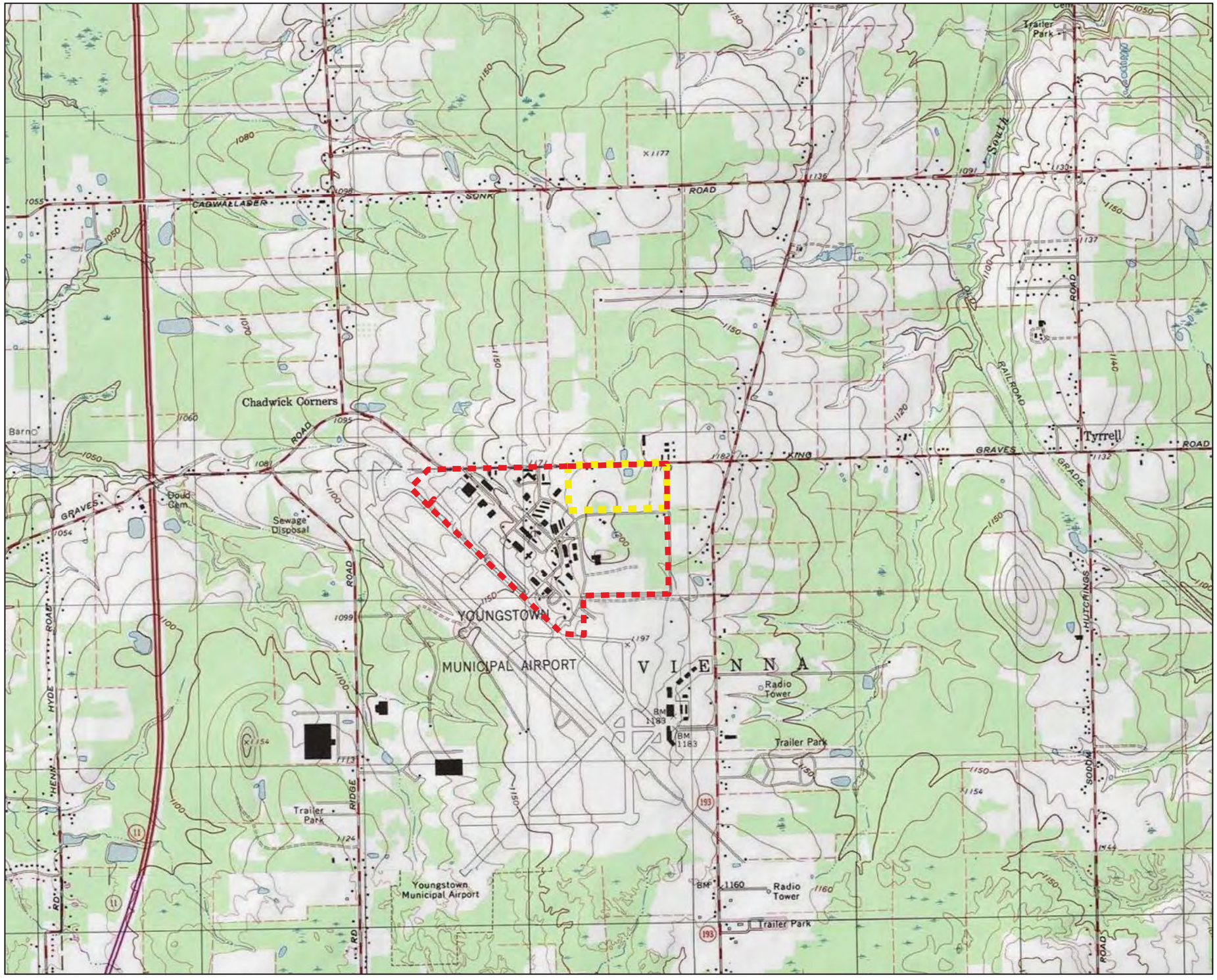
11. We respectfully request that you provide formal comments on the undertaking within 30 days of receipt of this letter. Please address questions or comments to 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road Unit 12, Vienna, OH 44473-5912; or by email at: 910aw.pa@us.af.mil. If you have any questions, please contact Mr. White at (330) 609-1236. Thank you for your assistance.

Joseph D. Janik

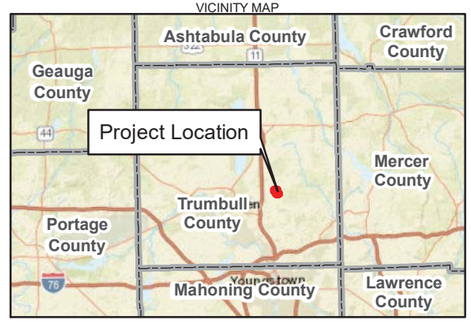
JOSEPH D. JANIK, Colonel, USAF
Commander

2 Attachments:
1. Figures
2. CRCP

Attachment 1
Figures



VICINITY MAP



LEGEND

Parcel Boundary

Area of Potential Effects

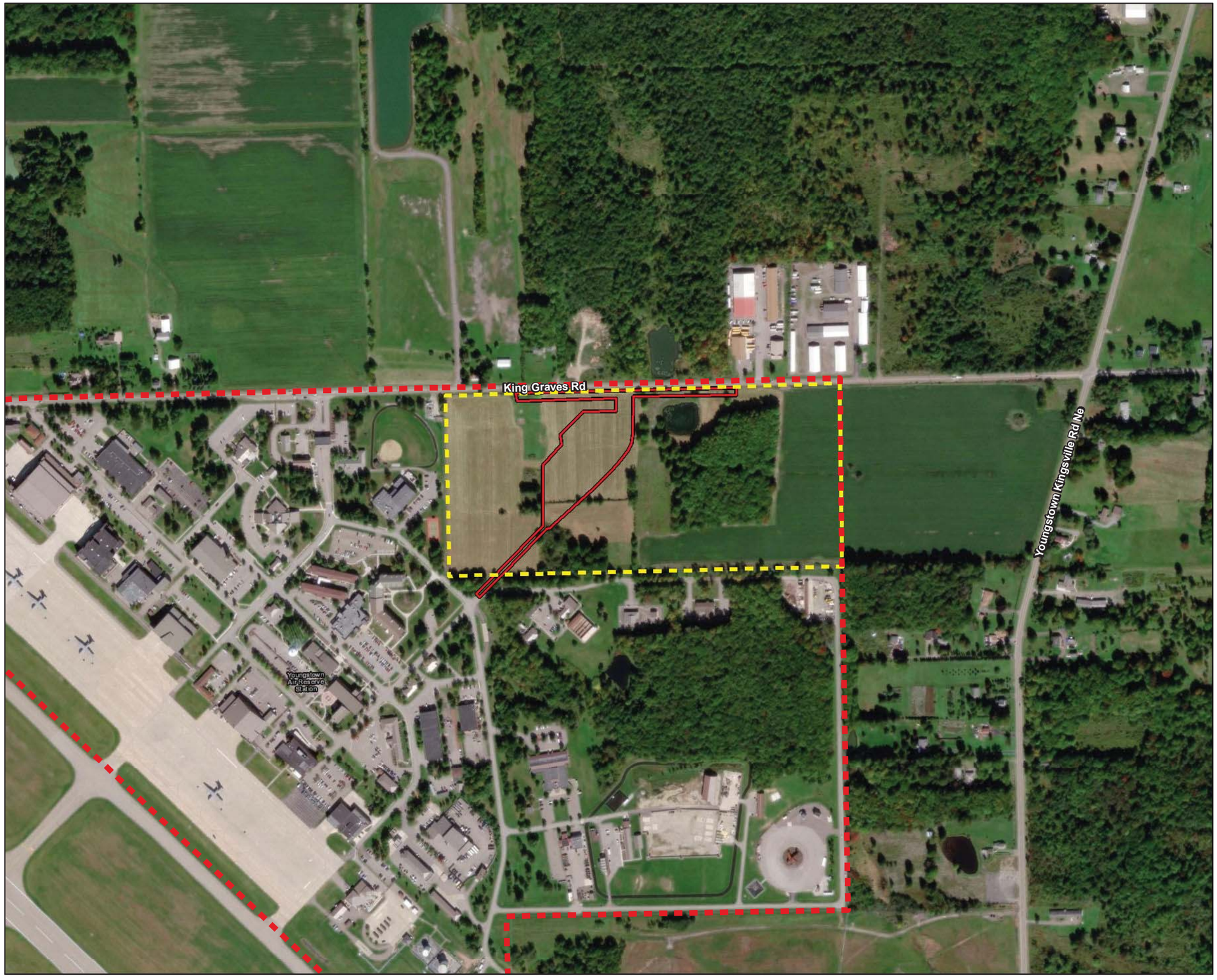
BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle:
Cortland, OH (published 1980)

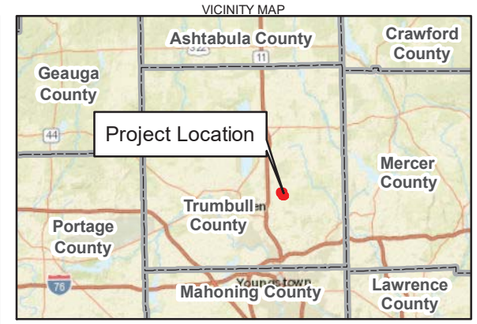
N

0 1,000 2,000
Feet

0 305 610
Meters

Figure 1.
Project Location
Youngstown Air Reserve Station
Vienna, Ohio





LEGEND

Name

- Parcel Boundary
- Approximate Project Footprint
- Area of Potential Effects

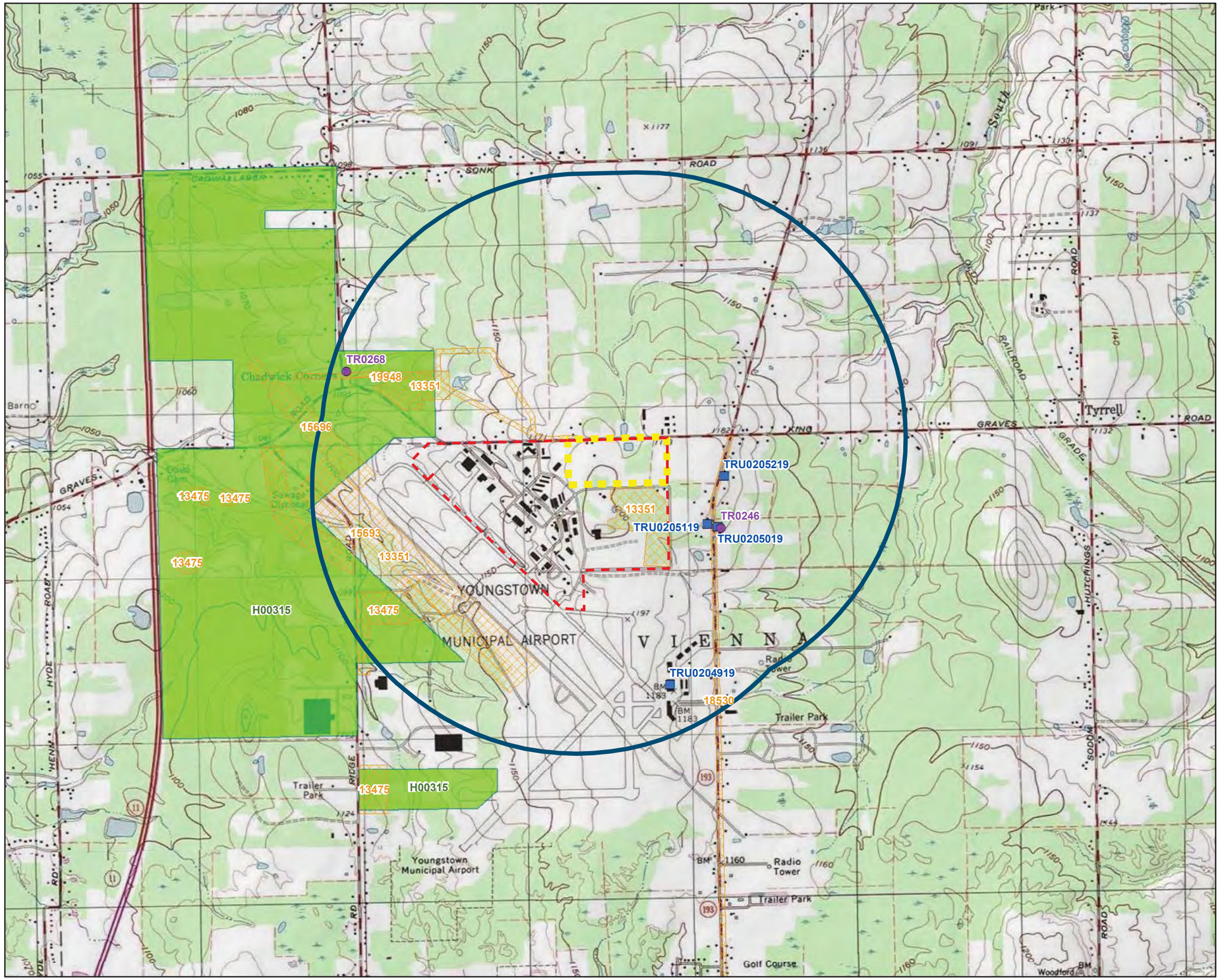
BASE MAP SOURCE:
Esri World Imagery Layer, 2014

