



Legal Department

American Electric Power  
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Columbus, OH 43215-2373  
AEP.com

January 9, 2018

Chairman Asim Z. Haque  
Ohio Power Siting Board  
180 East Broad Street  
Columbus, Ohio 43215

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**Re: In the Matter of the Letter of Notification Application of AEP Ohio Transmission Company, Inc. for a Certificate of Environmental Compatibility and Public Need for the Devola Station Project  
Case No. 18-0034-EL-BLN**

Dear Chairman Haque,

Attached please find a copy of the Letter of Notification (LON) for the above-referenced project by AEP Ohio Transmission Company, Inc. (AEP Ohio Transco). This filing and notice is in accordance with O.A.C. 4906-6-05.

A copy of this filing will also be submitted to the executive director or the executive director's designee. A copy will be provided to the Board Staff via electronic message. The Company will also submit a check in the amount of \$2,000 to the Treasurer, State of Ohio, for Fund 5610 for the expedited fees.

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

/s/ Christen Blend

Christen Blend (0086881), Counsel of Record  
Hector Garcia (0084517)  
Counsel for AEP Ohio Transmission Company, Inc.

cc. John Jones, Counsel OPSB Staff  
Jon Pawley, OPSB Staff

# Letter of Notification for Devola Station Project



Case No. 18-0034-EL-BLN

Submitted to:  
The Ohio Power Siting Board  
Pursuant to Ohio Administrative Code  
Section 4906-6-05

Submitted by:  
AEP Ohio Transmission Company, Inc.

January 9, 2018

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

### Letter of Notification for Devola Station Project

#### **4906-6-05**

AEP Ohio Transmission Company, Inc. (AEP Ohio Transco) is providing the following information to the Ohio Power Siting Board (OPSB) in accordance with the accelerated application requirements of Ohio Administrative Code Section 4906-6-05.

#### **4906-6-05(B) General Information**

##### **B(1) Project Description**

**The applicant shall provide the name of the project and applicant's reference number, names, and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a letter of notification or construction notice application.**

AEP Ohio Transco has identified the need to construct the Devola Station Project (the Project) in Muskingum Township, Washington County, Ohio. The Project consists of constructing a new 138 kilovolt (kV) electric transmission substation.

The Project will be constructed on property currently owned by AEP Ohio Transco located approximately 0.4-mile northwest of Mill Creek Road near the community of Devola, Ohio, which is approximately 2.4 miles north of the City of Marietta. A planned access road crosses property currently not owned by AEP Ohio Transco. The location of the Project is shown on a United States Geological Survey (USGS) Topographic Map as Exhibit 1-1 in Appendix A.

The Project meets the requirements for a Letter of Notification (LON) because it is within the types of projects defined by Item (3) of Appendix A to O.A.C. 4906-1-01, *Application Requirement Matrix For Electric Power Transmission Lines*:

*(3) Constructing a new electric power transmission substation.*

##### **B(2) Statement of Need**

**If the proposed project is an electric power transmission line or natural gas transmission line, a statement explaining the need for the proposed facility.**

AEP Ohio Transco, Ohio Power Company, Buckeye Power, Inc. (Buckeye), and Washington Electric Cooperative (Washington) (collectively, the Companies) have agreed to implement a long-term plan aimed at enhancing the reliability of the southeast Ohio area electric transmission and distribution network, referred to as the Southeast Ohio Improvements Program. The existing infrastructure has reached an age where it is in need of rebuild and redesign to meet the needs of customers across the region. The

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

Companies have developed a multi-year construction plan that will replace much of the existing infrastructure in place today.

The focus of the program is to rebuild the area's aged 23 kV infrastructure into a 138 kV network and redesign the system to improve reliability for customers across the region. Bringing additional power sources into the region will improve electric service reliability and provide the electrical capacity for future economic growth. Ultimately, the series of improvements and investment in the area will provide a looped transmission system from the proposed Lamping to Devola 138 kV substations.

The proposed Devola Station is in the 2017 LTFR; the station is listed as Tab FE-T10\_OHT, and the connecting lines are on Tab FE-T9\_OHT. The PJM number for this project is S1125. The station will be part of the overall program by connecting future and existing 138 kV transmission lines in the area. The addition of the substation into the planned 138 kV network will improve service reliability to regional customers; thereby enhancing service for customers, decreasing power interruptions, providing for more efficient recovery of service when outages occur, and supporting local economic development.

### **B(3) Project Location**

**The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the project area.**

Exhibit 1-1 in Appendix A shows the proposed Project relative to existing electrical transmission and distribution lines.

### **B(4) Alternatives Considered**

**The applicant shall describe the alternatives considered and reasons why the proposed location or route is best suited for the proposed facility. The discussion shall include, but not be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.**

AEP Ohio Transco evaluated land options to identify potential sites for the Project to determine the location of the proposed Devola Station. The proposed site for the Project represented the most appropriate solution for meeting AEP Ohio Transco's future capacity needs in the area. Specifically, the site chosen for the Project aligns with the proposed routes for the future Bell Ridge – Devola 138 kV Transmission Line, the Macksburg – Devola 138 kV Transmission Line and the Devola – Mill Creek 138 kV Transmission Line (Exhibit 1-1 in Appendix A).

The selected Project location was the most appropriate option because it is close to existing and proposed electric transmission lines, AEP Ohio Transco owns the land, the chosen location maximizes the availability of relatively level ridgetops while minimizing land use impacts (e.g., residential areas), and the chosen location minimizes ecological impacts (no impacts to streams are planned).

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

AEP Ohio Transco has been in communication with the single property owner of land where a permanent access road would be necessary for the Station. AEP Ohio Transco owns the land that is proposed for the substation area. AEP Ohio Transco is in negotiation to acquire an easement necessary to accommodate the permanent access road. Prior to the acquisition of the aforementioned easement, AEP will utilize a temporary access road to the site for tree clearing in advance of construction.

### **B(5) Public Information Program**

**The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.**

The Project will be located on property owned by AEP Ohio Transco. Within seven days of filing this LON, AEP Ohio Transco will issue a public notice in a newspaper of general circulation in the Project Area. The notice will comply with all requirements under O.A.C. 4906-6-08(A)(1)-(6). Further, AEP Ohio Transco maintains a website (<http://aeptransmission.com/ohio/>), which provides the public access to an electronic copy of this LON and the public notice for this LON. The LON will also be sent to applicable public officials concurrently with submittal to OPSB, and a paper copy of the LON will be provided to the Marietta/Washington County Library located at 615 Fifth Street, Marietta, Ohio. Lastly, AEP Ohio Transco retains land agents who discuss project timelines, construction and restoration activities with affected owners and tenants.

### **B(6) Construction Schedule**

**The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.**

Construction is planned to start in February 2018 with an anticipated in-service date of March 2020.

### **B(7) Area Map**

**The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.**

Exhibit 1-1 in Appendix A identifies the location of the Project Area on a USGS quadrangle map. Exhibit 1-2 in Appendix A shows the layout of the station on an aerial image with clearly marked streets, roads, and highways.

To visit the Project from Marietta City Government Office, take Putnam Street northeast 0.4 mile to the intersection of Putnam Street, 7th Street, and Glendale Road. Follow Glendale Road to the north for 1.2 miles to Colegate Drive. Turn left onto Colegate Drive and travel 0.8 mile before turning right onto Mill Creek Road. Follow Mill Creek Road for 0.28 mile. The Project Area is located approximately 0.4 mile up the transmission right-of-way to the north from Mill Creek Road.

### **B(8) Property Agreements**

**The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.**

Construction of the new Devola Station will occur on property owned by AEP Transco Ohio in Muskingum Township, Washington County. In addition, AEP Ohio Transco will obtain an easement for the permanent access road on a property near the proposed substation. No other property acquisition or easements are required to construct and operate Devola Station.

### **B(9) Technical Features**

**The applicant shall describe the following information regarding the technical features of the project:**

#### **B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.**

The Project will be constructed on property owned by the AEP Ohio Transco totaling an estimated 80 acres. The 138 kV Devola Station footprint will be approximately 3.7 acres. The equipment and facilities described below will be installed within the fenced area of the proposed Devola Station. The preliminary station layout is provided in Appendix B.

#### ***Breakers***

There will be six (6) 138 kV breakers and two (2) 138kV “Circuit-switchers” installed at the substation. These breakers will be SF6 (sulfur hexafluoride) gas insulated breakers. There will be eight (8) 17.5kV distribution breakers, two (2) 17.5kV totalizing distribution circuit breakers and one (1) 17.5kV bus tie distribution breaker.

#### ***Station Configuration (Layout)***

The station is designed as a 138kV breaker-and-a-half design, with an initial installation of two (2) strings, with a room to build a 3<sup>rd</sup> string.

#### ***Bus Arrangement and Structures***

The Project will be initially installed as follows: There will be a 138 kV two (2) string breaker-and-a-half layout with four 138kV line terminations (expandable to six). Equipment support steel structures will be designed using structural tubing, folded plate tapered tubular, and/or wide flange structures. There will be four(4) 138 kV H-Frame dead-end expandable bays. All yard structures will be ASTM A36, ASTM A500, or ASTM A572 steel hot-dip galvanized for corrosion protection. The high bus throughout the yard will be approximately 22 feet in height.

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

### ***Transformers***

There will be two (2) transformers installed at the station to serve AEP Ohio distribution load, which will be 2- 30 MVA 138/12 Transformers. There will be two (2) sets of smaller 50kVA distribution transformers, served of the distribution bay to provide preferred and backup station service.

### ***Control Buildings***

A single story, prefabricated DICM (Drop In Control Module), approximately 36 feet by 16 feet in dimension, will be installed.

### ***Other Major Equipment***

Other equipment will include surge arresters, Capacitor Voltage Transformers (CVTs), and disconnect switches.

## **B(9)(b) Electric and Magnetic Fields**

**For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line. The discussion shall include:**

### **B(9)(b)(i) Calculated Electric and Magnetic Field Strength Levels**

Not applicable. The proposed Project is an electric transmission substation and there are no occupied residences or institutions located within 100 feet of the Project.

### **B(9)(b)(ii) Design Alternatives**

**A discussion of the applicant's consideration of design alternatives with respect to electric and magnetic fields and their strength levels, including alternate conductor configuration and phasing, tower height, corridor location, and right-of-way width.**

Not applicable. The proposed Project is an electric transmission substation and there are no occupied residences or institutions located within 100 feet of the Project.

### **B(9)(b)(ii)(c) Project Costs**

**The estimated capital cost of the project.**

The capital cost estimate for the proposed Project, comprised of applicable tangible and capital costs, is approximately \$13,000,000.

**B(10) Social and Economic Impacts**

**The applicant shall describe the social and ecological impacts of the project.**

**B(10)(a) Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.**

The Project is located within Muskingum Township, Washington County, Ohio, approximately 2.4 miles north of the City of Marietta. The primary land use surrounding the site is vacant, with mature vegetation. There is an industrial use approximately 1,500 feet to the southeast of the site, and residential uses approximately 1,300 feet to the southwest and approximately 1,200 feet to the southeast of the site. Dense mature vegetation between the residences and the proposed Devola Station site will provide visual screening of the station from the residences. The proposed Devola Station will not impact existing land uses or future land use patterns near the site.

Vegetative communities within the Project Area include upland forest, scrub-shrub, and maintained lawn area. Onsite investigation indicates the permanent access road starts with ingress/egress from a parking lot, and travels through a maintained lawn area along an existing gravel two-track path leading to an early successional forest at the top of a ridge, continuing northwest to the Station site. The vegetative community along the proposed permanent access road shows signs of previous disturbance with a dense thicket of shrubs and vine.

