Letter of Notification Hayden-Roberts 345 kV Transmission Line Cut-ins to Cosgray Station (Adjustments) Project

PUCO Case No. 23-0528-EL-BLN

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

Submitted by:
Ohio Power Company

May 10, 2023

Letter of Notification

Ohio Power Company
Hayden-Roberts 345 kV Transmission Line Cut-ins to Cosgray Station (Adjustments)
4906-6-05

Ohio Power Company (the "Company") provides the following information to the Ohio Power Siting Board ("OPSB") pursuant to Ohio Administrative Code Section 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.

The Company has identified the need to construct the Hayden-Roberts 345 kV Transmission Line Cut-ins to Cosgray Station Project (the "Project") in the City of Hilliard, Franklin County, Ohio. The Project consists of constructing looped service from the double-circuit Hayden-Roberts 345 kV transmission line, specifically the eastern Hayden Sw. - Roberts No. 1 circuit, to a new 345 kV transmission substation (Cosgray Station, Case No. 22-0488-EL-BLN) to provide electricity to a customer's facility. Two new steel pole structures will be installed approximately 15 feet northeast of the existing centerline of the Hayden-Roberts 345 kV transmission line. The realigned circuit and extension into Cosgray Station total approximately 0.33 mile in length. Although the realigned transmission line extends to the adjacent property to the south, construction activities will be entirely on a property owned by the customer.

The Project was originally approved on October 14, 2022 (OPSB Case Number 22-0633-EL-BLN) but is being resubmitted due to shifts to the approved centerlines. The shifts are necessary because the Company discovered a natural gas pipeline in-line with the intended locations of Structures 9A and 9B, which are being moved 41.1 feet and 15.5 feet, respectively, to avoid the pipeline. The Project approval in October 2022 also included two 345 kV tie lines that will extend between Cosgray Station and the customer's distribution substation totaling approximately 0.14 mile. This portion of the Project is not resubmitted in this resubmittal. The location of the Project, customer's property, and station area are shown on Figure 1 and Figure 2 in Appendix A.

The Project meets the requirements for a Letter of Notification because it is within the types of projects defined by item 1(d)(ii) of Ohio Administrative Code Section 4906-1-01 Appendix A of the Application Requirement Matrix For Electric Power Transmission Lines:

(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:

(d) Line(s) primarily needed to attract or meet the requirements of a specific customer or customers, as follows:

(ii) Any portion of the line is on property owned by someone other than the specific customer or applicant.

The Project has been assigned PUCO Case No. 23-0528-EL-BLN.

B(2) Statement of Need

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

A customer has requested a new substation to serve their facility requiring 64 MW of initial load, with growth up to 256 MW of peak demand. To meet the customer's needs, the Company will be required to construct a new 345 kV station, named Cosgray Station, initially built with four 345 kV breakers in a ring bus configuration laid out as a six-breaker ring bus for future expansion in line with the customer's future expansion plans. In order to serve the customer, the Company will also be required to cut into the Hayden Sw. – Roberts No. 1 - 345 kV circuit with two dead end monopoles that will then tie directly into the new Cosgray Station. The customer has requested an in-service date of May 31st, 2023 for the initial load.

Failure to move forward with the proposed project will result in the inability to serve the customer's load expectations and thereby jeopardize the customer's plans in the Hilliard area (potentially 256 MW peak).

The need and solution for this supplemental Project was presented and reviewed with stakeholders at the March 19th 2021 and October 15th 2021 PJM SRRTEP meetings. The Project was subsequently assigned PJM supplemental number S2653.1-3 (See Appendix B).

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.

The location of the Project in relation to existing transmission lines and substation is shown in Figure 1 of Appendix A.

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.

The Project is located on customer property and based on the customer's proposed development and existing facilities in the area, the proposed location of the station and line interconnections are the most suitable location for the Project. Other alternatives would require impacting neighboring properties, as opposed to remaining entirely on the customer's property, and would add additional transmission length

to the Project without any additional benefit. The Cosgray Station and transmission line interconnections are located within the specific customer property on land most recently used for agriculture but has been zoned for industrial use. The proposed Project will result in no impacts to wetlands, streams, or known cultural resource areas eligible for the National Register of Historic Places (NRHP). Therefore, this alternative represents the most suitable location and is the most appropriate solution for meeting the Company and specific customer's needs in the area.

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 Company will inform affected property owners and tenants about this Project through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements of OAC Section 4906-6-08(A)(1-6). Further, the Company will mail a letter, via first class mail, to affected landowners, tenants, contiguous owners, and any other landowner the Company may approach for an easement necessary for the construction, operation, or maintenance of the Project. The letter will comply with all requirements of OAC Section 4906-6-08(B). The Company maintains a website (http://aeptransmission.com/ohio/) which hosts an electronic copy of this LON and the public notice of this LON. An electronic copy of the LON will be served to the public library in each political subdivision affected by this Project. In addition, the Company retains right of way land agents that discuss Project timelines, construction and restoration activities and convey this information to affected owners and tenants.

B(6) Construction Schedule

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

Construction of the Project is planned to resume in June 2023, and the anticipated in-service date will be July 2023.

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 in Appendix A provides the proposed Project area on a map of 1:24,000-scale (1 inch equals 2,000 feet), showing the Project on the United States Geological Survey (USGS) 7.5-minute topographic map of the Amanda, Ohio quadrangle. Figure 2 in Appendix A show the Project Area on recent aerial photography, dated 2019, as provided by the Ohio Statewide Imagery Program (OSIP) at a scale of 1:1,800 scale (1 inch equals 150 feet).

To visit the Project site from Columbus, Ohio, take I-70 West to Exit 93 and merge onto I-270 North. Continue for 4.1 miles before taking Exit 13B onto Cemetery Road. After 2.0 miles, take the 2nd exit of the traffic circle and continue on Cemetery Road. After 0.1 mile, Cemetery Road will bear slightly right and become Scioto Darby Road. Continue for 0.4 mile and take the first exit of the traffic circle onto Leppert Road. Go another 0.9 mile and the customer property is on the left (west) at the approximate address of 4555 Leppert Road, Hilliard, Ohio 43025, at latitude 40.046632, longitude -83.176331.

B(8) Property Agreements

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

The customer will provide the Company with a supplemental easement on the Hayden-Roberts 345kV line in order to establish and maintain the cut-in between the transmission line and Cosgray Station. A new easement will be established for the tie lines between Cosgray Station and the customer's distribution substation. While the Project extends to the adjacent property due to a slight realignment, all work activities are proposed on Parcels 050-011715 & 050-011455, which are both currently owned by the customer. No new right-of-way will be acquired on other properties.

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.

Line Asset Name:	Hayden-Roberts 345 kV
Ownership:	Ohio Power Company
Voltage:	345 kV
Conductors:	(3) 2-bundle 954 kcm ACSR 45/7 (Rail)
Static Wire:	(2) 7#8 Alumoweld (in/out of station), existing line has (1) OPGW 0.646" 72 count & (1) OPGW 12 count on circuit not being tapped
Insulators:	Polymer
ROW Width:	150 feet
Structure Type:	(2) Single Circuit, Monopole Deadend, custom concrete pier foundation

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.

No occupied residences or institutions are located within 100 feet of the Project.

B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately $1,800,000 based on a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in the Ohio Power Company's FERC formula rate (Attachment H-14 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Economic Impacts

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

B(10)(a) Land Use Characteristics

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

An aerial photograph of the Project vicinity is provided as Figure 2 in Appendix A. The Project is located in the City of Hilliard, Franklin County, Ohio. Norwich Township is adjacent to the north, west, and south of the customer property. Land use in the Project Area is urban and consists primarily of single-family residences. The Project site is part of an area within the City of Hilliard zoned as Planned Development. A recreational trail is adjacent to the west of the customer property with a park to the northwest. The closest residence is approximately 200 feet from the Project. No tree clearing is anticipated for the Project.

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 majority of the customer property, including the entirety of the Project, is fallow land. The Franklin County Auditor was contacted regarding parcels registered as Agricultural District Land on May 1, 202. The customer property was not identified as an Agricultural District Land parcel. The Project extends to the adjacent property to the south due to a slight shift in the centerline and the new proposed structures for the 345 kV cut-ins. This property is listed as Agricultural District Land. However, no construction is anticipated on the property and therefore no impacts are anticipated for the Project.

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant's investigation concerning the presence or absence of significant archaeological 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.

The Company's consultant completed a Phase I Cultural Resource Management Investigation of the Project Area. No further investigation was considered to be necessary by the consultant. The Ohio Historic Preservation Office ("SHPO") agreed that the Project will not impact any cultural resources eligible for listing on the NRHP and no additional coordination is necessary prior to construction. A copy of the February 17, 2022 concurrence letter from SHPO is provided in Appendix C.

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 and approved by the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC000005 for the Project and associated Cosgray Station. The Company will also coordinate storm water permitting needs with the City of Hilliard as required. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution Prevention Plan ("SWPPP") to minimize erosion control sediment to protect surface water quality during storm events. Coordination with the City of Hilliard is required for the SWPPP and is currently ongoing.

No streams or wetlands are located in the Project Area (see Appendix D). Therefore, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers or a Section 401 Water Quality Certification from the OEPA.

The FEMA Flood Insurance Rate Map was reviewed to identify any floodplains/flood hazard areas that have been mapped within the Project Area (specifically, map number **39049C0141K**). Based on this mapping, no mapped FEMA floodplains are located in the Project Area. Therefore, no floodplain permit will be required for this Project

There are no other known local, state, or federal requirements that must be met prior to commencement of the proposed Project.

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

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

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 January 6, 2022 response letter from the USFWS (see Appendix C) indicated that seasonal tree clearing would be required if bat habitat trees were identified. No clearing of bat habitat trees is anticipated as part of the Project. Due to the Project type, size, and location, USFWS does not anticipate adverse effects to any federally endangered, threatened, proposed, or candidate species.

A coordination letter was submitted to the Ohio Department of Natural Resources ("ODNR") Division of Wildlife ("DOW") Ohio Natural Heritage Program ("ONHP") and the ODNR - Office of Real Estate 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/OHNP and the ODNR – Office of Real Estate was received on January 21, 2022 (see Appendix C).