N

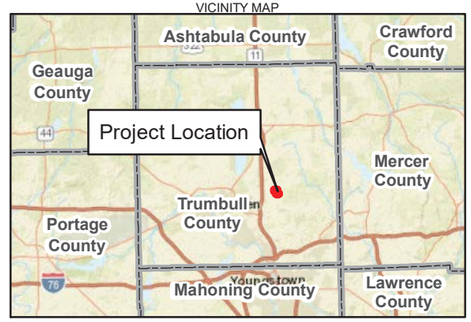
0 250 500
Feet

0 75 150
Meters

Figure 2.
Project Overview
Youngstown Air Reserve Station
Vienna, Ohio



VICINITY MAP



LEGEND

- Archaeological Site
- OHI Structure
- Phase I Archaeological Survey
- Architectural Resources Survey
- One-Mile Buffer
- Parcel Boundary
- Area of Potential Effects

BASE MAP SOURCE:
USGS 7.5-minute Topographic Quadrangle:
Cortland, OH (published 1980)

N

0 1,000 2,000
Feet

0 305 610
Meters

Figure 3.
Known Cultural Resources
Youngstown Air Reserve Station
Vienna, Ohio

Attachment 2
Cultural Resources Contingency Plan

HEADQUARTERS 910 AIRLIFT WING
Air Force Reserve Command
Youngstown Air Reserve Station
3976 King Graves Rd, Unit 37
Vienna, OH 44473-5937

CULTURAL RESOURCES CONTINGENCY PLAN

25 JANUARY 2017

PREPARED BY: 910 MSG/CEV

APPROVAL:

WILLIAM E. FINK
Environmental Engineer

25 January 2017
DATE

TABLE OF CONTENTS

RECORD OF CHANGES

All changes posted to this plan will be recorded on this page and filed at the end of the plan.

CHANGE	DATE OF CHANGE	DATE POSTED	PERSON POSTING CHANGE

RECORD OF REVIEW

DATE	REVIEWED BY	ORGANIZATION	REMARKS
15 MAY 2008	John Tarantine	910 MSG/CEV	Revised Plan Document
15 SEP 2009	Max Shifflet	910 MSG/CEV	Plan Review
29 SEP 2010	Max Shifflet	910 MSG/CEV	Plan Review
25 JAN 2017	William Fink	910 MSG/CEV	Plan Review

CHAPTER 1

1.0 INTRODUCTION

1.1 Executive Summary: The Cultural Resources Contingency Plan (CRCP) has been developed to assist base personnel in handling the discovery of an unidentified cultural resources on the base property. While it is not likely that a cultural resource will be discovered on base, it is important that base personnel and contractors take the appropriate actions in the event that a potential cultural resource is discovered. This will help to preserve cultural resources such as artifacts, archeological sites, and other historic findings.

1.2 Background: Four surveys have been conducted which relate to cultural resources. On 13 APR 77, Mr. William Brenner with Eastgate Development and Transportation Agency, performed a brief historical inventory of the base property. This survey revealed that there were no buildings, structures or sites of historical significance on base. In NOV 95, Resource Applications, Inc. performed a Phase I historic buildings survey of the base property. This survey identified no resources or activities that would require properties to be included on the National Register of Historic Places. On 15 APR 89, Mr. James Murphy who is a state certified archeologist performed an updated cultural resources survey. He reviewed archeological maps at the Ohio Historical Society which revealed no known archeological sites on or near the base. The Ohio Historical Inventory Files were also reviewed and no structures on base were listed. In NOV 95, Resource Applications, Inc. conducted a Phase I archaeological survey of the base property. No archaeological sites, prehistoric or historic, were identified during the survey.

1.3 Definition: A Cultural Resource, related to this plan, is defined as any historic, archeological, or Native American property of interest such as artifacts or human remains

1.4 References: The following is a list of laws related to cultural resources:

1.4.1 National Historic Preservation Act (NHPA)

1.4.2 Native American Graves Protection and Repatriation Act (NAGPRA)

1.4.3 Archeological Resource Protection Act (ARPA)

1.4.5 American Indian Religious Freedom Act (AIRFA)

1.4.6 AFI 32-7065 Cultural Resources Management

1.5 Responsibilities: The following organizations have responsibilities under the CRCP.

1.5.1 Base Civil Engineer (BCE): The BCE will ensure that construction activities are monitored and that any potential cultural item which is found is not disturbed. The BCE will make the site off-limits and preserve the finding until a determination of the significance of the finding can be made.

1.5.2 Environmental Engineer (CEV): The Environmental Engineer will report any finding of a potential cultural item. This office will also coordinate the mitigation of the finding, if required.

1.5.3 Base Contracting (LGC): The Base Contracting Office will ensure that each contractor involved in excavation on base is aware of the requirements in Section 2.1 and will immediately notify the Environmental Engineer's office if a contractor discovers a potential cultural resource.

CHAPTER 2

2.0 PROCEDURES

2.1 Protective Measures: Should a potential cultural resource be discovered on base, the following steps should be taken.

2.1.1 If the resource was discovered during excavation, immediately stop the excavation to prevent any further damage to the resource.

2.1.2 Base personnel will contact the Environmental Engineering Office (CEV) at ext. 1316 or 1557 to report the finding. Contractors will immediately notify the Contracting Officer, who will notify the Environmental Engineer.

2.1.2 Take appropriate actions to make the site off-limits to restrict access of unauthorized personnel who could damage or remove the resource.

2.2 Reporting Requirements:

2.2.1 After inspecting the site, the Environmental Engineer will contact the Departmental Consulting Archeologist, Archeology Assistance Division, National Park Service, Washington D.C. 20013-7127, to determine the significance of the resource.

2.2.2 The Environmental Engineer will also notify the Federal Historic Preservation Officer representative through the MAJCOM.

2.2.3 The Environmental Engineer will also notify the Ohio Historic Preservation Office, 567 East Hudson Street, Columbus, Ohio 43211-1030.

2.3 Mitigation Measures: The appropriate mitigation measures will be determined in coordination with the National Park Service. These mitigation measures can include limiting the project scope, repairing the property, or canceling, redesigning, or relocating a project but will depend on the significance and location of the resource.

APPENDIX A

DISTRIBUTION LIST

ORGANIZATION	OFFICE SYMBOL
Civil Engineering	CEA
Environmental Engineering	CEV
Base Contracting	LGC
Base Plans Office	XP

Responses Received

From: MacDowell, Kara - NRCS, Cortland, OH <kara.macdowell@oh.usda.gov>
Sent: Wednesday, March 13, 2019 2:50 PM
To: 910 AW/PA <910aw.pa@us.af.mil>
Subject: [Non-DoD Source] FPPA Rating Review - King Graves Road, Vienna, Oh

Hello,

Attached you will find the completed form AD-1006 for the Youngstown Air Reserve Station front gate project.

Please let me know if you have any questions.

Sincerely,

Kara MacDowell

District Conservationist – Trumbull and Portage Counties
USDA-NRCS

Trumbull County
520 W. Main St; Suite 3
Cortland, Oh 44410
(330) 637-2046 x3
(330) 282-8622 (direct line)
(Scheduled here Tuesdays, Wednesdays, and the 1st and 3rd Friday of the month)

Portage County
6970 State Route 88
Ravenna, Ohio 44266
(330) 297-7633 x3
(330) 235-6808 (direct line)
(Scheduled here Mondays, Thursdays, and the 2nd and 4th Friday of the month)

Fax: 855-842-8013

Helping People Help the Land

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*		Date Of Land Evaluation Request	
Name of Project Youngstown ARS Main Gate		Federal Agency Involved U.S. Dept of Defense	
Proposed Land Use Military Operations		County and State Trumball County, Ohio	
PART II *(To be completed by NRCS)*		Date Request Received By NRCS	Person Completing Form: Kara MacDowell
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	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS	

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	6			
B. Total Acres To Be Converted Indirectly	26			
C. Total Acres In Site	30			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide Important or Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)				

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	15			
2. Perimeter In Non-urban Use	(10)	5			
3. Percent Of Site Being Farmed	(20)	100			
4. Protection Provided By State and Local Government	(20)	0			
5. Distance From Urban Built-up Area	(15)	15			
6. Distance To Urban Support Services	(15)	0			
7. Size Of Present Farm Unit Compared To Average	(10)	5			
8. Creation Of Non-farmable Farmland	(10)	10			
9. Availability Of Farm Support Services	(5)	5			
10. On-Farm Investments	(20)	0			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	155	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	0	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	155	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	155	0	0	0

Site Selected: A	Date Of Selection 1/31/2019	Was A Local Site Assessment Used? YES ☐ NO ☑

Reason For Selection: National Defense Purposes exempt from FPPA by section 1547(b) 7 USC 4208(b)

Name of Federal agency representative completing this form: Laura Haught/Jacobs Engineering, Inc. Date: 1/31/2019

(See Instructions on reverse side)

Form AD-1006 (03-02)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, http://fppa.nrcs.usda.gov/lesa/.

Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s)of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)

Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.

Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.

Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.

Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.

2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

From: Zimmermann, Susan <susan_zimmermann@fws.gov>
Sent: Monday, March 18, 2019 11:08 AM
To: 910 AW/PA <910aw.pa@us.af.mil>
Subject: [Non-DoD Source] Air Force 910 MSG/CEV Airlift Wing New Entry Control Complex, Trumbull Co.

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

TAILS# 03E15000-2019-I-0903

Dear Mr. White,

We have received your recent correspondence regarding the above-referenced project. You have requested concurrence with your determination of effects to federally listed species, pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) has reviewed your project description and concurs with your determination that the project, as proposed, is not likely to adversely affect any federally listed species. This is based on the commitment to cut all trees ≥3 inches dbh only between October 1 and March 31 to avoid adverse effects to the federally listed endangered Indiana bat (Myotis sodalis) and threatened northern long-eared bat (Myotis septentrionalis).

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

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

Sincerely,

Patrice M. Ashfield
Ohio Field Office Supervisor

From: sarah.tebbe@dnr.state.oh.us <sarah.tebbe@dnr.state.oh.us>
Sent: Friday, April 5, 2019 7:55 AM
To: 910 AW/PA <910aw.pa@us.af.mil>
Cc: John.Kessler@dnr.state.oh.us
Subject: [Non-DoD Source] Environmental Review Request

Hi Mr. White,

We have received your request for review and would also like the link to the EA if/when that is available.

Thanks,

Sarah Tebbe
Ohio Department of Natural Resources
Office of Real Estate
2045 Morse Road
Columbus, Ohio 43229
(614) 265-6397

OHIO HISTORY CONNECTION

In reply refer to
2019-TRU-44355

April 3, 2019

Eric White
910 MSG/CEV
3976 King Graves Road, Unit 37
Vienna, Ohio 44473-5912

Dear Mr. White:

Re: Entry Control Complex, Youngstown Air Reserve Station, Vienna Township, Trumbull County, Ohio

This is in response to your correspondence, received on March 8, 2019, regarding this project. The undertaking is defined as the construction of a new main gate complex at the Youngstown Air Reserve Station in Vienna Township, Trumbull County, Ohio. My comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated regulations at 36 CFR Part 800.

Based on the information submitted, it is my opinion that the proposed undertaking will not affect properties listed in or eligible for listing in the National Register of Historic Places. No further coordination is required unless the project changes or archaeological remains are discovered during the course of the project. In such a situation, this office should be contacted as per 36 CFR 800.13.

Please be advised that this is a Section 106 decision. This review decision may not extend to other SHPO programs. If you have any questions, please contact me at (614) 298-2000, or by email at nyoung@ohiohistory.org.