The proposed limits of disturbance (LOD) for the Devola Station consist of upland early successional or second growth forest containing a variety of shrubs, vines, tree saplings, and a variety of larger diameter trees (diameter at breast height [dbh] between 3 and 8 inches). Wetlands were not observed within the proposed LOD. Additional habitat details are available in the Ecological Resources Inventory Report included as Appendix D.

There are no cemeteries, churches, schools, or other community facilities located within 1,000 feet of the proposed Project location. The nearest residences are approximately 1,200 feet southeast and 1,200 feet southwest of the proposed Station site (Exhibit 1-2 in Appendix A).

**B(10)(b) Agricultural Land Information**

**Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.**

AEP Ohio Transco's consultant contacted the Washington County Auditor to obtain information about Agricultural District lands and received the requested data via email on December 13, 2017. The proposed Project will be constructed on AEP Ohio Transco-owned parcels which are not listed by the Washington County Auditor's Office as part of a registered agricultural district. These parcels are not currently used for agricultural production.

**B(10)(c) Archaeological and Cultural Resources**

**Provide a description of the applicant's investigation concerning the presence or absence of significant archeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

In December 2017, AEP Ohio Transco's consultant completed a Phase I Archaeological Survey and an Architectural and Historical Resources impact assessment (Appendix C). Together, these Reports address archaeological and architectural resources in the Project area. A literature review indicated that there are no formally recorded resources in the Project area.

A Phase I archaeological survey was conducted in December 2017, utilizing both pedestrian reconnaissance and shovel testing within the survey area. No archaeological sites were identified within the Project Area and no other archaeological sites were documented within the survey area; therefore, AEP Ohio Transco's consultant recommends no further archaeological work and a consideration of "no historic properties or landmarks affected" is appropriate for the Project.

The architectural and historical resources survey conducted in December 2017 did not result in the identification of any historic properties. AEP Ohio Transco's consultant recommends a finding of "no historic properties affected," and does not recommend any further cultural resource management work for the Project.

These reports were submitted to the Ohio Historic Preservation Office ("OHPO") on December 20, 2017. AEP Ohio Transco is waiting for a response from OHPO regarding the cultural resource work.

**B(10)(d) Local, State, and Federal Agency Correspondence**

**Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.**

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction stormwater discharges under General Permit OHC000004, and AEP Ohio Transco will implement and maintain best management practices (BMPs), as outlined in the project-specific Storm Water Pollution Prevention Plan (SWPPP), to minimize erosion and control sediment to protect surface water quality during storm events. The Project as currently planned would not impact any wetlands or waterways. (See Appendix D).

The Project could temporarily impact one perennial stream, an unnamed tributary to the Muskingum River, identified as SDS106 in an Appendix D table and map. The proposed access road to the Devola Station crosses this stream using the existing paved driveway installed over a culvert; the culvert may need to be replaced as part of this Project. If plans change and as necessary, AEP Ohio Transco will coordinate with the U.S. Army Corps of Engineers to determine the appropriate permits required for construction.

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

The Project is not located within a Federal Emergency Management Agency (FEMA) 100-year floodplain area. Therefore, no floodplain permitting is required for the Project. There are no other known local, state, or federal requirements that must be met prior to commencement of the Project.

### **B(10)(e) Threatened, Endangered, and Rare Species**

**Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

Coordination with Ohio Department of Natural Resources (ODNR) Division of Wildlife (DOW) was initiated to obtain Ohio Natural Heritage Database records within a 1-mile radius of the proposed Devola Station. ODNR records of state- and federally listed species, provided November 20, 2017, indicates that 29 state- or federally listed species have known occurrences within a 1-mile radius of the Project.

Of these 29 species, potential habitat for only two of the species, Indiana bat (*Myotis sodalis*) and black bear (*Ursus americanus*), were identified within the Project Area. Due to the nature of the Project, adherence to seasonal tree cutting requirements during construction, and the mobility of the species, ODNR concurs that this Project is not likely to impact any of the listed species. Information on species obtained from U.S. Fish and Wildlife Service (USFWS) county lists and the ODNR-DOW Ohio Natural Heritage Database is provided in the Ecological Resources Inventory Report in Appendix D.

The USFWS *Federally Listed Species by Ohio Counties May 2017* (available at <https://www.fws.gov/midwest/endangered/lists/pdf/OhioCtyListMay2017.pdf>) was reviewed to determine the threatened and endangered species currently known to occur in Washington County, Ohio. This USFWS publication listed the following threatened or endangered species as occurring in Washington County: Indiana bat (*Myotis sodalis*; federally endangered), northern long-eared bat (*Myotis septentrionalis*; federally threatened), fanshell (*Cyprogenia stegaria*; federally endangered), pink mucket pearly mussel (*Lampsilis abrupta*; federally endangered), sheepnose (*Plethobasus cyphus*; federally endangered), snuffbox (*Epioblasma triquetra*; federally endangered), eastern hellbender (*Cryptobranchus alleganiensis*; federal species of concern), timber rattlesnake (*Crotalus horridus*; federal species of concern), and bald eagle (*Haliaeetus leucocephalus*; federal species of concern).

As part of the ecological study completed for the Project, a coordination letter was submitted to the USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The USFWS indicated that the proposed Project is within the range of the Indiana bat and northern long-eared bat in Ohio but not within known Indiana bat buffers. If tree-clearing occurs between October 1 and March 31, USFWS does not anticipate the Project having any adverse effects to these species or any other federally listed endangered, threatened, proposed, or candidate species. The USFWS letter did not include comments specific to the other federally listed species.

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

Based on the nature of the proposed Project activities and habitat characteristics of the surrounding vicinity, construction impacts to protected species are not anticipated. Winter tree clearing will be implemented to reduce impacts to bat species and their habitat. AEP Ohio Transco will coordinate with USFWS and ODNR regarding additional construction requirements, if required by these agencies.

### **B(10)(f) Areas of Ecological Concern**

**Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.**

No wildlife management areas or nature preserve lands are located within 1,000 feet of the Project. Correspondence received from the USFWS (Appendix D) indicates that there are no federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project Area.

The FEMA Flood Insurance Rate Map (FIRM) was consulted to identify any floodplains/flood hazard areas that have been mapped in the Project Area. Based on this map, no mapped FEMA floodplains are in the Project Area. Therefore, no floodplain permits will be required for this Project.

A review of the National Wetlands Inventory (NWI) database indicated that there are no NWI-mapped wetlands present within the Project Area. Wetland and waterbody delineations as well as a general habitat assessment surveys were completed by CH2M within the planned disturbance area on January 10, 2017, May 18, 2017, and August 14, 2017. The results of the wetland and waterbody delineations are presented in the Ecological Resources Inventory Report included in Appendix D. Pursuant to the aforementioned Ecological Resources Inventory Report, no wetlands were delineated within the Devola Station LOD. There is one stream (unnamed tributary to Muskingum River, delineated as SDS106 in Appendix D) delineated within the Devola LOD near the southern end of the proposed permanent access road, however there are currently no plans to impact this stream (currently a culverted access road to a manufacturing facility). The USFWS recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitats including preserving natural buffers around streams and wetlands to enhance beneficial functions. The current substation layout achieves this objective.

### **B(10)(g) Unusual Conditions**

**Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.**

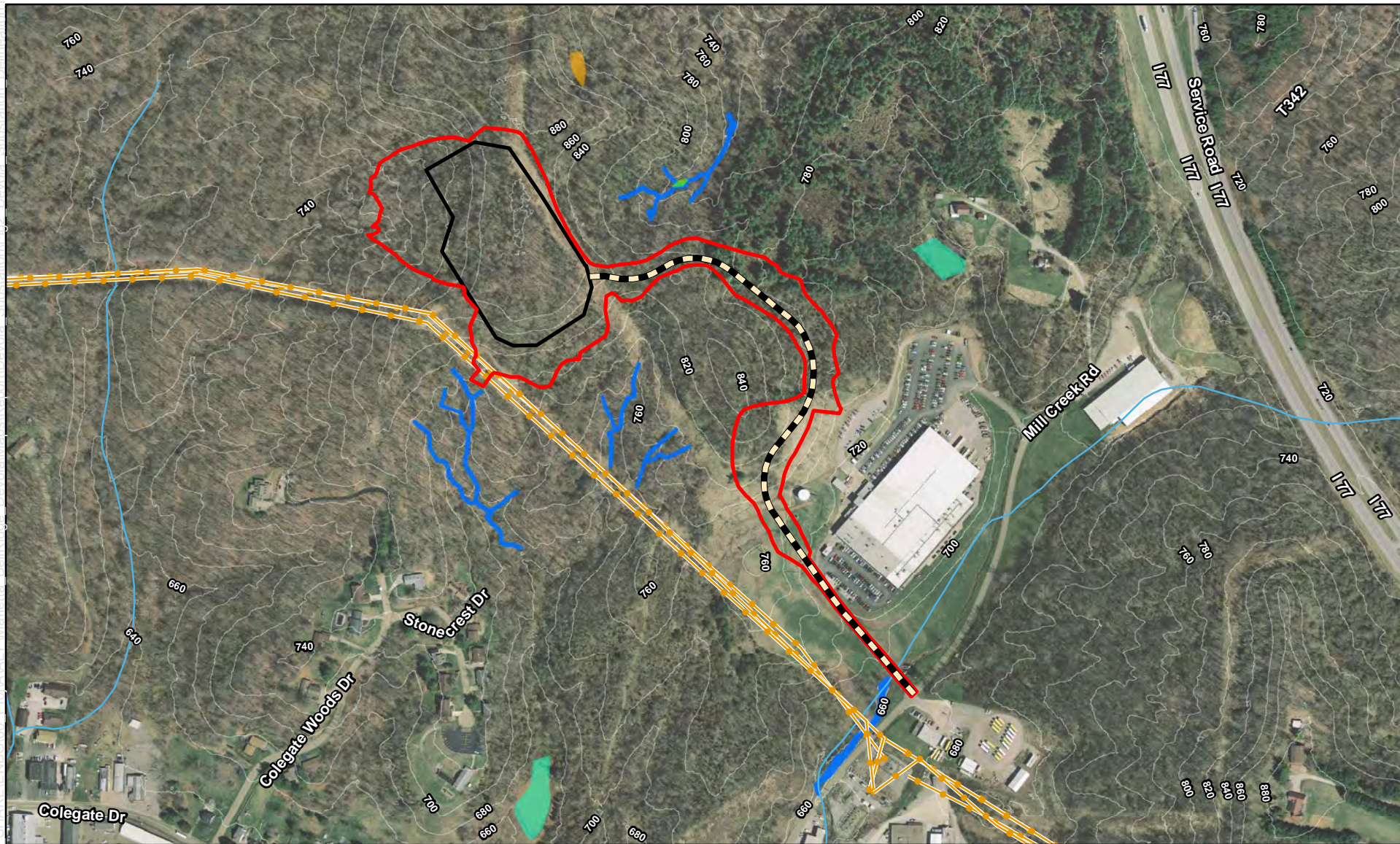
To the best of AEP Ohio Transco's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

### **Appendix A** Project Maps



<b>Legend</b> Devola Substation Footprint Devola Substation Site Limits of Disturbance Proposed Permanent Access Road	<b>BASE MAP SOURCE:</b> USGS 7.5-minute Topographic Quadrangles: Marietta	<b>LOCATOR MAP</b>  Washington County	<b>EXHIBIT 1-1</b> <b>USGS TOPOGRAPHIC MAP</b>  Devola Substation Washington County, OH	
	<b>Coordinate System:</b> State Plane Ohio South FIPS 3402 Feet <b>Datum:</b> NAD 1983 <b>Scale:</b> 1:8,000			 0 500 1,000 Feet
	December 29, 2017			



