

**AMERICAN TRANSMISSION SYSTEMS,  
INCORPORATED  
A FIRSTENERGY COMPANY**

**CONSTRUCTION NOTICE**

**JUNIPER-NEWBURGH / JUNIPER-JENNINGS &  
JUNIPER-PLEASANT VALLEY Q1 & Q2 138kV  
TRANSMISSION LINE STRUCTURE REPLACEMENT  
PROJECT**

**OPSB CASE NO.: 20-1647-EL-BNR**

**November 6, 2020**

**American Transmission Systems, Incorporated  
76 South Main Street  
Akron, Ohio 44308**

**CONSTRUCTION NOTICE**  
**JUNIPER-NEWBURGH / JUNIPER-JENNINGS & JUNIPER-PLEASANT VALLEY Q1**  
**& Q2 138 KV TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT**

The following information is being provided in accordance with the procedures in the Ohio Administrative Code (OAC) Chapter 4906-6 for the application and review of Accelerated Certificate Applications. Based upon the requirements found in Appendix A to OAC Rule 4906-1-01, this Project qualifies for submittal to the Ohio Power Siting Board (“Board”) as a Construction Notice application.

**4906-6-05: ACCELERATED APPLICATION REQUIREMENTS**

**4906-6-05: Name**

Name of Project: Juniper-Newburgh / Juniper-Jennings & Juniper-Pleasant Valley Q1 & Q2 138 kV Transmission Line Structure Replacement Project (“Project”).

**4906-6-05 (B)(1): Brief Description of the Project**

In this Project, American Transmission Systems, Incorporated (“ATSI”), a FirstEnergy company, is proposing to replace existing double circuit steel lattice structure #2915 on the Juniper-Newburgh / Juniper-Jennings 138 kV Transmission Line, and replace existing double circuit steel lattice structure #2217 on the Juniper-Pleasant Valley Q1 & Q2 138 kV Transmission Line due to localized erosion along Tinker’s Creek. Both existing structures will be replaced with steel monopole structures set with concrete foundations.

Recently, the geomorphology of Tinker’s Creek has changed significantly with the water channel shifting significantly due to erosion along the stream bank. To address the potential damage from the continued erosion to the existing structures, ATSI must replace the structures with steel monopole structures on concrete foundations designed to withstand flooding conditions. The new structures will be installed approximately 50-foot west of the existing structure positions along the existing centerline. Existing

structures #2915 and #2217 are 92 feet and 90 feet in height, respectively. The new structures will each be approximately 100 feet in height. When installation of the new poles is complete, the existing structures will be demolished.

The general location of the Project is shown in Exhibit 1 on a topographical overlay and in Exhibit 2 on an aerial overlay with imagery provided by ESRI. Exhibit 3 shows the general Project layout. The Project is located in the Village of Valley View, Cuyahoga County, Ohio.

**4906-6-05 (B)(1): Letter of Notification Requirement**

The Project meets the requirements for a Construction Notice because the Project is within the types of projects defined by Item (2)(a) of the Application Requirement Matrix for Electric Power Transmission Lines, Appendix A of OAC Rule 4906-1-01. This item states:

*(2) Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing line or replacing structures with a different type of structure, for a distance of:*

*(a) two miles or less*

The proposed Project is within the requirements of Item (2)(a) as it involves the replacement of two (2) existing steel lattice structures with two (2) steel monopole structures with concrete foundations in the existing right-of-way.

**4906-6-05 (B)(2): Need for the Project**

The Project is needed to ensure the structural integrity of the transmission lines. The current rate of erosion along Tinker's Creek is exposing the existing structure foundations. The proposed steel monopole structures with concrete foundations are designed to withstand flooding conditions.

**4906-6-05 (B)(3): Location of the Project Relative to Existing or Proposed Lines**

The location of the Project relative to existing or proposed lines is shown in the ATSI Transmission Network Map, included as part of the confidential portion of the FirstEnergy Corp. 2020 Long-Term Forecast Report (LTFR). This map was submitted to the PUCO in Case No. 20-0657-EL-FOR under Rule 4901:5-5:04 (C)(2)(b) of the Ohio Administrative Code. The map is incorporated by reference only. This map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations including the Juniper-Newburgh, Juniper-Jennings, and Juniper-Pleasant Valley 138 kV Q-1 & Q-2 Transmission Lines. The Project Area is located approximately 9 <sup>1</sup>/<sub>5</sub> inches (11" x 17" printed version) from the left edge of the map and 2 <sup>3</sup>/<sub>5</sub> inches (11" x 17" printed version) from the top of the map. The general location and layout of the Project Area is shown in Exhibits 1 through 3. The Project is not included in ATSI's LTFR filed in 2020 as this is an environmental condition based emergent project.

**4906-6-05 (B)(4): Alternatives Considered**

No other alternatives were considered.

**4906-6-05 (B)(5): Public Information Program**

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Transmission Line Project, as necessary. ATSI will maintain a copy of this Construction Notice application on FirstEnergy's website. The affected property

owner will be notified at least 7 days before construction begins informing them of the Project’s start and a proposed timeframe of construction and restoration activities.

**4906-6-05 (B)(6): Construction Schedule**

The construction schedule for this Project is expected to begin as early as February 18, 2021 and is anticipated to be completed by October 31, 2021.

**4906-6-05 (B)(7): Area Map**

Exhibit 1 depicts the general location of the Project on a partial copy of the United States Geological Survey USGS 7.5’ Quad ID Northfield. Exhibit 2 provides a partial copy of aerial imagery provided by ESRI.

**4906-6-05 (B)(8): Property Owner List**

The Project is located and all work pertaining to the structure replacement will be within existing FirstEnergy right-of-way. Table 1 contains a list of property owners affected by the Project.

**Table 1: Property Owner List**

<b>Parcel Number</b>	<b>Property Owner</b>	<b>Address</b>	<b>Easement Status</b>
573-17-007	Cleveland Electric Illuminating Co	Tinkers Creek Road	N/A
573-17-009	The United States of America	Cuyahoga Valley National Park Canal Road	Existing Easement

## **4906-6-05 (B)(9): TECHNICAL FEATURES OF THE PROJECT**

### **4906-6-05 (B)(9)(a): Operating Characteristics**

The existing transmission lines have the following characteristics. The same conductors, static wire, and insulators will be installed on the new proposed structure.

Voltage: 138 kV

Conductors: 795 kcmil 36/1 ACSR

Static Wire: 7#8 Alumoweld

Insulators: Porcelain

Structure Types: Exhibit 4: Double-Circuit Suspension Steel Monopole Single Shield Wire; One (1) structure needed.

Exhibit 5: Double-Circuit Suspension Steel Monopole Double Shield Wire; One (1) structure needed.

### **4906-6-05 (B)(9)(b): Electric and Magnetic Fields**

The closest occupied residence or institution is approximately 200 feet north from the proposed transmission line centerline; therefore, no Electric and Magnetic Field (“EMF”) calculations are required by this rule.

### **4906-6-05 (B)(9)(c): Estimated Cost**

The estimated cost for the proposed project is approximately \$1,155,115.

## **4906-6-05 (B)(10): SOCIAL AND ECOLOGICAL IMPACTS**

### **4906-6-05 (B)(10)(a): Land Uses**

The Project is located in the Village of Valley View, Cuyahoga County, Ohio. The main land use around the Project is greenspace owned by the Cuyahoga Valley National Park and nearby residential development to the north and adjacent to Tinkers Creek Road.

**4906-6-05 (B)(10)(b): Agricultural Land**

Agricultural land does not exist within the Project’s disturbance area.

**4906-6-05 (B)(10)(c): Archaeological or Cultural Resources**

As part of the investigation, a search of Ohio Historic Preservation Office (“OHPO”) online database was conducted to identify the existence of any significant historic or cultural resource sites within a 0.5-mile area of potential effect (APE). The results of the search are shown in Exhibit 6. The specific locations of any archeological resources identified within the APE and surrounding areas are excluded from the map as their locations are considered proprietary.

The OHPO database includes all Ohio listings on the National Register of Historic Places (“NRHP”), including districts, sites, building, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The results of the search indicate that three (3) listed NRHP sites, and four (4) NRHP Districts were identified within 0.5 mile of the Project. The nearest NRHP site is the Tinkers Creek Aqueduct approximately 0.2-mile south of the Project location. Identified NRHP sites and districts are shown below in Tables 2 and 3.

**Table 2. List of NRHP Sites**

<b>Reference #</b>	<b>Resource Name</b>	<b>Address</b>	<b>County</b>	<b>Applicable Criteria</b>	<b>Function</b>
78000378	Terra Vista Archaeological District	Address Restricted	Cuyahoga	Information Potential	Domestic
79000296	Tinkers Creek Aqueduct	Near Tinkers Creek Road	Cuyahoga	Event & Architecture/Engineering	Transportation
93000075	Edmund Gleason Farm & Boundary Increase	7243 Canal Road	Cuyahoga	Event & Architecture/Engineering	Domestic & Agricultural\ Subsistence

**Table 3. List of NRHP Districts**

Reference #	Resource Name	County	Number of Properties Associated with District Per County Listed
93000075	Edmund Gleason Farmstead	Cuyahoga	8
66000607	Ohio and Erie Canal District	Cuyahoga	2
78000378	Terra Vista Archeological District	Cuyahoga	0
85001123	Valley Railway Historic District	Cuyahoga	0

The OHPO database also includes listing of the Ohio Archaeological Inventory (“OAI”), the Ohio Historic Inventory (“OHI”), previous cultural resource surveys, and the Ohio Genealogical Society (“OGS”) cemetery inventory. Ten (10) OAI resources have been previously inventoried within 0.5 mile of the Project and are shown in Table 4 below. Six (6) OHI structure are located within 0.5 mile of the Project and are shown in Table 5 below. The closest structural resource is the Canal Road Bridge located approximately 0.1 mile west of the Project. One (1) previous cultural resource survey was conducted within 0.5 mile of the Project and is identified in Table 6. No OAI sites or OHI sites are in the direct disturbance area of the Project, and no impacts are expected.

**Table 4. List of OAI Listed Archeological Resources**

OAI Number	Site Name	Affiliation	County	Quad Name
CU0349	N/A	Historic	Cuyahoga	Northfield
CU0491	N/A	Historic	Cuyahoga	Northfield
CU0010	(Whittlesey) Fort # 4 (Russell Site)	Prehistoric	Cuyahoga	Northfield
CU0017	Terra Vista 1	Prehistoric	Cuyahoga	Northfield
CU0018	Terra Vista 2	Prehistoric	Cuyahoga	Northfield
CU0023	Valley View #16	Prehistoric	Cuyahoga	Northfield
CU0037	Unknown	Prehistoric	Cuyahoga	Northfield
CU0052	Winters Brown Site	Prehistoric	Cuyahoga	Northfield
CU0082	Council Marker Tree (Zeisberger) / (Muskingum Trail	Historic	Cuyahoga	Northfield



OAI Number	Site Name	Affiliation	County	Quad Name
CU0060	Flood Fort Site (Native longhouse site)	Prehistoric and Historic	Cuyahoga	Northfield

**Table 5. List of OHI Structural Resources**

OHI Number	Present Name	Historic Use	County	Municipality
CUY0430419	Cuyahoga Valley NRA\ Edmund Gleason Barn	Barn	Cuyahoga	Valley View
CUY0045519	Canal Road Bridge	Road/Vehicle Related	Cuyahoga	Valley View
CUY0212819	Sophia Franz House	Single Dwelling	Cuyahoga	Valley View
CUY0043919	Gleeson House	Single Dwelling	Cuyahoga	Valley View
CUY0046219	Tinkers Creek Aqueduct	Canal Related	Cuyahoga	Valley View
CUY0046719	Tinkers Creek Cemetery/ Hillside Cemetery	Cemetery	Cuyahoga	Valley View

**Table 6. List of Previous Cultural & Historic Resource Survey**

Year	Name	County
1984	Potential Historic Districts In Suburban Cuyahoga County	Cuyahoga

The OHPO database indicated that two (2) OSG cemeteries are located within 0.5mile of the Project location. The OHPO database indicates the Gleeson Homestead Cemetery is approximately 0.15mile north of the Project location. The Old Indian-Pilgurrah-Hillside-Tinkers Creek Valley Cemetery is approximately 0.35-mile northeast of the Project location. Neither identified OSG cemetery is in the direct disturbance area of the proposed Project. These sites are identified below in Table 7.

**Table 7. List of OGS Cemeteries**

OGS ID	Name	County
2657	Gleeson Homestead	Cuyahoga
2604	Old Indian-Pilgurrah-Hillside-Tinkers CreekValley	Cuyahoga

The Project scope includes replacing two (2) existing lattice towers with two (2) steel monopole structures. The monopole tower design is visually more compact than the existing steel lattice tower structures. Therefore, the proposed Project is not expected to have an adverse visual or direct effect on any of the resources identified in the 0.5-mile APE.