Sincerely,

Nathan J. Young, Project Reviews Manager
Resource Protection and Review

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

APR 15 2019

REPLY TO THE ATTENTION OF:

E-19J

Eric White
910th Airlift Wing
Air Force Reserve Command
U.S. Air Force
3976 King Graves Road, Unit 12
Vienna, Ohio 44473-5912

Re: Project Scoping for Construction of a New Entry Control Complex at Youngstown Air Reserve Station, Trumbull County, Ohio

Dear Mr. White:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced project scoping document, which was prepared by the U.S. Air Force (USAF). We are providing comments 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 action involves construction of a new entry control complex at Youngstown Air Reserve Station (YARS). Two alternatives have been provided:

- *Alternative 1 - Preferred Alternative.* Construction of a new main gate on 42.35 acres of farmland east of the existing main gate complex. Also included as part of this alternative are the following components:
  - Construct a new gate house;
  - Construct a new 4-lane asphalt road (with a divided median) from King Graves Road to the proposed new gatehouse;
  - Construct a new 2-lane asphalt road from the proposed new gatehouse to the Perimeter Road/Twining Road intersection;
  - Construct parking areas with ingress and egress lanes; and
  - Widen King Graves Road to include 2 new turn lanes.
- *No Action Alternative.* The proposed project will not proceed.

Based on the information provided in the scoping document, we have comments relating to water quality, wetlands, air quality strategies, stormwater management and transportation resiliency, environmental justice, pollinators, native plant species, energy efficiency, and consultation records, as stated below.

Water Quality

The forthcoming environmental assessment (EA) should describe how the proposed action may affect water bodies listed by the Ohio Environmental Protection Agency as impaired under Section 303(d) of the Clean Water Act and their listing status as impaired. We recommend this section of the document discuss current impairments, and how the proposed action may affect, either positively or detrimentally, any impairments.

Wetlands

The EA should explain how the Clean Water Act Section 404(b)(1) guidelines have been applied to both stream and wetland impacts. The Section 404 (b)(1) guidelines call for the Least Environmentally Damaging Practicable Alternative to be selected to address impacts to wetlands, streams, and other waters of the United States. The guidelines also require the sequence of first avoiding, then minimizing, and finally mitigating for any impacts to aquatic resources. Please discuss proposed mitigation for unavoidable, minimized, stream and wetland impacts (if applicable).

Air Quality Strategies

Temporary fugitive dust and diesel exhaust emissions from construction activities, such as use of heavy machinery and material hauling, would occur. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Diesel exhaust can also lead to other serious health conditions and can worsen heart and lung disease. We recommend USAF consider implementing air quality best management practices (BMPs) during the construction phase of this project and discuss plans in the EA. Several recommendations are included in an enclosure entitled, *U.S. Environmental Protection Agency Construction Emission Control Checklist.*

Stormwater Management and Transportation Resiliency

The National Climate Assessment finds that, in the Midwest, extreme heat, heavy downpours, and flooding will affect infrastructure, health, air and water quality, and more.[1] Storm events are occurring with greater frequency and intensity. The National Climate Assessment further concludes that, in the Midwest, extreme heat, heavy downpours, and flooding will affect infrastructure. We recommend that USAF account for increased storm frequency and intensity in the design of this project to help ensure the health and safety of the public by using appropriate airport-specific stormwater management designs. We recognize that any habitat that is created or preserved at or near the airport must conform to Federal Aviation Administration practices to minimize the risk of wildlife hazards to aircraft. See EPA's Adaptation Resource Center[2] for information on resiliency and adaptation measures.

Environmental Justice

If not already completed, we recommend USAF reach out to neighboring communities during project scoping to identify any environmental justice (EJ) concerns. We recommend using community input, demographic data, and an assessment of project impacts to determine whether

[1] U.S. Global Change Research Program, 2017 Climate Science Special Report: Fourth National Climate Assessment, Volume 1, available at: https://www.globalchange.gov/browse/reports

[2] EPA's Climate Adaptation Resource Center, available at: https://www.epa.gov/arc-x

the project could create environmental justice concerns. EJSCREEN[3] is a publicly-accessible mapping and screening tool available for your use. Consider using the report, "Promising Practices for EJ Methodologies in NEPA Reviews"[4] to inform your analysis of EJ issues and your engagement with communities with potential EJ concerns. The EA should document activities taken to address any EJ concerns.

Pollinators and Native Plant Species

We encourage USAF to meet the intent of the 2014 Presidential Memorandum (PM) entitled, "Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators,"[5] which responds to evidence of steep declines in certain pollinator populations. Pollinators are critical contributors to our nation's economy, food system, and environmental health. Vegetation within the project area can provide vital habitat for pollinators, providing food, shelter, and connections to other patches of habitat. The Mid-America Monarch Conservation Strategy is a valuable tool for maintenance staff and landscape designers.

Energy Efficiency

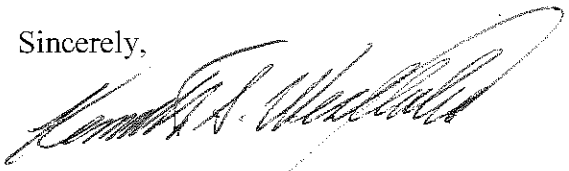
For new structures, we encourage the use of energy-efficient and/or sustainable building materials, such as south-facing skylights and windows, motion-sensored lighting, Energy Star certified windows and doors, and installation of renewable energy sources. Section 438 of the Energy Independence and Security Act provides examples of how to integrate energy efficiency into Federal projects.

Consultation Records

EPA recommends attaching to the EA inter-agency consultation documents regarding historic resources (Ohio State Historic Preservation Office), wetlands and streams (U.S. Army Corps of Engineers), and Federal and state threatened and endangered species (U.S. Fish and Wildlife Service and the Ohio Department of Natural Resources).

We are available to discuss these comments 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: U.S. Environmental Protection Agency Construction Emission Control Checklist

[3]See: https://www.epa.gov/ejscreen

[4] See: https://www.epa.gov/environmentaljustice/ej-iwg-methodologies-nepa-reviews

[5] See: www.whitehouse.gov/briefing-room/presidentialactions/presidential-memoranda

U.S. Environmental Protection Agency
Construction Emission Control Checklist

Diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer term exposure may worsen heart and lung disease. We recommend consideration of the following protective measures and commitment to applicable measures in the EA:

Mobile and Stationary Source Diesel Controls

- Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.
- On-Highway Vehicles: On-highway vehicles should meet, or exceed, the EPA exhaust emissions standards for model year 2010 and newer heavy-duty, on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).
- Marine Vessels: Marine vessels hauling materials for infrastructure projects should meet, or exceed, the latest U.S. EPA exhaust emissions standards for marine compression-ignition engines (e.g., Tier 4 for Category 1 & 2 vessels, and Tier 3 for Category 3 vessels).
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available.
- Consider requiring the following best practices through the construction contracting or oversight process:
- Establish and enforce a clear anti-idling policy for the construction site.
- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Repower older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric

vehicles, battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.).

- Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards.

Fugitive Dust Source Controls

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Occupational Health

- Reduce exposure through work practices and training, such as maintaining filtration devices and training diesel-equipment operators to perform routine inspections.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the type of work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.

NEPA Documentation

- Per Executive Order 13045 on Children's Health, EPA recommends the lead agency and project proponent pay particular attention to worksite proximity to places where children live, learn, and play, such as homes, schools, and playgrounds. Construction emission reduction measures should be strictly implemented near these locations in order to be protective of children's health.
- Specify how impacts to sensitive receptors, such as children, elderly, and the infirm will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

The Delaware Nation
Cultural Resources /106 Department
31064 State Highway 281
Anadarko, OK 73005
Phone (405)247-2448 Fax (405) 247-8905

19 April 2019

To Whom It May Concern:

The Delaware Nation Historic Preservation Department received correspondence regarding the following referenced project(s).

Project: Construction of a New Control Complex at Youngstown Air Reserve Station, Vienna Township, Trumbull County, OH

Our office is committed to protecting tribal heritage, culture and religion with particular concern for archaeological sites potentially containing burials and associated funerary objects.

The Lenape people occupied the area indicated in your letter during prior to European contact until their eventual removal to our present locations. According to our files, the location of the proposed project does not endanger cultural, or religious sites of interest to the Delaware Nation. **Please continue with the project as planned** keeping in mind during construction should an archaeological site or artifacts inadvertently be uncovered, all construction and ground disturbing activities should immediately be halted until the appropriate state agencies, as well as this office, are notified (within 24 hours), and a proper archaeological assessment can be made.

Please note the Delaware Nation, the Delaware Tribe of Indians, and the Stockbridge Munsee Band of Mohican Indians are the only Federally Recognized Delaware/Lenape entities in the United States and consultation must be made only with designated staff of these three tribes. We appreciate your cooperation in contacting the Delaware Nation Historic Preservation Office to conduct proper Section 106 consultation. Should you have any questions, feel free to contact our offices at 405/247-2448.

Dana Kelly
Historic Preservation/106 Asst.
Delaware Nation
31064 State Highway 281
Po Box 825
Anadarko, OK 73005
Ph. 405-247-2448
dkelly@delawarenation.com

Haught, Laura/WDC

From: Mason, Matthew R CIV USARMY CELRP (USA) <Matthew.R.Mason@usace.army.mil>
Sent: Thursday, May 30, 2019 3:42 PM
To: FINK, WILLIAM E GS-12 USAF AFRC 910 MSG/CEV; ed.wilk@epa.ohio.gov
Cc: Naccarato, Andrea/ATL; Jackson, Sara/ORL; Haught, Laura/WDC
Subject: [EXTERNAL] RE: Wetlands
Attachments: scannedDoc.pdf; area south of woodlot.pdf; soil south of woodlot.pdf; south edge of woodlot looking northwest.pdf

Bill,
I apologize for the delay in getting back to you.
Ed Wilk and I conducted a walkover of the site on April 11, 2019. The majority of our investigation was conducted within the woodlot located on the eastern portion of the study area. We determined that a significant portion of the woodlot and adjacent fields are wetlands and the wetland boundaries are not accurate. An example of this is the area identified as Wetland W01D is much bigger that is depicted on the attached figure and extends into the mowed field to the west of the woodlot and extends to and includes the area identified as Wetland W02. I have attached Figure 1-3 Wetland Delineation Map with a hand drawn line. The area west of the line does not contain any wetlands. Based upon the plans there is no work proposed east of this line - if you can avoid any work east of this line there is no need to re-delineate this area. If you are proposing work east of the hand drawn line we are requesting that the entire area be re-delineated during the growing season. I have attached some photos of the area for your review. Due to size I will send more photos tomorrow.

Matt Mason - Regulatory Specialist
US Army Corps of Engineers
Pittsburgh District Regulatory Branch
1000 Liberty Avenue, Federal Building, 20th Floor Pittsburgh, Pennsylvania 15222-4186
412-395-7129

-----Original Message-----
From: FINK, WILLIAM E GS-12 USAF AFRC 910 MSG/CEV [mailto:william.fink@us.af.mil]
Sent: Tuesday, May 28, 2019 4:14 PM
To: Mason, Matthew R CIV USARMY CELRP (USA) <Matthew.R.Mason@usace.army.mil>; ed.wilk@epa.ohio.gov
Cc: Naccarato, Andrea/ATL <Andrea.Naccarato@jacobs.com>; Jackson, Sara/ORL <Sara.Jackson1@jacobs.com>; Haught, Laura/WDC <Laura.Haught@jacobs.com>
Subject: Wetlands

Hello Matt & Ed,

I'm following up to see if your able to provide us with the outcome of the review of the wetlands area on the 42.35 acres adjacent to our installation. I would sincerely appreciate any update which may be available.

Thanks,

Bill Fink

Flight Chief - Environmental Engineering, 910 MSG/CEV

DSN: 346-1557 Comm: 330-609-1557

Appendix B
Public Notification and Notice of Availability

Notice for Early Public Review of a Proposed Activity Near Wetlands

To: All Interested Agencies, Groups, and Individuals

The U.S. Air Force (USAF) proposes to construct a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, Ohio. The Proposed Action would include acquisition of land and construction adjacent to wetlands. Construction would not impact the 100-year floodplain and will avoid or minimize impacts to wetlands. This notice is required by Section 2(b) of Executive Order (EO) 11990, "Protection of Wetlands," and by Section 2(a)(4) of EO 11988, "Floodplain Management," and has been prepared and made available to the public by the USAF in accordance with Title 32, Code of Federal Regulations, Part 989.24(c) and Air Force Instruction (AFI) 32-7064, Integrated Natural Resources Management, for actions proposed in wetlands and floodplains.

