AMERICAN TRANSMISSION SYSTEMS, INCORPORATED
A FIRSTENERGY COMPANY

LETTER OF NOTIFICATION

ASHLAND SUBSTATION AND 138 kV TRANSMISSION LINES STRUCTURE ADDITION PROJECT
OPSB CASE NO.: 20-1459-EL-BLN

November 24, 2020

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

LETTER OF NOTIFICATION
ASHLAND SUBSTATION AND 138 kV TRANSMISSION LINES
STRUCTURE ADDITION 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 ("OPSB") as a Letter of Notification application.

4906-6-05: ACCELERATED APPLICATION REQUIREMENTS

4906-6-05: Name

Name of Project: Ashland Substation and 138 kV Transmission Lines Structure Addition Project ("Project").

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

In this Project, American Transmission Systems, Incorporated ("ATSI") proposes to construct the new 138 kV/69 kV Ashland Substation, approximately 89,500 square feet in size, along with associated transmission line connections. The Ashland Substation will be configured to include five line exits (two 138 kV transmission lines and three 69 kV transmission lines). The existing Brookside-Howard 138 kV Transmission Line will loop into the new substation creating the Ashland-Brookside and Ashland-Howard 138 kV transmission lines. The existing Brookside-Leaside 138 kV Transmission Line will physically connect to the new substation as engineering mitigation for potential transmission line blowout and a future 138 kV source if needed but will not be electrically connected at this time. The Project will involve the addition of two (2) single steel double circuit monopoles and the removal of one (1) existing steel lattice tower from the existing double-circuit Brookside-Howard and Brookside-Leaside 138 kV transmission line corridor. The new steel monopoles will be installed one on each side of the substation along the same centerline as the existing Brookside-Howard and Brookside-Leaside 138 kV

transmission lines. In addition to the construction of the substation and installation of the two new single steel monopoles, new conductor will need to be installed on each transmission line. To loop the existing Brookside-Howard 138 kV Transmission Line into the new substation, the existing 336.4 kcmil 18/7 ACSS/TW will be replaced with approximately 500 feet of 795 kcmil 26/7 ACSR and will be installed from the new single steel monopoles to the new substation. To connect the existing Brookside-Leaside 138 kV Transmission Line to the new substation, the existing 336.4 kcmil 18/7 ACSS/TW will be replaced with approximately 500 feet of 556.5 kcmil 26/7 ACSR and will be installed from the new single steel monopoles to the new substation.

The general location of the Project is shown in Exhibit 1, a partial copy of the United States Geologic Survey, Richland County OH, Quad Map. Exhibit 2 is a copy of ESRI aerial imagery of the Project area. The Project is located at approximately 2384 State Route 39, Jackson, OH 44903. The general layout is shown in Exhibit 3. The Project is located in Milton Township and the City of Ashland, Ashland County Ohio.

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

The Project meets the requirements for a Letter of Notification because the Project is within the types of projects defined by Item (3) of the Application Requirement Matrix for Electric Power Transmission Lines, Appendix A of OAC Rule 4906-1-01. The Project is also within the type of projects defined by Item (2)(a). These items state:

> *(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,*
>
> *and;*
>
> *(3) Construction of a new electric power transmission substation.*

The proposed Project is within the requirements of Item (2)(a) because it involves adding two (2) steel monopoles to existing transmission lines and increasing conductor size, as well as within the requirements of Item (3) because it involves construction of a new ring bus that falls within the definition of a new electric power transmission substation.

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

This Project involves making improvements to the reliability and operational flexibility of the transmission system in the Project Study area to strengthen the transmission system under certain contingencies and to increase the resiliency, efficiency, and operational flexibility of the transmission system in the Project area. The proposed Project will create a 138 kV three-breaker ring bus substation yard and a 69 kV five-breaker ring bus substation yard which will mitigate voltage concerns and the risk of outages under contingency conditions that exist with the current system configuration. Additionally, at the completion of this Project there will be an additional 138 kV source in the region to support load growth and economic development. Finally, the Project will network three existing radial 69 kV transmission lines exiting the Brookside Substation. Networking the three radial transmission lines will improve reliability for the customers served from the lines since the lines will be fed from two different sources. As a result, outage duration will be reduced by providing the additional source to each of the three transmission lines. The Project is located within the City of Ashland, Ashland County, Ohio.

The proposed Project is the best option within this Project area to improve electric service to approximately 22,400 customers and 90 MW of load served by the affected transmission system. Moreover, the proposed design will augment capacity for economic development and load growth within the area. Compared to Project alternatives, the solution chosen not only addresses the potential local voltage collapse condition resulting from an outage of the Brookside 138 kV Substation, but also allows ATSI to network three 69 kV radial circuits to improve reliability and service for approximately 12,800 customers and 56 MW of load. Table 1 below identifies the impacted radial lines and the number of customers and load at risk for each line.

To recognize the system improvements that result from the Project, ATSI will need to complete two upgrades, one of which is jurisdictional (new substation) and one of which is not jurisdictional. The two components are:

1. Construct a new Ashland 138/69 kV Substation by looping in the existing Brookside-Howard 138 kV Transmission Line. The substation will consist of a 138 kV three-breaker ring bus and a 69 kV five-breaker ring bus with one 138/69 kV transformer.

2. Network three radial 69 kV lines from Brookside Substation into the new Ashland 138/69 kV Substation by constructing approximately 3.4 miles, 3.1 miles, and 0.2-mile-long sections of 69 kV transmission line. The new 69 kV networked lines will be the Ashland-Brookside #1 69 kV, the Ashland-Brookside #2 69 kV and the Ashland-Brookside #3 69 kV transmission lines. Although these new 69kV transmission lines are not jurisdictional, the construction of the new substation makes it possible for ATSI to construct them and to recognize the significant 69kV transmission system improvements that networking these three radial lines will provide.

Implementation of these upgrades is necessary to fully address the system reinforcements needed to achieve significant system improvements. More specifically, the Project is needed to reinforce the 69 kV and 138 kV ATSI transmission system in the project area to continue to provide safe and reliable electric service to the area and to provide capacity for economic development and load growth within the area.

The Project was submitted as a Supplemental Project to the PJM Regional Transmission Expansion Plan (RTEP) at the Subregional RTEP-Western Committee on August 31, 2018. The proposed solution was presented at the Subregional RTEP-Western Committee on September 28, 2018. The presentation slides are attached as Exhibits 4 and 5 respectively.

Background on Attachment M-3 of the PJM Open Access Transmission Tariff (OATT) Supplemental Project Planning Process

Supplemental Projects are transmission owner ("TO") initiated projects and part of the local planning process. The local planning process is conducted in accordance with Attachment M-3 of the PJM Open Access Transmission Tariff ("OATT"). Under the process set forth in

Attachment M-3, ATSI, as a TO, provides information regarding the criteria used to plan and identify supplemental projects at an "Assumptions" meeting. The Assumptions meeting is held on an annual basis, most recently on December 18, 2019. Following an Assumptions meeting, the TO develops and presents specific individual supplemental projects to PJM at monthly meetings as the specific projects are identified.

The process for developing specific supplemental projects builds on the assumptions identified generally and includes identification and review of system needs to be addressed by a specific project at separate Needs meetings. At the specific Needs meetings, stakeholders are provided an opportunity to comment on the specific supplemental project.

Next, there is a Solutions meeting where potential solutions are discussed for a specific supplemental project, as well as any alternatives identified. Stakeholders may then provide comments on the potential solutions. Following the Solutions meeting for the specific supplemental project, PJM performs a no-harm analysis. If PJM determines that there will be no harm to the transmission system from the project, the TO is permitted to proceed with the supplemental project.

ATSI supplemental projects are typically either a request for electric service from a new or existing customer and/or a project identified pursuant to FirstEnergy's Energizing the Future methodology, which is discussed with PJM stakeholders during the Assumptions meetings. This methodology and any identified projects are presented to PJM and the PJM stakeholders in accordance with the PJM OATT, Attachment M-3, process as described above. ATSI projects, like the proposed Project, are presented at the PJM Subregional RTEP-Western Committee meetings, which occur monthly. Supplemental upgrades that have been reviewed through the Attachment M-3 process are identified by PJM with an "s" followed by a four-digit number. Supplemental upgrades are not mandated or directed by PJM but are necessary to address planning functions not transferred to PJM (e.g. asset management and customer interconnections). These supplemental projects reflect the TOs' obligation to reliably serve its local service territory and are grounded in good utility practice.

In general, FirstEnergy's reliability enhancement methodology is intended to: (i) proactively upgrade and replace transmission lines and substation components that present an increasing risk to reliability; (ii) modernize the companies' transmission infrastructure by implementing technological advances to enhance reliability and promote increased efficiencies; (iii) increase or restore load serving capability; (iv) improve the resiliency of the existing transmission system to better withstand and recover from storms and unusual weather events such as extreme heat and cold; (v) address heightened concerns with cyber and physical security; (vi) improve customer reliability by installing new equipment with real-time monitoring capabilities to optimize maintenance intervals and reduce the likelihood of equipment failure; and (vii) better address customers' needs by reducing the duration and frequency of unscheduled outages. Reliability enhancement projects, like the proposed Project, are largely driven to meet increased reliability demands of customers.

Discussion of Need for Project under Attachment M-3 process as well as other need considerations.

The Brookside 138 kV Substation serves a significant number of customers and has eight 138 kV sources. The Brookside Substation has three 138/69 kV transformers and one 138-12.47 kV distribution transformer. Furthermore, the 69 kV system at Brookside is comprised of the following lines/loads and serves the majority of the load in the area:

Table 1. Transmission lines and loads served from Brookside Substation.

Transmission Line/Load	Radial/ Networked	Customers at Risk	MW at Risk
Industrial (Brookside) 69 kV Transmission Line[1]	Radial	4,400	23
Hale (Brookside) 69 kV Transmission Line[1]	Radial	3,900	14
Fairview (Brookside) 69 kV Transmission Line[1]	Radial	4,500	19
Brookside-Homer 69 kV Transmission Line	Networked	5,900	21
Jerome (Brookside) 69 kV Transmission Line	Radial	3,000	9
Brookside 138-12.47 kV distribution transformer	Networked	700	4
Totals		22,400	90

[1]Radial lines to be networked by proposed Project.

The existing Brookside 138 kV Substation was designed and constructed as a straight bus configuration. This straight bus configuration is a less reliable design when compared to ATSI's current substation design standard of a ring bus or breaker-and-a-half substation design. A straight bus design has several points of failure, including when a breaker fails to trip. As currently configured, a breaker's failure to trip at the Brookside Substation results in the loss of power to all transformers and lines connected to the bus, results in a complete outage of the station. Straight bus configurations are more susceptible to these failures and are significantly less reliable than the current design standards.

As the substation is currently operating, either a fault on the Brookside 138 kV bus or a line fault with a breaker failure to trip will result in a complete station outage because all 138 kV sources into Brookside will be interrupted.

This failure will result in a local voltage collapse on the Brookside 69 kV system and a thermal overload on the Brookside-Homer 69 kV Transmission Line, resulting in an outage to approximately 22,400 customers and 90 MW of load. In addition to the large number of residential customers served on this system, there are several large customers in this area, including the City of Ashland, Ashland University, FE Meyers Co., Wil Research, and several wholesale customers.

The current configuration of the Brookside Substation, with radial transmission lines exiting the substation, is inconsistent with both current FirstEnergy standards and current operating guidelines for PJM TOs.

PJM's General Transmission Owner Guidelines are intended to:

- Minimize the magnitude and duration of system outages in the event of a component failure
- Minimize widespread system effects on voltage, dynamic stability, etc., that occur because of unplanned events
- Facilitate the isolation of failed component(s) while maximizing the amount of transmission system equipment that can remain in service; and
- Include plans for expeditious restoration of failed facilities/components (such as dedicated spare equipment, etc.).

To meet these minimum standards, FirstEnergy's Requirements for Transmission Connected Facilities, the company's minimum design standards, require that all new substations must, at a minimum, include a breaker-and-a-half or a ring bus configuration.

Since the current Brookside Substation configuration does not meet current standards for transmission substations and the existing 69 kV radial transmission lines have a high exposure risk to local load loss and do not provide adequate operational flexibility during outage events, ATSI identified the Brookside Substation as a candidate substation for review for a reliability enhancement project. Applying FirtsEnergy's reliability enhancement methodology, this review concluded that a reliability enhancement project was warranted and that the best solution to mitigate the contingency, improve reliability, and provide increased operational flexibility was to provide another 138 kV source in the area as well as to network the 69 kV radial transmission lines out of Brookside Substation. The proposed Project meets these requirements. Alternatives considered were inadequate because they did not address a solution for networking the existing radial 69 kV transmission lines (which would all still be susceptible to a complete outage if there were a line fault on any one of them).

It is important to note that ATSI's transmission planning is based on deterministic criteria, not probabilistic criteria. In other words, ATSI's transmission planning reinforces the transmission system based on anticipated occurrence of an adverse planning event, not the weighing the probability of such event occurrence. Although ATSI cannot know or predict when a failure or fault will occur, outages on the Brookside 138 kV Substation bus have in fact been occurring since 2012. By adding the new Ashland 138/69 kV Substation, the Project will eliminate the potential for customer outages and a voltage collapse/thermal overload occurring from a fault on the Brookside 138 kV Substation bus.

From 2012 to the present, the Brookside 69 kV system has experienced twelve momentary outages and nineteen sustained outages with an average duration of 493 minutes. This Project was identified as the best solution to address these conditions.

The Project will improve operational flexibility and efficiency during outage, maintenance, and restoration efforts; reduce the amount of local load loss under Planning Events P1 (i.e. single

contingency – transmission circuit) and P2 (i.e. single contingency – bus fault or line fault with a breaker failure) contingency conditions; and strengthen the 138/69 kV system voltage under Planning Event P2 contingency conditions. PJM evaluated the proposed Project and did not identify any FirstEnergy or PJM Planning Criteria violations caused by the Project. PJM assigned the Project supplemental upgrade identification number s1714. The PJM SSRTEP-Western presentation slides are included as Exhibit 4 and 5 and include additional details of the Project drivers.

Based on a review of contingency scenarios described above, which are those most likely under the current configuration of the substation and transmission system, there are significant negative impacts to the reliability metrics System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), and Customer Average Interruption Duration (CAIDI) for the Ohio Edison region of FirstEnergy if the Project is not completed. These negative impacts are summarized in Table 2 below and assumes 22,400 customers interrupted based on the contingency scenarios described above for a three-hour duration. This outage duration was determined based on historic off-hours outage restoration times and includes the time necessary to assemble a crew, dispatch the crew to the scene, allow the crew time to determine the issue, and then for the crew to perform switching to restore customers.

$$SAIDI = \frac{\sum Customer\ Minutes\ Interrupted}{\sum Customers\ Served}$$

$$SAIFI = \frac{\sum Customer\ interrupted}{\sum Customers\ served}$$

$$CAIDI = \frac{\sum Customer\ minutes\ interrupted}{Customers\ interrupted}$$

Table 2. Impact to Reliability metrics due to customers interrupted under Contingency

SAIDI Impact	SAIFI Impact	CAIDI Impact	System CAIDI Increase
3.869	0.02150	180	1.2

The Project will mitigate the potential for outages under the contingency scenarios as described above and will improve reliability and operational flexibility in the Project area.

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 transmission 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 Brookside-Leaside 138 kV and Brookside-Howard 138 kV Transmission Lines. The Project area is located approximately 8 ½ inches (11" x 17" printed version) from the left edge of the map and 4 ¾ 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 and 2. The new Ashland Substation and associated transmission line connections are included in the 2020 LTFR.

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

- No action – Continued operation of the system as currently configured places approximately 22,400 customers and 90 MW of load at continued risk of the loss or disruption of service.
- Reconfigure Brookside Substation to add another 138/69 kV transformer to support the 69 kV system - This alternative was not selected since a bus fault or a line fault with a stuck breaker would result in an outage on the bus which would result in a potential voltage collapse and thermal overload with a loss of approximately 22,400 customers and 90 MW of load. This alternative would also result in continuing to serve approximately 56 MW and 12,800 customers on the three radial 69 kV transmission lines in the Brookside area.
- Convert Brookside Substation to a breaker-and-a-half configuration to eliminate the straight bus configuration – This alternative was not selected because there is not physical space to rebuild Brookside Substation as a breaker-and-a-half station. In addition, this alternative does not provide operational flexibility and reliability improvements to the approximately 12,800 customers and 56 MW of radially fed load if outages occurred on any of three radial 69 kV lines.

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

ATSI will issue a public notice in a newspaper of general circulation in the Project area within 7 days of filing this Letter of Notification application. The notice will comply with OAC Rules 4906-6-08(A) (1) through (6). In addition to the public notice, ATSI will mail letters explaining the Project to affected landowners and tenants within and contiguous to the planned Project area. ATSI has also established a Project website: https://www.firstenergycorp.com/about/transmission_projects/ohio.html .

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Project as necessary.

Finally, during all phases of this Project, ATSI will maintain the transmission projects hotline at 1-800-589-2837 and respond to questions submitted via email at: transmissionprojects@firstenergycorp.com. The public may use either the hotline or email to ask questions or leave comments on the Project for ATSI.

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

The construction schedule for this Project is expected to begin as early as March 1, 2021 and completed by November 1, 2021.

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

Exhibit 1 depicts the general location of the Project. This Exhibit provides a partial copy of the United States Geologic Survey, Ashland County OH, Quad Map. Exhibit 2 is a copy of ESRI aerial imagery of the Project area.

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

No new ROW is needed for the transmission line work, and property has been obtained for the substation. Table 3 contains a list of property owners affected by the Project.

Table 3. List of Affected Property Owners

Parcel Number	Property Owner	Property Address	Easement Status
G22-024-0-0003-05	David C. & Linsey A. Mager	1566 Baney Road, Ashland OH 44805	Existing easement. No additional rights needed.
G22-024-0-0008-00	Board of County Commissioners	110 Cottage Street, Ashland OH 44805	Obtained
G22-024-0-0009-00	Board of County Commissioners	110 Cottage Street, Ashland OH 44805	Obtained
TBD	ATSI	(TBD) Baney Rd, Ashland OH 44805	Owned in Fee (transferred 10-2-2020)
P44-082-0-0001-01	1750 Baney LLC	1750 Baney Road, Ashland OH 44805	Existing easement. No additional rights needed.

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

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

The transmission line construction will have the following characteristics:

Voltage: 138 kV

Conductors: 795 kcmil 26/7 ACSR - Brookside-Howard 138 kV
556.5 kcmil 26/7 ACSR - Brookside-Leaside 138 kV

Static Wire: 7#8 Alumoweld (existing and new)

Insulators: Polymer

ROW Width: 100 feet (existing 138 kV Transmission Corridor)

Structure Types: Exhibit 6: 138 kV Steel Monopole Double Circuit Deadend, (2) Structures required.

The equipment and facilities described below will be located within the fenced area of the proposed Project once construction is complete.

Materials:

138/69 kV transformer – (1)
138 kV Circuit Breakers – (3)
69 kV Circuit Breakers – (4)
Relay Panels – (11)
138 kV Switches – (9)
138 kV Capacitive Voltage Transformer (“CVT”) – (9)
138 kV Wave Trap – (1)

69 kV Switches – (16)
69 kV Capacitive Voltage Transformer ("CVT") – (12)
69 kV Station Service Voltage Transformer ("SSVT") – (2)

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

The closest occupied residence or institution is approximately 400 feet from the proposed transmission line centerline therefore no Electric and Magnetic Field ("EMF") calculations are required by this code provision.

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

The estimated capital cost for the proposed Project is approximately $11,621,500 paid by ATSI.

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

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

The Project is located in Milton Township and the City of Ashland, Ashland County Ohio. The main land use around the Project area is zoned as farmland. No new ROW is needed for the transmission line work, and property has been obtained for the substation.

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

Agricultural land does not exist within the Project 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 archeological or cultural resource sites within 0.5 mile of the Area of Potential Effect ("APE"). A map of the results of the search is shown in Exhibit 7.

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 no listed NRHP sites and no NRHP eligible sites were identified within 0.5 mile of the Project area.

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. There is no OAI listed archeological resource that has been previously inventoried within 0.5 mile of the Project area. There are no listed structural resources located within 0.5 mile of the Project area. No previous cultural resource surveys were conducted within 0.5 mile of the Project area. No OSG cemeteries are located within 0.5 mile of the Project area.

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

Table 4 shows the list of government agency requirements and their status at the time of filing.

Table 4. List of Government Agency Requirements to be Secured Prior to Construction

Agency	Permit Requirement	Permit Requirement
Ashland County	Access Permit Application	Will be Filed
Ohio Environmental Protection Agency	General NPDES Construction Storm Water Permit Application	Submitted on October 6, 2020
	Clean Water Act – Section 401 Water Quality Certification – Individual Permit Application	Ohio Rapid Assessment Methodology – OEPA Field Review completed on July 8, 2019 and updates provided by OEPA on July 11, 2019. Updated ORAM and wetland report provided to OEPA on July 22, 2019. •Section 401 was submitted on October 6, 2020 and re-submitted on October 16, 2020.
United States Army Corps of Engineers	Preliminary Jurisdictional Determination (Exhibit 8)	• Initial request for review sent on 5/14/2019 and approved on 5/23/2019. • Revised Pre-JD request reflecting changes as result of ORAM verification and additional review areas sent on 9/17/2019. USACE approved revised Pre-JD on 10/9/2019
	Clean Water Act – Section 404 – Individual Permit Application	•Pre-Application Meeting Early November •Section 404 was submitted on October 09, 2020*. •USACE posted the public notice on October 28, 2020.

***** In summary, ATSI is proposing permanent fills within 1.08-acres of forested and 0.62-acre of non-forested wetland habitat. Additionally, ATSI is proposing a permanent conversion of forested wetland habitat of approximately 0.25-acre and temporary fills from timber matting within 0.03-acre of non-forested wetland habitat.

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

As part of the investigation, AECOM, on behalf of ATSI, submitted a request to the Ohio Department of Natural Resources ("ODNR") Office of Real Estate to conduct an Environmental Review on February 13, 2019. As part of the Environmental Review, the ODNR Office of Real Estate conducted a search of the ODNR Division of Wildlife's Natural Heritage Database to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project area. The ODNR's Office of Real Estate's response on March 28, 2019 indicated that the Project area is within range of one (1) state and federally endangered species, one (1) state and federally threatened species, two (2) state endangered species, one (1) state threatened species, and one (1) potentially state threatened species. A copy of ODNR's Office of Real Estate's response is included as Exhibit 9**.**

As part of the investigation, a request for comments was also submitted to the United States Fish and Wildlife Services ("USFWS"). The USFWS's February 20, 2019 response is attached as Exhibit 10.

Both the, ODNR and USFWS responses indicated that the Project is within the range of the federally and state endangered Indiana Bat (*Myotis sodalis)*. USFWS response indicated that the Project is within the range of the federally threatened Northern Long-Eared Bat *(Myotis septentrionalis)*. Tree clearing necessary to support construction will be scheduled between October 1st and March 31st to avoid affecting potential habitat for any federally or state listed bat species. If this schedule cannot be achieved and the clearing of trees outside of this window is deemed necessary, consultation with ODNR and USFWS will be completed prior to clearing.

The ONDR's response also indicated records of the following aquatic species within one mile of the Project area:

- Iowa Darter *(Etheostoma exile)* - state endangered fish.
- Greater Redhorse *(Moxostoma valenciennesi)* - state threatened fish.
- Eastern Hellbender *(Cryptobrunchus alleganiensis)* - state endangered species and a federal species of concern.

The ODNR comments indicate that the Project is not likely to impact these species due to location, and that no in-water work is proposed in a perennial stream.

The ONDR's response also indicated records of the following bird species within one mile of the Project area:

- Upland Sandpiper (*Bartramia longicauda*) – a state endangered bird.

The ODNR's comments indicate that if this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. In regard to the upland sandpiper, the ODNR identified this species habitat as shorter grass/forb structures including grazed, hayed, or mowed areas. The upland sandpiper generally occupies large tracts of habitat within a minimum land requirement of 20 acres consisting of vegetation between 6 to 14 inches in height and could forage in areas less than 4 inches in height, according to Nesting Ecology and Nesting Habitat Requirements of Ohio's Grasslands Nesting Birds: A Literature Review by D. Swanson. Therefore, ODNR's approved bird specialist, Jeff Brown – AECOM, reviewed the Project area and identified that the open field within proximity to the Project is an actively mowed field utilized as a parking area for the Ashland County Fairgrounds that is less than 20 acres in size. Furthermore, several coyote and/or other predatory animals including feral cats are likely to exist that would likely prevent this species from nesting. Therefore, it was determined that the habitat size, type, and proximity to residential, commercial, and forested tree lines would exclude the open grassland as potential habitat for this species in our Project area and avoidance of the nesting period would not be required.

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

Neither the ODNR or the USFWS indicated any areas of ecological sites, including but not limited to any unique ecological sites, geological features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forest, national wildlife refuges, or other protected natural areas within one (1) mile of the Project area.

As part of the investigation, ATSI contracted AECOM to conduct a wetland delineation and

stream assessment within the 13.9-acre survey boundary located near South Baney Road in Milton Township, Ashland County, Ohio, as part of the Ashland Substation Project. The Wetland Delineation Report is attached as Appendix A. ATSI has reserved a total of 4.70-acres/credits with The Nature Conservancy's (TNC's) Ohio Stream and Wetland In-Lieu Fee Mitigation Program to compensate for the loss of wetland habitat as part of this Project. The 4.7 acres/credits include the necessary mitigation for all permanent work activities including the conversion of forested wetland habitat and permeant fills within forested and non-forested wetland habitat.

During the field survey of the 13.9-acre survey boundary, AECOM identified a total of one wetland complex composed of both PFO and PEM wetland habitats. On July 8, 2019, an OEPA representative, Cara Hardesty, completed the ORAM verification of the identified wetland complex and confirmed the boundaries of the wetland area. Ms. Hardesty classified and scored out the wetland complex as a modified Category 2 wetland. This wetland complex included the two PFO habitat components (Wetlands ASH-01a and ASH01c) as well as two PEM habitat components (Wetlands ASH-01b and ASH-01d) and received an ORAM score of 43.5. Exhibit 11 shows the extent of the wetland complex. A total of 3.03-acres of forested wetland habitat (Wetland Ash-01a/c) and 1.37-acres of non-forested wetland habitat (Wetland ASH-01 b/d) were delineated within the 13.9-acres survey boundary. Base on desktop analysis the entire wetland complex outside of the survey boundary is estimated at 22.92-acres of forested wetland habitat and 1.37-acres of non-forested wetland habitat. Of the delineated wetland, approximately 1.08-acres of forested and 0.62-acre of non-forested wetland habitat will be permanently filled from the construction of the substation. Additionally, ATSI is proposing a permanent conversion of approximately 0.25-acre forested wetland habitat to prevent arc-flashes and future overgrowth of vegetation into the substation. Lastly, ATSI will require installation of temporary timber matting within 0.03-acre of non-forested wetland habitat for construction access. As a result, a total of 1.98-acres of wetland habitat will be permanently or temporarily disturbed by the Project.

To compensate for the loss of wetland habitat, ATSI will a total of 4.70-acres/credits from the TNC's Ohio Stream and Wetland In-Lieu Fee Mitigation Program. This mitigation will meet all state and federal mitigation requirements for wetland impacts.

Additionally, a review of the online FEMA Flood Insurance Rate Mapping was performed. The Project work limits are not located within a regulated floodplain.

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 Letter of Notification application is being provided concurrently with its docketing with the OPSB to the following officials in Milton Township and the City of Ashland, Ashland County, Ohio.

Ashland County

Commissioner Jim Justice, President
Ashland County Commissioners
Commissioners' Office
110 Cottage Street
Ashland, OH 44805

Commissioner Denny Bittle
Ashland County Commissioners
Commissioners' Office
110 Cottage Street
Ashland, OH 44805

Commissioner Mike Welch,
Vice President
Ashland County Commissioners
Commissioners' Office
110 Cottage Street
Ashland, OH 44805

Mr. Edward J. Meixner, P.E., P.S.
Ashland County Engineer
1511 Cleveland Avenue
Ashland, OH 44805

Ms. Rebecca Owens, Vice Chairman
Ashland County Planning
Department
1763 State Route 60
Ashland, OH 44805

Milton Township

Mr. Rick Emmons, Chairman
Milton Township Trustee
1566A S. Baney Road
Ashland OH 44805

Ms. Deb Wertz
Milton Township Trustee
1281 CR 1475
Ashland OH 44805

Mr. Eric Fulk, Vice Chairman
Milton Township Trustee
1394 State Route 603
Ashland OH 44805

Ms. Jeanne Saner, Fiscal Officer
Milton Township
1158 CR 1475
Ashland OH 44805

City of Ashland

Mr. Matt Miller, Mayor
City of Ashland
206 Claremont Ave.
Ashland, Ohio 44805

Mr. Shane Kremser, PE, CBO
Building Official, City of Ashland,
City Engineer
206 Claremont Avenue, 3rd Floor
Ashland, OH 44805

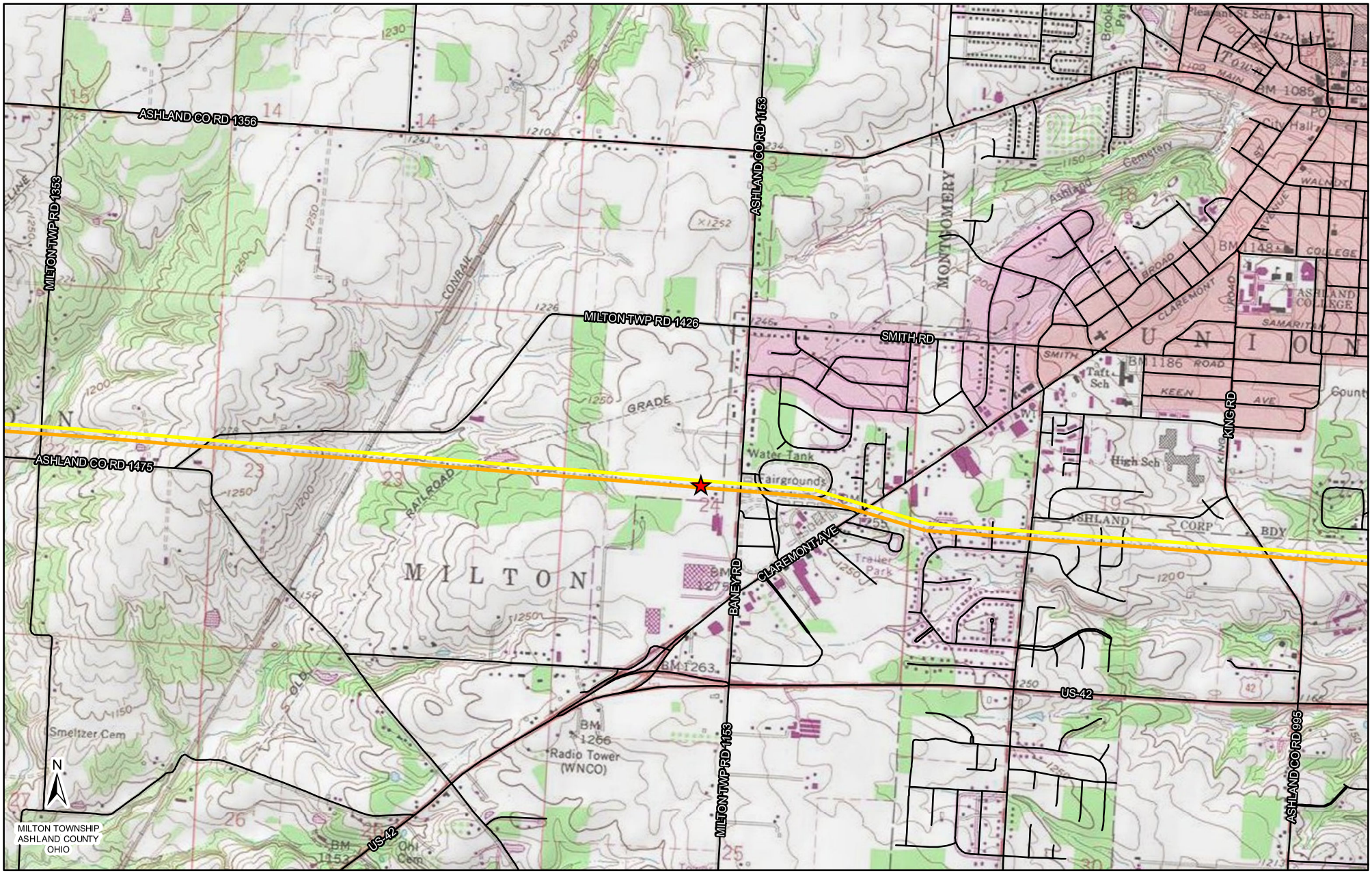
Mr. Larry Paxton, Finance Director
City of Ashland
206 Claremont Ave.
Ashland, Ohio 44805

Library

Ms. Heather Miller, Library Director
Ashland Public Library
224 Claremont Avenue
Ashland, OH 44805

Copies of the transmittal letters to these officials have been included with the transmittal letter submitting this Letter of Notification application to the OPSB and are being provided to meet the requirement of OAC Rule 4906-6-07 (B) to provide the OPSB with proof of compliance with the notice requirement to local officials in OAC Rule 4906-6-07 (A)(1) and to libraries in OAC Rule 4906-6-07 (A)(2).

Information is posted on www.firstenergycorp.com/about/transmission_project/ohio.html on how to request an electronic or paper copy of this Letter of Notification application. The link to website is being proved to meet the requirement of OAC Rule 4906-6-07 (B) and to provide the OPSB with proof of compliance with the notice requirements in OAC Rule 4906-6-07 (A)(3).



LEGEND:

- Project Area
- Brookside-Howard 138 kV
- Brookside-Leaside 138 kV
- Road

0 1,000 2,000 4,000

Feet

Reference:
USGS Topographical Overlay; ODOT

Coordinate System:
NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic; Units: Foot US

EXHIBIT 1

FirstEnergy

Ashland Substation and
138 kV Transmission Lines
Structure Addition Project

LEGEND:

- Project Area
- Brookside-Howard 138 kV
- Brookside-Leaside 138 kV
- Road

0 1,000 2,000 4,000

Feet

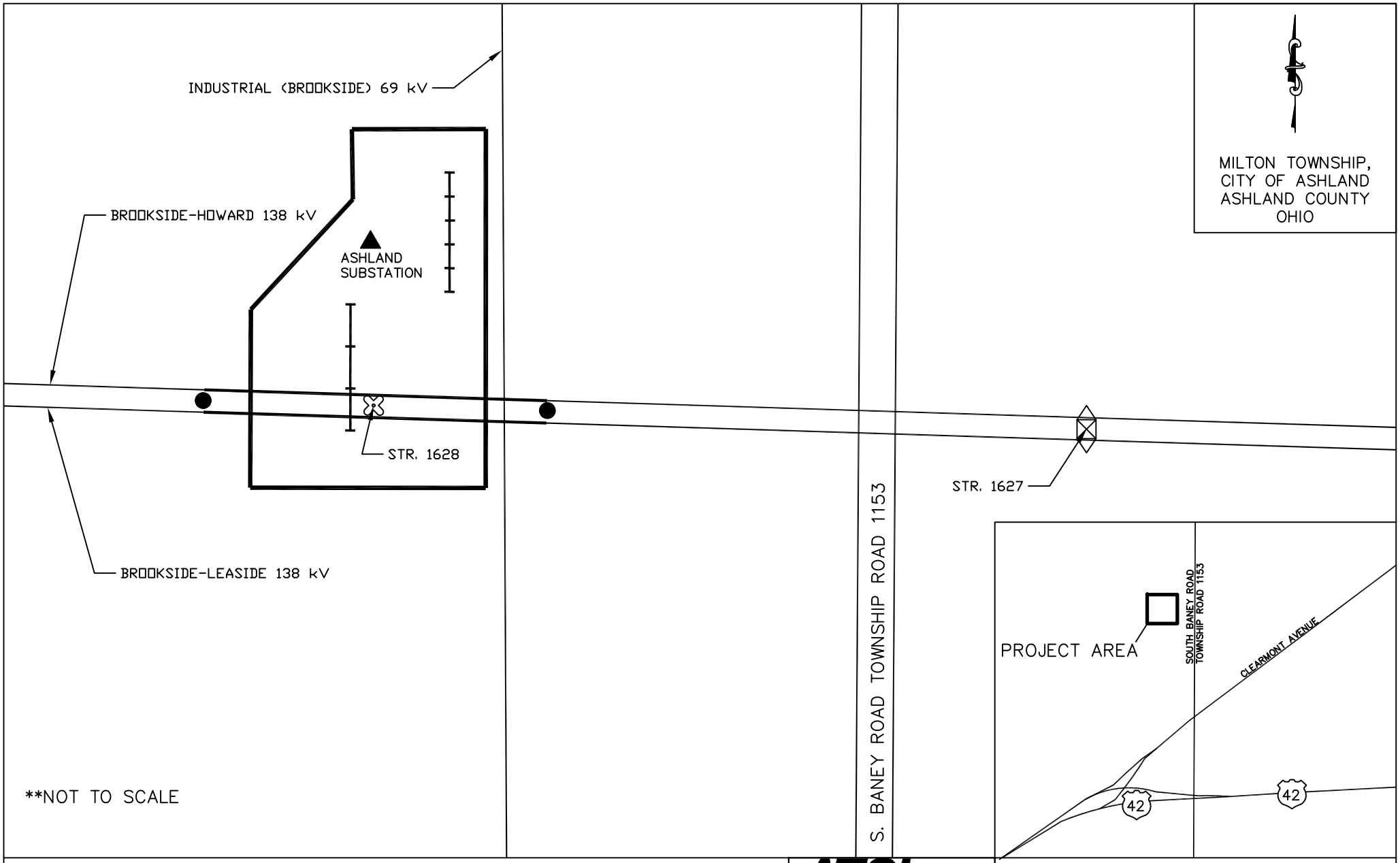
Reference:
ESRI Aerial Overlay; ODOT

Coordinate System:
NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Projection: Lambert Conformal Conic; Units: Foot US

EXHIBIT 2

FirstEnergy

Ashland Substation and
138 kV Transmission Lines
Structure Addition Project



LEGEND

- PROPOSED SUBSTATION
- PROPOSED SUBSTATION FENCE LINE
- EXISTING CONDUCTOR
- PROPOSED CONDUCTOR
- LATTICE TOWER TO REMAIN
- LATTICE TOWER TO BE REMOVED
- PROPOSED STEEL MONOPOLE
- EXISTING ROADS

ATSI®
American Transmission Systems, Inc
a subsidiary of FirstEnergy Corp.

ASHLAND SUBSTATION
AND 138 kV TRANSMISSION LINES
STRUCTURE ADDITION PROJECT

GENERAL LAYOUT

EXHIBIT 3

ATSI Transmission Zone: Supplemental
New Ashland 138/69 kV Substation

Problem Statement (Scope and Need/Drivers):

Operational Flexibility and Efficiency

- Improve operational flexibility during maintenance and restoration efforts
- Reduce amount of potential local load loss (Approximately 78 MWs) under contingency conditions
- Mitigate non-planning criteria voltage concerns on the < 100 kV system under contingency (P2) conditions.
  - *Loss of Brookside 138 kV bus or 138 kV stuck breaker.*
  - *Results in potential local voltage collapse on the Brookside 69 kV system.*

Potential Solution:

New Ashland 138/69 kV Substation

- Build new Ashland 138/69 kV substation
- Network radial 69 kV system new Ashland 138/69 kV station
- Configure Ashland substation to include terminals for:
  - Ashland – Brookside 138 kV and Ashland – Howard 138 kV lines
  - Ashland – Dell (Brookside) 69 kV Line,
  - Ashland – Fairview (Brookside) 69 kV Line,
  - Ashland – Hale (Brookside) 69 kV Line

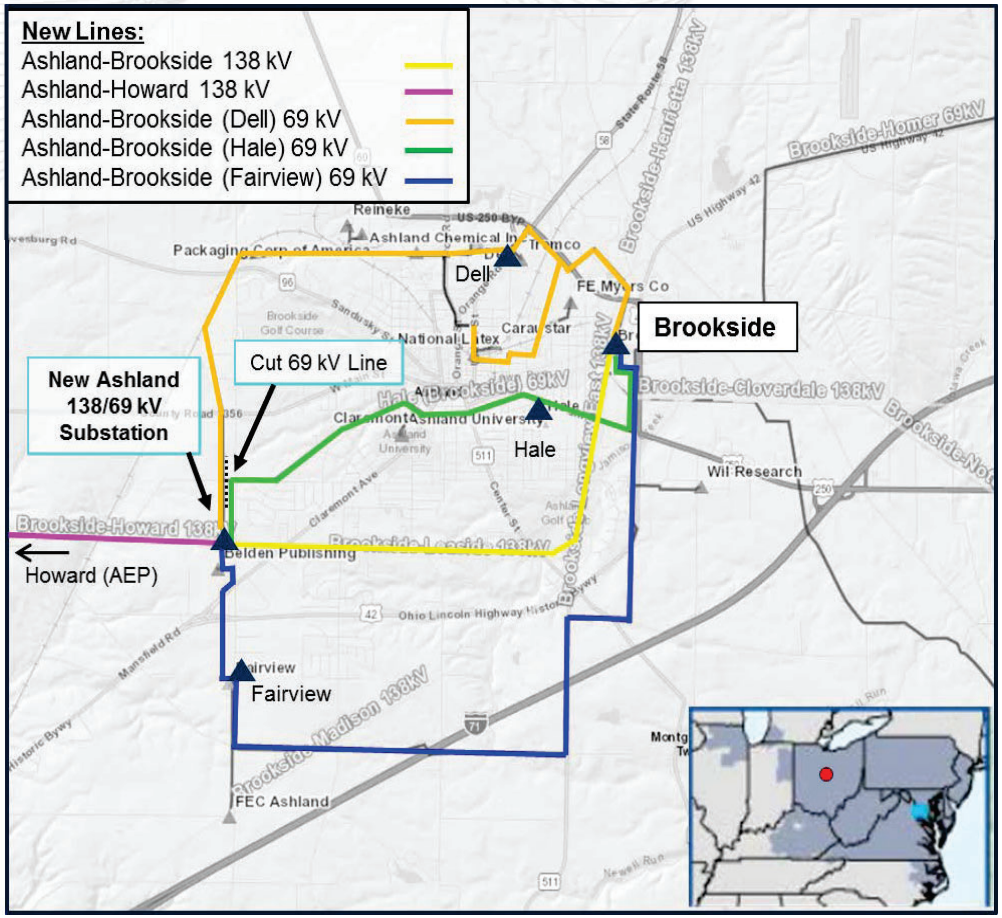
Alternatives Considered:

- Rebuild Brookside Substation to breaker and a half.
- Add capacitor bank at Brookside 69 kV substation for pre-contingency switching

Estimated Project Cost: $12.9M

Projected IS Date: 08/28/2020

Status: Conceptual



ATSI Transmission Zone: Supplemental
New Ashland 138/69 kV Substation

Previously Presented: 8/31/2018 SRRTEP

Problem Statement (Scope and Need/Drivers):

Operational Flexibility and Efficiency

- Improve operational flexibility during maintenance and restoration efforts
- Reduce amount of potential local load loss (Approximately 78 MWs) under contingency conditions
- Mitigate non-planning criteria voltage concerns on the < 100 kV system under contingency (P2) conditions.
  - *Loss of Brookside 138 kV bus or 138 kV stuck breaker.*
  - *Results in potential local voltage collapse on the Brookside 69 kV system.*

Selected Solution:

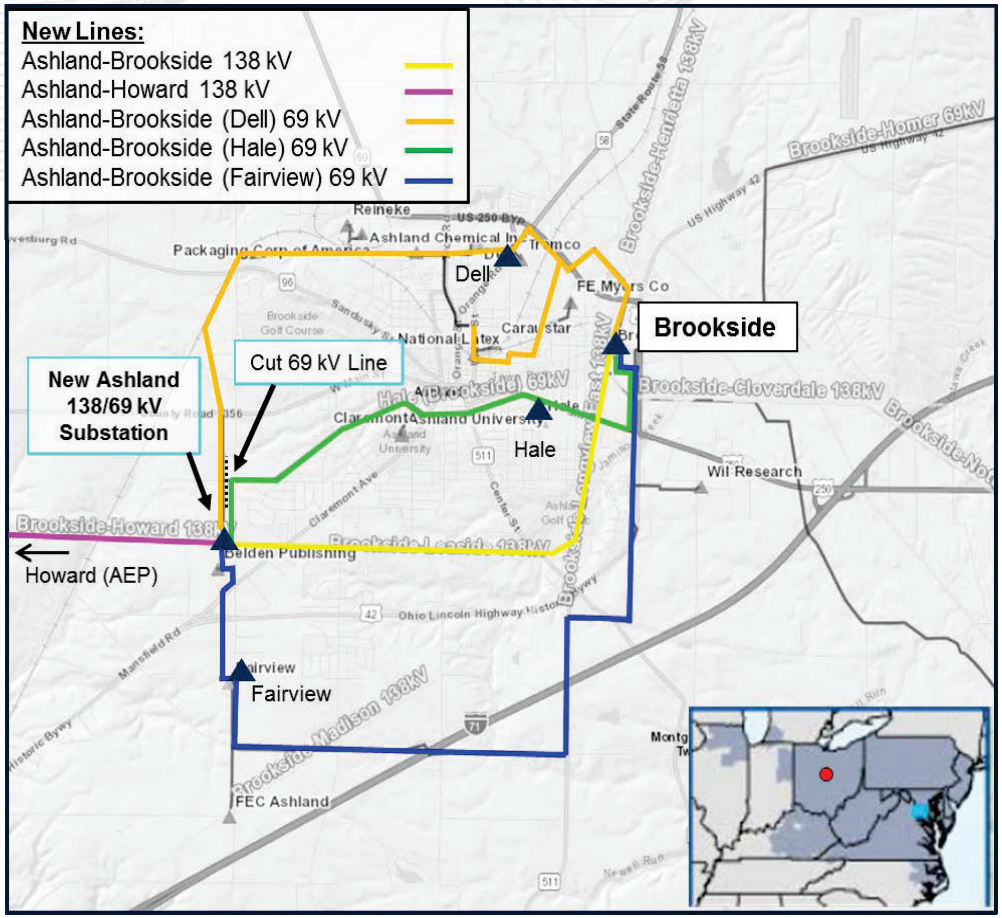
New Ashland 138/69 kV Substation **(S1714)**

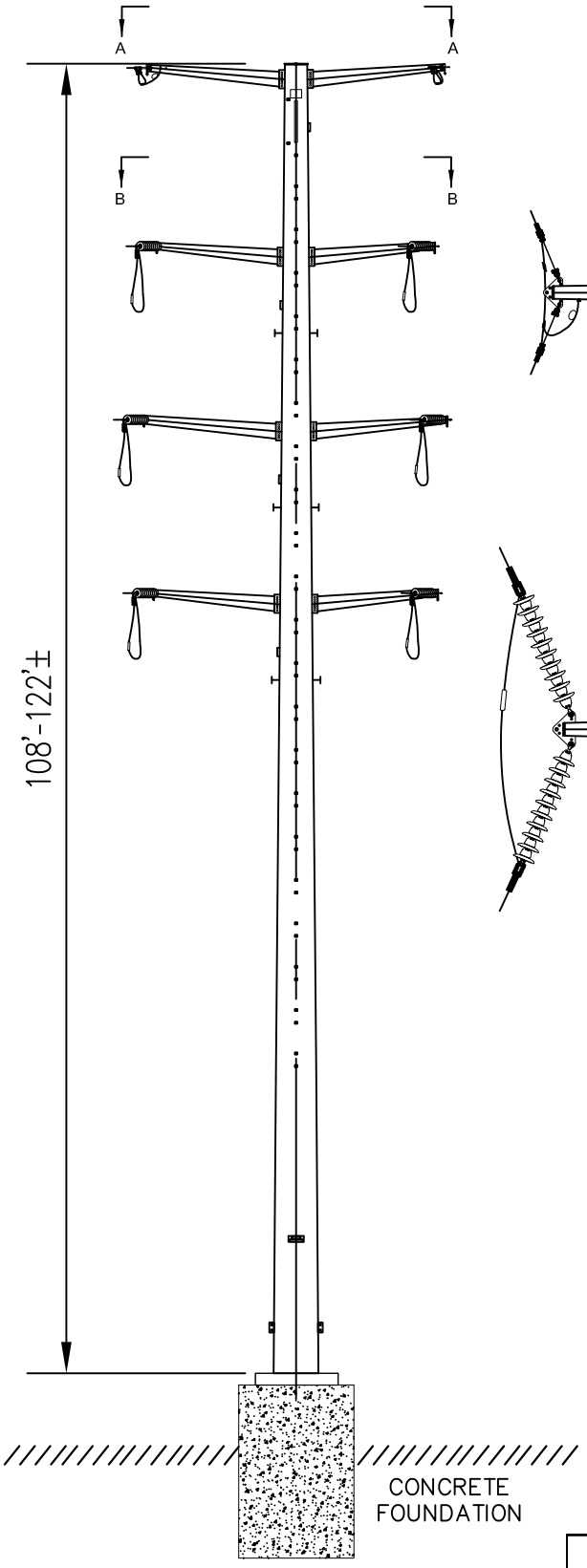
- Build new Ashland 138/69 kV substation
- Network radial 69 kV system new Ashland 138/69 kV station
- Configure Ashland substation to include terminals for:
  - Ashland – Brookside 138 kV and Ashland – Howard 138 kV lines
  - Ashland – Dell (Brookside) 69 kV Line,
  - Ashland – Fairview (Brookside) 69 kV Line,
  - Ashland – Hale (Brookside) 69 kV Line

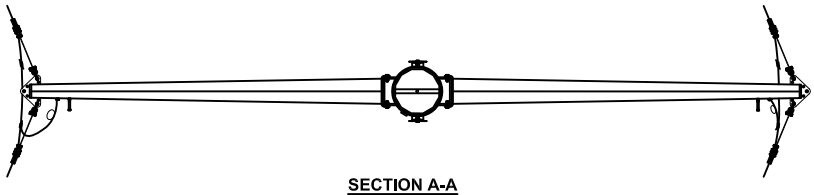
Estimated Project Cost: $12.9 M

Projected IS Date: 08/28/2020

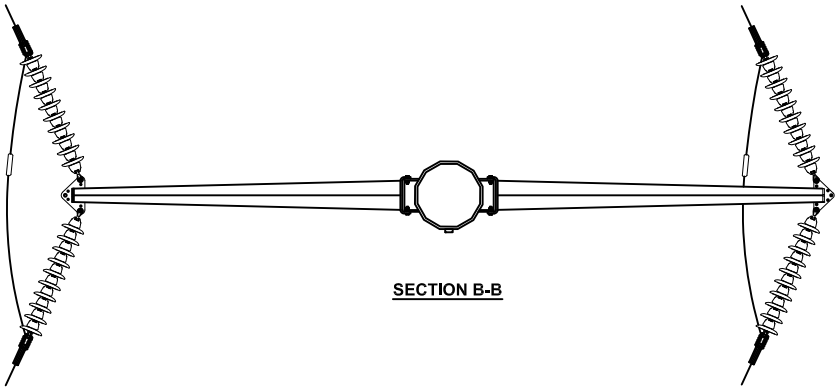
Status: Conceptual







SECTION A-A



SECTION B-B

ATSI®
American Transmission Systems, Inc
a subsidiary of FirstEnergy Corp.

ASHLAND SUBSTATION AND 138kV
TRANSMISSION LINES STRUCTURE ADDITION
PROJECT

138 kV STEEL MONOPOLE
DOUBLE CIRCUIT DEADEND STRUCTURE

NOT TO SCALE

EXHIBIT 6

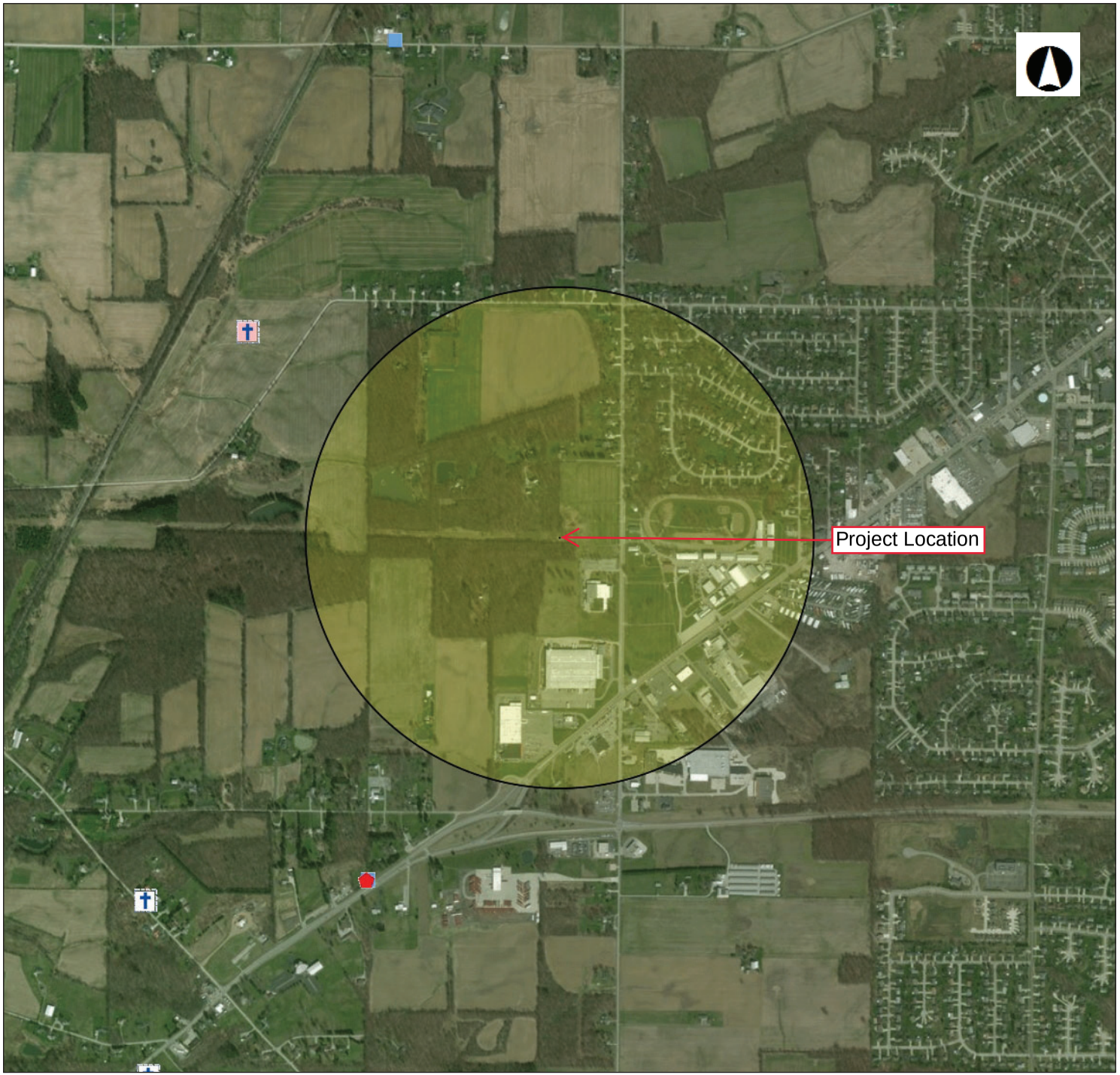


EXHIBIT 7

OHIO HISTORY CONNECTION

State Historic Preservation Office

Legend

- NR Listings
  - Listed
  - National Historic Landmark
  - Delisted
- NR Determinations of Eligibi
- Historic Structures
- Historic Bridges
- Historic Tax Credit Projects
- OGS Cemeteries
  - Confident
  - Not Confident
- Dams
- UTM Zone Split
- NR Boundaries
- Phase1
- Phase2
- Phase3
- Historic Previously Surveyed

0 0.30 0.61 Miles

1: 24,000

Copyright/Disclaimer

Datum: [Datum]

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

EXHIBIT 8

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO
ATTENTION OF

October 9, 2019

Regulatory Division
North Branch
LRH-2019-412-TUS

PRELIMINARY JURISDICTIONAL DETERMINATION

Mr. Jim F. Burns
AECOM
1300 E. 9th Street, Suite 500
Columbus, Ohio 44114

Dear Mr. Burns:

I refer to the *Updated Jurisdictional Determination Request* (report) for the Ashland Substation Project, dated September 17, 2019, submitted on your behalf by First Energy and received in this office on September 17, 2019. You have requested a preliminary jurisdictional determination (JD) for the potentially jurisdictional aquatic resources on the 13.9-acre site located west of South Baney Road, in the City of Ashland, Ashland County, Ohio (40.852026 latitude, -82.351106 longitude). Your JD request was previously assigned the following file number: LRH-2019-412-TUS. Please reference this number on all future correspondence related to this JD request.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328, including the amendment to 33 CFR 328.3 (80 Federal Register 37053), and 33 CFR 329. Section 404 of the Clean Water Act requires a Department of the Army (DA) permit be obtained prior to discharging dredged and/or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires a DA permit be obtained in advance of any work in, on, over or under a navigable water of the United States.

Based upon a review of the aquatic resources in the submitted report, this office has determined 3.076 acres of four (4) wetlands (Wetlands Ash-01a, Ash-01b, Ash-01c, and Ash-01d) are located within the review area. The aquatic resources identified above and listed on the enclosed preliminary JD form **may** be waters of the United States in accordance with the Regulatory Guidance Letter for JDs issued by the Corps on October 31, 2016 (Regulatory Guidance Letter No. 16-01). As indicated in the guidance, this preliminary JD is non-binding and cannot be appealed (33 CFR 331.2), and only provides a written indication that waters of the United States, including wetlands, may be present on-site.

You have declined to exercise the option to obtain an approved JD in this instance and at this time for the above aquatic resources. However, for the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the above aquatic resources will be evaluated as if they are waters of the United States.

Enclosed with this document please find two (2) copies of the preliminary JD. If you agree with the findings of this preliminary JD and understand your options regarding the same, please sign and date one (1) copy of the preliminary JD form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy via email to Rachel.King@usace.army.mil or by mail to the following address:

United States Army Corps of Engineers
Huntington District
Attn: North Branch-LRH-2019-412-TUS
502 Eighth Street
Huntington, West Virginia 25701

A copy of this letter will be provided to your agent, Mr. Auggie Ruggiero (First Energy). If you have any questions concerning the above, please contact Ms. Rachel King of the Energy Resource Branch at 304-399-6902, by mail at the above address, or by email at Rachel.King@usace.army.mil.

Sincerely,

Audrey Richter
Digitally signed by Audrey Richter
Date: 2019.10.09 14:36:17 -04'00'

Audrey Richter
Regulatory Project Manager
Energy Resource Branch

Enclosures

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NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Jim F. Burns	File Number: LRH-2019-412	Date: 10/9/2019
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:
Michael Hatten, Chief, Regulatory Division, 304-399-5710
Teresa Spagna, Chief, North Branch, 304-399-5210
Lee Robinette, Chief, Energy Resource Branch, 304-399-5610
Susan Porter, Chief, South/Transportation Branch, 304-399-5710
Address: U.S. Army Corps of Engineers
Regulatory Division
502 8th Street
Huntington, WV 25701

If you only have questions regarding the appeal process you may also contact:
Jacob Siegrist
Appeal Review Officer
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street Room 10524
Cincinnati, OH 45202-3222
TEL (513) 684-2699; FAX (513) 684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD:

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Mr. Jim F. Burns
AECOM
1300 E. 9th Street, Suite 500
Columbus, Ohio 44114

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Huntington District, Ashland Substation Site JD, LRH-2019-412-TUS

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: Ohio County/parish/borough: Ashland City: Ashland
Center coordinates of site (lat/long in degree decimal format):
Lat.: 40.852026 Long.: -82.351106
Universal Transverse Mercator: Zone 17
Name of nearest waterbody: Jamison Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

■ Office (Desk) Determination. Date: 9 October 2019
☐ Field Determination. Date:

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Wetland 1a	40.851246	-82.35101	1.79 acre	Wetland	Section 404
Wetland 1b	40.851436	-82.35096	0.69 acre	Wetland	Section 404
Wetland 1c	40.851246	-82.35101	1.24 acre	Wetland	Section 404
Wetland 1d	40.852234	-82.35120	0.04 acre	Wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items: Jurisdictional Determination Request-Ashland Substation Project, Ashland County, Ohio dated 17 September 2019 (JD, September 2019).

■ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor: Figure 1– Overview Map (JD, September 2019)

■ Data sheets prepared/submitted by or on behalf of the PJD requestor.
- ■ Office concurs with data sheets/delineation report. Appendix A – USACE Wetland and Upland Forms and Appendix B- OEPA Wetland ORAM Forms (JD, September 2019)
- ☐ Office does not concur with data sheets/delineation report. Rationale:_____.

☐ Data sheets prepared by the Corps:_____.

☐ Corps navigable waters' study:_____.

☐ U.S. Geological Survey Hydrologic Atlas:_____.
- ☐ USGS NHD data.
- ■ USGS 8 and 12 digit HUC maps. 05040002 – Mohican, 050400020601 – Lang Creek

■ U.S. Geological Survey map(s). Cite scale & quad name: 1:24K, Ashland South

■ Natural Resources Conservation Service Soil Survey. Citation: Figure 2- Soil Map Unit (JD, September 2019)

■ National wetlands inventory map(s). Cite name: Figure 3-Wetland Delineation and Stream Assessment Map (JD, September 2019)

☐ State/local wetland inventory map(s):_____.

☐ FEMA/FIRM maps:

☐ 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)

■ Photographs: ☐ Aerial (Name & Date):

or ■ Other (Name & Date): Appendix C – Wetlands Photographs (JD, September 2019) in the report referenced above.

■ Previous determination(s). File no. and date of response letter: PJD issued on May 23, 2019 (2019-412)

☐ _____. Other information (please specify):_____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Rachel Ky
Signature and date of Regulatory staff member completing PJD

October 9, 2019

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

EXHIBIT 9

Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR — MARY MERTZ, DIRECTOR

Office of Real Estate
Paul R. Baldridge, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

March 28, 2019

Brian Miller
AECOM
525 Vine Street
Cincinnati, Ohio 45202

Re: 19-188; ATSI - FirstEnergy Ashland Substation Project

Project: The proposed project involves the construction of a new substation within a 7-acre parcel adjacent to South Baney Road.

Location: The proposed project is located in Milton Township, Ashland County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. 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 National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior any to cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the Iowa darter *(Etheostoma exile),* a state endangered fish, and the Greater Redhorse (*Moxostoma valenciennesi*), a state threatened fish. The DOW recommends no in-water work from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, the project is not likely to impact these species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at (614) 265-6397 or Sarah.Tebbe@dnr.state.oh.us if you have questions about these comments or need additional information.

John Kessler
Environmental Services Administrator

EXHIBIT 10

Miller, Brian

Subject: ASTI Proposed Ashland Substation Project, Ashland 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# 03E15000-2019-TA-0726

Re: ASTI Proposed Ashland Substation Project, Ashland County, Ohio

Dear Mr. Miller,

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. We recommend that proposed activities minimize water quality impacts, including fill in streams and wetlands. Best management practices should be utilized to minimize erosion and sedimentation.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to the federally listed endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*), we do not anticipate adverse effects to any 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 U.S. Fish and Wildlife Service (Service) should be initiated to assess any potential impacts.

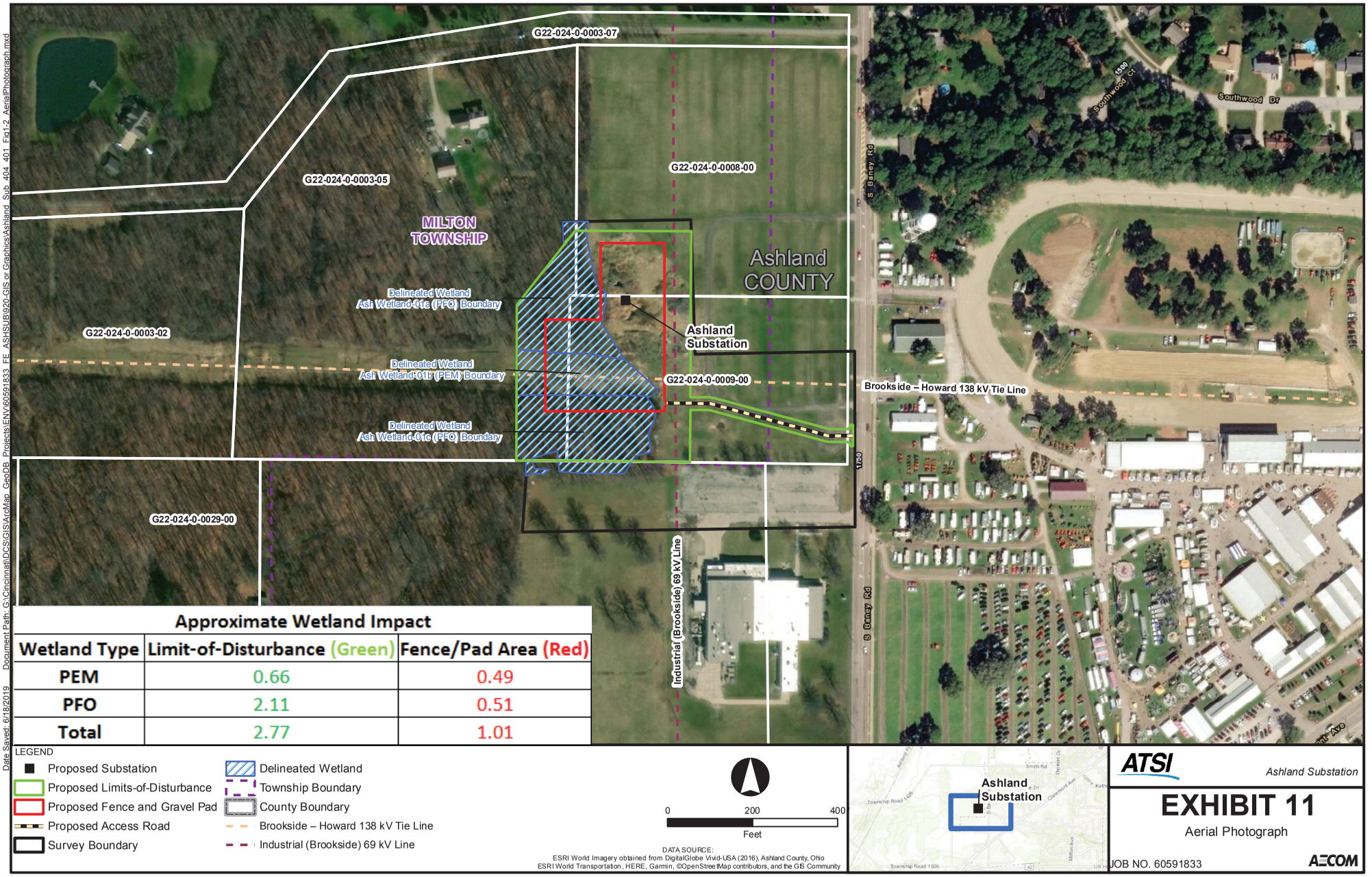
If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act (ESA), between the Service and the federal action agency, 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.

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.), 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 John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@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.

Sincerely,

Patrice Ashfield
Field Office Supervisor



Approximate Wetland Impact

Wetland Type	Limit-of-Disturbance (Green)	Fence/Pad Area (Red)
PEM	0.66	0.49
PFO	2.11	0.51
Total	2.77	1.01

LEGEND

- Proposed Substation
- Proposed Limits-of-Disturbance
- Proposed Fence and Gravel Pad
- Proposed Access Road
- Survey Boundary
- Delineated Wetland
- Township Boundary
- County Boundary
- Brookside – Howard 138 kV Tie Line
- Industrial (Brookside) 69 kV Line

0 200 400
Feet

DATA SOURCE:
ESRI World Imagery obtained from DigitalGlobe Vivid-USA (2016), Ashland County, Ohio
ESRI World Transportation, HERE, Garmin, ©OpenStreetMap contributors, and the GIS Community

ATSI

Ashland Substation

EXHIBIT 11

Aerial Photograph

JOB NO. 60591833

AECOM

Date Saved: 6/18/2019 Document Path: G:\CincinnatiDCS\GIS\ArcMap GeoDB Projects\ENV\60591833 FE ASHSUB\920-GIS or Graphics\Ashland Sub 404 401 Fig1-2 AerialPhotograph.mxd

APPENDIX A

ASHLAND SUBSTATION

WETLAND DELINEATION AND STREAM ASSESSMENT REPORT

Prepared for:
American Transmission Systems, Inc.
a FirstEnergy Company
76 South Main Street
Akron, Ohio 44308

525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

July 2019

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LIST OF ACRONYMS and ABBREVIATIONS

ATSI	American Transmission Systems, Inc.
DBH	Diameter at Breast Height
°F	Degree Fahrenheit
FAC	Facultative
FACU	Facultative upland
FACW	Facultative wetland
GPS	Global Positioning System
HHEI	Headwater Habitat Evaluation Index
IBI	Index of Biotic Integrity
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OAC	Ohio Administrative Code
OBL	Obligate wetland
OEPA	Ohio Environmental Protection Agency
OHWM	Ordinary high water mark
ORAM	Ohio Rapid Assessment Method
PEM	Palustrine Emergent
PFO	Palustrine Forested
PHWH	Primary Headwater Habitat
PSS	Palustrine Scrub/Shrub
QHEI	Qualitative Habitat Evaluation Index
ROW	Right-of-way
UPL	Upland
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WWH	Warmwater Habitat

1.0 INTRODUCTION

American Transmission Systems, Inc. (ATSI), a FirstEnergy Company (FirstEnergy), is proposing to construct the new Ashland Substation (Project) within Ashland County, Ohio. The Project can be located on the United States Geological Survey (USGS) Ashland South, Ohio 7.5 minute series topographic quadrangle (National Geographic Society, 2013) (Figure 1). The proposed substation will require approximately two acres of earth disturbance and ATSI plans to design the site within a 13.9-acre survey boundary located near South Baney Road in Milton Township, Ashland County, Ohio. The limits of the Project investigation are defined by the survey boundary (Figure 2 and Figure 3). The approximate coordinates for the Project's center of the survey boundary is 40.852026°, -82.351106°.

Land uses of the Project area were assigned a general classification based upon the principal land characteristics as observed through aerial photography review and observations during the field surveys. General land use types in the vicinity of the proposed Project include: residential lots, grass parking area associated with Ashland County fairgrounds, wetlands, wooded lots, and maintained transmission line ROW. Wooded lots and the Ashland County fairgrounds are the dominant land uses in the vicinity of the Project.

The Project area drains into an unnamed tributary to Town Run, which flows Town Run, then Jamison Creek to Lang Creek, and eventually into the Mohican River. Town Run and its unnamed tributaries are located within the Muskingum River drainage basin. The watersheds identified in the Project area include Lang Creek Watershed [Hydrologic Unit Code (HUC: 050400020601]. As per the Section 401 Water Quality Certification (WQC) for Nationwide Permit and Stream Eligibility Web Map website (Ohio Environmental Protection Agency (OEPA)), the Project is located within an Eligible area and impacts to streams, if required, could be authorized by the United States Army Corps of Engineers (USACE) under the Nationwide Permit Conditions.

Town Run has an Ohio Administrative Code (OAC) Chapter 3745-1 aquatic life habitat use designation of Warm Water Habitat (WWH) (State of Ohio, 2018).

According to the OEPA 2018 Ohio Integrated Water Quality Monitoring and Assessment Mohican River Watersheds Report, Mohican River watershed is listed as recreation impaired. Sources of impairments included failing home sewage treatments systems, agricultural practices, dams or impoundments, channelization, urban runoff/storm sewers, municipal point source discharges, and industrial point sources (OEPA 2018). However, the Mohican River Watershed Report lists Lang Creek Watershed as a non-impaired resource and only requires mitigation for

the presence of Bacteria (*E.coli*) as result of agricultural nonpoint sources and municipal point sources.

2.0 METHODOLOGY

Prior to conducting field surveys, digital and published county Natural Resources Conservation Service (NRCS) soil surveys, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, and U.S. Geological Survey (USGS) 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of potential wetland areas (Figure 2). The purpose of the field survey was to assess whether wetlands and other "waters of the U.S." are present within the Project's survey boundary, which consisted of a 13.9-acre survey boundary (Figure 3).

AECOM ecologists walked the Project survey boundary, access roads, and work areas to conduct a wetland delineation and stream assessment. Initial field investigations were conducted on February 6th, 2019. Due to winter conditions being present at the initial time of the survey, AECOM completed a follow up visit to confirm wetland boundary and site conditions on April 3, 2019. A second follow up visit was conducted July 8, 2019 due to an expansion of the project survey area. During the field survey, the physical boundaries of observed water features were recorded using sub-decimeter capable Trimble Global Positioning System (GPS) units. The GPS data was imported into ArcMap GIS software, where the data was then reviewed and edited for accuracy.

2.1 WETLAND DELINEATION

The Project survey boundary was evaluated according to the procedures outlined in the USACE *1987 Wetland Delineation Manual* (*1987 Manual*) (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (*Regional Supplement*) (USACE 2010). The *Regional Supplement* was released in August 2010 by the USACE to address regional wetland characteristics and improve the accuracy and efficiency of wetland delineation procedures. The *1987 Manual* and *Regional Supplement* define wetlands as areas that have positive evidence of three environmental parameters: hydric soils, wetland hydrology, and hydrophytic vegetation. Wetland boundaries are placed where one or more of these parameters give way to upland characteristics.

Since quantitative data were not available for any of the identified wetlands, AECOM utilized the routine delineation method described in the *1987 Manual* and *Regional Supplement* that consisted of a pedestrian site reconnaissance, including identifying the vegetation communities,

soils identification, a geomorphologic assessment of hydrology, and notation of disturbance. The methodology used to examine each parameter is described in the following sections.

Land uses observed within the Project survey boundary were assigned a general classification based upon the principal land characteristics of the location as observed through aerial photography review and observations during the field surveys.

2.1.1 Soils

Soils were examined for hydric soil characteristics using a spade shovel to extract soil samples. A *Munsell Soil Color Chart* (Kollmorgen Corporation 2010) was used to identify the hue, value, and chroma of the matrix and mottles of the soils. Generally, mottled soils with a matrix chroma of two or less, or unmottled soils with a matrix chroma of one or less are considered to exhibit hydric soil characteristics (Environmental Laboratory 1987). In sandy soils, mottled soils with a matrix chroma of three or less, or unmottled soils with a matrix chroma of two or less are considered to be hydric soils.

2.1.2 Hydrology

The *1987 Manual* requires that an area be inundated or saturated to the surface for an absolute minimum of five percent of the growing season (areas saturated between five percent and 12.5 percent of the growing season may or may not be wetlands, while areas saturated over 12.5 percent of the growing season fulfill the hydrology requirements for wetlands). The *Regional Supplement* states that the growing season dates are determined through onsite observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature (12-in. depth) is 41 degree Fahrenheit (^{o}F) or higher as an indicator of soil microbial activity. Therefore, the beginning of the growing season in a given year is indicated by whichever condition occurs earlier, and the end of the growing season by whichever persists later.

The *Regional Supplement* also states that if onsite data gathering is not practical, the growing season can be approximated by the number of days between the average (five years out of ten, or 50 percent probability) date of the last and first 28°F air temperature in the spring and fall, respectively. The National Weather Service WETS data obtained from the NRCS National Water and Climate Center reveals for Ashland County did not have sufficient data to determine the average growing season. Therefore, AECOM utilized data from an adjacent county, Richland County, to estimate the average growing period. Richland County growing season in an average year, lasts from April 25 to October 19, or about 177 days. In the Project area, five percent of the growing season equates to approximately nine days (NRCS 2018b).

The soils and ground surface were examined for evidence of wetland hydrology in lieu of detailed hydrological data. This is an acceptable approach according to the *1987 Manual* and *Regional Supplement.* Evidence indicating wetland hydrology typically includes primary indicators such as surface water, saturation, water marks, drift deposits, water-stained leaves, sediment deposits and oxidized rhizospheres on living roots; and secondary indicators such as, drainage patterns, geomorphic position, micro-topographic relief, and a positive Facultative (FAC)-neutral test (USACE 2010).

2.1.3 Vegetation

Dominant vegetation was visually assessed for each stratum (tree, sapling/shrub, herb and woody vine) and an indicator status of obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and/or upland (UPL) was assigned to each plant species based on the U.S. Army Corps of Engineers *2016 National Wetland Plant List: Northcentral and Northeast Region* (Lichvar et al. 2016), which encompasses the area of the Project. An area is determined to have hydrophytic vegetation when, under normal circumstances, 50 percent or more of the composition of the dominant species are OBL, FACW and/or FAC species. Vegetation of an area was determined to be non-hydrophytic when more than 50 percent of the composition of the dominant species was FACU and/or UPL species. In addition to the dominance test, the FAC-Neutral test and prevalence tests are used to determine if a wetland has a predominance of hydrophytic vegetation. Recent USACE guidance indicates that to the extent possible, the hydrophytic vegetation decision should be based on the plant community that is normally present during the wet portion of the growing season in a normal rainfall year (USACE 2012).

2.1.4 Wetland Classifications

Wetlands were classified based on the naming convention found in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). If wetlands were identified within the survey boundary; they would typically be classified as freshwater, palustrine systems, which include non-tidal wetlands dominated by trees, shrubs, emergents, mosses, or lichens. The palustrine wetland classification types are as follows:

- ***PEM*** – Palustrine emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.
- ***PSS*** – Palustrine scrub/shrub wetlands are characterized by woody vegetation that is less than three inches diameter at breast height (DBH), and greater than 3.28 feet tall. The

woody angiosperms (i.e., small trees or shrubs) in this broad leaved deciduous community have relatively wide, flat leaves that are shed annually during the cold or dry season.

- ***PFO*** – Palustrine forested wetlands are characterized by woody vegetation that is three inches or more DBH, regardless of total height. These wetlands generally include a canopy of broad-leaved and needle-leaved trees, an understory or young saplings and shrubs, and an herbaceous layer.

- ***PUB*** – Palustrine unconsolidated bottom wetlands includes all open water wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones, and a vegetative cover less than 30 percent. Palustrine open water wetlands are characterized by the lack of large stable surfaces for plant and animal attachment.

- ***PAB*** – Palustrine aquatic bed wetlands are characterized by plants that grow principally on or below the surface of the water for most of the growing season in most years. These plants are best developed in relatively permanent water or under conditions of repeated flooding.

- ***PML*** – Palustrine moss-lichen wetlands includes areas where mosses or lichens cover at least 30 percent of substrates other than rock and where emergents, shrubs, or trees alone or in combination cover less than 30 percent.

- ***PUS*** – Palustrine unconsolidated shore wetlands are characterized by substrates lacking vegetation except for pioneer plants that become established during brief periods when growing conditions are favorable. Unconsolidated shore wetlands have less than 30% areal coverage of vegetation and less than 75 percent areal cover of stones, boulders or bedrock.

- ***PRB*** – Palustrine rock bottom wetlands includes all wetlands and deepwater habitats with substrates having an aerial cover of stones, boulders, or bedrock 75 percent or greater and vegetative cover of less than 30 percent. Rock bottom wetlands and deepwater habitats are characterized by substrates predominantly made up of stones, boulders, or bedrock.

For some wetlands, multiple Cowardin classifications may be present where more than one classification's vegetation is dominant (vegetation covers 30 percent or more of the substrate). Where multiple Cowardin classifications are present, the Cowardin classification of the plants that constitute the uppermost layer of vegetation is listed.

2.1.5 Ohio Rapid Assessment Method v. 5.0

The OEPA *Ohio Rapid Assessment Method for Wetlands* v. 5.0 (*ORAM*) was developed to determine the relative ecological quality and level of disturbance of a particular wetland in order to meet requirements under Section 401 of the Clean Water Act. Wetlands are scored on the basis of hydrology, upland buffer, habitat alteration, special wetland communities, and vegetation communities. Each of these subject areas is further divided into subcategories under *ORAM* resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into "Category 1", 30 to 59.9 are "Category 2" and 60 to 100 are "Category 3". Transitional zones exist between “Categories 1 and 2” from 30 to 34.9 and between “Categories 2 and 3” from 60 to 64.9. However, according to the OEPA, if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower Category (Mack 2001).

Category 1 Wetlands

Category 1 wetlands support minimal wildlife habitat, hydrological and recreational functions, and do not provide for or contain critical habitats for threatened or endangered species. In addition, Category 1 wetlands are often hydrologically isolated and have some or all of the following characteristics: low species diversity, no significant habitat or wildlife use, limited potential to achieve wetland functions, and/or a predominance of non-native species. These limited quality wetlands are considered to be a resource that has been severely degraded or has a limited potential for restoration, or is of low ecological functionality.

Category 2 Wetlands

Category 2 wetlands "...support moderate wildlife habitat, or hydrological or recreational functions," and as wetlands which are "...dominated by native species but generally without the presence of, or habitat for, rare, threatened or endangered species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." Category 2 wetlands constitute the broad middle category of "good" quality wetlands, and can be considered a functioning, diverse, healthy water resource that has ecological integrity and human value. Some Category 2 wetlands are lacking in human disturbance and considered to be naturally of moderate quality; others may have been Category 3 wetlands in the past, but have been degraded to Category 2 status.

Category 3 Wetlands

Wetlands that are assigned to Category 3 have "...superior habitat, or superior hydrological or recreational functions." They are typified by high levels of diversity, a high proportion of native species, and/or high functional values. Category 3 wetlands include wetlands which contain or provide habitat for threatened or endangered species, are high quality mature forested wetlands, vernal pools, bogs, fens, or which are scarce regionally and/or statewide. A wetland may be a Category 3 wetland because it exhibits one or all of the above characteristics. For example, a forested wetland located in the flood plain of a river may exhibit "superior" hydrologic functions (e.g., flood retention, nutrient removal), but not contain mature trees or high levels of plant species diversity.

2.2 STREAM CROSSINGS

Regulatory activities under the Clean Water Act provide authority for states to issue water quality standards and "designated uses" to all waters of the U.S. upstream to the highest reaches of the tributary streams. In addition, the Federal Water Pollution Control Act of 1972 and its 1977 and 1987 amendments require knowledge of the potential fish or biological communities that can be supported in a stream or river, including upstream headwaters. Streams were identified by the presence of a defined bed and bank, and evidence of an ordinary high water mark (OHWM). The USACE defines OHWM as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE 2005).

Stream assessments were conducted using the methods described in the OEPA's Methods for Assessing Habitat in Flowing Waters: Using OEPA's *Qualitative Habitat Evaluation Index* (Rankin 2006) and *Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams, Version 3* (OEPA 2012).

2.2.1 OEPA Qualitative Habitat Evaluation Index

The qualitative habitat evaluation index (QHEI) is designed to provide a rapid determination of habitat features that correspond to those physical factors that most affect fish communities and which are generally important to other aquatic life (*e.g.*, macroinvertebrates). The quantitative measure of habitat used to calibrate the QHEI score are Indices (or Index) of Biotic Integrity (IBI) for fish. In most instances the QHEI is sufficient to give an indication of habitat quality, and the intensive quantitative analysis used to measure the IBI is not necessary. It is the IBI, rather than the QHEI, that is directly correlated with the aquatic life use designation for particular surface water.

The QHEI method is generally considered appropriate for waterbodies with drainage basins greater than one square mile, if natural pools are greater than 15.75 inches, or if the water feature is shown as blue-line waterways on USGS 7.5-minute topographic quadrangle maps. In order to convey general stream habitat quality to the regulated public, the OEPA has assigned narrative ratings to QHEI scores. The ranges vary slightly for headwater streams (H are those with a watershed area less than or equal to 20 mi^2) versus larger streams (L are those with a watershed area greater than 20 mi^2). The Narrative Rating System includes: Very Poor (<30 H and L), Poor (30 to 42 H, 30 to 44 L), Fair (43 to 54 H, 45 to 59 L), Good (55 to 69 H, 60 to 74 L) and Excellent (70+ H, 75+ L) (Rankin 2006).

2.2.2 OEPA Primary Headwater Habitat Evaluation Index

Headwater streams are typically considered to be first-order and second-order streams, meaning streams that have no upstream tributaries (or "branches") and those that have only first-order tributaries, respectively. The stream order concept can be problematic when used to define headwater streams because stream-order designations vary depending upon the accuracy and resolution of the stream delineation. Headwater streams are generally not shown on USGS 7.5-minute topographic quadrangles and are sometimes difficult to distinguish on aerial photographs. Nevertheless, headwater streams are now recognized as useful monitoring units due to their abundance, widespread spatial scale and landscape position (Fritz et al. 2006). Impacts to headwater streams can have a cascading effect on the downstream water quality and habitat value. The headwater habitat evaluation index (HHEI) is a rapid field assessment method for physical habitat that can be used to appraise the biological potential of most Primary Headwater Habitat (PHWH) streams. The HHEI was developed using many of the same techniques as used for QHEI, but has criteria specifically designed for headwater habitats. To use HHEI, the stream must have a "defined bed and bank, with either continuous or periodically flowing water, with watershed area less than or equal to 1.0 mi^2 (259ha), ***and*** a maximum depth of water pools equal to or less than 15.75 inches" (OEPA 2012).

Headwater streams are scored on the basis of channel substrate composition, bankfull width, and maximum pool depth. Assessments result in a score (0 to 100) that is converted to a specific PHWH stream class. Streams that are scored from 0 to 29.9 are typically grouped into "Class 1 PHWH Streams", 30 to 69.9 are "Class 2 PHWH Streams", and 70 to 100 are "Class 3 PHWH Streams". Technically, a stream can score relatively high, but actually belong in a lower class, and vice-versa. According to the OEPA, if the stream score falls into a class and the scorer feels that based on site observations that score does not reflect the actual stream class, a decision-making flow chart can be used to determine appropriate PHWH stream class using the HHEI

protocol (OEPA 2012). Evidence of anthropogenic alterations to the natural channel will result in a "Modified" qualifier for the stream.

Class 1 PHWH Streams: Class 1 PHWH Streams are those that have "normally dry channels with little or no aquatic life present" (OEPA 2012). These waterways are usually ephemeral, with water present for short periods of time due to infiltration from snowmelts or rainwater runoff.

Class 2 PHWH Streams: Class 2 PHWH Streams are equivalent to "warm-water habitat" streams. This stream class has a "moderately diverse community of warm-water adapted native fauna either present seasonally or on an annual basis" (OEPA 2012). These species communities are composed of vertebrates (fish and salamanders) and/or benthic macroinvertebrates that are considered pioneering, headwater temporary, and/or temperature facultative species.

Class 3 PHWH Streams: Class 3 PHWH Streams usually have perennial water flow with cool-cold water adapted native fauna. The community of Class 3 PHWH Streams is comprised of vertebrates (either cold water adapted species of headwater fish and or obligate aquatic species of salamanders, with larval stages present), and/or a diverse community of benthic cool water adapted macroinvertebrates present in the stream continuously (on an annual basis).

2.2.3 401 Eligibility Watersheds

Under the 401 Water Quality Certification for the 2017 Nationwide Permits (NWP), OEPA has limited the use of the expedited permits for impacts to high quality streams in Ohio. OEPA has developed a map/shapefile which designates Ohio watersheds into three categories:

Ineligible Areas: If any stream proposed to be impacted is located in an ineligible area, then impacts to that stream are not eligible for coverage under the NWPs and an individual 401 WQC will be required from OEPA.

Possibly Eligible Areas: Any stream proposed to be impacted which is located in a possibly eligible area will require additional field screenings. The pH value must be collected, or assumed to be greater than 6.5, and a QHEI or HHEI assessment must be performed on the stream. Flow charts provided in the OEPA Final Signed WQC NWP 2017 (OEPA 2017) will then be used to determine if stream impacts will be eligible for coverage under the NWP or if an individual 401 WQC is required.

Eligible Areas: Any impacts to streams located in eligible areas are eligible for coverage under the NWP.

3.0 RESULTS

AECOM delineated one wetland complex with two PEM and two PFO wetland habitat components within the survey boundary. No streams or ponds were identified within the survey boundary. The one wetland complex identified within the survey boundary is discussed in the following sections.

3.1 WETLAND DELINEATION

3.1.1 Preliminary Soils Evaluation

Soils within the wetland were observed and documented as part of the delineation methodology. According to the USDA/NRCS Web Soil Surveys of Ashland County, Ohio (NRCS 2018a) and the NRCS Hydric Soils Lists of Ohio (NRCS 2018c), three soil series are mapped within the Project survey boundary. One soil map unit, Wadsworth silt loam, 0 to 2 percent slopes (WaA), is listed as having a minor percentage of hydric components located within depressions. Table 1 provides a detailed overview of all soil series and soil map units within the Project survey boundary. Soil map units located within the Project survey boundary are shown on Figure 2.

TABLE 1
SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE ASHLAND SUBSTATION SURVEY BOUNDARY

Soil Series	Symbol	Map Unit Description	Topographic Setting[2]	Hydric	Hydric Component (%)
Rittman	RsB	Rittman silt loam, 2 to 6 percent slopes	Till plains	No	NA
Udorthents	Ud	Udorthents	-	No	NA
Wadsworth	WaA	Wadsworth silt loam, 0 to 2 percent slopes	Till plains	Yes	Frenchtown (10)

NOTES:
(1) Data sources include:
USDA. NRCS. 2018a. Web Soil Survey. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
USDA. NRCS. 2018c. National Hydric Soils List by State. Available online at: http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/
USDA. NRCS. 1980. Soil Survey of Ashland County, Ohio
(2) Web Soil Survey does not have an identified Topographic Setting associated with Udorthents (Ud) soil series.

3.1.2 National Wetland Inventory Map Review

According to NWI map of the Ashland South, Ohio quadrangle, no NWI mapped wetlands are located within the Project survey boundary (USFWS 2018) (Figure 2).

3.1.3 Delineated Wetlands

During the delineation, AECOM identified a total of one wetland complex composed of two PEM and two PFO wetland habitats, ranging in size from 0.04 acre to 1.79 acre, within the

Project survey boundary. Some wetland boundaries extend beyond these areas, but only what was identified within the Project survey boundary, access roads, and work areas were assessed. Table 2 provides a summary of the delineated wetlands within the Project survey boundary.

The locations and approximate extent of the wetland identified within the Project survey boundary is shown on Figure 3. Completed USACE wetland determination and ORAM forms are provided in Appendices A and B, respectively. Color photographs taken of this wetland have been provided in Appendix C.

TABLE 2
DELINEATED WETLANDS WITHIN THE ASHLAND SUBSTATION SURVEY BOUNDARY

Wetland Name	Latitude	Longitude	Cowardin Classification[1]	NWI Classification	ORAM Score	ORAM Category[2]	Acreage within Survey Corridor
Wetland Ash-01a	40.851246335	-82.351010450	PFO	N/A	43.5	Modified Category 2	1.79
Wetland Ash-01b	40.851436442	-82.350956635	PEM	N/A			0.69
Wetland Ash-01c	40.851246335	-82.351010450	PFO	N/A			1.24
Wetland Ash-01d	40.852234	-82.351203	PEM	N/A			0.04
Total: 4	PEM: 2 and PFO: 2						**3.77**

Cowardin Classification[1] : PEM = palustrine emergent and PFO=palustrine forested
ORAM Category[2:] The Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms.

3.1.4 Delineated Wetlands ORAM V5.0 Results

On July 8, 2019, an OEPA representative, Cara Hardesty, completed the ORAM verification of the identified wetland complex and confirmed the boundaries of the wetland area. Ms. Hardesty classified and scored out the wetland complex as a modified Category 2 wetland. This wetland complex included the two PFO habitat components (Wetlands ASH-01a and ASH-01c) as well as two PEM habitat components (Wetlands ASH-1b and ASH-01d) and received an ORAM score of 43.5. The ORAM score for this wetland has also been included within Table 2. Completed ORAM forms are provided in Appendix B.

Category 1 Wetlands

No Category 1 wetlands were identified during the field surveys within the Project survey boundary.

Category 2 Wetlands

One wetland complex (Wetland ASH-01a, ASH-01b, ASH-01c, and ASH-01d) was identified within the survey boundary and was scored as a modified Category 2 wetland with a score of 43.5. This wetland generally exhibited narrow upland buffers and low (old field) to moderately high land use (residential and new fallow field). This wetland also exhibited a moderately good habitat development with a sparse coverage of invasive species. This wetland characteristically had habitat and hydrology recovering or recovered from previous manipulation due to mowing, clearcutting, selective cutting, shrub/sapling removal, sedimentation, and other likely disturbances.

Category 3 Wetlands

No Category 3 wetlands were identified during the field surveys within the Project survey boundary.

3.2 STREAM CROSSINGS

No streams were identified within the survey boundary.

3.3 PONDS

No ponds were surveyed within the Project's survey boundary.

4.0 SUMMARY

The ecological survey of the Project's survey boundary identified one wetland complex with two PEM and two PFO wetland habitat components within the survey boundary. No streams or ponds were identified within the survey boundary. The one wetland complex was field verified by an OEPA representative as an ORAM Modified Category 2 wetland. No ORAM Category 1 or Category 3 wetlands were identified within the Project survey boundary.

AECOM has preliminarily determined that all assessed wetlands within the Project survey boundary appear to be jurisdictional (i.e., waters of the U.S.), as they all appear to be tributaries or wetlands that flow into or combine with other streams (waters of the U.S). The locations of the streams and wetlands identified within the survey boundary are shown on Figure 3.

The information contained in this wetland delineation report is for a survey boundary that may be much larger than the actual Project limits-of-disturbance; therefore, lengths and acreages listed in this report may not constitute the actual impacts of the Project defined in subsequent permit applications. If necessary, a separate report that identifies the actual Project impacts will be provided with agency submittals.

The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due to natural processes or human impacts at the project site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the expansion of knowledge over time. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond the control of AECOM.

5.0 REFERENCES

Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* Office of Biological Services, U.S. Fish and Wildlife Service, Washington, D.C.

Environmental Laboratory. 1987. *U.S. Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.

Fritz, K.M., B.R. Johnson, and D.M. Walters. 2006. *Field Operations Manual for Assessing the Hydrologic Permanence and Ecological Condition of Headwater Streams. EPA/600/ R-06/126*. U.S. Environmental Protection Agency, Office of Research and Development, Washington DC.

Kollmorgen Corporation. 2010. Munsell Soil Color Charts. Baltimore, Maryland.

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

Mack, John J. 2001. *Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. Ohio EPA Technical Report WET/2001-1*. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.

National Geographic Society. 2013. USA Topo Maps. Available online at: http://www.arcgis.com/home/item.html?id=99cd5fbd98934028802b4f797c4b1732

OEPA, 2018. 2018 *Integrated Water Quality Monitoring and Assessment Report*. Ohio Environmental Protection Agency, Division of Surface Water.

OEPA. 2017. All Counties, Cities, and Townships in Ohio. Grant of Clean Water Act Section 401 Water Quality Certification. Authorization of discharge of dredge or fill material to various waters of the State for the following Nationwide Permits as published in January 6, 2017, Federal Register (Volume 82, Number 4) O EPA ID Number 165184 Access at: https://www.epa.ohio.gov/Portals/35/401/Final%20Signed%20401%20WQC%20NWP%202017.pdfs on 01/23/2019.

OEPA, 2012. *Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams*. Version 3.0. OEPA Division of Surface Water, Columbus, Ohio.

Rankin, Edward T. 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI).* Ohio EPA Ecological Assessment Section, Division of Surface Water, Columbus, Ohio.

U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter No. 05-05: Guidance on Ordinary High Water Mark Identification.

U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J.R. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture, Soil Conservation Service. 1980. Soil Survey of Ashland County, Ohio.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2018a. Web Soil Survey, Ashland County, Ohio. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

U.S. Department of Agriculture, Natural Resources Conservation Service. 2018b. National Weather Service- Wetland Climate Evaluation Database (WETS Table). http://www.wcc.nrcs.usda.gov/climate/wetlands.html. Accessed 2/14/19.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2018c. National Hydric Soils List. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed 2/14/2019.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2018d. Web Soil Survey (GIS Shapefile). http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed 7/10/19.

U.S. Fish and Wildlife Service. 2018. National Wetlands Inventory Classification De-coder. Available online at http://137.227.242.85/Data/interpreters/wetlands.aspx. Accessed 2/14/19.

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Ashland Substation
40.852026
-82.351106

Ashland County

LEGEND

■ Proposed Substation

0 2,000 4,000
Feet

BASE MAP SOURCE:
ArcGIS Online, USA Topo Maps

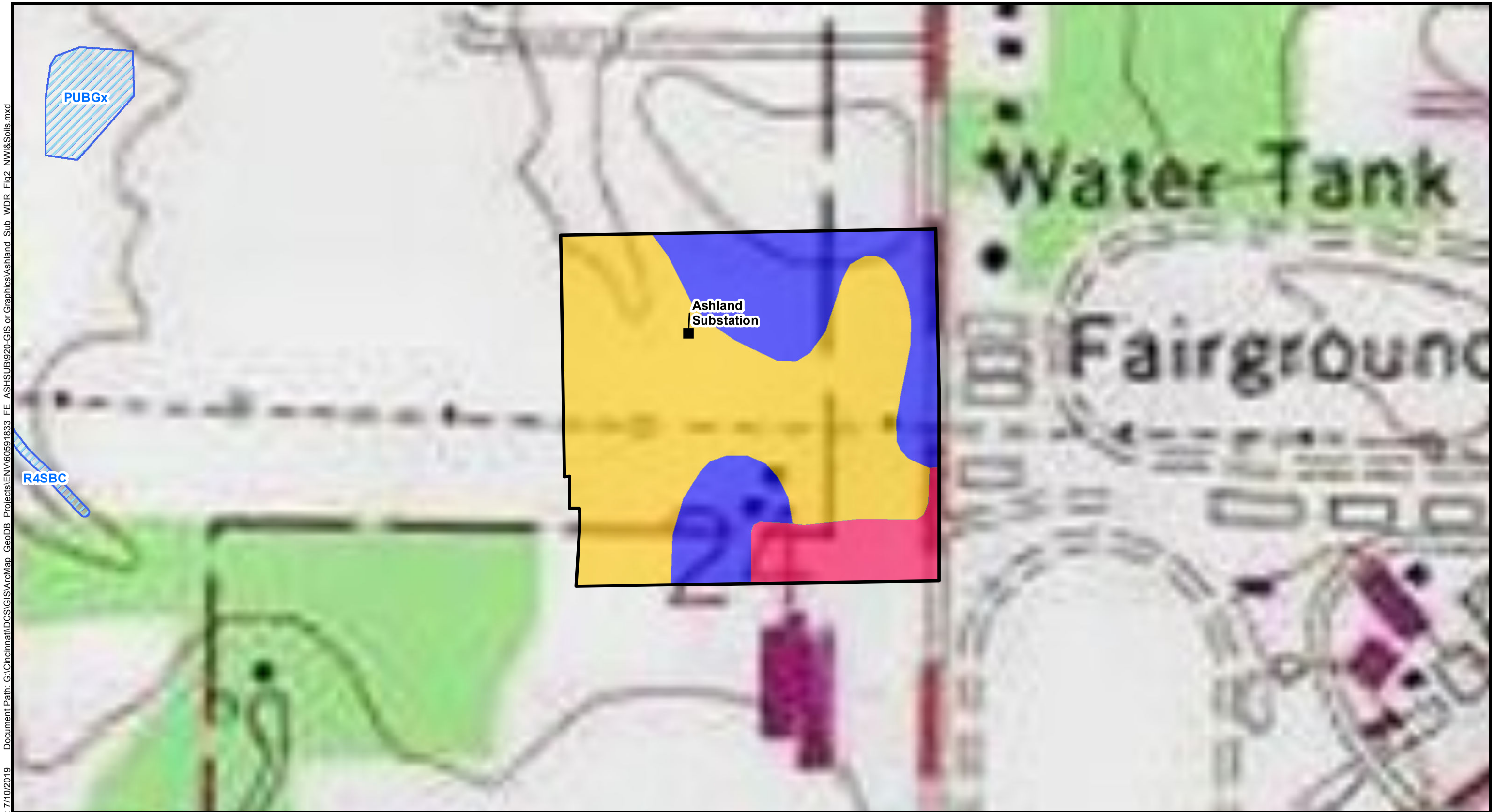
ATSI

Ashland Substation

FIGURE 1
OVERVIEW MAP

JOB NO. 60591833

AECOM



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LEGEND

- Proposed Substation
- Survey Boundary
- National Wetland Inventory (NWI)

Soil Unit

- RsB
- Ud
- WaA

0 200 400
Feet

BASE MAP SOURCE:
ArcGIS Online, USA Topo Maps

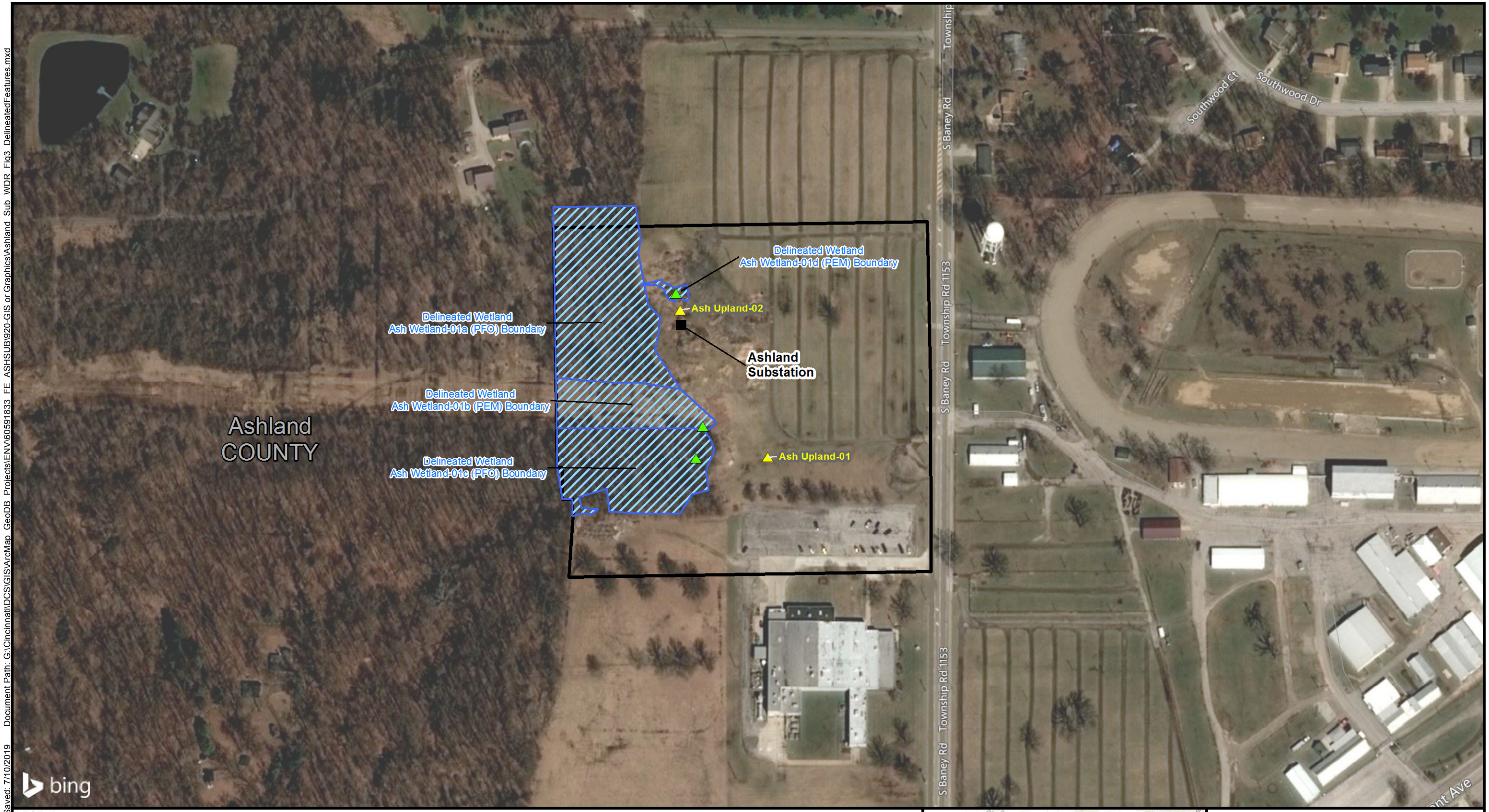
ATSI

Ashland Substation

FIGURE 2
SOIL MAP UNIT AND NATIONAL WETLAND INVENTORY MAP

JOB NO. 60591833

AECOM



LEGEND

- Proposed Substation
- Survey Boundary
- Delineated Wetland
- Upland Data Point
- Wetland Data Point

0 200 400

Feet

BASE MAP SOURCE:
ArcGIS Online, Bing Maps Aerial

ATSI

Ashland Substation

FIGURE 3
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

JOB NO. 60591833

AECOM

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APPENDIX A

U.S. ARMY CORPS OF ENGINEERS WETLAND AND UPLAND FORMS

Wetland Ash-01a and 01c

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ashland Substation | City/County: Ashland | Sampling Date: 06-Feb-19

Applicant/Owner: American Transmission Systems, Inc. | State: OH | Sampling Point: **W-MRK-020619-01PFO**

Investigator(s): M.R.Kline, R.C.Massa | Section, Township, Range: S | T 24N | R 17W

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): concave

Slope: 0.5% / 0.3 ° | Lat.: 40.851246335 | Long.: -82.351010450 | Datum: NAD 83

Soil Map Unit Name: WaA-Wadsworth silt loam, 0 to 2 percent slopes | NWI classification: N/A

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

Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ 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 ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
PFO section of a PEM/PFO wetland complex, located within a depression on both sides of an existing right-of-way. Water drains across the right-of-way from a forested weland into another forested section on the opposite side. The wetland boundary follows the edge of the depression.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1. Quercus palustris	50	☑ 55.6%	FACW
2. Acer rubrum	25	☑ 27.8%	FAC
3. Ulmus rubra	15	☐ 16.7%	FAC
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	0
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. Cornus racemosa	30	☑ 54.5%	FAC
2. Cornus amomum	20	☑ 36.4%	FACW
3. Cornus alba	5	☐ 9.1%	FACW
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	55	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Toxicodendron radicans	20	☑ 100.0%	FAC
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	20	= Total Cover	
Woody Vine Stratum (Plot size: None)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	75	x 2 =	150
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	165 (A)		420 (B)

Prevalence Index = B/A = 2.545

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **W-MRK-020619-01PFO**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc [2]	Texture	Remarks
0-8	2.5Y	5/2	95	2.5Y	6/8	5	C	M	Silty Clay Loam	
8-16	2.5Y	6/2	75	10YR	6/8	25	C	M	Silty Clay Loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches): 2

Water Table Present? Yes ◉ No ○ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

Source of hydrology is spring seeps and surface runoff.

Wetland Ash-01b

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ashland Substation | City/County: Ashland | Sampling Date: 06-Feb-19

Applicant/Owner: American Transmission Systems, Inc. | State: OH | Sampling Point: **W-MRK-020619-01PEM**

Investigator(s): M.R.Kline, R.C.Massa | Section, Township, Range: S | T 24N | R 17W

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): concave

Slope: 0.5% / 0.3 ° | Lat.: 40.851436442 | Long.: -82.350956635 | Datum: NAD 83

Soil Map Unit Name: WaA-Wadsworth silt loam, 0 to 2 percent slopes | NWI classification: N/A

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ 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 ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
PEM section of a PEM/PFO wetland complex, located within a depression on an existing right-of-way. Water drains across the right-of-way into a forested section on the opposite side. The wetland boundary follows edge of depression and hydrophytic vegetation.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: None)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	0
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: None)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	75	☑ 55.6%	FACW
2. Onoclea sensibilis	40	☑ 29.6%	FACW
3. Persicaria sagittata	10	☐ 7.4%	OBL
4. Euthamia graminifolia	10	☐ 7.4%	FACW
5.	0	☐ 0.0%	
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	135	= Total Cover	
Woody Vine Stratum (Plot size: None)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	125	x 2 =	250
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	135 (A)		260 (B)

Prevalence Index = B/A = 1.926

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes ◉ No ○**

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

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **W-MRK-020619-01PEM**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc [2]	Texture	Remarks
0-16	10YR	5/1	80	10YR	5/8	20	C	M	Silty Clay Loam	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches): 1

Water Table Present? Yes ◉ No ○ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

Source of hydrology is spring seeps and surface runoff.

