



Legal Department

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

November 7, 2017

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

Hector Garcia
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Senior Counsel –
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**Re: Case No. 17-2281-EL-BLN Request for Expedited Treatment:
In the Matter of the Letter of Notification for the
Lemaster 138 kV Station Update**

Dear Chairman Haque,

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

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

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

Respectfully submitted,

/s/ Christen Blend

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

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

Letter of Notification for Lemaster 138 kV Station Update



An **AEP** Company

BOUNDLESS ENERGY™

PUCO Case No. 17-2281-EL-BLN

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

Submitted by:
AEP Ohio Transmission Company, Inc.

November 7, 2017

LETTER OF NOTIFICATION FOR LEMASTER 138 KV STATION UPDATE

Letter of Notification Lemaster 138 kV Station Update

4906-6-05

AEP Ohio Transmission Company, Inc. ("AEP Ohio Transco") provides this Letter of Notification ("LON") to the Ohio Power Siting Board ("OPSB") in accordance with the requirements of the Ohio Administrative Code Chapter 4906-6-05.

4906-6-5(B) General Information

B(1) Project Description

The name of the project and applicant's reference number, names, and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Letter of Notification.

AEP Ohio Transco has identified the need to construct the Lemaster Station Update (the "Project") in York Township, Athens County, Ohio. The Project consists of constructing a new 138 kV electric transmission substation on a site adjacent to AEP's existing Poston Station, which will ultimately be replaced by the Lemaster Station. The Project will be set up as a 138 kV breaker-and-a-half configuration, with an initial placement of four breaker strings, containing six 138 kV circuit terminations. It will also contain two 138 kV capacitor banks, for system voltage support.

The Project will be constructed on AEP property that was previously owned by the Athens County Port Authority located along Poston Road (County Road 110) near its intersection with State Route 691. The location of the property is shown on Figure 1.1 in Appendix A. The new undeveloped, non-forested property is approximately 41.75 acres in size. AEP Ohio Transco purchased the property for the Project. Figures 1.2 and 1.3 in Appendix A show the existing Poston Station and the general location of the proposed Lemaster Station within the Project Area. At a later date, AEP Ohio Transco will submit separate applications to the OPSB for the relocation of electric transmission lines from the existing Poston Station to the new Lemaster Station.

A LON for the Project was previously submitted to the OPSB on December 21, 2016, under PUCO Case No. 16-2314-EL-BLN. The location of the proposed substation has shifted slightly since that filing and is now proposed to be located slightly east of the location outlined in the December 2016 LON. The location of the previously proposed substation and newly proposed substation are shown on Figures 1.1 and 1.2 in Appendix A.

AEP Ohio Transco's engineering contractor for the Project reviewed the existing topography and geotechnical information provided by AEP Ohio Transco for the Project Area. AEP Ohio Transco requested that the contractor consider mitigation of potential flooding risks on site when designing the Lemaster Station facility. It was their assessment that it would be ideal for the long-term flood avoidance of the

LETTER OF NOTIFICATION FOR LEMASTER 138 KV STATION UPDATE

facility to move the proposed substation location easterly on the existing property in order to minimize the impact of runoff coming onto the station pad from properties to the north. The contractor has finalized the substation pad design, including diversion ditches, a retention pond, and a small stormwater basin near the southwest corner of the substation. This basin will provide storm water detention and act as a post-construction Best Management Practice (BMP) for runoff from the station pad.

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

(3) Constructing a new electric power transmission substation.

B(2) Statement of Need

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

The Poston Substation, which will be retired and removed, has been subject to flooding in the past, posing a safety concern. The existing substation site also increases the difficulty of maintaining and repairing aging equipment that was installed in the 1940's and 50's. This equipment no longer complies with AEP's safety standards. The drivers for replacement of the equipment are age, dielectric strength breakdown, short circuit strength breakdown, and accessory damage. The new substation will occupy approximately 5 acres and cost approximately \$13 million to construct. Grading, retention/detention features, and access to the station will also be constructed on the property surrounding the 5 acre station site. The substation would consist of one 138 kV to 12 kV transformer, four breaker strings, ten 138 kV breakers, two 138 kV capacitor banks, and a control building. AEP proposes to commence construction in May 2017 and place the new substation in service by June 2018.

B(3) Project Location

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

Figures 1.2, 1.3, and 1.4 in Appendix A show the location of the Project in relation to other existing AEP Ohio Transco transmission lines and the existing Poston Station.

B(4) Alternatives Considered

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

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The proposed Project is located on property immediately adjacent to the existing Poston Station facility. This property is currently undeveloped and non-forested, and does not contain any streams or wetlands. There are no residences within 1,000 feet of the proposed Project location. This minimizes impacts to the community and the environment, while taking into account the engineering and construction needs of the Project. Therefore, no significant alternatives were studied as part of the Project. The study area for the Project is the same as in the previously approved LON in PUCO Case No. 16-2314-EL-BLN.

B(5) Public Information Program

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

The Project will be located fully on property currently owned by AEP Ohio Transco. Within seven days of filing this LON, AEP Ohio Transco will issue a public notice in a newspaper of general circulation in the Project Area. The notice will comply with all requirements under O.A.C. Section 4906-6-08(A)(1-6). Further, AEP Ohio Transco maintains a website (<http://aeptransmission.com/ohio/>) which provides the public access to an electronic copy of this LON and the public notice for this LON. The LON will also be sent to applicable public officials concurrently with submittal to OPSB, and a paper copy of the LON will be provided to the Athens County Public Library.

B(6) Construction Schedule

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

Construction is planned to start in November/December 2017. The in-service date (completion date) of the Project is expected to be on or about June 2018.

B(7) Area Map

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

Figure 1.1 included in Appendix A identifies the location of the Project Area on a USGS quadrangle map. Figure 1.2 in Appendix A is an aerial map of the Project Area. To visit the Project from Columbus, take US 33 southeast to the State Route 682 interchange approximately four miles northeast of Athens, Ohio. Take State Route 682 south for 0.25 miles and then turn right (west) on Poston Road (County Road 110). Follow Poston Road west for approximately 2.75 miles. The Project Area is located on the north side of the road.

B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the

LETTER OF NOTIFICATION FOR LEMASTER 138 KV STATION UPDATE

facility and a list of the additional properties for which such agreements have not been obtained.

Construction of the new Lemaster Station will occur on property previously owned by the Athens County Port Authority in York Township, Athens County (Parcel ID: P010010000104). AEP Ohio Transco purchased the 41.75-acre parcel for construction of the station. No other property acquisition or easements are required to construct and operate the Lemaster Station.

B(9) Technical Features

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

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

The proposed Lemaster Station will be constructed on a 29.15-acre property. AEP Ohio Transco intends to construct an approximate 5.0 acre station, adjacent storm water facilities, and access roads on this property. The equipment and facilities described below will be installed within the fenced area of the proposed Lemaster Station facility.

Breakers

There will be ten 138 kV breakers and two 138kV “cap-switchers” installed at the substation. These breakers will be SF6 (sulfur hexafluoride) gas insulated, dead tank breakers.

Switchgear

The station is designed as a 138 kV breaker-and-a-half design, with an initial installation of four strings.

Bus Arrangement and Structures

The Project will be installed as follows: There will be a 138 kV four-string breaker-and-a-half layout with six 138 kV line terminations (expandable to seven). Two 138 kV capacitor banks will attach to the two 138 kV buses, via a cap-switcher and disconnect switches. Equipment support steel structures will be constructed using structural tubing, folded plate tapered tubular, and/or wide flange structures. There will be a six bay 138 kV A-Frame dead-end expandable to seven. All yard structures will be ASTM A36, ASTM A500, or ASTM A572 steel hot-dip galvanized for corrosion protection. The high bus throughout the yard will be approximately 34 feet in height.

Transformers

There will be one 138 kV to 12 kV transformer installed at the substation.

Control Buildings

A single story, prefabricated control building, approximately 26 feet by 60 feet in dimension, will be installed.

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Other Major Equipment

Other equipment will include two 138 kV capacitor banks (28.8 MVAR each), surge arresters, Capacitor Voltage Transformers (“CVTs”), line traps, station service equipment, and disconnect switches.

B(9)(b) Electric and Magnetic Fields

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

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

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

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

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

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

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

The estimated capital cost of the project.

The 2018 estimated capital cost of the proposed Project is \$13,028,669.

B(10) Social and Economic Impacts

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

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

The Project is located within York Township, Athens County, Ohio. Figure 1.3 in Appendix A shows land use categories documented within the Project Area, as well as the U.S. Department of Agriculture (“USDA”) land use categories for areas surrounding the Project Area. According to this map, land uses in the Project Area consist of old field habitats, industrial areas, and exiting roadways, while land uses in the areas surrounding the Project Area consist of pasture/hayfield, grassland, barren land, and deciduous forest. Field observations by AEP Ohio Transco’s consultant indicate the Project Area is primarily comprised of

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old field habitat, which can be characterized as non-forested grassland that is occasionally disturbed (mowed, grazed, or cleared) and contains a variety of herbaceous species, young shrubs, and tree saplings. No streams or wetlands are located in the Project Area.

There are currently no active residences, cemeteries, churches, schools, or other community facilities located within 1,000 feet of the proposed Lemaster Station location (as shown on Figures 1.2 and 1.3 in Appendix A). The nearest residences are located approximately 1,700 feet to the west of the proposed substation location along State Route 691 (see Figure 1.3). A water filtration plant is located approximately 0.5 miles to the northeast of the Project (approximately 1,000 feet northeast of the existing Poston Station).

No wildlife management areas or nature preserve lands are located within 1,000 feet of the Project. However, the Wayne National Forest, the Hamley Run Floodplain Forest Conservation Site, a Breeding Amphibian Site, a Floodplain Forest Plant Community, and a Mixed Mesophytic Forest Plant Community were reported by the Ohio Department of Natural Resources ("ODNR") Ohio Natural Heritage Program ("ONHP") as occurring within one mile of the Project Area (see Appendix C). The proposed Project will not impact any of these resources.

B(10)(b) Agricultural Land Information

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

The Project is not located within registered agricultural district lands, based on December 9, 2016 coordination with the Athens County Auditor's Office. Additionally, the Project Area does not contain any active agricultural row crop land (see Figure 1.3 in Appendix A and Figure 3 in Appendix C).