The new Main Gate would include a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. The purpose of the Proposed Action is to provide a new permanent Main Gate for YARS that would accommodate the current mission and meet prescribed antiterrorism/force protection standards under the U.S. Department of Defense's Unified Facilities Criteria and AFI 10-245, Antiterrorism. The existing gate does not meet these standards, creating an increased security risk to the installation. The proposed project footprint would be approximately 5.6 acres in size, including an inspection bay approximately 3,475 square feet (sq. ft.) in size, a gate house approximately 190 sq. ft. in size, an overwatch facility approximately 50 sq. ft. in size, and a visitor center approximately 1,535 sq. ft. in size. Because of the constraints of internal development at YARS and the adjacent Youngstown-Warren Regional Airport, no other alternatives were identified as feasible for the construction of a new Main Gate. The USAF is preparing an environmental assessment (EA) in accordance with the National Environmental Policy Act to analyze the potential environmental impacts of the Proposed Action.

The USAF is seeking advance public comment on the proposed project to determine if there are any public concerns regarding the project's potential impacts and is soliciting public input or comments on potential project alternatives. The full EA will also be available for public review in the spring/summer of 2019. Please provide written comments to: 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road, Unit 12, Vienna, OH 44473; or by email at: 910aw.pa@us.af.mil. Written comments will be accepted for 30 days from the publication of this notice.

ORIGINAL + 2 TEARSHEETS
MAILED 2-20-19

Notice for Early Public Review of a Proposed Activity Near Wetlands

To: All Interested Agencies, Groups, and Individuals

The U.S. Air Force (USAF) proposes to construct a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, Ohio. The Proposed Action would include acquisition of land and construction adjacent to wetlands. Construction would not impact the 100-year floodplain and will avoid or minimize impacts to wetlands. This notice is required by Section 2(b) of Executive Order (EO) 11990, "Protection of Wetlands," and by Section 2(a)(4) of EO 11988, "Floodplain Management," and has been prepared and made available to the public by the USAF in accordance with Title 32, *Code of Federal Regulations*, Part 989.24(c) and Air Force Instruction (AFI) 32-7064, *Integrated Natural Resources Management*, for actions proposed in wetlands and floodplains.

The new Main Gate would include a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. The purpose of the Proposed Action is to provide a new permanent Main Gate for YARS that would accommodate the current mission and meet prescribed antiterrorism/force protection standards under the U.S. Department of Defense's Unified Facilities Criteria and AFI 10-245, *Antiterrorism*. The existing gate does not meet these standards, creating an increased security risk to the installation. The proposed project footprint would be approximately 5.6 acres in size, including an inspection bay approximately 3,475 square feet (sq. ft.) in size, a gate house approximately 190 sq. ft. in size, an overwatch facility approximately 50 sq. ft. in size, and a visitor center approximately 1,535 sq. ft. in size. Because of the constraints of internal development at YARS and the adjacent Youngstown-Warren Regional Airport, no other alternatives were identified as feasible for the construction of a new Main Gate. The USAF is preparing an environmental assessment (EA) in accordance with the National Environmental Policy Act to analyze the potential environmental impacts of the Proposed Action.

The USAF is seeking advance public comment on the proposed project to determine if there are any public concerns regarding the project's potential impacts and is soliciting public input or comments on potential project alternatives. The full EA will also be available for public review in the spring/summer of 2019. Please provide written comments to: 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road, Unit 12, Vienna, OH 44473; or by email at: 910aw.pa@us.af.mil. Written comments will be accepted for 30 days from the publication of this notice.

#046-2T-February 15 & 16, 2019 #WOH0050106

PROOF OF PUBLICATION

STATE OF OHIO
TRUMBULL COUNTY SS: CONNIE PACEK

BEING DULY SWORN, UPON OATH STATES THAT SHE IS AN AUTHORIZED REPRESENTATIVE OF THE TRIBUNE CHRONICLE, (A DIVISION OF EASTERN OHIO NEWSPAPERS INC). A DAILY NEWSPAPER PRINTED IN THE CITY OF WARREN, COUNTY OF TRUMBULL, STATE OF OHIO AND OF GENERAL CIRCULATION IN THE CITY OF WARREN, TRUMBULL COUNTY, OHIO AND IS INDEPENDENT IN POLITICS.

THAT THE ATTACHED ADVERTISEMENT WAS PUBLISHED IN THE TRIBUNE CHRONICLE EVERY: DAY

FOR TWO CONSECUTIVE ~~WEEKS~~ DAYS AND

THAT THE FIRST INSERTION WAS ON FRIDAY

THE 15th DAY OF February 2019

CONNIE PACEK

SWORN TO BEFORE ME AND SUBSCRIBED IN MY PRESENCE ON THIS 19TH DAY OF February 2019

NOTARY PUBLIC

LAWRENCE J. KOVACH, Notary Public
STATE OF OHIO
MY COMMISSION EXPIRES SEPTEMBER 23, 2022

SEAL

ADVERTISING COST $ 867.82

Tribune Chronicle
240 Franklin St. S.E.
Warren, Ohio 44483
330-841-1600
330-841-1721 Fax
www.TribTODAY.com

Statement Number	Billing Date
619497	2/28/19
Account Number	**Billing Period**
L52119	FEBRUARY 2019
Total Amount Due	**Amount Enclosed**
-9.00	

Cards Accepted - Visa, Mastercard, Discover, Amex

Signature Ex. MM/

Advertising Invoice/Statement

Bill Account Name And Address	Remittance Address
JACOBS ENGINEERING 225 E ROBINSON ST, STE 5 ORLANDO FL 32801 ATTN: SARA JACKSON	TRIBUNE CHRONICLE 240 FRANKLIN ST SE WARREN OH 44483

---------- Please Detach Upper Portion And Return With Payment ----------

Day	Reference	Description	Dimensions	Units	Rate	Amount
		PREVIOUS BALANCE				0.00
14	CC	PAYMENT THANK YOU				876.82-
15		LEGAL CLASS DISPLAY	3X 4.75	14.25	30.45	433.91
16		LEGAL CLASS DISPLAY	3X 4.75	14.25	30.45	433.91

Message

WATCH FOR THE 1ST EDITION OF OUR 2019 ALMANAC TO BE DISTRIBUTED ON MARCH 6TH. THERE'S STILL TIME TO BE INCLUDED IN THE APRIL EDITION. CALL 330-841-1700 TODAY!

Totals			Ageing				
Display	Other Charges	Credits	Current	30 Days	60 Days	90 Days	Total Due
867.82	.00	876.82	-9.00	.00	.00	.00	-9.00

Statement Number	Billing Date
619497	2/28/19
Account Number	**Billing Period**
L52119	FEBRUARY 2019

Contract Information	
Expiration Date	**Requirement**
Current Month	**Cumulative**

Terms

Payment is due by the 10th of the month. An interest charge of 1.5% per month (18% annual) is applied to the unpaid balance at the end of each month.

Name Of Advertiser
JACOBS ENGINEERING
Salesperson
CINDY SIMPSON

Advertising Invoice/Statement

Tribune Chronicle
240 Franklin St. S.E.
Warren, Ohio 44483
330-841-1600
330-841-1721 Fax

Legal Notices

LEGAL NOTICE

Canfield Township Board of Trustees will meet at 21 S. Broad St, Canfield (Township Hall) in Special Regular Session, Tuesday, February 19, 2019 at 8:00am. The public is welcome to attend.

LEGAL NOTICE

Notice for Early Public Review of a Proposed Activity Near Wetlands

To: All Interested Agencies, Groups, and Individuals

The U.S. Air Force (USAF) proposes to construct a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, Ohio. The Proposed Action would include acquisition of land and construction adjacent to wetlands. Construction would not impact the 100-year floodplain and will avoid or minimize impacts to wetlands. This notice is required by Section 2(b) of Executive Order (EO) 11990, "Protection of Wetlands," and by Section 2(a)(4) of EO 11988, "Floodplain Management," and has been prepared and made available to the public by the USAF in accordance with Title 32, *Code of Federal Regulations*, Part 989.24(c) and Air Force Instruction (AFI) 32-7064, *Integrated Natural Resources Management*, for actions proposed in wetlands and floodplains.

The new Main Gate would include a gate house with covered canopy, vehicle inspection facility, visitor center, overwatch facility, roads, signage, parking, vehicle barrier systems, landscaping, and associated infrastructure. The purpose of the Proposed Action is to provide a new permanent Main Gate for YARS that would accommodate the current mission and meet prescribed antiterrorism/force protection standards under the U.S. Department of Defense's Unified Facilities Criteria and AFI 10-245, *Antiterrorism*. The existing gate does not meet these standards, creating an increased security risk to the installation. The proposed project footprint would be approximately 5.6 acres in size, including an inspection bay approximately 3,475 square feet (sq. ft.) in size, a gate house approximately 190 sq. ft. in size, an overwatch facility approximately 50 sq. ft. in size, and a visitor center approximately 1,535 sq. ft. in size. Because of the constraints of internal development at YARS and the adjacent Youngstown-Warren Regional Airport, no other alternatives were identified as feasible for the construction of a new Main Gate. The USAF is preparing an environmental assessment (EA) in accordance with the National Environmental Policy Act to analyze the potential environmental impacts of the Proposed Action.

The USAF is seeking advance public comment on the proposed project to determine if there are any public concerns regarding the project's potential impacts and is soliciting public input or comments on potential project alternatives. The full EA will also be available for public review in the spring/summer of 2019. Please provide written comments to: 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road, Unit 12, Vienna, OH 44473; or by email at: 910aw.pa@us.af.mil. Written comments will be accepted for 30 days from the publication of this notice.

LEGAL NOTICE

Sealed bids will be received by:

Youngstown State University
Procurement Services
Jones Hall (410 Wick Ave.) 2nd Floor
Youngstown, Ohio 44555

for the following Project:

Project: YSU 1920-02
Meshel Hall Renovations – Phase 2
Youngstown State University
Youngstown, Mahoning County

in accordance with the Contract Documents prepared by:

Youngstown State University
Office of Planning and Construction
230 W. Wood Street
Youngstown, Ohio 44555
Contact: Summer Barker, AIA
330-941-3239
330-941-1454
snbarker@ysu.edu

Bidders may submit requests for consideration of a proposed Substitution for a specified product, equipment, or service to the Architect/Engineer ("A/E") no later than 10 days prior to the bid opening. Additional products, equipment, and services may be accepted as approved Substitutions only by written Addendum.

From time to time, the Commission issues new editions of the "State of Ohio Standard Requirements for Public Facility Construction" and may issue interim changes. Bidders must submit Bids that comply with the version of the Standard Requirements included in the Contract Documents.

Prevailing Wage rates and Equal Employment Opportunity requirements are applicable to this Project.

This Project is subject to the State of Ohio's Encouraging Diversity, Growth, and Equity ("EDGE") Business Development Program. A Bidder is required to submit with its Bid and with its Bidder's Qualifications form, certain information about the certified EDGE Business Enterprise(s) participating on the Project with the Bidder. Refer to **Section 6.1.11** of the **Instructions to Bidders**.

The EDGE Participation Goal for the Project is **5.0 percent**.

The percentage is determined by the contracted value of goods, services, materials, and labor that are provided by EDGE-certified business(es). The participation is calculated on the total amount of each awarded contract. For more information about EDGE, contact the State of Ohio EDGE Certification Office at http://das.ohio.gov/eod, or at its physical location: 4200 Surface Road, Columbus, Ohio 43228-1395; or by telephone at (614) 466-8380.

The Bidder may be subject to a Pre-Award Affirmative Action Compliance Review in accordance with Section 123:2-5-01 of the Ohio Administrative Code including a review of the Bidder's employment records and an on-site review.

The Bidder must indicate on the Bid Form, the locations where its services will be performed in the spaces provided or by attachment in accordance with the requirements of Executive Order 2011-12K related to providing services only within the United States. Failure to do so may cause the Bid to be rejected as non-responsive.

DOMESTIC STEEL USE REQUIREMENTS AS SPECIFIED IN OHIO REVISED CODE SECTION 153.011 APPLY TO THIS PROJECT. COPIES OF OHIO REVISED CODE SECTION 153.011 CAN BE OBTAINED FROM ANY OF THE OFFICES OF THE OHIO FACILITIES CONSTRUCTION COMMISSION.

Bidders are encouraged to be enrolled in and to be in good standing in a Drug-Free Safety Program ("DFSP") approved by the Ohio Bureau of Workers' Compensation ("OBWC") prior to submitting a Bid and provide, on the Bid Form with its Bid, certain information relative to their enrollment in such a program; and, if awarded a Contract, shall comply with other DFSP criteria described in **Section 1.6** of the **General Conditions**.

