Final Report

Environmental Assessment
Construct Munitions Maintenance Facility Building 543, Project ZQEL 05 - 0007

Youngstown Air Reserve Station

Youngstown – Warren Regional Airport
Vienna, Ohio 44473

Submitted to:

Youngstown Air Reserve Station
910TH Airlift Wing
910 MSG/CEV
Contract No. F41624-03-D-8622
Task Order 0094

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June 2006

Report Documentation Page

Form Approved
OMB No. 0704-0188

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1. REPORT DATE **JUN 2006**	2. REPORT TYPE	3. DATES COVERED **00-00-2006 to 00-00-2006**
4. TITLE AND SUBTITLE **Environmental Assessment: Construct Munitions Maintenance Facility Building 543, Project ZQEL 05 - 0007 Youngstown Air Reserve Station**		5a. CONTRACT NUMBER 5b. GRANT NUMBER 5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)		5d. PROJECT NUMBER 5e. TASK NUMBER 5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Weston Solutions Inc,711 E. Monument Avenue,Dayton,OH,45402**		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S) 11. SPONSOR/MONITOR'S REPORT NUMBER(S)
12. DISTRIBUTION/AVAILABILITY STATEMENT **Approved for public release; distribution unlimited**		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT		
15. SUBJECT TERMS		

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**76**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

file
16-B
final
06-04

FINDING OF NO SIGNIFICANT IMPACT/FINDING OF NO PRACTICABLE ALTERNATIVE (FONSI/FONPA)

CONSTRUCT MUNITIONS MAINTENANCE FACILITY BUILDING 543, PROJECT ZQEL 05-0007 YOUNGSTOWN AIR RESERVE STATION (YARS), OHIO

INTRODUCTION:

The 910th Airlift Wing (910th AW) proposes to construct a munitions maintenance facility at a location adjoining the existing munitions facilities at Youngstown Air Reserve Station (YARS), Trumbull County, Ohio. The Proposed Action, two reasonable alternatives, and a No Action Alternative were evaluated in an environmental assessment (EA). The purpose of the proposed action is to provide facilities and space to enable the 910th AW to accomplish its munitions maintenance mission in accordance with AFI 21-201, Management and Maintenance of Non-Nuclear Munitions; AFMAN 91-201, Explosives Safety Standards; and AFRCH 32-1001, Standard Facility requirements. Currently, there is no facility at YARS that fully complies with all three of these requirements. Existing munitions buildings have neither the physical space nor proper facilities from operational and functional perspectives to fully meet the requirements of the YARS munitions maintenance mission.

PROPOSED ACTION AND ALTERNATIVES:

Proposed Action:
The Proposed Action would include construction of an approximately 3,300 square-foot (SF) single-story building with provisions for future additional rooms bringing the total structure size to 4,680 SF. The facility would be concrete slab on grade with brick masonry walls and a metal roof. The facility would house office, administrative, personnel support, storage, and mechanical rooms as well as drive through maintenance bays. Supporting infrastructure would include utilities, communications, driveway access and parking pavement bringing the total developed area to approximately 25,000 SF.

Construction of the facility is proposed for the approximately 3.5 acre parcel adjacent to and immediately east of the existing munitions facilities. Siting requirements, including ESQD (explosive safety quantity distance) and IL (intra-line) distances as well as security setbacks and clear zones must also be met, thereby extending the project footprint.

ALTERNATIVES:

In addition to the Proposed Action and the No Action Alternative, two alternate locations on YARS, Alternative A and Alternative B, were designated as reasonable for further evaluation. Expansion and remodeling of the existing munitions facilities is not practicable due to explosives operational restrictions and building separation requirements. Relocation and expansion of the existing munitions facilities is also not practicable because of the lack of suitable sites, limited reuse potential of the existing buildings, and excessive costs and schedule delays. Various site designs continue to be evaluated for the Proposed Action location; no site designs have been done for the alternate locations. No other significant actions or location alternatives were deemed as reasonable.

Alternative A, an upland, wooded area is located along Perimeter Road approximately 800 to 900 feet south and east of the existing munitions facility. Alternative A would potentially result in less impact to wetlands and would meet the Reserves' mission requirements for new space in an isolated area; however,

it disperses the munitions complex and would result in less efficient operations. Its remote location and separation from the highly secured existing munitions facilities would present a security concern. Truck transport to Alternative A would be hampered by the existing road configuration as tractor trailer semi-trucks are currently unable to navigate the 90 degree turns leading to the location. Perimeter Road would need expansion and/or rerouting to accommodate these trucks. Alternative A would also result in greater noise impacts to adjoining properties. Alternative A is not a practicable alternative to the Proposed Action.

Alternative B, an existing open field, is located off Perimeter Road adjacent to the Fire Training Facility to the east, a storm water retention and woodland/wetland area to the north, and various base facilities to the west. Alternative B would not impact wetlands. However, this location is currently being used as a training and unit exercise area by the Reserves and by Base Civil Engineering. Furthermore, this location has been programmed as the site for a new mission required EOD (explosive ordnance disposal) facility. The facility, comprising approximately 11,000 square feet with additional space requirements for security and explosives standoff distances, would occupy most of the available land at this location and would not leave sufficient area for the munitions maintenance facility. Alternative B is not a practicable alternative to the Proposed Action.

Under the No Action Alternative, no construction would occur. Existing conditions would remain and operations would continue under current limitations and deficiencies. The Reserves' munitions mission requirements would continue to be unmet. The No Action Alternative is not a practicable alternative to the Proposed Action.

ENVIRONMENTAL CONSEQUENCES

Biological Resources:
The Proposed Action and Alternative A would result in minor, long-term impacts to vegetation and wildlife. Approximately one to two acres of woodland, depending on site design and construction requirements, would be cleared with the resulting disturbance to wildlife and loss of habitat. The woodland may contain suitable habitat trees for the Indiana bat, a federal endangered species. The loss of this vegetation would not impact the diversity of the plant life or habitat in the greater vicinity. Impacts would be minor because this loss represents only a small percentage of the 32 acre woodland at YARS and because the woodland type and habitat are common throughout the region. Additionally, YARS will complete a tree survey of the prospective project locations to identify any candidate bat roost trees and will implement appropriate mitigation prior to any construction activities.

No biological resources of any significance exist at the Alternative B location.

Endangered Species:
No threatened or endangered species are known to exist anywhere near the Project Study Area. Coordination with the U.S. Fish & Wildlife Service (USF&WS) has identified the potential for Indiana bat summer brood or nesting trees in the woodland area of the Proposed Action and Alternative A locations. In response, a survey for the presence of any such trees will be completed before any tree clearing, thereby allowing for development of appropriate mitigation ranging from avoidance to no clearance from April 15 to September 15. No adverse impacts are expected.

Wetlands:
The Proposed Action would potentially result in the loss of up to two acres of U.S. Army Corps of Engineers (USACE) jurisdictional wetlands with a lesser amount potentially lost under Alternative A. According to Ohio EPA's Ohio Rapid Assessment Method (ORAM), the wetlands are Category 1 and Category 2, minimal and moderate ecological values, respectively. The loss of these jurisdictional

wetlands would represent a long-term, adverse impact. Sections 401 and 404 (Clean Water Act) permits would be required. This permitting process requires compensatory wetland mitigation. The mitigation would be accomplished at an off-base site(s) and in a ratio as negotiated with the USACE and the Ohio Environmental Protection Agency (OEPA). With this mitigation, only a minor, long-term impact to the wetlands of the region would result.

Construction at the Alternative A location could potentially avoid most jurisdictional wetlands because of the upland nature of the location. Some jurisdictional wetlands would likely be disturbed, however, by construction for utility connections and from site excavation, grading, etc.

Water Resources:
No surface streams or floodplains exist in the Project Study Area, although some drainage ditches do occur. The Proposed Action and Alternative A would potentially result in minimal groundwater impacts due to disruption of perched water tables that are related to the wetlands in these areas. Best Management Practices (BMPs) would be implemented to minimize the disruption and to control erosion and runoff that could impact surface waters. An NPDES permit for construction activities from the OEPA would be obtained, if required, prior to construction and would include storm water and pollution prevention controls. No impact to surface water is expected from the Proposed Action, Alternative A or Alternative B.

Installation Restoration Program Sites(IRP):
One No Further Action IRP site is located to the west of the Alternative B location. No impact to the IRP site or to Alternative B is expected.

Soils:
Potential short-term, negative soil erosion and sedimentation impacts at the Proposed Action, Alternative A and Alternative B locations would be controlled by the Storm Water Pollution Prevention Plan (SWP3) that would be developed and implemented for the project. No long-term, adverse impacts are anticipated.

Land Use:
Both the Proposed Action and Alternative A would alter the existing and planned land use from natural feature open space to industrial use. This would represent a change of less than 10% of that land use category at YARS and, therefore, represent a long-term, but minor impact. The open space at the Alternative B location has been slated for future industrial development. A larger Explosive Ordnance Disposal (EOD) facility project is programmed for construction at this location, which would not leave sufficient area for the munitions maintenance facility.

Construction of the munitions maintenance facility at either Alternative A or B locations would physically separate related munitions facilities and functions and would result in less efficient operations and a fragmented munitions mission.

Cultural/Historic Resource:
No cultural resources have been identified in or near the Project Study Area and the Ohio State Historic Preservation Office has concurred with the assessment.

Air Quality:
Minor short-term impacts to air quality would be expected from construction activities including fugitive dust and exhaust emissions from vehicles and equipment with any of the project construction alternatives. BMPs would minimize potential impacts, all of which would be below de minimus conformity levels.

Noise:
Short-term, negligible impacts to ambient noise levels would occur with the Proposed Action and Alternative B from construction activities. Short-term, minor noise impacts would potentially affect off-base residences immediately east of the Alternative A location.

Health and Safety:
No impacts would be anticipated from construction of the project with implementation of proper health and safety procedures and regulations. The No Action Alternative would continue to have a minor negative impact on health and safety due to the existing ESQD and operational maintenance safety deficiencies associated with materials storage and housekeeping at the existing munitions complex.

Socioeconomics:
Nominal beneficial, short-term and long-term impacts would accrue to the local economy from the project resulting from employment and income generated through construction activities and from the enhanced mission capabilities of the 910th Airlift Wing, thereby supporting the long-term status of YARS as a major regional employment center. Loss of this mission capability under the No Action Alternative could result in further inefficiencies and jeopardize operations and growth of YARS, resulting in loss of jobs, payroll, and future investments.

Transportation/Traffic:
Beneficial, long-term improvements for parking and truck deliveries would result from construction of the Proposed Action. Alternatives A and B would result in functional inefficiency, including transport operations, due to the disjoint locations from the existing munitions facilities. Alternative A would additionally require expansion and/or relocation of Perimeter Road to allow tractor trailer semi-truck access to the location. The No Action Alternative would continue the current adverse impacts to munitions maintenance operations due to the lack of adequate parking and truck delivery options, particularly with respect to security setbacks and ESQD zones.

Utilities:
No capacity issues exist with provision of any utilities for the project at any location. Alternatives A and B would require varying extensions and upgrades of utilities resulting in additional impacts from construction activities. The required extensions for the Proposed Action are relatively short and direct with potentially little to only minor disturbances.

REGULATORY REQUIREMENTS:

Compensatory mitigation would be required through OEPA Section 401 and USACE Section 404 permitting for impacting jurisdictional wetlands.

USF&WS concurrence with this action includes provision for an Indiana bat nesting tree survey with appropriate mitigation as warranted.

PUBLIC NOTICE:

All actions proposed have been analyzed in an Environmental Assessment (EA) and the EA and this Finding of No Significant Impact (FONSI) / Finding of No Practicable Alternative (FONPA) have been made available to the public for a 30 day review period through the Youngstown Air Reserve Station Public Affairs Office.

FINDING OF NO SIGNIFICANT IMPACT:

The Proposed Action and reasonable alternatives, including a No Action Alternative, were considered in the EA and the Proposed Action was found to be the Preferred Alternative. After review of this environmental assessment conducted in accordance with the requirements of the National Environmental Policy Act, the Council on Environmental Quality (CEQ) regulations, and the U.S. Air Force Environmental Impact Analysis Process, 32 Code of Federal Regulations (32 CFR 989 as amended), I conclude that the Proposed Action would not have a significant impact on the quality of the human or natural environment. Accordingly, the requirements of the above referenced regulations have been fulfilled and an Environmental Impact Statement (EIS) does not need to be prepared.

FINDING OF NO PRACTICABLE ALTERNATIVE:

The Proposed Action is the Preferred Alternative because it best meets the requirements and purpose of Project ZQEL 05-0007 with minimal environmental impact including all practicable mitigation measures to minimize environmental impacts. Alternative A would result in mostly similar impacts as the Proposed Action and Alternative B would result in less natural feature impact, but with serious land use conflicts. Both Alternative A and B present functional and or land/use issues that do not achieve the project purpose. The No Action Alternative would not meet the project need to accomplish the munitions maintenance mission and would result in continuation of the current inadequate conditions. Pursuant to Executive Order 11990, Protection of Wetlands, the authority delegated by the Secretary of the Air Force Order 791.1; and taking the above information into consideration, I find that there is no practicable alternative to construction in the wetlands of Youngstown Air Reserve Station and that the Proposed Action includes all practicable measures to minimize harm to the natural and human environment.

STEVEN W. ZANDER, Colonel, USAF
The Civil Engineer

3 JAN 07
Date

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Construct Munitions Maintenance Facility
Building 543, Project ZQEL 05 - 0007

Youngstown Air Reserve Station

Youngstown – Warren Regional Airport
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June 2006

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1.0 Purpose and Need for Action

1.1 Introduction

This section includes four subsections: a brief introduction to the proposed project, a project description, a discussion of document objectives, and a summary of key environmental regulatory requirements.

This environmental assessment (EA) discusses the proposed action of constructing a munitions maintenance facility, Building 543, at Youngstown Air Reserve Station (YARS), Ohio. The Air Force designation for the proposed project is Project ZQEL 05-0007. This EA has been performed in accordance with the National Environmental Policy Act (NEPA) of 1969, 40 Code of Federal Regulations (CFR), Part 1500, the Council on Environmental Quality (CEQ) regulations implementing NEPA, and the U. S. Air Force (USAF) Environmental Impact Analysis Process (EIAP) 32 CFR 989 which is detailed in Air Force Instruction (AFI) 32-7061.

The mission of the 910TH Airlift Wing stationed at YARS includes requirements for the administration and maintenance of munitions trailers, equipment, and materials. The purpose of the proposed action is to provide facilities and space to enable the 910TH Airlift Wing to accomplish its current and mission growth responsibilities for national security.

Existing munitions facilities do not meet the requirements of Air Force Instruction (AFI) 21-201, *Management and Maintenance of Non-Nuclear Munitions*; Air Force Manual (AFMAN) 91-201, *Explosive Safety Standards*; and Air Force Reserve Command Handbook (AFRCH) 32-1001, *Standard Facility Requirements*. All three of these requirements are mandatory. Currently, there is no facility at YARS that fully complies with all of these requirements. Construction of the proposed facility will result in fully meeting these requirements.

1.2 Project Description

YARS is located in the northeast section of Ohio, approximately 12 miles north of the City of Youngstown. The 230 acre base is adjacent to the Youngstown – Warren Regional Airport in Vienna Township, Trumbull County (Figure 1).The base is the home of the 910TH Airlift Wing of the U.S. Air Force Reserve which supports national objectives by providing mission-ready C-130 airlift forces, including a state-of-the-art aerial spray capability. This capability represents the only full-time, fixed-wing aerial spay mission in the Department of Defense. The base is also home to U.S. Navy and Marine Corps tenants.