According to the ODNR-DOW, the Project is within the range of the Indiana bat, northern long-eared bat, little brown bat, and tricolored bat. ODNR recommends cutting between October 1 and March 31. No winter hibernacula were observed within the Project Area (See Appendix D), and no tree clearing is anticipated for the Project. Therefore, no impacts are anticipated to the above listed bats and no additional coordination with ODNR regarding bat species is required.

The ODNR-DOW indicated that the Project is within the range of 15 mussel species and ten fish species. Due to no in-water work and habitat, these species are not anticipated to be impacted by the Project.

In addition, the ODNR lists the Project in the range of the American bittern, black-crowned night-heron, lark sparrow, least bittern, northern harrier, sandhill crane, and upland sandpiper. The ODNR recommends that nesting habitats for the listed species be avoided during their nesting periods. The professional survey completed for avian resources concluded no suitable habitat was observed for any of the species in the Project area. In regard to the sandhill crane, the professional review of the Project area indicated that the stopover habitat may be present. However, because the Project area is located within a developed area, the agricultural field habitat is not likely to be important or highly utilized migration stopover habitat for this species. ODNR concluded that no construction restrictions are warranted as suitable habitat was not present on site, combined with the current site development occurring on the customer property.

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.

Correspondence received from the USFWS indicated that there are no federal wilderness areas, wildlife refuges, or designated critical habitat in the Project vicinity. Similarly, the ODNR ONHP identified no unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within one mile of the Project (see Appendix D).

FEMA Flood Insurance Rate Maps were consulted to identify any floodplains/flood hazard areas that have been mapped in the Project Area (specifically, map number **39049C0141K**). Based on these maps, no mapped FEMA floodplains are located in the Project area.

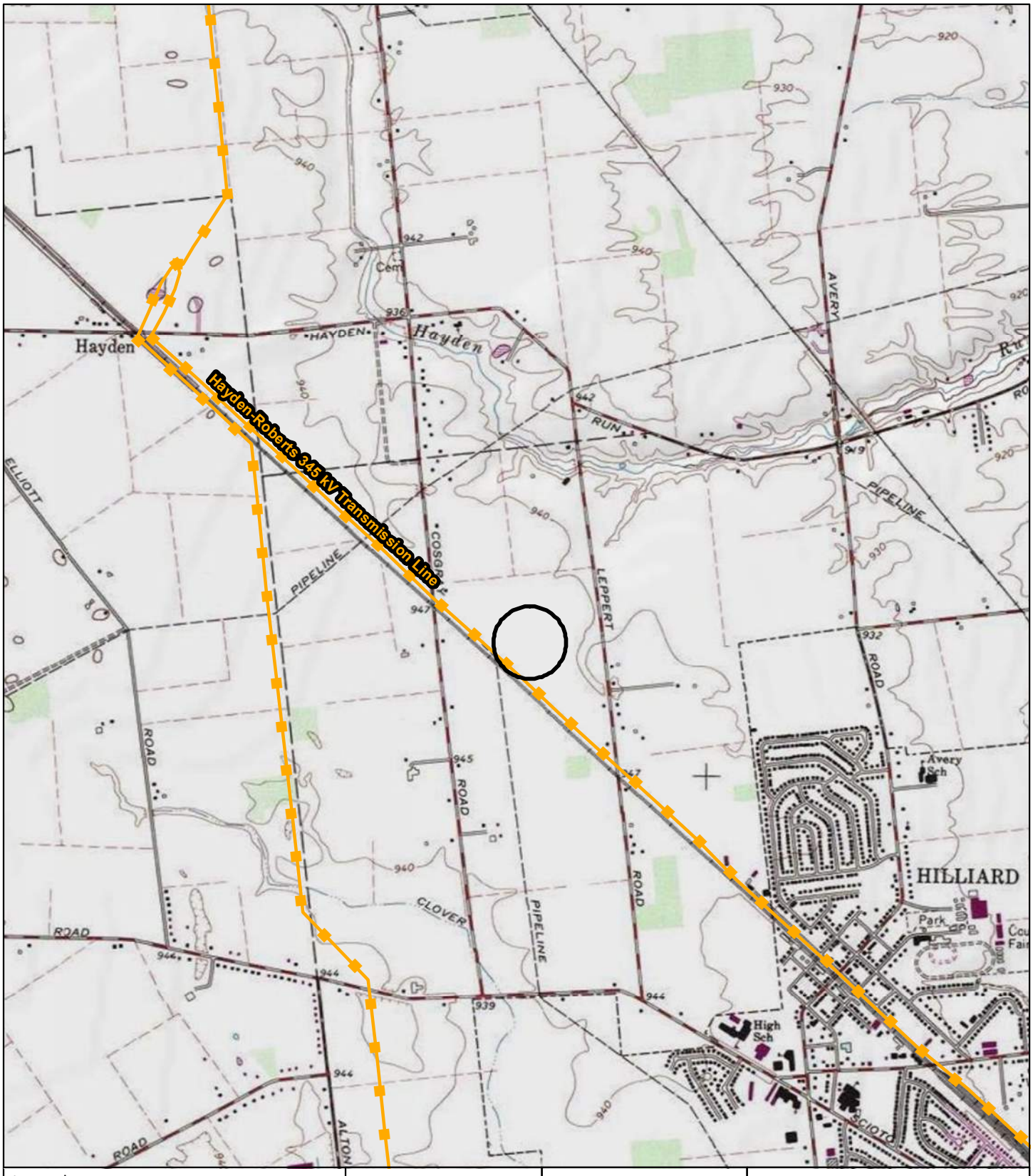
Wetland and stream delineation field surveys were completed within the Project area by the Company's consultant in January 2022. No wetlands or streams were identified within in the Project Area (see Figure 2 in Appendix D).

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 the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

Appendix A Project Maps



Legend:

- Project Area
- Existing Transmission Line (345 kV)

Data Sources: AEP, USGS 7.5' Topographic Quadrangle (Hilliard, Ohio)

Ohio State Plane South NAD 1983

July 14, 2022

PROJECT LOCATION

FRANKLIN COUNTY, OHIO

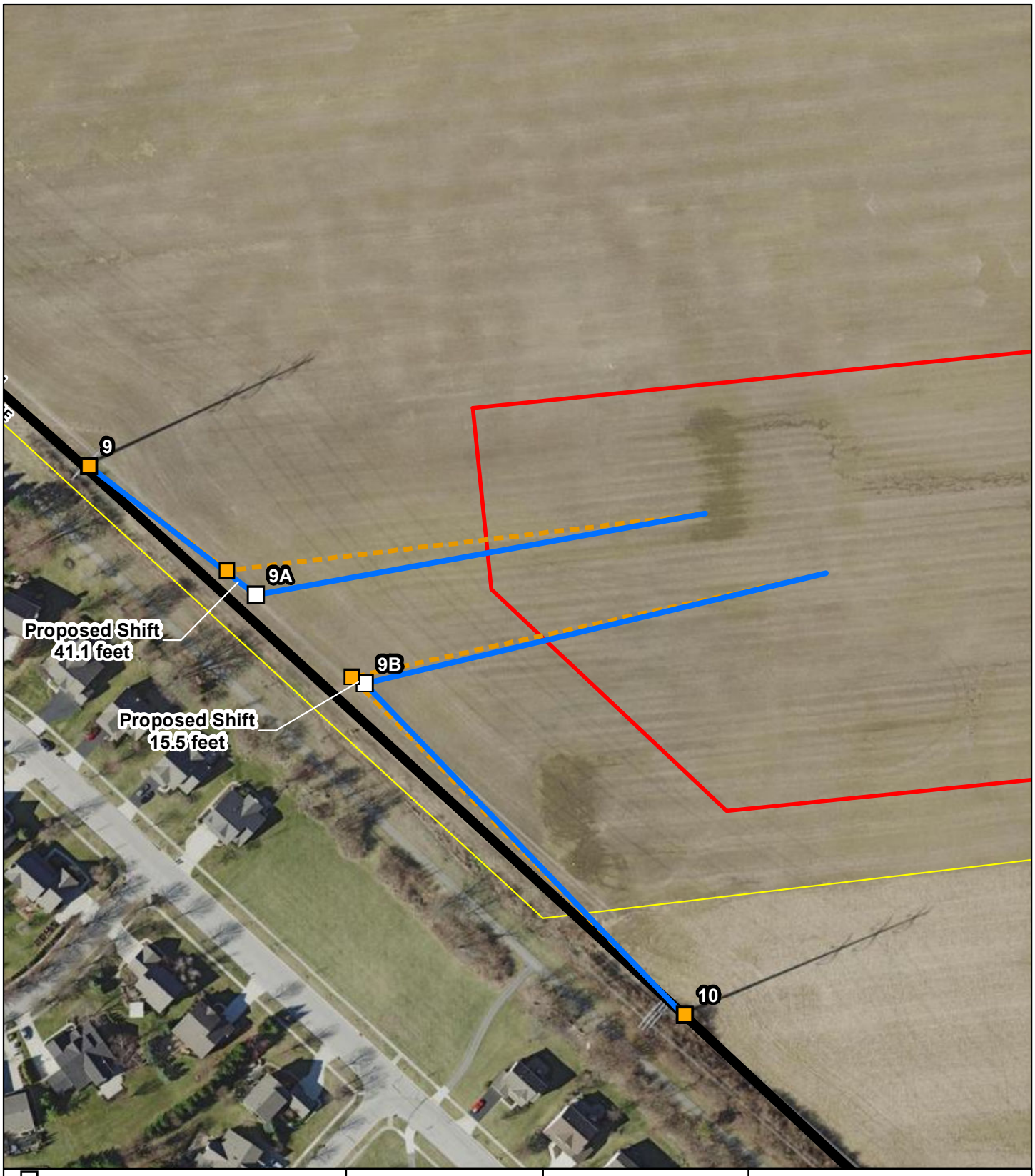
FIGURE 1
TOPOGRAPHIC OVERVIEW

AEP OHIO

Hayden-Roberts 345 kV Cut-Ins to Cosgray Station

0 1,000 2,000 3,000

Feet



Proposed Structure Location
Proposed Transmission Line Adjustment
Approved Structure Location (Case No. 22-0633-EL-BLN)
Approved 345 kV Transmission Line (Case No. 22-0633-EL-BLN)
Proposed Cosgray Station (Filed Separately)
Project Area (Customer Property)
Existing Transmission Line (345 kV)

Data Sources: AEP, Ohio Statewide Imagery Program (2019)