Bids will be received for:

Trade	Estimate
General Contract	**$1,740,000.00**
Alternate G-1: Ceiling Panels	**$60,000.00**
Alternate G-2: Ceiling Grid, Panels & Lights	**$205,000.00**
Alternate G-3: Window Blinds	**$28,000.00**
Alternate M-1: Glycol Pumps	**$34,000.00**
Alternate M-2: Pneumatic Valve Operators	**$6,500.00**
Alternate M-3: Variable Frequency Drives	**$19,000.00**

Until **Wednesday, February 27, 2019, at 2:00 p.m.**, when all Bids will be opened and read aloud. Bids are due prior to 2:00pm at the YSU Procurement Office, Jones Hall 2nd Floor.

All Bidders are strongly encouraged to attend the Pre-Bid Meeting on **Thursday, February 7, 2019** at **2:00pm** until approximately **3:00pm**, at the following location: **Meshel Hall, Room 437**.

The Contractor is responsible for scheduling the Project, coordinating the Subcontractors, and providing other services identified in the Contract Documents.

The Contract Documents are available for purchase from Roller Reprographic Services, Inc. 11907 Market St., North Lima, OH 44452, Phone: 330-549-0377, Mike Krakora, Email: prints@rollerreprographics.com at a non-refundable cost per set, plus shipping, if requested. Please call Roller Reprographics, Inc. for more information regarding cost per set.

The Contract Documents may be reviewed for bidding purposes without charge during business hours at the office of the A/E and the following locations:

Allied Construction Industries
3 Kovach Drive
(continued in next column)

(continued from previous column)

Cincinnati, Ohio 45215
Phone: (513) 221-8020
Contact: Candi Oakley
E-mail: coakley@aci-construction.org
Website: www.aci-construction.org

BB-Bid Plan Room
Contractor's Register
800 East Main Street
Jefferson Valley, NY 10535
Phone: (800) 431-2584 Ext 3618
Contact: Kathy Stein
E-mail: kstein@thebluebook.com
Website: www.thebluebook.com

The Builder's Exchange, Inc. (Cleveland)
9555 Rockside Rd., Suite 300
Valley View, Ohio 44125
Phone: (216) 393-6300 Ext 39 / (866) 907-6300
Contact: Laurel Screptock
E-mail: info@bxohio.com
Website: www.bxcleve.com

The Builder's Exchange, Inc. (Dayton)
2077 Embury Park Road
Dayton, Ohio 45414
Phone: (937) 278-5723
Contact: John Grandetti [Do not send documents]
E-mail: jgrandetti@bxohio.com
Website: www.bxohio.com

The Builder's Exchange, Inc. (Toledo)
5555 Airport Highway, Suite 140
Toledo, Ohio 43615
Phone: (419) 865-3833 Ext 201
Contact: Sarah Skiver
E-mail: sskiver@bxohio.com
Website: www.bxohio.com

Builder's Exchange of East Central Ohio
5080 Aultman Road
North Canton, Ohio 44720
Phone: (330) 452-8039 Ext 104
Contact: Julie Thornberry
E-mail: jthornberry@buildersexchange.org
Website: www.mybx.org

Cincinnati Builders Exchange
4350 Glendale-Milford Road, Suite 120
Cincinnati, Ohio 45242
Phone: (513) 769-4800 Ext 203
Contact: Ashley Grandetti
E-mail: agrandetti@bxohio.com
Website: www.bxohio.com

Pittsburgh Builders Exchange
1813 North Franklin Street
Pittsburgh, Pennsylvania 15233
Phone: (412) 922-4200
Contact: Karen Kleber
E-mail: Karen@pghbx.org
Website: www.pghbx.org

Construction Journal
7261 Engle Road, Suite 101
Cleveland, Ohio 44130
Phone: (800) 969-4700 / (440) 826-4700 Ext 17
Contact: Ted Blaicher
E-mail: ted.blaicher@constructionjournal.com
Website: www.constructionjournal.com

ConstructConnect
30 Technology Parkway South - Suite 100
Norcross, Georgia 30092
Phone: (800) 364-2059 Ext. 8158
Contact: Allen Blair
E-mail: isgftmr@gmail.com
Website: www.constructconnect.com

Dodge Data Analytics
c/o McGraw-Hill Company
3315 Central Avenue
Hot Springs, Arkansas 71913-6138
Phone: (800) 393-6343
Website: www.construction.com
To upload project documents: http://construction.com/dodge/submit-project.asp

Subcontractors Association of Northeast Ohio
637 Vernon Odom Blvd
Akron, Ohio 44307
Phone: (330) 762-9951 Ext 11
Contact: Shelly Miller
E-mail: safetycenter@saneo.com
Secondary E-mail: planroom@saneo.com
Website: www.saneo.com

Northeast Ohio Procurement Technical Assistance Center
Lakeland Community College
Engineering Building Room 222
7700 Clock Tower Drive
Kirtland, Ohio 44094
Phone: (440) 525-7733
Contact: Jane Stewart
E-mail: jstewart@lakelandcc.edu
Website: http://lakelandcc.edu/ptac/

Ohio University Procurement Technical Assistance Center
Voinovich Center for Leadership and Public Affairs
The Ridges, Building 20, Suite 143
Athens, Ohio 45701
Phone: (740) 597-1868
Contact: Sharon Hopkins
E-mail: ptac@ohio.edu
Website: www.ohio.edu/ptac

South Point Procurement Technical Assistance Center
Southern Ohio Procurement Outreach Center
216 Collins Avenue
South Point, Ohio 45680
Phone: (740) 377-4550
Contact: Jordan Lucas
E-mail: jordan@sopoc.org
Website: www.sopoc.org

Mahoning Valley Procurement Technical Assistance Center
Mahoning Valley Economic Development Corporation
4319 Belmont Avenue
Youngstown, Ohio 44505
Phone: (330) 759-3668 x24
Contact: Norma Webb
E-mail: norma@mvedc.com
Website: www.mvedc.com

Akron Minority Business Assistance Center
Akron Urban League
440 Vernon Odom Boulevard
Akron, Ohio 44307
Phone: (234) 542-4145
Contact: Kimberly Irvin-Lee
E-mail: klee@akronurbanleague.org
Website: www.akronurbanleague.org

Cincinnati Minority Business Assistance Center
Greater Cincinnati African American Chamber
2945 Gilbert Avenue
Cincinnati, Ohio 45206
Phone: (513) 475-7151 Ext. 121
Contact: Deborah Davis
E-mail: deborah@african-americanchamber.com
Website: ww.african-americanchamber.com

Cleveland Minority Business Assistance Center
Urban League of Greater Cleveland
2930 Prospect Avenue
Cleveland, Ohio 44115
Phone: (216) 622-0999
Contact: Renee Ligon
E-mail: rligon@ulcleveland.org
Website: www.ulcleveland.org

Columbus Minority Business Assistance Center
Columbus Urban League
788 Mt. Vernon Avenue
Columbus, Ohio 43203
Phone: (614) 372-2358
Contact: Melinda Carter [Paper + PDF]
E-mail: mcarter@cul.org
Website: www.cul.org

Dayton Minority Business Assistance Center
City of Dayton c/o Human Relations Council
907 West Fifth Street
Dayton, Ohio 45402
Phone: (937) 333-1033
Contact: RoShawn Winburn
E-mail: roshawn.winburn@daytonohio.gov

Toledo Minority Business Assistance Center
University of Toledo
2145 East Scott Park Drive
Toledo, Ohio 43607
Phone: (419) 530-3344
Contact: Lenora McIntyre
E-mail: nwombac@utoledo.edu
Website: www.nwombac.com
To mail project documents:
2801 West Bancroft Street, MS 420
Toledo, Ohio 43606

Youngstown Minority Business Assistance Center
Youngstown Business Incubator
241 West Federal Street
Youngstown, Ohio 44503
Phone: (330) 884-6053
Contact: Carmella Williams
E-mail: cwilliams@ybi.org
Website: www.ybi.org

Roller Reprographic Services AKA Builders Exchange (Youngstown)
12037 South Avenue
North Lima, Ohio 44452
Phone: (330) 549-0377
Fax: (330) 549-0307
Contact: Andrea Hazel
E-mail: prints@rollerreprographicserives.com
Web: http://rollerreprographics.com/Contact_Us.html

Construction Bulletin
4178 Market Street
Youngstown, Ohio 44512
Phone: (330) 782-3733
Fax: (330) 782-8110
Contact: Clarice Ciotti
E-mail: consbull@sbcglobal.com

Approved for Publication:
February 2, 9, 16, 2019

LEGAL NOTICE

Sealed bids will be received by:

Youngstown State University
Procurement Services
Jones Hall (410 Wick Ave.) 2nd Floor
Youngstown, Ohio 44555

for the following Project:

Project: YSU 1920-9.1
YSU Cafaro Field
Youngstown State University
Youngstown, Mahoning County

in accordance with the Contract Documents prepared by:

GPD Group
100 Federal Plaza East, Suite 200
Youngstown, Ohio 44503
Contact: Chris Tolnar, PE
Phone: (330) 599-4321

Bidders may submit requests for consideration of a proposed Substitution for a specified product, equipment, or service to the Architect/Engineer ("A/E") no later than 10 days prior to the bid opening. Additional products, equipment, and services may be accepted as approved Substitutions only by written Addendum.

From time to time, the Commission issues new editions of the "State of Ohio Standard Requirements for Public Facility Construction" and may issue interim changes. Bidders must submit Bids that comply with the version of the Standard Requirements included in the Contract Documents.

Prevailing Wage rates and Equal Employment Opportunity requirements are applicable to this Project.

This Project is subject to the State of Ohio's Encouraging Diversity, Growth, and Equity ("EDGE") Business Development Program. A Bidder is required to submit with its Bid and with its Bidder's Qualifications form, certain information about the certified EDGE Business Enterprise(s) participating on the Project with the Bidder. Refer to **Section 6.1.11** of the **Instructions to Bidders**.

The EDGE Participation Goal for the Project is **5.0 percent**.

The percentage is determined by the contracted value of goods, services, materials, and labor that are provided by EDGE-certified business(es). The participation is calculated on the total amount of each awarded contract. For more information about EDGE, contact the State of Ohio EDGE Certification Office at http://das.ohio.gov/eod, or at its physical location: 4200 Surface Road, Columbus, Ohio 43228-1395; or by telephone at (614) 466-8380.

The Bidder may be subject to a Pre-Award Affirmative Action Compliance Review in accordance with Section 123:2-5-01 of the Ohio Administrative Code including a review of the Bidder's employment records and an on-site review.

The Bidder must indicate on the Bid Form, the locations where its services will be performed in the spaces provided or by attachment in accordance with the requirements of Executive Order 2011-12K related to providing services only within the United States. Failure to do so may cause the Bid to be rejected as non-responsive.

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Bidders are encouraged to be enrolled in and to be in good standing in a Drug-Free Safety Program ("DFSP") approved by the Ohio Bureau of Workers' Compensation ("OBWC") prior to submitting a Bid and provide, on the Bid Form with its Bid, certain information relative to their enrollment in such a program; and, if awarded a Contract, shall comply with other DFSP criteria described in **Section 1.6** of the **General Conditions**.

Bids will be received for:

Trade	Estimate
General Contract	**$2,150,000.00**
Alternate A-1: Restroom Building Shell	**$25,000.00**
Alternate A-2: Restroom Building Interior	**$75,000.00**
Alternate A-3: Scoreboard	**$25,000.00**
Alternate A-4: Lighting	**$285,000.00**
Alternate A-5: Shock Pad	**$85,000.00**

Until **Wednesday, March 13, 2019, at 2:00 p.m.**, when all Bids will be opened and read aloud. Bids are due prior to 2:00pm at the YSU Procurement Office, Jones Hall 2nd Floor.

All Bidders are strongly encouraged to attend the Pre-Bid Meeting on **Tuesday, February 26, 2019** at **2:00pm** until approximately 3:00pm, at the following location: **Beeghly Center, North Lobby (facing football field)**.

The Contractor is responsible for scheduling the Project, coordinating the Subcontractors, and providing other services identified in the Contract Documents.

The Contract Documents are available for purchase from Roller Reprographic Services, Inc. 11907 Market St., North Lima, OH 44452, Phone: 330-549-0377, Andrea Hazel, Email: prints@rollerreprographics.com at a non-refundable cost per set, plus shipping, if requested. Please call Roller Reprographics, Inc. for more information regarding cost per set.