Current munitions-related facilities at YARS are clustered in the largely undeveloped northeast sector of the base (Figure 2). These include Buildings 537 and 533 as well as the adjacent small arms range, Building 9028, and related facilities in Buildings 530 and 531. These facilities are primarily bordered by a 32 acre woodland, which is the largest block of undeveloped land at the base.

The existing munitions buildings have neither the physical space nor proper facilities from an operational or functional perspective to fully meet the requirements of the YARS munitions maintenance mission. U.S. Air Force requirements governing munitions operations, including Air Force Manual 91-201, *Explosive Safety Standards* and Air Force Instruction 21-201, *Management and Maintenance of Non-Nuclear Munitions*, prohibit some current housekeeping practices that have resulted from the lack of space. These include the commingling of packing material associated with explosives, required to be maintained for shipping and deployment purposes. The storage and maintenance of munitions support equipment and aircraft armament equipment with explosives also does not fully meet AFMAN 91-201 and AFI 21-201. Vehicle parking must be at least 100 feet from explosive storage/operational locations and facilities need to meet Quantity Distance Intra-Line (IL) or distance protection spacing requirements. IL distances provide the minimum degree of protection to activities associated with explosives.

Per AFRCH 32-1001, *Standard Facility Requirements*, and AFI 21-201, a facility is needed to meet administrative space requirements for the munitions maintenance program including offices, a secure munitions dispatch and control room, and classroom. The facility would also incorporate space needed for personnel support including lockers and restrooms. There is also a requirement for an adequate drive through maintenance bay to perform maintenance and storage of munitions support equipment for munitions handling and aircraft armament which are prohibited from being commingled with explosives. Maintenance on and storage of this equipment is also prohibited in the current existing munitions facilities per AFMAN 91-201.

No facility is currently available at YARS for maintenance and storage of munitions support equipment and aircraft armament equipment. Munitions support equipment and aircraft armament equipment are being stored outside because of lack of space, which is resulting in increased corrosion and deterioration of equipment. Current facility parking does not meet the IL distance outlined in AFMAN 91-201 which requires a 100 foot safety zone separation from the parking area and munitions storage facilities. Current facility parking is within 50 feet because of the lack of developed area.

Figure 1 – Regional Location

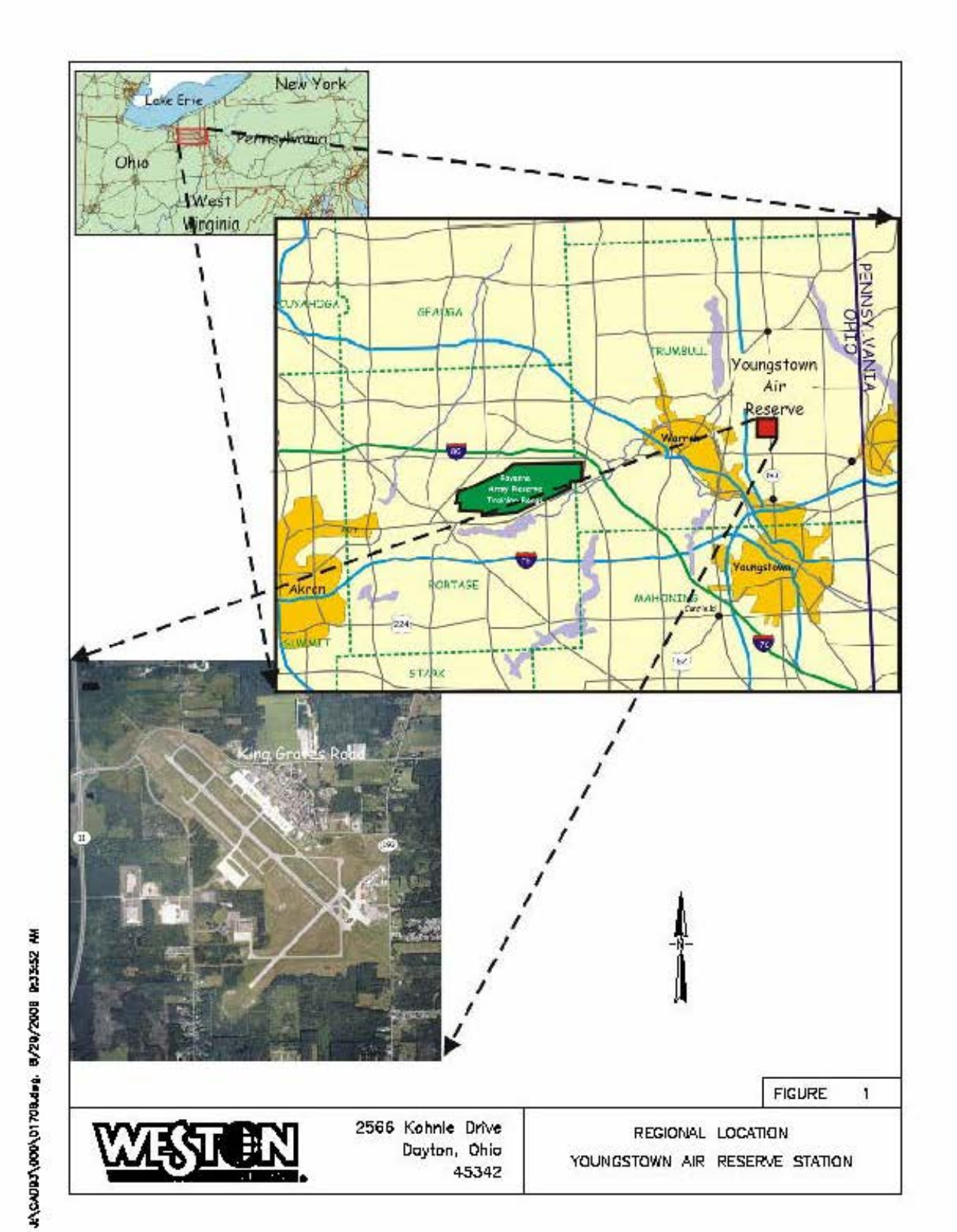
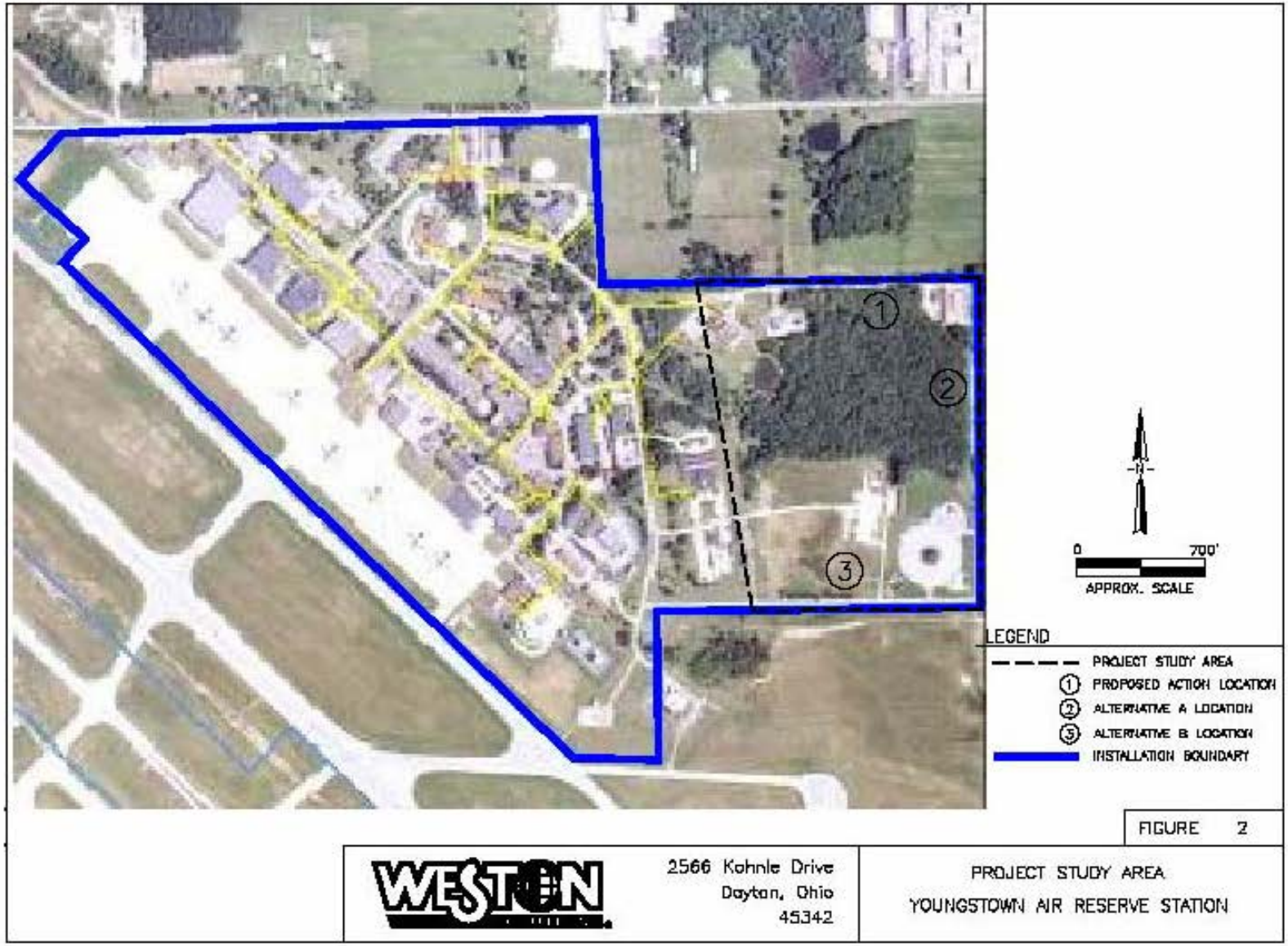


Figure 2 – Project Study Area



The new facility should be located within close proximity of the current munitions facilities to ensure an orderly and efficient munitions operation. The new facility should also incorporate a parking area large enough to provide trucks delivering and picking up munitions with adequate space to turn around. The current parking area does not provide enough area for truck turn around and is forcing munitions to be loaded and unloaded closer than the desirable distance from base lodging and gym facilities (Buildings 111, 112, and 104, respectively).

1.3 Objective

The objective of this EA is to support the interrelated decisions concerning the construction and operation of the new munitions maintenance facility and provide the decision maker and the public with information required to understand the short-term and long-term environmental consequences of the proposed action, alternative actions, and of no action as an alternative and to determine the significance of those actions. As appropriate, measures to mitigate any adverse effects are recommended and the determination of whether a Finding of No Significant Impact (FONSI) and Finding of No Practicable Alternative (FONPA) will be made if the potential impacts are not considered significant.

1.4 Scope of Environmental Analysis

This EA describes and evaluates potential environmental consequences associated with the construction and operation of the munitions maintenance facility, Building 543 at three alternative site locations and the No Action Alternative. The primary areas of concern associated with the Proposed Action and alternatives include wetlands, natural resources, water resources, and land use. Other areas of potential impact will be addressed as pertinent to the Proposed Action or specific alternative.

1.5 Regulatory Requirements

The USAFR must comply with numerous statutes, regulations, and policy/instruction directives including the Code of Federal Regulations and Executive Orders. These are addressed, in part, through the EIAP and NEPA evaluation processes. Various permits, issued by the Ohio Environmental Protection Agency (OEPA) and the U.S. Army Corps of Engineers (USACE) may apply to the proposed action. These include an OEPA National Pollutant Discharge Elimination System (NPDES) permit for storm water discharges involving disturbance of more than one acre of ground. Disturbance of jurisdictional wetlands would require compliance with Executive Order 11990 and a Section 401 Water Quality Certification from the OEPA and a Section 404 Wetlands Permit from the USACE. Other mitigation requirements may be

triggered by these permits. Appropriate project specifications would include other regulatory and YARS requirements that may apply to the project such as 29 CFR OSHA mandates.

2.0 The Proposed Action and Alternatives

2.1 Introduction

This section details the Proposed Action and the process used to formulate alternatives. Two reasonable alternatives to the proposed action, in addition to the No Action Alternative, have been identified.

2.2 Process Used to Formulate Alternatives

The NEPA process requires consideration of a full range of reasonable alternatives to the proposed action, including a no action alternative. The intention is to select an alternative that meets the underlying purpose, mission, or need of the proposed project, but which minimize potential adverse environmental impacts and/or other negative consequences. Reasonable alternatives are those actions that may meet the purpose and mission for the project and deserve further analysis before choosing a course of action.

Potential alternatives were formulated on the space and functional operational needs described in Section 1.2, as well as available facilities and building sites on base. This evaluation considered a range of potential options from remodeling and expansion of existing facilities to new construction elsewhere on base.

The criteria utilized in the evaluation focused on land use and the functional efficiency and safety requirements associated with the munitions operations. The current munitions related facilities are located in the relatively remote northeast section of the base, away from most other buildings and traffic/operational areas. This location is ideal with respect to the explosive safety quantity distance criteria (ESQDs) and building separation requirements (IL or intra-line distances) as established by AFI 21-201 and AFM 91-201. The proposed new facility, in part, directly supports the munitions operations and is, therefore, considered a munitions related activity. As such, functional efficiency and land use compatibility would require locating the new facility in close proximity to the existing munitions complex as described in Section 1.2.

No suitable site or location to meet these requirements exists on base outside the designated project study area as shown in Figure 2. This study area was designated for alternatives analyses. No other suitable facilities exist on base that could be remodeled to accommodate the need. Expansion and remodeling of the existing munitions facilities to meet the need is not feasible due to explosives operational restrictions and building separation requirements as previously cited. Relocation and expansion of existing munitions facilities was also deemed impracticable for a number of reasons including lack of suitable

sites and space, limited reuse potential of the existing buildings for the function, and excessive costs and schedule delays. Thus, alternatives other than new construction and no action were not considered further.

The Proposed Action has been formulated on new construction adjacent to the existing munitions facilities and operations. Although vacant land at YARS is very limited, two other potential locations within the Project Study Area were identified and field checked as suitable for further evaluation as alternate sites for the proposed munitions maintenance facility, Building 543. These locations, Alternative A and Alternative B, were identified along Perimeter Road at varying distances from the existing munitions complex (Figure 2). They are described as locations because no detailed study of actual project layout or site design has been done at these locations and, consequently, no project site boundaries exist as such. Rather, the alternative locations represent general areas within which the proposed Building 543 could be constructed. Conversely, the Proposed Action location consists of the approximately 3.5 acre parcel immediately east of the existing munitions facilities.

Lastly, the No Action Alternative was considered. Under the No Action Alternative, no new construction nor significant alterations would occur. The No Action Alternative also serves as a baseline for comparative evaluation of potential environmental consequences.

2.3 Alternatives Eliminated from Further Consideration

The Proposed Action, Alternative A, and Alternative B, were designated as the only reasonable alternatives for evaluation. Numerous design considerations, including site planning variations, have been, and continue to be evaluated. However, no other significant action or site location alternatives were deemed as reasonable for evaluation in this EA. As required by NEPA, the No Action Alternative was also designated for evaluation.

2.4 Description of Alternatives Considered

2.4.1 Proposed Action: Construct Munitions Maintenance Facility, Building 543

The Proposed Action would include construction of an approximately 3,300SF one story building located to the immediate east of the existing munitions facilities, specifically Buildings 537 and 533 as shown on Figure 3. The site would be raised approximately 1.5 feet with storm drainage by overland flow to a new drainage swale and the ditch along Perimeter Road. The building would have a concrete slab on grade foundation with exterior brick masonry walls with vertical

metal panel siding at all window and door openings. A standing seam metal roof would cover the structure.