Upland Ash-01

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ashland Substation City/County: Ashland Sampling Date: 06-Feb-19

Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: **W-MRK-020619-01UPL**

Investigator(s): M.R.Kline, R.C.Massa Section, Township, Range: S T M R

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): convex

Slope: 0.5% / 0.3 ° Lat.: 40.851254354 Long.: -82.350450767 Datum: NAD 83

Soil Map Unit Name: WaA-Wadsworth silt loam, 0 to 2 percent slopes NWI classification: N/A

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

Are Vegetation ☑ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ○ 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 ○ No ◉	**Is the Sampled Area within a Wetland?** **Yes ○ No ◉**
Hydric Soil Present?	Yes ○ No ◉	
Wetland Hydrology Present?	Yes ○ No ◉	

Remarks:
Upland data point for W-MRK-020619-001 (Sample point #1). Surrounding land use is mowed fields used for fairgrounds parking.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: None)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	0
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: None)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. Dactylis glomerata	100	☑	58.8%	FACU
2. Trifolium repens	40	☑	23.5%	FACU
3. Taraxacum officinale	20	☐	11.8%	FACU
4. Plantago major	10	☐	5.9%	FAC
5.	0	☐	0.0%	
6.	0	☐	0.0%	
7.	0	☐	0.0%	
8.	0	☐	0.0%	
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	170	= Total Cover		
Woody Vine Stratum (Plot size: None)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	160	x 4 =	640
UPL species	0	x 5 =	0
Column Totals:	170 (A)		670 (B)

Prevalence Index = B/A = 3.941

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes ○ No ◉**

Remarks: (Include photo numbers here or on a separate sheet.)
Sample point is within a mowed field used for fairgrounds parking.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **W-MRK-020619-01UPL**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc [2]	Texture	Remarks
0-8	10YR	4/3	100						Silt Loam	
8-12	10YR	5/2	50	10YR	4/6	50			Silty Clay Loam	mixed with 50% rock

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Shovel rufusal at 12 inches due to rock.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No source of hydrology.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ashland Substation 69kV City/County: Ashland Sampling Date: 06-Feb-19

Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: **Sample point #2**

Investigator(s): M.R.Kline, R.C.Massa Section, Township, Range: S T 24N R 17W

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): convex

Slope: 0.5% / 0.3 ° Lat.: 40.852126082 Long.: -82.351131019 Datum: NAD 83

Soil Map Unit Name: WaA-Wadsworth silt loam, 0 to 2 percent slopes NWI classification: N/A

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

Are Vegetation ☑, Soil ☑, or Hydrology ☑ significantly disturbed? Are "Normal Circumstances" present? Yes ○ 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 ○ No ◉

Hydric Soil Present? Yes ○ No ◉

Wetland Hydrology Present? Yes ○ No ◉

Is the Sampled Area within a Wetland? **Yes** ○ **No** ◉

Remarks:
Upland data point located within a spoil pile area which includes: soils, concrete, blacktop, and mulch. Area is highly disturbed with small pockets of water with hydrophytic vegetation. Pockets of water are created by piled materials and tire ruts.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: None)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	0
	0	= Total Cover		
Sapling/Shrub Stratum (Plot size: None)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
3.	0	☐	0.0%	
4.	0	☐	0.0%	
5.	0	☐	0.0%	
	0	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. Dactylis glomerata	75	☑	42.9%	FACU
2. Phalaris arundinacea	25	☑	14.3%	FACW
3. Trifolium repens	25	☑	14.3%	FACU
4. Daucus carota	20	☐	11.4%	UPL
5. Phytolacca americana	10	☐	5.7%	FACU
6. Achillea millefolium	10	☐	5.7%	FACU
7. Typha angustifolia	5	☐	2.9%	OBL
8. Bidens frondosa	5	☐	2.9%	FACW
9.	0	☐	0.0%	
10.	0	☐	0.0%	
	175	= Total Cover		
Woody Vine Stratum (Plot size: None)				
1.	0	☐	0.0%	
2.	0	☐	0.0%	
	0	= Total Cover		

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	120	x 4 =	480
UPL species	20	x 5 =	100
Column Totals:	175 (A)		645 (B)

Prevalence Index = B/A = 3.686

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? **Yes** ○ **No** ◉

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation is disturbed by stockpiling of debris and soils.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **Sample point #2**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc [2]	Texture	Remarks
0-12	10YR	4/2	50	7.5YR	4/6	50			Silty Clay Loam	mixed with rock and debris

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

Shovel refusal at 12 inches. Soils are mixed heavily with rock and blacktop.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches): _____

Water Table Present? Yes ○ No ◉ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches): _____

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks:

No source of hydrology. Pockets of water are created by stockpiles of soil, debris, and tire ruts collecting surface runoff.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ashland Substation City/County: Ashland Sampling Date: 06-Feb-19

Applicant/Owner: American Transmission Systems, Inc. State: OH Sampling Point: **W-BJM-190708-1 PEM**

Investigator(s): B.J.MILLER Section, Township, Range: S T 24N R 17W

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): concave

Slope: 0.5% / 0.3 ° Lat.: 40.852242 Long.: -82.35121 Datum: NAD 83

Soil Map Unit Name: Wadsworth silt loam, 0 to 2 percent slopes (WaA) NWI classification: N/A

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

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ 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 ◉ No ○	**Is the Sampled Area within a Wetland?** Yes ◉ No ○
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks:
PEM section of a PEM/PFO wetland complex, located within a depressional area that is actively disturbed by vehicle traffic and fill materials. The wetland boundary was identified by the dominance of Typha latifolia and presence of surface water and algae that drains directly west into Wetland Ash-

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
Tree Stratum (Plot size: None)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	0
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: None)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
3.	0	☐ 0.0%	
4.	0	☐ 0.0%	
5.	0	☐ 0.0%	
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Typha angustifolia	60	☑ 70.6%	OBL
2. Eleocharis obtusa	10	☐ 11.8%	OBL
3. Juncus effusus	5	☐ 5.9%	OBL
4. Carex vulpinoidea	5	☐ 5.9%	FACW
5. Festuca pratensis	5	☐ 5.9%	FACU
6.	0	☐ 0.0%	
7.	0	☐ 0.0%	
8.	0	☐ 0.0%	
9.	0	☐ 0.0%	
10.	0	☐ 0.0%	
	85	= Total Cover	
Woody Vine Stratum (Plot size: None)			
1.	0	☐ 0.0%	
2.	0	☐ 0.0%	
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x 1 =	75
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	85 (A)		105 (B)

Prevalence Index = B/A = 1.235

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ◉ No ○

Remarks: (Include photo numbers here or on a separate sheet.)
15 percent of the vegetative community was bare soil.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **W-BJM-190708-1 PEM**

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

Depth (inches)	Matrix Color (moist)		%	Redox Features Color (moist)		%	Type [1]	Loc [2]	Texture	Remarks
0-3	10YR	4/2	100						Silty Clay Loam	
3-6	2.5YR	5/2	100						Silty Clay	
6-18	2.5YR	5/1	95	2.5YR	4/6	5	C	M	Silty Clay	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2] Location: PL=Pore Lining. M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Muck Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

Soil profile appeared to be heavily disturbed by vehicle compaction and spoil material.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ◉ No ○ Depth (inches): 1

Water Table Present? Yes ◉ No ○ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ◉ No ○ Depth (inches): 0

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

Source of hydrology is runoff.

APPENDIX B

OEPA WETLAND ORAM FORMS

Version 5.0	**Ohio Rapid Assessment Method for Wetlands** **10 Page Form for Wetland Categorization**	
	Background Information **Scoring Boundary Worksheet** **Narrative Rating** **Field Form Quantitative Rating** **ORAM Summary Worksheet** **Wetland Categorization Worksheet**	Ohio EPA, Division of Surface Water Final: February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

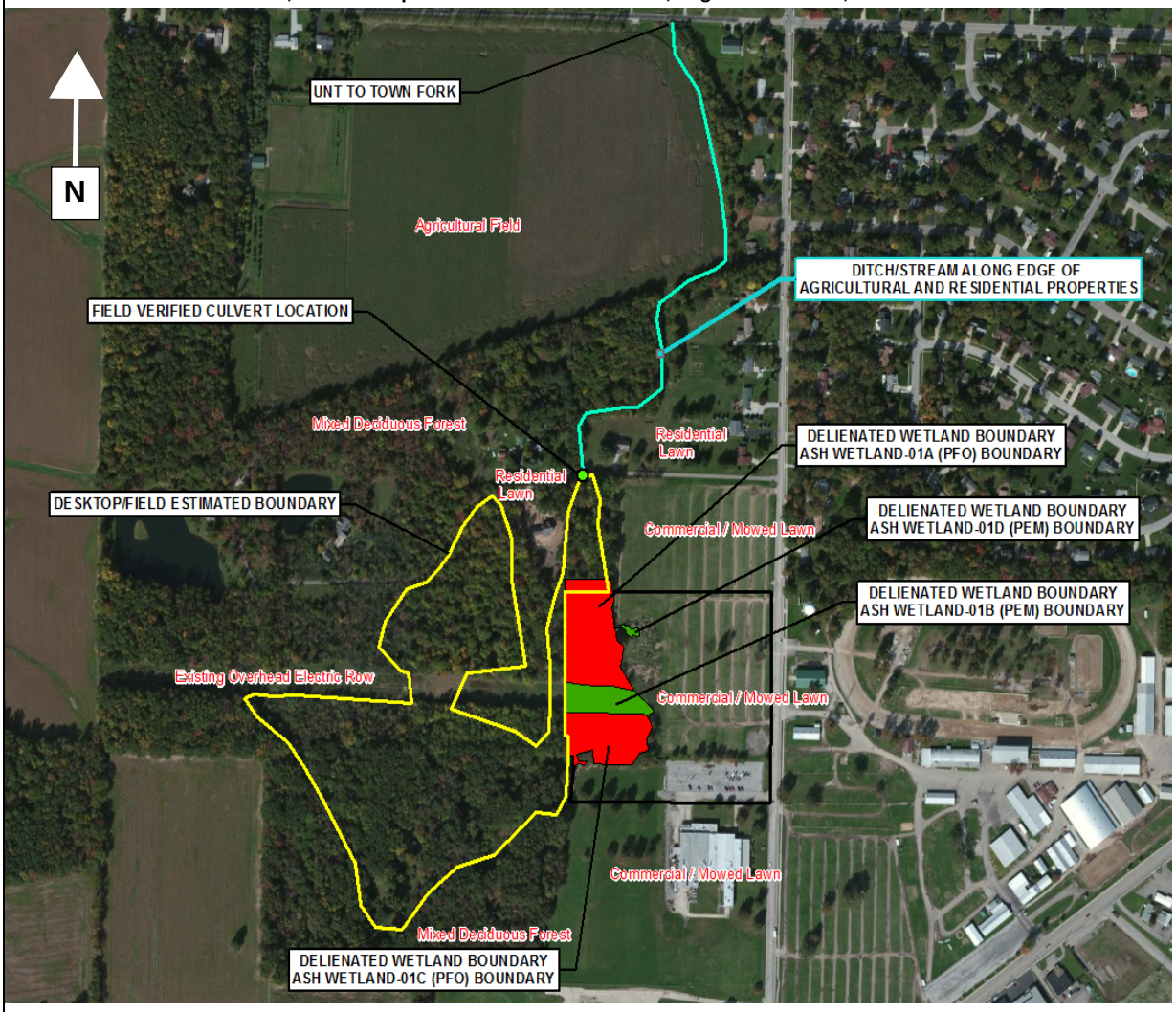
Name:	Matt Kline
Date:	2019-02-06; OEPA ORAM VERIFICATION (Cara Hardesty - 2019-07-08)
Affiliation:	AECOM
Address:	Foster Plaza 6, 681 Andersen Drive, Suite 400, Pittsburgh, PA 15220
Phone Number:	412-530-4700
e-mail address:	matthew.kline@aecom.com
Name of Wetland:	Wetland Ash-01 (a,b,c,&d)
Vegetation Communit(ies):	Palustrine Emergent and Forested Wetland
HGM Class(es):	Depressed seasonal (DFC)

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

Lat/Long or UTM Coordinate	40.851538°, -82.351367°	
USGS Quad Name	Ashland South, Ohio 7.5 Minute USGS Topo Quad	
County	Ashland County	
Township	Milton Township	
Section and Subsection	USFS - GLO Township Records - T24N R17W	
Hydrologic Unit Code	Lang Creek Watershed (HUC: 050400020601)	
Site Visit	2/6/2019 and 4/4/2019	
National Wetland Inventory Map	None within Survey Boundary or Wetland (Figure 2)	
Ohio Wetland Inventory Map	None within Survey Boundary or Wetland (Figure 2)	
Soil Survey	See Figure 2 in Wetland Delineation Report	
Delineation report/map	See Figure 3 in Wetland Delineation Report	

Name of Wetland: Wetland Ash-01a, b, & c	
Wetland Size (acres, hectares): Greater than 10 acres & less than 25 acres (includes estimated & delineated wetland boundary)	

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

The PEM/PFO wetland complex is located along the edge of grass parking area associated with the Ashland County Fairgrounds. The wetland boundary is defined by a depressional area formed along the edge of the mowed/grass parking area. The wetland continues outside of the study area and drains towards the north into a culvert located on a private drive way. Review of historical aerial indicated that on the opposite side of this culvert, a wetland and/or drainage channel continues. This drainage channel continues to the north and discharges into a ditch along the edge of a agricultural field / residential property. This channel can be seen on historic mapping (2006) and appears to flow to the west around the agricultural field and then along the edge of the residential lawns/agricultural field to the north. This channel empties into a unnamed tributary to Town Run, which originates on USGS quad near Smith Road.

Final score : 43.5		**Category:**	Mod. Cat 2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	√	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	√	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	√	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	√	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		√
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.		√

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap . The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	NO Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Go to Question 8a
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO Go to Question 8b

8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	NO Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Wetland ASH-01a, 01b, 01c, 01d

Site: Ashland	Rater(s): M.R.Kline, R.C.Massa, B.Miller	Date: 2/6/2019

Field Id:
W-MRK-190206-001 PEM/PFO

Metric 1. Wetland Area (size).

4 (max 6 pts) | 4 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [x] 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)

3.77 acres within Survey Boundary
Wetland is larger than 10 acres but less than 25 acres

Metric 2. Upland buffers and surrounding land use.

5 (max 14 pts.) | 9 (subtotal)

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

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [x] 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)
- [x] LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

14.5 (max 30 pts.) | 23.5 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

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

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

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

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

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

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [x] Other: right-of-way

Metric 4. Habitat Alteration and Development.

11 (max 20 pts.) | 34.5 (subtotal)

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

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

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [x] 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)
- [x] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [x] clearcutting
- [x] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [x] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [x] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

34.5 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ASH-01a, 01b, 01c, 01d

Site: Ashland	Rater(s): M.R.Kline, R.C.Massa, B.Miller	Date: 2/6/2019

Field Id:
W-MRK-190206-001 PEM/PFO

34.5 subtotal this page

0 **34.5** 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 Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

9 **43.5** max 20pts. / subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [2] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

- [1] Vegetated hummucks/tussucks
- [2] Coarse woody debris >15cm (6in)
- [1] Standing dead >25cm (10in) dbh
- [1] 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 spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high 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

Category 2

43.5 **GRAND TOTAL(max 100 pts)**

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	4	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	14.5	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	9	
	TOTAL SCORE	43.5	Category based on score breakpoints

Modified Category 2

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	YES Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

APPENDIX C

REPRESENTATIVE WETLAND PHOTOGRAPHS

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

April 3, 2019

Description:

Wetland Ash-01a & Wetland Ash-01c

PFO Wetland

Modified Category 2

Facing North

Date:

April 3, 2019

Description:

Wetland Ash-01a & Wetland Ash-01c

PFO Wetland

Modified Category 2

Facing East

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

April 3, 2019

Description:

Wetland Ash-01a & Wetland Ash-01c

PFO Wetland

Modified Category 2

Facing West

Date:

April 3, 2019

Description:

Wetland Ash-01a & Wetland Ash-01c

PFO Wetland

Modified Category 2

Facing South

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

April 3, 2019

Description:

Wetland Ash-01a & Wetland Ash-01c

PFO Wetland

Modified Category 2

Soil Profile

Date:

April 3, 2019

Description:

Wetland Ash-01b

PEM Wetland

Modified Category 2

Facing North

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

April 3, 2019

Description:
Wetland Ash-01b

PEM Wetland

Modified Category 2

Facing East

Date:

April 3, 2019

Description:

Wetland Ash-01b

PEM Wetland

Modified Category 2

Facing West

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

April 3, 2019

Description:
Wetland Ash-01b

PEM Wetland

Modified Category 2

Facing South

Date:

April 3, 2019

Description:

Wetland Ash-01b

PEM Wetland

Modified Category 2

Soil Profile

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

July 8, 2019

Description:
Wetland Ash-01d

PEM Wetland

Modified Category 2

Facing North

Date:

July 8, 2019

Description:

Wetland Ash-01d

PEM Wetland

Modified Category 2

Facing East

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

July 8, 2019

Description:
Wetland Ash-01d

PEM Wetland

Modified Category 2

Facing West

Date:

July 8, 2019

Description:

Wetland Ash-01d

PEM Wetland

Modified Category 2

Facing South

AECOM

PHOTOGRAPHIC RECORD
Wetlands

Client Name:	Site Location:	Project No.
American Transmission Systems, Inc, a FirstEnergy Company	Ashland Substation Project	60591833

Date:

July 8, 2019

Description:
Wetland Ash-01d

PEM Wetland

Modified Category 2

Soil Profile

Date:

N/A

Description:

N/A

Intentionally left blank