**4906-6-05 (B)(10)(d): Local, State, and Federal Requirements**

Table 8 shows the list of government agency requirements associated with the Project.

**Table 8. List of Government Agency Requirements**

<b>Agency</b>	<b>Permit Requirement</b>
Village of Valley View	Flood Hazard Area Development Plan Permit
Village of Valley View	Street Opening/Utility Permit/Site Plan

**4906-6-05 (B)(10)(e): Endangered, Threatened, and Rare Species Investigation**

As part of this investigation, ATSI submitted a request to the Ohio Department of Natural Resources (“ODNR”) Office of Real Estate to conduct an Environmental Review on October 9, 2020. A response has not been received to date and will be provided upon receipt.

ATSI also submitted a request to the US Fish and Wildlife Service (“USFWS”) for a threatened and endangered species review on October 9, 2020 to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project area. The USFWS comments were returned October 20, 2020. The comments indicated the proposed Project lies within the vicinity of one or more confirmed records of federally endangered Indiana bats (*Myotis sodalis*) and within the range of the federally threatened northern long-eared bat (*Myotis septentrionalis*). A copy of the USFWS comments are included in Exhibit 7.

Tree clearing is not anticipated for this proposed Project. If it is determined that tree clearing is required, it will take place between the recommended seasonal clearing timeframe of November 15 through March 15 to avoid potential impacts to listed bat species. Therefore, no impacts to these species are anticipated

**4906-6-05 (B)(10)(f): Areas of Ecological Concern**

The USFWS comments did not identify any areas of ecological concern. A review of the National Wetlands Inventory (NWI) database provided by the USFWS indicated that there is a Palustrine, Forested/Scrub-Shrub, Broad Leaved Deciduous, Seasonally Flooded (PFO1/SS1C) wetland within the Project area. As part of the investigation, ATSI hired GPD Group to conduct a wetland and stream assessment of the Project area. On September 15, 2020 the GPD investigation focused on an approximately 3.1-acre study area comprised of the proposed Project work area, access road, and additional workspace area. The results yielded one palustrine scrub/shrub/palustrine emergent (PSS/PEM) Modified Category 2 wetland that encompasses approximately 1.97 acres of the Project area. A copy of the Wetland Delineation Report is included as Exhibit 8. Due to location of the Project, construction matting will be used to temporarily access the Project area to remove the existing lattice towers and install the new monopoles. The proposed poles will be located within the delineated wetland. Permanent and temporary fills and subsequent wetland impacts will be less than 0.1 acre; thus, the Project will not require a Preconstruction Notice to the US Army Corps of Engineers (USACE) to obtain coverage under Nationwide Permit 12 (NWP12).

According to FEMA's National Flood Hazard Layer (NFHL) viewer, the Project is in an area labeled as Regulatory Floodway and Zone AE which designates areas that have a 1% probability of flooding every year, otherwise known as a 100-year floodplain. The proposed Project is not expected to have any adverse net effect on the Floodway because the existing lattice towers with concrete foundations will be removed from the Floodway

and be replaced with monopoles. The appropriate coordination and authorization will be obtained from the Village of Valley View floodplain administrator prior to the start of construction.

**4906-6-05(B)(10)(g): Other Information**

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code as adopted by the PUCO and will meet all applicable safety standards established by the Occupational Safety and Health Administration.

No other or unusual conditions are expected that will result in significant environmental, social, health or safety impacts.

**4906-6-07: Documentation of Letter of Notification Transmittal and Availability for Public Review**

This Construction Notice is being provided concurrently with its docketing with the Board to the following officials and library in the Village of Valley View and/or Cuyahoga County, Ohio.

**Cuyahoga County**

Mr. Dan Brady, President  
Cuyahoga County Council  
2079 East 9th Street, 8th Floor  
Cleveland, OH 44115

Mr. Pernel Jones Jr., Vice President  
Cuyahoga County Council  
2079 East 9th Street, 8th Floor  
Cleveland, OH 44115

Mr. Jack Schron  
Cuyahoga County Council – District 6  
2079 East 9th Street, 8th Floor  
Cleveland, OH 44115

Mr. Armond Budish  
Cuyahoga County Executive  
2079 East Ninth Street  
Cleveland, OH 44115

Mr. Glenn Coyne, FAICP Executive  
Director  
Cuyahoga County Planning  
Commission  
2079 East 9th Street, Suite 5-300  
Cleveland, OH 44115

Ms. Sunny Simon, Vice Chair,  
Acting Chair  
Cuyahoga County Planning  
Commission  
2079 East 9th Street  
Cleveland, OH 44115

Mr. David E. Marquard P.E., P.S.  
Cuyahoga County Engineer  
2079 East 9th Street  
Cleveland, OH 44115

Ms. Ruth Skuly, Chair  
Soil and Water Conservation District  
3311 Perkins Avenue, Suite 100  
Cleveland, OH 44114

Mr. Howard Maier, Vice Chair  
Soil & Water Conservation District  
3311 Perkins Avenue, Suite 100  
Cleveland, OH 44114

**Village of Valley View**

Mayor Jerry Piasecki  
Village of Valley View  
6848 Hathaway Road  
Valley View, OH 44125

Mr. David Wingefeld, President  
Valley View Village Council  
6848 Hathaway Road  
Valley View, OH 44125

Ms. Mary Snyder  
Village of Valley View Executive  
Assistant  
6848 Hathaway Road  
Valley View, OH 44125

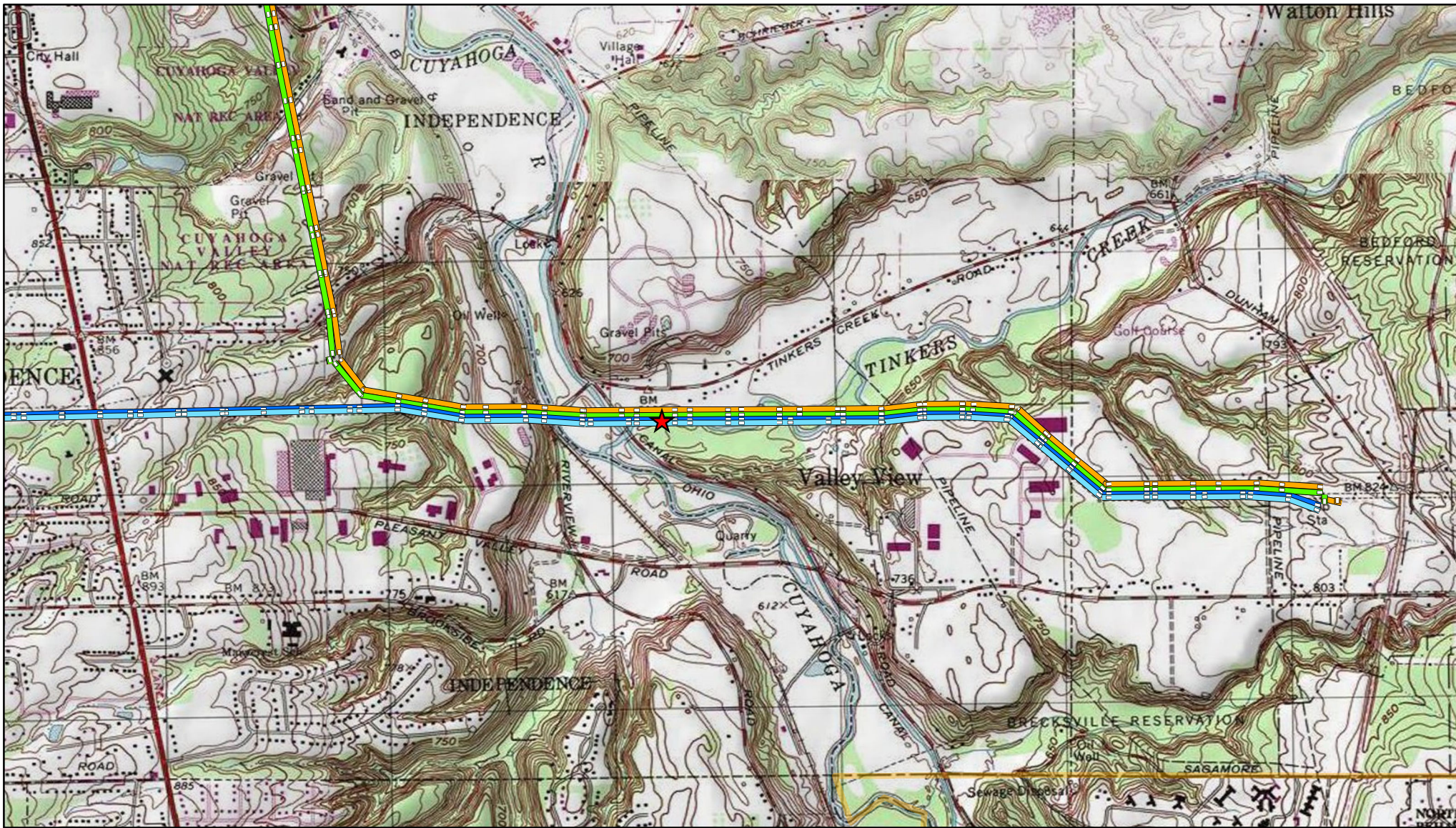
Mr. Todd Sciano, P.E.  
Village of Valley View Engineer  
7979 Hub Parkway  
Valley View, OH 44125

**Library**

Ms. Melanie Rapp-Weiss  
Independence Branch Manager  
Cuyahoga County Public Library  
6361 Selig Drive  
Independence, OH 44131

Copies of the transmittal letters to these officials have been included with this applications proof of compliance under OAC Rule 4906-6-07 (B) to provide the Board with proof of notice to local officials as required by OAC Rule 4906-6-07 (A)(1) and to the library per OAC Rule 4906-6-07 (A)(2).

Information is posted at [www.firstenergycorp.com/about/transmission\\_project/ohio.html](http://www.firstenergycorp.com/about/transmission_project/ohio.html) on how to request an electronic or paper copy of this Construction Notice application. The link to this website is being provided to meet the requirements of OAC Rule 4906-6-07 (B) and to provide the Board with proof of compliance with the notice requirements in OAC Rule 4906-6-07 (A)(3).



**EXHIBIT 1**

**Juniper-Newburgh / Juniper-Jennings & Juniper-Pleasant Valley Q1 & Q2 138 kV Transmission Line Structure Replacement Project**

Municipality: Valley View  
 County: Cuyahoga  
 State: Ohio  
 USGS Quads: Northfield

0 1,000 2,000 4,000



Feet







1 inch = 2,000 feet



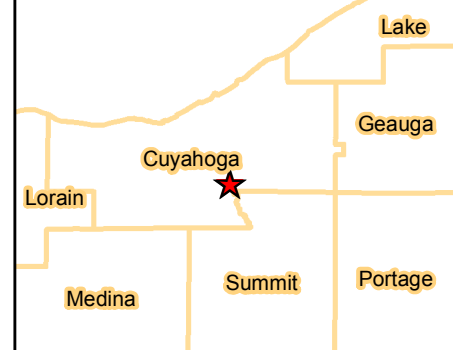
NAD 1983 StatePlane Ohio North  
 Projection: Lambert Conformal Conic  
 Linear Unit: US Foot