Legend

- Devola Substation Footprint
- Devola Substation Site Limits of Disturbance
- Proposed Permanent Access Road
- Existing Transmission Line
- Stream (NHD)
- Wetland (NWI)
- Delineated Stream
- Delineated Wetland
  - Palustrine Emergent (PEM)
  - Palustrine Forested (PFO)

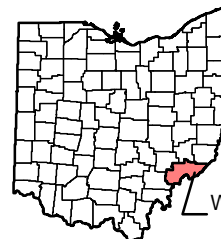
BASE MAP SOURCE:  
Ohio Statewide Imagery  
Program, 2014

Coordinate System: State Plane  
Ohio South FIPS 3402 Feet  
Datum: NAD 1983  
Scale 1:6,000

January 03, 2018



LOCATOR MAP



Washington  
County

EXHIBIT 1-2  
AERIAL IMAGERY MAP



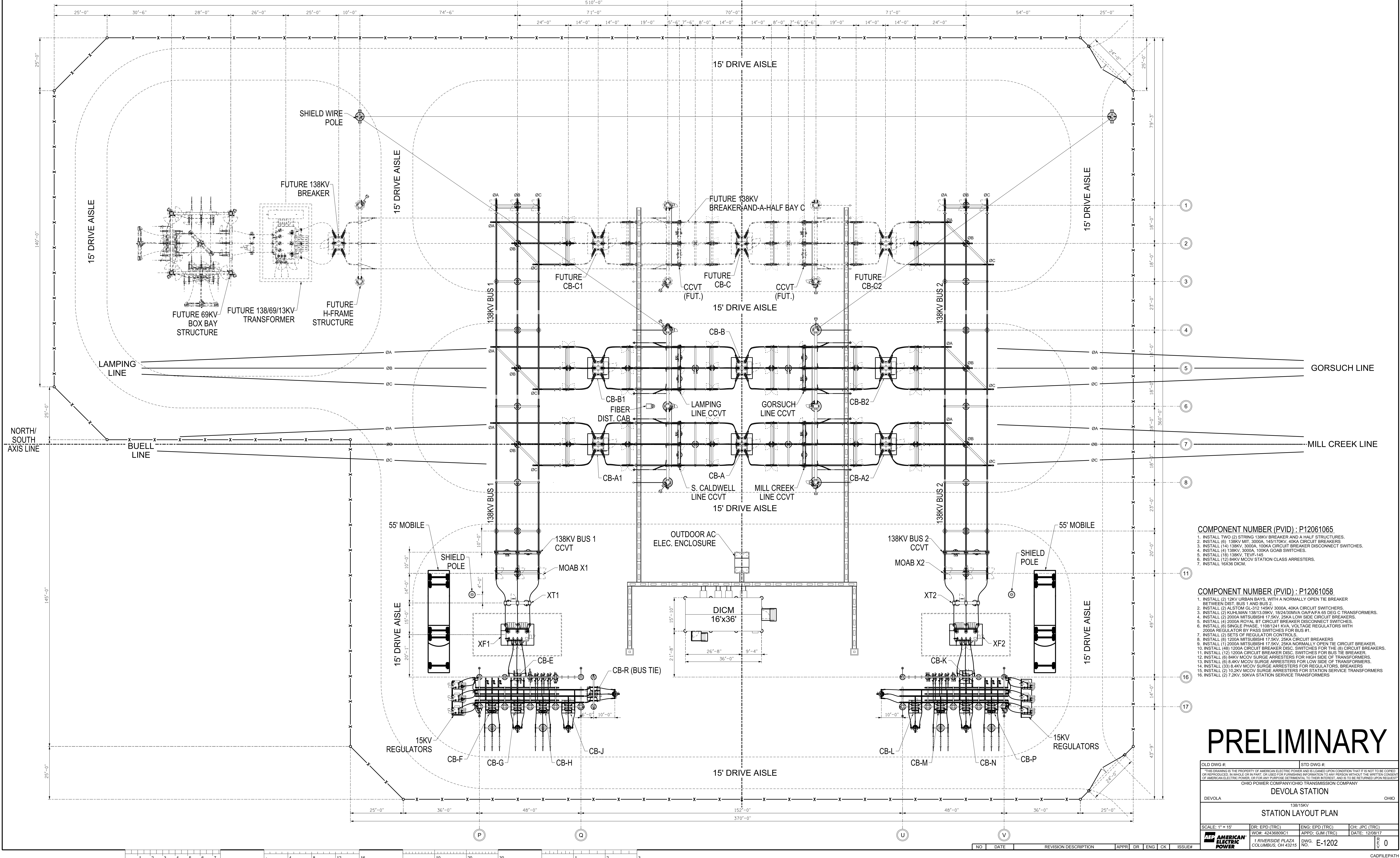
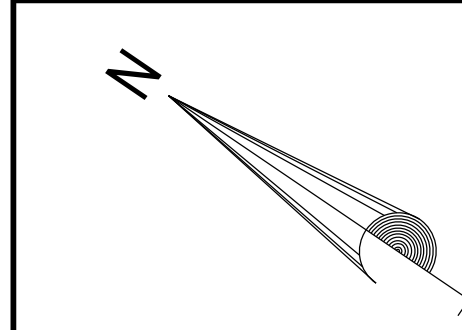
Devola Substation  
Washington County, OH

0 500 1,000  
Feet

## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

Appendix B Project Design Drawings

### **Appendix B** Project Design Drawings



## LETTER OF NOTIFICATION FOR DEVOLA STATION PROJECT

Appendix C Ecological Resources Inventory Report

### **Appendix C Architectural and Historical Resources Report**



**Phase I Archaeological Investigations for the 7 ha (17.4 ac)  
Devola Substation Project in Muskingum Township,  
Washington County, Ohio**

**Ryan J. Weller**

**December 19, 2017**

1395 West Fifth Ave.  
Columbus, OH 43212  
Phone: 614.485.9435  
Fax: 614.485.9439  
Website: [www.wellercrm.com](http://www.wellercrm.com)

**Phase I Archaeological Investigations for the 7 ha (17.4 ac)  
Devola Substation Project in Muskingum Township,  
Washington County, Ohio**

**By**

**Ryan J. Weller**

**Submitted By:**

**Ryan J. Weller, P.I  
Weller & Associates, Inc.  
1395 West Fifth Ave.  
Columbus, OH 43212  
Phone: 614.485.9435 Fax: 614.485.9439**

**Prepared For:**

**American Electric Power  
700 Morrison Road  
Gahanna, OH 43230**

**Lead Agency:**

**Ohio Power Siting Board**



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**Ryan Weller, P.I.**

**December 19, 2017**

## **Abstract**

In December 2017, Weller & Associates, Inc. conducted Phase I Archaeological Investigations for the 7 ha (17.4 ac) Devola Substation Project in Muskingum Township, Washington County, Ohio. These investigations were conducted for American Electric Power and were prepared for submittal to the Ohio Power Siting Board. These investigations involved subsurface testing and visual inspection; much of the subject area was found to be in steeply sloping terrain or disturbed. A cultural resources management (CRM) survey was conducted in a manner that is reflective to Section 106 of the National Historic Preservation Act to identify any sites or properties relative to this project and to evaluate them for the National Register of Historic Places (NRHP). The archaeological work involved a literature review and field investigations; the history/architectural component of these investigations is contained in a separate document. These investigations did not result in the identification of any cultural materials.

The project area is located in an upland setting that is to the east of the Muskingum River Valley. This area is lowly populated and the majority of the area that was subject to survey was contained in steeply sloping conditions. The project plans involve the installation/construction of the Devola Station, transmission line easement adjustment, and associated access corridors. Generally, the project is located to the south of State Route 821, west of Interstate 77, northeast of Colgate Road, and east of State Route 60/Muskingum River.

The literature review that was conducted for this project did not indicate that there were any definitive previously recorded archaeological resources within the project's study area. There is an excavated mound indicated in the nearby terrain or in close proximity (Mills 1914). Review of an early twentieth century atlas suggests a former residence may be possible in the northern part of the project. Otherwise, there are no formally recorded resources in the project area.

The field investigations were focused on the archaeological aspect of the cultural resources management review. These investigations involved visual inspection of the viewshed and archaeological testing, as appropriate. The work did not result in the identification of any cultural materials and no significant cultural resources were identified in the project or its surrounding terrain. Much of the project area was found to be steeply sloped or disturbed. No further work is deemed necessary for this project as the project will not involve any significant sites or landmarks.

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## **Introduction**

In December 2017, Weller & Associates, Inc. conducted Phase I Archaeological Investigations for the 7 ha (17.4 ac) Devola Substation Project in Muskingum Township, Washington County, Ohio (Figures 1-3). The work was completed under contract with American Electric Power (AEP). These investigations were conducted for submittal to the Ohio Power Siting Board (OPSB). The survey is to identify any sites or properties and to evaluate them relative to the National Register of Historic Places (NRHP) in a manner that is reflective of Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]). This report summarizes the results of the fieldwork and literature review. The report format and design are similar to that established in *Archaeology Guidelines* (Ohio State Historic Preservation Office [OHPO] 1994).

Chad Porter conducted the literature review on December 18, 2017. Ryan Weller served as the Senior Project Manager/ Principal Investigator. The field crew included Joshua Engle and Jamie Vosvick. The report preparation was by Ryan Weller, Alex Thomas, and Chad Porter.

## ***Project Description***

The project will include the installation of the new Devola substation, which is planned within an approximately 7 ha (17.4 ac) area. Included in this project are access roads and a Devola-Mill Creek transmission line. The access corridors are expected to be about 9.1 m (30 ft) wide and are estimated to be about 1.4 km (.9 mi) long. There planned transmission line will be about .4 miles long and have a survey corridor that is 30.5 m (100 ft) wide. The proposal accounts for archaeological investigations as well as history/architectural components; the reporting documents will be prepared separately.

## **Environmental Setting**

### ***Climate***

Washington County, like all of Ohio, has a continental climate, with hot and humid summers and cold winters. About 99 cm (39 in) of precipitation fall annually on the county with the average monthly precipitation about 8 cm (3.3 in). February is the driest month, while July tends to be the wettest month for Washington County [United States Department of Agriculture, Soil Conservation Service (USDA, SCS) 1977 (2017)].

### ***Physiography, Relief, and Drainage***

Washington County is located within the Allegheny Plateaus physiographic region of Ohio. More specifically, the project is located on the Marietta Plateau physiographic region. This region is characterized by “dissected, high relief plateau, remnants of ancient lacustrine clay-filled Teays drainage system common, elevations 515-1400 ft” (Brockman 1998). The project area is principally drained by unnamed tributaries of the Muskingum River. The northernmost aspect of the project is drains to

Second Creek, a named tributary of the river. The project is in an upland setting where deep alluvial soils are not expected.

### ***Geology***

The project is situated in the Marietta Plateau. The underlying bedrock is from the Permian- and Pennsylvanian-era sedimentary rocks (Brockman 1998; USDA, SCS 1977:3). The geology of the project consists of shales, siltstones, coals, and sandstones (Brockman 1998) relative to the Allegheny, Conemaugh, and Monongahela, and Washington Series.

### ***Soils***

The portion of the project area that is within the Upshur-Vandalia Association. These are upland, unglaciated soils that typically have eroded, narrow ridge tops and steep side slopes. There are seven specific soils involved in this project (Table 1); these are mostly affiliated with upland, rugged, sloping terrain. Only the Zanesville series soil and one series of the Upshur silty clay loam (UpC) is indicated as being fully within testable slope parameters; that is, the slope is indicated as being less than 15 percent. The majority of the project area is considered to be fully disturbed or sloped. There are no deep, alluvial soils anticipated from this project (USDA, SCS 2017).