Ohio State Plane South
NAD 1983

May 01, 2023

PROJECT LOCATION

FRANKLIN COUNTY, OHIO

FIGURE 2
PROJECT AERIAL MAP

AEP OHIO
An AEP Company
BOUNDLESS ENERGY

Hayden-Roberts 345 kV Cut-Ins to Cosgray Station

0 75 150 225
Feet

Appendix B Long Term Forecast Report and PJM Solution

PUCO Form FE-T9:
AEP Ohio
Specifications of Planned Transmission Lines

1.	LINE NAME AND NUMBER:	Cosgrey Customer Tie Line #2 345 kV S2653 TP2021031
2.	POINTS OF ORIGIN AND TERMINATION	Cosgrey - CMH091 INTERMEDIATE STATION - N/A
3.	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	0.1 miles / 150 ft / 1 circuit
4.	VOLTAGE: DESIGN / OPERATE	345 kV / 345 kV
5.	APPLICATION FOR CERTIFICATE:	2022
6.	CONSTRUCTION:	2022 - 2023
7.	CAPITAL INVESTMENT:	$0.075M
8.	PLANNED SUBSTATION:	Cosgray
9.	SUPPORTING STRUCTURES:	Steel
10.	PARTICIPATION WITH OTHER UTILITIES	N/A
11.	PURPOSE OF THE PLANNED TRANSMISSION LINE	New 345 kV extension to serve co-op transmission delivery point
12.	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Unable to provide requested service to customer
13.	MISCELLANEOUS:	

AEP Transmission Zone M-3 Process
Franklin County, OH

Need Number: AEP-2021-OH014

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 01/21/2022

Selected Solution:

- **Cosgray 345 kV Station:** Greenfield 345 kV ring bus station laid out as a six breaker ring bus for future expansion that includes four (4) 345 kV 63 kA breakers initially. 345kV revenue metering equipment will be installed. **Estimated Cost: $16M (s2653.1)**
- **Hayden-Roberts #2 Tap & Extension:** Cut into the Hayden–Roberts No. 1 345 kV circuit with 2 dead end monopoles that will then tie directly in to the new Cosgray Station. Fiber extension & termination into new Cosgray Station. Remote end relay settings updates. **Estimated Cost: $1.87M (s2653.2)**
- **Cosgray-Customer Tie Line 1 & 2:** Install tie lines between Cosgray and the customer's Station. **Estimated Cost: $0.15M (s2653.3)**

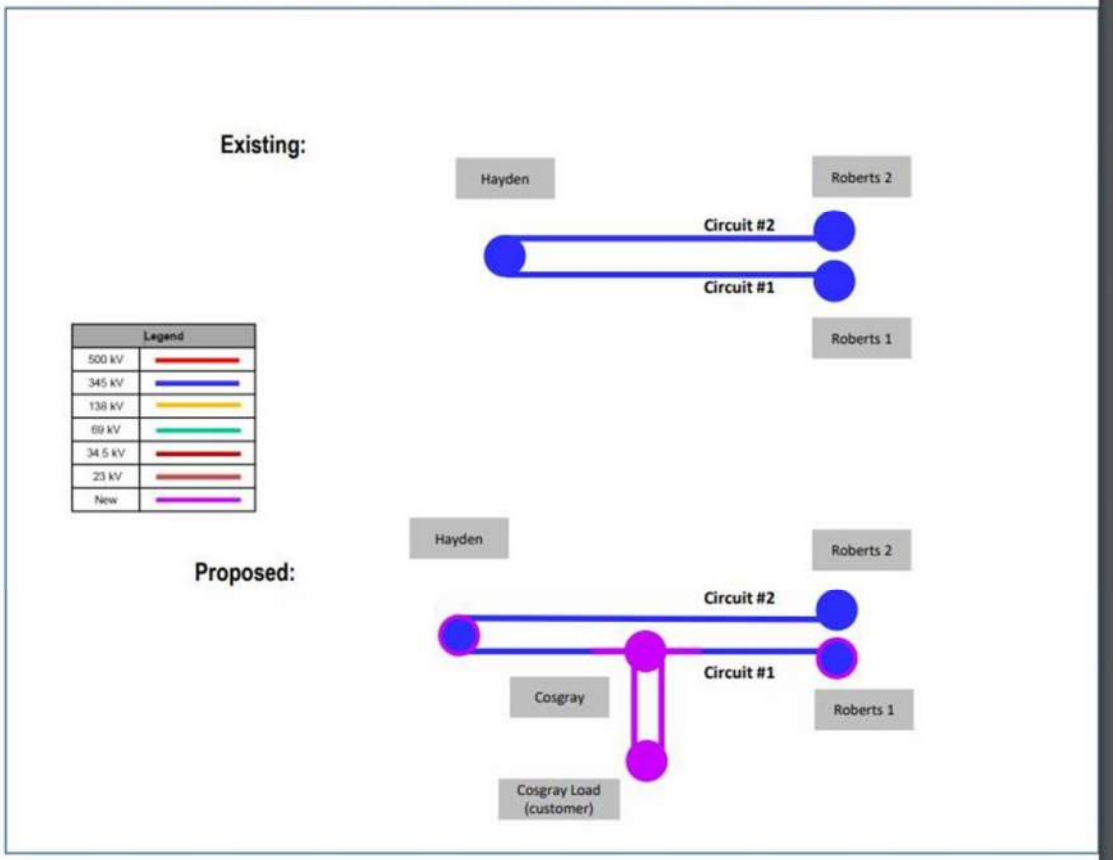
Total Estimated Transmission Cost: $18.02M

Projected In-Service: 5/1/2023

Supplemental Project ID: s2653.1-.3

Project Status: Scoping

Model: RTEP 2026



AEP Transmission Zone M-3 Process
Franklin County, OH

Need Number: AEP-2021-OH014

Process Stage: Solutions Meeting 10-15-2021

Proposed Solution:

- **Cosgray 345 kV Station:** Greenfield 345 kV ring bus station laid out as a six breaker ring bus for future expansion that includes four (4) 345 kV 63 kA breakers initially. 345kV revenue metering equipment will be installed. **Estimated Cost: $16M**
- **Hayden-Roberts #2 Tap & Extension:** Cut into the Hayden–Roberts No. 1 345 kV circuit with 2 dead end monopoles that will then tie directly in to the new Cosgray Station. Fiber extension & termination into new Cosgray Station. Remote end relay settings updates. **Estimated Cost: $1.87M**
- **Cosgray-Customer Tie Line 1 & 2:** Install tie lines between Cosgray and the customer's Station. **Estimated Cost: $0.15M**

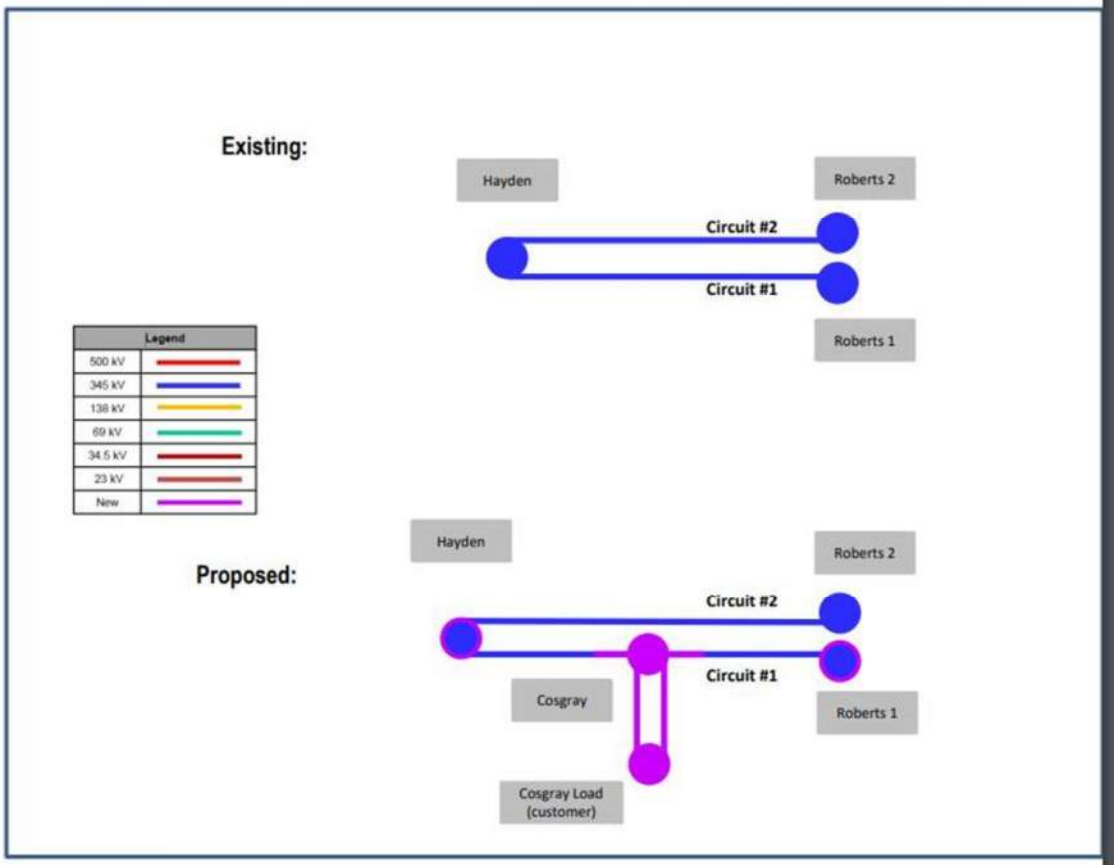
Total Estimated Transmission Cost: $18.02M

Alternatives Considered:
Serving the site via greenfield double circuit line approximately 0.8 miles to the customer site from the existing Hayden – Cole 138kV circuit, as well as a new 6 breaker ring was investigated. The significant amount of land development between the 138 kV line and the customer's site significantly increased the risk in obtaining ROW and would have required constructing the 138 kV lines underground. Conceptual costs put the 138 kV service option on par with the 345 kV service option. Because of the schedule risks associated with the 138 kV service plan, the customer requested to move forward with taking service from AEP at 345 kV.