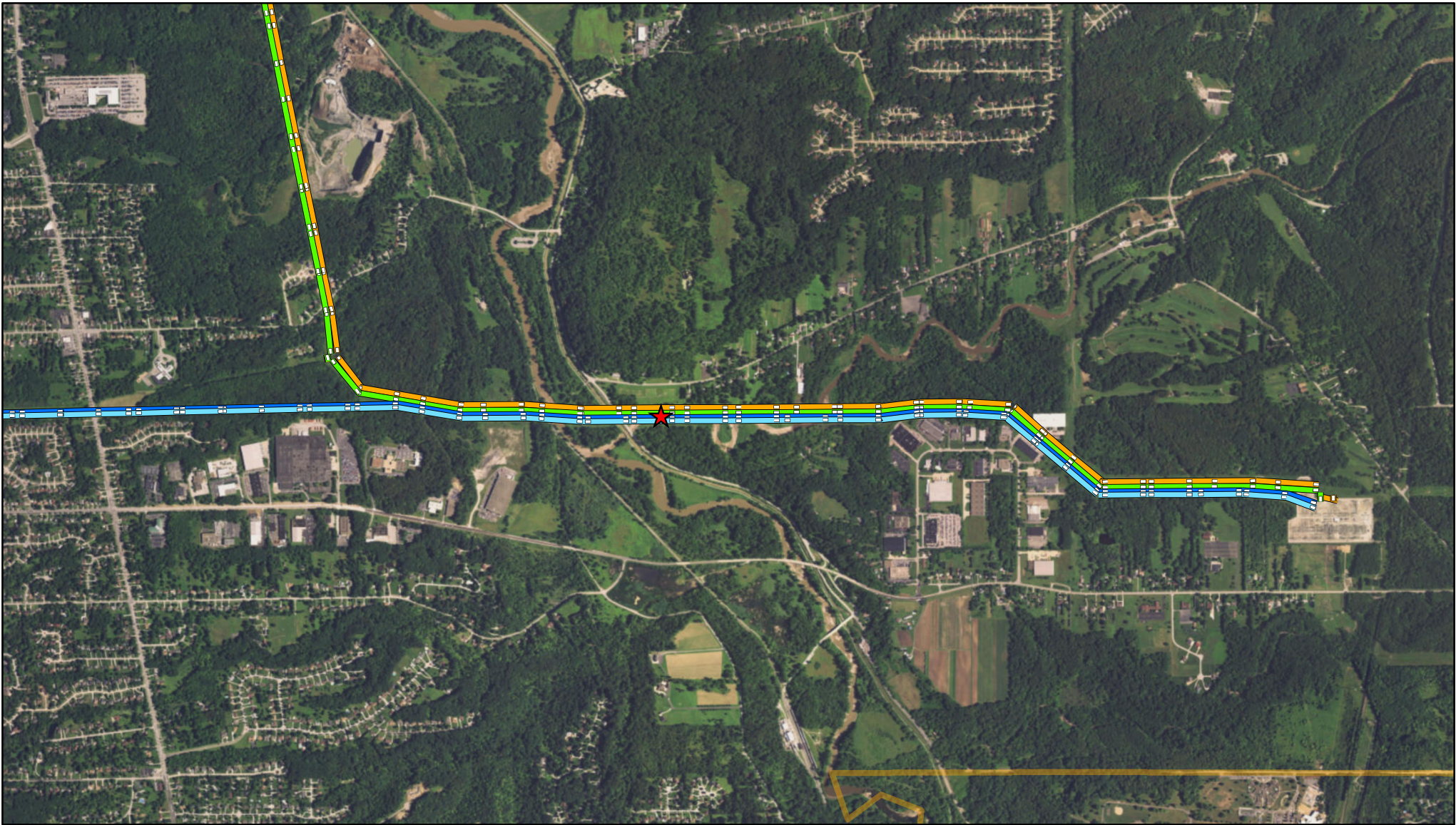
Source: Cuyahoga County GIS Office  
 National Geographic Society

**Legend**

-  Project Location
-  Juniper-Newburgh 138kV Q-18
-  Juniper-Jennings 138kV Q-15
-  Juniper- Pleasant Valley 138kV Q-1
-  Juniper-Pleasant Valley 138kV Q-2
-  County Boundary

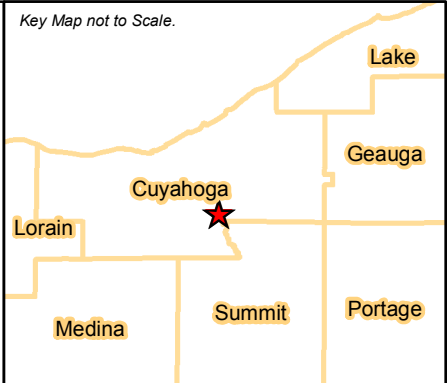
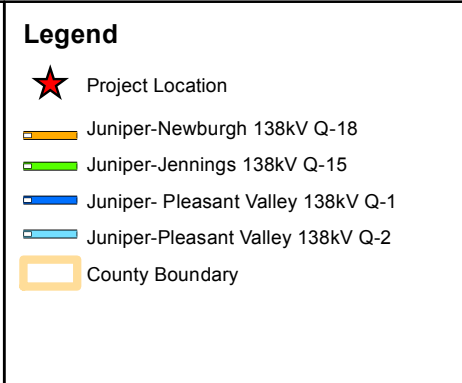
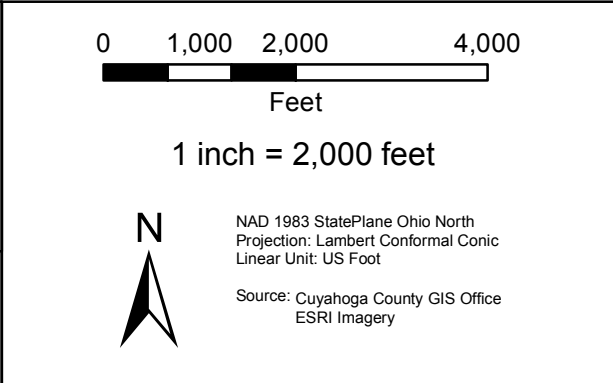
Key Map not to Scale.





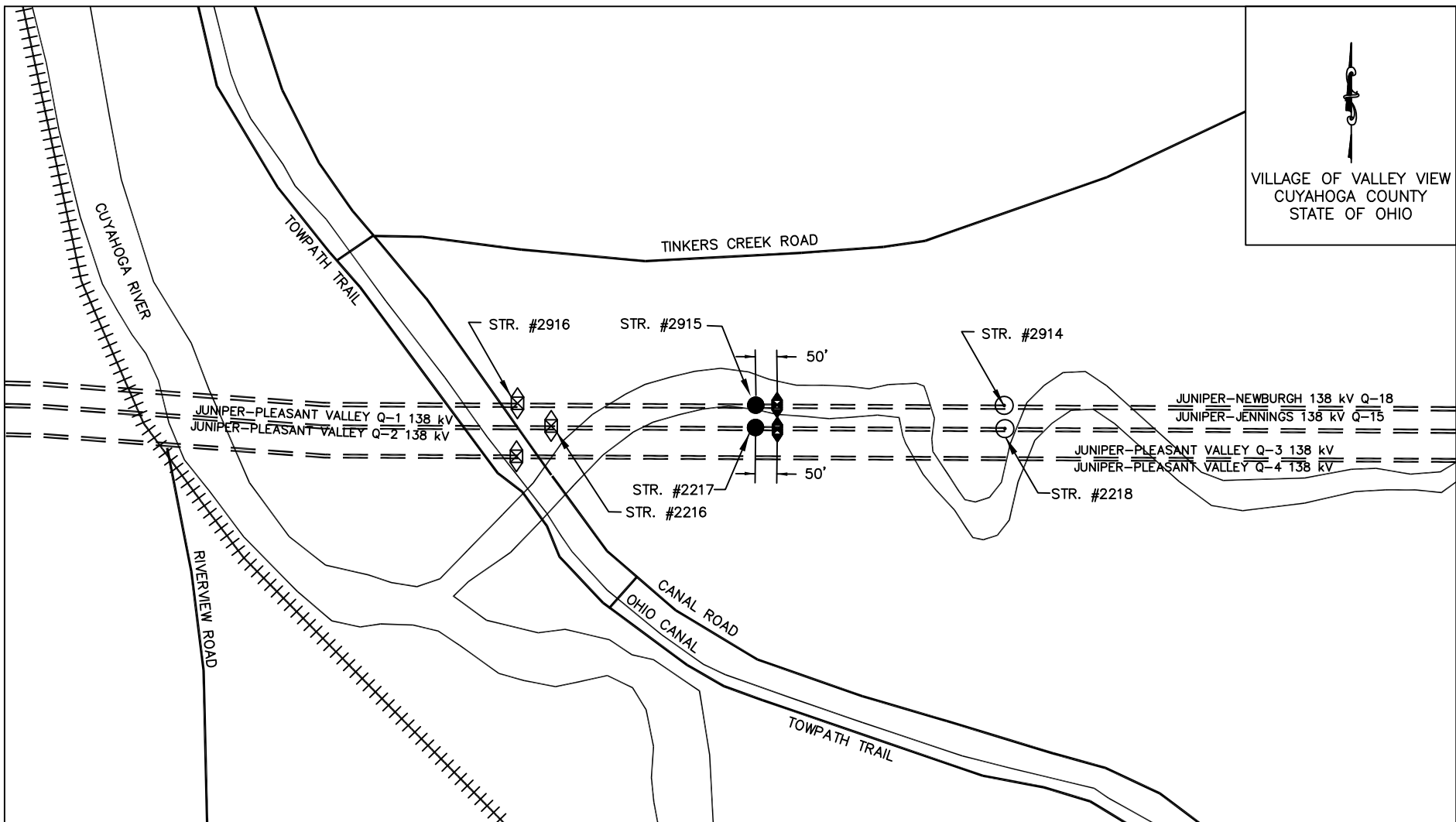
**EXHIBIT 2**  
 Juniper-Newburgh / Juniper-Jennings & Juniper-Pleasant Valley Q1 & Q2 138kV Transmission Line Structure Replacement Project

Municipality: Valley View  
 County: Cuyahoga  
 State: Ohio  
 USGS Quads: Northfield





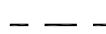


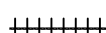




VILLAGE OF VALLEY VIEW  
 CUYAHOGA COUNTY  
 STATE OF OHIO



**LEGEND**

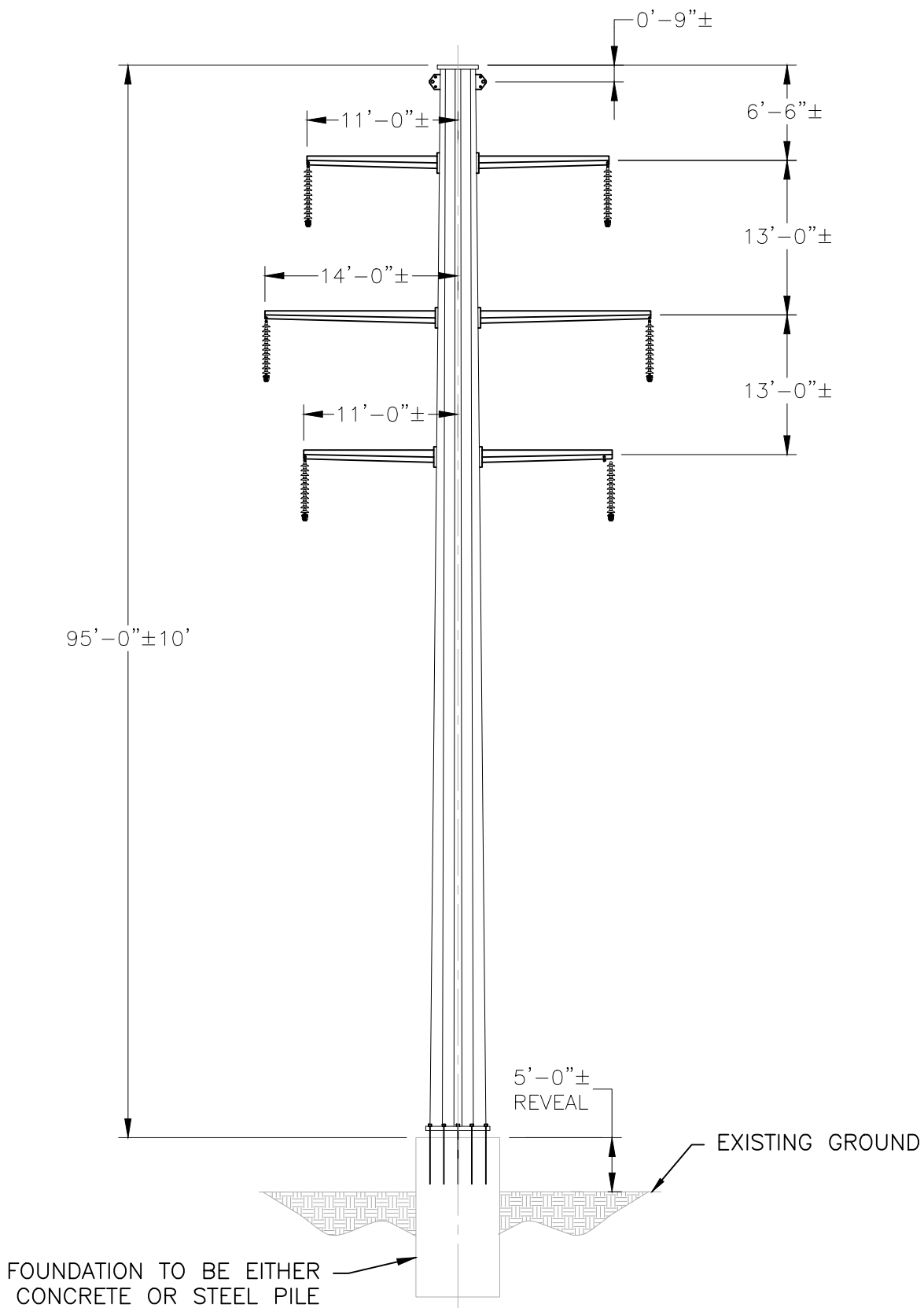
-  EXISTING STEEL LATTICE STRUCTURE
-  EXISTING STEEL MONOPOLE STRUCTURE
-  LATTICE STRUCTURE TO BE REMOVED
-  PROPOSED MONOPOLE STEEL STRUCTURE
-  EXISTING TRANSMISSION CENTERLINE
-  EXISTING ROADWAY
-  EXISTING RIVER/STREAM
-  RAILROAD