<b>Table 1. Soils in the Project Area.</b>			
<b>Soil Symbol</b>	<b>Soil Name</b>	<b>% Slope</b>	<b>Location</b>
DsG	Dekalb and Gilpin stony soils	25-70	Steep sloped areas
UpC	Upshur silty clay loam	6-12	Side slopes
UpD	Upshur silty clay loam	12-18	Side slopes
UpE	Upshur silty clay loam	15-25	Side slopes
UsF	Upshur-Gilpin complex	25-35	Steep sloped areas
VaF	Vandalia silty clay loam	25-35	Steep sloped areas
ZnB	Zanesville silt loam	3-8	Ridge tops

### ***Flora***

There was, and continues to be, great floral diversity in Ohio. This diversity is relative to the soils and the terrain that generally includes the till plain, lake plain, terminal glacial margins, and unglaciated plateau (Forsyth 1970). Three major glacial advances, including the Kansan, Illinoian, and Wisconsinan, have affected the landscape of Ohio. The effects of the Wisconsin glaciation are most pronounced and have affected more than half of the state (Pavey et al. 1999).

The least diverse part of Ohio extends in a belt from the northeast below the lake-affected areas through most of western Ohio (Gordon 1966). These areas are part of the late Wisconsin ground moraine and lateral end moraines. It is positioned between the lake plains region and the terminal glacial moraines. This area included broad forested areas of beech maple forests interspersed with mixed oak forests in elevated terrain or where relief is greater (Forsyth 1970; Gordon 1966). Prairie environments such as those in Wyandot and Marion County areas would contain islands of forests, but were mostly expansive open terrain dominated by grasses.

The northwestern Ohio terrain is nearly flat because of ancient glacial lakes and glaciation, which affected the flora. However, the vegetation was more diverse than the till plain to the south and east because of the variety of factors that contributed to its terrain. Forests within the Black Swamp were generally comprised of elm/ash stands; however, dissected areas along drainages and drier, elevated areas from beach deposits would contain mixed forests of oak and hickory (Gordon 1966, 1969). There was little upland floral diversity in the lake plains (Black Swamp region) except for the occasional patches of oak and hickory. Floral variety was most evident in narrow sleeves along larger stream valleys where there was relief.

The most biological diversity in Ohio is contained within the Allegheny Plateau, which encompasses the southeastern two-thirds of the state (Sheaffer and Rose 1998). Because this area is higher and has drier conditions, it is dominated by mixed oak forests. Some locations within the central part of this area contain beech and mixed mesophytic forests. There are large patches of oak and sugar maple forests to the south of the terminal moraine from Richland to Mahoning County (Gordon 1966).

Southwestern Ohio from about Cincinnati to Bellefontaine east to the Scioto River historically contained a very diverse floral landscape. This is an area where moraines from three glacial episodes are prevalent (Pavey et al. 1999). Forests in this area include elm-ash swamp, beech, oak-sugar maple, mixed mesophytic, prairie grasslands, mixed oak, and bottomland hardwoods (Core 1966; Gordon 1966, 1969). These forest types are intermingled with prairies being limited to the northern limits of this area mostly in Clark and Madison Counties.

Generally, beech forests are the most common variety through Ohio and could be found in all regions. Oak and hickory forests dominated the southeastern Ohio terrain and were found with patchy frequency across most of northern Ohio. Areas that were formerly open prairies and grasslands are in glacial areas, but are still patchy. These are in the west central part of the state. Oak and sugar maple forests occur predominantly along the glacial terminal moraine. Elm-ash swamp forests are prevalent in glaciated areas including the northern and western parts of Ohio (Gordon 1966; Pavey et al. 1999).

The project area is located in southern Washington County. This is an area where the uplands are considered as predominately mixed oak forestation (Gordon 1966).

### ***Fauna***

The upland forest zone offered a diversity of mammals to the prehistoric diet. This food source consisted of white-tailed deer, black bear, Eastern cottontail rabbit, opossum, a variety of squirrels, as well as other less economically important mammals. Several avian species were a part of the upland prehistoric diet as well (i.e. wild turkey, quail, ruffed grouse, passenger pigeon, etc.). The lowland zone offered significant species as well. Raccoon, beaver, and muskrat were a few of the mammals, while wood duck and wild goose were the economically important birds. Fishes and shellfish were also an integral part of the prehistoric diet. Ohio muskellunge, yellow perch, white crappie, long nose gar, channel catfish, pike, and sturgeon were several of the fish,

whereas, the Ohio naiad mollusc, butterfly's shell, long solid, common bullhead, knob rockshell, and cod shell were the major varieties of shellfish. Reptiles and amphibians, such as several varieties of snakes, frogs, and turtles, were also part of the prehistoric diet (Trautman 1981; Lafferty 1979; Mahr 1949).

## **Cultural Setting**

The first inhabitants of Ohio were probably unable to enter this land until the ice sheets of the Wisconsin glacier melted around 14,000 B.C. Paleoindian sites are considered rare due to the age of the sites and the effects of land altering activities such as erosion. Such sites were mostly used temporarily and thus lack the accumulation of human occupational deposits that would have been created by frequent visitation. Paleoindian artifact assemblages are characteristic of transient hunter-gatherer foraging activity and subsistence patterns. In Ohio, major Paleoindian sites have been documented along large river systems and near flint outcrops in the Unglaciaded Plateau (Cunningham 1973). Otherwise, Paleoindian sites in the glaciaded portions of Ohio are encountered infrequently and are usually represented by isolated finds or open-air scatters.

The Paleoindian period is characterized by tool kits and gear utilized in hunting Late Pleistocene megafauna and other herding animals including but not limited to short-faced bear, barren ground caribou, flat-headed peccary, bison, mastodon, giant beaver (Bamforth 1988; Brose 1994; McDonald 1994). Groups have been depicted as being mobile and nomadic (Tankersley 1989); artifacts include projectile points, multi-purpose unifacial tools, burins, gravers, and spokeshaves (Tankersley 1994). The most diagnostic artifacts associated with this period are fluted points that exhibit a groove or channel positioned at the base to facilitate hafting. The projectiles dating from the late Paleoindian period generally lack this trait; however, the lance form of the blade is retained and is often distinctive from the following Early Archaic period (Justice 1987).

The Archaic period has been broken down into three sub-categories, including the Early, Middle, and Late Archaic. During the Early Archaic period (ca. 10,000-8000 B.P.), the environment was becoming increasingly arid as indicated by the canopy (Shane 1987). This period of dryness allowed for the exploitation of areas that were previously inaccessible or undesirable. The Early Archaic period does not diverge greatly from the Paleoindian regarding the type of settlement. Societies still appear to be largely mobile with reliance on herding animals (Fitting 1963). For these reasons, Early Archaic artifacts can be encountered in nearly all settings throughout Ohio. Tool diversity increased at this time including hafted knives that are often re-sharpened by the process of beveling the utilized blade edge and intense basal grinding (Justice 1987). There is a basic transition from lance-shaped points to those with blades that are triangular. Notching becomes a common hafting trait. Another characteristic trait occurring almost exclusively in the Early and Middle Archaic periods is basal bifurcation and large blade serrations. Tool forms begin to vary more and may be a reflection of differential resource exploitation. Finished tools from this period can include bifacial knives, points, drills/perforators, utilized flakes, and scrapers.

The Middle Archaic period (8000-6000 B.P.) is poorly known or understood in archaeological contexts within Ohio. Some (e.g., Justice 1987) regard small bifurcate

points as being indicative of this period. Ground stone artifacts become more prevalent at this time. Other hafted bifaces exhibit large side notches with squared bases, but this same trait can extend back to the Paleoindian period. The climate at this time is much like that of the modern era. Middle Archaic period subsistence tended to be associated with small patch foraging that involved a consistent need for mobility with a shift towards stream valleys (Stafford 1994). Sites encountered from this time period throughout most of Ohio tend to be lithic scatters or isolated finds. The initial appearance of regional traits may be apparent at this time.

The Late Archaic period in Ohio (ca 6000-3000 B.P.) diverges from the previous periods in many ways. Preferred locations within a regional setting appear to have been repeatedly occupied. The more intensive and repeated occupations often resulted in the creation of greater social and material culture complexity. The environment at this time is warmer and drier. Most elevated landforms in northeastern Ohio have yielded Archaic artifacts (Prufer and Long 1986: 7), and the same can be stated for the remainder of Ohio.

Various artifacts are diagnostic of the Late Archaic period. Often, burial goods provide evidence that there was some long-distance movement of materials, while lithic materials used in utilitarian assemblages are often from a local chert outcrop. There is increased variation in projectile point styles that may reflect regionalism. Slate was often used in the production of ornamental artifacts. Ground and polished stone artifacts reached a high level of development. This is evident in such artifacts as grooved axes, celts, bannerstones, and other slate artifacts.

It is during the Terminal Archaic period (ca 3500-2500 B.P.) that extensive and deep burials are encountered. Cultural regionalism within Ohio is evident in the presence of Crab Orchard (southwest), Glacial Kame (northern), and Meadowood (central to Northeastern). Along the Ohio River, intensive occupations have been placed within the Riverton phase. Pottery makes its first appearance during the Terminal Late Archaic.

The Early Woodland period (ca 3000-2100 B.P.) in Ohio is often associated with the Adena culture and the early mound builders (Dragoo 1976). Early and comparably simple geometric earthworks first appear with mounds more spread across the landscape. Pottery at this time is thick and tempered with grit, grog, or limestone; however, it becomes noticeably thinner towards the end of the period. There is increased emphasis on gathered plant resources, including maygrass, chenopodium, sunflower, and squash. Habitation sites have been documented that include structural evidence. Houses that were constructed during this period were circular, having a diameter of up to 18.3 m (Webb and Baby 1963) and often with paired posts (Cramer 1989). Artifacts dating from this period include leaf-shaped blades with parallel to lobate hafting elements, drilled slate pieces, ground stone, thick pottery, and increased use of copper. Early Woodland artifacts can be recovered from every region of Ohio.

The Middle Woodland period (ca 2200-1600 B.P.) is often considered to be equivalent with the Hopewell culture. The largest earthworks in Ohio date from this period. There is dramatic increase in the appearance of exotic materials that appear most often in association with earthworks and burials. Artifacts representative of this period include thinner, grit-tempered pottery, dart-sized projectile points (Lowe Flared, Steuben,

Snyders, and Chesser) [Justice 1987], exotic materials (mica, obsidian, and marine shell, etc.). The points are often thin, bifacially beveled, and have flat cross sections. There seems to have been a marked increase in the population as well as increased levels of social organization. Middle Woodland sites seem to reflect a seasonal exploitation of the environment. There is a notable increase in the amount of Eastern Agricultural Complex plant cultigens, including chenopodium, knotweed, sumpweed, and little barley. This seasonal exploitation may have followed a scheduled resource extraction year in which the populations moved camp several times per year, stopping at known resource extraction loci. Middle Woodland land use appears to center on the regions surrounding earthworks (Dancey 1992; Pacheco 1996); however, there is evidence of repeated occupation away from earthworks (Weller 2005a). Household structures at this time vary with many of them being squares with rounded corners (Weller 2005a). Exotic goods are often attributed to funerary activities associated with mounds and earthworks. Utilitarian items are more frequently encountered outside of funerary/ritual contexts. The artifact most diagnostic of this period is the bladelet, a prismatic and thin razor-like tool, and bladelet cores. Middle Woodland remains are more commonly recovered from central Ohio south and lacking from most areas in the northern and southeastern part of the state.