The Contract Documents may be reviewed for bidding purposes without charge during business hours at the office of the A/E and the following locations:

Allied Construction Industries
3 Kovach Drive
Cincinnati, Ohio 45215
Phone: (513) 221-8020
Contact: Candi Oakley
E-mail: coakley@aci-construction.org
Website: www.aci-construction.org

BB-Bid Plan Room
Contractor's Register
800 East Main Street
Jefferson Valley, NY 10535
Phone: (800) 431-2584 Ext 3618
Contact: Kathy Stein
E-mail: kstein@thebluebook.com
Website: www.thebluebook.com

The Builder's Exchange, Inc. (Cleveland)
9555 Rockside Rd., Suite 300
Valley View, Ohio 44125
Phone: (216) 393-6300 Ext 39 / (866) 907-6300
Contact: Laurel Screptock
E-mail: info@bxohio.com
Website: www.bxcleve.com

The Builder's Exchange, Inc. (Dayton)
2077 Embury Park Road
Dayton, Ohio 45414
Phone: (937) 278-5723
Contact: John Grandetti [Do not send documents]
E-mail: jgrandetti@bxohio.com
Website: www.bxohio.com

The Builder's Exchange, Inc. (Toledo)
5555 Airport Highway, Suite 140
Toledo, Ohio 43615
Phone: (419) 865-3833 Ext 201
Contact: Sarah Skiver
E-mail: sskiver@bxohio.com
Website: www.bxohio.com

Builder's Exchange of East Central Ohio
5080 Aultman Road
North Canton, Ohio 44720
Phone: (330) 452-8039 Ext 104
Contact: Julie Thornberry
E-mail: jthornberry@buildersexchange.org
Website: www.mybx.org

Cincinnati Builders Exchange
4350 Glendale-Milford Road, Suite 120
Cincinnati, Ohio 45242
Phone: (513) 769-4800 Ext 203
Contact: Ashley Grandetti
E-mail: agrandetti@bxohio.com
Website: www.bxohio.com

Pittsburgh Builders Exchange
1813 North Franklin Street
Pittsburgh, Pennsylvania 15233
Phone: (412) 922-4200
Contact: Karen Kleber
E-mail: Karen@pghbx.org
Website: www.pghbx.org

Construction Journal
7261 Engle Road, Suite 101
Cleveland, Ohio 44130
Phone: (800) 969-4700 / (440) 826-4700 Ext 17
Contact: Ted Blaicher
E-mail: ted.blaicher@constructionjournal.com
Website: www.constructionjournal.com

ConstructConnect
30 Technology Parkway South - Suite 100
Norcross, Georgia 30092
Phone: (800) 364-2059 Ext. 8158
Contact: Allen Blair
E-mail: isgftmr@gmail.com
Website: www.constructconnect.com

Dodge Data Analytics
c/o McGraw-Hill Company
3315 Central Avenue
Hot Springs, Arkansas 71913-6138
Phone: (800) 393-6343
Website: www.construction.com
To upload project documents:
(continued in next column)

(continued from previous column)

http://construction.com/dodge/submit-project.asp

Subcontractors Association of Northeast Ohio
637 Vernon Odom Blvd
Akron, Ohio 44307
Phone: (330) 762-9951 Ext 11
Contact: Shelly Miller
E-mail: safetycenter@saneo.com
Secondary E-mail: planroom@saneo.com
Website: www.saneo.com

Northeast Ohio Procurement Technical Assistance Center
Lakeland Community College
Engineering Building Room 222
7700 Clock Tower Drive
Kirtland, Ohio 44094
Phone: (440) 525-7733
Contact: Jane Stewart
E-mail: jstewart@lakelandcc.edu
Website: http://lakelandcc.edu/ptac/

Ohio University Procurement Technical Assistance Center
Voinovich Center for Leadership and Public Affairs
The Ridges, Building 20, Suite 143
Athens, Ohio 45701
Phone: (740) 597-1868
Contact: Sharon Hopkins
E-mail: ptac@ohio.edu
Website: www.ohio.edu/ptac

South Point Procurement Technical Assistance Center
Southern Ohio Procurement Outreach Center
216 Collins Avenue
South Point, Ohio 45680
Phone: (740) 377-4550
Contact: Jordan Lucas
E-mail: jordan@sopoc.org
Website: www.sopoc.org

Mahoning Valley Procurement Technical Assistance Center
Mahoning Valley Economic Development Corporation
4319 Belmont Avenue
Youngstown, Ohio 44505
Phone: (330) 759-3668 x24
Contact: Norma Webb
E-mail: norma@mvedc.com
Website: www.mvedc.com

Akron Minority Business Assistance Center
Akron Urban League
440 Vernon Odom Boulevard
Akron, Ohio 44307
Phone: (234) 542-4145
Contact: Kimberly Irvin-Lee
E-mail: klee@akronurbanleague.org
Website: www.akronurbanleague.org

Cincinnati Minority Business Assistance Center
Greater Cincinnati African American Chamber
2945 Gilbert Avenue
Cincinnati, Ohio 45206
Phone: (513) 475-7151 Ext. 121
Contact: Deborah Davis
E-mail: deborah@african-americanchamber.com
Website: www.african-americanchamber.com

Cleveland Minority Business Assistance Center
Urban League of Greater Cleveland
2930 Prospect Avenue
Cleveland, Ohio 44115
Phone: (216) 622-0999
Contact: Renee Ligon
E-mail: rligon@ulcleveland.org
Website: www.ulcleveland.org

Columbus Minority Business Assistance Center
Columbus Urban League
788 Mt. Vernon Avenue
Columbus, Ohio 43203
Phone: (614) 372-2358
Contact: Melinda Carter [Paper + PDF]
E-mail: mcarter@cul.org
Website: www.cul.org

Dayton Minority Business Assistance Center
City of Dayton c/o Human Relations Council
907 West Fifth Street
Dayton, Ohio 45402
Phone: (937) 333-1033
Contact: RoShawn Winburn
E-mail: roshawn.winburn@daytonohio.gov

Toledo Minority Business Assistance Center
University of Toledo
2145 East Scott Park Drive
Toledo, Ohio 43607
Phone: (419) 530-3344
Contact: Lenora McIntyre
E-mail: nwombac@utoledo.edu
Website: www.nwombac.com
To mail project documents:
2801 West Bancroft Street, MS 420
Toledo, Ohio 43606

Youngstown Minority Business Assistance Center
Youngstown Business Incubator
241 West Federal Street
Youngstown, Ohio 44503
Phone: (330) 884-6053
Contact: Carmella Williams
E-mail: cwilliams@ybi.org
Website: www.ybi.org

Roller Reprographic Services AKA Builders Exchange (Youngstown)
12037 South Avenue
North Lima, Ohio 44452
Phone: (330) 549-0377
Fax: (330) 549-0307
Contact: Andrea Hazel
E-mail: prints@rollerreprographicserives.com
Web: http://rollerreprographics.com/Contact_Us.html

Construction Bulletin
4178 Market Street
Youngstown, Ohio 44512
Phone: (330) 782-3733
Fax: (330) 782-8110
Contact: Clarice Ciotti
E-mail: consbull@sbcglobal.com

Approved for Publication:
February 16, 23, March 2, 2019

LEGAL NOTICE

Sealed bids will be received by:

Youngstown State University
Procurement Services
Jones Hall (410 Wick Ave.) 2nd Floor
Youngstown, Ohio 44555

for the following Project:

Project: YSU 1920-9.2
YSU North Central Parking Facility
Youngstown State University
Youngstown, Mahoning County

in accordance with the Contract Documents prepared by:

GPD Group
100 Federal Plaza East, Suite 200
Youngstown, Ohio 44503
Contact: Chris Tolnar, PE
Phone: (330) 599-4321
ctolnar@gpdgroup.com

Bidders may submit requests for consideration of a proposed Substitution for a specified product, equipment, or service to the Architect/Engineer ("A/E") no later than 10 days prior to the bid opening. Additional products, equipment, and services may be accepted as approved Substitutions only by written Addendum.

From time to time, the Commission issues new editions of the "State of Ohio Standard Requirements for Public Facility Construction" and may issue interim changes. Bidders must submit Bids that comply with the version of the Standard Requirements included in the Contract Documents.

Prevailing Wage rates and Equal Employment Opportunity requirements are applicable to this Project.

This Project is subject to the State of Ohio's Encouraging Diversity, Growth, and Equity ("EDGE") Business Development Program. A Bidder is required to submit with its Bid and with its Bidder's Qualifications form, certain information about the certified EDGE Business Enterprise(s) participating on the Project with the Bidder. Refer to **Section 6.1.11** of the **Instructions to Bidders**

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The EDGE Participation Goal for the Project is **5.0 percent**

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The percentage is determined by the contracted value of goods, services, materials, and labor that are provided by EDGE-certified business(es). The participation is calculated on the total amount of each awarded contract. For more information about EDGE, contact the State of Ohio EDGE Certification Office at http://das.ohio.gov/eod, or at its physical location: 4200 Surface Road, Columbus, Ohio 43228-1395; or by telephone at (614) 466-8380.

The Bidder may be subject to a Pre-Award Affirmative Action Compliance Review in accordance with Section 123:2-5-01 of the Ohio Administrative Code including a review of the Bidder's employment records and an on-site review.

The Bidder must indicate on the Bid Form, the locations where its services will be performed in the spaces provided or by attachment in accordance with the requirements of Executive Order 2011-12K related to providing services only within the United States. Failure to do so may cause the Bid to be rejected as non-responsive.

DOMESTIC STEEL USE REQUIREMENTS AS SPECIFIED IN OHIO REVISED CODE SECTION 153.011 APPLY TO THIS PROJECT. COPIES OF OHIO REVISED CODE SECTION 153.011 CAN BE OBTAINED FROM ANY OF THE OFFICES OF THE OHIO FACILITIES CONSTRUCTION COMMISSION.

Bidders are encouraged to be enrolled in and to be in good standing in a Drug-Free Safety Program ("DFSP") approved by the Ohio Bureau of Workers' Compensation ("OBWC") prior to submitting a Bid and provide, on the Bid Form with its Bid, certain information relative to their enrollment in such a program; and, if awarded a Contract, shall comply with other DFSP criteria described in **Section 1.6** of the **General Conditions**.

Bids will be received for:

Trade	Estimate
General Contract	**$1,130,000.00**

Until **Wednesday, March 13, 2019, at 3:00 p.m.,** when all Bids will be opened and read aloud. Bids are due prior to 3:00pm at the YSU Procurement Office, Jones Hall 2nd Floor.

All Bidders are strongly encouraged to attend the Pre-Bid Meeting on **Tuesday, February 26, 2019** at **3:00pm** until approximately 4:00pm, at the following location: **Beeghly Center, North Lobby (facing football field)**.

The Contractor is responsible for scheduling the Project, coordinating the Subcontractors, and providing other services identified in the Contract Documents.

The Contract Documents are available for purchase from Roller Reprographic Services, Inc. 11907 Market St., North Lima, OH 44452, Phone: 330-549-0377, Andrea Hazel, Email: prints@rollerreprographics.com at a non-refundable cost per set, plus shipping, if requested. Please call Roller Reprographics, Inc. for more information regarding cost per set.