The building interior would include gypsum board walls, suspended acoustical tile ceilings, and florescent lighting. Utilities would be extended to the facility including water, gas, electricity, communications (fiber optic), and sanitary sewer. Most of the utility connections are relatively close, less than 800 feet, as they serve one or more buildings of the existing munitions complex. Except for the sanitary, which will require a lift station, all of the utilities will be extended to the building from Perimeter Road.

The new facility will house office and administrative rooms, restrooms and locker area, drive-through maintenance bay, and storage and mechanical rooms. The Proposed Action also includes provision for future additional rooms including a storage area and a classroom. These additions would bring the total structure size to approximately 4,680 square feet. Parking and driveway access would add to the developed area.

The anticipated total developed area associated with the project is approximately 25,000 square feet. Site and facility design to date are preliminary, although siting design requirements associated with ESQD and IL distances, as well as security set-backs for the building and parking areas, all need to be met. The building, for example, must be at least 80 feet from the base perimeter fence and have a clear zone (no trees) of 20 feet (YARS, 2005, 1). The edge of the asphalt pavement surrounding the facility is slated to be at least 100 feet from the fence surrounding Buildings 537 and 533 (YARS, 2006, 2).

Site development is planned for the 3.5 acre project location immediately east of the existing munitions facilities as shown in Figures 2 and 3. Flexibility in actual facility siting within this parcel remains, depending on environmental and other design factors. The parcel is wooded and contains about 2.3 acres of jurisdictional wetlands. Site work would include clearing, grading and filling, and excavation for utilities.

2.4.2 Alternative A – Perimeter Road Site A

Under Alternative A, the proposed munitions maintenance facility, Building 543, would be constructed as described under the Proposed Action, but at a location along Perimeter Road (Figures 2 and 3). This location is approximately 800 to 900 feet south and east of the existing munitions facilities, but still within the northeastern margin of the base. The physical and natural features of the site location are similar to those of the proposed site, being within the large woodland tract located in this part of the base. The location is characterized, however, by a more upland environment with less wetland area.

Residential properties lie immediately east of the location, across Perimeter Road and the installation boundary. A water main enters the base near this location and an electrical line parallels the road. Other utilities, however, are remote from the location, generally 1,000 feet or more.

2.4.3 Alternative B – Perimeter Road Site B

Under Alternative B, the proposed munitions maintenance facility, Building 543, would be constructed as described under the Proposed Action, but at a location off of Perimeter Road in the area currently being used for Air Force Reserves and Civil Engineering training and exercises (Figures 2 and 3). This location has also recently been proposed as the site for a new 11,000 square foot EOD (explosive ordnance disposal) facility (YARS, 2006, 3). This site location is about one-quarter mile due south of the existing munitions facilities. The location is near the southern margin of the base, adjacent to the Youngstown – Warren Regional Airport and the airport flightline. The site location is characterized by an open field which abuts the base fire training area to the east, a storm water retention and woodland/wetland area to the north, and various base facilities to the west. Water, sewer, and electricity are proximate to the location; other utilities are remote.

2.4.4 No Action Alternative

Under the No Action Alternative, no construction would occur. Existing conditions would remain and operations would continue under current limitations and deficiencies. The Air Force Reserves munitions mission requirements would continue to be unmet. This alternative also serves as a baseline against which the Proposed Action and other alternatives will be evaluated and compared.

2.5 Summary Comparison of Alternatives

Section 3 of this EA describes environmental features pertinent to the Project Area and alternatives analysis. Section 4 details the anticipated potential impacts of the Proposed Action and each alternative. This section presents a brief comparison of those impacts. Resource areas with no potential impact are not included in this comparison.

Potential environmental impacts are classified and described by numerous terms referring to the outcome (beneficial/adverse or negative), duration (short-term/long-term) mode (direct/indirect), and magnitude and/or severity of the action being analyzed. Magnitude and severity of impacts are generally described as significant, major, minor, minimal or nominal, and negligible. Significant impacts generally result from substantial effects to resources, or values associated with important, critical, protected, and or controversial

concerns. Minor impacts are serious, relevant, and measurable, but with mitigation, do not reach the level of major or significant. Minimal or nominal impacts are measurable and relevant, but limited in area, effect, and/or duration. Negligible impacts are inconsequential with conditions remaining essentially unchanged.

2.5.1 Proposed Action

The Proposed Action would result in the loss of up to 2.3 acres of jurisdictional, mostly low value, wetlands. With mitigation through the Section 401 and 404 permitting process, including limiting the development footprint, this would represent a minor impact. Minor impacts would also occur to vegetation, wildlife,

and land use. Further coordination will be required with the USF&WS to protect potential habitat for the endangered Indiana Bat. Short term nominal to minor impacts would affect surface waters, air quality, and noise. Implementation of Best Management Practices would reduce potential impacts and prevent minor impacts from becoming more adverse.

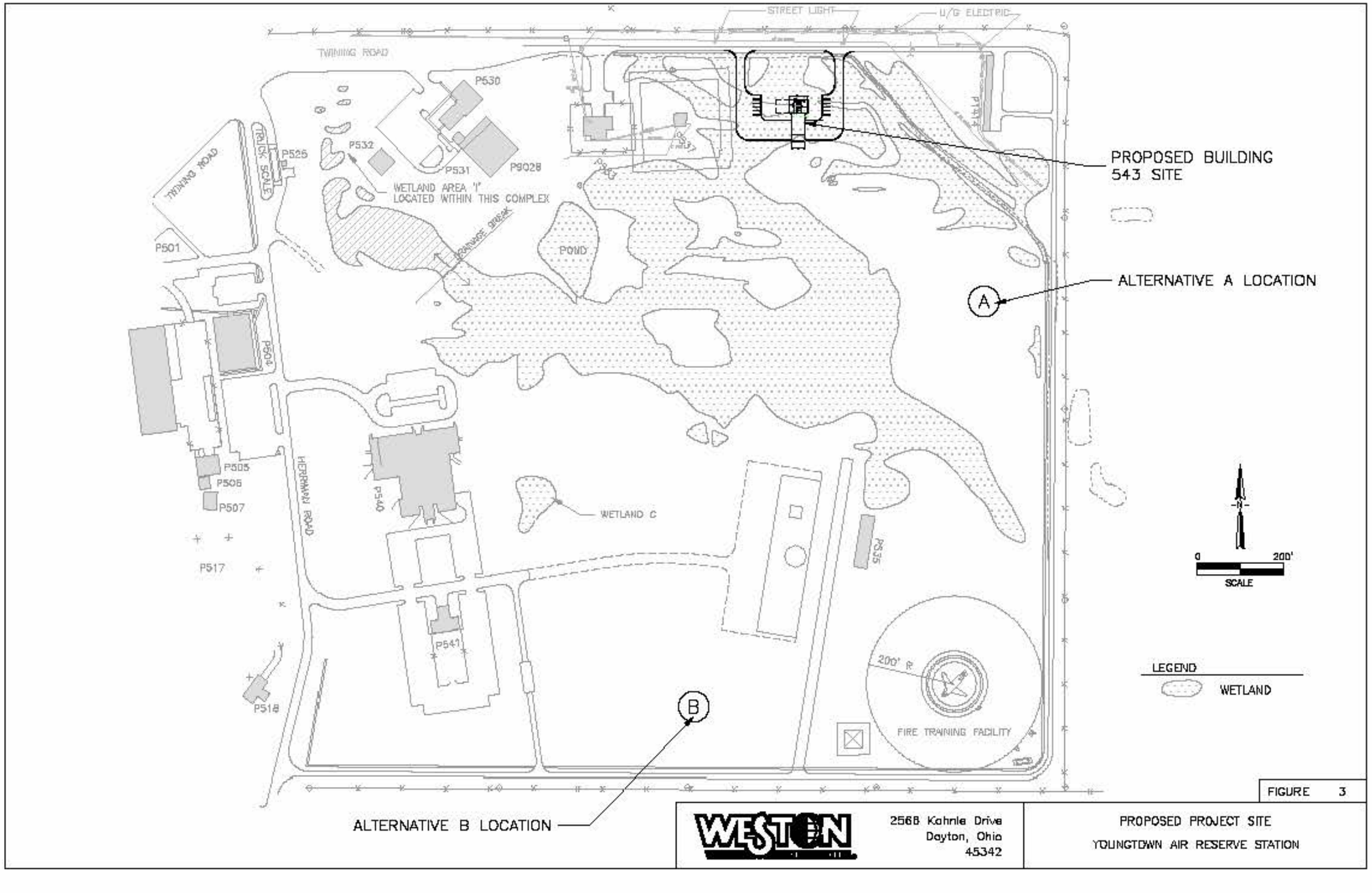
The Proposed Action would meet the Air Force Reserves mission requirements, collocate similar and functionally related land uses, eliminate potential health and safety impacts, and result in a long-term, indirect socioeconomic benefit.

2.5.2 Alternative A

The potential impacts for Alternative A are approximately the same as for the Proposed Action with the exception that there would be less impact to wetlands. The extent of vegetation, wildlife, and land use impacts would be potentially greater due to the need for utility extensions and the resulting further fragmentation of the natural area/woodland land use with an industrial use. Truck transport to the site would be hampered by the existing road configuration as tractor trailer semi-trucks are currently unable to navigate the 90 degree turns leading to the location. Perimeter Road would need expansion and/or rerouting to accommodate such access (YARS, 2005, 4). This alternative would also result in greater noise impacts to adjoining properties.

Alternative A would meet the Air Force Reserves mission requirements for new space in an area that would be isolated; however, it disperses the munitions complex and would result in less efficient operations. Its remote location and separation from the highly secured existing munitions facilities would present a security concern.

Figure 3 – Project Site



2.5.3 Alternative B

As an existing open field available for industrial land use, Alternative B would not impact wetlands or land use. Vegetation and wildlife impacts would be negligible. Slightly greater soil erosion and storm water runoff impacts would be possible. Other impacts are the same as for the Proposed Action.

Mission and operational impacts would be the same as for Alternative A, except that the Alternative B location is currently being used as a training and unit exercise area by the Air Force Reserves and by Base Civil Engineering. Construction at this location would preclude these uses. Furthermore, the location has recently been proposed as the site for a new mission required EOD (explosive ordnance disposal) facility. The facility, comprising approximately 11,000 square feet with additional space requirements for security and explosives standoff distances, would occupy most of the location currently available for training and industrial development.

2.5.4 No Action Alternative

The No Action Alternative would not allow the 910th AW to meet the Air Force Reserve munitions training mission or facility requirements. On-going health and safety risks and inefficient operations would continue. A potential long-term socioeconomic loss would result due to the lack of mission capability at YARS.

2.5.5 Preferred Alternative

The Proposed Action best meets the objectives of functionally collocating related munitions operations in a safe and cost-effective manner, resulting in only minor impact after mitigation. Consequentially, the Proposed Action is the preferred alternative.

3.0 Affected Environment

3.1 Introduction

This section describes the environment of the Project Study Area and any additional geographic area, such as the base or region that would be potentially affected by the Proposed Action and alternatives. This section also provides the background information and a basis for the analysis of environmental impact in Section 4.0. The Project Study Area includes the specific proposed and alternate locations as well as any surrounding area that may be related or potentially affected. The primary Project Study Area is outlined in Figure 2.

3.2 Biological Resources

3.2.1 Vegetation

Vegetation in the Project Study Area consists of a contiguous 26 acre, mixed northern hardwood woodland and relatively open areas characterized by individual or small clumps of trees, shrubs, forbs, and grasses. The woodland, which covers both the Proposed Action and Alternative A locations, is characterized by a relatively young, even-aged stand of red maple (Acer rubrum) (U.S. Air Force Reserve Command, 2003). This woodland type reflects both the prior disturbance and poor drainage of the area (e2M, 2002).

Larger specimen trees to 30 inch dbh are scattered throughout the woodland. These include sugar maple (Acer saccharum) American beech (Fagus grandifolia), and red oak (Quercus rubra) on more upland areas and red maple, green ash (Fraxinus pennsylvanica), and tulip tree (Liriodendron tulipifera), and poplars/cottonwood (Populus spp.) in wetter areas. Scattered white pine (Pinus strobus) are found near the margins of the woodland, particularly around the small pond at the northwest margin of the woodland. Scattered shrubs including dogwood (Cornus spp.) and spicebush (Lindera benzoin) and northern arrowwood (Viburnum recognitum) characterize the understory.

The Alternative B location is an open field characterized primarily by common grasses and forbs. The site location has been heavily and regularly disturbed due to training activities including heavy equipment use.

Photographs depicting the general characteristics of each location are included in Appendix A.

3.2.2 Wildlife

The fauna found in the Project Study Area include species commonly found in similar habitats in this part of Ohio. Mammals include deer, fox, raccoon,

opossum, skunks, rabbits, groundhogs, squirrels, and chipmunks. Amphibians include toads, frogs, and salamanders. A wide range of birds from Canada geese to common song birds are found within and near the Project Study Area. According to the U.S. Fish & Wildlife Service (USF&WS, 1995), the woodlot itself is too small to support neotropical forest nesting birds, but it may be of value to other species including migratory birds. Similarly, the habitat is too restricted to support hunting or trapping.

The woodlot does provide moderate habitat for song birds, limited habitat for the amphibians, and the small pond supports warm water fish including bass and bluegill (e2M, 2002). Habitat enhancement that might attract birds is discouraged by the installation BASH program which seeks to eliminate the potential for bird activity near the active flightline (Harland Bartholomew & Associates, 2005).

3.2.3 Threatened and Endangered Species

Compliance with Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, and AFI 32-7064, *Integrated Natural Resource Management Plan* (INRMP), requires all Air Force properties to protect species classified as endangered or threatened under the Endangered Species Act of 1973 (ESA) and to comply with State of Ohio Law 1531.25 and its implementing regulations for species listed by the state as threatened and endangered (T&E). To comply with these requirements, YARS conducted a Threatened and Endangered Species Survey in 1996 (Parsons Engineering, 1996). No T&E species were identified on the installation and none are known to occur in the vicinity.

YARS is located within the range of several T&E or special status species including the Indiana bat (Myotis sodalis), bald eagle (Haliaeetus leucocephalus), eastern massasauga rattlesnake (Sistrurus c. catenatus), and clubshell (Pleurobema clava, a mussel).

The eastern massasauga rattlesnake is a federal candidate species usually found in wet areas including wet prairies, marshes, and low lying areas. No suitable habitat exists in the specific Project Study Area according to U.S. Fish & Wildlife Service (op. cit., 1995). Similarly, no habitat exists in the vicinity for the bald eagle or clubshell.

Copies of correspondence with the Ohio Department of Natural Resources (ODNR) and the USF&WS regarding the potential occurrences of threatened and endangered species and other natural features in the Project Study Area are provided in Appendix A. The ODNR indicated that it had no records of rare or endangered species, no natural preserves, no unique ecological sites, or any breeding animal concentrations within one-half mile of the Project Study Area.

The USF&WS has most recently indicated that the Project Study Area woodlot, including the Proposed Action and Alternative A locations, may contain trees that provide summer habitat for the Indiana bat and requested further coordination before cutting of trees on the site. The concern is for specific trees that may serve as maternity brood or roost trees for the bat. These are typically trees with exfoliating bark or snags with peeling bark and cavities. The USF&WS requested a field survey for such trees and implementation of mitigation as appropriate.