JUNIPER-NEWBURGH/JUNIPER-JENNINGS AND  
 JUNIPER-PLEASANT VALLEY Q1 AND Q2 138 kV  
 TRANSMISSION LINE STRUCTURE  
 REPLACEMENT PROJECT

GENERAL LAYOUT

EXHIBIT 3



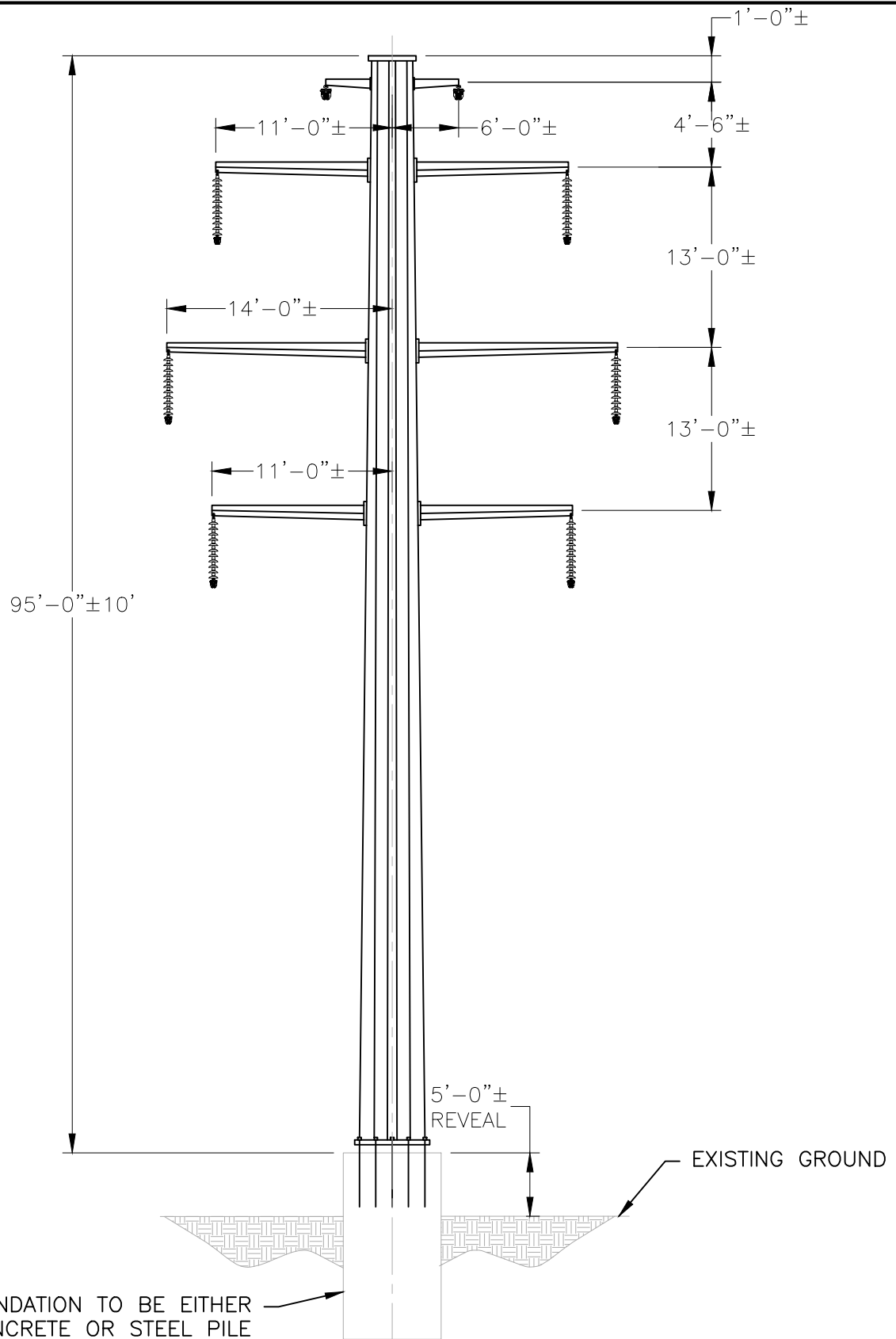
\*\* NOT TO SCALE



Juniper-Newburgh / Juniper-Jennings &  
Juniper-Pleasant Valley Q1 & Q2 138 kV Transmission Line  
Structure Replacement Project

DOUBLE-CIRCUIT SUSPENSION SINGLE SHIELD WIRE,  
STEEL MONOPOLE WITH FOUNDATION

EXHIBIT 4



\*\* NOT TO SCALE

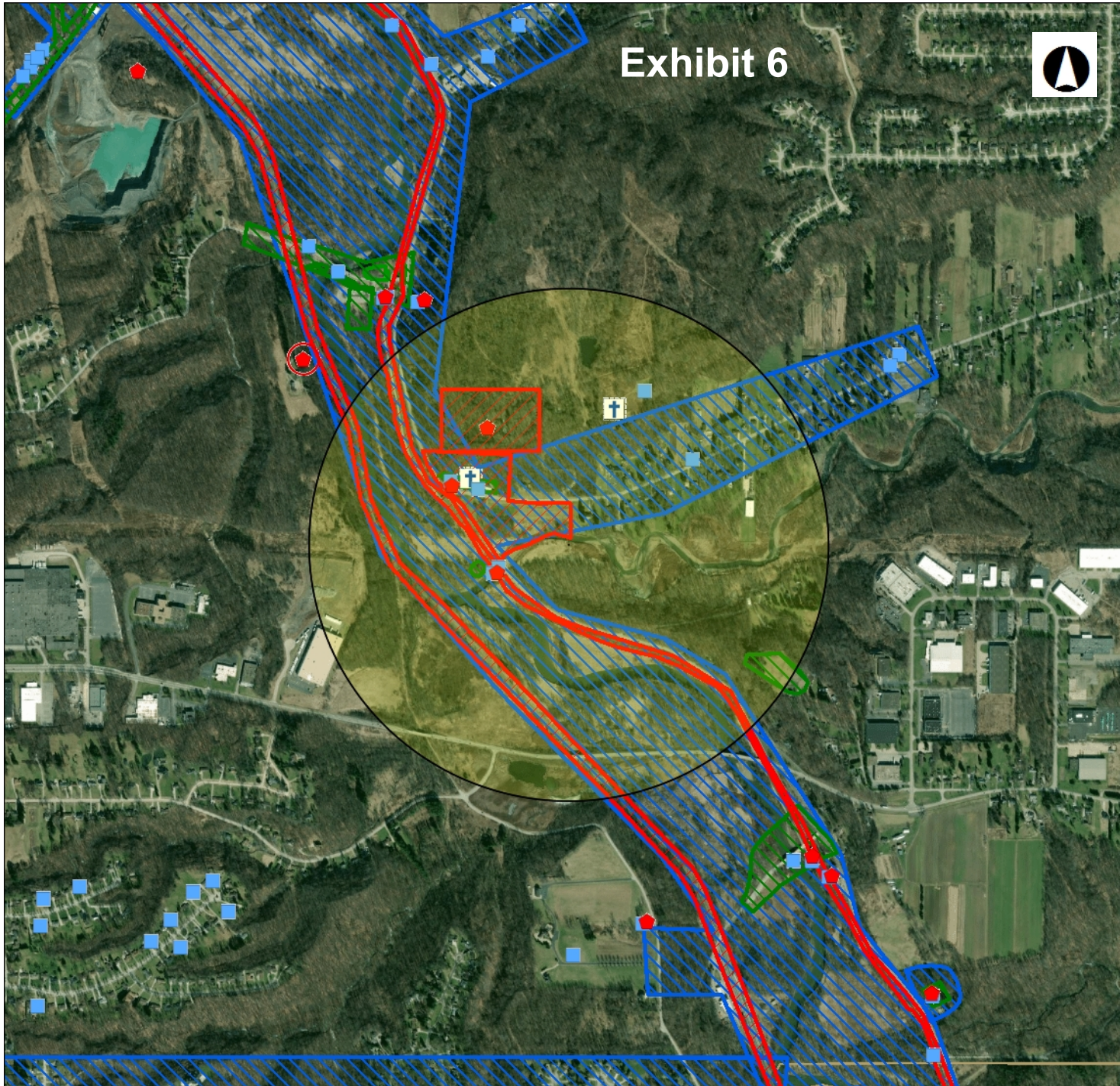
**ATSI**  
 American Transmission Systems, Inc.  
 a subsidiary of First Energy Corp.

uniper-Newburgh / uniper- ennings  
 uniper- leasant alley Q1 Q2 138 k Transmission Line  
 Structure Replacement roject

DOUBLE-CIRCUIT SUSPENSION, DOUBLE SHIELD WIRE,  
 STEEL MONOPOLE WITH FOUNDATION

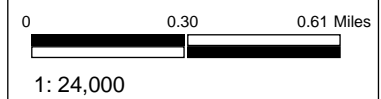
EXHIBIT 5

# Exhibit 6



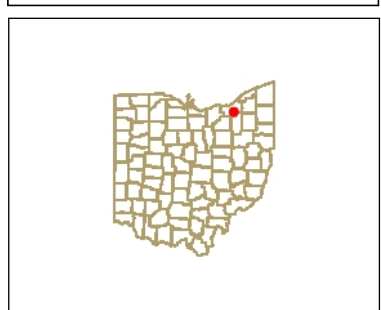
### Legend

- NR Listings**
  - ◆ Listed
  - ◆ National Historic Landmark
  - ✕ Delisted
- Determinations of Eligibility**
  - ◆ DOE
  - ✕ Demolished
- Historic Structures**
  -
- Historic Bridges**
  -
- Historic Tax Credit Projects**
  -
- OGS Cemeteries**
  - † Confident
  - † Not Confident
- Historic Markers**
  - ◆
- Dams**
  -
- UTM Zone Split**
  -
- NR Boundaries**
  -
- Phase1**
  -



**Copyright/Disclaimer**  
 This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Datum: [Datum]  
 Projection: WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere



[EXTERNAL] FW: First Energy's Tinkers Creek Project, Valley View, Cuyahoga County, Ohio

Stuller, Grant <gstuller@gpdgroup.com>

Thu 10/29/2020 1:37 PM

To: Latina, Alex (Humphrys, Scott M) <alatin@firstenergycorp.com>

Cc: Ruggiero, Augustine (Henslee, Dianna L) <aruggiero@firstenergycorp.com>

📎 1 attachments (8 MB)

FE\_Tinkers Creek\_Wetland Delineation\_2020.pdf;

Alex,

Per your request, attached is the wetland report and below is the USFWS response for Tinkers Creek. We have not received ODNR's response to date.

Thanks,  
Grant

**Grant Stuller | GPD GROUP**

**T:** 614.859.1608 / **M:** 614.205.7755

---

**From:** Ohio, FW3 <ohio@fws.gov>

**Sent:** Tuesday, October 20, 2020 9:11 AM

**To:** Loushin, Brian <bloushin@gpdgroup.com>; Stuller, Grant <gstuller@gpdgroup.com>

**Cc:** nathan.reardon@dnr.state.oh.us; Parsons, Kate <kate.parsons@dnr.state.oh.us>

**Subject:** First Energy's Tinkers Creek Project, Valley View, Cuyahoga County, Ohio



UNITED STATES DEPARTMENT OF THE INTERIOR  
U.S. Fish and Wildlife Service  
Ecological Services Office  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2021-TA-0111

Dear Mr. Loushin,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

**FEDERALLY LISTED SPECIES COMMENTS:** All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (*Myotis sodalis*) and the federally threatened **northern long-eared**

**bat** (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags  $\geq 3$  inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

**The proposed project is in the vicinity of one or more confirmed records of Indiana bats.** Therefore, we recommend that trees  $\geq 3$  inches dbh be saved wherever possible. Because the project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Since Indiana bat presence in the vicinity of the project has been confirmed, clearing of trees  $\geq 3$  inches dbh during the summer roosting season may result in direct take of individuals. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and tree removal is unavoidable, we recommend that removal of any trees  $\geq 3$  inches dbh only occur between November 15 and March 15. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. **Please note that, because Indiana bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.**

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at [mike.pettegrew@dnr.state.oh.us](mailto:mike.pettegrew@dnr.state.oh.us).