The Contract Documents may be reviewed for bidding purposes without charge during business hours at the office of the A/E and the following locations:

Allied Construction Industries
3 Kovach Drive
Cincinnati, Ohio 45215
Phone: (513) 221-8020
Contact: Candi Oakley
E-mail: coakley@aci-construction.org
Website: www.aci-construction.org

BB-Bid Plan Room
Contractor's Register
800 East Main Street
Jefferson Valley, NY 10535
Phone: (800) 431-2584 Ext 3618
Contact: Kathy Stein
E-mail: kstein@thebluebook.com
Website: www.thebluebook.com

The Builder's Exchange, Inc. (Cleveland)
9555 Rockside Rd., Suite 300
Valley View, Ohio 44125
Phone: (216) 393-6300 Ext 39 / (866) 907-6300
Contact: Laurel Screptock
E-mail: info@bxohio.com
Website: www.bxcleve.com

The Builder's Exchange, Inc. (Dayton)
2077 Embury Park Road
Dayton, Ohio 45414
Phone: (937) 278-5723
Contact: John Grandetti [Do not send documents]
E-mail: jgrandetti@bxohio.com
Website: www.bxohio.com

The Builder's Exchange, Inc. (Toledo)
5555 Airport Highway, Suite 140
Toledo, Ohio 43615
Phone: (419) 865-3833 Ext 201
Contact: Sarah Skiver
E-mail: sskiver@bxohio.com
Website: www.bxohio.com

Builder's Exchange of East Central Ohio
5080 Aultman Road
North Canton, Ohio 44720
Phone: (330) 452-8039 Ext 104
Contact: Julie Thornberry
E-mail: jthornberry@buildersexchange.org
Website: www.mybx.org

Cincinnati Builders Exchange
4350 Glendale-Milford Road, Suite 120
Cincinnati, Ohio 45242
Phone: (513) 769-4800 Ext 203
Contact: Ashley Grandetti
E-mail: agrandetti@bxohio.com
Website: www.bxohio.com

Pittsburgh Builders Exchange
1813 North Franklin Street
Pittsburgh, Pennsylvania 15233
Phone: (412) 922-4200
Contact: Karen Kleber
E-mail: Karen@pghbx.org
Website: www.pghbx.org

Construction Journal
7261 Engle Road, Suite 101
Cleveland, Ohio 44130
Phone: (800) 969-4700 / (440) 826-4700 Ext 17
Contact: Ted Blaicher
E-mail: ted.blaicher@constructionjournal.com
Website: www.constructionjournal.com

ConstructConnect
30 Technology Parkway South - Suite 100
Norcross, Georgia 30092
Phone: (800) 364-2059 Ext. 8158
Contact: Allen Blair
E-mail: isgftmr@gmail.com
Website: www.constructconnect.com

Dodge Data Analytics
c/o McGraw-Hill Company
3315 Central Avenue
Hot Springs, Arkansas 71913-6138
Phone: (800) 393-6343
Website: www.construction.com
To upload project documents: http://construction.com/dodge/submit-project.asp

Subcontractors Association of Northeast Ohio
637 Vernon Odom Blvd
(continued in next column)

(continued from previous column)

Akron, Ohio 44307
Phone: (330) 762-9951 Ext 11
Contact: Shelly Miller
E-mail: safetycenter@saneo.com
Secondary E-mail: planroom@saneo.com
Website: www.saneo.com

Northeast Ohio Procurement Technical Assistance Center
Lakeland Community College
Engineering Building Room 222
7700 Clock Tower Drive
Kirtland, Ohio 44094
Phone: (440) 525-7733
Contact: Jane Stewart
E-mail: jstewart@lakelandcc.edu
Website: http://lakelandcc.edu/ptac/

Ohio University Procurement Technical Assistance Center
Voinovich Center for Leadership and Public Affairs
The Ridges, Building 20, Suite 143
Athens, Ohio 45701
Phone: (740) 597-1868
Contact: Sharon Hopkins
E-mail: ptac@ohio.edu
Website: www.ohio.edu/ptac

South Point Procurement Technical Assistance Center
Southern Ohio Procurement Outreach Center
216 Collins Avenue
South Point, Ohio 45680
Phone: (740) 377-4550
Contact: Jordan Lucas
E-mail: jordan@sopoc.org
Website: www.sopoc.org

Mahoning Valley Procurement Technical Assistance Center
Mahoning Valley Economic Development Corporation
4319 Belmont Avenue
Youngstown, Ohio 44505
Phone: (330) 759-3668 x24
Contact: Norma Webb
E-mail: norma@mvedc.com
Website: www.mvedc.com

Akron Minority Business Assistance Center
Akron Urban League
440 Vernon Odom Boulevard
Akron, Ohio 44307
Phone: (234) 542-4145
Contact: Kimberly Irvin-Lee
E-mail: klee@akronurbanleague.org
Website: www.akronurbanleague.org

Cincinnati Minority Business Assistance Center
Greater Cincinnati African American Chamber
2945 Gilbert Avenue
Cincinnati, Ohio 45206
Phone: (513) 475-7151 Ext. 121
Contact: Deborah Davis
E-mail: deborah@african-americanchamber.com
Website: www.african-americanchamber.com

Cleveland Minority Business Assistance Center
Urban League of Greater Cleveland
2930 Prospect Avenue
Cleveland, Ohio 44115
Phone: (216) 622-0999
Contact: Renee Ligon
E-mail: rligon@ulcleveland.org
Website: www.ulcleveland.org

Columbus Minority Business Assistance Center
Columbus Urban League
788 Mt. Vernon Avenue
Columbus, Ohio 43203
Phone: (614) 372-2358
Contact: Melinda Carter [Paper + PDF]
E-mail: mcarter@cul.org
Website: www.cul.org

Dayton Minority Business Assistance Center
City of Dayton c/o Human Relations Council
907 West Fifth Street
Dayton, Ohio 45402
Phone: (937) 333-1033
Contact: RoShawn Winburn
E-mail: roshawn.winburn@daytonohio.gov

Toledo Minority Business Assistance Center
University of Toledo
2145 East Scott Park Drive
Toledo, Ohio 43607
Phone: (419) 530-3344
Contact: Lenora McIntyre
E-mail: nwombac@utoledo.edu
Website: www.nwombac.com
To mail project documents:
2801 West Bancroft Street, MS 420
Toledo, Ohio 43606

Youngstown Minority Business Assistance Center
Youngstown Business Incubator
241 West Federal Street
Youngstown, Ohio 44503
Phone: (330) 884-6053
Contact: Carmella Williams
E-mail: cwilliams@ybi.org
Website: www.ybi.org

Roller Reprographic Services AKA Builders Exchange (Youngstown)
12037 South Avenue
North Lima, Ohio 44452
Phone: (330) 549-0377
Fax: (330) 549-0307
Contact: Andrea Hazel
E-mail: prints@rollerreprographicserives.com
Web: http://rollerreprographics.com/Contact_Us.html

Construction Bulletin
4178 Market Street
Youngstown, Ohio 44512
Phone: (330) 782-3733
Fax: (330) 782-8110
Contact: Clarice Ciotti
E-mail: consbull@sbcglobal.com

Approved for Publication:
February 16, 23, March 2, 2019

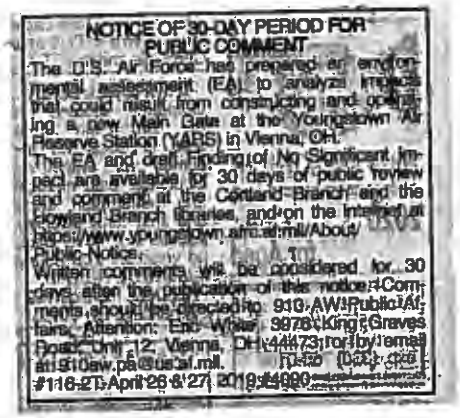
LEGAL NOTICE
Notice to Bidders

Sealed proposals will be received by the City of Campbell, 351 Tenney Avenue, Campbell, Ohio 44405 until 12:00 p.m. on Tuesday, April 30, 2019 for the sale of the City Water Treatment Plant and System. Cost per bid packet is $50. Any questions, please contact Lew Jackson, City Administrator at 330-755-1451 ext.114.

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

The U.S. Air Force has prepared an environmental assessment (EA) to analyze impacts that could result from constructing and operating a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, OH. The EA and draft Finding of No Significant Impact are available for 30 days of public review and comment at the Cortland Branch and the Howland Branch libraries, and on the internet at https://www.youngstown.afrc.af.mil/About/Public-Notice.

Written comments will be considered for 30 days after the publication of this notice. Comments should be directed to: 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road, Unit 12, Vienna, OH 44473; or by email at: 910aw.pa@us.af.mil.



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Written comments will be considered for 30 days after the publication of this notice. Comments should be directed to: 910 AW/PublicAffairs, Attention: Eric Wiker, 9976 King Graves Road, Unit 12, Vienna, OH 44473; or by email at: 910aw.pa@us.af.mil.

#116-2T-April 26 & 27, 2019-$40.00

PROOF OF PUBLICATION

STATE OF OHIO
TRUMBULL COUNTY SS· CONNIE PACEK

BEING DULY SWORN, UPON OATH STATES THAT SHE IS AN AUTHORIZED REPRESENTATIVE OF THE TRIBUNE CHRONICLE, (A DIVISION OF EASTERN OHIO NEWSPAPERS INC). A DAILY NEWSPAPER PRINTED IN THE CITY OF WARREN, COUNTY OF TRUMBULL, STATE OF OHIO AND OF GENERAL CIRCULATION IN THE CITY OF WARREN, TRUMBULL COUNTY, OHIO AND IS INDEPENDENT IN POLITICS

THAT THE ATTACHED ADVERTISEMENT WAS PUBLISHED IN THE TRIBUNE CHRONICLE EVERY DAY

FOR TWO DAYS CONSECUTIVE ~~WEEKS~~ AND

THAT THE FIRST INSERTION WAS ON TRI DAY

THE 26th DAY OF APRIL 2019

CONNIE PACEK

SWORN TO BEFORE ME AND SUBSCRIBED IN MY PRESENCE ON THIS 30TH DAY OF April 2019

NOTARY PUBLIC

SEAL

LAWRENCE J. KOVACH, Notary Public
STATE OF OHIO
MY COMMISSION EXPIRES SEPTEMBER 23, 2022

ADVERTISING COST $249.82

JA351600

THE STATE OF OHIO
Mahoning County

Proof Of Publication

Personally appeared before the undersigned authority, Deborah Logan of THE VINDICATOR PRINTING COMPANY, publishers of THE VINDICATOR, a newspaper printed and of general circulation in Mahoning, Trumbull and Columbiana Counties in Ohio and Lawrence and Mercer Counties in Pennsylvania, and being duly sworn, on her oath deposes and says that the notice hereto attached was published 2 times and that insertions were as follows:

4/26/2019 ; 4/27/2019

Advertisement..... $120.00
Affidavit..... 2.00

TOTAL..... $122.00

Sworn to and subscribed before me this 2nd day of May, A.D. 2019

Julie A. Merrell

NOTARY PUBLIC

JULIE A. MERRELL
Notary Public, State of Ohio
My Comm. Expires July 05, 2022

Legal Notices

LEGAL NOTICE

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

The U.S. Air Force has prepared an environmental assessment (EA) to analyze impacts that could result from constructing and operating a new Main Gate at the Youngstown Air Reserve Station (YARS) in Vienna, OH. The EA and draft Finding of No Significant Impact are available for 30 days of public review and comment at the Cortland Branch and the Howland Branch libraries, and on the internet at https://www.youngstown.afrc.af.mil/About/Public-Notice.

Written comments will be considered for 30 days after the publication of this notice. Comments should be directed to: 910 AW Public Affairs, Attention: Eric White, 3976 King Graves Road, Unit 12, Vienna, OH 44473; or by email at: 910aw.pa@us.af.mil.

Appendix C
Air Quality Emission Estimates and Record of Non-Applicability

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

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: YOUNGSTOWN Air Reserve Station
County(s): Trumbull
Regulatory Area(s): Youngstown-Warren-Sharon, OH-PA; NOT IN A REGULATORY AREA

b. Action Title: Construction of New Main Gate

c. Project Number/s (if applicable):

d. Projected Action Start Date: 10 / 2020

e. Action Description:

Construction of New Main Gate

f. Point of Contact:

Name: Caitlin Santinelli
Title: Scientist
Organization: Jacobs
Email: caitlin.santinelli@jacobs.com
Phone Number: 678.530.4148

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

Conformity Analysis Summary:

2020

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Youngstown-Warren-Sharon, OH-PA			
VOC	0.090		
NOx	0.597		
CO	0.519		
SOx	0.001		
PM 10	4.879		
PM 2.5	0.026		
Pb	0.000		
NH3	0.000		
CO2e	128.2		
NOT IN A REGULATORY AREA			
VOC	0.090		

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

NOx	0.597		
CO	0.519		
SOx	0.001		
PM 10	4.879		
PM 2.5	0.026		
Pb	0.000		
NH3	0.000		
CO2e	128.2		

2021

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Youngstown-Warren-Sharon, OH-PA			
VOC	0.223		
NOx	0.934		
CO	1.050		
SOx	0.002		
PM 10	0.045		
PM 2.5	0.045		
Pb	0.000		
NH3	0.001		
CO2e	218.7		
NOT IN A REGULATORY AREA			
VOC	0.223		
NOx	0.934		
CO	1.050		
SOx	0.002		
PM 10	0.045		
PM 2.5	0.045		
Pb	0.000		
NH3	0.001		
CO2e	218.7		

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Youngstown-Warren-Sharon, OH-PA			
VOC	0.001		
NOx	0.009		
CO	0.008		
SOx	0.000		
PM 10	0.001		
PM 2.5	0.001		
Pb	0.000		
NH3	0.000		
CO2e	11.0		
NOT IN A REGULATORY AREA			
VOC	0.001		
NOx	0.009		
CO	0.008		
SOx	0.000		
PM 10	0.001		
PM 2.5	0.001		