Weston conducted a field survey of the Project Area woodlands on 12 June, 2006 to identify any potential Indiana bat brood or roost trees. Eight potential habitat trees were identified and marked with spray paint. Three of the trees were close to the prospective Proposed Action location and two were in the Alternative B location. The remainder were in the adjoining woodland. Only one of the trees, a 40 inch diameter maple in the Alternative A location, was characterized by favorable bat habitat conditions. The other seven trees were smaller with only marginal exfoliating bark.

3.2.4 Wetlands

A comprehensive wetlands survey of YARS was conducted in 2001 and 2002 (e2M, 2002). The survey, utilizing the official 1987 U.S. Army Corps of Engineers (ACE) methodology, identified 12.46 acres of ACE jurisdictional wetlands and 0.89 acres of isolated wetlands regulated by OEPA. Nearly all of these wetlands are located in the Project Study Area.

The wetlands were field delineated and categorized for functional and ecological value according to OEPA's Ohio Rapid Assessment Method (ORAM). This method facilitates protection of wetlands by comparative assessment of potential impact according to the value class of the wetlands. The most valuable wetlands are Category 3 with Category 2 and Category 1 wetlands possessing lesser wetland function and ecological values, respectively.

The entire wetland complex is located in the northeast section of the base, largely coincident with the Project Study Area (Figure 3). The wooded wetlands occupy most of the central portion of the approximate 32 acre woodland. The wetlands are characterized primarily by the red maple overstory and other vegetation as described in Section 3.2.1.

Primary functions of the wetlands include moderate storm water storage and song bird habitat, along with limited amphibian reproductive habitat. None of the wetlands have unique or unusual features. All of the 12.46 acres of ACE jurisdictional wetlands are Category 1 or Category 2 wetlands according to ORAM scoring. The Category 2 wetlands have moderate ecological values. These wetlands have no threatened or endangered species, no significant

habitat or wildlife use, and relatively low species diversity. Category 1 wetlands have minimal ecological values. Some characteristics of the wetlands are depicted in the photographs of the Project Study Area in Appendix A.

The Proposed Action location consists of approximately 3.5 acres due east of the existing munitions complex. Approximately 2.3 acres of this site consists of jurisdictional wetlands. Depending on actual site configuration and project layout, some of the 2.3 acres of wetland would be included in the construction area.

The Alternative A location is primarily upland, but depending on project design and site configuration, some minor areas of jurisdictional wetland could potentially be impacted. This would be particularly true for extension of utilities to the site. No wetlands exist at the Alternative B location.

As wetlands are regulated under various statutes including Section 404 of the Clean Water Act, OAC 3745-1-54, Wetlands Anti Degradation and OAC 3745-32, Section 401 Water Quality Certification, and Executive Order 11990, Protection of Wetlands, YARS must comply with the regulatory requirements before implementing any actions which may impact the wetlands. Under Secretary of the Air Force Order 780.1, issued in April, 1991 and embodied in AFI 32-7064, a Finding of No Practical Alternative (FONPA) must be approved by a properly designated official before any action is undertaken in the Federal wetlands.

3.3 Water Resources

3.3.1 Groundwater

Groundwater at YARS is closely related to the underlying geology. Located within the glaciated Allegheny Plateau, groundwater is found in both the glacial gravels, till, and sand deposits as well as the bedrock formations. The glacial substrate is irregularly distributed across the base, ranging from very shallow deposits to depths of over 100 feet. Accordingly, no significant groundwater aquifers are associated with these glacial deposits. Groundwater is seasonally near the surface over much of the Project Study Area, in part due to numerous perched water tables which contribute to the hydric soil and wetland conditions.

Principal groundwater resources are associated with Pennsylvanian age sandstones of the Pottsville Formation at depths of less than 100 feet to over 300 feet. The aquifer is confined and average yields are about 10 gpm. Mississippian age shales and sandstones of the Cuyahoga Group also provide groundwater at less than 200 feet bgs with yields of 10gpm (U.S. Department of Agriculture, 1992).

No sole source aquifers under U.S. Code 1424(e) of the Safe Drinking Water Act are found on or near YARS.

3.3.2 Surface Water

YARS is located near several drainage divides, but within the Ohio River Basin. Most installation storm water drains westerly to intermittent streams flowing to Spring Run which discharges to Mosquito Creek and, ultimately, the Mahoning River. A northeast section of YARS drains to the southeast through intermittent streams, ultimately reaching South Branch of Yankee Run, which drains to the Shenango River in Pennsylvania. The small pond in the Project Study Area outlets in this direction.

Other than the small pond (less than one acre), there are no significant surface water features on base. Storm water flows overland, through culverts, and drainage ditches to five outfalls. Three of the outfalls are piped, while two are overland flow and/or intermittent channels.

The installation is covered by a State of Ohio General Storm Water Permit for Industrial Activity. As required by the permit, the installation Storm Water Pollution Prevention Plan (SWP3) includes Best Management Practices (BMPs) to prevent pollution, principally from aircraft deicing and snow/ice control. The base Sustainability Action Plan calls for management to encourage groundwater recharge and the INRMP includes provisions to prevent erosion and sedimentation to the wetlands.

Storm water runoff from construction activities can impact water quality by contributing sediment and other pollutants exposed at construction sites. The National Pollutant Discharge Elimination System (NPDES) Storm Water Program, Phase II rules, address construction activities that disturb one acre or more of land. The YARS storm water program is covered by the OEPA General Permit.

3.3.3 Floodplains

As there are no significant streams on or adjacent to YARS, there are no officially designated floodplains in the vicinity. The various intermittent channels and drainage ditches on the installation are managed as part of the storm water system.

3.4 Installation Restoration Program (IRP)

There are five IRP sites at YARS (HBA, 2005). The five IRP sites include former drum storage and transformer storage areas, a waste oil/solvent corral, a POL/lead sludge disposal area, and a fuel line leak area. All of these sites have been studied under the IRP and all are now closed with No Further Action (NFA) determination status (YARS, 2006, 5). Only one site, the former drum storage area (SS-01), is near the Project Study Area, being just west of the Alternative B location.

3.5 Soils

The U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS) soil survey of Trumbull County (USDA, 1992) has identified six soil series at YARS. Most of the installation is characterized by Udorthent soils – those that have been cut or filled with a wide range of soil properties. This reflects the highly developed nature of the base.

The Project Study Area, however, is dominated by two soil series, the Rawson and the Haskins, with minor areas of Wadsworth and Mitiwanga. The characteristics of these soils are important because of their relationship to the wetlands and vegetation of the area. Rawson soils, formed on loamy sediments and glacial till, are moderately well drained with moderately slow to very slow permeability. An intermittent perched water table occurs between 2 to 3.5 feet depth. The soil is non-hydric, but has hydric components.

The Haskins soils are deep, poorly drained soils formed on glacial till with a seasonal perched water table at 0.5 to 1.5 feet depth. Permeability varies from moderate in the upper loamy lenses to very slow in the deeper clayey lenses. The soil is non-hydric, but has hydric components.

The other two soil series were also formed primarily on till and are somewhat poorly drained. The Wadsworth soil has a fragipan (nearly impervious lens) at 18 to 30 inches depth with slow to very slow permeability. The Mitiwanga soil has a seasonal high water table at 6 to 12 inch depth.

3.6 Land Use

YARS encompasses approximately 230 acres, most of which consists of improved land committed to military activity and airport support operations. An additional 91 acres of land are leased from the Youngstown-Warren Regional Airport Authority for assault runway use.

The developed areas of YARS include buildings and structures committed to administrative, aircraft and airfield operations, maintenance, civil engineering, and personnel and mission support activities. A network of roads, parking areas, and walkways, as well as aircraft aprons, connect the various structures. Undeveloped or open space areas are primarily limited to the far eastern section of the base. Land uses abutting the base include the airport to the southeast, south, and southwest; some rural residential properties to the east; and primarily agricultural or woodland areas to the north and northwest.

A comprehensive General Plan for YARS was issued in 2005 (HBA, 2005). The plan provides a detailed assessment of current and future land uses, and issues associated with both. The plan also provides a vision for development of the base including supplying mission-critical facilities, meeting "Force Protection" standards, creating a pedestrian-friendly place to train, and for achieving sustainability goals. A framework for future development and mission expansion improvements is detailed over an approximate seven-year horizon.

The plan categorizes installation Open Space as either developable or as natural resource preservation. Current land use at the Proposed Action location and the Alternative A and B locations is Open Space. The Proposed Action and Alternative A locations are both located in natural resource preservation Open Space, which reflects the existing woodland/wetland land cover. The Open Space at the Alternative B location is classified as developable, with most of the location identified for industrial expansion potential including possible relocation of the POL tank farm. The land use plan is currently under review and will likely be revised (YARS, 2006, 6). This will include changes to land use categories and designated areas.

Explosive safety zone or quantity/distance restrictions (ESQDs) are associated with Buildings 533 and 537 in the existing munitions complex. These 100-foot arc zones extend partly into the Proposed Action location, which presents an IL site design issue for the proposed facility as discussed in Section 2.4.1. None of the Alternative A and B locations has any current ESQD restriction zones; however, this may change should the proposed new EOD facility be constructed at the Alternative B location. The entire Project Study Area lies beyond the 65 dB (decibel) noise contour surrounding airfield operations.

3.7 Cultural Resources

According to the YARS Cultural Resources Contingency Plan (U.S. Air Force Reserve Command, 2001), four different surveys have been conducted on the installation over the years to identify either historic or prehistoric resources. The most significant of these were the 1995 basewide Phase I historic building survey and the 1995 Phase I archaeological survey by Resource Applications Inc. (RAI, 1995). In 1989, archaeological maps at the Ohio Historical Society were

reviewed by Mr. James Murphy, a state certified archaeologist. No known archaeologic sites were found on or near the base.

Based on these studies, no historic or prehistoric resources are known to exist at YARS. Coordination regarding the Proposed Action and alternative locations and any potential cultural resource implications was initiated with the State Historic Preservation Office (SHPO). Additional requested data and photographs of the Proposed Action and Alternative A and B locations were provided to the SHPO. Coordination response indicating general concurrence with the lack of cultural resources was received in April, 2006. The correspondence is included in appendix A.

3.8 Air Quality

The Clean Air Act Amendments of 1990 (CAAA) tasked the USEPA with generating a revised set of rules governing the establishment of air quality standards and rules governing emissions of pollutants. The National Ambient Air Quality Standards (NAAQS) set concentration levels for the following pollutants, often referred to as "criteria air pollutants": carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), lead, ozone (O_3; note: emissions of volatile organic compounds or VOCs are regarded as precursors of ozone), and particulate matter equal to or less than 2.5 microns in diameter ($PM_{2.5}$). Lead is also regulated as a hazardous air pollutant (HAP). Air quality issues associated with the Proposed Action are primarily related to the potential generation of pollutants during construction activities and fugitive emissions from vehicles.

Air quality is typically good in the vicinity of YARS, and is generally affected only locally by military and civilian vehicle emissions, particulate pollution from vehicle traffic, industrial sources, and construction activities. Mobile sources such as vehicle and aircraft emissions are generally not regulated and are not covered under existing permitting requirements. Specific emissions sources at YARS include natural gas boilers, fuel cell maintenance, engine test stands, paint spray booths, refueling operations, and emergency power generators.

YARS is located in Trumbull County in the Youngstown-Warren Metropolitan Statistical Area (MSA) which is designated as basic non-attainment for the 8-hour ozone standard. The prior one-hour ozone standard maintenance status of Trumbull County was revoked in June, 2005. The county is in attainment for the other criteria pollutants.

The designation results in a requirement for an air quality conformity applicability analysis for Federal actions to determine whether or not Conformity Rules apply. Applicability hinges on emission increases from the action or exceedence of de-minimus emissions of criteria pollutants.

YARS prepared a base-wide Air Emissions Inventory Report in 2005 (YARS, 2005) that covered all 2004 operations. This activity included an emissions inventory of all potential installation emission sources and an analysis of the applicability of governing regulations. The status of each source type was assessed.

YARS is exempt from Title V of the CAA Amendments of 1990 since potential emissions are below major source thresholds. Most of the installation sources are de minimus and others are exempt from OEPA permit requirements. Some fall under permit-by-rule exemptions which require record keeping.

3.9 Noise

Noise levels associated with YARS operations can create conflicts related to activities both on and off the base. Flight activities at YARS that contribute to the noise environment include the 910th Airlift Wing and the aircraft operations of the Youngstown-Warren regional Airport. Flight operations of the 910th Airlift Wing include the missions of the 12 assigned C-130 aircraft as well as transient aircraft such as C-130s utilizing the installation's engine repair facility. No commercial airline service is currently available at the airport, but chartered and general/corporate aircraft utilize the facility.

Noise levels can be considered in terms of levels ranging from those in a typical home at 40dB, and levels at which noise begins to harm hearing is exposed for a long period (8 hours) at 90dB. Typical noise sources in and around the Project Area include aircraft and human activities. Military aircraft operations and vehicle traffic are the existing primary sources of noise in the vicinity.

A Federal Aviation Administration Part 150 Study established the 65dB LDN (day-night average sound level) noise contour around the airfield in 1993. Virtually all of YARS, including the Project Study Area, lies beyond this noise threshold. This noise level represents existing conditions to which potential noise levels from construction and demolition can be compared.

3.10 Health and Safety

General health and safety issues associated with the proposed project include worker safety and public safety during construction as well as recognition of the ESQDs associated with the existing munitions complex. Occupational and public safety issues are addressed with respect to site clearing and excavation activities.

Health and safety issues for the project include hazards associated with construction of the building and supporting infrastructure. Such hazards include

physical hazards (including heavy and light on-site equipment usage), hazardous materials, and underground/overhead utility work.

Two ESQDs are associated with Buildings 533 and 537 respectively, which adjoin the Proposed Action location. These zones could affect site construction activities including materials storage locations and handling as well as work practices.

3.11 Socioeconomics

YARS is located within the Youngstown-Warren MSA, which includes Mahoning and Trumbull Counties in Ohio and Mercer County in Pennsylvania. The region grew steadily with population peaking in the 1970s at over 600,000 inhabitants (U.S Census Bureau, 2000). The population of Youngstown, the region's largest city, actually peaked in 1960 at 167,000.

With the decline of the steel industry, an economic mainstay of the region into the 1970s, and more recently, manufacturing in general, the region has endured declines in numerous socioeconomic indicators. Population of the MSA in 2000 was 602,964, a decline from 613,623 in 1990. The population is projected to fall to 571,000 by 2020 (Ohio Department of Development, 2005).

Trumbull County, which includes the City of Warren and YARS, has followed a similar population trend reaching a peak of 241,863 in 1980, decreasing to 225,116 in 2000, and projected to decline to 211,000 by 2020 (Ohio Department of Development, 2005).

The regional population declines over the last several decades, as well as the projected future declines, are principally related to the loss of manufacturing jobs in the region. Nationally, employment in the iron and steel industry alone dropped from 399,000 in 1980 to 169,000 only nine years later (U.S. Statistical Abstract). More than 3 million U.S. manufacturing jobs were lost between 1998 and 2003 (Economic Policy Institute, 2005).

In this context of regional decline, the importance of YARS as both a major and relatively steady employer is evident. The base is listed as one of only five employers in the Youngstown-Warren area with more than 2,000 employees (Youngstown-Warren Regional Chamber of Commerce, 2005). Of the other four, two are hospitals/health care providers and two are associated with the automotive industry – Delphi Packard Electric Systems and General Motors Lordstown Assembly. Delphi is in bankruptcy proceedings, although the Packard Electric Division, based in Warren, is doing well and not slated for closure (Dayton Daily News, 2006). General Motors recently announced major job cuts and plant closings. Nine other employers are listed by the Chamber of Commerce as having from 1,000 to 2,000 employees; all but two of these are

governmental or educational institutions. Another 19 non-governmental employers are listed with 500 to 1,000 employees including seven manufacturing operations.