Projected In-Service: 5/1/2023

Project Status: Scoping

Model: RTEP 2026



Appendix C Agency Coordination

In reply, refer to
2022-FRA-53653

February 17, 2022

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: Hayden-Cosgray 345kV Extension Project, Norwich Township, Franklin County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on January 20, 2022 regarding the proposed Hayden-Cosgray 345kV Extension Project, Norwich Township, Franklin County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Cultural Resource Management Investigations for the Hayden-Cosgray 345kV Extension Project in Norwich Township, Franklin County, Ohio* by Ryan J. Weller & Scott McIntosh (Weller & Associates, Inc. 2022).

A literature review, visual inspection, and surface collection was completed as part of the investigations. No previously identified archaeological sites are located within the project area and no new archaeological sites were identified during survey. Our office agrees no additional archaeological investigation is needed.

A literature review and field survey were completed as part of the investigations. A total of six (6) architectural resources 50 years of age or older were identified within the Area of Potential Effects (APE) during the field survey. It is Weller's recommendation that none of these properties are eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with Weller's recommendations regarding eligibility. No further architectural survey is recommended.

Based on the information provided, we agree that the project as proposed will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org, or Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1091724

Ohio Department of Natural Resources
MIKE DEWINE, GOVERNOR MARY MERTZ, DIRECTOR

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

January 21, 2022

Daniel Godec
Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati OH 45241

Re: 21-1161; Hayden-Roberts No. 2 345 kV Line Cut-In Project

Project: The proposed project involves completing a transmission line cut-in and removal activities.

Location: The proposed project is located in Norwich Township, Franklin County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

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

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

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

A search for unique ecological sites, scenic rivers, state nature preserves, wildlife areas, parks or forests, national wildlife refuges, and other protected natural areas indicates that the following sites occur within a one-mile radius of the project area:

Homestead Metro Park -- Columbus and Franklin County Metro Parks

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 entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH $\geq$ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "*Range-wide Indiana Bat Survey Guidelines*." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.

Federally Endangered

clubshell (*Pleurobema clava*)
northern riffleshell (*Epioblasma torulosa rangiana*)
purple cat's paw (*Epioblasma o. obliquata*)
rayed bean (*Villosa fabalis*)
snuffbox (*Epioblasma triquetra*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)
long solid (*Fusconaia maculata maculate*)
Ohio pigtoe (*Pleurobema cordatum*)
pocketbook (*Lampsilis ovata*)
washboard (*Megalonaias nervosa*)

State Threatened

black sandshell (*Ligumia recta*)
fawnsfoot (*Truncilla donaciformis*)
pondhorn (*Uniomerus tetralasmus*)
threehorn wartyback (*Obliquaria reflexa*)

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 following listed fish species.

State Endangered

goldeye (*Hiodon alosoides*)
Iowa darter (*Etheostoma exile*)
northern brook lamprey (*Ichthyomyzon fossor*)
popeye shiner (*Notropis ariommus*)
shortnose gar (*Lepisosteus platostomus*)
spotted darter (*Etheostoma maculatum*)
tonguetied minnow (*Exoglossum laurae*)

State Threatened

lake chubsucker (*Erimyzon sucetta*)
paddlefish (*Polyodon spathula*)
Tippecanoe darter (*Etheostoma tippecanoe*)

The DOW recommends no in-water work in perennial streams from March 15 through 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 these or other aquatic species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the black-crowned night-heron *(Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should

be avoided in this habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through august 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

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

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

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

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

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

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

From: Ohio, FW3
To: Godec, Daniel; Parsons, Kate
Cc: nathan.reardon@dnr.state.oh.us
Subject: AEP"s Hayden-Roberts No. 2, 345 kV Line Cut-In Project, Franklin County, Ohio
Date: Thursday, January 6, 2022 1:29:36 PM
Attachments: image.png
image.png

TAILS#03E15000-2022-TA-0530

Dear Mr. Godec,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found 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 breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet 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, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. 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 trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.
If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be

conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then 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 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. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army 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. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or 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, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

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

Sincerely,

Patrice Ashfield

Field Office Supervisor

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

Appendix D Ecological Resources Inventory Report

Hayden-Roberts No. 2 345 kV Line Cut-In Project, Franklin County, Ohio

Ecological Resources Inventory Report

Prepared for:

AEP Ohio Transmission Company, Inc.
8600 Smiths Mill Road
New Albany, OH 43054

Prepared by:

Stantec Consulting Services, Inc.
11687 Lebanon Road
Cincinnati, OH 45241

February 24, 2022

Sign-off Sheet

This document entitled Ecological Resources Inventory Report, Hayden-Roberts No. 2 345 kV Line Cut-In Project, Franklin County, Ohio was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of AEP Ohio Transmission Company, Inc. Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by 

(signature)

Aaron Kwolek

Reviewed by 

(signature)

Dan Godec

Table of Contents

1.0 INTRODUCTION

AEP Ohio Transmission Company, Inc. (AEP) is proposing construction activities associated with the Hayden-Roberts No. 2 345 kV Line Cut-In Project. The Project includes completing transmission line cut-in and removal activities. The Project area is located east of Cosgray Road, northwest of the City of Hilliard, Franklin County (Figure 1, Appendix A). The Project area was surveyed for wetlands, waterbodies, open water features, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on January 13, 2022. The approximate locations of features located up to 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. The approximate locations of these features are shown on the Figure 2 maps in Appendix A as "approximate" wetlands, streams (waterways), open waters, 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 survey data, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest 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; OEPA 2018) and/or Qualitative Habitat Evaluation Index (QHEI; OEPA 2006). The centerline of each waterway and/or the OHWM of each waterway was identified and surveyed using a handheld sub-meter accuracy global positioning system (GPS) unit and mapped with geographic information system (GIS) software. Additionally, the locations of ponds/open water features and 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.

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 federally listed or state-listed species that have the potential to occur within Franklin County.

3.0 RESULTS

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys on January 13, 2022, for threatened and endangered species or their habitats. Figure 3 (Appendix A) shows the vegetation communities/habitats identified within the Project area and the locations of any identified rare, threatened, or endangered species habitat observed within the Project area during the time of the habitat assessment surveys. Representative photographs of the vegetation communities/habitats and land cover types identified within the Project area are included in Appendix C of this report (photo locations are shown on Figure 3, Appendix A). Information regarding the vegetation communities/habitats/land cover types identified within the Project area is provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the Hayden–Roberts No. 2 345 kV Line Cut-In Project Area, Franklin 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	Moderate to Extreme Disturbance/Ruderal Community dominated by native and non-native herbaceous and woody species. Common plant species included Amur honeysuckle (*Lonicera maackii*), tall fescue, multiflora rose (*Rosa multiflora*), curly dock (*Rumex crispus*), Japanese bristlegrass (*Setaria faberi*), red clover (*Trifolium pratense*), Canadian horseweed (*Conyza canadensis*), eastern poison ivy (*Toxicodendron radicans*), Callery pear (*Pyrus calleryana*), and white heath aster (*Symphyotrichum ericoides*).	No	1.1
Agricultural Field	Extreme Disturbance/Ruderal Community dominated by planted row crop species such as corn (*Zea mays*) and soybean (*Glycine max*), as well as non-native volunteers such as yellow foxtail (*Setaria pumila*) and white clover (*Trifolium repens*).	No	18.3

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
		TOTAL	**19.4**

3.2 WETLANDS

No wetlands were delineated within the Project area during the field surveys completed on January 13, 2022. Additionally, no NWI-mapped wetlands are located within the Project area. However, one wetland determination sample point (SP01) was evaluated within the Project area in the location most likely to meet the criteria to be considered a wetland. Representative photographs of the wetland determination sample point within the Project area are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). The completed wetland determination data form is included in Appendix D.

3.3 STREAMS

No streams were delineated within the Project area during the field surveys completed on January 13, 2022.

3.4 OPEN WATERS

No open waters were identified within the Project area during the field surveys that took place on January 13, 2022.

3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 2. Summary of Potential Federally Listed and Ohio State-Listed Species within the Hayden-Roberts No. 2 345 kV Line Cut-In Project Area, Franklin County, Ohio