The Late Woodland period (ca A.D. 400-900) is distinct from the previous period in several ways. There appears to be a population increase and a more noticeable aggregation of groups into formative villages. The villages are often positioned along large streams, on terraces, and were likely seasonally occupied (Cowan 1987). This increased sedentism was due in part to a greater reliance on horticultural garden plots, much more so than in the preceding Middle Woodland period. The early Late Woodland groups were growing a wide variety of crop plants that are collectively referred to as the Eastern Agricultural Complex. These crops included maygrass, sunflower, and domesticated forms of goosefoot and sumpweed. This starch and protein diet was supplemented with wild plants and animals. Circa A.D. 800 to 1000, populations adopted maize agriculture, and around this same time, shell-tempered ceramics appear. Other technological innovations and changes during this period included the bow and arrow and changes in ceramic vessel forms.

The Late Prehistoric period (ca A.D. 1000-1550) is distinctive from former periods. The Cole complex (ca A.D. 1000-1300) has been identified in central and south-central Ohio. Sites that have been used to define the Cole complex include the W.S. Cole (33DL11), Ufferman (33DL12), and Decco (33DL28) sites along the Olentangy; the Zencor Village site, located along the Scioto River in southern Franklin County; and the Voss Mound site (33FR52), located along the Big Darby Creek in southwestern Franklin County. It has been suggested that this cultural manifestation developed out of the local Middle Woodland cultures and may have lasted to be contemporaneous with the Late Prehistoric period (Barkes 1982; Baby and Potter 1965; Potter 1966). Cole is a poorly defined cultural complex as its attributes are a piecemeal collection gathered from various sites. Some have suggested that it may be associated with the Fort Ancient period (Pratt and Bush 1981). Artifacts recovered from sites considered as Cole include plain and cordmarked pottery, triangular points, Raccoon Notched points, chipped slate discs, rectangular gorgets, and chipped stone celts. The vessels often have a globular form with highly variable attributes and rim treatment. There have been few structures encountered

from this period, but those that have are typically rounded or circular (Pratt and Bush 1981; Weller 2005b).

Monongahela phase sites date to the Late Prehistoric to Contact period in eastern Ohio. Monongahela sites are typically located on high bottomlands near major streams, on saddles between hills, and on hilltops, sometimes a considerable distance from water sources. Most of these sites possessed an oval palisade, which surrounded circular house patterns. Burials of adults are usually flexed, and burial goods are typically ornamental. A large variety of stone and bone tools are found associated with Monongahela sites. Monongahela pottery typically is plain or cordmarked with a rounded base and a gradually in-sloping shoulder area. Few Euro-American trade items have been found at Monongahela sites (Drooker 1997).

### ***Protohistoric to Settlement***

By the mid-1600s, French explorers traveled through the Ohio country as trappers, traders, and missionaries. They kept journals about their encounters and details of their travels. These journals are often the only resource historians have regarding the early occupants of seventeenth century Ohio. The earliest village encountered by the explorers in 1652 was a Tionontati village located along the banks of Lake Erie and the Maumee River. Around 1670, it is known that three Shawnee villages were located along the confluence of the Ohio River and the Little Miami River. Because of the Iroquois Wars, which continued from 1641-1701, explorers did not spend much time in the Ohio region, and little else is known about the natives of Ohio during the 1600s. Although the Native American tribes of Ohio may have been affected by the outcome of the Iroquois Wars, no battles occurred in Ohio (Tanner 1987).

French explorers traveled extensively through the Ohio region from 1720-1761. During these expeditions, the locations of many Native American villages were documented. In 1751, a Delaware village known as Maguck existed near present-day Chillicothe. In 1758, a Shawnee town known as 'Lower Shawnee 2' existed at the same location. The French also documented the locations of trading posts and forts, which were typically established along the banks of Lake Erie or the Ohio River (Tanner 1987).

While the French were establishing a claim to the Ohio country, many Native Americans were also entering new claims to the region. The Shawnee were being forced out of Pennsylvania because of English settlement along the eastern coast. The Shawnee created a new headquarters at Shawnee Town, which was located at the mouth of the Scioto River. This headquarters served as a way to pull together many of the tribes which had been dispersed because of the Iroquois Wars (Tanner 1987).

Warfare was bound to break out as the British also began to stake claims in the Ohio region by the mid-1700s. The French and Indian War (1754-1760) affected many Ohio Native Americans; however, no battles were recorded in Ohio (Tanner 1987). Although the French and Indian War ended in 1760, the Native Americans continued to fight against the British explorers. In 1764, Colonel Henry Bouquet led a British troop from Fort Pitt, Pennsylvania to near Zanesville, Ohio.

In 1763, the Seven Years' War fought between France and Britain, also known as the French and Indian War ended with The Treaty of Paris. In this Peace of Paris, the French ceded their claims in the entire Ohio region to the British. When the American Revolution ended with the Second Treaty of Paris in 1783, the Americans gained the entire Ohio region from the British; however, they designated Ohio as Indian Territory. Native Americans were not to move south of the Ohio River, but Americans were encouraged to head west into the newly acquired land to occupy and govern it (Tanner 1987).

By 1783, Native Americans had established fairly distinct boundaries throughout Ohio. The Shawnee tribes generally occupied southwest Ohio, while the Delaware tribes stayed in the eastern half of the state. Wyandot tribes were located in north-central Ohio, and Ottawa tribes were restricted to northeast Ohio. There was also a small band of Mingo tribes in eastern Ohio along the Ohio River, and there was a band of Mississauga tribes in northeastern Ohio along Lake Erie. The Shawnee people had several villages within Ross County along the Scioto River (Tanner 1987). Although warfare between tribes continued, it was not as intense as it had been in previous years. Conflicts were contained because boundaries and provisions had been created by earlier treaties.

In 1795, the Treaty of Greenville was signed as a result of the American forces defeat of the Native American forces at the Battle of Fallen Timbers. This allocated the northern portion of Ohio to the Native Americans, while the southern portion was opened for Euro-American settlement. Although most of the battles which led up to this treaty did not occur in Ohio, the outcome resulted in dramatic fluctuations in the Ohio region. The Greenville Treaty line was established, confining all Ohio Native Americans to northern Ohio, west of the Tuscarawas River (Tanner 1987).

Ohio Native Americans were again involved with the Americans and the British in the War of 1812. Unlike the previous wars, many battles were fought in the Ohio country during the War of 1812. By 1815, peace treaties began to be established between the Americans, British, and Native Americans. The Native Americans lost more and more of their territory in Ohio. By 1830, the Shawnee, Ottawa, Wyandot, and Seneca were the only tribes remaining in Ohio. These tribes were contained on reservations in northwest Ohio. By the middle 1800s, the last of the Ohio Native Americans signed treaties and were removed from the Ohio region.

### ***Washington County History***

In 1788, a group of Ohio Company explorers, surveyors, and settlers, including 48 men led by General Rufus Putnam, founded Marietta (Andrews 1902; Howe 1888; Williams Bros. 1881). This was the first, permanent American settlement in the Northwest Territory. Major John Doughty had built Fort Harmer three years previous but it had been abandoned and would be rebuilt and reoccupied. Campus Martius, later to be called Marietta, was that place of entry and settlement (Andrews 1902). These men had arrived in April; Governor Arthur St. Clair followed that July to begin his governance of the Northwest Territory from this preliminary seat in the forests of Ohio (Williams Bros. 1881). Upon Governor St. Clair's arrival, he created Washington County as a subdivision of the Ohio Territory. At that time, the county was nearly half the size of the

current State. Most of the early history of Washington County however, contained itself to the present bounds and the region surrounding Marietta (Andrews 1902; Howe 1888; Williams Bros. 1881). Due to the dispute with Northwestern Indian tribes over the ownership of Ohio lands, the settlements were heavily fortified or had forts nearby (Fort Harmer, Campus Martius, Farnes Castle, Fort Freye, and Fort Tyler). Settlers followed peace into the county (Andrews 1902; Howe 1888; Williams Bros. 1881).

With the considerable organization of the Ohio Company, growth and progress was almost immediate in Washington County. There was a school in session the first year of occupation. Major Anselm Tupper taught it (Andrews 1902). Once relative peace came to the region and civil growth could take place outside the blockhouses, real growth began. The Congregational Church had organized back east, before settlement or even migration. Their own building, The Two Horn Church, was the oldest church in Ohio (Howe 1888). Within a decade, a formal academy was in operation. Muskingum Academy was both an educational and a religious edifice and continued as such many years. Washington County also boasts the state's first library, kept at the house of Isaac Pierce. These were books belonging to General Israel Putnam which were removed to Ohio after his death in 1795, by his son Colonel Israel Putnam. As such, it was known first as the Putnam Library, but later as the Belpre Library or the Belpre Farmer's Library.

Early settlers relied heavily on agriculture for subsistence and cultivated the broad valley floors of the Ohio and Muskingum Rivers. Fruit farming was important in Marietta with peaches being the most popular. In 1791, Captain Jonathan Devol built a floating mill, which went up and down the Ohio River servicing local farmers. After 1812, steamboats became the primary mode of transportation along the Ohio River (Williams Bros. 1881). In 1823, the Marietta Steam Boat Company was established on the Little Muskingum River. In 1837, the Muskingum River improvement led to the construction of a series of dams and locks along the Muskingum River to improve canal and steamboat travel. As river transportation improved, new markets opened for agricultural products allowing surplus flour, meal, pork, beef, and wool to be sold for additional economic profit (Andrews 1902; Williams Bros. 1881).

The first railroad constructed in Washington County was the Baltimore and Ohio Railroad built in 1857 (Andrews 1902). This connected Marietta with Athens and Cincinnati, which led to an increase in industries such as agriculture, oil, clay, shale, and sandstone. Oil was discovered at Duck Creek in the 1860's leading to a peak in petroleum production between 1890 and 1910. After World War I agriculture declined in Washington County and other industries were developed such as coal, forestry, and oil (Wright 1953).

As mentioned, Marietta was the first permanent and continually occupied settlement in Ohio; moreover, within the Northwest Territory. As such, it is no surprise that this town is and always was the county seat of Washington County. Upon entering this area, the Ohio Company men discovered that the Muskingum River valley and its surrounding banks and ridge tops were teeming with prehistoric earthworks testifying to the extinct civilization who previously had built and lived in this same location. The directors of the Ohio Company admired these sites and provided for their protection and

preservation. The act creating the Town of Marietta came several years later in 1801. Dudley Woodbridge was the first storeowner in the Northwest Territory, having located on the corner of Muskingum and Ohio Streets. Many of the later stores lined the river in Marietta and Harmer. The location of Marietta on two navigable rivers made the community a center for commerce and industry early in its development. Shipbuilding was one of the first industries in Marietta and this drove the city to become an important early manufacturing and transportation hub (Andrews 1902).

Aside from Marietta, Belpre is the only other incorporated city in the county. There are five incorporated towns: Beverly, Lowell, Lower Salem, Macksburg, and Matamoras. It is made up of 22 townships, and it contains 15 unincorporated villages. Most of the growth, and therefore, most of the notable history in the county is contained within Marietta and to a lesser degree Belpre.

### ***Muskingum Township History***

Muskingum Township originally was contained completely within the first lines of Adams Township set in 1798. The creation of neighboring townships portioned Adams and until 1861, modern Muskingum lands were severally under the local governments of Fearing, Marietta, and Union Townships. It was thus established April 18, 1861 after the Ohio legislature passed a bill defining its boundaries. When Union Township dissolved in 1877, Muskingum received an additional portion (Andrews 1902; Marietta Daily Times 1938; William Bros 1881).

Settlement in Muskingum had begun long before, however, correlative to the end of the Indian Wars. Three settlements are notable there: The Rainbow Settlement, The Wiseman's Bottom Settlement, and the later settlement of a region known as "the ridge" (Andrews 1902; Marietta Daily Times 1938; William Bros 1881).