As of September, 2004, YARS had 2,239 authorized personnel positions including over 1,100 USAF Reservists (YARS Fact Sheet). These base jobs generate a payroll of over $50 million. When combined with local base expenditures of over $28 million and a more than $17 million payroll from indirect job creation, the economic impact of the base is more than $95 million annually. Clearly, the ongoing mission and operations of YARS is of vital socioeconomic importance to the region.

3.12 Transportation/Traffic

YARS is served by a network of highways that allow ready access to the base. These include Ohio State Routes 11 and 193. From these routes the base is accessed by King Graves Road, a county road. The current road alignment and gate access configurations are deficient from force protection and potential traffic congestion perspectives according to the General Plan. The Plan has recommended a number of improvements including road realignment.

On base, circulation is hampered by the lack of a clear hierarchy for the roads, lack of pedestrian connections, and an inefficient location of parking. Force protection issues are common.

The primary transportation/traffic issues associated with the project involve the current difficult access for larger trucks to the munitions complex and lack of adequate parking, particularly parking that meets ESQD setback requirements. Larger trucks cannot utilize the length of Perimeter Road because of turning restrictions as discussed in Section 2.5.2.Tractor trailer semi-trucks are currently unable to navigate the 90 degree turns. This problem somewhat isolates the Alternative A location. Perimeter Road would have to be expanded or rerouted to allow better access. The limited parking and apron area at Building 533 does not accommodate the current parking or delivery needs and does not meet the ESQD or potential force protection setback requirements.

3.13 Utilities

YARS is currently served by all major utilities including potable water, sanitary and storm sewers, electricity, natural gas, and communications. All of the systems have been rated as adequate, with most of the infrastructure in very good condition (HBA, 2005). The lone exception is the storm system which has inadequate drainage in some locations. Some curb and gutter improvement work is underway at the base.

Potable water is supplied to YARS by Trumbull County's Southeast Water District and sanitary is provided by the County's Mosquito Creek Sewer District. Both systems have adequate capacities. YARS also has an industrial wastewater collection system and an industrial pre-treatment facility in Building 309 that discharges into the sanitary system.

Electricity is provided by Ohio Edison which also has responsibility for the on-base distribution system. Natural gas is supplied by Dominion Gas to a tap at the base perimeter. Most of the base buildings have independent gas heat sources. Both the electricity and gas systems are in need of force protection upgrades according to the General Plan.

The base utility systems are not uniformly available to all of the alternative project locations. All utilities extend to one part or another of the buildings currently comprising the munitions complex. The utilities are, therefore, near the Proposed Action location. Potable water and electricity are near the Alternative A location, but all other utilities would have to be extended up to 1,000 or more feet from existing service connections. Water and electricity are also available to the Alternative B location, and storm and sanitary lines are closer than for the Alternative A location. Other utilities are remote from the Alternative B location.

The base fire department is integrated with the local emergency and HAZMAT response system. Solid waste services at YARS are contracted out with disposal at a licensed landfill.

4.0 Environmental Consequences

4.1 Introduction

The purpose of this section is to provide an evaluation of the potential impact associated with the Proposed Action, construction of a new Munitions Maintenance Facility at the proposed site, Project ZQEL 05-0007; with implementation of Alternative A, construction of the facility at Perimeter Road site A; with Alternative B, construction of the facility at Perimeter Road site B; and the No Action Alternative as presented in Section 2.0. The Proposed and Alternate site locations are depicted in Figures 2 and 3. The consequences of the alternatives will be compared to those of the Proposed Action. The No Action Alternative represents the baseline conditions to which the Proposed Action and Alternatives A and B are compared.

4.2 Biological Resources

4.2.1 Vegetation

4.2.1.1 Proposed Action

The entire Proposed Action location, consisting of approximately 3.5 acres, is wooded including over 2 acres of wooded wetlands. The vegetation includes specimen trees up to 30 inches in diameter along with understory shrubs, forbs, and wild flowers. The construction footprint of the proposed facility is approximately 25,000 square feet, although this could increase depending on actual building siting as a result of utility extensions, IL distance security clear zone, and construction access.

Detailed site planning could mitigate the potential loss of vegetation; however, the project would most likely result in the clearance and removal of about one acre of the red maple woodland and associated understory. Mitigation would include scheduling tree clearing during the period from 15 September to 15 April, as required by coordination with the USF&WS, to ensure no impact to Indiana bat habitat trees at least during the nesting season. The trees identified during the tree survey would either be avoided or removed, if necessary, after the bat nesting season (April 15 to September 15). With this mitigation, the potential loss would represent a nominal, long-term impact to the existing approximately 32 acre woodland and natural area of the base. Additional, adjoining woodland area may be impacted by short-term construction activities including grading, excavation, and stockpiling. Regeneration and possible revegetation would ultimately restore these areas following construction.

4.2.1.2 Alternative A

Construction of the new facility at the Alternative A location would result in similar vegetation impacts as with the Proposed Action. As this location is mostly an upland area, the species mix of vegetation would be somewhat different and little to no wetland areas would be potentially impacted. Mitigation measures, including identification and avoidance and/or removal of potential Indiana bat brood or roost trees would be the same and the resulting vegetation impact would be the same.

4.2.1.3 Alternative B

Construction of the proposed project at the Alternative B location would result in the loss of up to one acre of open space vegetated by grasses and forbs. This area is frequently disturbed by base activities and vegetation is minimal. The potential impact would be negligible.

4.2.1.4 No Action Alternative

No vegetation would be affected by the No Action Alternative.

4.2.2 Wildlife

4.2.2.1 Proposed Action

The Proposed Action would result in the permanent loss of approximately one acre of wildlife habitat, including wetland habitat, particularly for amphibians. Additional wildlife habitat, including wetland habitat, may be lost depending on site construction activities and facility setback and clear zone requirements as described in Section 2. Coordination with the ODNR and the USF&WS indicated the lack of any critical habitat or sites of significant ecological value, however, further coordination and a tree survey was required to assess potential summer nesting habitat for the Indiana bat (see Threatened and Endangered Species).

Potential impacts to wildlife include the loss of vernal pools and other wetland areas that are of value to the less mobile amphibian species. This loss would be mitigated somewhat by the required mitigation for loss of jurisdictional wetlands (see Wetlands). More mobile wildlife, including the common mammals and birds, would be expected to move from the disturbed area to adjoining undisturbed areas. With the planned agency coordination and mitigation, the impacts to wildlife are expected to be minor. Short-term, temporary impacts to wildlife would also result from construction activities. No long-term impact to any specific wildlife species is expected.

4.2.2.2 Alternative A

The potential impacts to wildlife at this location are similar to those at the Proposed Action location. As a more upland area, however, fewer vernal pools and wetland habitat areas would be potentially affected. The same mitigation requirements would apply, resulting in potential minor impacts to wildlife.

4.2.2.3 Alternative B

No impact to any wildlife is anticipated from construction of the facility at this location. The location has only minimal habitat for foraging birds and small mammals which would continue to use remaining adjoining areas.

4.2.2.4 No Action Alternative

Wildlife in the Project Study Area would not be impacted by this alternative.

4.2.3 Threatened and Endangered Species

4.2.3.1 Proposed Action

No threatened or endangered species nor their habitats are known to exist in the vicinity of the Proposed Action construction site. As discussed in Section 3.2.3, no such species or their habitats have been identified anywhere on the installation. Correspondence with ODNR also indicated the lack of any records of such species in the area. Correspondence with the USF&WS, however, indicated that the Project Study Area lies within the range of several special status species. Project Study Area habitat for these species, however, is limited to summer brood or nesting trees for the Indiana bat. The USF&WS requested further coordination before any woodland clearing to ensure that such trees are avoided or possible impacts are otherwise mitigated. A survey for the presence of such trees was discussed with USF&WS (2006) and was conducted on 12 June, 2006. As described in Section 3.2.3, several candidate habitat trees were field identified and marked. This will allow development of any specific necessary mitigation including avoidance and/or limiting tree removal to the non - nesting season. With this mitigation, no impacts to threatened or endangered species would be expected.

4.2.3.2 Alternative A

The most favorable tree offering summer habitat for the Indiana bat is along an old fencerow in the upland area of the Alternative A location. Consequently, the USF&WS tree survey and coordination as discussed above are more critical at

this location. Otherwise, prospective impacts to threatened or endangered species are the same as for the Proposed Action.

4.2.3.3 Alternative B

Threatened or endangered species would not be impacted under Alternative B. There are no threatened and endangered species or habitats in the Alternative B location.

4.2.3.4 No Action Alternative

Threatened or endangered species would not be impacted under the No Action Alternative.

4.2.4 Wetlands

4.2.4.1 Proposed Action

Implementation of the Proposed Action would result in the potential loss of up to 2.3 acres of jurisdictional wetlands. Construction disturbance, including filling, erosion, runoff and sedimentation, may not occur over the entire 3.5 acre project site (Figure 3) and with detailed site design, the actual wetlands impacted would likely be less than 2.3 acres. Nonetheless, the loss of these Category 1 and Category 2 jurisdictional wetlands would represent a long-term adverse impact that must be justified by the lack of practicable alternatives. Approval through Section 401 and 404 permits would also be required. This permitting process would require compensatory wetland mitigation. Given the lack of suitable on-base sites for this mitigation, a wetlands mitigation bank or other off site location must be negotiated with the regulatory agencies for wetlands development. The compensation ratio for loss of forested wetlands ranges from 1.5 to 2.5, or approximately 3.5 to 5.75 acres of newly developed wetlands. Preliminary discussions and field reviews with the regulatory agencies suggest that the Proposed Action wetland disturbance can be permitted with off site mitigation. Compliance with this mitigation process would result, then, in only a minor impact to the wetland resources of the region.

4.2.4.2 Alternative A

Construction of the project at this location could potentially avoid any consequential impact to the jurisdictional wetlands in the Project Study Area. The location includes an upland area of two to three acres between “fingers” of jurisdictional wetlands (Figure 3). The footprint of the proposed facility could potentially be constructed in this area, however, necessary utility connections could result in some wetland disturbance. Additionally, adjoining wetland areas

could be indirectly impacted from various construction activities such as erosion and runoff.

4.2.4.3 Alternative B

No wetlands exist in the immediate vicinity of this location. Consequently, no wetland impacts would be expected from facility construction at this location.

4.2.4.4 No Action Alternative

No wetland impacts would result from the No Action Alternative.

4.3 Water Resources

4.3.1 Groundwater

4.3.1.1 Proposed Action

Construction activities for the munitions maintenance facility would require relatively shallow subsurface excavation and grading. The deepest excavation would likely be in conjunction with subsurface utility extensions and connections. Construction activities would have no effect on the groundwater aquifers which exist at depths well below potential construction. Various perched water tables, which are seasonal and relatively near the surface throughout the Project Study Area and especially in the wetland zones, may be impacted by construction. The subsurface hydrogeology may be altered over a limited area. This potential impact is expected to be minimal. The potential impact is related to the wetland impacts, as the perched water tables generally sustain or contribute to the hydrology of the vernal pools. Because of the sensitivity of the adjoining wetland areas, spill prevention and Best Management Practices (BMPs) would be implemented as project specifications to avoid potential indirect impact to the adjoining, wetlands.

4.3.1.2 Alternative A

Potential groundwater impacts at this location are similar to those anticipated at the Proposed Action location. These impacts are somewhat less likely, however, because of the more upland characteristics of the location.

4.3.1.3 Alternative B

Disturbance of groundwater at this location is less likely than at the Proposed Action and Alternative A locations since perched water tables are less common in the area. No impact is anticipated. Nonetheless, project specifications should include the spill prevention and BMPs in case groundwater were encountered.

4.3.1.4 No Action Alternative

The No Action Alternative would have no impact on groundwater.

4.3.2 Surface Water

4.3.2.1 Proposed Action

Construction activities at the Proposed Action location could involve land surface disturbance of one acre or more since in addition to the building and related driveway, parking, etc., there would be a need to extend various utilities to the facility. A permit for discharge associated with disturbance of one acre or more of land would be required under Phase II of the NPDES Storm Water Regulations. If the area of the affected location is anticipated to be one acre or more in size, an NPDES permit for construction activities from the Ohio EPA would be required.

As the land surface at this location is relatively level, erosion control measures would inhibit erosion during heavy rain events that could potentially affect a drainage channel to the east. Construction activities would not significantly alter the surface water hydrology and would not create a potential source of surface water contamination as long as spill prevention and BMPs are enforced. Therefore, the construction activities are not expected to impact surface water resources.

4.3.2.2 Alternative A

Potential surface water impacts from construction of the facility at the Alternative A location are the same as for the Proposed Action. The drainage channel that could be affected by site runoff, however, is to the north and west of the location.

4.3.2.3 Alternative B

Potential surface water impacts at the Alternative B location are similar to those at the other locations. This site is more sloping, however, and therefore presents a greater risk of erosion and runoff impact to the adjoining drainage channels. Storm water mitigation and project specifications as described for the Proposed Action would prevent or limit potential impact to minimal effects.

4.3.2.4 No Action Alternative

The No Action Alternative would have no effect on surface water resources.

4.3.3 Floodplain

4.3.3.1 Proposed Action

There are no surface streams nor any defined floodplains in the Project Study Area. Consequently, there are no floodplain effects associated with the project.

4.3.3.2 Alternative A

Alternative A would have no impact on any floodplains.

4.3.3.3 Alternative B

Alternative B would have no impact on any floodplains.

4.3.3.4 No Action Alternative

This alternative would have no effect on any floodplains.

4.4 Installation Restoration Program Sites

4.4.1 Proposed Action

No IRP sites are located near the Proposed Action location. The project would have no effect on any IRP sites nor be affected by any IRP sites.

4.4.2 Alternative A

Alternative A would have no impact on any IRP site nor be affected by any IRP sites.

4.4.3 Alternative B

The Alternative B location is immediately east and south of IRP site SS-01, a former drum storage area which is a No Further Action status site. Construction at this location would not affect the IRP site nor would any effects from the site be expected.

4.4.4 No Action Alternative

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

4.5 Soils

4.5.1 Proposed Action

Construction of the munitions maintenance facility at the preferred site would have the potential for soil erosion and potential sedimentation of adjoining wetlands. Erosion would be short-term, but sedimentation could result in further adverse impacts to wetlands. Erosion and dust control measures, as mitigation, would be utilized as detailed in the Storm Water Pollution Prevention Plan (SWP3) for the project. Under the storm water Phase II rules, a Notice of Intent (NOI) must be submitted to OEPA for the project, if one acre or more of land will be disturbed. Regular monitoring is required to ensure proper implementation of the SWP3. Due to the relatively flat topography of the project area and the required mitigation measures, excessive erosion and sedimentation are not anticipated and no long-term impacts to soils, surface waters, or adjoining wetlands are expected.

4.5.2 Alternative A

The potential soil impacts associated with construction of the project at this location are the same as for the Proposed Action.

4.5.3 Alternative B

The Alternative B location is more sloping than the other locations and, therefore, soil erosion poses more of an impact risk. The same permitting and mitigation requirements would apply. Drainage at the location, however, is generally away from the wetland areas resulting in less risk of impact to these resources. No long-term impacts would be expected.

4.5.4 No Action Alternative

Soils would not be impacted under the No Action Alternative.