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Fishes						
Shortnose Gar/*Lepisosteus platostomus*	E	N/A	Habitat includes large weedy lakes and reservoirs, backwaters, and quiet pools of medium to large rivers, stagnant ponds, sloughs, canals, brackish waters of coastal inlets, occasionally coastal marine waters; often near vegetation or close to submerged or overhanging objects by day. Young tend to occupy shallows and larger individuals are found in deeper water. Spawning occurs over weed beds of shallow waters in rivers, usually in grass and weeds in shoal water in lakes, or near stone piles of railroad bridges, in nests of smallmouth bass, or over gravel bars (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the shortnose gar. ODNR recommends no in-water work in perennial streams from March 15 through 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. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Popeye Shiner/*Notropis ariommus*	E	N/A	This species is found in extremely clear waters in moderate sized streams. These streams usually have slow to moderate flow and many long slow pools (ODNR 2017).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the popeye shiner. The ODNR recommends no in-water work in perennial streams from March 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 this species or other aquatic species. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Goldeye/*Hiodon alosoides*	E	N/A	Goldeye habitat includes quiet turbid water of medium to large lowland rivers, small lakes, ponds, and marshes connected to them, and muddy shallows of larger lakes. This fish prefers moderate to fast current in Illinois and Ohio. Spawning occurs in shallow firm-bottomed sites in river pools or backwaters or over gravel shoals in tributary streams (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the goldeye. ODNR recommends no in-water work in perennial streams from March 15 through 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. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Northern Brook Lamprey/ *Ichthyomyzon fossor*	E	N/A	Adult lampreys are found in clear brooks with fast flowing water and sand or gravel bottoms. Juveniles are found in slow moving water buried in soft substrate in medium to large streams (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the northern brook lamprey. ODNR recommends no in-water work in perennial streams from March 15 through 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. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Iowa Darter/*Etheostoma exile*	E	N/A	This species is typically found in natural lakes and very sluggish streams or marshes with dense aquatic vegetation and clear waters over sandy substrates. In Ohio, this species has been found in pothole or kettle lakes (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the Iowa darter. ODNR recommends no in-water work in perennial streams from March 15 through 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. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Spotted Darter/ *Etheostoma maculatum*	E	N/A	This species is found in medium sized rivers and streams. They are typically found in areas of swift current at the top or bottom end of a riffle where there are many very large boulders or flab slabs or rock. They spend most of their time hiding under the upstream edge of these large rocks (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the spotted darter. ODNR recommends no in-water work in perennial streams from March 15 through 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. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Tonguetied Minnow/ *Exoglssum laurae*	E	N/A	Habitat for this species includes rocky pools and runs of cool to warm water. They prefer clear creeks and small to medium sized rivers of moderate gradient with unsilted bottoms of gravel, cobble, and/or boulder. Spawning occurs in gravel nests in slow to moderate current (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the tonguetied minnow. The ODNR recommends no in-water work in perennial streams from March 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 this species or other aquatic species. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Tippecanoe Darter/ *Etheostoma tippecanoe*	T	N/A	This species prefers medium to large streams in the Ohio River drainage system and are found in riffles of moderate current with substrates of gravel or cobble sized rocks (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the Tippecanoe darter. ODNR recommends no in-water work in perennial streams from March 15 through 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. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Lake Chubsucker/ *Erimyzon sucetta*	T	N/A	This species is found in natural lakes and very sluggish streams or marshes with dense aquatic vegetation and clear water. In Ohio, they are typically found in pothole	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the lake chubsucker. ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			lakes. Additionally, they were found in three man-made lakes where one or several of these small natural lakes were flooded to form a larger reservoir including Buckeye Lake, Indian Lake, and the Portage Lakes (ODNR 2018).		proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Paddlefish/*Polyodon spathula*	T	N/A	Paddlefish are found in the Ohio River and up to the first dam on its larger tributaries. They prefer the sluggish pools and backwater areas of these rivers and streams. Historically they were much more common and could be found as far up the Ohio River as Pennsylvania. It is also probable that there was a small population in Lake Erie at one time. Today paddlefish are most often seen in the Ohio River from Portsmouth downstream to the Indiana state line (ODNR 2017).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the paddlefish. ODNR recommends no in-water work in perennial streams from March 15 through 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. USFWS – No comments received.	The ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Mussels						
Northern Riffleshell/ *Epioblasma torulosa rangiana*	E	E	This mussel is found in a wide variety of streams from small to large. Habitat for this species includes riffles and firmly packed substrates of fine to coarse gravel. This mussel needs highly oxygenated water (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the northern riffleshell 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Purple Cat's Paw/ *Epioblasma obliquata obliquata*	E	E	This species is extremely sensitive to pollution, sedimentation, and impoundment. This species prefers runs and riffles in medium to large rivers with sand and gravel substrates. In Ohio, this species is known from Killbuck Creek (NatureServe 2022.	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the purple cat's paw. Due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Rabbitsfoot/*Quadrula cylindrica*	E	T	Typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Rabbitsfoot are also found in medium to large rivers in sand and gravel (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the rabbitsfoot 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Elephant-ear/*Elliptio crassidens crassidens*	E	N/A	This mussel is found in muddy sand, sand, and rocky substrates in moderate currents. In some areas, it is common in large creeks to rivers with moderate to swift currents	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the elephant-ear 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 this species.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			primarily on sand and limestone or rock substrates (NatureServe 2022).		USFWS – No comments received.	
Ohio Pigtoe/*Pleurobema cordatum*	E	N/A	This mussel prefers strong currents of large rivers with substrates of sand and gravel, though is somewhat tolerant of lentic systems (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the Ohio pigtoe. Due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Pocketbook/*Lampsilis ovata*	E	N/A	The pocketbook is very generalized in habitat preference, adapting well to both impoundment situations as well as free-flowing, shallow rivers. It is usually found in moderate to strong current, however it can survive in standing water. The most suitable substrate consists of a mixture of gravel and coarse sand mixed with some silt or mud (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the pocketbook 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Pondhorn/*Uniomerus tetralasmus*	T	N/A	This species typically inhabits the quiet or slow-moving, shallow waters of sloughs, borrow pits, ponds, ditches, and meandering streams. It is tolerant of poor water conditions and can be found well buried in a substrate of fine silt and/or mud. It has been known to survive for extended periods of time when a pond or slough has temporarily dried up by burying itself deep into the substrate (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the pondhorn 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Snuffbox/*Epioblasma triquetra*	E	E	The snuffbox occurs in medium-sized streams to large rivers, generally on mud, rocky, gravel, or sand substrates in flowing water. They are often deeply buried in substrate and overlooked by collectors (NatureServe 2022). It is found in a wide range of particle sized substrates; however, swift shallow riffles with sand and gravel are where it is typically found (Parmalee and Bogan 1998; Watters et al. 2009).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the snuffbox 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Long solid/*Fusconaia subrotunda*	E	N/A	This species is found in medium to large rivers with a strong current and often in sand and gravel (NatureServe 2022).	No suitable habitat was observed within the Project area	ODNR – The Project area is within the range of the long solid 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Washboard/*Megalonaias nervosa*	E	N/A	This species is typically a large river species, living in the main channel and in some of the overbank areas of reservoirs, but in some instances, it may also become established in medium-sized and even small rivers. It is found in areas with a slow current with muddy to coarse gravel substrates (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the washboard 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Clubshell/*Pleurobema clava*	E	E	The clubshell occurs in medium to small rivers and streams, containing clean, coarse sand and cobble substrates (USFWS 1994). The clubshell is usually found within the current, where it may live several inches underneath the surface. It is most common in the downstream ends of riffles and islands (Watters et al. 2009). The clubshell is mostly considered an Ohio River system species, including the Tennessee, Cumberland, Kanawha, and Wabash river drainages. However, it is also found within the Maumee River system of Lake Erie. Although historically the clubshell was originally described as occurring within Lake Erie, only one record of its occurrence there has been found (Watters et al. 2009).	No suitable habitat was observed within the Project area	ODNR – The Project area is within the range of the clubshell 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Rayed Bean/*Villosa fabalis*	E	E	Habitat includes gravel or sandy substrate, especially in areas of thick roots of aquatic plants, increased substrate stability (NatureServe 2022; Parmalee and Bogan 1998). Rayed bean can be associated with shoal or riffle areas, and in shallow, wave-washed areas of glacial lakes. It is generally found in smaller, headwater creeks, but sometimes in larger rivers and open-water bodies. It can occur in shallow riffles or in lakes with water depths up to four feet. It has been found in riffles, generally in vegetation, and deeply buried in sand and gravel bound together by roots (Parmalee and Bogan 1998).	No suitable habitat was observed within the Project area	ODNR – The Project area is within the range of the rayed bean 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Black Sandshell/*Ligumia recta*	T	N/A	The black sandshell is typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the black sandshell mussel. Due to the location, and that there is no in-water work proposed in a	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore,

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			water depths from several inches to six feet or more (NatureServe 2022).		perennial stream of sufficient size, this project is not likely to impact this species. USFWS – No comments received.	impacts to this species are not anticipated and avoidance dates are not applicable.
Threehorn Wartyback/ *Obliquaria reflexa*	T	N/A	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 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the threehorn wartyback 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Fawnsfoot/*Truncilla donaciformis*	T	N/A	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. A substrate of either sand or mud is suitable and although it is typically found in moderate current, it can adapt to a lake or embayment environment lacking current (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project area is within the range of the fawnsfoot 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 this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Mammals						
Indiana Bat/*Myotis sodalis*	E	E	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 2020a). 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 suitable habitat was observed within the Project area.	ODNR – 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 suitable trees must be cut during the summer months, ODNR recommends a net survey be conducted between June 1 and August 15, prior to any cutting. In addition, ODNR recommends a desktop habitat assessment, followed by field a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – The USFWS response letter (Appendix B) indicated that, due to the project type, size, and location, if caves and mines (potential bat hibernacula) will not be disturbed and seasonal tree cutting (clearing of trees ≥3 inches' diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats is implemented, they do not anticipate adverse effects to this species.	No suitable summer roosting habitat or potential hibernacula were observed within the Project area. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec and no potential bat hibernacula were identified within the Project area or its vicinity (Figure 4; Appendix A). Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Northern Long-eared Bat/*Myotis septentrionalis*	E	T	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 2020b). 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 suitable habitat was observed within the Project area.	ODNR – 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 suitable trees must be cut during the summer months, ODNR recommends a net survey be conducted between June 1 and August 15, prior to any cutting. In addition, ODNR recommends a desktop habitat assessment, followed by field a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – If no caves or abandoned mines may be disturbed and tree removal is unavoidable, seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) is recommended. Following this seasonal tree clearing recommendation should ensure that no adverse effects to the northern long-eared bat will occur. Incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule.	No suitable summer roosting habitat or potential hibernacula were observed within the Project area. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec and no potential bat hibernacula were identified within the Project area or its vicinity (Figure 4; Appendix A). Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Little Brown Bat/*Myotis lucifugus*	E	N/A	The little brown bat is found throughout Ohio. This species seems to prefer to forage over water but also forages among trees in rather open areas (Harvey et al. 1999). During summer, it typically inhabits buildings, attics, church belfries, barns and outbuildings, and occasionally more natural habitats such as sloughing bark of a dead tree. During summer, two types of roosts are utilized: day roosts and night roosts. Day roosts are the maternity colony roost, while little brown bats often roost in other areas where they rest and congregate to digest their food in between foraging bouts. In Ohio, this species typically utilizes caves and mines as hibernacula, although at least one hibernaculum was found to be located in an attic of an old building (Brack et al. 2010).	No suitable habitat was observed within the Project area.	ODNR – 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 suitable trees must be cut during the summer months, ODNR recommends a net survey be conducted between June 1 and August 15, prior to any cutting. In addition, ODNR recommends a desktop habitat assessment, followed by field a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – No comments received.	No suitable summer roosting habitat or potential hibernacula were observed within the Project area. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec and no potential bat hibernacula were identified within the Project area or its vicinity (Figure 4; Appendix A). Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Tri-colored Bat/*Perimyotis subflavus*	E	N/A	The tricolored bat is found throughout Ohio. This species has been found to forage above and within a variety of habitats, including woodlands, agricultural fields, grassy areas, and over streamside vegetation (Sparks et al. 2011). Maternity colonies have often been found within clusters of dead leaves, hanging in trees. Maternity colonies have also been found in or on buildings. Little is known of male tri-colored bats in summer, but it is thought that they are probably solitary and spend their days in similar situations, as well as crevices, caves and mines (Brack et al. 2010). In Ohio, this species typically utilizes caves and mines as hibernacula, utilizing a variety of situations, including very cold areas near cave entrances to deeper passages that seem to be too warm for other species of bats (Brack et al. 2010).	No suitable habitat was observed within the Project area.	ODNR – 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 suitable trees must be cut during the summer months, ODNR recommends a net survey be conducted between June 1 and August 15, prior to any cutting. In addition, ODNR recommends a desktop habitat assessment, followed by field a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – No comments received.	No suitable summer roosting habitat or potential hibernacula were observed within the Project area. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec and no potential bat hibernacula were identified within the Project area or its vicinity (Figure 4; Appendix A). Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Birds						
American Bittern/ *Botaurus lentiginosus*	E	N/A	Nesting American bitterns are very secretive and prefer large undisturbed wetlands that have scattered small pools amongst the dense vegetation. They occasionally occupy bogs, large wet meadows, and dense, shrubby swamps (ODNR 2018)	No suitable habitat was observed within the Project area.	ODNR – Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If suitable habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Lark Sparrow/ *Chondestes grammacus*	E	N/A	Lark sparrow breeding habitat includes various open situations with scattered bushes and trees, including: shortgrass, mixed-grass, and tallgrass prairie with a shrub component and sparse litter; parkland; sandhills; barrens; old fields; cultivated fields; shrub thickets; shrubsteppe (native and altered); woodland edges; shelterbelts; orchards, parks; riparian areas; brushy pastures; overgrazed pastures; and savanna. The lark sparrow nests on the ground or close to	No suitable habitat was observed within the Project area.	ODNR – This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If suitable habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			the ground (most often within 4 meters) in woody vegetation. Ground nests may be located in areas of sparse ground cover such as those areas associated with burning, moderate to heavy grazing, or poor or eroded soils, or in idle fields, lawns, and cemeteries (NatureServe 2022).			
Black-crowned Night-heron/*Nycticorax nycticorax*	T	N/A	These largely nocturnal herons are likely more common than suspected but tend to hide in thick vegetation during the day. They are often found roosting in thick vegetation along streams, lakes, and wetlands (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR – Black-crowned night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If suitable habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the Project is not likely to impact this species. USFWS - No comments received.	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
Least Bittern/*Ixobrychus exilis*	T	N/A	This species prefers to nest in marshes or swamps with dense emergent vegetation, especially cattails (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR - This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this Project is not likely to impact this species. USFWS - No comments received.	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
Northern Harrier/*Circus hudsonius*	E	N/A	Harriers hunt low over grasslands, with wings held in a distinctive dihedral (V-shape). This is a common migrant and winter species; nesters are much rarer, although they occasionally breed in large marshes and grasslands (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR - This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this Project is not likely to impact this species. USFWS - No comments received.	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
Sandhill Crane/*Grus canadensis*	T	N/A	On their wintering grounds, sandhill cranes utilize agricultural fields and roost in shallow standing water or wet bottomlands. On their breeding grounds, they are found on large tracts of wet meadows, shallow marshes, or bogs for nesting (ODNR 2022b).	Potentially suitable migration stopover habitat was observed within the Project area	ODNR - Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh,	Potentially suitable migration stopover habitat is present in the Project area (agricultural field habitat). However, because the Project area is located within a developed area, the agricultural field habitat is not likely to be important or highly utilized migration stopover habitat for this species.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
				(agricultural field habitat).	or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this Project is not likely to have an impact on this species. USFWS - No comments received.	Additionally, no suitable nesting habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.
Upland Sandpiper/ *Bartramia longicauda*	E	N/A	Upland sandpipers breed in grasslands, pastures, and unkept agricultural land with a mosaic of old fields and crop lands, and sometimes the grassy expanses of airports (ODNR 2022b).	No suitable habitat was observed within the Project area.	ODNR - Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of habitat will not be impacted, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated and avoidance dates are not applicable.