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Patrice Ashfield". The signature is fluid and cursive, with a large initial "P" and "A".

Patrice Ashfield  
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW  
Kate Parsons, ODNR-DOW

WETLAND DELINEATION  
AND SURFACE WATER STUDY

FirstEnergy's

# Juniper-Newburgh / Juniper- Jennings & Juniper-Pleasant Valley Q1 & Q2 138kV Transmission Line Structure Replacement Project

Cuyahoga County, Ohio

Prepared by GPD Group for:

FirstEnergy West Akron Campus  
341 White Pond Drive  
Akron, Ohio 44320

October 11, 2020





## Table of Contents

<b>1.0</b>	EXECUTIVE SUMMARY .....	1
<b>2.0</b>	INTRODUCTION.....	2
<b>3.0</b>	WETLAND DEFINITION.....	2
<b>4.0</b>	FINDINGS .....	4
4.1	WETLANDS.....	4
	<b>4.1.1</b> Literature Review.....	4
	<b>4.1.2</b> Field Reconnaissance .....	4
4.2	STREAMS .....	4
	<b>4.2.1</b> Literature Review.....	5
	<b>4.2.2</b> Field Reconnaissance .....	5
4.3	PONDS.....	6
	<b>4.3.1</b> Literature Review.....	6
	<b>4.3.2</b> Field Reconnaissance .....	6
<b>5.0</b>	CONCLUSIONS.....	6
<b>6.0</b>	LITERATURE CITED/REFERENCES .....	7

### Tables

Table 1	Soil Summary
Table 2	Wetland Feature Summary

### Figures

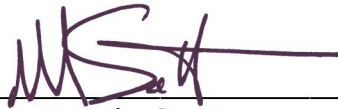
Figure 1	USGS Topographic Map
Figure 2	Aquatic Features Locations Map
Figure 3	County Soil Map
Figure 4	National Wetlands Inventory Map

### Appendices

Appendix A	Field Data Forms
Appendix B	Representative Photographs
Appendix C	Methodology
Appendix D	List of Preparers

FirstEnergy's  
Juniper-Newburgh / Juniper-Jennings &  
Juniper-Pleasant Valley Q1 & Q2 138kV  
Transmission Line Structure Replacement  
Project  
Cuyahoga County, Ohio  
2020110.00  
October 11, 2020

---



---

Lincoln Scott  
Director of Environmental



---

Grant Stuller  
Project Manager



---

Brian Loushin  
Lead Technical

## 1.0 EXECUTIVE SUMMARY

GPD Group completed a routine survey for wetlands and other “Waters of the United States” in September 2020 on FirstEnergy’s Juniper-Newburgh / Juniper-Jennings & Juniper-Pleasant Valley Q1 & Q2 138kV Transmission Line Structure Replacement Project located in Cuyahoga County, Ohio. The information in this report has been compiled as documentation of existing aquatic features for the future construction of an access road.

The study area investigated and documented in this report consists of a proposed access road alignment that is approximately 752 linear feet. The proposed access road begins at Canal Road and ends at two lattice towers carrying transmission lines. The study area investigated a varying width, 100 to 180 foot, corridor along the proposed access road centerline.

Additionally, the study area is located within the Cuyahoga River Basin and is contained within the Town of Twinsburg-Tinkers Creek subwatershed (HUC 12: 04110002-0504). The study area that was investigated is within the jurisdictional boundary of the USACE Buffalo District Office. Figure 1 depicts the project location on the Northfield, Ohio United States Geologic Survey (USGS) 7.5-Minute Topographic Quadrangle Map.

The information in this report has been compiled as documentation of existing aquatic features and represents the professional opinion of GPD Group regarding the boundaries, general characteristics, and classifications of waters within the study area. This document is intended to establish the on-site extent of jurisdictional freshwater features and can be used to facilitate a Jurisdictional Determination. It is GPD Group’s recommendation that no earthwork be conducted until such time as all appropriate regulatory agency acknowledgements, reviews, and verifications have been completed.

Based on the field investigations, one (1) wetland feature has been identified within the study area boundary. No stream features or pond features have been identified within the study area boundary. The identified aquatic features are depicted on the Aquatic Features Locations Map (Figure 2). The areal extent of the wetland feature was calculated using a Geographic Information System (GIS) and are presented in Table 2. Representative photographs were taken of the features within the study area boundary and are provided in Appendix B.



## 2.0 INTRODUCTION

In September 2020, GPD Group conducted field studies along a 752 linear foot alignment for a proposed access road. These field studies focused on wetlands and other “Waters of the United States” delineations and habitat assessments within the designated study area. The land use within the project study area consists of immature forest and emergent floodplain wetlands. The surrounding land use consisted of immature forest, floodplains, and residential properties.

A Routine Level On-Site Determination, as outlined in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual, was performed. Additionally, the methods outlined in the April 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral Northeast Region (Version 2.0) were utilized to further ascertain the presence/absence of the three parameters that define a wetland. For any identified wetland, the Ohio Rapid Assessment Method for Wetlands (ORAM) Version 5.0 was used to provisionally rate each delineated wetland in accordance with current Ohio Environmental Protection Agency (Ohio EPA) standards, and to determine the appropriate regulatory category in which to place the wetland.

Streams were evaluated using either the Field Evaluation Manual for Ohio’s Primary Headwater Habitat Streams or the Methods for Assessing Habitat in Flowing Water: Using the Qualitative Habitat Evaluation Index (QHEI), published by the Ohio EPA. When appropriate, the Headwater Habitat Evaluation Index (HHEI) data sheet, Headwater Macroinvertebrate Field Evaluation Index (HMFEI) data sheet, and QHEI data sheet were completed in the field.

In addition to wetlands, an investigation for streams ponds located within the study area boundary was also conducted. No streams or ponds were identified. Tinkers Creek is directly adjacent to the project study area but was not evaluated as it lies outside of the project study area boundaries.

## 3.0 WETLAND DEFINITION

Jurisdictional freshwater wetlands are included as a subset of “Waters of the United States” as defined by 33 CFR Part 328.3. The following definition of a wetland is the regulatory definition used by the USACE for administering Section 404 of the Clean Water Act which limits activities within “Waters of the United States” including wetlands. Wetlands are:

“Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated conditions. Wetlands generally include swamps, marshes, bogs, and similar areas”. (EPA, 40 CFR 230.3)

Wetland determinations are based on a three-parameter approach. An area must exhibit these three characteristics to be classified as a wetland:

1. hydrophytic vegetation
2. hydric soils



### 3. wetland hydrology

Hydrophytic vegetation is defined as macrophytic plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of the presence of water. In the course of developing the wetland determination methodology, the USACE, in cooperation with the U.S. Fish and Wildlife Service (USFWS), Environmental Protection Agency (EPA), and the Natural Resources Conservation Service (NRCS), compiled a comprehensive list of wetland vegetation. A method to quantify what type of vegetation is typical "wetland vegetation" was also developed and certain species of plants were assigned a plant indicator classification/status. The indicator classification/status of a plant species is expressed in terms of the estimated probability of that species occurring in wetland conditions within a given region. The indicator classification/status within this list includes:

1. Obligate Wetland (OBL) – occur almost always in wetlands (estimated probability 99%), under natural conditions.
2. Facultative Wetland (FACW) – usually occur in wetlands (estimated probability 67% to 99%), but occasionally found in non-wetlands.
3. Facultative (FAC) – equally likely to occur in wetlands and non-wetlands (estimated probability 34% to 66%).
4. Facultative Upland (FACU) – usually occurs in non-wetlands, but occasionally found in wetlands (estimated probability 1% to 33%).
5. Upland (UPL) - occur almost always in uplands (estimated probability 1%), under natural conditions.

Plants that are OBL, FACW, and FAC are considered wetland species.

Hydric soils are those soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions within the major portion of the root zone. The National Technical Committee for Hydric Soils has developed criteria for hydric soil determinations in addition to hydric soil types. The USACE criteria for hydric soils specifies that the chroma must be /1 if the soil has no mottles (marked with spots of contrasting color), and /2 or /3 if the soil is mottled. Any soil colors described within this report were determined in the field using the Munsell Soil Color Charts Year 2009 Edition.

Wetland hydrology is the permanent or periodic inundation or saturation of soil (within the root zone) for a significant period during the growing season. Many factors influence the hydrology of an area including precipitation, topography, soil permeability, and plant cover. The frequency and duration of inundation or soil saturation are important factors in the determination of the existence of wetland hydrology. Primary indicators of wetland hydrology are inundation, soil saturation (within the root zone), water marks, sediment deposits, and drainage patterns. Secondary indicators such as oxidized root channels in the upper 12" of soil, water stained leaves, local soil survey data, and FAC-neutral vegetation test are sometimes also used to determine the presence of wetland hydrology. One primary indicator, or two secondary indicators, is required to establish the presence of wetland hydrology.



## Summary

In general, an area must meet all three of the aforementioned criteria to be classified as a wetland. In certain problem areas such as seasonal wetlands that are only wet during certain times of the year or in recently disturbed (atypical) situations, areas may be considered a wetland if only two criteria are met. Additionally, in special situations, an area that meets the definition of a wetland may not be within USACE jurisdiction due to a lack of adjacency to another “Water of the United States”. These isolated features fall under the jurisdiction of the Ohio EPA.

## 4.0 FINDINGS

### 4.1 Wetlands

#### 4.1.1 Literature Review

Prior to performing field studies, the USGS 7.5-Minute Topographic Quadrangle Map (Figure 1), County Soil Survey map (Figure 3), and NWI map (Figure 4) were analyzed in detail to determine the possible distribution of any previously-identified freshwater wetlands within the study area. The NWI map depicts a Palustrine, Forested/Scrub-Shrub, Broad Leaved Deciduous, Seasonally Flooded (PFO1/SS1C) wetland within the project study area. No evidence of freshwater wetland features was depicted within the study area on the topographic map.

The Cuyahoga County, Ohio (USDA-NRCS, 2010) Soil Survey Geographic (SSURGO) database indicates that there are two (2) soil types mapped within the study area boundary. None of these soil types appear on the List of Hydric Soils for Cuyahoga County maintained by the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS, 2020). The soil map is enclosed as Figure 3. Additional information pertaining to the soil type identified within the study area is presented in the table below.

TABLE 1 – SOIL SUMMARY

<i>Symbol</i>	<i>Taxonomy</i>	<i>Map Unit Description</i>	<i>Drainage Class</i>	<i>Hydric</i>
Tg	Coarse-loamy, mixed, mesic Dystric Fluventic Eutrochrepts	Tioga loam, frequently flooded	Moderately well drained	No
W	N/A	Water	N/A	No

Notes: Hydric Soils of Ohio, Revised 2020 (NRCS)  
 Soil Designations as seen on Figure 3

#### 4.1.2 Field Reconnaissance

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any wetlands not annotated on the reviewed sources.

For more information on the methods used in the field to determine whether or not a suspect area qualified as a wetland, please consult Appendix C.



One (1) freshwater wetland feature was identified within the study area. The on-site wetlands totaled 1.97 acres. The wetland was designated Wetland 1 and is depicted on the Aquatic Features Locations Map (Figure 2).

Wetland 1 was determined to be contiguous to Tinker Creek (OAC 3745-2-26, Table 26-2). Therefore, Wetland 1 is considered “adjacent”. The USACE will make the final determination of “jurisdiction” in accordance with the Clean Water Act concerning all on-site aquatic features.

Wetland data forms and ORAM field forms can be found in Appendix A, and representative photographs can be found in Appendix B. A detailed summary of the Wetland 1 is presented in the table below.

TABLE 2 – WETLAND FEATURE SUMMARY

ID	Photo	ORAM Score/ Category	Cowardin Class	Surrounding Land Use	Hydrologic Connectivity <sup>A</sup> / Receiving Body (Distance To)	On-Site Acreage
Wetland 1	1-3	44.5/Modified Category 2	PSS/PEM	Forest/Tinkers Creek	Adjacent/Tinkers Creek (0.0 mi)	1.97

Wetland Designation as see on Figure 2 Total On-Site Wetland Acreage 1.97  
 Adjacent/Isolated refers to Traditional Navigable Waters and/or "Waters of the United States"

<sup>A</sup> The USACE will make the final determination regarding “adjacent” or “isolated” and subsequent jurisdiction.

## 4.2 Streams

### 4.2.1 Literature Review

Prior to performing field studies, the USGS 7.5-Minute Topographic Quadrangle Map (Figure 1), Cuyahoga County Soil Survey map (Figure 3), and NWI map (Figure 4) were analyzed in detail to determine the possible distribution of any previously-identified streams within the study area boundary. The NWI map depicts a Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded (R2UBH) running through the northern part of the study area. The Cuyahoga County Soil Survey map and the USGS Topographic Map depict a stream feature on the northern side of the project study area. GPD Group determined that this aquatic feature was incorrectly mapped by examining recent/up to date aerial photos of the area and through observations made during the site visit.

### 4.2.2 Field Reconnaissance

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any streams not annotated on the reviewed sources.

For more information on the methods used in the field to determine whether or not a suspect area qualified as a stream, please consult Appendix C.

No stream features were identified within the study area boundary. Tinkers Creek is directly adjacent to the project study area but was not evaluated as it lies outside of the project study area boundaries.

## **4.3** Ponds

### **4.3.1** *Literature Review*

Prior to performing field studies, the USGS 7.5-Minute Topographic Quadrangle Map (Figure 1), County Soil Survey map (Figure 3), and NWI map (Figure 4) were analyzed in detail to determine the presence of any previously-identified ponds within the study area boundary.

No evidence of pond features was identified within the study area boundary on the reviewed sources.

### **4.3.2** *Field Reconnaissance*

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any ponds not annotated on the reviewed sources.

For more information on the methods used in the field to determine whether or not a suspect area qualified as a stream, please consult Appendix C.

No pond features were identified within the study area boundary during the field reconnaissance activities.

## **5.0** CONCLUSIONS

Based upon the field reconnaissance activities, one (1) wetland feature was identified within the study area. No stream features or pond features were identified within the study area. The wetland feature was designated Wetland 1 and is depicted on the Aquatic Features Locations Map (Figure 2).

Criteria have been evaluated in order to determine whether the aquatic feature located within study area is "adjacent" or "isolated". Specifically, the definition of "adjacent", as provided in 33 CFR Part 328.4, was used to determine if the aquatic feature was bordering, contiguous, or neighboring ("adjacent") other "Waters of the United States."

Wetland 1 was determined to be contiguous to Tinker Creek (OAC 3745-2-26, Table 26-2) and is potentially considered "adjacent" or "Waters of the United States". The USACE will make the final determination of "jurisdiction" in accordance with the Clean Water Act concerning all on-site aquatic features.

It is GPD Group's recommendation that no earthwork be conducted until such time as all appropriate regulatory agency acknowledgements, reviews, and verifications have been completed.





## 6.0 LITERATURE CITED/REFERENCES

- Braun, L.E. 1987. *The Monocotyledoneae of Ohio*. The Ohio State University Press, Columbus, Ohio.
- Brown, Lauren. 1979. *Grasses an Identification Guide*. Houghton Mifflin Company, New York, New York.
- Cowardin, et al. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetland Delineation Manual*. Technical Report Y-87-1. U.S. Army Corps of Engineers Waterway Experiment Station, Vicksburg, Mississippi.
- Environmental Laboratory. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral Northeast (Version 2.0)*. ERDC/EL TR-12-9, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- Federal Interagency Committee for Wetland Delineation (FICWD). 1989. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. U.S. Army Corps of Engineers, Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington D.C. Cooperative Publication.
- Knobel, Edward. 1980. *Field Guide to the Grasses, Sedges and Rushes of the United States*. Dover Publications, Inc., Toronto, Ontario.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X
- Munsell Soil Color Charts. 2009. *Munsell Products, Macbeth Color and Photometry Division of Kolmorgen Corporation*, Baltimore, Maryland.
- Newcomb, Lawrence. 1977. *Newcomb's Wildflower Guide*. Little Brown and Company, Boston, Massachusetts.
- Ohio EPA, 2001. *Ohio Rapid Assessment Method for Wetlands v. 5.0*. Division of Surface Water, Columbus, Ohio.
- Ohio EPA, 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. Division of Surface Water, Columbus, Ohio.
- Ohio EPA, 2018. *State of Ohio Water Quality Standards. Chapter 3745-1 of the Administrative Code. (Standards and Technical Support Section)*. Division of Surface Water, Columbus, Ohio.



Ohio EPA, 2018. Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams – Version 4.0. Division of Surface Water, Columbus, Ohio.

Rankin, Edward, T. 1989. The Qualitative Habitat Evaluation Index Rationale, Methods, and Application. Ohio EPA, Ecological Assessment Division, Columbus, Ohio.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>.

Tiner, R.W. 1988. Field Guide to Nontidal Wetland Identification. Maryland Department of Natural Resources, Annapolis, Maryland and the U.S. Fish and Wildlife Service, Newton Corner, Massachusetts.

United States Department of Agriculture – Natural Resources Conservation Service. December 2015. List of Hydric Soils for Cuyahoga County, Ohio.

United States Department of Agriculture – Natural Resources Conservation District. 2009. Soil Survey Geographic (SSURGO) database for Cuyahoga County, Ohio.

United States Department of Agriculture – Soil Conservation Service. Midwestern Wetland Flora, Field Office Guide to Plant Species. Midwest National Technical Center, Lincoln, Nebraska.

U. S. Fish and Wildlife Service. February 2018. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/wetlands/>

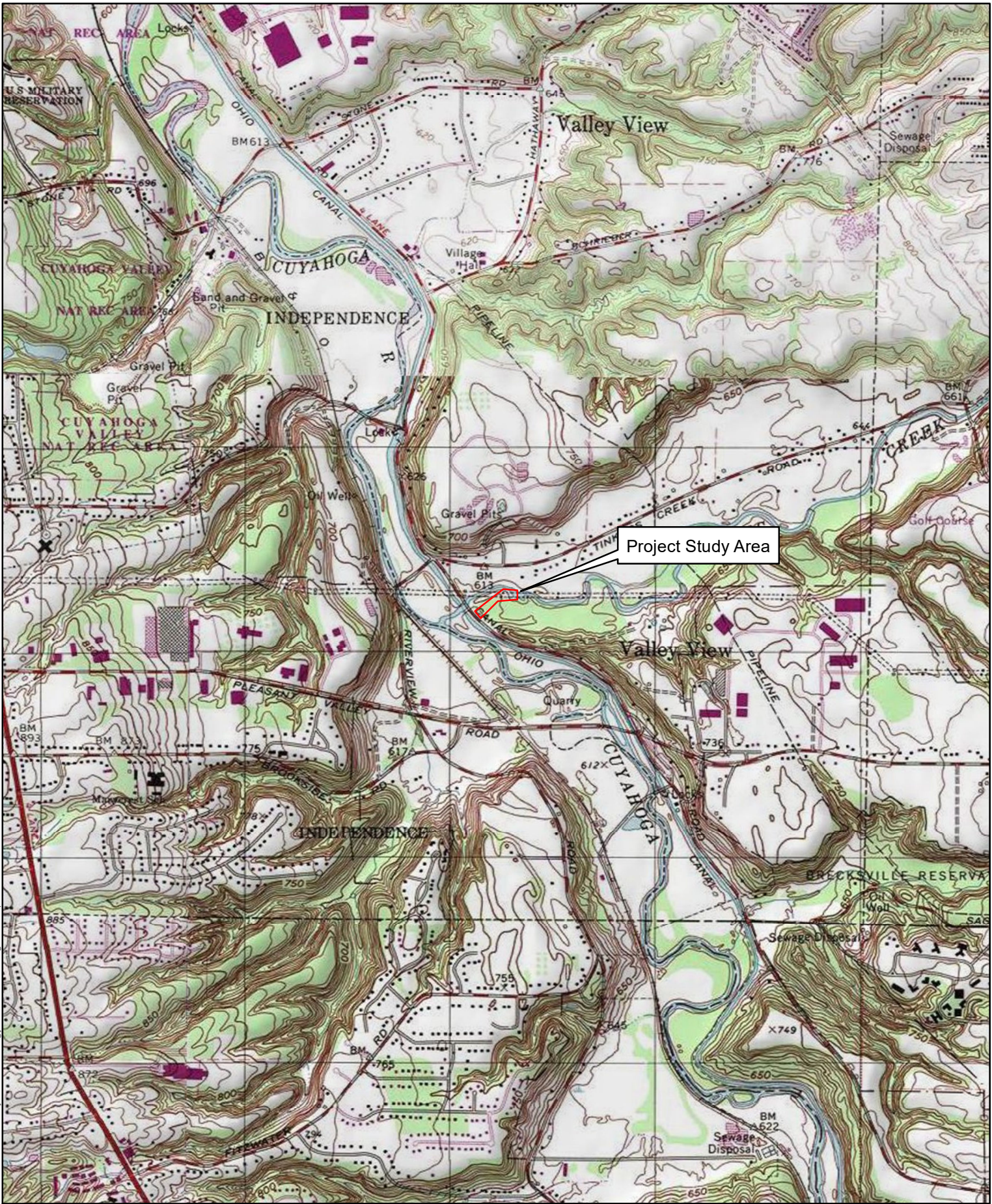
United States Geological Service. Northfield, Ohio. 7.5-Minute Topographic Quadrangle Map. U.S. Department of the Interior, Geological Survey.

U.S. Geological Survey, 2012, The StreamStats program, online at <http://streamstats.usgs.gov>



## Figures

- Figure 1 USGS Topographic Map
- Figure 2 Aquatic Features Locations Map
- Figure 3 County Soil Map
- Figure 4 National Wetlands Inventory Map



Project Study Area

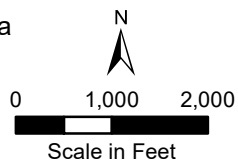


Figure 1 USGS Topographic Map  
 Juniper-Newburgh / Juniper-Jennings & Juniper-  
 Pleasant Valley Q1 & Q2 138kV Transmission Line  
 Structure Replacement Project  
 Cuyahoga County, Ohio



- Study Area
- Wetland
- Wetland Extends
- ✕ Wetland Point
- Upland Point

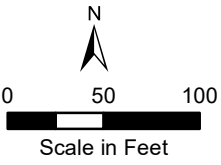
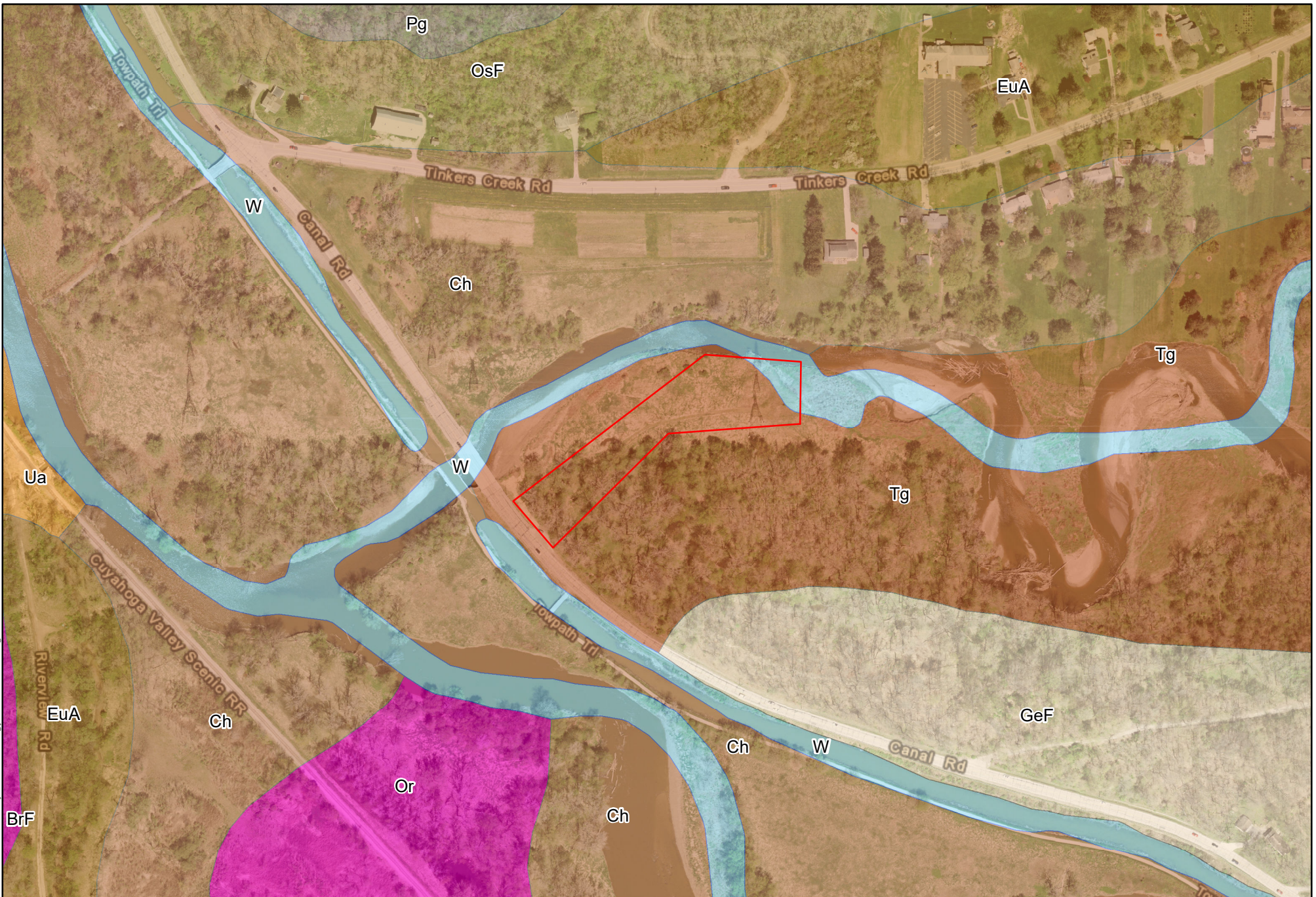




Figure 2  
 Aquatic Resources Map  
 Juniper-Newburgh / Juniper-Jennings & Juniper-Pleasant Valley Q1 & Q2 138kV  
 Transmission Line Structure Replacement Project  
 Cuyahoga County, OH



 Project Study Area  
 Hydric Soil

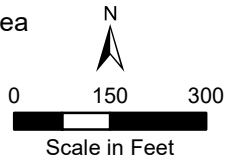
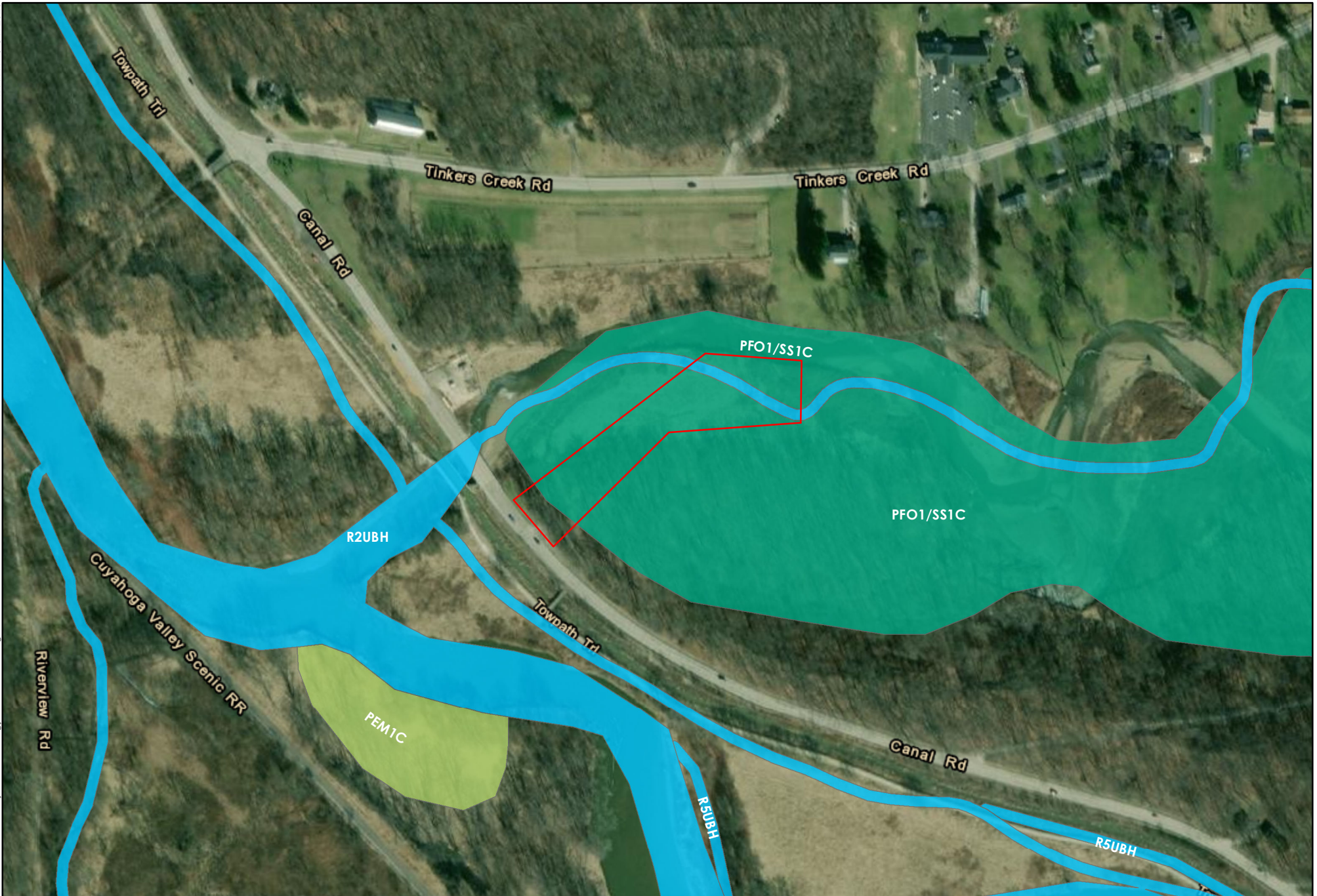


Figure 3  
Cuyahoga County Soil Map

Juniper-Newburgh / Juniper-Jennings & Juniper-Pleasant Valley Q1 & Q2 138kV Transmission Line Structure Replacement Project



- Project Study Area
- Pond
- NWI Wetlands**
- Emergent
- Forested/Shrub
- Lake
- Other
- Riverine

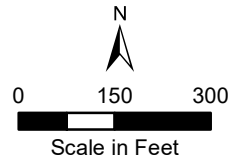


Figure 4 National Wetlands Inventory Map  
Juniper-Newburgh / Juniper-Jennings & Juniper-Pleasant Valley Q1 & Q2 138kV  
Transmission Line Structure Replacement Project  
Cuyahoga County, Ohio

## Appendix A Field Data Form

- Wetland Delineation forms
- ORAM form



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Tinker's Creek Tower Replacement City/County: Cuyahoga Sampling Date: 9/15/20  
 Applicant/Owner: First Energy State: OH Sampling Point: 0915-2  
 Investigator(s): Lincoln Scott, Brian Loushin Section, Township, Range: Unsectioned  
 Landform (hillside, terrace, etc.): depression/floodplain Local relief (concave, convex, none): concave Slope %: 1  
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.365405 Long: -81.606313 Datum: NAD 83  
 Soil Map Unit Name: Tg NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u> If yes, optional Wetland Site ID: <u>Wetland 1</u>
Remarks: (Explain alternative procedures here or in a separate report.)    	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)                   ___ Aquatic Fauna (B13) ___ Saturation (A3)                           ___ Marl Deposits (B15) ___ Water Marks (B1)                         ___ Hydrogen Sulfide Odor (C1) <u>X</u> Sediment Deposits (B2)                 ___ Oxidized Rhizospheres on Living Roots (C3) <u>X</u> Drift Deposits (B3)                        ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)                 ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)                        ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
--	--

<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
--	---

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: 0915-2

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>65</u></td><td>x 2 = <u>130</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>25</u></td><td>x 4 = <u>100</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>90</u></td><td>(A) <u>230</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.56</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>65</u>	x 2 = <u>130</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>90</u>	(A) <u>230</u> (B)	Prevalence Index = B/A = <u>2.56</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>65</u>	x 2 = <u>130</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>25</u>	x 4 = <u>100</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>90</u>	(A) <u>230</u> (B)																			
Prevalence Index = B/A = <u>2.56</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u> )																				
1. <u>Phalaris arundinacea</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Solidago canadensis</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Artemisia biennis</u>	<u>15</u>	<u>No</u>	<u>FACW</u>																	
4. <u>Verbesina alternifolia</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

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



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Tinker's Creek Tower Replacement City/County: Cuyahoga Sampling Date: 9/15/20  
 Applicant/Owner: First Energy State: OH Sampling Point: 0915-3  
 Investigator(s): Lincoln Scott, Brian Loushin Section, Township, Range: Unsectioned  
 Landform (hillside, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope %: 2  
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.36475 Long: -81.607826 Datum: NAD 83  
 Soil Map Unit Name: Tg NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u> If yes, optional Wetland Site ID: <u>Wetland 1</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)                      ___ Aquatic Fauna (B13) ___ Saturation (A3)                              ___ Marl Deposits (B15) ___ Water Marks (B1)                            ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)                      ___ Oxidized Rhizospheres on Living Roots (C3) <u>X</u> Drift Deposits (B3)                            ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)                      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)                            ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7) ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
--	--

<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
--	---

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: 0915-3

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Acer negundo</i></u>	25	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
2. <u><i>Populus deltoides</i></u>	25	Yes	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>50</u>	=Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
		=Total Cover		
<u>Herb Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Artemisia biennis</i></u>	55	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Phalaris arundinacea</i></u>	15	No	FACW	
3. <u><i>Lycopus americanus</i></u>	10	No	OBL	
4. <u><i>Lysimachia nummularia</i></u>	10	No	FACW	
5. <u><i>Impatiens capensis</i></u>	5	No	FACW	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>95</u>	=Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
		=Total Cover		
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____				

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





**VEGETATION** – Use scientific names of plants.

Sampling Point: 0915-1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>45</u></td><td>x 2 = <u>90</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>55</u></td><td>x 4 = <u>220</u></td></tr> <tr><td>UPL species <u>3</u></td><td>x 5 = <u>15</u></td></tr> <tr><td>Column Totals: <u>103</u></td><td>(A) <u>325</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.16</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>55</u>	x 4 = <u>220</u>	UPL species <u>3</u>	x 5 = <u>15</u>	Column Totals: <u>103</u>	(A) <u>325</u> (B)	Prevalence Index = B/A = <u>3.16</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>45</u>	x 2 = <u>90</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>55</u>	x 4 = <u>220</u>																			
UPL species <u>3</u>	x 5 = <u>15</u>																			
Column Totals: <u>103</u>	(A) <u>325</u> (B)																			
Prevalence Index = B/A = <u>3.16</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: _____)																				
1. <u>Solidago canadensis</u>	45	Yes	FACU																	
2. <u>Artemisia biennis</u>	30	Yes	FACW																	
3. <u>Fraxinus pennsylvanica</u>	10	No	FACW																	
4. <u>Dipsacus fullonum</u>	10	No	FACU																	
5. <u>Phalaris arundinacea</u>	5	No	FACW																	
6. <u>Daucus carota</u>	3	No	UPL																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

\_\_\_ 2 - Dominance Test is >50%

\_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

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

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

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

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

**Hydrophytic Vegetation Present?**      Yes           No   X  

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



**SOIL**

Sampling Point: 0915-1

<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/4	95	10yr 5/1	5	d	pl	Loamy/Clayey	
2-12	10yr 3/4	100					Loamy/Clayey	
12-18	10yr 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

**Remarks:**

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. ([http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_051293.docx](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx))

<b>Site:</b> FE Tinkers Creek	<b>Rater(s):</b> B. Loushin, L. Scott	<b>Date:</b> 09/15/2020
-------------------------------	---------------------------------------	-------------------------

<b>5</b>	<b>5</b>
max 6 pts.	subtotal

### Metric 1. Wetland Area (size).

Select one size class and assign score.

- >50 acres (>20.2ha) (6 pts)
- 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- 10 to <25 acres (4 to <10.1ha) (4 pts)
- 3 to <10 acres (1.2 to <4ha) (3 pts)
- 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- <0.1 acres (0.04ha) (0 pts)

<b>9</b>	<b>14</b>
max 14 pts.	subtotal

### Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

<b>20</b>	<b>34</b>
max 30 pts.	subtotal

### Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- High pH groundwater (5)
- Other groundwater (3)
- Precipitation (1)
- Seasonal/Intermittent surface water (3)
- Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- 100 year floodplain (1)
- Between stream/lake and other human use (1)
- Part of wetland/upland (e.g. forest), complex (1)
- Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- >0.7 (27.6in) (3)
- 0.4 to 0.7m (15.7 to 27.6in) (2)
- <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- Semi- to permanently inundated/saturated (4)
- Regularly inundated/saturated (3)
- Seasonally inundated (2)
- Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- None or none apparent (12)
- Recovered (7)
- Recovering (3)
- Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input checked="" type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____

<b>8.5</b>	<b>42.5</b>
max 20 pts.	subtotal

### Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- None or none apparent (4)
- Recovered (3)
- Recovering (2)
- Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- Excellent (7)
- Very good (6)
- Good (5)
- Moderately good (4)
- Fair (3)
- Poor to fair (2)
- Poor (1)

4c. Habitat alteration. Score one or double check and average.