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

Pb	0.000		
NH3	0.000		
CO2e	11.0		

2023 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Youngstown-Warren-Sharon, OH-PA			
VOC	0.001		
NOx	0.009		
CO	0.008		
SOx	0.000		
PM 10	0.001		
PM 2.5	0.001		
Pb	0.000		
NH3	0.000		
CO2e	11.0		
NOT IN A REGULATORY AREA			
VOC	0.001		
NOx	0.009		
CO	0.008		
SOx	0.000		
PM 10	0.001		
PM 2.5	0.001		
Pb	0.000		
NH3	0.000		
CO2e	11.0		

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

February 27, 2019

Caitlin Santinelli, Scientist — DATE

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location
Base: YOUNGSTOWN Air Reserve Station
County(s): Trumbull
Regulatory Area(s): Youngstown-Warren-Sharon, OH-PA; NOT IN A REGULATORY AREA

- Action Title: Construction of New Main Gate

- Project Number/s (if applicable):

- Projected Action Start Date: 10 / 2020

- Action Purpose and Need:
Construction of New Main Gate

- Action Description:
Construction of New Main Gate

- Point of Contact
Name: Caitlin Santinelli
Title: Scientist
Organization: Jacobs
Email: caitlin.santinelli@jacobs.com
Phone Number: 678.530.4148

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Construction of New Main Gate
3.	Heating	Comfort Heating at New Main Gate Facilities

2. Construction / Demolition

2.1 General Information & Timeline Assumptions

- Activity Location
County: Trumbull
Regulatory Area(s): Youngstown-Warren-Sharon, OH-PA; NOT IN A REGULATORY AREA

- Activity Title: Construction of New Main Gate

- Activity Description:
Construction of New Main Gate

- Activity Start Date
Start Month: 10
Start Month: 2020

- Activity End Date
Indefinite: False
End Month: 12
End Month: 2021

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.312976
SO_x	0.003553
NO_x	1.530802
CO	1.568670
PM 10	4.923551

Pollutant	Total Emissions (TONs)
PM 2.5	0.070119
Pb	0.000000
NH_3	0.001018
CO_2e	346.8

2.1 Site Grading Phase

2.1.1 Site Grading Phase Timeline Assumptions

- Phase Start Date
Start Month: 10
Start Quarter: 1
Start Year: 2020

- Phase Duration
Number of Month: 2
Number of Days: 0

2.1.2 Site Grading Phase Assumptions

- General Site Grading Information
Area of Site to be Graded (ft^2): 243936
Amount of Material to be Hauled On-Site (yd^3): 0
Amount of Material to be Hauled Off-Site (yd^3): 0

- Site Grading Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Tractors/Loaders/Backhoes Composite	2	7

- Vehicle Exhaust
Average Hauling Truck Capacity (yd^3): 20 (default)
Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

2.1.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0919	0.0014	0.5823	0.5765	0.0280	0.0280	0.0082	132.95
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0562	0.0012	0.3519	0.3508	0.0138	0.0138	0.0050	122.62
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.2117	0.0024	1.5772	0.8005	0.0630	0.0630	0.0191	239.56
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**Pb**	**NH_3**	**CO_2e**
LDGV	000.290	000.002	000.217	003.327	000.008	000.007		000.023	00326.998
LDGT	000.361	000.003	000.377	004.554	000.011	000.010		000.024	00420.846
HDGV	000.732	000.005	001.044	015.772	000.023	000.021		000.045	00770.032
LDDV	000.122	000.003	000.130	002.421	000.004	000.004		000.008	00315.997
LDDT	000.263	000.004	000.374	004.153	000.007	000.006		000.008	00448.254
HDDV	000.433	000.013	004.575	001.600	000.169	000.155		000.027	01474.653
MC	002.419	000.003	000.766	013.488	000.028	000.025		000.053	00397.445

2.1.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$PM10_{FD} = (20 * ACRE * WD) / 2000$

$PM10_{FD}$: Fugitive Dust PM 10 Emissions (TONs)
20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)
ACRE: Total acres (acres)
WD: Number of Total Work Days (days)
2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd^3)
$HA_{OffSite}$: Amount of Material to be Hauled Off-Site (yd^3)
HC: Average Hauling Truck Capacity (yd^3)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.2 Building Construction Phase

2.2.1 Building Construction Phase Timeline Assumptions

- Phase Start Date
Start Month: 12
Start Quarter: 1
Start Year: 2020

- Phase Duration
Number of Month: 9
Number of Days: 0

2.2.2 Building Construction Phase Assumptions

- General Building Construction Information
Building Category: Office or Industrial
Area of Building (ft^2): 5250
Height of Building (ft): 30
Number of Units: N/A

- Building Construction Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

2.2.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Cranes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0898	0.0013	0.6610	0.3917	0.0256	0.0256	0.0081	128.83
Forklifts Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0320	0.0006	0.1690	0.2160	0.0070	0.0070	0.0028	54.467
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.290	000.002	000.217	003.327	000.008	000.007		000.023	00326.998
LDGT	000.361	000.003	000.377	004.554	000.011	000.010		000.024	00420.846
HDGV	000.732	000.005	001.044	015.772	000.023	000.021		000.045	00770.032
LDDV	000.122	000.003	000.130	002.421	000.004	000.004		000.008	00315.997
LDDT	000.263	000.004	000.374	004.153	000.007	000.006		000.008	00448.254
HDDV	000.433	000.013	004.575	001.600	000.169	000.155		000.027	01474.653
MC	002.419	000.003	000.766	013.488	000.028	000.025		000.053	00397.445

2.2.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = BA * BH * (0.42 / 1000) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.42 / 1000): Conversion Factor ft^3 to trips (0.42 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase
$VMT_{VT} = BA * BH * (0.38 / 1000) * HT$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
BA: Area of Building (ft^2)
BH: Height of Building (ft)
(0.38 / 1000): Conversion Factor ft^3 to trips (0.38 trip / 1000 ft^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.3 Architectural Coatings Phase

2.3.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date
Start Month: 9
Start Quarter: 1
Start Year: 2021

- Phase Duration
Number of Month: 2
Number of Days: 0

2.3.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information
Building Category:
Total Square Footage (ft^2): 5250
Number of Units: N/A

- Architectural Coatings Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips
Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.3.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.290	000.002	000.217	003.327	000.008	000.007		000.023	00326.998
LDGT	000.361	000.003	000.377	004.554	000.011	000.010		000.024	00420.846
HDGV	000.732	000.005	001.044	015.772	000.023	000.021		000.045	00770.032
LDDV	000.122	000.003	000.130	002.421	000.004	000.004		000.008	00315.997
LDDT	000.263	000.004	000.374	004.153	000.007	000.006		000.008	00448.254
HDDV	000.433	000.013	004.575	001.600	000.169	000.155		000.027	01474.653
MC	002.419	000.003	000.766	013.488	000.028	000.025		000.053	00397.445

2.3.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$VMT_{WT} = (1 * WT * PA) / 800$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
1: Conversion Factor man days to trips (1 trip / 1 man * day)
WT: Average Worker Round Trip Commute (mile)
PA: Paint Area (ft^2)
800: Conversion Factor square feet to man days (1 ft^2 / 1 man * day)

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)
BA: Area of Building (ft^2)
2.0: Conversion Factor total area to coated area (2.0 ft^2 coated area / total area)
0.0116: Emission Factor (lb/ft^2)
2000: Conversion Factor pounds to tons

2.4 Paving Phase

2.4.1 Paving Phase Timeline Assumptions

- Phase Start Date
Start Month: 11
Start Quarter: 1
Start Year: 2021

- Phase Duration
Number of Month: 2
Number of Days: 0

2.4.2 Paving Phase Assumptions

- General Paving Information
Paving Area (ft^2): 145313

- Paving Default Settings
Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	2	6
Rollers Composite	1	7

Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.4.3 Paving Phase Emission Factor(s)

- Construction Exhaust Emission Factors (lb/hour) (default)

Graders Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0919	0.0014	0.5823	0.5765	0.0280	0.0280	0.0082	132.95
Other Construction Equipment Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0562	0.0012	0.3519	0.3508	0.0138	0.0138	0.0050	122.62
Rubber Tired Dozers Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.2117	0.0024	1.5772	0.8005	0.0630	0.0630	0.0191	239.56
Tractors/Loaders/Backhoes Composite								
	VOC	**SO_x**	**NO_x**	**CO**	**PM 10**	**PM 2.5**	**CH_4**	**CO_2e**
Emission Factors	0.0436	0.0007	0.2744	0.3616	0.0134	0.0134	0.0039	66.897

- Vehicle Exhaust & Worker Trips Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
LDGV	000.290	000.002	000.217	003.327	000.008	000.007		000.023	00326.998
LDGT	000.361	000.003	000.377	004.554	000.011	000.010		000.024	00420.846
HDGV	000.732	000.005	001.044	015.772	000.023	000.021		000.045	00770.032
LDDV	000.122	000.003	000.130	002.421	000.004	000.004		000.008	00315.997
LDDT	000.263	000.004	000.374	004.153	000.007	000.006		000.008	00448.254
HDDV	000.433	000.013	004.575	001.600	000.169	000.155		000.027	01474.653
MC	002.419	000.003	000.766	013.488	000.028	000.025		000.053	00397.445

2.4.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$

CEE_{POL}: Construction Exhaust Emissions (TONs)
NE: Number of Equipment
WD: Number of Total Work Days (days)
H: Hours Worked per Day (hours)
EF_{POL}: Emission Factor for Pollutant (lb/hour)
2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase
$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
PA: Paving Area (ft^2)
0.25: Thickness of Paving Area (ft)
(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd^3 / 27 ft^3)
HC: Average Hauling Truck Capacity (yd^3)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd^3)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase
$VMT_{WT} = WD * WT * 1.25 * NE$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase
$VOC_P = (2.62 * PA) / 43560$

VOC_P: Paving VOC Emissions (TONs)
2.62: Emission Factor (lb/acre)
PA: Paving Area (ft^2)
43560: Conversion Factor square feet to acre (43560 ft2 / $acre)^2$ / acre)

3. Heating

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location
County: Trumbull

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Regulatory Area(s): Youngstown-Warren-Sharon, OH-PA; NOT IN A REGULATORY AREA

- Activity Title: Comfort Heating at New Main Gate Facilities

- Activity Description:
Comfort Heating at New Main Gate Facilities

- Activity Start Date
Start Month: 1
Start Year: 2022

- Activity End Date
Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions:

Pollutant	Emissions Per Year (TONs)
VOC	0.000504
SO_x	0.000055
NO_x	0.009171
CO	0.007704
PM 10	0.000697

Pollutant	Emissions Per Year (TONs)
PM 2.5	0.000697
Pb	0.000000
NH_3	0.000000
CO_2e	11.0

3.2 Heating Assumptions

- Heating
Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method
Area of floorspace to be heated (ft^2): 1775
Type of fuel: Natural Gas
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value ($MMBtu/ft^3$): 0.00105
Energy Intensity ($MMBtu/ft^2$): 0.1085

- Default Settings Used: Yes

- Boiler/Furnace Usage
Operating Time Per Year (hours): 900 (default)

3.3 Heating Emission Factor(s)

- Heating Emission Factors (lb/1000000 scf)

VOC	SO_x	NO_x	CO	PM 10	PM 2.5	Pb	NH_3	CO_2e
5.5	0.6	100	84	7.6	7.6			120390

3.4 Heating Formula(s)

- Heating Fuel Consumption ft^3 per Year
FC_{HER}= HA * EI / HV / 1000000

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method
HA: Area of floorspace to be heated (ft^2)
EI: Energy Intensity Requirement ($MMBtu/ft^2$)

HV: Heat Value (MMBTU/ft^3)
1000000: Conversion Factor

- Heating Emissions per Year

HE_{POL}= FC * EF_{POL} / 2000

HE_{POL}: Heating Emission Emissions (TONs)
FC: Fuel Consumption
EF_{POL}: Emission Factor for Pollutant
2000: Conversion Factor pounds to tons

Record of Non-Applicability (RONA) Concerning the General Conformity Rule (40 CFR Part 51)

Name of Project: Proposed Main Gate Youngstown Air Reserve Station

Location: Trumbull County, Ohio

The Proposed Action consists of construction of a new Main Gate at the Youngstown Air Reserve Station.

Conformity under the Clean Air Act, Section 176, has been evaluated for the proposed action in accordance with 40 CFR Part 51. The requirements of the General Conformity rule are not applicable to this project because the area is in attainment with all NAAQS. Therefore, the General Conformity rule is not applicable.

W. E. Fink

WILLIAM FINK
Chief of Environmental Engineering

7 March 2019

Date