B(10)(c) Archaeological and Cultural Resources

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

In October 2016, AEP Ohio Transco's consultant completed Phase I cultural resource investigations for the Project (see Appendix B of the previously filed LON under PUCO Case No. 16-2314-EL-BLN). The field investigations were conducted within the original Project Area (41.75 acres) Weller & Associates, Inc. verified field investigations on the Poston Substation portion of the Project Area related to the proposed Lemaster Station adjustment on October 31, 2017. The Project plans are to slightly move the proposed station location to the east. Weller had previously completed cultural resource management work for the planned station area as it was proposed, which is just west of the currently planned area. The work involved visual inspection of the subject area and shovel probing to verify the conditions. The field investigations did not identify any cultural materials and the area was found to be fully and severely disturbed by grading

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activity associated with coal mining and activities associated with the extant Poston Station. Weller did not recommend any additional work for the Project.

The literature review conducted for the Project Area identified no previously recorded archaeological sites within a one-mile radius of the Project Area, and one previously recorded architectural site - the EM Poston Generating Station (ATH0063302; ca 1949), which is located adjacent to the Project Area. This site is not regarded as being a significant cultural resource.

The archaeological field reconnaissance determined that the majority of the Project Area has been severely altered and disturbed. However, testing in the western part of the cultural resources study area west of the proposed Lemaster Station site identified a historic period site (33AT1057). This site may have significant deposits, as several intact subsurface deposits were identified during shovel testing. It is recommended that this site be avoided, otherwise a Phase II archaeological assessment is considered appropriate. Provided 33AT1057 is avoided, no further work is considered to be necessary for this Project. For more information, see the Phase I Cultural Resources Management Investigations report included in Appendix B of the previously filed LON under PUCO Case No. 16-2314-EL-BLN. An addendum cultural resources survey letter report has been prepared under separate cover.

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

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

A Notice of Intent was filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC000004, and AEP Ohio Transco will implement and maintain best management practices, as outlined in the project-specific Storm Water Pollution Prevention Plan ("SWPPP"), to minimize erosion and control sediment to protect surface water quality during storm events. The Project will not impact any streams or wetlands, and no tree clearing will be required in any forested wetlands (see Appendix C). In addition, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers or Pre-Construction Notification to the U.S. Army Corps of Engineers.

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

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

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

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statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The United States Fish and Wildlife Service (“USFWS”) *Federally Listed Species by Ohio Counties October 2015* (available at www.fws.gov/midwest/ohio/pdf/OhioTEListByCountyOct2015.pdf) was reviewed to determine the threatened and endangered species currently known to occur in Athens County. This USFWS publication listed the following threatened or endangered species as occurring in Athens County: Indiana bat (*Myotis sodalis*; federally endangered), northern long-eared bat (*Myotis septentrionalis*; federally threatened), fanshell (*Cyprogenia stegaria*; federally endangered), sheepnose (*Plethobasus cyphus*; federally endangered), pink mucket pearly mussel (*Lampsilis orbiculata*; federally endangered), snuffbox (*Epioblasma triquetra*; federally endangered), and American burying beetle (*Nicrophorus americanus*; federally endangered). As part of the ecological study completed for the Project, a coordination letter was submitted to the USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The November 28, 2016 response letter from USFWS (see Appendix B) indicated that the proposed Project is within the range of the Indiana bat and northern long-eared bat in Ohio, and within the vicinity of one or more confirmed records of Indiana bats, but if tree clearing occurs between October 1 and March 31, they do not anticipate the Project having any adverse effects to these species or any other federally listed endangered, threatened, proposed, or candidate species. The proposed Project is not expected to require any tree clearing. The USFWS letter did not include any comments specific to the other federally listed species.

Several state-listed threatened species, endangered species, and species of concern are listed by the Ohio Department of Natural Resources as occurring, or potentially occurring in Athens County.

(<http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/species%20and%20habitats/state-listed%20species/athens.pdf>) These state-listed species are addressed in detail in the Ecological Resources Inventory Report included in Appendix B.

Coordination letters were submitted via email to the Ohio Department of Natural Resources (“ODNR”) Division of Wildlife (“DOW”) Ohio Natural Heritage Program (“ONHP”) and the ODNR Office of Real Estate in November 2016, seeking an environmental review of the proposed Project for potential impacts on state-listed and federally-listed threatened or endangered species. Correspondence from ODNR’s DOW/ONHP was received on November 17, 2016 and correspondence from the ODNR Office of Real Estate was received on December 30, 2016 (see Appendix B).

According to the ODNR Office of Real Estate, the Project is within the vicinity of records for the Indiana bat and presence of the Indiana bat has been established in the area. If suitable habitat occurs within the project area, the ODNR recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the ODNR recommends cutting occur between October 1 and March 31. If no tree removal is proposed, this Project is not likely to impact this species. The ODNR Office of Real Estate also indicated that due to the Project location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact federal and state-listed mussel species. The Project is also within the range of the channel darter (*Percina copelandi*), a state threatened fish, and the river darter (*Percina shumardi*), a state threatened fish. The ODNR Office of Real Estate recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their

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habitat. If no in-water work is proposed, this Project is not likely to impact these or other aquatic species. The Project is also within the range of the timber rattlesnake (*Crotalus horridus horridus*), a state endangered species and a federal species of concern, the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species, mud salamander (*Pseudotriton montanus*), a state threatened species, and black bear (*Ursus americanus*), a state endangered species. The ODNR Office of Real Estate indicated that due to the location, the type of habitat present at the project site, and the type of work proposed, this Project is not likely to impact these species.

According to the DOW/OHNP, three species are known to occur within a one-mile radius of the Project Area, including rough boneset (*Eupatorium pilosum*; status not yet determined), a caddisfly (*Brachycentrus numerosus*; state endangered), and eastern box turtle (*Terrapene carolina*; state species of concern). None of these known locations is within or in the immediate vicinity of the Project Area and no impacts to these species are anticipated (see Appendix C for further information). Potentially suitable habitat for two other state-listed species, black bear (*Ursus americanus*; state endangered) and timber rattlesnake (*Crotalus horridus horridus*; state endangered) were observed in the Project Area. However, neither of species is known to occur within a mile of the Project Area, and no impacts to these species are anticipated (see Appendix B for further information).

B(10)(f) Areas of Ecological Concern

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

The ODNR DOW/OHNP response indicated that they are unaware of any unique geological features or scenic rivers within a mile of the Project Area, but did state that the Wayne National Forest, the Hamley Run Floodplain Forest Conservation Site, a Breeding Amphibian Site, a Floodplain Forest Plant Community, and a Mixed Mesophytic Forest Plant Community exist within a one-mile radius of the Project. However, none of these known locations occur within or immediately adjacent to the Project Area and no impacts are anticipated (see Appendix B). Correspondence received from the USFWS (see Appendix B) indicated that there are no federal wilderness areas, wildlife refuges, or designated critical habitat in the Project vicinity.

The FEMA Flood Insurance Rate Map ("FIRM") was consulted to identify any floodplains/flood hazard areas that have been mapped in the Project Area (specifically, map number 39009C0095C). Based on this map, no mapped FEMA floodplains are located in the Project Area. Therefore, no floodplain permits will be required for this Project.

A review of the National Wetlands Inventory ("NWI") database indicated that one NWI-mapped wetland was identified within the Project Area. Wetland and stream delineation field surveys were completed within

LETTER OF NOTIFICATION FOR LEMASTER 138 KV STATION UPDATE

the Project Area by AEP Ohio Transco's consultant in November 2016. The results of the wetland and stream delineations are presented in the Ecological Resources Inventory Report included in Appendix B. No wetlands or streams were identified in the Project Area. The area identified by the NWI as a wetland within the Project Area was found to lack the necessary criteria to be considered a wetland. Therefore, no impacts are anticipated during Project construction activities.

B(10)(g) Unusual Conditions

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

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

LETTER OF NOTIFICATION FOR LEMASTER 138 KV STATION PROJECT

Appendix A Project Maps
November 7, 2017

Appendix A Project Maps

Figures 1.1, 1.2, 1.3, and 1.4

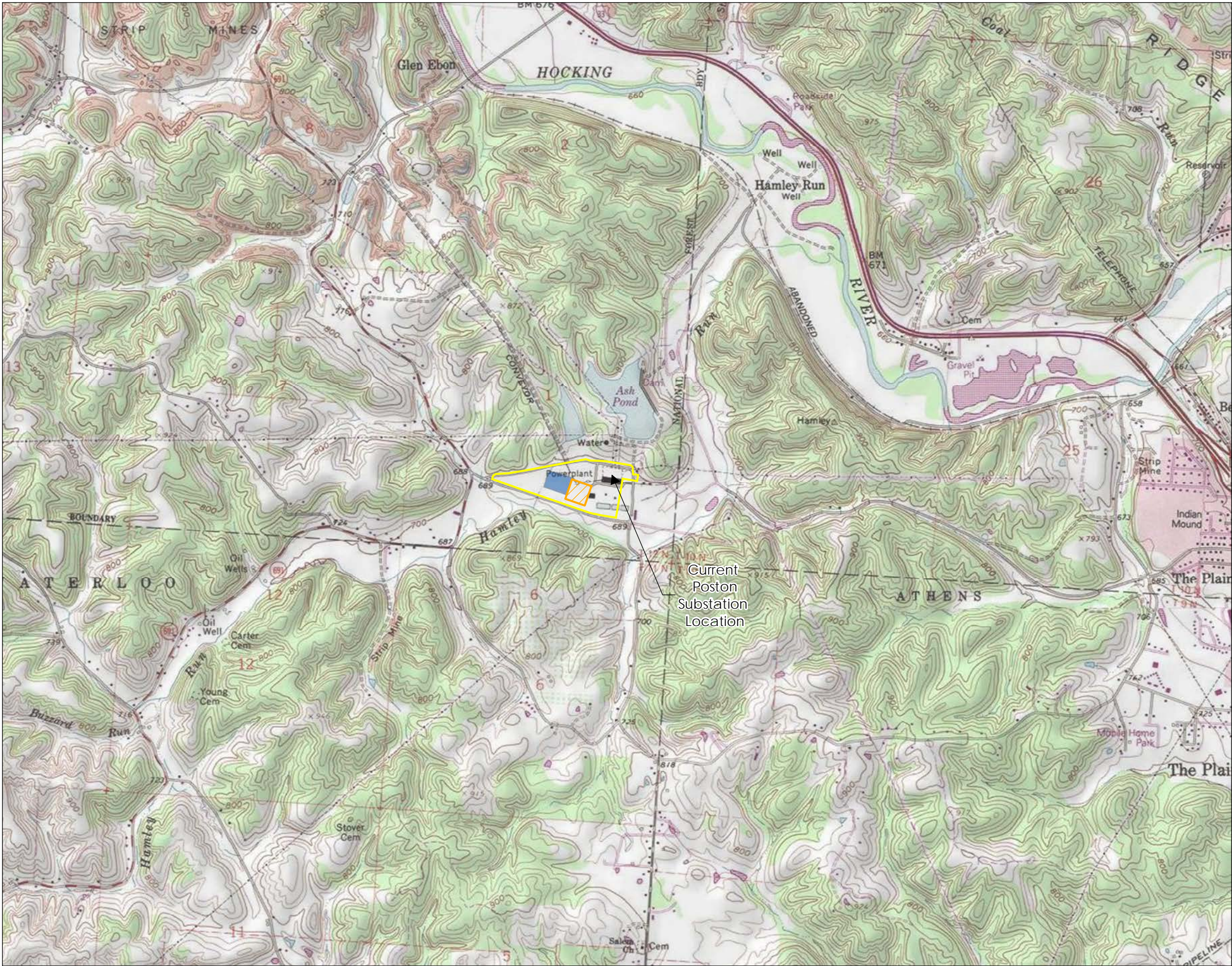


Figure No.
1.1

Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project

Project Location
Athens County, Ohio

193704783
Prepared by HDB on 2017-10-30
Technical Review by JH on 2017-10-31
Independent Review by DJG on 2017-10-31

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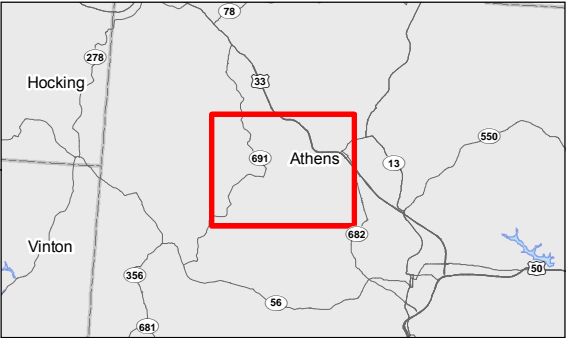
N

Legend

Project Area

Approximate Proposed Lemaster Substation Fence Line

Former Proposed Lemaster Substation Fence Line



- Notes
- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 - Data Sources Include: Stantec, AEP, NADS
 - Background: USGS 7.5' Topographic Quadrangles - Nelsonville (OH, 1983) and The Plains (OH, 1975)



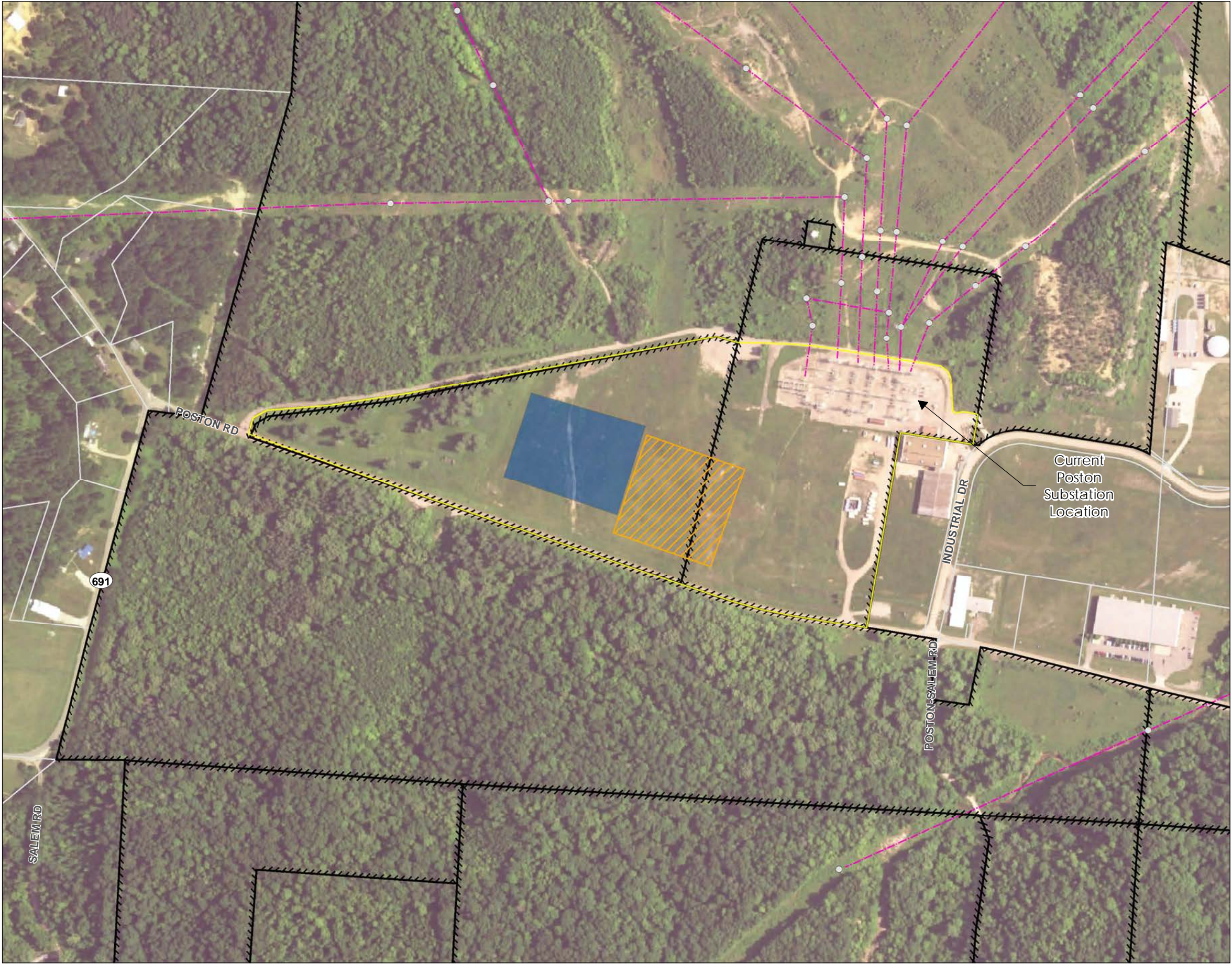


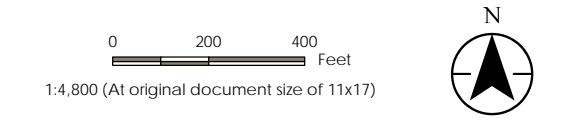
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1.2

Title
Project Layout Map

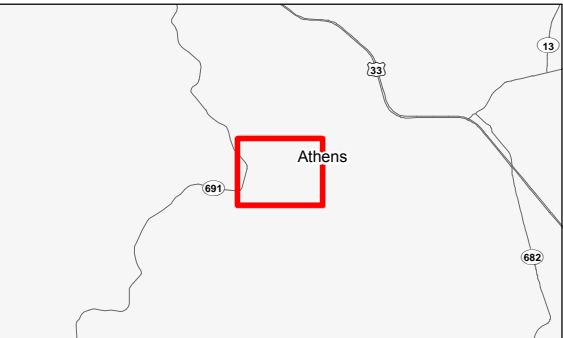
Client/Project
AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project

Project Location
Athens County, Ohio

193704783
Prepared by HDB on 2017-10-30
Technical Review by JH on 2017-10-31
Independent Review by DJG on 2017-10-31



- Legend
- Existing Structure
 - Existing Transmission Line
 - Project Area
 - Approximate Proposed Lemaster Substation Fenceline
 - Former Proposed Lemaster Substation Fenceline
 - AEP Property Line
 - Parcel Boundary



- Notes
- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 - Data Sources Include: Stantec, AEP, NADS, OGRIP
 - Orthophotography: 2015 NAIP Imagery



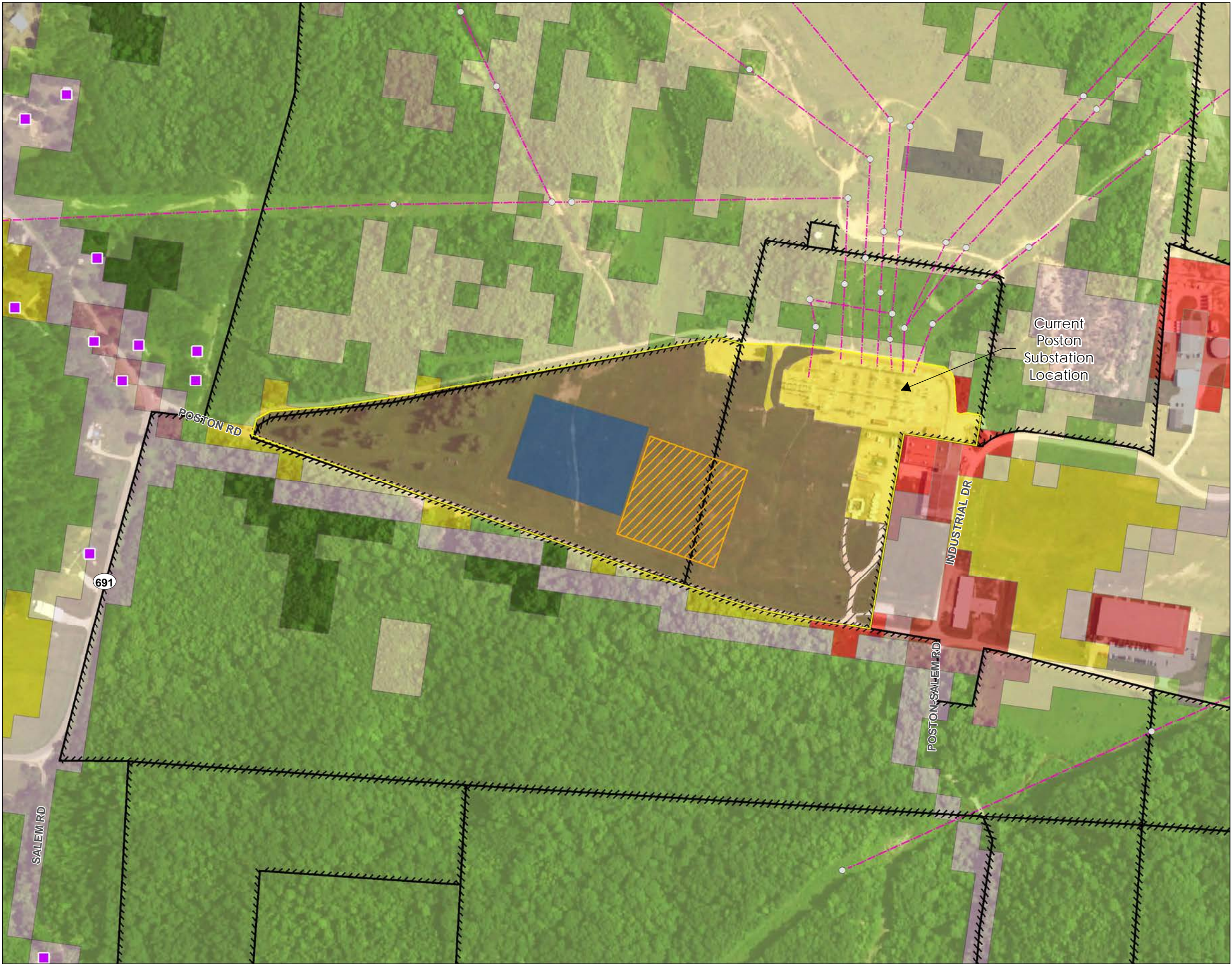


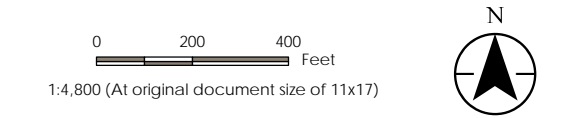
Figure No.
1.3

Title
Land Use Map

Client/Project
AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project

Project Location
Athens County, Ohio

193704783
Prepared by HDB on 2017-10-30
Technical Review by JH on 2017-10-31
Independent Review by DJG on 2017-10-31



Legend

Existing Structure

Existing Transmission Line

Project Area

Approximate Proposed Lemaster Substation Fenceline

Former Proposed Lemaster Substation Fenceline

AEP Property Line

Residence

School*

Cemetery*

Church*

Habitat Area

Industrial

Old Field

Existing Roadway

National Land Cover Database

Developed, Open Space

Developed, Low Intensity

Developed, Medium Intensity

Developed, High Intensity

Barren Land

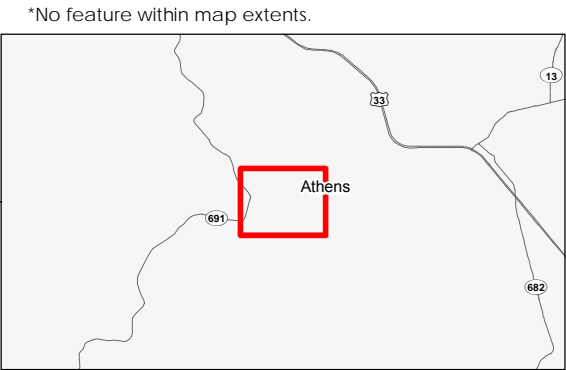
Deciduous Forest

Evergreen Forest

Shrub/ Scrub

Grassland/ Herbaceous

Pasture/ Hay

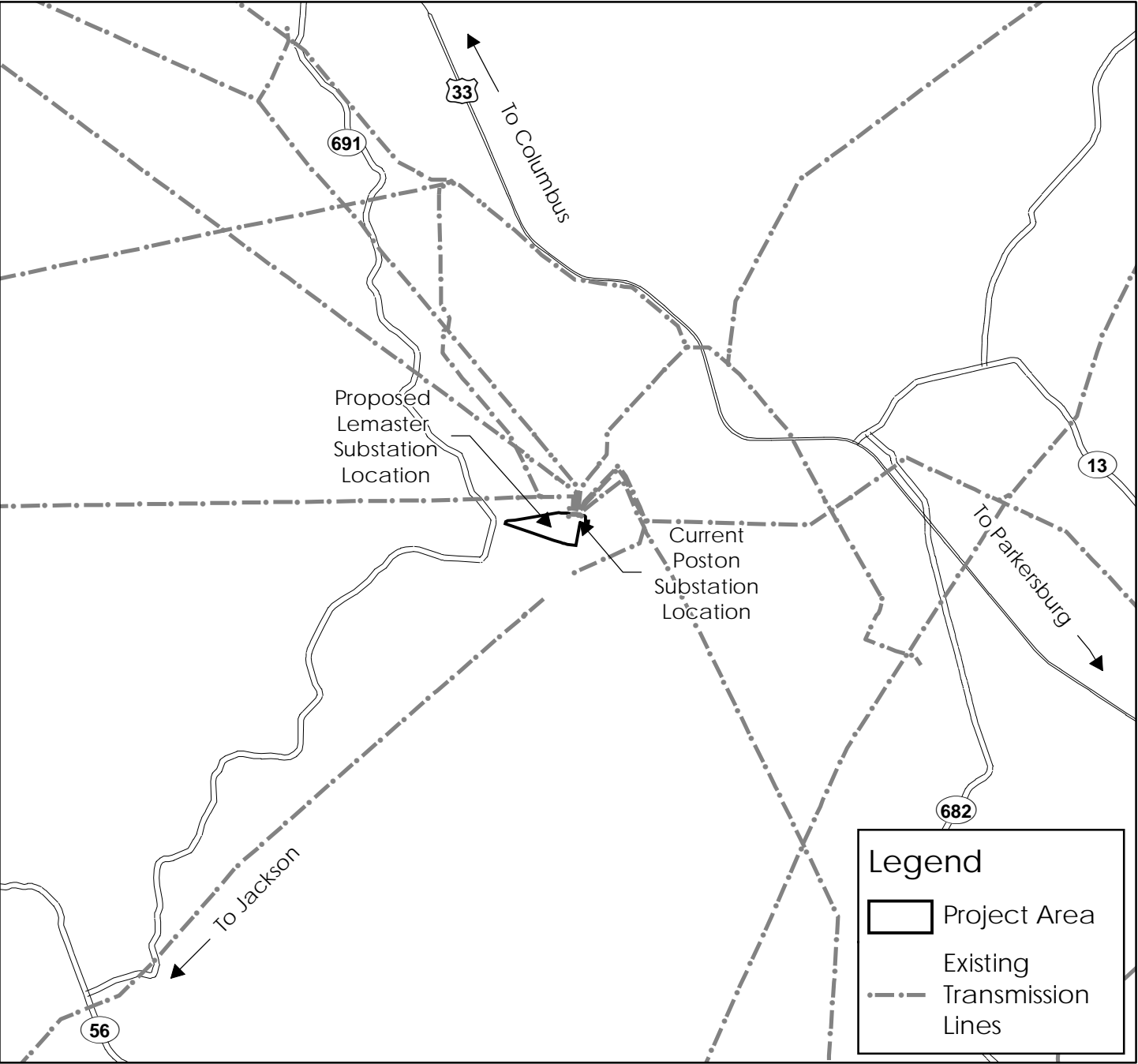


Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources Include: Stantec, AEP, NLCD, NADS, OGRIP
3. Orthophotography: 2015 NAIP Imagery



Figure 1.4 - Concept Map



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Appendix B Ecological Resources Inventory Report
November 7, 2017

Appendix B Ecological Resources Inventory Report

**Lemaster 138 kV Station Project,
Athens County, Ohio**

**Ecological Resources Inventory
Report**



Prepared for:

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LEMASTER 138 KV STATION PROJECT,
ATHENS COUNTY, OHIO

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1.0 Introduction

AEP Ohio Transmission Company, Inc. (AEP) is proposing the construction of a new 138 kV electric transmission substation (Lemaster 138 kV Station) in Athens County, Ohio (Figure 1, Appendix A). The Project area was surveyed for wetlands, waterbodies, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services, Inc. (Stantec) biologists on November 7 and 8, 2016. The approximate locations of features located up to approximately 50 feet outside of the Project area were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the Project area. These features are shown on the Figure 2 maps in Appendix A as “approximate” wetlands, streams, and upland drainage features.

2.0 Methods

2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic mapping, National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil surveys, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Version 2.0) (USACE 2012). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05) (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (USACE 2002). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI) and/or Qualitative Habitat Evaluation Index (QHEI). The centerline of each waterway was identified and surveyed using a handheld sub-meter accuracy GPS unit and mapped with GIS software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

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2.3 RARE SPECIES

Prior to conducting the field surveys, Stantec contacted the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix B – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the proposed Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by these species.

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3.0 Results

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys within the Project area on November 7 and 8, 2016, for wetlands, waterbodies, and threatened and endangered species or their habitats. Figure 2 (Appendix A) shows the wetlands and waterbodies identified by Stantec within the Project area, as well as the locations of upland drainage features identified within the Project area. Figure 3 (Appendix A) shows the habitats and locations of any identified rare, threatened, or endangered species habitat observed within the Project area during the rare, threatened, and endangered species habitat assessment surveys. Representative photographs of the wetlands, streams, upland drainage features, and other habitats identified within the Project area are included in Appendix C of this report (photo locations are shown on Figures 2 and 3, Appendix A).

Table 1. Vegetation Communities and Land Cover Found within the Lemaster 138 kV Station Project Area, Athens County, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Old Field	Extreme Disturbance/ Ruderal Community (dominated by opportunistic invaders or native highly tolerant taxa)	No	33.72
Industrial	Extreme Disturbance (existing roads and gravel parking lots)	No	6.73
Existing Roadway	Extreme Disturbance/existing gravel and/or paved road.	No	1.30
Total			41.75

3.2 WETLANDS

No wetlands were identified within the Project area. However, one wetland determination sample point was taken within an NWI mapped palustrine scrub-shrub/emergent wetland (PSS/PEM) area (see Figure 2). The area did not meet the criteria to be considered a wetland. Completed wetland determination data forms for this sample point are included in Appendix D.

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3.3 STREAMS

No streams were identified within the Project area.

3.4 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 2. Summary of Potential Ohio State-Listed Species within the Lemaster 138 kV Station Project Area, Athens County, Ohio

Common Name	Scientific Name	State Listing ¹	Known to Occur in Athens County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Insects								
Regal Fritillary	<i>Speyeria idalia</i>	E	Yes	No	Occurs in tall grass prairie remnants (Butterflies and Moths of North America 2016).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Grizzled Skipper	<i>Pyrgus centaureae wyandot</i>	E	Yes	No	This species is associated with openings in mature oak forests that support stands of Canada cinquefoil. Most of these areas are highly disturbed, and are characterized by fair amounts of exposed soil and rock (ODNR 2017b).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
American Burying Beetle	<i>Nicrophorus americanus</i>	E	Yes	No	Current information suggests this species is a habitat generalist, or one that lives in many types of habitat, but with a slight preference for grasslands and the open understory of oak-hickory forests (ODNR 2017b).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Caddisfly	<i>Brachycentrus numerosus</i>	E	Yes	Yes	Habitat preference has not been assessed at this time (NatureServe 2017), though caddisflies normally occur in streams, rivers, and ponds.	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Marsh Fern Moth	<i>Fagitana littera</i>	T	Yes	No	This species typically occurs in unforested wetlands such as bogs, shrub swamps, and marshes. This species also occurs along wet powerlines and wet open pinelands (New York Natural Heritage Program 2015).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Fishes								
Channel Darter	<i>Etheostoma tippecanoe</i>	T	Yes	No	This fish prefers medium to large streams in the Ohio River drainage system and are found in riffles of moderate current with substrate of gravel or cobble sized rocks (ODNR 2017b).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this species or other aquatic species.
River Darter	<i>Percina shumardi</i>	T	Yes	No	Large rivers and lower portions of tributaries; deep chutes and riffles where current is swift and substrates are coarse gravel or rock (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this species or other aquatic species.

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Common Name	Scientific Name	State Listing ¹	Known to Occur in Athens County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Amphibians								
Midland Mud Salamander	<i>Pseudotriton montanus diastictus</i>	T	Yes	No	Muddy springs, slow floodplain streams, and swamps along slow streams; backwater ponds and marshes created by beaver activity (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and type of work proposed, the Project is not likely to impact this species.
Eastern Spadefoot	<i>Scaphiopus holbrookii</i>	E	Yes	No	Eastern spadefoots occur in areas of sandy, gravelly, or soft, light soils in wooded or unwooded terrain. On land, they range up to at least several hundred meters from breeding sites. When inactive, they remain burrowed in the ground. Eggs and larvae develop in temporary pools formed by heavy rains. Breeding sites include temporary pools and areas flooded by heavy rains (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and type of work proposed, the Project is not likely to impact this species.
Eastern Hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	E	Yes	No	Rocky, clear creeks and rivers, usually where there are large shelter rocks. The species prefers cool waters with temperatures usually lower than 20 degrees Celsius. High amounts of instream cover are needed for shelter/reproduction, including large flat rocks or submerged logs (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Mussels								
Clubshell	<i>Pleurobema clava</i>	E	Yes	No	The clubshell is found in small to medium rivers, but occasionally found in large rivers, especially those having large shoal areas. It is generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle and cannot tolerate mud or slackwater conditions (USFWS 1994). Badra and Goforth (2001) found the clubshell in gravel/sand substrate, in runs having laminar flow (0.06-0.25 m/sec) within small to medium sized streams.	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.
Snuffbox	<i>Epioblasma triquetra</i>	E	Yes	No	Occurs in medium-sized streams to large rivers generally on mud, rocky, gravel, or sand substrates in flowing water. Often deeply buried in substrate and overlooked by collectors (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.
Fanshell	<i>Cyprogenia stegaria</i>	E	Yes	No	Medium to large streams and rivers with moderate to strong current in coarse sand and gravel and depth ranging from shallow to deep (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.
Pink Mucket	<i>Lampsilis orbiculata</i>	E	Yes	No	Large rivers in habitats ranging from silt to boulders, but apparently more commonly from gravel and cobble. Collected from shallow and deep water with current velocity ranging from zero to swift, but never standing pools of water (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.
Sheepnose	<i>Plethobasus cyphus</i>	E	Yes	No	Although it does inhabit medium-sized rivers, this mussel generally has been considered a large-river species. It may be associated with riffles and gravel/cobble substrates but usually has been reported from deep water with slight to swift currents and mud, sand, or gravel bottoms. It also appears capable of surviving in reservoirs. Specimens in larger rivers may occur in deep runs (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.

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Black Sandshell	<i>Ligumia recta</i>	T	Yes	No	Typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.
Threehorn Wartyback	<i>Obliquaria reflexa</i>	T	Yes	No	This species is typical of the large rivers where there is moderately strong current and a stable substrate composed of gravel, sand, and mud (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.
Fawnsfoot	<i>Truncilla donaciformis</i>	T	Yes	No	This species occurs in both large and medium-sized rivers at normal depths varying from less than three feet up to 15 to 18 feet in big rivers such as the Tennessee. Substrates of either sand or mud are suitable and although it is typically found in moderate current, it can adapt to a lake or embayment environment lacking current (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	Due to the Project location and that there is no in-water work proposed in a perennial stream of sufficient size, the Project is not likely to impact this species.
Mammals								
Indiana Bat	<i>Myotis sodalis</i>	E	Yes	No	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007; USFWS 2017b). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	No	No hibernacula or suitable roost trees were observed within the Project area. If any tree clearing is determined to be necessary for this project, AEP anticipates clearing the trees between October 1 and March 31. Therefore, no adverse effects are anticipated.	The project is within the vicinity of records for the Indiana bat. Presence of the Indiana bat has been established in the area, and therefore additional summer surveys would not constitute presence/absence in the area. If suitable habitat occurs within the project area, ODNR recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, ODNR recommends cutting occur between October 1 and March 31. If no tree removal is proposed, this project is not likely to impact this species.
Allegheny Woodrat	<i>Neotoma magister</i>	E	Yes	No	Typical habitat is rocky cliffs and slopes (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Black Bear	<i>Ursus americanus</i>	E	Yes	No	Black bears inhabit forests and nearby openings, including forested wetlands. When inactive, they occupy dens under fallen trees, ground-level or above-ground tree cavities or hollow logs, underground cave-like sites, or the ground surface in dense cover (NatureServe 2017)	Yes	Habitat was observed within the Project area, but due to the mobility of this species no impacts are anticipated.	Due to the mobility of this species, the Project is not likely to impact this species.
Reptiles								

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Common Name	Scientific Name	State Listing ¹	Known to Occur in Athens County? ²	Known Within One Mile of Project Area? ³	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	ODNR Comments/Recommendations
Timber Rattlesnake	<i>Crotalus horridus horridus</i>	E	Yes	No	In the central Midwest, optimum habitat is a high, dry ridge with oak-hickory forest interspersed with open areas. Hibernacula are typically located in a rocky area where underground crevices provide retreats for overwintering, such as a fissure in a ledge, a crevice between ledge and ground, and fallen rock associated or unassociated with cliffs (NatureServe 2017).	Yes	Potential habitat (open areas adjacent to hilly forested areas) was observed within the Project area, but typical habitat was not observed and due to the mobility of this species, no impacts are anticipated.	Due to the location, the type of habitat at the project site, and the type of work proposed, this project is not likely to impact this species.
Spotted Turtle	<i>Clemmys guttata</i>	T	Yes	No	Spotted turtles inhabit mostly unpolluted, shallow bodies of water with a soft bottom and aquatic vegetation, such as small marshes, marshy pastures, bogs, fens, woodland streams, swamps, small ponds, vernal pools, and lake margins: in some areas they occur in brackish tidal streams (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Eastern Box Turtle	<i>Terrapene carolina</i>	SOC	Yes	Yes	This species prefers forests, fields, and scrub shrub habitats. Eastern box turtles use loose soil, debris, and leaf litter for cover. Areas with loose, loamy soils are preferred for egg laying sites (NatureServe 2017).	Yes	This species typically prefers moist forest and scrub shrub habitat as opposed to the open, old field habitat observed in the Project area. Due to this and the mobility of this species, no impacts are anticipated.	No comments received.
Plants								
Rough Boneset	<i>Eupatorium pilosum</i>	Status Not Detrmined	Yes	Yes	This species prefers wet meadows and open, swampy woods dominated by native species (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
¹ E=Endangered; T=Threatened; SOC=Species of Concern ² According to Ohio Department of Natural Resources, State Listed Wildlife Species by County (ODNR 2017a). ³ According to Ohio Natural Heritage Program (Appendix B).								

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Table 3. Summary of Potential Federally-Listed Species within the Lemaster 138 kV Station Project Area, Athens County, Ohio

Common Name	Scientific Name	Federal Listing ¹	Known to Occur in Athens County? ²	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	USFWS Comments/ Recommendations
Mammals							
Indiana bat	<i>Myotis sodalis</i>	E	Yes	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007; USFWS 2017b). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	No	No hibernacula or suitable roost trees were observed within the Project area. If any tree clearing is determined to be necessary, AEP anticipates clearing the trees between October 1 and March 31. Therefore, no adverse effects are anticipated.	If trees must be cut, the USFWS recommends cutting occur between October 1 and March 31. If no hibernacula will be affected, following this seasonal tree clearing recommendation should ensure that any effects to this species are insignificant.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	T	Yes	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2016). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	No	No hibernacula or suitable roost trees were observed within the Project area. If any tree clearing is determined to be necessary, AEP anticipates clearing the trees between October 1 and March 31. Therefore, no adverse effects are anticipated.	If trees must be cut, the USFWS recommends cutting occur between October 1 and March 31. If no hibernacula will be affected, following this seasonal tree clearing recommendation should ensure that any effects to this species are insignificant.
Birds							
Bald Eagle	<i>Haliaeetus leucocephalus</i>	SOC	Yes	Breeding habitat most commonly includes areas close to (within 4 km) coastal areas, bays, rivers, lakes, reservoirs, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, or seabirds. This species typically nests in large trees or on cliffs (NatureServe 2017).	No	No nests or suitable nesting habitat was observed in the Project area. Therefore, no impacts are anticipated.	No comments received.
Mussels							
Snuffbox	<i>Epioblasma triquetra</i>	E	Yes	Occurs in medium-sized streams to large rivers generally on mud, rocky, gravel, or sand substrates in flowing water. Often deeply buried in substrate and overlooked by collectors (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Fanshell	<i>Cyprogenia stegaria</i>	E	Yes	Medium to large streams and rivers with moderate to strong current in coarse sand and gravel and depth ranging from shallow to deep (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Pink Mucket	<i>Lampsilis orbiculata</i>	E	Yes	Large rivers in habitats ranging from silt to boulders, but apparently more commonly from gravel and cobble. Collected from shallow and deep water with current velocity ranging from zero to swift, but never standing pools of water (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.

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Common Name	Scientific Name	Federal Listing ¹	Known to Occur in Athens County? ²	Habitat Preference	Potential Habitat Observed in Project Area?	Impact Assessment	USFWS Comments/ Recommendations
Sheepnose	<i>Plethobasus cyphus</i>	E	Yes	Although it does inhabit medium-sized rivers, this mussel generally has been considered a large-river species. It may be associated with riffles and gravel/cobble substrates but usually has been reported from deep water with slight to swift currents and mud, sand, or gravel bottoms. It also appears capable of surviving in reservoirs. Specimens in larger rivers may occur in deep runs (NatureServe 2017).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Insects							
American Burying Beetle	<i>Nicrophorus americanus</i>	E	Yes	Current information suggests this species is a habitat generalist, or one that lives in many types of habitat, but with a slight preference for grasslands and the open understory of oak-hickory forests (ODNR 2017b).	No	No habitat was observed within the Project area. Therefore, no impacts are anticipated.	No comments received.
Reptiles							
Timber Rattlesnake	<i>Crotalus horridus horridus</i>	SOC	Yes	In the central Midwest, optimum habitat is a high, dry ridge with oak-hickory forest interspersed with open areas. Hibernacula are typically located in a rocky area where underground crevices provide retreats for overwintering, such as a fissure in a ledge, a crevice between a ledge and ground, and fallen rock associated or unassociated with cliffs (NatureServe 2017).	Yes	Potential habitat (open areas adjacent to hilly forested areas) was observed within the Project area, but typical habitat was not observed and due to the mobility of this species, no impacts are anticipated.	No comments received.
¹ E=Endangered; T=Threatened; SOC=Species of Concern ² According to USFWS (2017a).							

4.0 Conclusions and Recommendations

Stantec conducted a wetland and waterbodies delineation and a preliminary habitat assessment for threatened and endangered species or their habitats within the Project area on November 7 and 8, 2016. During the field surveys, no streams or wetlands were identified within the Project area.

The information provided by Stantec regarding wetland and stream boundaries is based on an analysis of the wetland and upland conditions present within the Project area at the time of the fieldwork. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

Three state-listed species are known to occur within a one-mile radius of the Project area according to correspondence received from the ODNR Natural Heritage Program (NHP), including rough boneset, a caddisfly, and eastern box turtle (Appendix B). None of these known locations are within or in the immediate vicinity of the Project area. Some habitat for eastern box turtle does occur in the Project area, though this species typically prefers moist forest and scrub shrub habitats. No box turtles were observed in the Project area and due to the mobility of this species and habitat observed in the Project area (open, non-forested), the proposed Project is not expected to impact this species. No habitat for rough boneset or caddisfly occurs in the Project area and no impacts to these species are anticipated. Habitat for two other state-listed species, black bear, and timber rattlesnake, were also observed in the Project area. However, neither of species is known to occur within a mile of the Project area, and due to their mobility, no impacts to these species are anticipated.

The ODNR NHP also responded that they are unaware of any unique geological features or scenic rivers within a mile of the Project area, but did state that the Wayne National Forest, the Hamley Run Floodplain Forest Conservation Site, a Breeding Amphibian Site, a Floodplain Forest Plant Community, and a Mixed Mesophytic Forest Plant Community exist within a mile of the Project area (Appendix B). However, none of these known locations occur within or immediately adjacent to the Project area and no impacts are anticipated.

According to the ODNR - Office of Real Estate, the project is within the vicinity of records for the Indiana bat and presence of the Indiana bat has been established in the area. If suitable habitat occurs within the project area, ODNR recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, ODNR recommends cutting occur between October 1 and March 31. If no tree removal is proposed, this Project is not likely to impact this species. No hibernacula or suitable summer roost habitat for Indiana bat (or northern long-eared bat) was identified in the project area during field surveys. No tree clearing is anticipated for the Project. However, if any trees >3" diameter at breast height (dbh) must be removed, AEP anticipates clearing the trees between October 1 and March 31.

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The ODNR - Office of Real Estate also indicated that due to the Project location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact federal and state-listed mussel species. The project is also within the range of the channel darter, a state threatened fish, and the river darter, a state threatened fish. The ODNR - Office of Real Estate recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, this Project is not likely to impact these or other aquatic species. No streams were identified in the Project area during field surveys and therefore no suitable mussel habitat or fish habitat is located in the Project area. The project is also within the range of the timber rattlesnake, a state endangered species and a federal species of concern, the eastern spadefoot toad, a state endangered species, mud salamander, a state threatened species, and black bear, a state endangered species. The ODNR - Office of Real Estate indicated that due to the location, the type of habitat present at the project site, and the type of work proposed, this Project is not likely to impact these species.

A technical assistance letter was submitted to the USFWS for this Project. The USFWS response letter (Appendix B) indicates that the proposed Project is located in the vicinity of one or more confirmed records of the Indiana bat. Therefore, the USFWS recommends saving trees ≥ 3 inches dbh. The USFWS also recommends that if no caves or abandoned mines are present and tree removal is unavoidable, then clearing of trees ≥ 3 inches dbh between October 1 and March 31 is recommended to avoid impacts to Indiana bats and northern long-eared bats. The USFWS also indicated that due to the project type, size, and location, they do not anticipate adverse effects to any other federally endangered, threatened, proposed or candidate species. No caves, abandoned mines or suitable roost trees were observed in the Project area, and the proposed Project is not expected to require tree clearing. If any tree clearing is determined to be necessary, AEP anticipates clearing the trees will occur between October 1 and March 31. Therefore, no adverse effects to the Indiana bat or northern long-eared bat are anticipated.

The USFWS also stated that there are no federal wilderness areas, wildlife refuges, or designated critical habitat in the Project area, but recommended that impacts to wetlands and other water resources be avoided or minimized to the maximum extent possible, and that best management practices be utilized to minimize erosion and sedimentation and prevention of non-native, invasive plant establishment.

**LEMASTER 138 KV STATION PROJECT,
ATHENS COUNTY, OHIO**

5.0 References

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LEMASTER 138 KV STATION PROJECT, ATHENS COUNTY, OHIO

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Appendix A Figures

A.1 FIGURE 1 – PROJECT LOCATION MAP

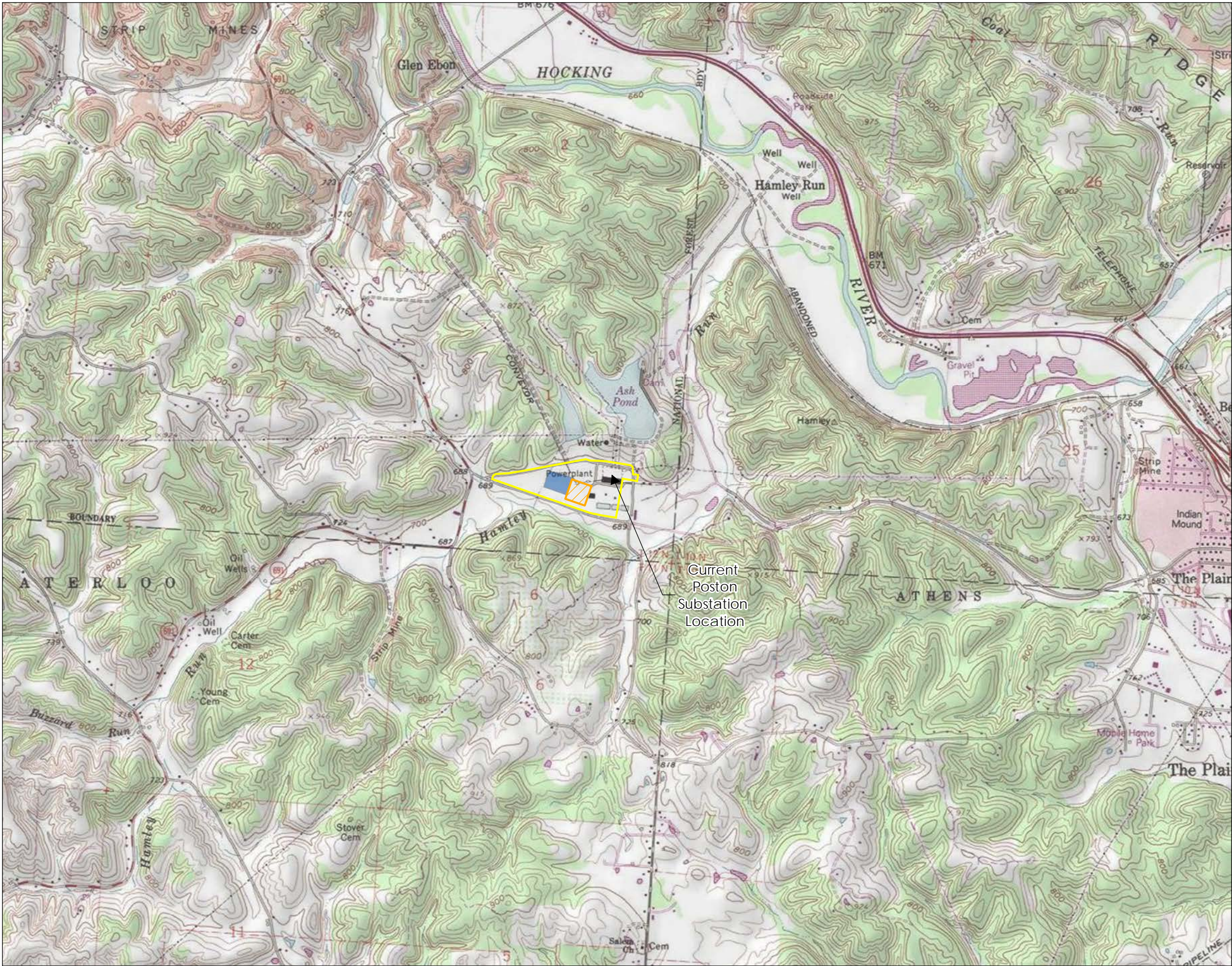
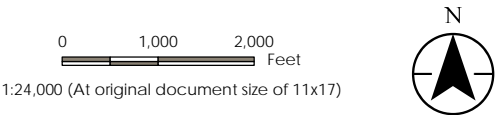


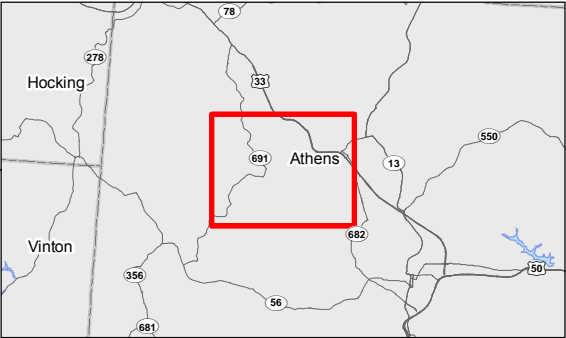
Figure No.
1
Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project

Project Location
Athens County, Ohio
193704783
Prepared by HDB on 2017-10-30
Technical Review by JH on 2017-10-31
Independent Review by DJG on 2017-10-31



Legend
Project Area
Approximate Proposed Lemaster Substation Fenceline
Former Proposed Lemaster Substation Fenceline



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources Include: Stantec, AEP, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Nelsonville (OH, 1983) and The Plains (OH, 1975)



LEMASTER 138 KV STATION PROJECT,
ATHENS COUNTY, OHIO

A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP



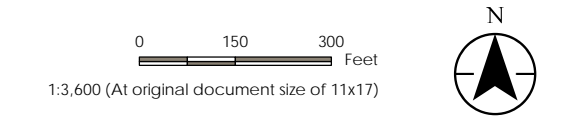
Figure No.
2

Title
Wetland and Waterbody
Delineation Map

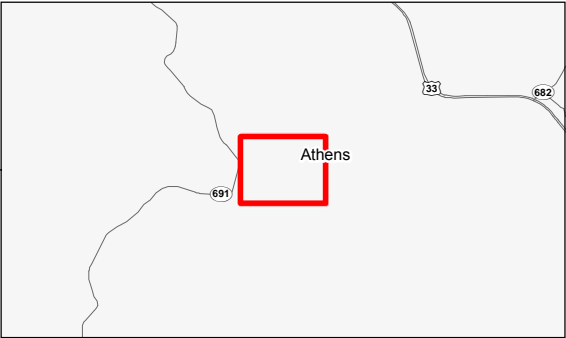
Client/Project
AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project

Project Location
Athens County, Ohio

193704783
Prepared by HDB on 2017-10-30
Technical Review by JH on 2017-10-31
Independent Review by DJG on 2017-10-31



- Legend
- Existing Structure
 - Photo Location
 - Existing Transmission Line
 - Project Area
 - Approximate Proposed Lemaster Substation Fence Line
 - Former Proposed Lemaster Substation Fence Line
 - Wetland Determination Sample Point
 - Existing Culvert
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Approximate Waterway
 - Approximate Wetland
 - FEMA Flood Hazard Areas
 - 100-year Flood Zone
 - 100-year Floodway



- Notes
- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 - Data Sources Include: Stantec, AEP, NADS, OGRIP, FEMA
 - Orthophotography: 2015 NAIP Imagery



LEMASTER 138 KV STATION PROJECT,
ATHENS COUNTY, OHIO

A.3 FIGURE 3 – HABITAT ASSESSMENT MAP

V:\1937\Active\193704783\03_data\gk_crd\gkmd\eco\fig3_eco_habareas_193704783.mxd Revised: 2017-11-07 By: hbolone

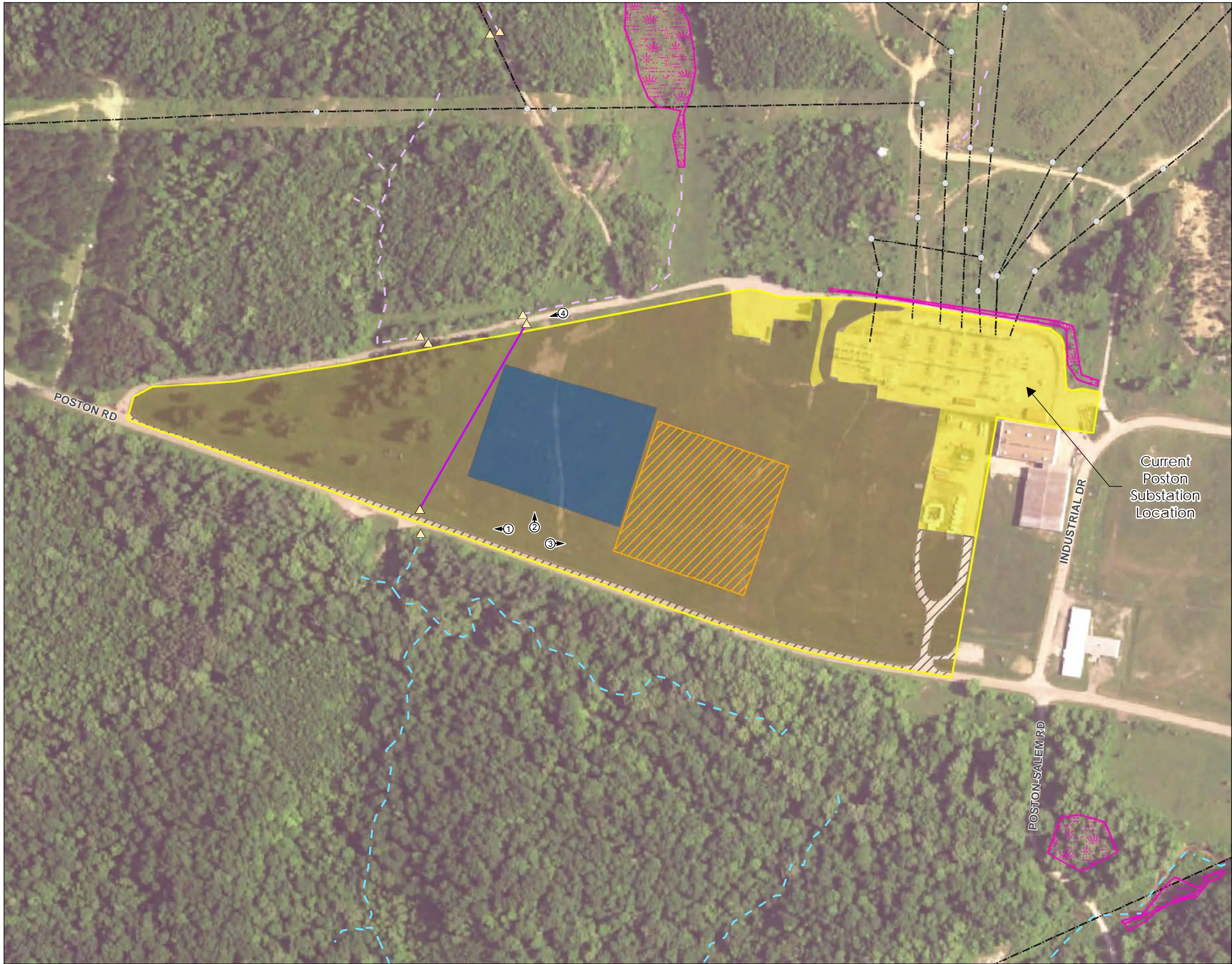


Figure No.
3

Title
Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project

Project Location
Athens County, Ohio

193704783
Prepared by HDB on 2017-10-30
Technical Review by JH on 2017-10-31
Independent Review by DJG on 2017-10-31

0150300
Feet

1:3,600 (At original document size of 11x17)

N

Legend

●

Existing Structure

○

Photo Location

Existing Transmission Line

□

Project Area

▨

Approximate Proposed Lemaster Substation Fenceline

■

Former Proposed Lemaster Substation Fenceline

▲

Existing Culvert

~

Upland Drainage Feature

Approximate Upland Drainage Feature

Approximate Waterway

▭

Approximate Wetland

Habitat Area

■

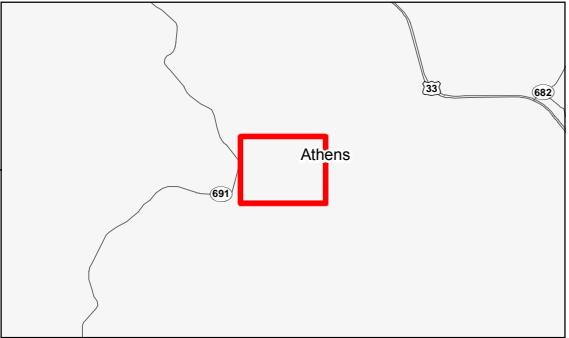
Industrial

■

Old Field

▨

Existing Roadway



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
- Data Sources Include: Stantec, AEP, NADS, OGRIP
- Orthophotography: 2015 NAIP Imagery



Appendix B Agency Correspondence



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, 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

December 30, 2016

Dan Godec
Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

Re: 16-865; Request for Technical Assistance, AEP Lemaster Station Project

Project: The proposed project involves the construction of the Lemaster Station.

Location: The proposed project is located in York, Dover, and Waterloo Townships, Athens 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 data request response is included on pages 3-4 of the project documentation.

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 vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Presence of the Indiana bat has been established in the area, and therefore additional summer surveys would not constitute presence/absence in the area. The following species of trees have relatively high value as potential Indiana bat roost trees: 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 no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the club shell (*Pleurobema clava*), a state endangered and federally endangered mussel, the sheepnose (*Plethobasus cyphus*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the pink mucket (*Lampsilis orbiculata*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel, the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel, and the black sandshell (*Ligumia recta*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the channel darter (*Percina copelandi*), a state threatened fish, and the river darter (*Percina shumardi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed, this project is not likely to impact these or other aquatic species.