The Rainbow Settlement was established April 29, 1795 on the Muskingum River. Israel Stone and his family were the first settlers of the Rainbow district, a donation tract allotment. The Stacy, Dyar, and Stowe families followed very soon after. Another settlement, Wiseman's Bottom, was so close to Rainbow, that the name is nearly the only separation. The first settlers there were Barkers, Putnams, Devols, and Russells. This area had been cleared by a man named Wiseman in attempt to make a claim on the land. He left shortly after, and his claim was not honored because the area was purchased legally by the Ohio Company. He therefore is not considered the first settler of the area, but his name lingered past Colonel Joseph Barker's initial settlement there in 1795. The settlement of the ridge, which was located in the eastern portion of the township, did not begin until much later because of the obvious advantages of the land along the river. Although there were some sporadic pioneers on the ridge before 1825, real immigration began in 1833 with a large number of Germans entering that portion of the township (Andrews 1902; Marietta Daily Times 1938; William Bros 1881).

The first schoolhouse in Muskingum Township was apparently the one in Wiseman's Bottom which received land and much support from Israel Putnam. The first teacher there was Miss Esther Levings. No dates are recorded for the erection of the schoolhouse or when Levings started teaching; however, in 1816, the location was moved

to higher ground on the same farm and a new schoolhouse, made of brick, served also as a church. The church was for the community and not affiliated with a particular domination, but there is record that the first to preach there was Joseph Willard, an Episcopal clergyman. As late as 1902, there were only two churches in the whole of Muskingum Township. One was the German dominated Evangelical Protestant Church in the ridge district. The other was a congregation of Methodist Episcopal African Americans on Rainbow Creek (Andrews 1902; William Bros 1881).

Two men are integral to the economic beginnings of the township. Colonel Joseph Baker and Captain Jonathan Devol. The industry that ties these two men in common was shipbuilding. As early as 1801 and 1802, Barker and Devol were building ocean worthy vessels out of the lumber from the forests that bordered their farms. Their work ended in 1809 when a Federal embargo act was passed. Col. Barker was certainly the more productive shipbuilder, but Devol produced much wider architecture for the community. Capt. Devol built the first mill in the township which was a floating mill in 1796. His second was a larger floating mill built in 1803 and provided a great service to the early inhabitants up and down the Muskingum. He also built a large frame flouring mill and a dam in 1807. In 1866 Major Putnam added three buhrs at Devol's Dam which was considered then the best on the river. Captain Devol later added to the importance of the mill by adding a carding mill (Andrews 1902; Marietta Daily Times 1938; William Bros 1881).

The Washington County Children's Home began in 1866 as an orphanage. It was the first in the state (Andrews 1902; Marietta Daily Times 1938; William Bros 1881).

## **Research Design**

The purpose of a Phase I survey is to locate and identify archaeological resources that will be involved in the Devola Station Project. However, the plans do not indicate that any buildings older than 50 years will be taken (i.e., razed or removed) as a result of the construction activities. Once these resources are identified and sampled, they are evaluated for their eligibility or potential eligibility to the National Register of Historic Places (NRHP). The literature review aspect of these investigations is directed to answer or address the following questions:

- 1) Did the literature review reveal anything that suggests the project had been previously surveyed and what is the relationship of previously recorded properties to the project?
- 2) Are cultural resources likely to be identified in the project?

## ***Archaeological Field Methods***

The survey conducted within the project used three methods of sampling and testing to identify and evaluate cultural resources. These included shovel test unit excavation, shovel probe excavation, surface collection, and visual inspection.

*Shovel test unit excavation.* Shovel test units were placed at 15-m intervals. Shovel test units measure 50 cm on a side and are excavated to 10 cm below the

topsoil/subsoil interface. Individual shovel test units were documented regarding their depth, content and color (Munsell). All of the undisturbed soil matrices from shovel test units are screened using .6 cm hardware mesh.

*Shovel probes.* These are excavated in locations where disturbance is not obvious at the surface. They are initiated as shovel test units and are excavated to about 20 cm at a minimum before they are abandoned due to severe disturbance. If the soil is not disturbed, the shovel probe becomes a shovel test unit.

*Visual inspection.* The locations where cultural resources were not expected, such as disturbed or low/wet areas, steeply sloped areas, were walked over and visually inspected. This also pertains to small segments that are immediately adjacent to the road right-of-way or were in steeply sloping conditions. This method was used to verify the absence or likelihood of any cultural resources being located in these areas. It was also utilized to document the general terrain and the surrounding area.

The application of the resulting field survey methods was documented in field notes, field maps, and project plan maps.

### ***Curation***

There were no cultural materials identified during these investigations. Notes and maps affiliated with this project will be maintained at Weller & Associates, Inc. files.

## **Literature Review**

The literature review study area is defined as a 305 m (1,000 ft) area centered on the project area (Figures 2 and 3). In conducting the literature review, the following resources were consulted at SHPO and the State Library of Ohio:

- 1) *Archeological Atlas of Ohio* (Mills 1914);
- 2) SHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- 3) Ohio Archaeological Inventory (OAI) files;
- 4) Ohio Historic Inventory (OHI) files;
- 5) National Register of Historic Places (NRHP) files;
- 6) Determinations of Eligibility (DOE) files;
- 7) SHPO CRM/contract archaeology files; and
- 8) Washington County atlases, histories, historic USGS 15' series topographic map(s), and current USGS 7.5' series topographic map(s);
- 9) Online Genealogical and Cemetery Records.

A review of *Archeological Atlas of Ohio* (Mills 1914) was conducted. There appears to be an excavated mound (Figure 4) in the vicinity of the project.

The OAI files /OHC topographic maps indicated that there are no recorded archaeological sites recorded in the study area.

The OHI files did not indicate any resources located within the project area; there are five listed in the study area (Table 2). None of these resources are adjacent to the project area. One is located to the east of an access road and the other four are positioned to the south and at the limits of the study area (Figure 2).

<b>Table 2. Ohio Historic Inventory resources within the study area.</b>						
<i>OHI #</i>	<i>PRESENT NAME</i>	<i>ADDRESS</i>	<i>ARCHITECTURAL STYLE</i>	<i>HISTORIC USE</i>	<i>ACTIVITY</i>	<i>DATE</i>
WAS0106817	Bonnie Landsittel House	1324 Colegate Rd T-342	Colonial Revival	Single Dwelling	Original Construction	1935
WAS0106917	Lucille Darrah House	1326 Colegate Rd T-342	Vernacular	Single Dwelling	Original Construction	1935
WAS0107017	S J Brockmeier House	1330 Colegate Rd T-342	Vernacular	Single Dwelling	Original Construction	1920
WAS0107117	Claude Cameron House	1332 Colegate Rd T-342	Vernacular	Single Dwelling	Original Construction	1900
WAS0115709	L Eugene Plummer House	T-342	Queen Anne	Single Dwelling	Original Construction	1900

A review of the DOE and NRHP files was conducted and there are no affiliated resources within or near the project area or its study area.

Review of the professional CRM survey files indicated that there have not been any surveys conducted in the study area.

Historic cartographic resources were reviewed in order to get a better understanding of past landowners and the distribution of past buildings and structures. *The Atlas of Washington County, Ohio* (Lake 1875) indicates a series of small lots extending through this area, but no buildings are noted relative to the project. The USGS 1904 Marietta, WV 15 Minute Series (Topographic) map (Figure 5) indicates a building in the northern part of the project area; this may be in the northeastern aspect of the project area. The modern USGS 1975 Marietta, OH 7.5 Minute Series (Topographic) map indicates upland conditions with no buildings within or near the project (Figure 2).

### ***Literature Review Summary and Expectations***

The literature review indicated few previously recorded resources in the project area or its vicinity. Mills does indicate a mound and further indicated that it had been excavated; excavated mounds relative to Mills are infrequently identified. An early twentieth century map indicates what is likely a residence just within or near the northeastern part of the project area. However, it seems unlikely that cultural materials would be identified from this survey area. The majority of the soils in this area are

contained in steeply sloped conditions. Areas associated with the planned access corridors are likely to be disturbed as these often make use of existing, graded pathways. The most likely situation for the identification of any archaeological deposits would be the ridge top where slope and soil conditions are most favorable. Intensive occupation within the project area is not expected.

## **Fieldwork Results**

The field investigations for this project were conducted on December 18, 2017. This work was conducted during suitable, but cool weather conditions as the temperatures ranged from 35-50 degrees Fahrenheit. The fieldwork involved subsurface testing and visual inspection (Figures 5-12). The project area is located in an upland, rugged setting that is north of Marietta and is largely undeveloped. These investigations were conducted for the planned station, affected transmission line corridors, and access roads. These investigations encountered many conditions and situations that were either disturbed or steeply sloped. Even the areas that were intact, proved to be highly eroded. The fieldwork did not result in the identification of any cultural materials.

The project area is very irregularly-shaped and located in an upland setting that includes rugged conditions. The area that was subject to these investigations is largely contained in undeveloped and unimproved land. There are residences, businesses, and facilities in the valley area to the south and southwest of the project. There are cleared electric line corridors that cross through the area, one of which is central to the overall project. Deciduous forestation is the dominant floral characteristic of the area. The shovel testing was conducted in the areas/landforms that were suitable for investigations, that is, not sloped or severely disturbed.

The access corridors that were investigated for this project involved visual inspection. Expectedly, these corridors reused existing, graded pathways that appear to have been used for past logging ventures and/or for the original construction of the extant electric lines. Steeply sloping conditions or severe disturbance precluded archaeological investigations of the access corridors (Figure 6-8).

The survey for the electric transmission line was limited to visual inspection and photographic documentation. The conditions that were experienced in this corridor involved steep slope and disturbance. The disturbance appears to be associated with post-installation activities that are associated with the electric lines (Figures 6 and 9). The steepness of the slope was initially suspect upon review of the soils survey and was confirmed by the field investigations.

The physical archaeological work that was conducted for this project was limited to the planned Devola Station area (Figure 6 and 10). This area is irregularly-shaped and involves a ridge top promontory. There were 62 shovel test units and 3 shovel probes excavated in this area and these were excavated to the east and west of an electric line corridor. The testing identified topsoil deposits that are best described as being 'heavily eroded'. The topsoil was found to have a sub-angular and blocky texture. It was very compact and contained more clay than would have been expected, a reflection of erosion. The topsoil is dark brown (10YR3/3) silty clay loam. The subsoil, having similar texture

qualities, was found to be dark yellowish brown (10YR4/4) silty clay loam (Figure 12). The subsoil was notably more clayey and occasionally contained fragments of bedrock or flagstone. The interface between these two levels was irregular and broken. There were no cultural materials identified during these investigations.

The literature review for this project indicated that an excavated mound and a former residence were located in the vicinity. Visual inspection of the project and its immediate vicinity, about 7.5 m around the northern and western boundary for the station, did not identify any indications of an excavated mound (Mills 1914). A residence was indicated in the vicinity according to a cartographic reference; evidence for this occupation or building was not identified and it appears that it was likely located to the north of the project area.

There were no cultural materials identified during these investigations. The majority of the project area was found to be severely disturbed or steeply sloped. The area where subsurface testing was accomplished, a ridge top, was found to have shallow and eroded topsoil. The conditions experienced within the project area were largely not amiable for the identification of intact cultural deposits. There were no cultural materials identified during these investigations.

### **APE Definition and NRHP Determination**

The APE is a term that must be applied on an individual project basis. The nature of the project or undertaking is considered in determining the APE. It is typically applied to federally involved undertakings, but is considered for projects to allow for a similar means of evaluation; especially if the project might involve a federal agency in the future. This may include areas that are off the property or outside of the actual project's boundaries to account for possible visual impacts. Archaeological investigations are typically limited to the footprint of the construction activity and a limited area around it if deemed appropriate and depending upon the type of construction. The project plans involve the rebuilding of a small section of an existing electric line, the use and development built access corridors, and an electric station installation. Many of the access corridors make use of existing, graded drives, or logging roads. This project is located in a steep, upland setting as well as deciduous forestation. These investigations did not identify any significant archaeological deposits, no archaeological sites were identified.