4.6 Land Use

4.6.1 Proposed Action

Construction of the munitions maintenance facility at the preferred location would alter the existing land use from open space to industrial. The current open space categorization is for natural feature areas meriting preservation. The future land use plan for this location continues the current designation, but as discussed in

Section 3.6, various land use designations and their extent are currently under review and subject to change as YARS evaluates the prospective locations of proposed new mission - essential facilities.

The alteration of the existing and planned future land use at the Proposed Action location would change less than 10 percent of the open space/natural area land use type on YARS. The Proposed Action land use would represent an adjoining expansion of existing industrial land uses. Development of all or most of the this parcel would link the existing industrial land uses of the munitions complex with the existing Civil Engineering storage yard. The Proposed Action, would therefore, result in a long-term, but minor impact to current installation land use.

4.6.2 Alternative A

The potential impacts to land use from construction of the project at the Alternative A location are similar to those of the Proposed Action. The impact, however, would be somewhat greater due to the isolated location of the site. Development here would not represent a spatial expansion of the existing industrial use, but rather a new, fragmented non-conforming use in an otherwise natural land use area. The related industrial munitions activities would become separate in different areas of the base. Development at this location also presents more of a physical security concern due to the remote and isolated location.

4.6.3 Alternative B

The Alternative B location is currently classified by the General Plan (GP) as open space that is developable. Industrial land uses currently exist east and west of the location. The future land use of the location is programmed by the GP for industrial redevelopment opportunities. The location is currently used for Air Force Reserve and CE unit training exercises and has also been recently identified as the prospective site for a new mission-required EOD facility. Construction of the Proposed Action at this location would, therefore, not impact any land use categorical planning. It would, however, spatially separate the currently related industrial munitions activities and compete with current and/or future land use activities at the Alternative B location.

4.6.4 No Action Alternative

Under the No Action Alternative, land use would not change at the Proposed Action and Alternative A locations. Other industrial development, however, may occur at the Alternative B location.

4.7 Cultural Resources

4.7.1 Proposed Action

No cultural resources have been identified anywhere in or adjacent to the entire Project Study Area. There are no potentially historic buildings nearby and the probability of any archaeological resources in the area is very low. No impacts are anticipated.

Coordination with the SHPO has been completed as documented by the correspondence in Appendix A. The SHPO has concurred with the assessment of limited probability for archaeological deposits and no effect to any historic properties.. Should any unidentified, potential resources be discovered during project construction, precautionary measures as set forth in the base Cultural Resources Contingency Plan, which is embodied in YARS construction specifications, would be followed.

4.7.2 Alternative A

Potential cultural resource impacts at this location are the same as for the Proposed Action. No impacts are anticipated.

4.7.3 Alternative B

Potential cultural resource impacts at this location are the same as for the Proposed Action. No impacts are anticipated.

4.7.4 No Action Alternative

No impacts to cultural resources would result from the No Action Alternative.

4.8 Air Quality

4.8.1 Proposed Action

Minor, short-term impacts to air quality are expected from construction of the project including fugitive dust and airborne materials from various sources including excavation and grading as well as exhaust emissions from construction vehicles and equipment. Construction BMPs, including dust suppression and equipments controls, would minimize particulate and emission materials.

Prior air conformity analyses at YARS have shown potential emissions to be well below conformity thresholds (YARS, 2005). Even at an order of magnitude greater, the emissions from the proposed project would be far below de minimus levels for conformity applicability. The potential emissions are also not regionally significant under 40 CFR 93.153(i) and are, therefore, in conformance with the State Implementation Plan.

No conformity nor further air quality analyses are required.

4.8.2 Alternative A

Potential air quality impacts at the Alternative A location are the same as for the Proposed Action.

4.8.3 Alternative B

Potential air quality impacts at the Alternative B location are the same as for the Proposed Action.

4.8.4 No Action Alternative

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

4.9 Noise

4.9.1 Proposed Action

Short-term negligible impacts from construction activities, particularly from truck, heavy equipment and chain saw operations, would be expected to increase ambient noise levels. At 50 feet, noise levels generated by standard construction equipment range from 72 to 94 dB. While noticeable and potentially annoying to vicinity visitors such as walkers or joggers along Perimeter Road, the noise will be intermittent and temporary. There are no sensitive receptors, base administrative buildings, or off-base residences near the Proposed Action location. Construction crews would be subject to more noise; however, adherence to OSHA health and safety regulations would minimize any adverse effects.

4.9.2 Alternative A

Potential noise impacts from project construction at this location would be the same as for the Proposed Action with the exception that a number of off-base

residences are located immediately east of the location, just beyond the perimeter fence. These residents may experience temporary, short-term disturbance from the construction activity noise, particularly during any backyard activities. Limiting construction to normal work-day schedules would help to mitigate more adverse effects from any disruptive noise.

4.9.3 Alternative B

Potential noise impacts at this location would be the same as for the Proposed Action.

4.9.4 No Action Alternative

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

4.10 Health and Safety

4.10.1 Proposed Action

Because project construction workers would be responsible for complying with standard operating procedures and applicable health and safety regulations, no impacts to health and safety would be expected from the Proposed Action. “Digging permits” would be obtained from Base Civil Engineering prior to any excavating.

The Proposed Action would result in a long-term positive impact by providing adequate facilities to eliminate the current operational maintenance safety issues associated with use of Buildings 533 and 537.

4.10.2 Alternative A

The potential health and safety impacts associated with project construction at this location would be the same as for the Proposed Action.

4.10.3 Alternative B

Potential health and safety impacts associated with construction of the project at this location would be the same as for the Proposed Action.

4.10.4 No Action Alternative

With the No Action Alternative, current inadequate restricted area for parking associated with the ESQDs around Buildings 533 and 537 and the operational

maintenance safety issues associated with materials storage and various housekeeping functions at the existing munitions facilities would not be addressed.

4.11 Socioeconomics

4.11.1 Proposed Action

Nominal, beneficial, short-term socioeconomic impacts would occur as a result of constructing the proposed project. The nominal beneficial impact to the local economy would result from employment and income generated through contracts and services associated with the construction project.

The Proposed Action would have a long-term, nominal, beneficial socioeconomic impact for the region. The benefit is related to the improved and enhanced mission capabilities of the 910TH Airlift Wing. Preserving and enhancing operations at the base would support the long-term status of YARS as a major regional employment center.

4.11.2 Alternative A

Construction of the project at this location would result in the same socioeconomic benefits as for the Proposed Action.

4.11.3 Alternative B

Construction of the project at this location would have the same socioeconomic benefits as for the Proposed Action.

4.11.4 No Action Alternative

The No Action Alternative would have no immediate effect on socioeconomics. In the long-term, however, the loss of mission capability for the 910Th Airlift Wing could result in further inefficiencies and jeopardize the future potential operations and growth of YARS. This would represent an economic loss for the region.

4.12 Transportation/Traffic

4.12.1 Proposed Action

Project construction at the preferred location would result in long-term improvements for parking and truck deliveries associated with the munitions

maintenance operations. No adverse effects to traffic or transportation are anticipated.

4.12.2 Alternative A

Construction of the project at this location would have the same beneficial space impacts as for the Proposed Action. However, the location is disjunct from the existing munitions facilities and would separate related munitions operations and personnel resulting in functional inefficiency, including transport operations. This is a problem that the Proposed Action is designed to alleviate. Additionally, some truck deliveries to the site, both for construction and long-term facility operation, may be difficult, if not impossible, due to existing tight, 90 degree turns at both ends of Perimeter Road that tractor trailer semi-trucks are currently unable to navigate. Reconstruction, including expansion and/or relocation of one or both of the turns would be required to accommodate the larger truck vehicles.

4.12.3 Alternative B

Construction of the project at this location would have the same consequences as at the Alternative A location except that deliveries to the site would be more direct and would not be restricted by the 90 degree Perimeter Road turns.

4.12.4 No Action Alternative

The No Action Alternative would not eliminate the adverse impacts to munitions maintenance operations from the lack of adequate parking and truck delivery options, particularly with respect to security setbacks and ESQD zones.

4.13 Utilities

4.13.1 Proposed Action

Construction of the Proposed Action would require some extension of all utility systems to the adjoining site and facility. These extensions would be relatively direct and of minor to moderate length. The extensions would range from about 100 feet to over 800 feet, depending on the individual utility system and the ultimate facility location. Adequate capacities exist for all of the utilities and no impacts are anticipated.

4.13.2 Alternative A

Construction of the project at this location would require major extension of several utilities including sewer and natural gas. The base water supply line is near the location. The electric line which runs along Perimeter Road is adequate

only for street lighting and would need to be upgraded. All other utilities are remote from the site and would require extensions of more than 1,000 feet, with potential additional adverse impacts to the surrounding woodlands and wetlands. Utility capacity is adequate.

4.13.3 Alternative B

Construction of the project at this site would require fewer and less distant extensions of utilities than at the Alternative A location, but more so than for the Proposed Action. No sensitive areas would be affected. Utility capacity is adequate.

4.13.4 No Action Alternative

No impact would occur to YARS or area utilities under the No Action Alternative.

4.14 Cumulative Impacts

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

No other significant actions are known to be occurring or planned which would result in any incremental adverse impact. Some programs are in place to improve infrastructure, and/or contribute to long-term YARS plans. These include replacement of selective components of various utility systems and implementation of anti - terrorism/force protection measures. Cumulative impacts would not be expected.

4.15 Unavoidable Adverse Effects

There would be several short-term and long-term unavoidable adverse impacts associated with the construction of the Munitions Maintenance Facility as discussed in the sections above. However, with implementation of the mitigation measures described in the respective impact areas, no significant unavoidable adverse environmental effects would result from implementation of the Proposed Action. Similarly, no significant adverse impacts would result from implementation of Alternative A or Alternative B. The No Action Alternative would continue the current operational munitions maintenance problems and, potentially, result in a loss of 910Th Airlift Wing mission purpose.

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

Neither the Proposed Action, Alternate A, nor Alternative B would affect the long-term productivity of the environment. Implementation of the Proposed Action would enhance the long-term productivity of the base, while under the No Action Alternative, operational inefficiencies would continue. No significant environmental consequences nor depletion of natural resources have been identified through this EA.

4.17 Irreversible and Irretrievable Commitments of Resources

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

5.0 List of Preparers

John Koerner, Program Manager, Senior Scientist/Planner, Weston Solutions

B.A. Geography/Botany, University of Michigan

M.A. Physical Geography, University of Colorado

Ph.D. Candidacy, Geography/Geology, University of Michigan

36 years experience

6.0 List of Agencies and Persons Consulted

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

Name	Affiliation	Subject
Roger Anderson	910MXS	Munitions Operations
Chad Brown	910AW/SE	Project Need
Mary Knapp, PhD	USF&WS	T & E Species
Renee Noel	910SFS/SFOA	Project Design/Security
Michael Norris	910AW/SE	Project Need
Thomas Perdue	88ABW/CEV	EIAP/FONPA
John Tarantine	910MSG/CEV	Overall Project
Max Shifflet	910MSG/CEV	Project Data
Debbie Woischke	ODNR	Natural Resources
Robert Woods	910MSG/CE	Project Design
Nathan Young	SHPO	Cultural Resources

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Youngstown Air Reserve Station 2, Personal Communication with Max Shifflet (YARS) and John Koerner (Weston), April, 2006

Youngstown Air Reserve Station 3, Personal Communication with John Tarantine and Max Shifflet (YARS) and John Koerner (Weston), April 2006

Youngstown Air Reserve Station 4, Personal Communication with John Tarantine and Max Shifflet (YARS) and John Koerner (Weston), October, 2005

Youngstown Air Reserve Station 5, Personal Communication with Max Shifflet (YARS) and John Koerner (Weston), December, 2005 and April, 2006

Youngstown Air Reserve Station 6, Personal Communication with John Tarantine and Max Shifflet (YARS) and John Koerner (Weston), April, 2006

Appendix A

Correspondence & Project Photographs

April 4, 2006

John M. Koerner
Weston Solutions, Inc.
2566 Kohnle Drive
Miamisburg, Ohio 45342-3669

Dear Mr. Koerner:

Re: Munitions Maintenance Building, Building 543, Youngstown Air Reserve Station, Vienna, Trumbull County, Ohio.

This is in response to your additional correspondence, received on February 8, 2006, regarding the proposed construction of a new munitions maintenance building at the Youngstown Air Reserve Station in 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 included in your submission, the project footprint does not appear to have a high probability for archaeological deposits. I am unable to determine whether any properties in the area of potential effect (APE) are eligible for the National Register of Historic Places. However, Based on the limited information provided, I can concur that the proposed project will not affect historic properties.

No further coordination with this office is necessary unless there is a change in the project. If new or additional historic properties are discovered during implementation of this project, or if the project changes, this office should be notified as required by 36 CFR Section 800.13.

If you have any questions regarding this matter, please call me, at (614) 298-2000 or at nyoung@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Nathan J. Young

Nathan J. Young, Project Reviews Manager
Resource Protection and Review

1004390

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2 February 2006

Mr. Nathan J. Young
Project Reviews Manager, Resource Protection & Review
Ohio Historic Preservation Office
567 East Hudson Street
Columbus, Ohio 43211-1030

Subject: Munitions Maintenance Facility, Building 543, Youngstown Air Reserve Station, Vienna, Trumbull County, Ohio

Dear Mr. Young,

In response to your letter of 24 January, 2006 requesting additional information regarding the subject project, I have enclosed the following documentation:

1) A section of the USGS 7.5 minute Cortland quad with the project location highlighted. This project location is entirely within the Youngstown Air Reserve Base and includes the Proposed Site as well as Alternative Sites 1 and 2. I have placed the letters A, B, and C on the quad section to locate each of these sites, respectively. These sites were also indicated on the location base map sent to your office with our original letter of 5 December, 2005. The locations of the sites are approximate as detailed design of the project has not yet occurred.

2) Photographs from each of the sites taken in the four cardinal directions as indicated on each photograph. The approximate locations of the photography and the general direction of the views have been highlighted on the attached base map showing the Project Site & Location. This is the base map referenced in #1 above. The photography locations are approximately coincident with the Proposed Site and Alternative Sites, respectively. I have also included two additional photographs – one of the view west along Perimeter Road at the northern edge of the base adjacent to the Proposed Site, and the second indicating the view east along Perimeter Road at the southern margin of the base adjacent to Alternate Site 2. The photographs are on the included CD.

As can be seen from the photographs, most of the project location is wooded although the Alternative 2 location is an open field. The only buildings even close to the sites are the existing, relatively new munitions buildings (537 and 533) as shown in the photograph (View west from the Proposed Site). Several other structures can be seen in the photographs (View north and View west) at Alternate Site 2. These structures include a Civil Engineering storage building less than 50 years old (535-View north), Base Vehicle

Wash facility and two new Flight Readiness buildings (536 and 538) some distance to the west. The readiness buildings include office and training facilities. All of these buildings are shown on the Project Site and Location base drawing.

No offsite structures are proximate to any of the sites, the closest being several residences to the east of Alternative Site 1 beyond Perimeter Road. No buildings on base over 50 years old are near any of the sites and none of these buildings would be affected by the project.

We would appreciate your prompt review, and comments or concurrence with our assessment at your earliest convenience. Should your office have any questions or require further information, please don't hesitate to contact me at 937-384-4232 or by email at John.Koerner@westonsolutions.com.