The project is within the range of the timber rattlesnake (*Crotalus horridus horridus*), a state endangered species, and a federal species of concern. The timber rattlesnake is a woodland species. In addition to using wooded areas, the timber rattlesnake also utilizes sunlit gaps in the canopy for basking and deep rock crevices known as den sites for overwintering. Due to the location, the type of habitat at the project site, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat at the project site and within the vicinity of the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the mud salamander (*Pseudotriton montanus*), a state threatened species. Due to the location, the type of habitat present at the project site, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, 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/water-use-planning/floodplain-management#PUB>

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife
Raymond W. Petering, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

November 17, 2016

Dan Godec
Stantec Consulting Services, Inc.
11687 Lebanon Rd.
Cincinnati, OH 45241

Dear Mr. Godec,

I have reviewed the Natural Heritage Database for the Lemaster Station project area, including a one mile radius, in York, Dover and Waterloo Townships, Athens County, Ohio. The numbers/letters on the list below correspond to the areas marked on the accompanying map. Common name, scientific name and status are given for each species.

- A. Wayne National Forest – US Forest Service
- B. Hamley Run Floodplain Forest Conservation Site
- 1. *Eupatorium pilosum* – Rough Boneset, recently added to inventory, status not determined
- 2. Breeding Amphibian Site
- 3. *Brachycentrus numerosus* – caddisfly, endangered
- 4. Floodplain Forest Plant Community
- 5. *Terrapene carolina* – Eastern Box Turtle, species of concern
- 6. Mixed Mesophytic Forest Plant Community

A Conservation Site is an area deemed by the Natural Heritage Program to be a high quality natural area not currently under formal protection. It may, for example, harbor one or more rare species, be an outstanding example of a plant community or have geologically significant features, etc. These sites may be in private ownership and our listing of them does not imply permission for access.

We are unaware of any geologic features, scenic rivers, state wildlife areas, nature preserves, parks or forests or national wildlife refuges or parks within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does 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.

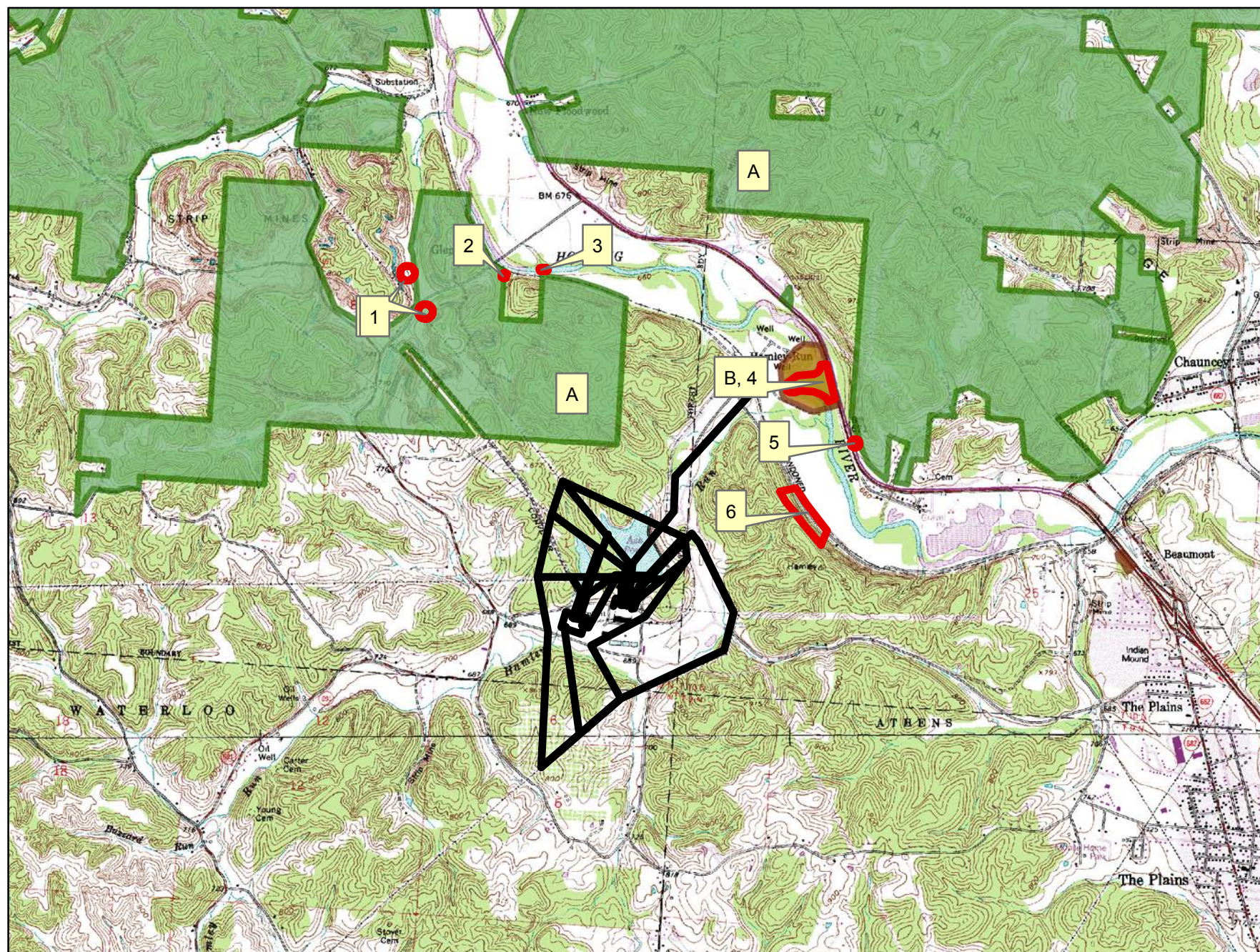
Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

A handwritten signature in blue ink that reads "Debbie Woischke".

Debbie Woischke
Ohio Natural Heritage Program

Lemaster Station Project



Godec, Daniel

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Monday, November 28, 2016 11:29 AM
To: Godec, Daniel
Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us
Subject: Lemaster Electric Transmission Substation Project, Athens Co.



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



TAILS: 03E15000-2017-TA-0252

Dear Mr. Godec,

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

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

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

The proposed project is in the vicinity of one or more confirmed records of Indiana bats. Therefore, we recommend that trees ≥ 3 inches dbh be saved wherever possible. Because the project will result in a small amount of forest clearing

relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Since Indiana bat presence in the vicinity of the project has been confirmed, clearing of trees ≥ 3 inches dbh during the summer roosting season may result in direct take of individuals. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and tree removal is unavoidable, we recommend that removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. **Please note that, because Indiana bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.**

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

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

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



Dan Everson

Field Supervisor

cc: Nathan Reardon, ODNR-DOW

Kate Parsons, ODNR-DOW

Appendix C Representative Photographs

AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project
Athens County, Ohio



Photograph 1. View of old field habitat and wetland determination sample point SP-1 within the Project area. Photograph taken facing west.



Photograph 2. View of old field habitat within the Project area. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
Lemaster 138 kV Station Project
Athens County, Ohio



Photograph 3. View of old field habitat within the Project area and current Lemaster substation adjacent to the Project area. Photograph taken facing west/northwest.



Photograph 4. Representative view of upland drainage feature and industrial habitat within the Project area. Photograph taken facing southwest.

Appendix D Data Forms

D.1 WETLAND DETERMINATION DATA FORMS

Project/Site: Lemaster 138 kV Station Project		Stantec Project #: 193704783	Date: 11/07/16
Applicant: American Electric Power		Investigator #1: Aaron Kwolek	Investigator #2: Jody Nicolson
Soil Unit: FcA - Fitchville silt loam, 0-3% slopes		NW1/WW1 Classification: PFO	
Landform: Dip	Local Relief: Concave	Sample Point: SP-1	Wetland ID: NA
Slope (%): 0%	Latitude: 39.38179	Longitude: -82.184290	Community ID: UPL
Datum: NAD83		Section: 1	Township: 12N
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: 15W	Dir: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic?			

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:	

HYDROLOGY	
Wetland Hydrology Indicators (Check here if indicators are not present): <input type="checkbox"/>	
<u>Primary:</u> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<u>Secondary:</u> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test

Field Observations: Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)		Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	N/A
Remarks:	

SOILS	
Map Unit Name: FcA - Fitchville silt loam, 0-3% slopes	Series Drainage Class: somewhat poorly drained
Taxonomy (Subgroup):	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Mottles					Texture (e.g. clay, sand, loam)
			Color (Moist)		%	Color (Moist)		%	Type	Location	
0	16	---	10YR	4/4	100	---	---	---	---	---	silt loam
---	---	---	---	---	---	---	---	---	---	---	---
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NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input type="checkbox"/>		Indicators for Problematic Soils ¹	
<input type="checkbox"/> 1 - Histosol <input type="checkbox"/> 2 - Histic Epipedon <input type="checkbox"/> 3 - Black Histic <input type="checkbox"/> 4 - Hydrogen Sulfide <input type="checkbox"/> 5 - Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, MLRA 122, 136) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 127, 147) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks: Fill material

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **Lemaster Station Project** Wetland ID: **NA** Sample Point: **SP-1**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind. Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		

Herb Stratum (Plot size: 5 ft radius)

1.	Carex frankii	5	N	OBL
2.	Schedonorus arundinaceus	30	N	FACU
3.	Trifolium pratense	10	N	FACU
4.	Trifolium repens	10	Y	FACU
5.	Taraxacum officinale	5	N	FACU
6.	Juncus effusus	10	Y	FACW
7.	Elymus canadensis	30	Y	FACU
8.	Plantago major	5	N	FACU
9.	Carex vulpinoidea	5	N	OBL
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		110		

Woody Vine Stratum (Plot size: 30 ft radius)

1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		

Remarks:

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 spp. <u>10</u>	x 1 = <u>10</u>
FACW spp. <u>10</u>	x 2 = <u>20</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>90</u>	x 4 = <u>360</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>110</u> (A)	<u>390</u> (B)
Prevalence Index = B/A = <u>3.545</u>	

Hydrophytic Vegetation Indicators:

- Yes ☐ No ☐ Rapid Test for Hydrophytic Vegetation
 Yes ☐ No ☐ Dominance Test is > 50%
 Yes ☐ No ☐ Prevalence Index is ≤ 3.0 *
 Yes ☐ No ☐ Morphological Adaptations (Explain) *
 Yes ☐ No ☐ Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

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

Woody Vines - All woody vines greater than 3.28 ft. in height.

Hydrophytic Vegetation Present ☐ Yes ☒ No

Additional Remarks:

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

11/7/2017 4:00:48 PM

in

Case No(s). 17-2281-EL-BLN

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