Considering the footprint of the project construction and what is regarded as the archaeological APE, a finding similar to 'no historic properties' or landmarks affected is deemed appropriate.

### **Recommendations**

In December 2017, Weller & Associates, Inc. conducted Phase I Archaeological Investigations for the Devola Substation Project in Muskingum Township, Washington County, Ohio. These archaeological field investigations involved subsurface testing and visual inspection. The field investigations did not identify any cultural materials. It is Weller's opinion that this project will not affect any significant archaeological sites or

historic properties. A recommendation of no further work is considered and a consideration 'no historic properties or landmarks affected' is appropriate.

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## Figures

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Figure 1. Political map of Ohio showing the approximate location of the project.

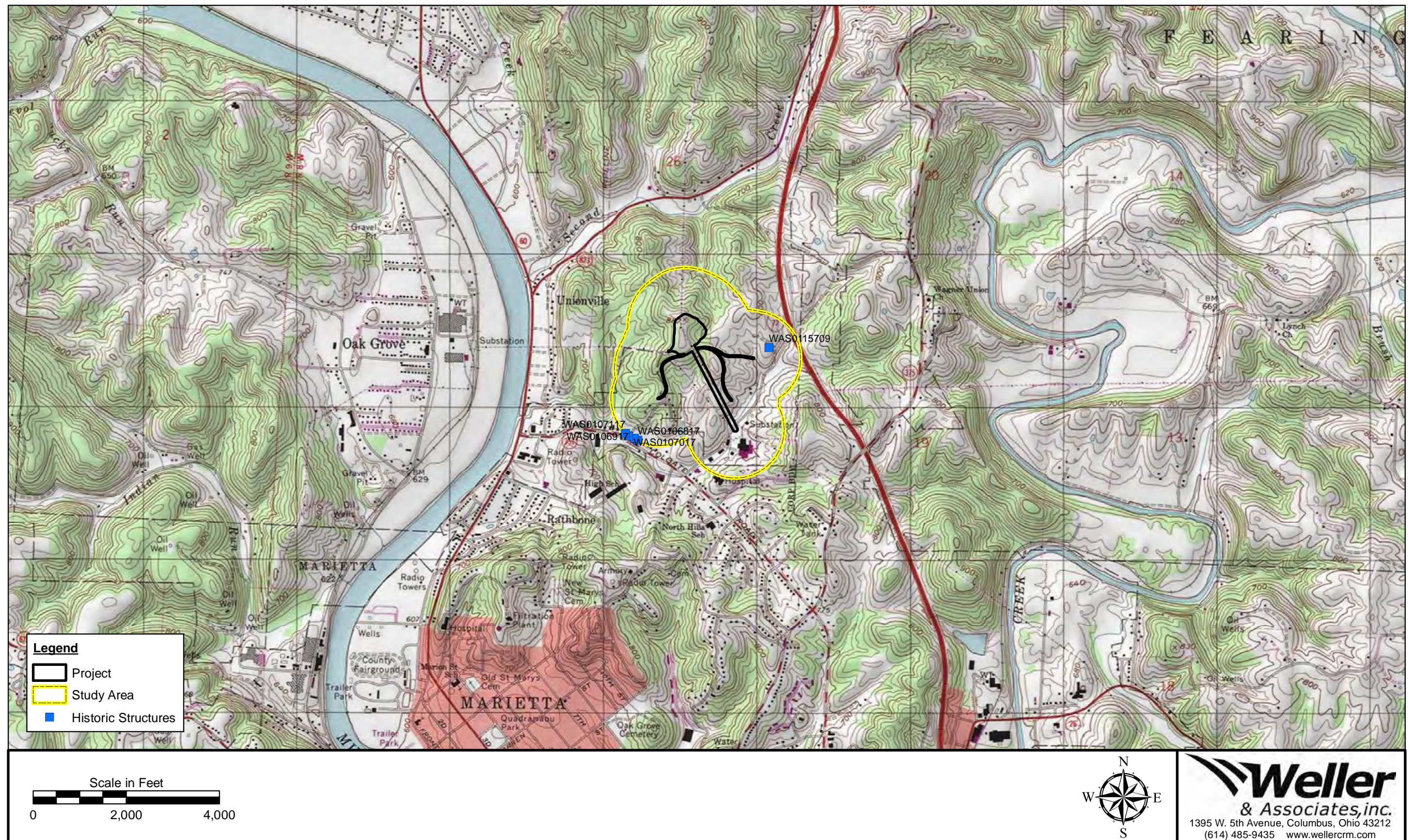


Figure 2. Portion of the USGS 1975 Marietta, Ohio 7.5 Minute Series (Topographic) map indicating the location of the project and previously recorded resources in the study area.

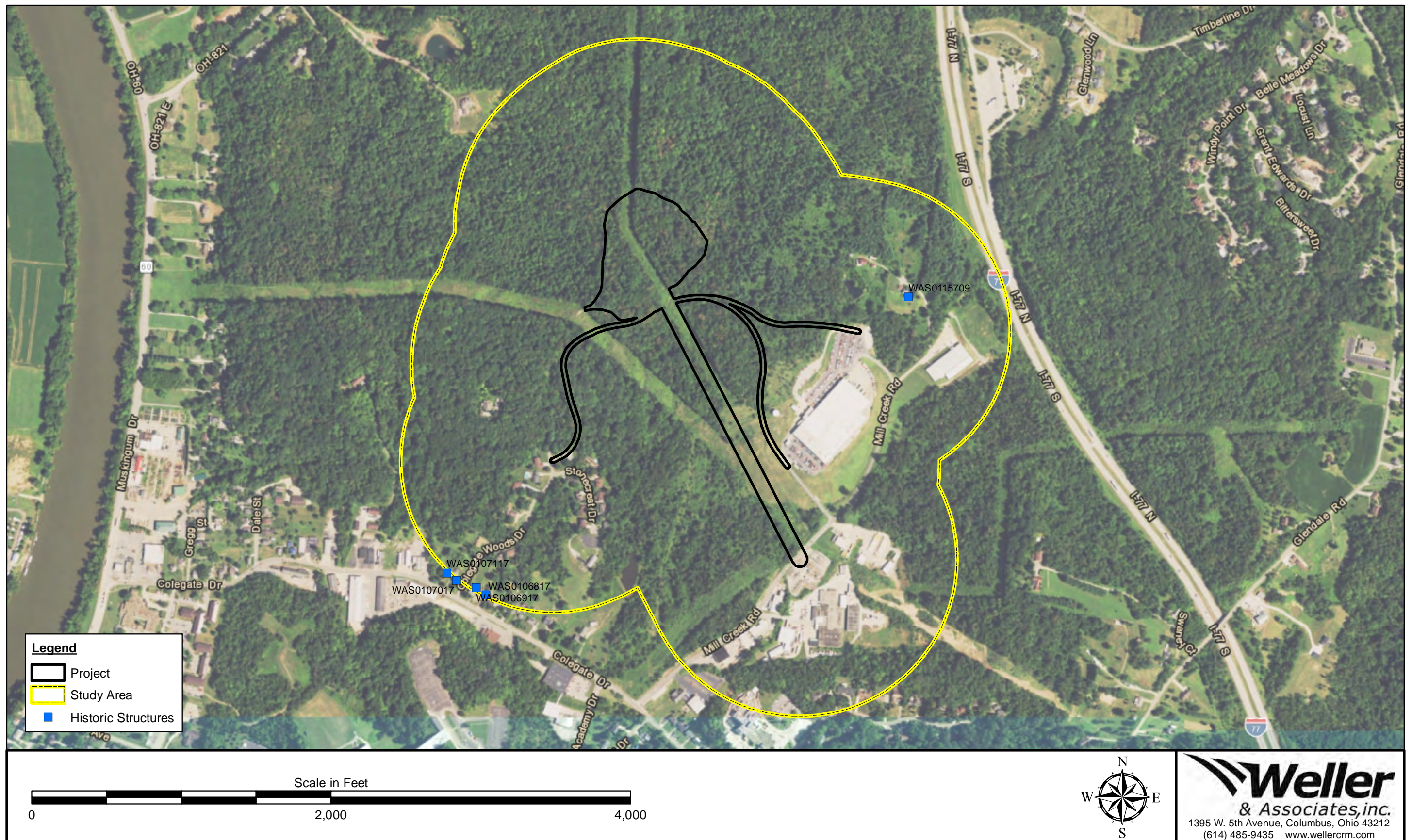


Figure 3. Aerial map indicating the location of the project and previously recorded resources in the study area.

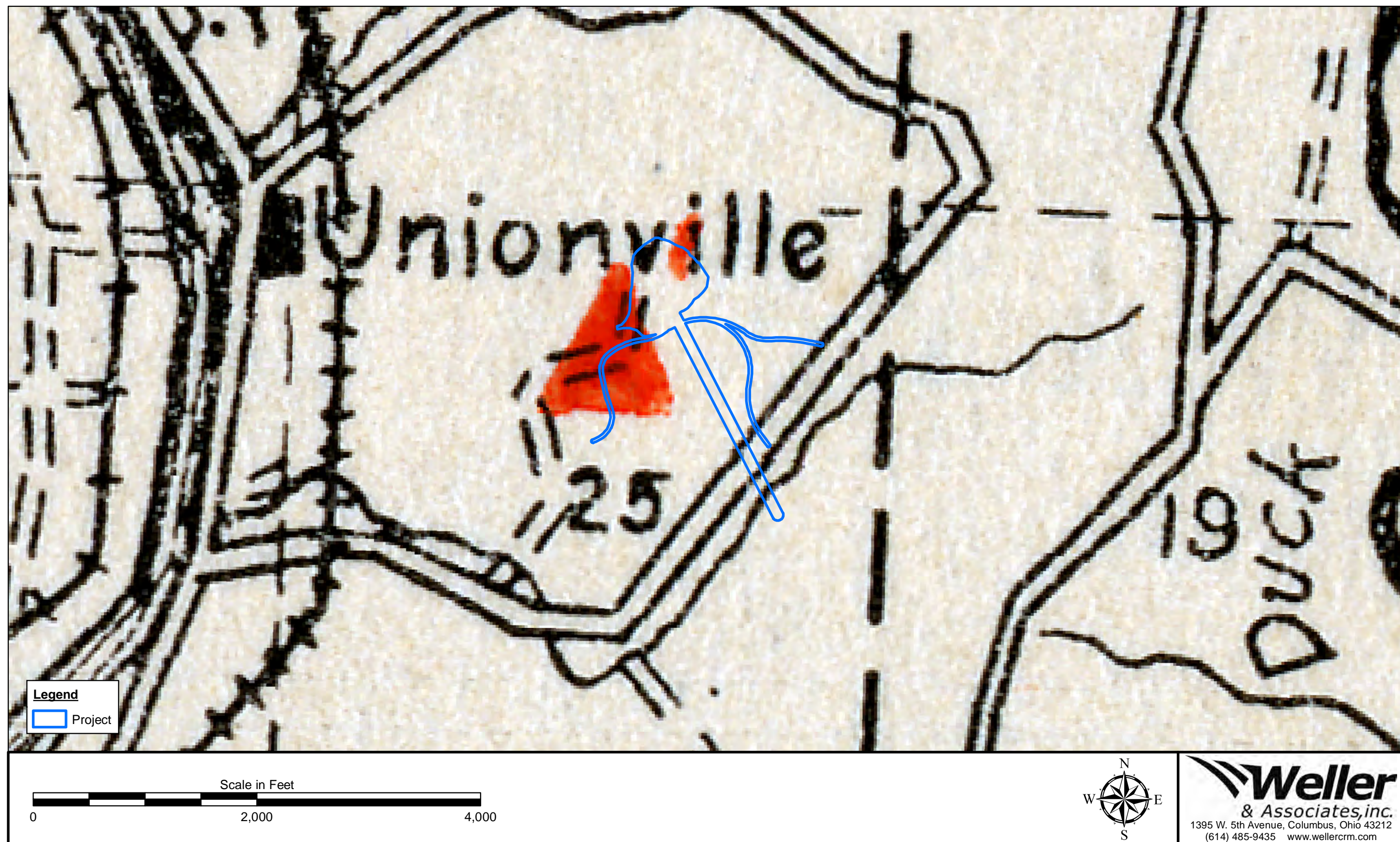


Figure 4. Portion of the *Archeological Atlas of Ohio* (Mills' 1914) indicating the approximate location of the project.

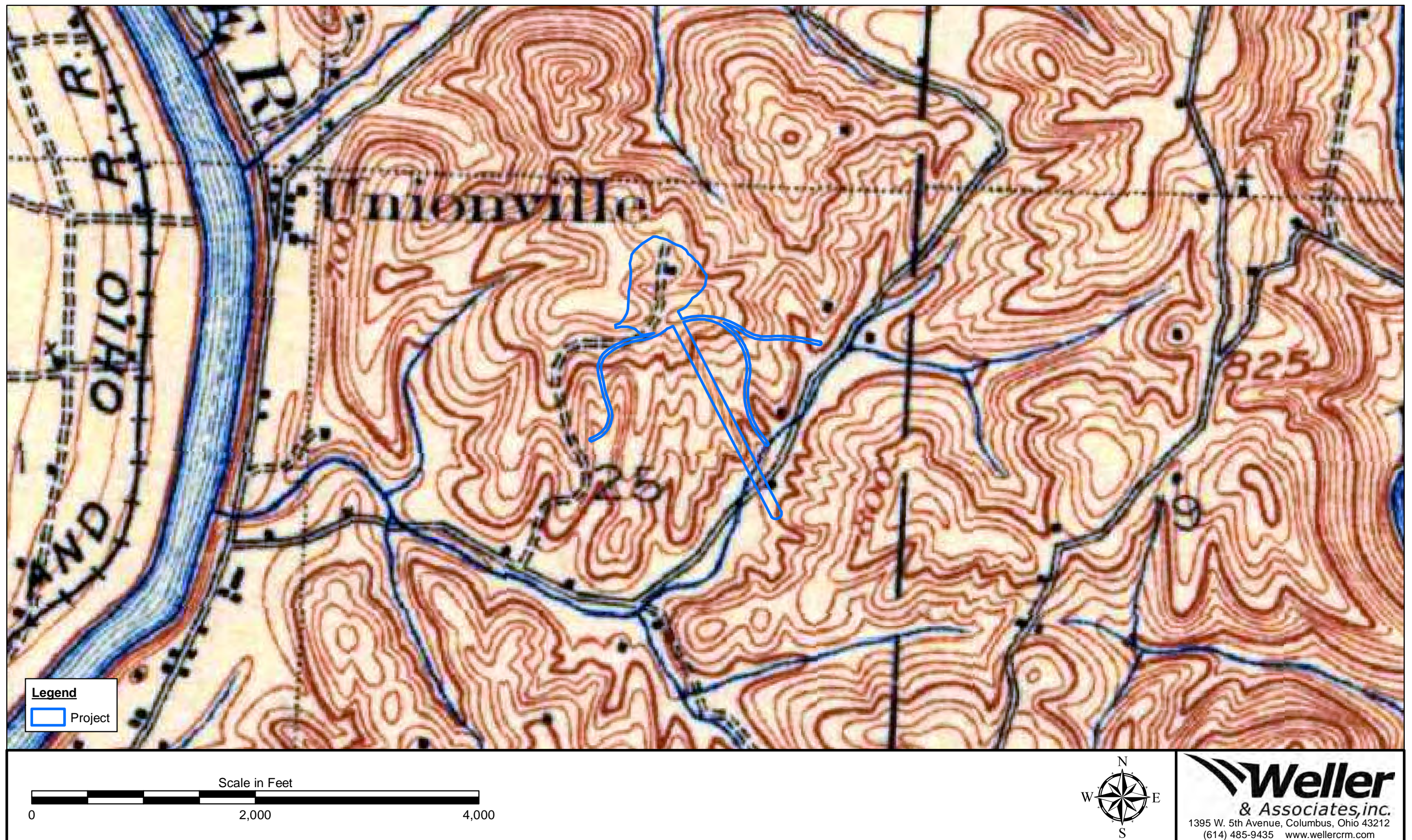


Figure 5. Portion of the USGS 1904 Marietta, Ohio 15 Minute Series (Topographic) map indicating the approximate location of the project.

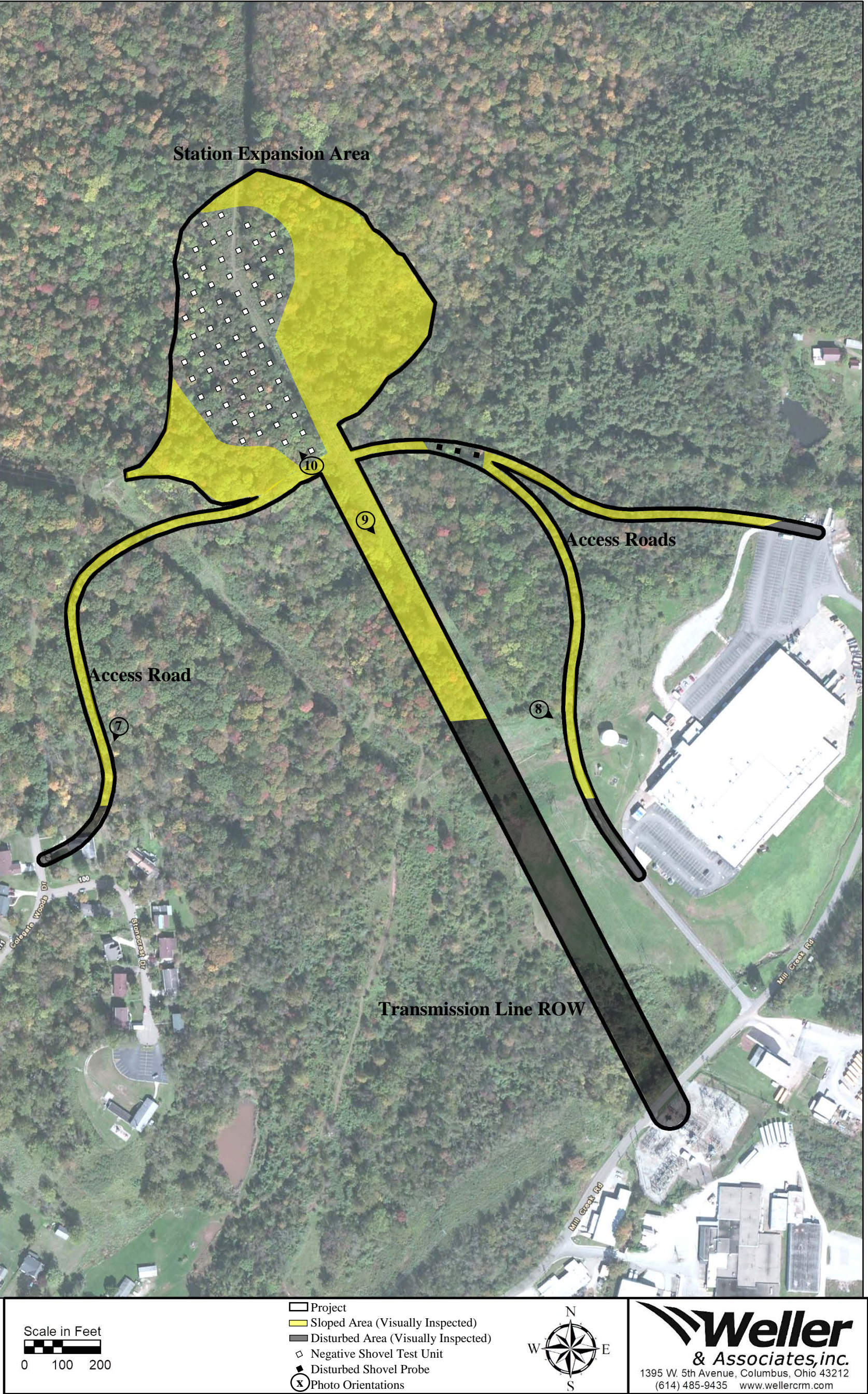


Figure 6. Aerial fieldwork map of the project indicating the results of testing and photo orientations.



Figure 7. Typical conditions within the western access corridor.



Figure 8. Typical sloped and disturbed conditions within the eastern access corridors.



Figure 9. Sloped and disturbed conditions within the transmission line ROW.



Figure 10. Conditions within the station expansion area.



Figure 11. View of an eroded/disturbed shovel probe from the project.

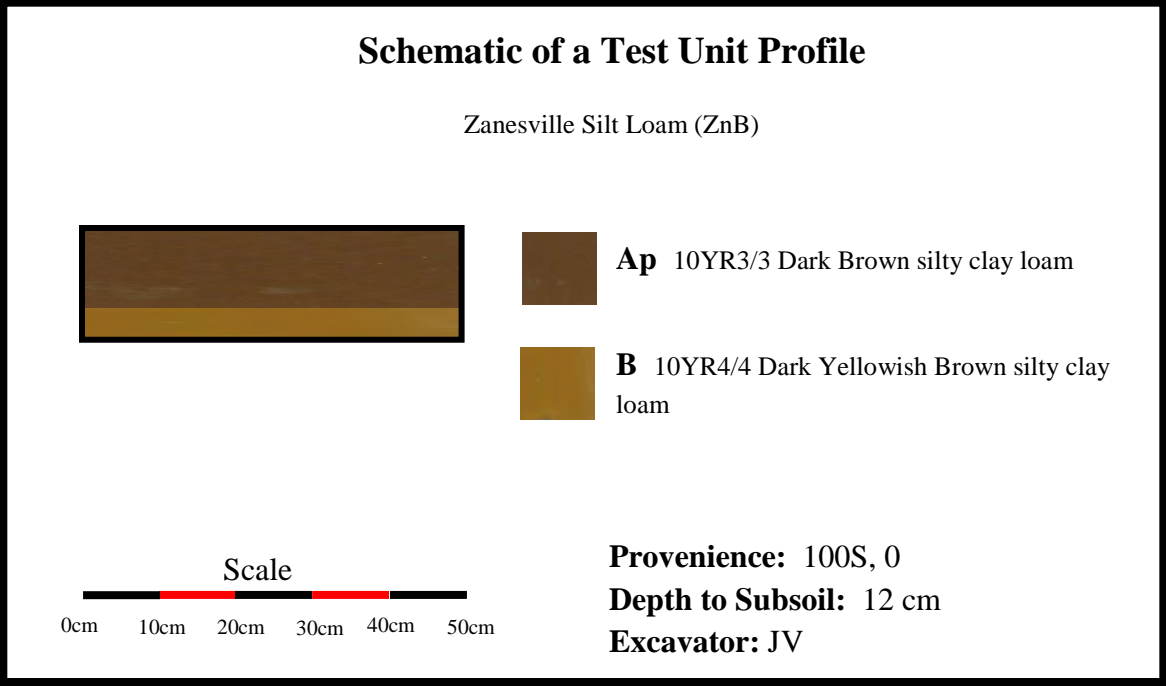


Figure 12. A typical shovel test unit excavated within the project.

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Summary: Letter of Notification electronically filed by Ms. Christen M. Blend on behalf of AEP Ohio Transmission Power Company, Inc.