[1]E=Endangered; T=Threatened; N/A= Not Applicable
[2]According to ODNR, State Listed Wildlife and Plant Species by County (ODNR 2022a).
[3]According to USFWS (2018).

4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted a wetland and waterbodies delineation and a preliminary habitat assessment for threatened and endangered species within the Project area on January 13, 2022. No streams, wetlands, or open water features 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 field work. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment. One wetland determination data form was completed and is provided in Appendix D and representative photographs are provided in Appendix C.

An ODNR Ohio Natural Heritage Program data request and environmental review request letter was sent to the ODNR Office of Real Estate on December 21, 2021. The ODNR Office of Real Estate response dated January 21, 2022 (Appendix B) states that there are no records of threatened or endangered species within a one-mile radius of the Project area. Additionally, a search for unique ecological sites, scenic rivers, state nature preserves, wildlife areas, parks or forests, national wildlife refuges, and other protected natural areas indicated the Homestead Metro Park, managed by Columbus and Franklin County Metro Parks, occurs within a one-mile radius of the Project area. The Project will not impact this park.

The ODNR stated that the entire state of Ohio is within the range of the Indiana bat, northern long-eared bat, little brown bat, and the tri-colored bat. If trees are present within the Project area and trees must be cut, the ODNR Division of Wildlife (DOW) recommends cutting only occur from October 1 – March 31, conserving trees with loose, shaggy bark and/or crevices holes, or cavities as well as trees with diameter at breast height (dbh) ≥ 20 inches if possible. If trees are present within the Project area and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting.

The ODNR also recommends that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if there are potential bat hibernacula present within 0.25 miles of the Project area. Stantec completed a desktop habitat desktop assessment in accordance with the 2020 Range-wide Indiana Bat Survey Guidelines (USFWS 2020a) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022b) and locations of known or suspected karst geology (ODNR 2022c). The desktop assessment did not identify any caves, abandoned underground mines, active underground mines, or other potential bat hibernacula within the Project area or within a 3-mile buffer of it (Figure 4, Appendix A) Project area. Additionally, no potential bat hibernacula, forested habitats, or potential summer roost trees were identified within the Project area and any tree clearing required for the Project will take place between October 1 and March 31. Therefore, no impacts are anticipated to federally listed or state-listed bat species.

The ODNR states that the Project is within the range of several state-listed and federally listed threatened and endangered mussel species, as well as several state-listed threatened and endangered fish species (Table 2). Because no streams were identified within the Project area and no in-water work is proposed by AEP in a perennial stream, no impacts to these species of mussels and fish are anticipated.

The ODNR also states that the Project is also within range of the following state-listed endangered and threatened bird species: the American bittern, black-crowned night-heron, lark sparrow, least bittern, northern harrier, sandhill crane, and upland sandpiper. The ODNR recommends that nesting habitats for the listed species be avoided during their nesting periods. However, no nesting habitat is present within the Project area for any of these state-listed bird species (Table 2). Therefore, this Project is not likely to impact these species and nesting season avoidance dates are not applicable. Potential suitable migration stopover habitat for the sandhill crane is present within the Project area (agricultural field habitat). However, because the Project area is located within a developed area, the agricultural field habitat is not likely to be important or highly utilized migration stopover habitat for this species.

A technical assistance request letter was also submitted to the USFWS on December 21, 2021. The USFWS response letter dated January 6, 2022, states that there are no federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project area (Appendix B). The USFWS recommends that impacts to wetlands and other water resources be avoided or minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation. According to the USFWS response letter, all projects in the State of Ohio lie within range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. As stated, no potential bat hibernacula, forested habitats, or potential summer roost trees for these species were identified within the Project area and any tree clearing required for the Project will take place between October 1 and March 31. Therefore, no impacts to federally listed bat species are anticipated.

Additionally, the USFWS states that they do not anticipate adverse effects to any other federally endangered, threatened, proposed or candidate species due to the Project type, size, and location.

5.0 REFERENCES

Brack, Virgil Jr., Dale W. Sparks, John O. Whitaker Jr., Brianne L. Walters, and Angela Boyer. 2010. Bats of Ohio. Indiana State University Center for North American Bat Research and Conservation.

Cowardin, L.M., V. Carter V., F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service Report No. FWS/OBS/-79/31.Washington, D.C.

Harvey, Michael J., J. Scott Altenbach, and Troy L. Best. 1999. Bats of the United States. Arkansas Game & Fish Commission, Little Rock, Arkansas. 64 pp.

Mack, J.J. 2001. Ohio Rapid Assessment Method for Wetlands, Manual for Using Version 5.0. Ohio EPA Technical Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit, Columbus, Ohio.

NatureServe. 2022. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.0. NatureServe, Arlington, VA. U.S.A. Available http://explorer.natureserve.org. Accessed January 17, 2022.

Ohio Department of Natural Resources (ODNR) Division of Wildlife and U.S. Fish and Wildlife Service (USFWS). 2020. Ohio Mussel Survey Protocol. Available at https://ohiodnr.gov/static/documents/wildlife/permits/dow-protocol-ohio-mussel-survey.pdf. Accessed January 17, 2022.

ODNR Division of Wildlife. 2017. Stream Fishes of Ohio Field Guide. Available at https://ohiodnr.gov/static/documents/wildlife/backyard-wildlife/pub5127%20Stream%20Fishes%20of%20Ohio%20Field%20Guide.pdf. Accessed January 17, 2022.

ODNR Division of Wildlife. 2018. Species Guide Index. Available at http://wildlife.ohiodnr.gov/species-and-habitats/species-guide-index/. Accessed January 2020.

ODNR Division of Wildlife. 2022. State Listed Wildlife and Plant Species by County. Available at https://ohiodnr.gov/discover-and-learn/safety-conservation/about-odnr/wildlife/documents-publications/wildlife-plants-county. Accessed January 17, 2022.

ODNR Division of Geological Survey. 2022b. Karst Interactive Map. Available online at Karst Interactive Map Viewer (ohiodnr.gov). Accessed January 2022.

ODNR Division of Mineral Resources and Division of Geological Survey. Mines of Ohio. 2022c. Available online at ODNR Mines of Ohio Viewer (ohiodnr.gov). Accessed January 2022.

Ohio Environmental Protection Agency (OEPA). 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI).

OEPA. 2018. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 129 pp.

Parmalee, P.W. and A.E. Bogan. 1998. The Freshwater Mussels of Tennessee. University of Tennessee Press: Knoxville, Tennessee. 328 pp.

Sparks, Dale W., Curtis J. Schmidt, and Jerry R. Choate. 2011. Bats of Kansas. Indiana State University Center for North American Bat Research and Conservation, Terre Haute, Indiana. 60 pp.

U.S. Army Corps of Engineers (USACE), Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, Mississippi.

USACE. 2002. Issuance of Nationwide Permits; Notice, 67 Fed. Reg. 10. January 15, 2002. Federal Register: The Daily Journal of the United States. Available at https://www.gpo.gov/fdsys/pkg/FR-2002-01-15/pdf/02-539.pdf.