- None or none apparent (9)
- Recovered (6)
- Recovering (3)
- Recent or no recovery (1)

Check all disturbances observed

<input type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input checked="" type="checkbox"/> herbaceous/aquatic bed removal
<input checked="" type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

<b>42.5</b>
subtotal this page

<b>Site:</b> FE Tinkers Creek	<b>Rater(s):</b> B. Loushin, L. Scott	<b>Date:</b> 09/15/2020
-------------------------------	---------------------------------------	-------------------------

42.5

subtotal first page

0	42.5
---	------

max 10 pts. subtotal

### Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- Lake Erie coastal/tributary wetland-restricted hydrology (5)
- Lake Plain Sand Prairies (Oak Openings) (10)
- Relict Wet Prairies (10)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migratory songbird/water fowl habitat or usage (10)
- Category 1 Wetland. See Question 1 Qualitative Rating (-10)

2

44.5

max 20 pts. subtotal

### Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- 1 Emergent
- Shrub
- 1 Forest
- Mudflats
- Open water
- Other \_\_\_\_\_

6b. horizontal (plan view) Interspersion.

Select only one.

- High (5)
- Moderately high(4)
- Moderate (3)
- Moderately low (2)
- Low (1)
- None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- Extensive >75% cover (-5)
- Moderate 25-75% cover (-3)
- Sparse 5-25% cover (-1)
- Nearly absent <5% cover (0)
- Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- Vegetated hummocks/tussucks
- 1 Coarse woody debris >15cm (6in)
- Standing dead >25cm (10in) dbh
- Amphibian breeding pools

#### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

#### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

#### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

#### Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Modified  
Category 2

44.5

# Appendix B Representative Photographs



Photograph 1. Representative view of Wetland 1 looking northeast.



Photograph 2. Representative view of Wetland 1 looking southwest.



Photograph 3. Representative view of Wetland 1 looking northeast.

# Appendix C Methodology

## Methodology

### Wetlands

Prior to performing any field studies, the County Soil Survey map, the USGS 7.5-Minute Topographic Quadrangle Map, and the National Wetlands Inventory (NWI) map were analyzed in detail to determine the presence of any previously-identified freshwater wetlands within the study area boundary.

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any wetlands not annotated on the reviewed sources.

For any suspected wetland areas, the wetland determination is performed based upon the Routine Level On-Site method as outlined in the 1987 USACE Manual. This method consists of collecting a data point within an area that exhibits wetland characteristics. Within this area vegetation is identified, hydrology is assessed, and soils to a depth of at least 18 inches are identified and described. This method is accepted by the USACE and takes into consideration the three wetland parameters (1. Vegetation, 2. Soils, 3. Hydrology) covering both normal and atypical situations. Subsequently, an upland data point within an area adjacent to the delineated wetland, which did not exhibit wetland characteristics, is collected in the same manner, to provide contrasting evidence.

### *Vegetation*

All habitat types within the study area boundary are identified and the distribution of individual plant species is noted. The existing vegetation is analyzed with respect to percentage of cover for each species. This involves estimation of existing plant species composition by direct observation. Wetlands, as stated previously, are usually characterized by the predominance of hydrophytic plant species. Conversely, upland areas would be dominated by more xerophytic species, or plants better adapted to drier soil conditions. A mesic zone, or the transition between wetland and upland habitat, is often comprised of a mixture of FACW, FAC, and FACU species.

With respect to the vegetation, the USACE Manual places great emphasis on the presence of hydrophytic plant species as an indicator of wetland conditions. It is determined which species are dominant within each plant community. The determination of whether or not an herbaceous species is dominant is based on percentage of cover. Vegetative dominance is calculated as described in the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands (50/20 method).

The species indicator classification/status is determined and recorded for each dominant plant species found at the site. This information is used in conjunction with their percentage of cover to determine whether a prevalence of wetland species exists in any of the vegetation communities occurring within the study area boundary. Species indicator classification/status information is obtained from the USACE's The National Wetland Plant List: 2013 wetland ratings for the State of Ohio (Lichvar, 2013).





### *Soils*

During the field investigation of the study area, a spade shovel is used to dig soil test pits to accurately document the extent of hydric soil conditions. The test pits are dug to a depth of approximately 18 inches and the soil is examined for color, texture, and moisture content. Soil color is determined in the field using the 2009 Edition of the Munsell Soil Color Charts. Hydric soils are identified by color/chroma. The Munsell designation indicates the soil color as removed from the test pit. Hydric soil determinations are made in strict accordance with USACE criteria.

Weather conditions during the soil identification procedures for this investigation were tepid (approximately 68°F) and partly cloudy.

### *Hydrology*

Hydrology indicators [including inundation, soil saturation (within the root zone), water marks, sediment deposits, etc.] are used in conjunction with vegetation and soil characteristics to establish the presence/absence of freshwater wetlands. The study area is also evaluated for signs of past human disturbances to determine whether any identified features had been created by man (man-induced wetland) or if the hydrologic regime of the feature had been recently altered. While hydrology is the driving force in wetland creation, it is often the least exact and most difficult to identify in the field. Field indicators are often used to assess the hydrology of an area, especially during times when surface water is not present, or during times of low groundwater, as it might otherwise be difficult to identify.

### *Wetland Evaluation*

The ORAM Version 5.0 is used to rate any wetland observed within the study area boundary in accordance with current Ohio EPA standards, and to determine the appropriate regulatory category in which to place the wetland. This assessment is also used to assess the overall ecological quality and the level of function of a particular wetland. The numeric score obtained from the ORAM field form is not, and should not be considered, an absolute number with intrinsic meaning. The numeric score does, however, allow for relative comparisons between wetlands to be made.

#### Interim Scoring Break Points for Wetland Regulatory Categories for ORAM

Category	ORAM v5.0 score
1	0 - 29.9
1 or 2 gray zone	30 - 34.9
Modified 2	35 - 44.9
2	45 - 59.9
2 or 3	60 - 64.9
3	65 - 100

In general, Category 1 wetlands are those wetlands that support minimal wildlife habitat, and minimal hydrological and recreational functions. Category 1 wetlands do not provide critical

habitat for threatened or endangered species or contain rare or otherwise sensitive species. Category 2 wetlands support moderate wildlife habitat or hydrological functions. Category 2 wetlands may include the presence of native plant species, but generally do not support threatened or endangered wildlife. Category 3 wetlands support superior wildlife habitat and hydrologic functions. Category 3 wetlands also can have high levels of diversity with a high proportion of native species producing high functional value.

Any wetland observed within the study area boundary is also identified to their respective Cowardin et al. (1979) classification. In brief, this method requires that the delineator classify systems based on the areal extent of vegetative cover. If vegetation covers 30% or more of the substrate, classes are distinguished on the basis of the life form of the plants that constitute the uppermost layer of vegetation and that possess an areal coverage 30% or greater.

The boundary of any wetland identified within the study area boundary is flagged and recorded in the field with a Trimble Geo-XH hand-held GPS with sub-meter horizontal accuracy. The boundary data that is collected is spatially accurate to <1.0 meter and conforms to the most recent USACE criteria for wetland delineation boundary surveys.

### Streams

Prior to performing any field studies, the County Soil Survey map, the USGS 7.5-Minute Topographic Quadrangle Map, and the NWI map were analyzed in detail to determine the presence of any previously-identified streams within the study area boundary.

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any streams not annotated on the reviewed sources.

If any streams are identified within the study area boundary, their drainage area is calculated using the USGS StreamStats for Ohio website (USGS StreamStats Ohio, 2010) to first determine if the stream is considered a Primary Headwater Habitat (PHWH) Stream (<1.0mi<sup>2</sup>), or a non PHWH Stream (>1.0mi<sup>2</sup>). If the stream is determined to be a PHWH Stream, the Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams is used to assign a Headwater Habitat Evaluation Index (HHEI) score for the stream. The HHEI evaluation requires the examination of three habitat variables (channel substrate composition, bankfull width, and maximum pool depth) to sufficiently separate PHWH streams into Class I, Modified Class I, Class II, Modified Class II, and Class III PHWH streams. Once an HHEI score is established for a stream, the decision making flowchart from the Field Evaluation Manual for Ohio's PHWH streams is reviewed to determine the appropriate designation of stream class. Following the flowchart, where it was warranted, further evaluation for potential Rheocrene Biotic Communities may be required. This evaluation includes conducting a Headwater Macroinvertebrate Field Evaluation Index (HMFEI) and an investigation of the aquatic vertebrates (fish and amphibians) utilizing the stream. The flow regime of the stream is determined in the field based on stream morphology and site conditions at the time of the investigation.

If a stream is identified as a Non-PHWH Stream (drainage area >1.0mi<sup>2</sup>), the stream is characterized by completing a Qualitative Habitat Evaluation Index (QHEI) assessment (Rankin, 1989). The QHEI field method requires the examination of six stream habitat characteristics. The evaluation and rating of these six habitat characteristics can yield a qualitative score from 7-100. A low score is indicative of a stream with relatively low ecological/habitat value for fish or macroinvertebrates, etc. A score near the middle of the range is indicative of moderate habitat, and a score near the high end of the range could indicate an exceptional stream community. The six stream habitat characteristics that are evaluated included substrate quality, in-stream cover, channel morphology, riparian zone quality, pool/glide and riffle/run quality, and stream gradient.

Similar to the wetlands, the centerline of streams within the study area is recorded in the field with a Trimble Geo-XH hand-held GPS with sub-meter horizontal accuracy.

### Ponds

Prior to performing any field studies, the County Soil Survey map, the USGS 7.5-Minute Topographic Quadrangle Map, and the NWI map were analyzed in detail to determine the presence of any previously-identified ponds within the study area boundary.

Following the literature review, further investigation included inspection on foot during the field reconnaissance portion of the project to confirm the information gathered from the literature review, and to identify any ponds not annotated on the reviewed sources. Ponds were identified as those areas with permanent inundation and lacking hydrophytic vegetation indicators.

# Appendix D

## List of Preparers



## Brian Loushin, Environmental Scientist

Mr. Loushin received his Bachelors of Science Degree in Environment and Natural Resources from The Ohio State University in Columbus, Ohio. He has experience with field data collection, ecological surveys, and Environmental Site Assessment (ESA) projects. Brian assists in coordination efforts with the State Historic Preservations Office (SHPO), Ohio Environmental Protection Agency (OEPA), the U.S. Fish and Wildlife Service (USFWS) and various Divisions of Ohio Department of Natural Resources (ODNR) to complete file reviews and natural heritage database reviews. He also assists in the preparation of technical documents.

### Special Training

Course/Program	Date Completed
The University of Akron, Leaders at All Levels	March 2014
OSHA 40-Hour Health and Safety Training – Cincinnati State	December 2014
Wetland Delineation Training Course – Midwest Biodiversity Institute	April 2015
Ohio Rapid Assessment Method for Wetland v5.0 Training Course – Ohio Environmental Protection Agency	May 2015
State of Ohio Asbestos Hazard Evaluation Specialist	November 2017
Asbestos Management Planner Course – Training Services International	November 2017
Asbestos Building Inspector Course – Training Services International	November 2017
Ohio Department of Transportation OES – Ecological Training Course	March 2018

## Lincoln Scott, Director Environmental Services

Mr. Scott received his bachelor's degree in Biology from Kent State University. As the Director of Environmental Services, Mr. Scott provides more than 23 years of experience conducting a wide variety of ecological and environmental studies. As the Director of Environmental Services Mr. Scott works through all aspects of a project from early planning and field studies to QA/QC. Mr. Scott has managed a diverse mix of projects in over 30 states, he has a deep understanding of wetland delineation and waterway permitting protocols.

### Special Training

Course/Program	Year Completed
Army Corps of Engineers Wetland Delineation Methods and Management	1998
OSHA 40-Hour Health and Safety Training	1999
Freshwater Wetland Construction and Mitigation Techniques – Rutgers University, Cook College	2000
Nationwide Permits Course – Wetland Training Institute	2000
Ohio Rapid Assessment Method for Wetland v5.0 Training - OEPA	2002
HHEI Headwater Habitat Assessment Training - OEPA	2003
QHEI and Bio-Criteria Workshop – Ohio University	2010
Aquatic Macroinvertebrate Training – Ohio University	2010
Chemical Methods Training (Aquatic) – Ohio University	2010
Wetland Plant Identification – Dr. Robert Mohlenbrock	2012
ODOT Ecological Manual Training	2017
ODOT Waterway Permits Training	2018