Sincerely,

John M. Koerner
Program Manager
Weston Solutions

Copy: Mr. John Tarantine
910 MSG/CEV Youngstown Air Reserve Station

Attachments:
1. Figures
2. CD

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127

(614) 469-6923
Fax: (614) 469-6919

December 19, 2005

Mr. John Koerner
Weston Solutions, Inc.
2566 Kohnle Dr.
Miamisburg, OH 45342-3669

Dear Mr. Koerner:

This is in response to your December 2, 2005 letter requesting information we may have regarding the occurrence or possible occurrence of Federally-listed threatened or endangered species within the vicinity of the proposed site. The project involves the construction of a proposed 4,680 square-foot munitions maintenance facility, and installation of utility lines, sewers, access drive, parking area, and pavement at the Youngstown Air Reserve Station, Vienna, Trumbull County, Ohio (Project # ZQEL 05-007). Currently, the area proposed for construction is composed of 3.5 acres of upland and wetland woods, approximately 50 years in age, and dominated by red maple.

There are no Federal wilderness areas, wildlife refuges, or designated Critical Habitat within the vicinity of the proposed project.

The Service recommends that impacts to streams and wetlands be avoided, and buffers surrounding these systems be preserved. Streams and wetlands provide valuable habitat for fish and wildlife resources, and the filtering capacity of wetlands helps to improve water quality. Naturally vegetated buffers surrounding these systems are also important in preserving their wildlife-habitat and water quality-enhancement properties. The proposed activities do not constitute a water-dependent activity, as described in the Section 404(b)(1) guidelines, 40 CFR 230.10. Therefore, practicable alternatives that do not impact the special aquatic site (i.e., wetlands) are presumed to be available, unless clearly demonstrated otherwise. Therefore, before applying for a Section 404 permit, the client should closely evaluate all project alternatives that do not affect wetlands, and if possible, select an alternative that avoids impacts to the aquatic resource.

ENDANGERED SPECIES COMMENTS: The proposed project lies within the range of the **Indiana bat** (*Myotis sodalis*), a Federally-listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. Summer habitat requirements for the species are not well defined but the following are considered important:

1. Dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas.

2. Live trees (such as shagbark hickory and oaks) which have exfoliating bark.

3. Stream corridors, riparian areas, and upland woodlots which provide forage sites.

Should the proposed site contain trees or associated habitats exhibiting any of the characteristics listed above, we recommend that the habitat and surrounding trees be saved wherever possible. If the trees must be cut, further coordination with this office is requested to determine if surveys are warranted. Any survey should be designed and conducted in coordination with the Endangered Species Coordinator for this office.

The project lies within the range of the clubshell mussel, bald eagle, and eastern massasauga, federal endangered, threatened, and candidate species, respectively. Due to the project type, location, and onsite habitat, these species would not be expected within the project area, and no impacts to these species are anticipated. Relative to these species, this precludes the need for further action on this project as required by the 1973 Endangered Species Act, as amended. If project plans change or if portions of the proposed project were not evaluated, it is our recommendation that you contact our office for further review.

This technical assistance letter is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C.661 et seq.), the Endangered Species Act of 1973, as amended, and is consistent with the intent of the National Environmental Policy Act of 1969, and the U.S. Fish and Wildlife Service's Mitigation Policy.

If you have questions, or if we may be of further assistance in this matter, please contact Megan Seymour at extension 16 in this office.

Sincerely,

Megan Seymour

for Mary Knapp, Ph.D.
Supervisor

cc: ODNR, DOW, SCEA Unit, Columbus, OH

Weston Solutions, Inc.
2566 Kohnle Drive
Miamisburg, Ohio 45342-3669
937-384-4200 • Fax 937-384-4201
www.westonsolutions.com

2 December 2005

Dr. Mary Knapp, Supervisor
U.S. Fish and Wildlife Service
Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4115

Subject: Environmental Assessment, Construct Munitions Maintenance Facility, Building 543, Youngstown Air Reserve Station, Vienna, Ohio

Dear Dr. Knapp,

The Youngstown Air Reserve Station (YARS), U. S. Air Force Reserve is seeking informal consultation with the U.S. Fish and Wildlife Service in compliance with Section 7 of the Endangered Species Act for construction of a new munitions maintenance facility at the base, Project ZQEL 05-007. YARS has initiated an Environmental Assessment (EA) for the subject project in accordance with the requirements of NEPA and U.S. Air Force procedures applicable to the project.

The geographic location of the proposed project is Trumbull County, T.4 N, R. 2 W, Vienna Township. This location is depicted on the attached map (Figure 1) from the USGS Cortland 7.5 minute quadrangle. The project site is located in an undeveloped, wooded section of the base (Figure 2). The proposed site consists of about 3.5 acres which includes approximately 2.3 acres of U.S. Army Corps of Engineers (USACE) jurisdictional wetlands. Your office previously assisted YARS in categorizing undeveloped areas of the base for fish and wildlife management (see attached 1995 letter). No unique or special fish, wildlife or habitats were identified at that time.

The proposed project includes construction of an approximate 4,680 square foot munitions maintenance facility, including two anticipated future additions, with extension and connection of utilities: water, electricity, gas, communications, and storm/sanitary sewers. A new access drive, parking, and pavement area would total about 21,800 square feet and bring the total development footprint to just over one-half acre. Project design is at the conceptual stage. The new facility is needed to accommodate the munitions maintenance mission of the military units stationed at YARS. Current space is inadequate and operations are in violation of U.S. Air Force instructions and safety standards.

In addition to the Proposed Action, two other site alternatives are being evaluated. The first site is in the more upland wooded area along Perimeter Road and the other is in the training area near the flight line (Figure 2). Both sites are remote from current munitions facilities and both sites would result in additional area subject to explosive hazard. A No Action alternative will also be evaluated.

A wetland study and delineation of YARS was conducted in 2002 (Wetland Identification and Delineation Report, Youngstown Air reserve Station, Ohio, e2M, 2002). The survey identified approximately 12.46 acres of USACE jurisdictional wetlands and 0.89 acres of isolated wetlands regulated by the OEPA. The 12 plus acres of wetlands consist of a relatively contiguous tract within the approximate 30 acre woodland identified in the referenced 1995 letter. Most of this area was formerly drained and disturbed agricultural land according to the 2002 study, but has been relatively undisturbed for the past 50 years.

The wooded wetlands are dominated by a young red maple overstory and are largely characterized by a sparsely vegetated understory. According to the OEPA's Ohio Rapid Assessment Method (ORAM) scoring system, all of the wetlands are Category 1 or 2; there are no Category 3 wetlands on base. No threatened or endangered species are known to exist in the area according to a natural resources survey done in 1996 (Natural Resources Survey, Youngstown Air Reserve Station, Vienna, Ohio, Parsons Engineering-Science, 1996).

I am requesting comment from your agency regarding the presence or absence of Federal and State-listed species that may be located within 0.5 miles of the proposed project location. In addition, please comment on the presence or absence of areas of ecological concern including wetlands, national wild and scenic rivers, wildlife areas/refuges, or wildlife management areas that may be located within any areas that may be disturbed by the project. We have also contacted the ODNR's Division of Natural Areas and Preserves for a search of their Natural Heritage Database.

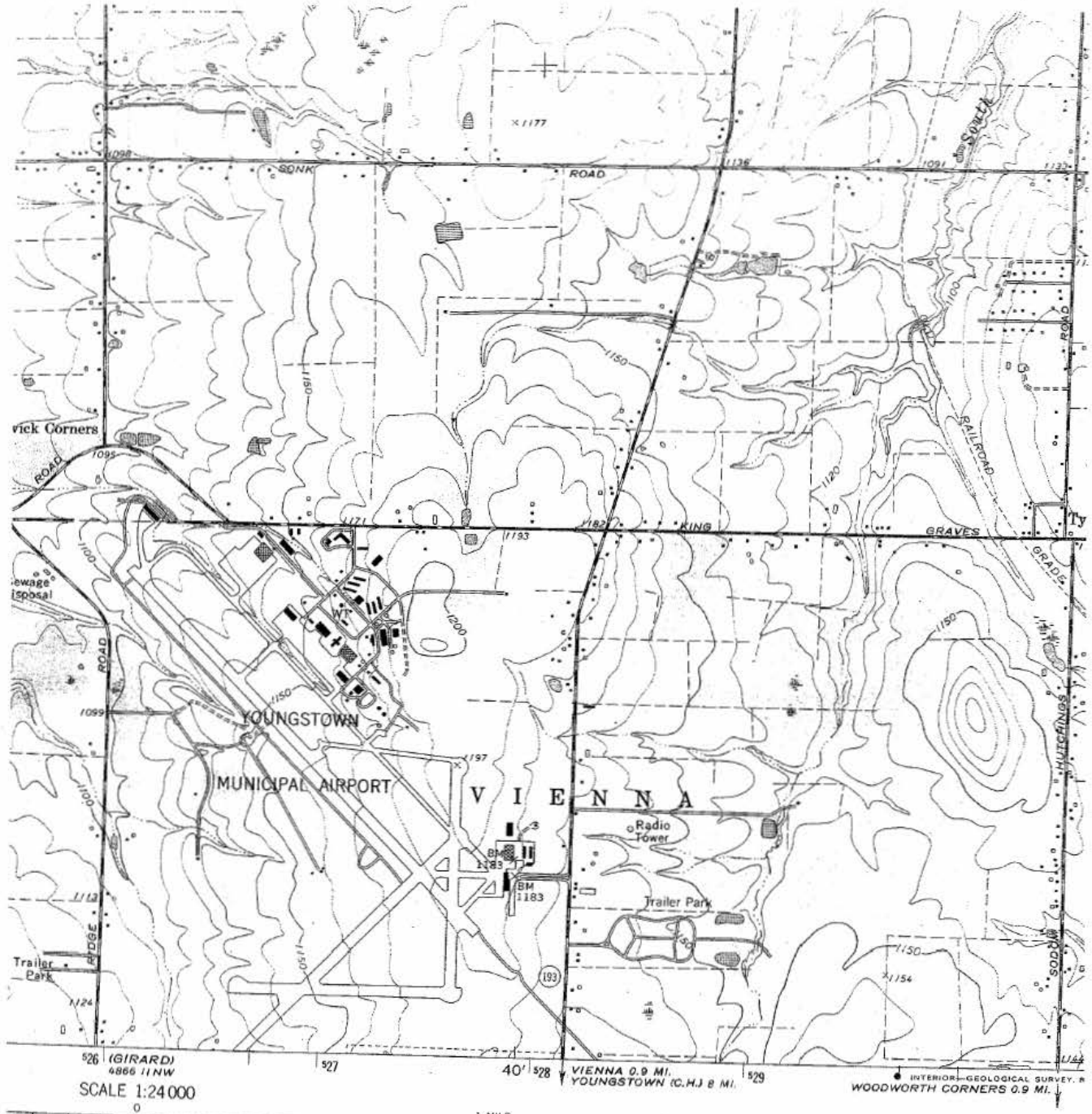
Please send your comments to me at the address listed on the letterhead. If you have any questions, please call me at 937-384-4218 or contact me by email at John.Koerner@westonsolutions.com. Thank you for your assistance.

Sincerely,

John M. Koerner
Senior Environmental Scientist
Weston Solutions

Copy
Mr. John Tarantine
910 MSG/CEV Youngstown Air Reserve Station

Attachments



SCALE 1:24 000

1 MILE

2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 10 FEET
ONAL GEODETIC VERTICAL DATUM OF 1929

Figure 1

QUADRANGLE LOCATION

ROAD CLASSIF

Heavy-duty

Medium-duty

State F

PLIES WITH NATIONAL MAP ACCURACY STANDARDS
J. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled in cooperation with State of Ohio agencies from aerial photographs taken 1977 and other source data. This information not field checked. Map edited 1979.

Purple tint indicates extension of urban areas.

Boundary lines shown in purple compiled from latest

CO

N4

PH
AMS 4

1. COMPONENT		2. DATE
USAFR	FY 2005 MILITARY CONSTRUCTION PROJECT DATA	10 May 05

3. INSTALLATION AND LOCATION
910 Airlift Wing, 3976 King Graves Road,
Youngstown Warren Regional Airport, ARS, Vienna, Ohio 44473

4. PROJECT TITLE	5. PROJECT NUMBER
Construct Munitions Maint. Facility	05-0007

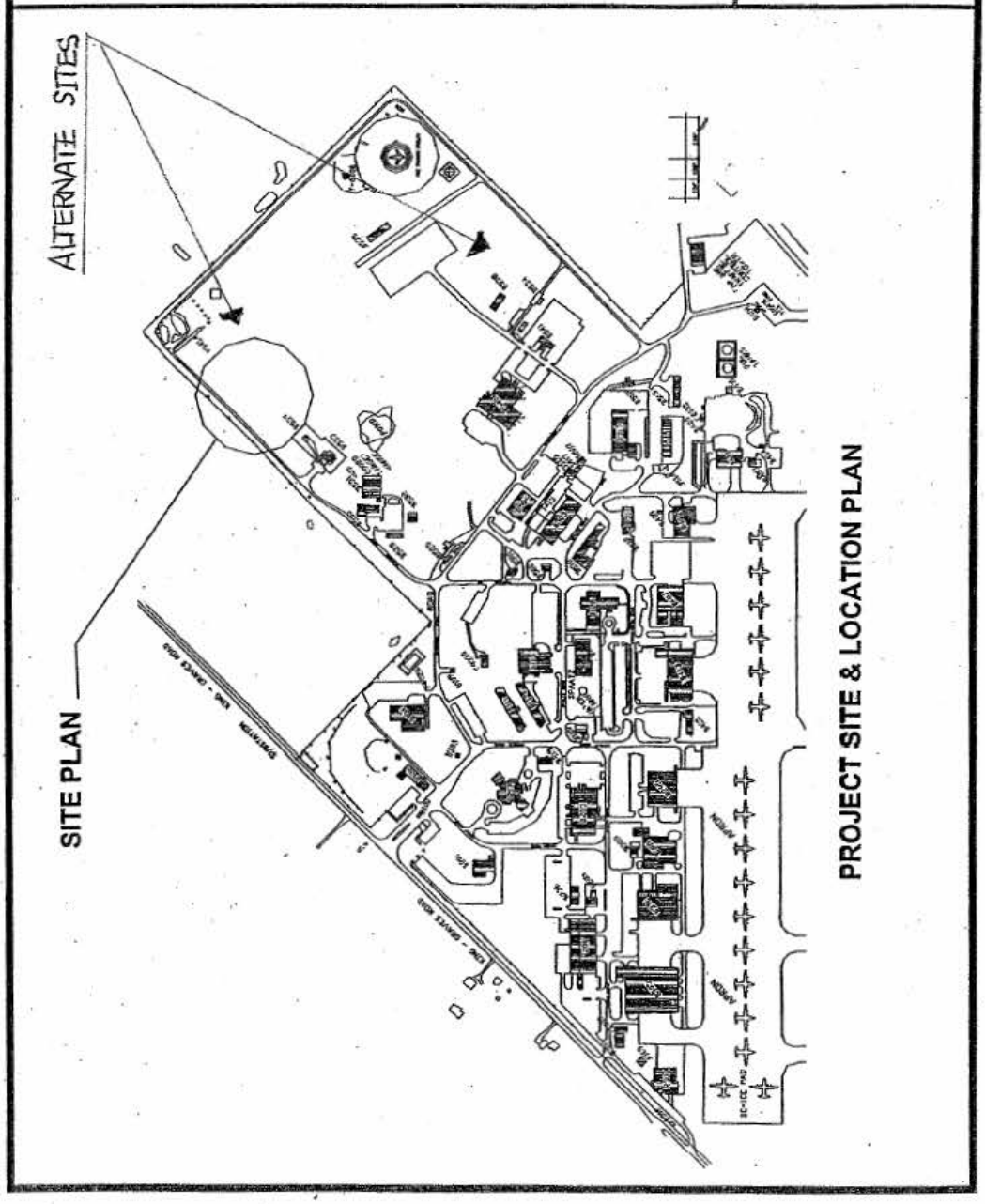


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Figure 2

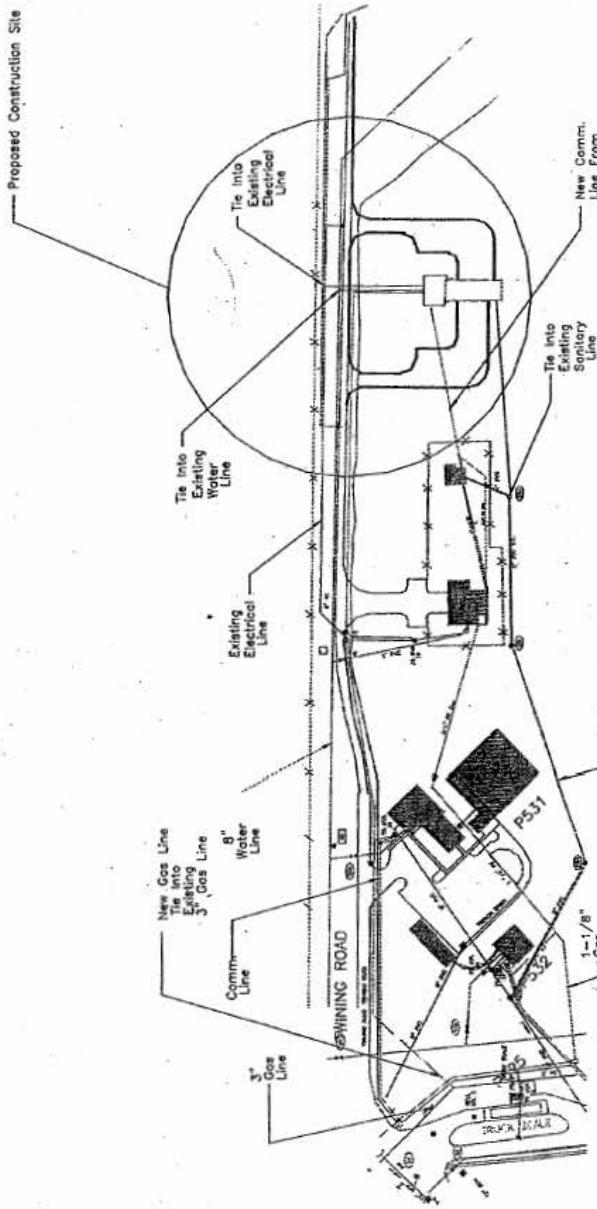
PREVIOUS EDITION MYA BE USED INTERNALLY
UNTIL EXHAUSTED *U.S.G.P.O:1991-1281-437:85216

DD Form 1391, DEC 76 (EF)

1. COMPONENT		2. DATE
USAFR	FY 2005 MILITARY CONSTRUCTION PROJECT DATA	10May05

3. INSTALLATION AND LOCATION
910 Airlift Wing, 3976 King Graves Road,
Youngstown Warren Regional Airport, ARS, Vienna, Ohio 44473

4. PROJECT TITLE	5. PROJECT NUMBER
Construct Munitions Maint. Facility	05-0007



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PREVIOUS EDITION MYA BE USED INTERNALLY UNTIL EXHAUSTED *U.S.G.P.O:1991-1281-437:85216

DD Form 1391, DEC 76 (EF)

F-21-9

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
6950-H Americana Parkway
Reynoldsburg, Ohio 43068

IN REPLY REFER TO:

COMM: 614/469-6923 FAX: 614/469-6919

August 16, 1995

Mr. Larry D. Lemar
910 Airlift Wing/CE
3976 King Graves Road
Youngstown-Warren Rgl. Aprt.
ARS Vienna, Ohio 44473-0910

Dear Mr. Lemar:

This responds to your request for assistance in categorizing certain lands on the Youngstown Air Reserve Base as to their suitability for fish and wildlife management. Mr. Bill Kurey of this office visited the areas in question with Mr. Greg Wykle of your staff on August 14. We have also reviewed the installation classification rules and would like to submit to you the following observations and recommendations.

1. The 36 acres of unimproved land are unsuitable for any but the most restrictive hunting and trapping programs because of the limited size of the parcel. Safety considerations might make hunting inadvisable and there was not enough habitat for fur bearers to make trapping feasible.

2. Fishing opportunities are also limited, but the pond does have some recreational fishing potential. Large numbers of small bluegills were observed in the pond.

3. The estimated 30 acres of woodland is too small an area to interest many of the neotropical forest nesting birds. Contiguous tracts of about 200 acres seem to be the low end of what these birds like. However, this is not to say that many other species of migratory birds don't use the area. The area might have some potential for bird watching and nature walks.

4. RECOMMENDATION: From our admittedly limited understanding of the installation classification system, we recommend that the land parcel in question be assigned to Category II. We suggest that the area be used informally for fishing, bird watching, nature walks, and other activities that are compatible with its present ability to support fish and wildlife. Category II would appear to be the proper category based on "resource limitations."

If you have questions or we may be of further assistance in this matter please contact Mr. Bill Kurey of this office at 614-469-6923.

Sincerely,

Kent E. Kroonemeyer

Kent E. Kroonemeyer
Supervisor

cc: C. Suprenant, FWS Fish. Res., Carterville, IL

Ohio Department of Natural Resources

BOB TAFT, GOVERNOR | SAMUEL W. SPECK, DIRECTOR

Division of Natural Areas and Preserves
Tom Linkous, Chief
2045 Morse Rd., Bldg. F-1
Columbus, OH 43229-6693
Phone: (614) 265-6453; Fax: (614) 267-3096

November 16, 2005

John Koerner
Weston Solutions, Inc.
2566 Kohnle Dr.
Miamisburg, OH 45342

Dear Mr. Koerner:

After reviewing our Natural Heritage maps and files, I find the Division of Natural Areas and Preserves has no records of rare or endangered species in the Youngstown Air Reserve Station EA project area, including a half mile radius, in Vienna Township, Trumbull County, and on the Cortland Quad.

There are no existing or proposed state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, breeding or non-breeding animal concentrations or state parks, forests or wildlife areas within a half mile radius of the project area.

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

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

Sincerely,

Debbie Woischke

Debbie Woischke, Ecological Analyst
Natural Heritage Program

DNR 0001

Weston Solutions, Inc.
2566 Kohnle Drive
Miamisburg, OH 45342
937-384-4200
937-384-4201 (Fax)
www.westonsolutions.com

Restoring Resource Efficiency

FACSIMILE TRANSMITTAL

To:	ODNR Div of Nat Areas	**Recipient's Facsimile #**	614 -267-3096
	Ms Debbie Woischke	**Recipient's Telephone #**	614-265-6453
From:	John Koerner	**Originator's Telephone #**	937-384-4218
Total Pages:	4 (Incl. cover sheet)		
Date:	November 14,2005	**W.O. #:**	Youngstown EA

Comments:

Weston Solutions formally requests a search of the Heritage Database for the environmental features and resources checked on the attached request form. This information is being requested to comply with all of the pertinent coordination and other requirements associated with the USAF Environmental Impact Analysis Process and NEPA . The project site has been identified on a portion of the Cortland, Trumbull County quad that is attached. The project involves construction of a new munitions facility at the Youngstown Air Reserve Station.

Sincerely,

John M. Koerner

WESTON...Restoring Resource Efficiency

Our services encompass environmental remediation, redevelopment, and management and compliance.

Our emphasis on restoring resource efficiency to our clients' operations—including land, air, water, facilities, and staff—ensures that clients derive maximum value from their resources.

The documents accompanying this telecopy transmission contain confidential, privileged or proprietary information that either constitutes the property of Weston Solutions, Inc. (WESTON$_{SM}$) or, if the property of another, represents information that is within WESTON's care, custody and control. The information is intended to be for the use of the individual or entity named on the transmission sheet. If you are not the intended recipient, be aware that any disclosure, copying or use of the contents of this telecopied information is prohibited. If you have received this telecopy in error, please notify us by telephone immediately so that we can arrange for the retrieval of the original documents at no cost to you. Thank you for your assistance.

DATA REQUEST

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
PHONE: 614-265-6453; FAX: 614-267-3096

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

FEES:
Fees are determined by the amount of time it takes to complete your project. The charge is $25.00 per ½ hour with a ½ hour minimum. We can perform a data search manually or by computer. The Heritage Data Services staff will determine the most cost-efficient method of doing your search. A cost estimate can be provided upon request. Unless otherwise specified, an invoice will accompany the data services response.

****

This request is being submitted by: ☒ fax ☐ mail ☐ both

Date: 14 November 2005

Your Agency/Organization: Weston Solutions, Inc

Your Name/Title: John M Koerner, Senior Scientist

Address: 2566 Kohnle Drive

City/State/Zip: Dayton, OH 45342

Phone/Fax: 937-384-4218 fax: 937-384-4201

Project Name/Number: Youngstown Air Reserve Station EA

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

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

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

PLANTS:
- ☐ Federal Status Only
- ☐ State Legal Status Only
- ☐ Rare (non-legal status)
- ☒ All of the above

ANIMALS:
- ☐ Federal Status Only
- ☐ State Legal Status Only
- ☐ Rare (non-legal status)
- ☒ All of the above

PLANT COMMUNITIES:
- ☒ All
- ☐ Wetlands Only
- ☐ Other_____

OTHER FEATURES:
- ☐ Geologic Features
- ☐ Breeding/Non-breeding Animal Concentrations
- ☐ Champion Trees
- ☐ State Nature Preserves and Natural Areas
- ☐ State Wild, Scenic and Recreational Rivers
- ☐ State Parks, Forests, Wildlife Areas
- ☒ All of the above
- ☐ Other_____

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

None

The area you want searched:
- ☐ study area as outlined on the map
- ☒ study area plus ½ mile radius
- ☐ study area plus 1 mile radius
- ☐ other_____

How will the information be used:

Data for NEPA Environmental Assessment

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

Your Signature John M. Koenig

DNR 5203
Rev. 9/97

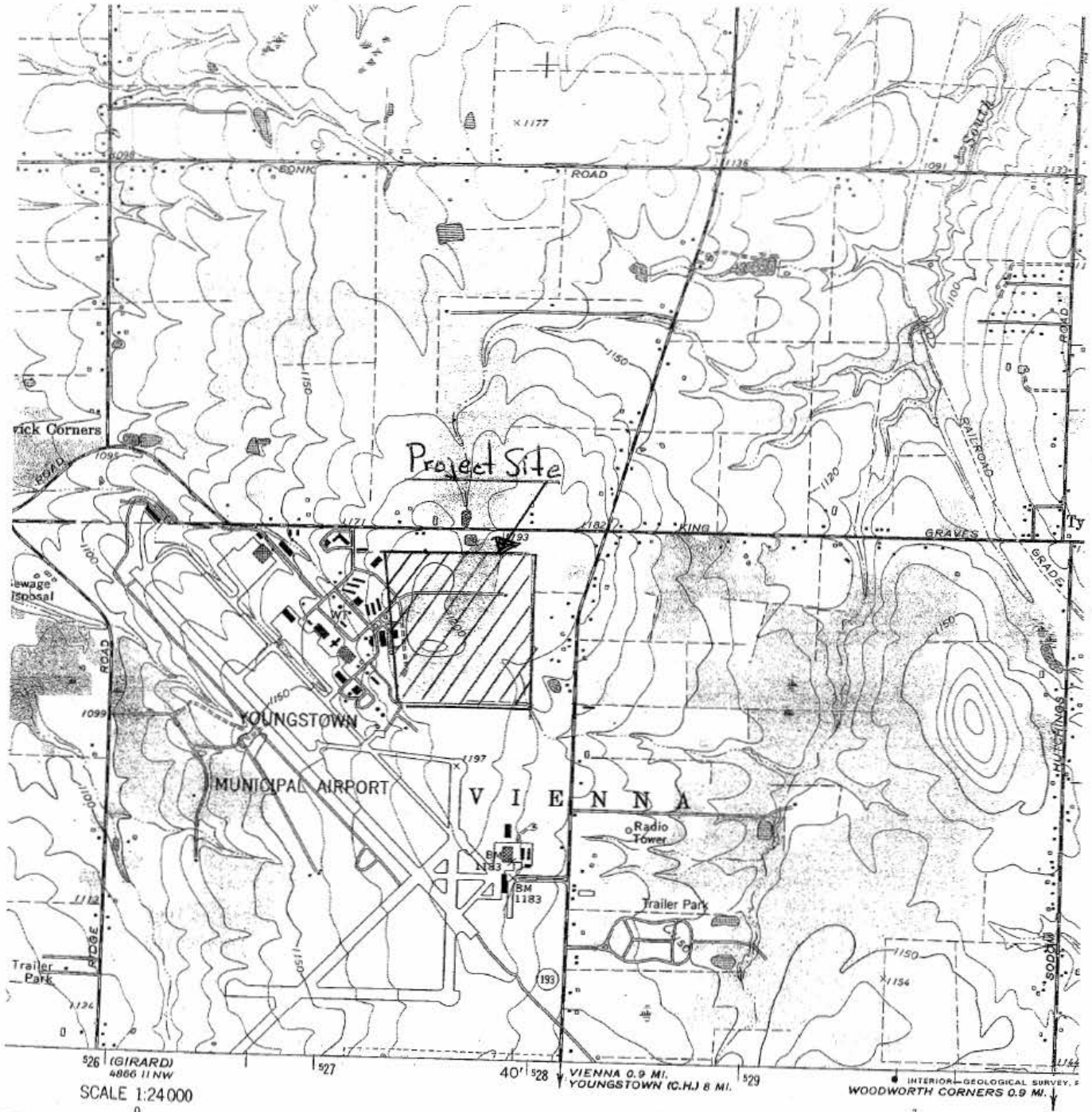
Project Site
YOUNGSTOWN
MUNICIPAL AIRPORT
V I E N N A
Radio Tower
Trailer Park
Trailer Park
BM 1183
KING
GRAVES
ROAD
RAILROAD
526 (GIRARD) 4866 II NW
527
528
529
VIENNA 0.9 MI.
YOUNGSTOWN (C.H.) 8 MI.
WOODWORTH CORNERS 0.9 MI.
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETER
CONTOUR INTERVAL 10 FEET
ONAL GEODETIC VERTICAL DATUM OF 1929
Cortland
OHIO
QUADRANGLE LOCATION
ROAD CLASSI
Heavy-duty
Medium-duty
State
CC
PLIES WITH NATIONAL MAP ACCURACY STANDARDS
J. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
Revisions shown in purple compiled in cooperation with State of Ohio agencies from aerial photographs taken 1977 and other source data. This information not field checked. Map edited 1979.
Purple tint indicates extension of urban areas.
Boundary lines shown in purple compiled from latest
PH
AMS

Photo 1: Proposed location – east view

Photo 2: Proposed location – south view

Photo 3: Proposed location – west view.

Photo 4: Proposed location – north view

Photo 5: Alternate “A” location – east view

Photo 6: Alternate “A” location – south view

Photo 7: Alternate “A” location – west view.

Photo 8: Alternate “A” location – north view

Photo 9: Alternate “B” location – east view

Photo 10: Alternate “B” location – south view

Photo 11: Alternate “B” location – west view.

Photo 12: Alternate “B” location – north view