USACE. 2005. *Guidance on Ordinary High Water Mark Identification* (Regulatory Guidance Letter, No. 05-05). Available online at http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-05.pdf. Accessed January 17, 2022.

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Version 2.0,* ed. J.F. Berkowitz, J. S. Wakeley, R. W. Lichvar, C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USFWS. 1994. Clubshell (Pleurobema clava) and Northern Riffleshell (Epioblasma torulosa rangiana) Recovery Plan. Prepared for the U.S. Fish and Wildlife Service, Hadley, Massachusetts. 68 pp.

USFWS. 2007. Indiana bat (Myotis sodalis) draft recovery plan: First revision. U.S. Fish and Wildlife Service, Ft. Snelling, Minnesota. 258 pp.

USFWS. 2018. Federally Listed Species by Ohio Counties. Available at https://www.fws.gov/midwest/ohio/EndangeredSpecies/pdf/SpeciesListByCountyApril2018.pdf. Accessed January 17, 2022.

USFWS. 2020a. 2020 Range-wide Indiana Bat Survey Guidelines, March 2020. Available at https://www.fws.gov/midwest/endangered/mammals/inba/surveys/pdf/FINAL%20Range-wide%20IBat%20Survey%20Guidelines%203.23.20.pdf. Accessed January 17, 2022.

USFWS. 2020b. Northern Long-eared Bat (*Myotis septentrionalis*). Available online at https://www.fws.gov/midwest/Endangered/mammals/nleb/nlebFactSheet.html.. Accessed January 17, 2022.

Watters, G. T., M. A. Hoggarth, and D. H. Stansbery. 2009. The Freshwater Mussels of Ohio. The Ohio State University Press, Columbus, OH. 421 pp.

Appendix A FIGURES

A.1 FIGURE 1 – PROJECT LOCATION MAP

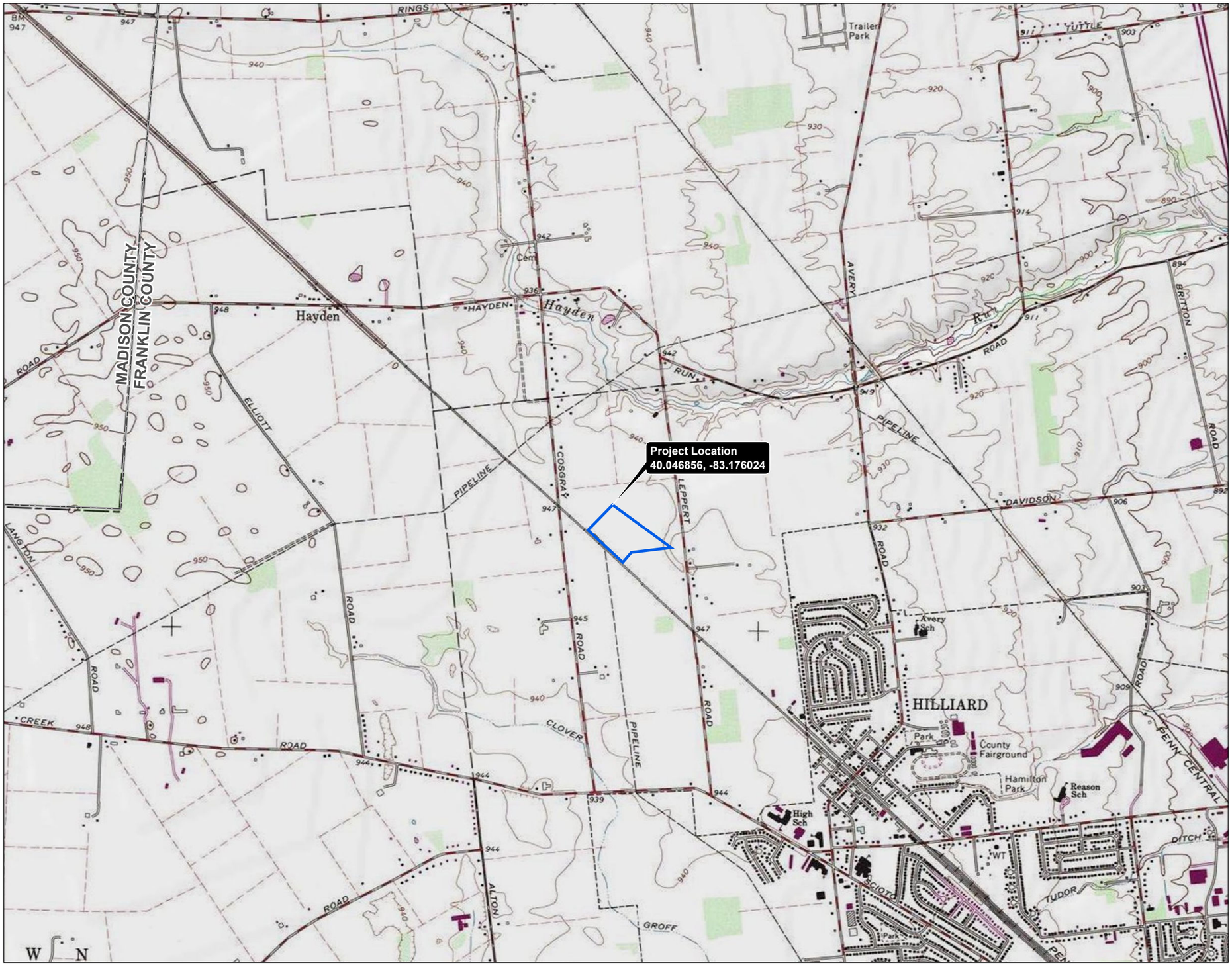


Figure No.

1

Title

Project Location Map

Client/Project 193708709

AEP Ohio Transmission Company, Inc.
Hayden-Roberts No. 2
345 kV Line Cut-In Project

Project Location
Franklin County, Ohio

Prepared by JDS on 2022-01-19
TR by AJK on 2022-01-28
IR by DJG on 2022-02-15

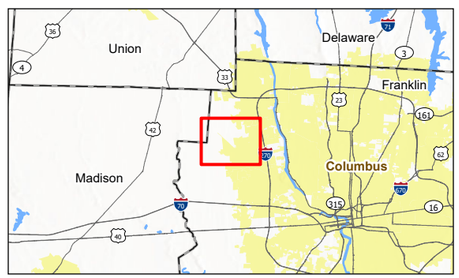
N

0 1,000 2,000 Feet

(At original document size of 11x17)
1:24,000

Legend

Project Area



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Hilliard, OH (1980)

Stantec

A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP

Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project 193708709

AEP Ohio Transmission Company, Inc.
Hayden-Roberts No. 2
345 kV Line Cut-In Project

Project Location
Franklin County, Ohio

Prepared by JDS on 2022-01-19
TR by AJK on 2022-01-28
IR by DJG on 2022-02-15

N

0 100 200 Feet
(At original document size of 11x17)
1:2,400

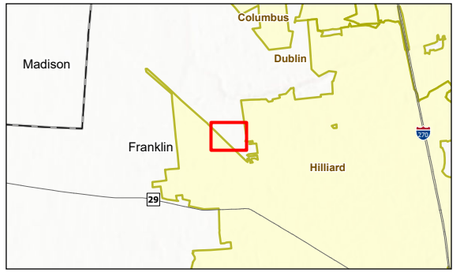
Legend

- Existing Structure
- Existing Transmission Line
- Project Area
- Photo Location
- Wetland Determination Sample Point
- National Wetlands Inventory Feature

FEMA Flood Hazard Area*

- 100-year Floodplain
- Floodway

*No features within data frame



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
3. Orthophotography: 2019 NAIP

Stantec

A.3 FIGURE 3 – HABITAT ASSESSMENT MAP

Figure No.
3

Title
Habitat Assessment Map

Client/Project 193708709
AEP Ohio Transmission Company, Inc.
Hayden-Roberts No. 2
345 kV Line Cut-In Project

Project Location
Franklin County, Ohio

Prepared by JDS on 2022-01-19
TR by AJK on 2022-01-28
IR by DJG on 2022-02-15

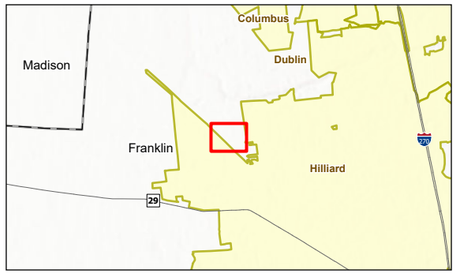
N

0 100 200 Feet
(At original document size of 11x17)
1:2,400

Legend
- Existing Structure
- Existing Transmission Line
- Project Area
- Photo Location

Habitat Area
- Agricultural Field
- Old Field

*No features within data frame



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP

Stantec

A.4 FIGURE 4 – BAT HIBERNACULA DESKTOP STUDY MAP

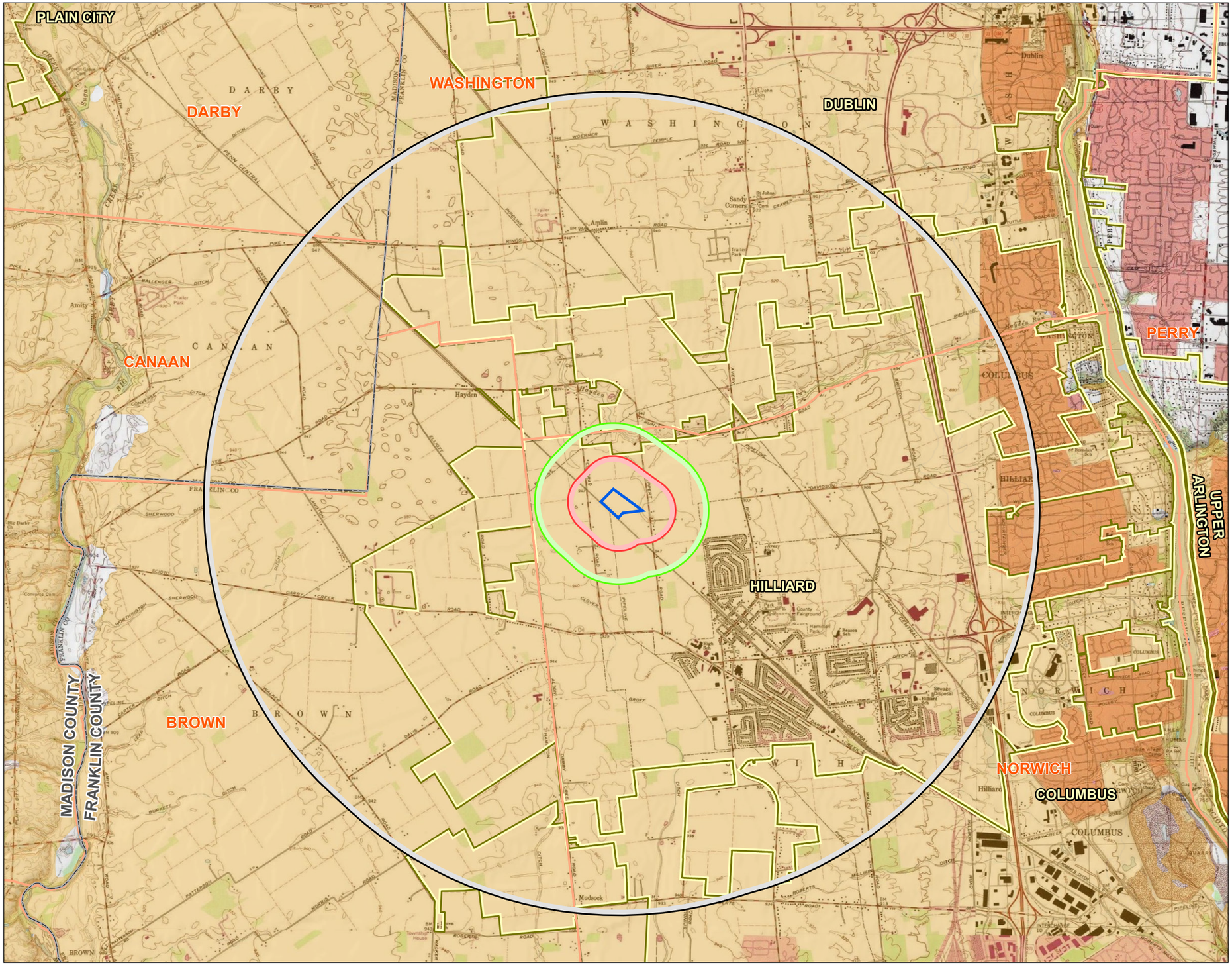


Figure No.
4

Title
Bat Hibernacula Desktop Study Map

Client/Project
AEP Ohio Transmission Company, Inc.
Hayden-Roberts No. 2
345 kV Line Cut-In Project

193708709

Project Location
Franklin County, Ohio

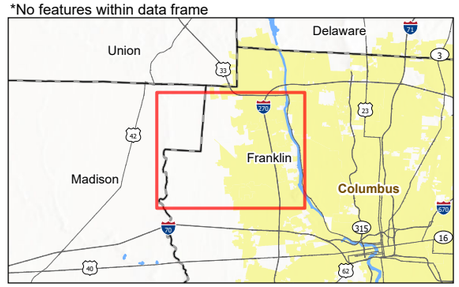
Prepared by JLH on 2022-01-26
TR by AJK on 2022-01-28
IR by DJG on 2022-02-15

N

0 2,000 4,000 Feet
(At original document size of 11x17)
1:48,000

Legend
- Project Area
- 0.25-Mile Project Area Buffer
- 0.5-Mile Project Area Buffer
- 3-Mile Project Area Buffer
- Karst Feature*
- Area of Karst Geology
- Abandoned Underground Mine*
- Inactive Mine*
- Active Surface Mine*
- Abandoned Surface Mine Area*
- Abandoned Underground Mine Area*
- Inactive Surface Mine Area*
- Active Surface Mine Area*
- Surface Mine Area (Unknown Status)*

*No features within data frame



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, ODNR, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Hilliard, OH (1980)

Stantec

Appendix B AGENCY CORRESPONDENCE

Ohio Department of Natural Resources
MIKE DEWINE, GOVERNOR MARY MERTZ, DIRECTOR

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

January 21, 2022

Daniel Godec
Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati OH 45241

Re: 21-1161; Hayden-Roberts No. 2 345 kV Line Cut-In Project

Project: The proposed project involves completing a transmission line cut-in and removal activities.

Location: The proposed project is located in Norwich Township, Franklin County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

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

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

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

A search for unique ecological sites, scenic rivers, state nature preserves, wildlife areas, parks or forests, national wildlife refuges, and other protected natural areas indicates that the following sites occur within a one-mile radius of the project area:

Homestead Metro Park -- Columbus and Franklin County Metro Parks

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 entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH $\geq$ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "*Range-wide Indiana Bat Survey Guidelines*." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.

Federally Endangered

clubshell (*Pleurobema clava*)
northern riffleshell (*Epioblasma torulosa rangiana*)
purple cat's paw (*Epioblasma o. obliquata*)
rayed bean (*Villosa fabalis*)
snuffbox (*Epioblasma triquetra*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)
long solid (*Fusconaia maculata maculate*)
Ohio pigtoe (*Pleurobema cordatum*)
pocketbook (*Lampsilis ovata*)
washboard (*Megalonaias nervosa*)

State Threatened

black sandshell (*Ligumia recta*)
fawnsfoot (*Truncilla donaciformis*)
pondhorn (*Uniomerus tetralasmus*)
threehorn wartyback (*Obliquaria reflexa*)

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 following listed fish species.

State Endangered

goldeye (*Hiodon alosoides*)
Iowa darter (*Etheostoma exile*)
northern brook lamprey (*Ichthyomyzon fossor*)
popeye shiner (*Notropis ariommus*)
shortnose gar (*Lepisosteus platostomus*)
spotted darter (*Etheostoma maculatum*)
tonguetied minnow (*Exoglossum laurae*)

State Threatened

lake chubsucker (*Erimyzon sucetta*)
paddlefish (*Polyodon spathula*)
Tippecanoe darter (*Etheostoma tippecanoe*)

The DOW recommends no in-water work in perennial streams from March 15 through 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 these or other aquatic species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The project is within the range of the black-crowned night-heron *(Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should

be avoided in this habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through august 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

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

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

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

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

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

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at mike.pettegrew@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

From: Ohio, FW3
To: Godec, Daniel; Parsons, Kate
Cc: nathan.reardon@dnr.state.oh.us
Subject: AEP"s Hayden-Roberts No. 2, 345 kV Line Cut-In Project, Franklin County, Ohio
Date: Thursday, January 6, 2022 1:29:36 PM
Attachments: image.png
image.png

TAILS#03E15000-2022-TA-0530

Dear Mr. Godec,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found 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 breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet 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, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. 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 trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see http://www.fws.gov/midwest/endangered/mammals/nleb/index.html), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.
If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be

conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then 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 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. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army 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. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or 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, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

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

Sincerely,

Patrice Ashfield

Field Office Supervisor

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

Appendix C REPRESENTATIVE PHOTOGRAPHS

C.1 WETLAND AND WATERBODY PHOTOGRAPHS

Photograph Location 1. View of upland (agricultural field) at wetland determination sample point location SP01. Photograph taken facing north.

Photograph Location 1. View of upland (agricultural field) at wetland determination sample point location SP01. Photograph taken facing east.

Photograph Location 1. View of upland (agricultural field) at wetland determination sample point location SP01. Photograph taken facing south.

Photograph Location 1. View of upland (agricultural field) at wetland determination sample point location SP01. Photograph taken facing west.

C.2 HABITAT PHOTOGRAPHS

Photograph Location 1. View of agricultural field habitat. Photograph taken facing east.

Photograph Location 1. View of agricultural field habitat. Photograph taken facing south.

Photograph Location 2. View of agricultural field habitat. Photograph taken facing east.

Photograph Location 2. View of agricultural field habitat. Photograph taken facing west.

Photograph Location 3. View of old field habitat. Photograph taken facing south.

Photograph Location 3. View of old field and agricultural field habitats. Photograph taken facing northwest.

Appendix D DATA FORMS

WETLAND DETERMINATION DATA FORM

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Hayden-Roberts No. 2 345 kV Line Cut-In Project	Stantec Project #:	193708709
Applicant:	AEP Ohio Transmission Company, Inc.		
Investigator #1:	Kate Bomar	Investigator #2:	Aaron Kwolek
Soil Unit:	CrA - Crosby silt loan, Southern Ohio Till Plain, 0-2% slopes	NWI/WWI Classification:	NA
Landform:	Depression	Local Relief:	Linear
Slope (%):	0	Latitude: 40.04606	Longitude: -83.176495 Datum: --

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

Are Vegetation ☑, Soil ☑, or Hydrology ☑ significantly disturbed?
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

Are normal circumstances present? ☑ Yes ☐ No

Date:	01/13/22
County:	Franklin
State:	Ohio
Wetland ID:	N/A
Sample Point:	**SP01**
Community ID:	UPL
Section:	--
Township:	--
Range:	-- Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? ☐ Yes ☑ No
Wetland Hydrology Present? ☐ Yes ☑ No
Hydric Soils Present? ☐ Yes ☑ No
Is This Sampling Point Within A Wetland? ☐ **Yes** ☑ **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑)

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

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth: 0	(in.)
Water Table Present?	☐ Yes	☑ No	Depth: 0	(in.)
Saturation Present?	☐ Yes	☑ No	Depth: 0	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

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

Remarks:

SOILS

Map Unit Name: CrA - Crosby silt loan, Southern Ohio Till Plain, 0-2% slopes

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 Color (Moist)		Matrix %	Redox Features Color (Moist)		Redox Features %	Redox Features Type	Redox Features Location	Texture (e.g. clay, sand, loam)
0	16	1	10YR	4/2	100	--	--	--	--	--	silty clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑)
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

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

Restrictive Layer (If Observed) Type: N/A Depth: N/A

Hydric Soil Present? ☐ Yes ☑ No

Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: Hayden-Roberts No. 2 345 kV Line Cut-In Project | Wetland ID: N/A | Sample Point: SP01

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.	*Setaria faberi*	40	Y	FACU
2.	*Taraxacum officinale*	5	N	FACU
3.	*Solidago canadensis*	10	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	55		

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: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: *0%* (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	55	x 4 =	220
UPL spp.	0	x 5 =	0
Total	55 (A)		220 (B)

Prevalence Index = B/A = *4.000*

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: