

Letter of Notification for the Celtic 345 kV Station Project



An **AEP** Company

PUCO Case No. 23-1098-EL-BLN

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

Submitted by:
Ohio Power Company

December 14, 2023

LETTER OF NOTIFICATION FOR THE CELTIC 345 kV STATION PROJECT

Letter of Notification Ohio Power Company Celtic 345 kV Station Project

4906-6-05 Accelerated Application Requirements

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

4906-6-05(B) General Information

B(1) Project Description

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

The Company is proposing the Celtic 345 kV Station Project (the “Project”), located in Jerome Township, Union County, Ohio. The Project involves construction of a new 18.6-acre transmission substation to provide electricity to a customer’s facility. The Project is located on property owned by the Company and will support the customer’s new development. The Celtic Station will receive 138-kV looped transmission service from the Kileville-Jerome 138-kV Transmission Line (pending approval in OPSB Case Number 23-1009-EL-BLN), and will require a future 345-kV transmission line connection (to be filed with the OPSB later). The location of the Project is shown on **Exhibit 1** and **Exhibit 2** of **Appendix A**.

The Project meets the requirements for a Letter of Notification (“LON”) because it is consistent with Item (3) of 4906-1-01 *Appendix A Application Requirement Matrix for Electric Power Transmission Lines*:

3) Constructing a new electric power transmission substation

The Project has been assigned PUCO Case No. 23-1098-EL-BLN.

B(2) Statement of Need

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

An existing customer has requested additional service to support an estimated projected load of 440 MW. Initial service to the customer is fed from the Company’s Kileville Station, with additional capacity being added after the construction of the proposed Jerome Station (approved in Case No. 23-0531-EL-BLN). However, in order to comply with North American Electric Reliability Corporation requirements (N-1 and N-1-1 contingency scenarios) and meet the customer’s total load demand, the Company will be required to install a new 345/138 kV source station, Celtic Station, which is the subject of this filing. The 345 kV sources to the Celtic Station will be established by cutting-into the Hayden – Hyatt 345 kV line and constructing

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approximately 1.5 miles of double circuit 345 kV line which will be filed separately with the OPSB. Celtic Station will provide an additional source to the customer's load in the area.

Failure to move forward with the proposed Project will result in Ohio Power Company's inability to serve the customer's load expectations, thereby jeopardizing the customer's plans in the area (440 MW peak).

The need for the customer driven supplemental project was presented and reviewed with stakeholders during the February 17, 2023 PJM SRRTEP meeting. The solution was presented and reviewed with stakeholders during the May 9, 2023 PJM TEAC meeting, see **Appendix B**. This Project was included in the Company's 2023 Long Term Forecast Report and can be found on page 54, 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 Project is in Union County, Ohio. **Exhibit 1** in **Appendix A** shows the Project area on United States Geological Survey (USGS) Hilliard and Shawnee Hills topographic quadrangle map in relation to existing and proposed facilities. **Exhibit 2** in **Appendix A** identifies the Project on aerial imagery.

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.

Several alternative site locations were preliminarily considered, and the Company determined that the proposed location is the most suitable for the Project. Based on proposed development in the Project area and preliminary planning for the transmission line interconnection for the Project, a limited number of viable corridors were identified to provide a transmission line interconnection between Celtic 345 kV Station, the Kileville Station, and Jerome 138kV Station. The majority of the two parcels where the Project is proposed was originally considered for the transmission line interconnection but due to the necessary transmission line right-of-way width, would render the remainder of the parcels undevelopable. To reduce impacts to land use in the area, the Company purchased these parcels for the Project instead of pursuing only transmission line easements on the properties. The proposed Project location will result in no impacts to wetlands, streams, or known cultural resource areas eligible for the National Register of Historic Places. Other alternative sites would have required separate 138/345 kV corridors, longer transmission interconnects, had future proposed development plans, or had owners who were unwilling to sell property. The location of the Project minimizes impacts to the community and the environment, while satisfying the customer's engineering and construction needs. The Project represents the most suitable location and most appropriate solution for meeting the Company's and specific customer's needs in the area.

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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.

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 Ohio Administrative Code (“OAC”) Section 4906-6-08(A)(1-6). Further, the Company will mail a letter, via first class mail, to affected landowners, tenants, contiguous landowners, 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 provides the public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library and select municipal officials in each political subdivision for this Project. The Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project area.

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 commence in March 2024 with a proposed in-service date of September 2025.

B(7) Area Map

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

Exhibit 1 in Appendix A identifies the location of the Project area on a USGS the Hilliard and Shawnee Hills 1:24,000-scale quadrangle map. **Exhibit 2 in Appendix A** shows the Project area on an ESRI World Imagery aerial map (March 2023).

To visit the Project from Columbus, take interstate (I-) 70 West and take exit 93 onto I-270 North. Take I-270 North for approximately 9.0 miles. Take exit 17B onto OH-161 West/US-33 West, then take exit 106 for OH-161 West. Turn left onto OH-161 West/Post Road and take the first exit at the traffic circle onto OH-161 West. Keep right onto Industrial Parkway/Old US Highway 33 then take the second exit at the traffic circle and stay on Industrial Parkway/Old US Highway 33. Turn left onto Warner Road and follow for 1.1 mile, and right onto Mitchell-Dewitt Road and follow for 0.4 mile. The Project is on the right (east) (latitude 40.123085, longitude -83.216302).

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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 proposed Project is located on two parcels, Parcel Numbers 1500270090010 and 1500270060000, which are both owned by the Company. No other property easements, options, or land use agreements are necessary to construct the Project.

B(9) Technical Features

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

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

The Celtic 345 kV Station is proposed to include the following equipment:

- 2 – 345/138kv transformers
- 4 – 345kv Circuit Breakers
- 8 - 138kv Circuit Breakers
- 1 – 16 x 60ft DICM

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.

Not applicable. No occupied residences or institutions are located within 100 feet of the Project.

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

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

Not applicable. No occupied residences or institutions are located within 100 feet of the Project.

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B(9)(c) Project Costs

The estimated capital cost of the project.

The capital cost estimate for the Project, which is comprised of applicable tangible and capital costs, is approximately \$67,650,000 using a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in the Ohio Power Company 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) 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 (March 2023) of the Project vicinity is provided as **Exhibit 2** in **Appendix A**. The Project is located in Jerome Township, Union County, Ohio. The existing and surrounding land use of the Project area consists of agricultural land use, with residential lots to the west and commercial lots to the east. Development occurring within this area is largely for industrial and commercial uses. No places of worship, schools, institutions, hospitals, cemeteries, landmarks, or recreational areas were identified within 1,000 feet of the proposed station.

B(10)(b) Agricultural Land Information

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

The Project area was previously used for agricultural crops but has been purchased for development by the Company. The surrounding area is characterized by agricultural, commercial, and residential uses. No properties registered as agricultural district land are in the Project area based on coordination with the Union County Auditor's Office on December 1, 2023.

B(10)(c) Archaeological and Cultural Resources

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

A Phase I Archaeological Investigation and a History Architecture Investigation was conducted in March 2023 and provided to the Ohio State Historic Preservation Office (SHPO) for consultation. These investigations did not result in the identification of any archaeological deposits or significant architectural resources within the Project's area of potential effect. There were no history/architectural resources identified as eligible or potentially eligible for inclusion on the National Register of Historic Places. The

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SHPO responded on April 24, 2023, and agreed that the Project as proposed will have no effect on historic properties. Therefore, no further coordination with the SHPO is necessary. The SHPO coordination letter 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 will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC00006. The Company will also coordinate storm water permitting needs with local government agencies as necessary. The Company will implement and maintain best management practices as outlined in the project-specific Stormwater Pollution Prevention Plan to minimize erosion and sediment runoff to protect surface water quality during storm events.

The Company's consultant conducted a stream and wetland delineation survey within the Project area and did not identify any wetlands, streams, or ponds. Project construction activities are not expected to result in the discharge of fill material in wetlands or waterbodies, therefore a permit with the U.S. Army Corps of Engineering and/or the Ohio Environmental Protection Agency (OEPA) is not anticipated for the Project.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), the Project is not located in a 100-year floodplain or floodway (FEMA Map Numbers 39159C0390D and 39159C0480D). Therefore, no floodplain impacts are anticipated. As such, the Company will not be required to obtain floodplain permits from Union County for construction occurring in this area.

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

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

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

Coordination letters were sent to U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources-Division of Wildlife (ODNR-DOW). The USFWS response was received on March 2, 2023, and ODNR-DOW's response was received on March 8, 2023. Copies of the agencies' correspondence letters are provided in **Appendix C**.

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According to the USFWS's response, the Project area lies within range of two federally listed species: the endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*). The USFWS indicated that the Project is in the vicinity of one or more confirmed records of Indiana bats and recommends avoiding tree removal whenever possible. If no caves or abandoned mines are present and trees greater than or equal to 3 inches dbh cannot be avoided, USFWS recommends removal only occur between October 1 and March 31. A desktop habitat assessment was conducted and no active or abandoned caves or mines were identified in the Project area. The Company anticipates the need to clear approximately 0.9 acres of trees and plans to do so between October 1 and March 31.

According to response from the ODNR-DOW, the Natural Heritage Database has no records of state or federally listed species within one mile of the Project. The Project is within the vicinity of records for the Indiana bat and that the entire state of Ohio is within the range of the northern long-eared bat, the little brown bat (*Myotis lucifugus*), and the tricolored bat (*Perimyotis subflavus*). If trees must be cut, ODNR-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 diameter at breast height (dbh) ≥ 20 inches. ODNR-DOW also recommends that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if there are potential hibernaculum(a) present within 0.25 miles of the Project area. The Company's consultant completed a desktop habitat assessment in accordance with the 2023 Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines. No active or abandoned mines, areas with karst geology, or areas with karst features were identified within 0.25-mile buffer of the Project area. In addition, no potential bat hibernacula were observed within the Project area during the field surveys. However, potentially suitable summer foraging and roosting habitat was observed within the Project area. The Company anticipates the need for tree clearing, and plans to conduct clearing between October 1 and March 31.

The ODNR also stated that the Project is within the range of seven protected mussel species: the federally endangered snuffbox (*Epioblasma triquetra*), federally endangered northern riffleshell (*Epioblasma torulosa rangiana*), federally endangered clubshell (*Pleurobema clava*), federally endangered rayed bean (*Villosa fabalis*), federally threatened rabbitsfoot (*Quadrula cylindrica cylindrica*), state endangered elephant-ear (*Elliptio crassidens crassidens*), and state threatened pondhorn (*Unio merus tetralasmus*). The ODNR-DOW does not anticipate any impacts to these species because no in-water work is proposed for the Project.

The Project is also within the range of the state endangered American bittern (*Botaurus lentiginosus*). This bird species nests in large wetlands with dense vegetation. ODNR commented that if habitat is present that construction should avoid this type of habitat during the species' nesting period of May 1 to July 31. If this type of habitat will not be impacted, ODNR-DOW states that the Project is not likely to impact this species. As a result of the field review no suitable habitat was observed; therefore, no impacts to the American bittern are anticipated.

The Project is also within the range of the state endangered king rail (*Rallus elegans*), which nests in marsh vegetation. ODNR commented that if habitat is present that construction should avoid this type of habitat during the species' nesting period of May 1 to July 31. If wetland habitat will not be impacted, ODNR-DOW states that the Project is not likely to impact this species. As a result of the field review no suitable habitat was observed; therefore, no impacts to the king rail are anticipated.

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The Project is within range of the state threatened least bittern (*Ixobrychus exilis*), which utilizes dense emergent wetlands with semiaquatic vegetation interspersed with woody vegetation and open water. ODNR commented that if habitat is present that construction should avoid this habitat during the least bittern nesting period, May 1 through July 31. ODNR-DOW states that if this type of habitat will not be impacted, the Project is not likely to impact this species. As a result of the field review no suitable habitat was observed; therefore, no impacts to the least bittern are anticipated.

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.

Coordination letters were submitted to the USFWS and ODNR requesting a review the Project and identification of areas of ecological concern. The USFWS's response email was received on March 2, 2023, (**Appendix C**) and did not indicate any federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project. The ODNR's response received on March 8, 2023 (**Appendix C**) did not indicate any known unique ecological sites, geologic features, scenic rivers, state wildlife areas, state natural preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the Project area.

The Company's consultant completed a wetland and waterway delineation for the Project in February and March 2023. No wetlands, streams, or open waters were delineated within the Project area. The Company's consultant prepared an Ecological Survey Report for the Project area and the surrounding area (**Appendix D**).

Based on the FEMA FIRM Map Numbers 39159C0390D and 39159C0480D (effective 2008-12-16), the Project is not within the boundaries of any 100-year floodplains or floodways.

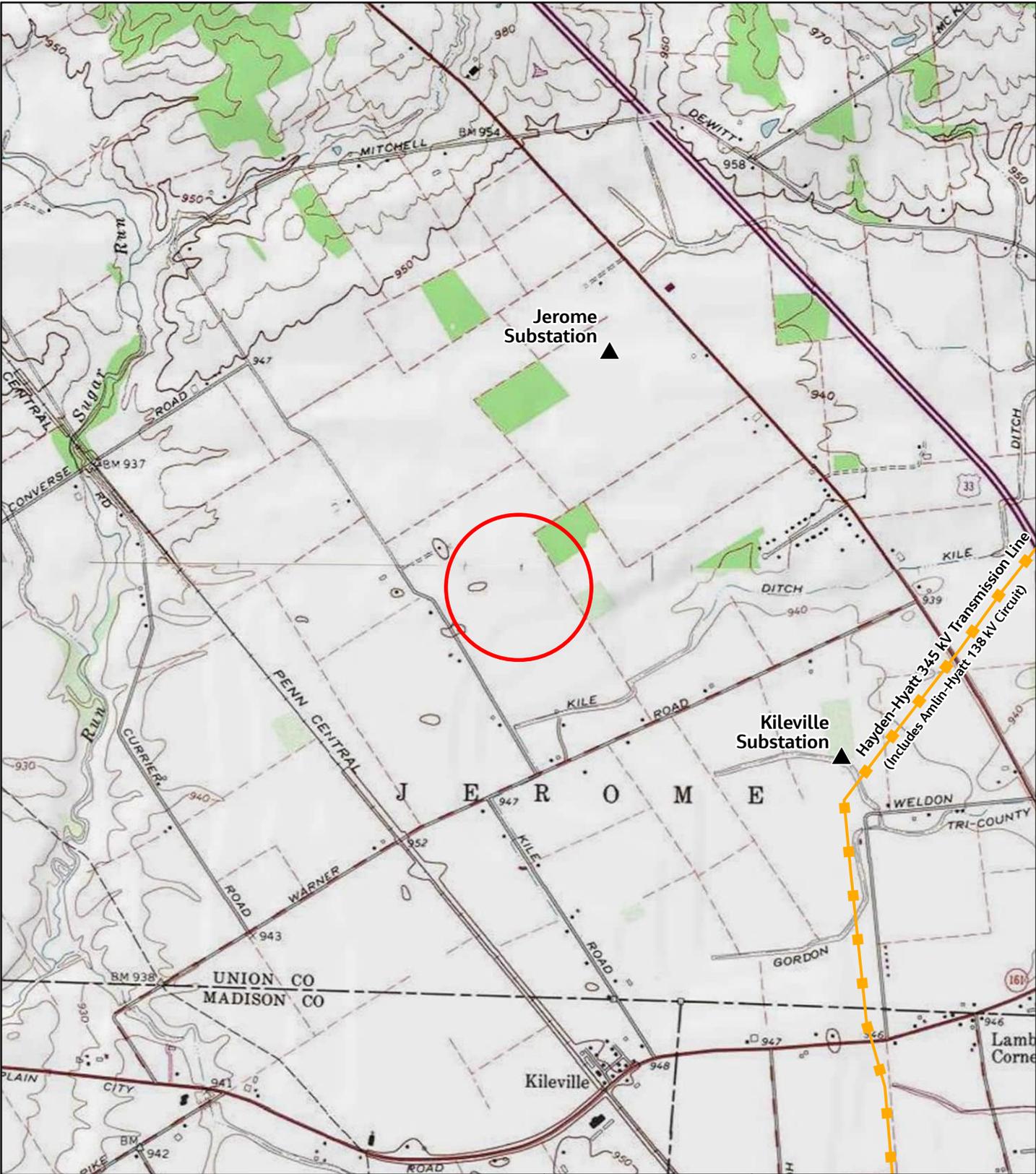
B(10)(g) Unusual Conditions

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.

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Appendix A Project Maps



Legend

-  Project Area
-  Existing Substation
-  Existing Transmission Line

Base Map Source:
USGS Topographic Quads:
Hilliard and Shawnee Hills

Coordinate System
State Plane Ohio North
FIPS 3401 (US Feet)
Datum: NAD 1983
Scale: 1:24,000



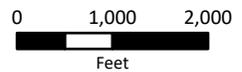
11/28/2023



**Exhibit 1
Topographic Overview**



Celtic 345 kV Station Project
Union County, OH





Legend

-  Proposed Substation
-  NHD Stream
-  NWI Wetlands
-  Roadways
-  Parcel Boundaries

Base Map Source:
ESRI World Imagery
(2023)

Coordinate System
State Plane Ohio North
FIPS 3401 (US Feet)
Datum: NAD 1983
Scale: 1:6,000



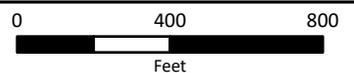
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**Exhibit 2
Aerial Overview**



Celtic 345 kV Station Project
Union County, OH



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Appendix B PJM Solution Submittal and 2023 Long Term Forecast Report



Need Number: AEP-2023-OH041

Process Stage: Solutions Meeting 5/9/2023

Previously Presented: Needs Meeting 2/17/2023

Project Driver: Customer Service

Specific Assumption Reference:

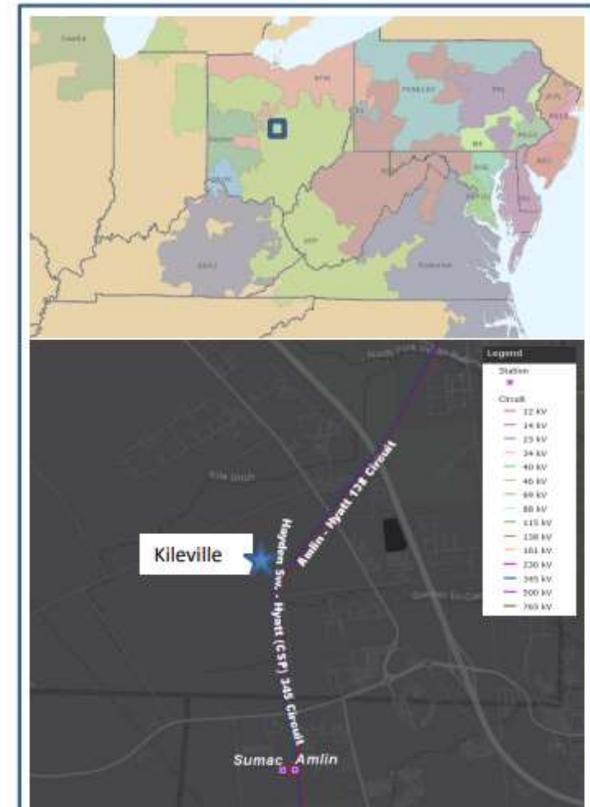
AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 12)

Problem Statement:

Customer Service:

- An existing customer planned to be served out of AEP's proposed Kileville Station in Union Count, OH, has requested service for an incremental bulk load addition of 96 MW. This will bring the total & ultimate load for the customers site to ~~256~~ 258 MW.
- Customer requested in-service date of 4/1/2024.

AEP Transmission Zone M-3 Process Kileville





AEP Transmission Zone M-3 Process Dublin & Hilliard, OH

Need Number: AEP-2023-OH041

Process Stage: Solutions Meeting 5/9/2023

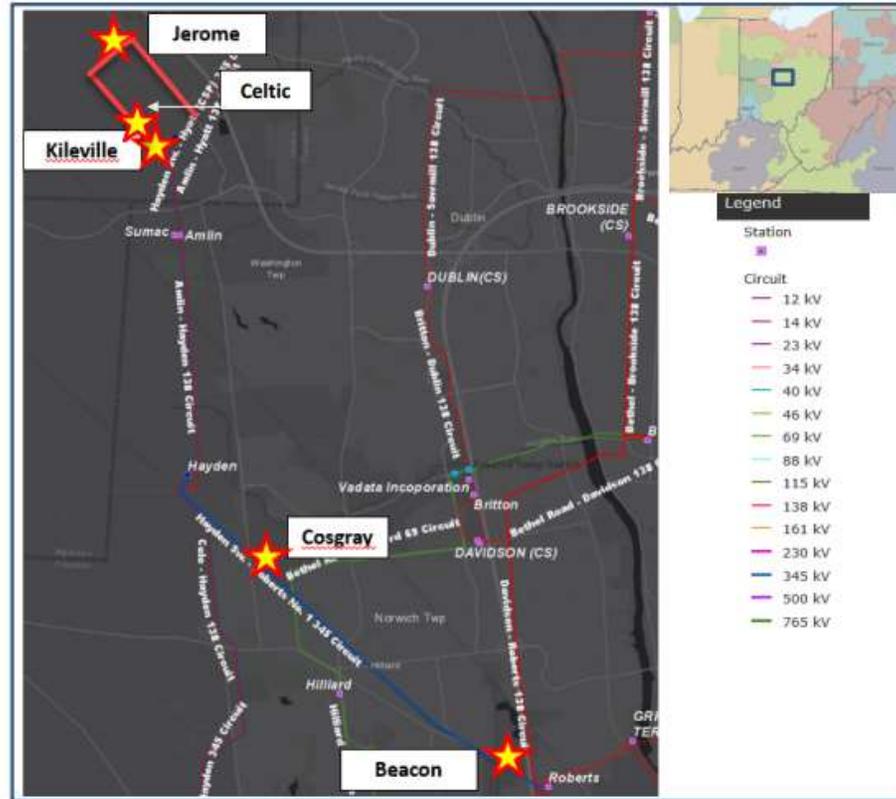
Proposed Solution:

The following scope of work is all direct connect facilities to physically connect demand to the grid.

- **Celtic 345/138 kV:** Originally, Kileville is the station that was envisioned (s2855) to serve 461 MW of demand with room for 345 kV expansion based on LOAs with the customer. However, land in the area of the proposed Kileville station was not available for expansion to install 345/138 kV transformation. Therefore, a new station site called **Celtic** is being proposed to serve as the 345 kV source for the 461 MW of load to be served in this area. Cut into the Hayden – Hyatt 345 kV circuit, reroute ~0.8 miles of the circuit and extend ~1.1 miles of new double circuit line, utilizing 2-bundled ACSR Pheasant 1272 (54/19) conductor, SE rating 2413 MVA, to the greenfield Celtic 345/138 kV station with (4) 345 kV, 63 kA, 5000 A breakers laid out as ring bus configuration on high side. Install two 675MVA-345/138 kV power transformers. Install (6) 138kV, 63 kA, 4000 A breakers & (2) 69.1 MVAR 138 kV Cap bank on low side configured as ring bus with provisions for future breaker and half configuration. The proposed Kileville – Jerome 138 kV circuit will be brought in and out of the station. Cost: **\$60 M**
- **Kileville 138 kV:** Expand Kileville station (originally proposed under s2855) with (4) additional 63 kA, 4000A circuit breakers in breaker and half bus configuration. Construct (2) 138 kV tie lines to the customers dead end structures ~0.05 miles utilizing ACSR Dove 556.5 (26/7) conductor SE 284 MVA. Customers will be directly connected at this station. Cost: **\$4.1 M**



AEP Transmission Zone M-3 Process Dublin & Hilliard, OH



PUCO Form FE-T10 Supplement
AEP Ohio
Summary of Proposed Substations

Wagenhals (TP2021252)	138/69/23 kV	T	2025	Northeast Canton - Wagenhals 138 kV	P	~10
Wagenhals (TP2021252)	138/69/23 kV	T	2025	June Road - Wagenhals 138 kV	P	~10
Wagenhals (TP2021252)	138/69/23 kV	T	2025	Sunnyside - Wagenhals 69 kV	P	~10
Wagenhals (TP2021252)	138/69/23 kV	T	2025	Minerva - Wagenhals 69 kV	P	~10
Wagenhals (TP2021252)	138/69/23 kV	T	2025	Wagenhals - West Louisville 69 kV	P	~10
Wagenhals (TP2021252)	138/69/23 kV	T	2025	Stanley Court - Wagenhals 69 kV	P	~10
Wagenhals (TP2021252)	138/69/23 kV	T	2025	Republic Georgetown - Wagenhals #1 23kV	P	~10
Wagenhals (TP2021252)	138/69/23 kV	T	2025	Republic Georgetown - Wagenhals #2 23kV	P	~10
Badger (TP2021766)	138	T	2024	Badger - Corridor 138 kV	P	~10
Badger (TP2021766)	138	T	2024	Badger - Jug 138 kV	P	~10
Badger (TP2021766)	138	T	2024	Badger - Gondor #1 138 kV	P	~10
Badger (TP2021766)	138	T	2024	Badger - Gondor #2 138 kV	P	~10
Badger (TP2021766)	138	T	2024	Badger - Gondor #3 138 kV	P	~10
Badger (TP2021766)	138	T	2024	Badger - Gondor #4 138 kV	P	~10
Jerome (TP2021576)	138	T	2024	Jerome - Kileville 138 kV	P	~7
Jerome (TP2021576)	138	T	2024	Jerome - Celtic 138 kV	P	~7
Jerome (TP2021576)	138	T	2024	Hyatt - Jerome 138 kV	P	~7
Jerome (TP2021576)	138	T	2024	Jerome - Rohan #1 138 kV	P	~7
Jerome (TP2021576)	138	T	2024	Jerome - Rohan #2 138 kV	P	~7
Jerome (TP2021576)	138	T	2024	Jerome - Rohan #3 138 kV	P	~7
Jerome (TP2021576)	138	T	2024	Jerome - Rohan #4 138 kV	P	~7
Celtic (TP2021576)	138 / 345	T	2024	Celtic - Hayden 345 kV	P	~40
Celtic (TP2021576)	138 / 345	T	2024	Celtic - Hyatt 345 kV	P	~40
Celtic (TP2021576)	138 / 345	T	2024	Celtic -Jerome 138 kV	P	~40
Celtic (TP2021576)	138 / 345	T	2024	Celtic - Kileville 138 kV	P	~40
Adkins (TP2017239)	345 kV	T	2023	Adkins - Beatty 345 kV	E	~4 Site Expansion
Adkins (TP2017239)	345 kV	T	2023	Adkins - Lightstone 345 kV	E	~4 Site Expansion
Adkins (TP2017239)	345 kV	T	2023	Adkins - Atlanta 345 kV	E	~4 Site Expansion
North Intertie (TP2021048)	138 kV	T	2023	North Intertie - South Canton 138 kV	E	~0.15 Site Expansion
North Intertie (TP2021048)	138 kV	T	2023	North Intertie - W New Philadelphia 138 kV	E	~0.15 Site Expansion

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Appendix C Agency Correspondence



In reply, refer to
2023-UNI-57514

April 24, 2023

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

RE: Celtic Station Project, Jerome Township, Union County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received March 27, 2023 regarding the proposed Celtic Station Project, Jerome Township, Union 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 23.5 ha (58.1 ac) Celtic Station Project in Jerome Township, Union County, Ohio* by Ryan J. Weller and Scott McIntosh (Weller & Associates, Inc., 2023).

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavation was completed as part of the investigations. No previously identified archaeological site is located within the project area. One (1) new archaeological site was identified during survey, Ohio Archaeological Inventory (OAI) #33UN1109. The site is recommended not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no additional archaeological survey is necessary.

A literature review and field survey were completed as part of the investigations. A total of five (5) resources fifty years of age or older were identified within the Area of Potential Effects (APE). Weller recommends none of these properties are eligible for listing in the NRHP. Our office agrees with Weller's recommendations of eligibility.

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 khorricks@ohiohistory.org or Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Krista Horrocks".

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1097537



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

March 8, 2023

Michelle Kearns
Stantec Consulting Services, Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204

Re: 23-0177; AEP Celtic Station Project

Project: The proposed project involves the construction of a new 345 kV substation.

Location: The proposed project is located in Jerome Township, Union 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: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. 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.

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

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

The project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, 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 bat species 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. The DOW recommends tree 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 ≥ 20 if possible.

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 & NORTHERN LONG-EARED 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 Eileen Wyza 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

snuffbox (*Epioblasma triquetra*)

Northern riffleshell (*Epioblasma torulosa rangiana*)

clubshell (*Pleurobema clava*)

rayed bean (*Villosa fabalis*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)

State Threatened

pondhorn (*Unio merus tetralasmus*)

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 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 king rail (*Rallus elegans*), a state endangered bird. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. 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 no wetland habitat will be impacted, the 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.

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.

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

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994



March 2, 2023

Project Code: 2023-0043051

Dear Ms. Kearns:

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: The proposed project is in the vicinity of one or more confirmed records of Indiana bats. 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 <https://ecos.fws.gov/ecp/species/9045>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are known or assumed present. Please note that, because Indiana bat presence has already been

confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.

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 it is 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
Eileen Wyza, ODNR-DOW

LETTER OF NOTIFICATION FOR THE CELTIC 345 KV STATION PROJECT

Appendix D Ecological Survey Report



**Celtic Station 345 kV Install
Project
Union County, Ohio**

Ecological Survey Report

Prepared for:

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

Prepared by:

Stantec Consulting Services Inc.
1500 Lake Shore Drive, Suite 100
Columbus, OH 43204

April 28, 2023

Sign-off Sheet

This document entitled Celtic Station 345 kV Install Project Ecological Survey Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of AEP Ohio Transmission Company, Inc. (the "Client"). 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 *Zoe True*

(signature)

Zoe True

Reviewed by *Charlie Allen*

(signature)

Charlie Allen

Reviewed by *Tyler Gillette*

(signature)

Tyler Gillette

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CELTIC STATION 345 KV INSTALL PROJECT ECOLOGICAL SURVEY REPORT

Introduction
April 28, 2023

1.0 INTRODUCTION

AEP Ohio Transmission Company, Inc. (AEP) is proposing to construct a new 345 Kilovolt (k)V station in Union County, Ohio that is part of the greater Jerome and Loop Connection Project. The Celtic Station 345 kV Install Project (the Project) is located in Dublin, Jerome Township, Union County, Ohio. (Figure 1, Appendix A). The Project will include the construction of a new 345 kV station, a skid station and associated lines and stormwater/drainage. An approximate 58-acre study area consisting of two parcels (the Project area) was surveyed for wetlands, waterbodies, open water features, upland drainage features, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on February 8 - 9 and March 6, 2023 (Figure 2, Appendix A). 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. These features are shown on the Figure 2 maps in Appendix A as "approximate" wetlands, streams (waterways), open waters, and upland drainage features.

Methods
April 28, 2023

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 maps, 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 Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0; USACE 2010). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001). Wetland boundaries were identified and surveyed using a handheld sub-meter accuracy global positioning system (GPS) unit and mapped with geographic information systems (GIS) software.

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) and determined as potential Waters of the U.S. (WOTUS) in reference to the current guidance per interpretation of WOTUS that is consistent with the pre-2015 regulatory regime (40 CFR 230.3(s)) (USEPA 2022). 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 2020) and/or *Qualitative Habitat Evaluation Index (QHEI)* (OEPA 2006). The centerline and/or the OHWM locations of each waterway were identified and surveyed using a handheld sub-meter accuracy GPS unit and mapped with GIS software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

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 D – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by these species.

Results
 April 28, 2023

3.0 RESULTS

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys within the Project area on February 8 – 9 and March 6, 2023, for potentially suitable habitats for threatened and endangered species. Figure 3 (Appendix A) shows the land cover, vegetation communities, and any identified rare, threatened, or endangered species habitats observed within the Project area during the habitat assessment surveys. Representative photographs of the vegetation communities/habitats identified within the Project area are included in Appendix C-2 of this report (photo locations are shown on Figure 3 in Appendix A). Information regarding the vegetation communities/habitats identified within the Project area are provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the Celtic Station 345 kV Install Project Area, Union 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
Early Successional Forest	Intermediate disturbance (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa, and structures). Dominant species included red maple (<i>Acer rubrum</i>), common hackberry (<i>Celtis occidentalis</i>), nodding foxtail (<i>Setaria faberi</i>), rubus (<i>Rubus idaeus</i>), ground ivy (<i>Glechoma hederacea</i>), Canada goldenrod (<i>Solidago canadensis</i>), shagbark hickory (<i>Carya ovata</i>), pin oak (<i>Quercus palustris</i>), green ash (<i>Fraxinus pennsylvanica</i>), and black walnut (<i>Juglans nigra</i>).	No	2.78
Agricultural Field	Extreme Disturbance/Ruderal Community (dominated by planted non-native row crop species, opportunistic invaders, and/or native highly tolerant taxa). Dominate species include ground ivy, common dandelion (<i>Taraxacum officinale</i>), corn (<i>Zea mays</i>), and soybean (<i>Glycine max</i>).	No	53.85
Maintained Lawn	Moderate to Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa, and structures). Dominant species included red maple, blue spruce (<i>Picea pungens</i>), white pine (<i>Pinus strobus</i>), and Kentucky bluegrass (<i>Poa pratensis</i>).	No	1.48

CELTIC STATION 345 KV INSTALL PROJECT ECOLOGICAL SURVEY REPORT

Results

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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			58.11

3.2 WETLANDS

Desktop analysis determined that the Project Area contains no NWI features. No wetlands were identified within the Project area during the field surveys conducted on February 8 – 9 and March 6, 2023. Two sample points (SP01, SP02) were collected to document the existing conditions within the Project area. The wetland determination data forms are included in Appendix B, representative photographs of the sample points are included in Appendix C, and the locations of the sample points are depicted on Figure 2, Appendix A.

3.3 STREAMS

No streams were delineated within the Project area during the field surveys completed on February 8 – 9 and March 6, 2023. The Project area also does not contain any mapped National Hydrography Data (NHD) waterbodies.

3.4 OPEN WATERS

No open waters (i.e., ponds, lakes) were delineated within the Project area during the field surveys completed on February 8 – 9 and March 6, 2023.

Results
April 28, 2023

3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 2. Summary of Potential Federal and Ohio State-Listed Species within the Celtic Station 345 kV Install Project, Union County, Ohio

Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
Indiana bat/ <i>Myotis sodalis</i>	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 2022). 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 potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost and foraging habitat (early successional forest) was observed within the Project area.	<p>ODNR – This Project lies within the vicinity of records for the Indiana bat. Therefore, summer tree clearing is not recommended, and additional summer surveys would not constitute a presence/absence survey. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh \geq 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area.</p> <p>USFWS – The Project lies within the vicinity of one or more confirmed records for the Indiana bat. If the proposed Project area contains trees \geq3 inches dbh, the USFWS recommends that trees be saved wherever possible. If no caves or abandoned mines are present and trees \geq3 inches dbh cannot be avoided, USFWS recommends that removal of any trees \geq3 inches dbh only occur between October 1 and March 31. Seasonal tree clearing is recommended to avoid adverse effects to the Indiana bat.</p>	<p>A desktop habitat assessment in accordance with the 2022 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2022) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022a) and locations of known or suspect karst geology (ODNR 2022b). The desktop assessment did not identify any karst regions or abandoned or active mines within 0.25 miles of the Project area (Figure 4; Appendix A). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations.</p> <p>Avoidance Dates: April 1 through September 30</p>
Northern Long-eared Bat/ <i>Myotis septentrionalis</i>	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 2022). 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 potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost and foraging habitat (early successional forest) was observed within the Project area.	<p>ODNR - This Project lies within the range of the northern long-eared bat. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh \geq 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area.</p> <p>USFWS – If the proposed Project area contains trees \geq3 inches dbh, the USFWS recommends that trees be saved wherever possible. If no caves or abandoned mines are present and trees \geq3 inches dbh cannot be avoided, USFWS recommends that removal of any trees \geq3 inches dbh only occur between October 1 and March 31. Seasonal tree clearing is recommended to avoid adverse effects to the northern long-eared bat. Incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule.</p>	<p>A desktop habitat assessment in accordance with the 2022 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2022) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022a) and locations of known or suspect karst geology (ODNR 2022b). The desktop assessment did not identify any karst regions or abandoned or active mines within 0.25 miles of the Project area (Figure 4; Appendix A). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations.</p> <p>Avoidance Dates: April 1 through September 30</p>

CELTIC STATION 345 KV INSTALL PROJECT ECOLOGICAL SURVEY REPORT

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April 28, 2023

Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
Little Brown Bat/ <i>Myotis lucifugus</i>	E	N/A	This bat uses a wide range of habitats and man-made structures for roosting, including buildings and attics. Less frequently, they use hollows of trees. Winter hibernation sites typically consist of caves, tunnels, abandoned mines. Foraging habitat for this species generally occurs over water, along the edges of lakes and stream or in woodlands near waterbodies (NatureServe 2022).	No potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost habitat (early successional forest) was observed within the Project area.	ODNR - This Project lies within the range of the little brown bat. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh \geq 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – No comment	A desktop habitat assessment in accordance with the 2022 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2022) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022a) and locations of known or suspect karst geology (ODNR 2022b). The desktop assessment did not identify any karst regions or abandoned or active mines within 0.25 miles of the Project area (Figure 4; Appendix A). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations. Avoidance Dates: April 1 through September 30.
Tricolored Bat/ <i>Perimyotis subflavus</i>	E	PE	This species is found throughout Ohio and is associated with forested landscapes, foraging near trees and along waterways. Maternity and summer roosts usually occur in dead or live tree foliage, or in the south, in clumps of Spanish moss. Maternity colonies may also use tree cavities or man-made structures, such as buildings or bridges. Caves, mines, and rock crevices may be used as night roosts between foraging (NatureServe 2022).	No potentially suitable winter hibernacula were observed within the Project area. However, suitable summer roost habitat (early successional forest) was observed within the Project area.	ODNR - This Project lies within the range of the tricolored bat. The ODNR DOW recommends tree clearing only occur between October 1 and March 31 and conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh \geq 20 inches. In addition, the DOW recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if there are potential hibernacula present within the Project area. USFWS – No comment.	A desktop habitat assessment in accordance with the 2022 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2022) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022a) and locations of known or suspect karst geology (ODNR 2022b). The desktop assessment did not identify any karst regions or abandoned or active mines within 0.25 miles of the Project area (Figure 4; Appendix A). Potentially suitable summer foraging and roosting habitat was observed in the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable roosting habitat and will proceed in accordance with agency recommendations. Avoidance Dates: April 1 through September 30
Snuffbox / <i>Epioblasma triquetra</i>	E	E	Occurs in medium-sized streams to large rivers generally on mud, rocky, gravel, or sand substrates in flowing water. Often deeply buried in substrate and overlooked by collectors (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. 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 comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.

CELTIC STATION 345 KV INSTALL PROJECT ECOLOGICAL SURVEY REPORT

Results
April 28, 2023

Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
Clubshell / <i>Pleurobema clava</i>	E	E	This is a species of small to medium-sized rivers and streams; generally found in clean, coarse sand and gravel in runs, often just downstream of a riffle, and cannot tolerate mud or slackwater conditions (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. 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 comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Northern Riffleshell / <i>Epioblasma torulosa rangiana</i>	E	E	Preferred habitat is swiftly moving water. The high oxygen concentrations in swift streams may be necessary for survival. It is a species of riffle areas of smaller streams, and as such has fared better than larger river species (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. 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 comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Rayed Bean / <i>Villosa fabalis</i>	E	E	It is generally known from smaller headwater creeks, but records exist in larger rivers. They are usually found in or near shoal or riffle areas, and in the shallow wave-washed areas of glacial lakes, including Lake Erie (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. 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 comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Rabbitsfoot / <i>Quadrula cylindrica cylindrica</i>	E	T	The typical habitat 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 (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. 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 comment.	No suitable habitat was observed within the Project area. In addition, due to the location and habitat within the Project area, this Project is not likely to impact this species.
Elephant-ear / <i>Elliptio crassidens</i>	E	N/A	An inhabitant of channels in large creeks to rivers with moderate to swift currents, primarily on sand and limestone or rock substrates (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. 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 comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
Pondhorn / <i>Uniomerus tetralasmus</i>	T	N/A	Typically inhabits quite or slow-moving, shallow waters of shoughs, 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 (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. 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 comment.	No suitable habitat was observed within the Project area. In addition, no in-water work is proposed in a perennial stream. Therefore, this Project is not likely to impact this species.
American Bittern / <i>Botaurus lentiginosus</i>	E	N/A	Occurs primarily in large freshwater and (less often) brackish marshes, including lake and pond edges where cattails, sedges, or bulrushes are plentiful and marshes where there are patches of open water and aquatic bed vegetation (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. If large undisturbed wetlands with scattered small pools amongst dense vegetation, bogs, large wet meadows, or shrubby swamps 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 comment.	No suitable habitat was observed within the Project area. Therefore, this Project is not likely to impact this species and avoidance dates are not applicable.
King Rail / <i>Rallus elegans</i>	E	N/A	Occurs in freshwater marshes, upland – wetland marsh edges, rice fields or similar flooded farmlands, shrub swamps (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. If areas with marsh vegetation will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If no	No suitable habitat was observed within the Project area. Therefore, this Project is not likely to impact this species and avoidance dates are not applicable.

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Common/Scientific Names	*State Listed Status	*Federally Listed Status	Typical Habitat	Habitat Observed	Agency Comment** (Appendix D)	Potential Impacts and Avoidance Dates
					wetland habitat will be impacted, the Project is not likely to impact this species. USFWS – No comment.	
Least Bittern / <i>Ixobrychus exilis</i>	T	N/A	Occurs in tall emergent vegetation in marshes, primarily freshwater, less commonly in coastal brackish marshes and mangrove swamps. Prefers marshes with scattered bushes or other woody growth (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of this species. If emergent wetland 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. USFWS – No comment.	No suitable habitat was observed within the Project area. Therefore, this Project is not likely to impact this species and avoidance dates are not applicable.

*Status key: E=Endangered; T=Threatened; PE = Proposed Endangered; N/A = Not Applicable

**The information is based on the literature review response information from ODNR and USFWS and is study area/project specific.

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 February 8 - 9 and March 6, 2023. During the field surveys, no wetlands, streams, or open water features were observed 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.

A technical assistance request letter was submitted to the USFWS on February 13, 2023, and a response letter was received on March 2, 2023. According to the USFWS response letter, the Project lies within the vicinity of the one or more confirmed records of the Indiana bat. In addition, the entire State of Ohio lies within the range of the northern long-eared bat. Therefore, USFWS recommends that trees ≥ 3 inches diameter at breast height (dbh) be saved wherever possible and any tree removal that is unavoidable should only occur between October 1 and March 31 to avoid adverse effects to these species.

The Project area contains potentially suitable foraging and roosting habitat for the Indiana bat and northern long-eared bat. No potentially suitable hibernacula were observed within the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable habitat and will proceed in accordance with agency recommendations.

The USFWS also stated 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 (Appendix D).

An ODNR Ohio Natural Heritage Program data request and environmental review request letter was sent to the ODNR Office of Real Estate on February 13, 2023. The ODNR Office of Real Estate response letter, dated March 8, 2023, stated that the Project is within the vicinity of records for the federal and state endangered Indiana bat and the entire state of Ohio is within the range of the federally threatened and state endangered northern long-eared bat, and state endangered little brown bat and tricolored bat. If trees are present within the Project area, and trees must be cut, the Division of Wildlife (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 ≥ 20 inches if possible. The DOW also recommends a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) are present within 0.25 mile of the Project area. Stantec completed a desktop habitat assessment in accordance with the 2022 Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines (USFWS 2022) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022a) and locations of known or suspect karst geology (ODNR 2022b).

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Conclusions and Recommendations

April 28, 2023

The desktop assessment did not identify any karst regions or abandoned or active mines within 0.25 miles of the Project area (Figure 4; Appendix A). In addition, no potentially suitable winter hibernacula were observed during the field surveys. However, potentially suitable foraging and roosting habitat was observed within the Project area. AEP will determine if any tree clearing is necessary in areas containing suitable habitat and will proceed in accordance with agency recommendations.

According to the ODNR response letter, the Project is within the range of the federally endangered snuffbox, clubshell, northern riffleshell, and rayed bean, the federally threatened rabbitsfoot, the state endangered elephant-ear and the state threatened pondhorn freshwater mussels. However, the DOW states that due to the location, and that no in-water work is proposed in a perennial stream of sufficient size, the Project is not likely to impact these species. In addition, no in-water work in any perennial stream is proposed by AEP, therefore, impacts to freshwater mussel species are not anticipated.

The ODNR response letter stated, the Project is within the range of the American bittern, a state listed endangered bird. ODNR recommends that if large undisturbed wetlands with scattered small pools amongst dense vegetation will be impacted by the Project, construction should be avoided in this habitat during this species' nesting period of May 1 through July 31. However, if this type of habitat will not be impacted, the Project is not likely to impact this species. No suitable habitat was observed within the Project area; therefore, this Project is not likely to impact this species.

The ODNR response letter stated, the Project is within the range of the king rail, a state listed endangered bird. ODNR recommends that if marsh grass habitat will be impacted by the Project, construction should be avoided in this habitat during this species' nesting period of May 1 through July 31. However, if this type of habitat will not be impacted, the Project is not likely to impact this species. No suitable habitat was observed within the Project area and, therefore, this Project is not likely to impact this species.

The ODNR response letter stated, the Project is within the range of the least bittern, a state listed threatened bird. ODNR recommends that if densely vegetated emergent wetlands will be impacted, construction should be avoided in this habitat during this species' nesting period of May 1 through July 31. However, if this type of habitat will not be impacted, this Project is not likely to impact this species. No suitable habitat was observed within the Project area, and, therefore, this Project is not likely to impact this species.

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References
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5.0 REFERENCES

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Figures
April 28, 2023

APPENDIX A FIGURES

A.1 PROJECT LOCATION MAP

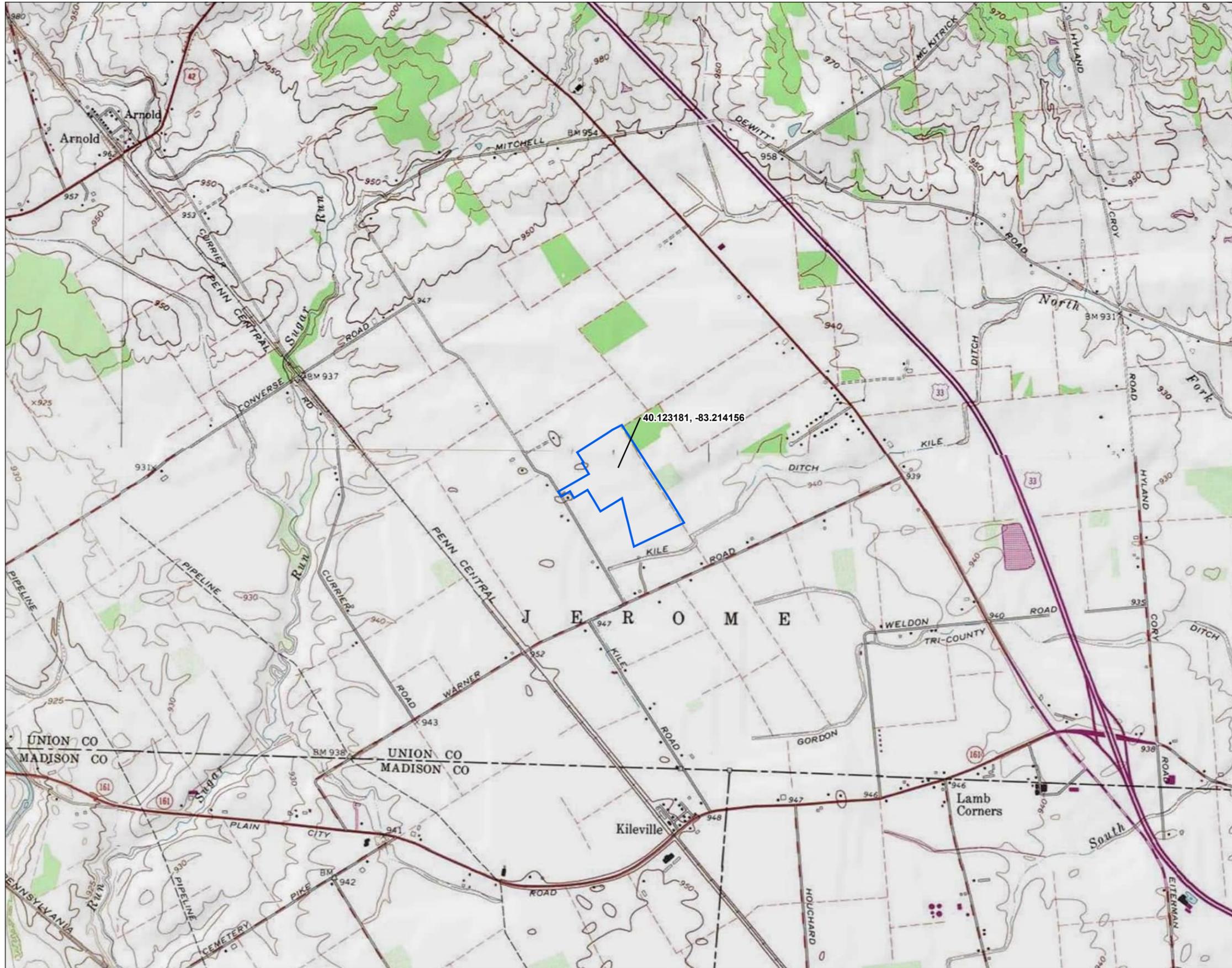


Figure No.

1

Title

Project Location Map

Client/Project
 AEP Ohio Transmission Company, Inc.
 Celtic Station 345kV Install

193708936

Project Location
 Union County, Ohio

Prepared by RA on 2023-02-06
 TR by CA on 2023-03-17
 IR by TG on 2023-03-20



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 North FIPS 3401 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS
 3. Background: USGS 7.5' Topographic Quadrangles - Hilliard, OH (1974), Shawnee Hills, OH (1975)



Figures
April 28, 2023

A.2 WETLAND AND WATERBODY DELINEATION MAP

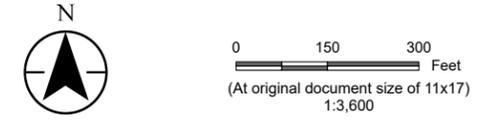
V:\1937\Active\193708932-193708936_Jerome_Loop\03_data\gis_cad\gis\mxd\ecol\193708933_Cellichinstall_Eco.aprx Revised: 2023-03-21 By: carmer



Figure No. **2**
Title **Wetland and Waterbody Delineation Map**

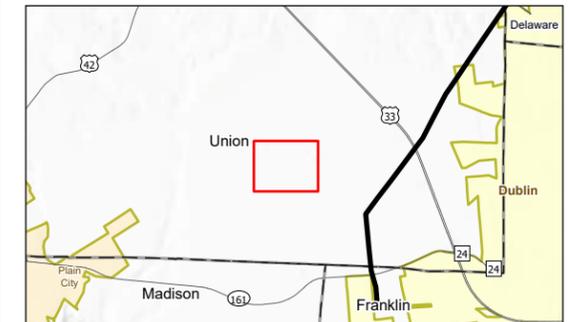
Client/Project 193708933
AEP Ohio Transmission Company, Inc.
Celtic Station 345kV Install

Project Location Union County, Ohio Prepared by RA on 2023-02-06
TR by CA on 2023-03-17
IR by TG on 2023-03-20



- Legend**
- Project Area
 - Photo Location
 - Culvert
 - Storm Drain
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - 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 North FIPS 3401 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2021 NAIP



Figures
April 28, 2023

A.3 HABITAT ASSESSMENT MAP

V:\1937\Active\193708932-193708936_Jerome_Loop\03_data\gis_cad\gis\mxd\eco\193708933_Cellicn\install_Eco.aprx Revised: 2023-03-21 By: carmer

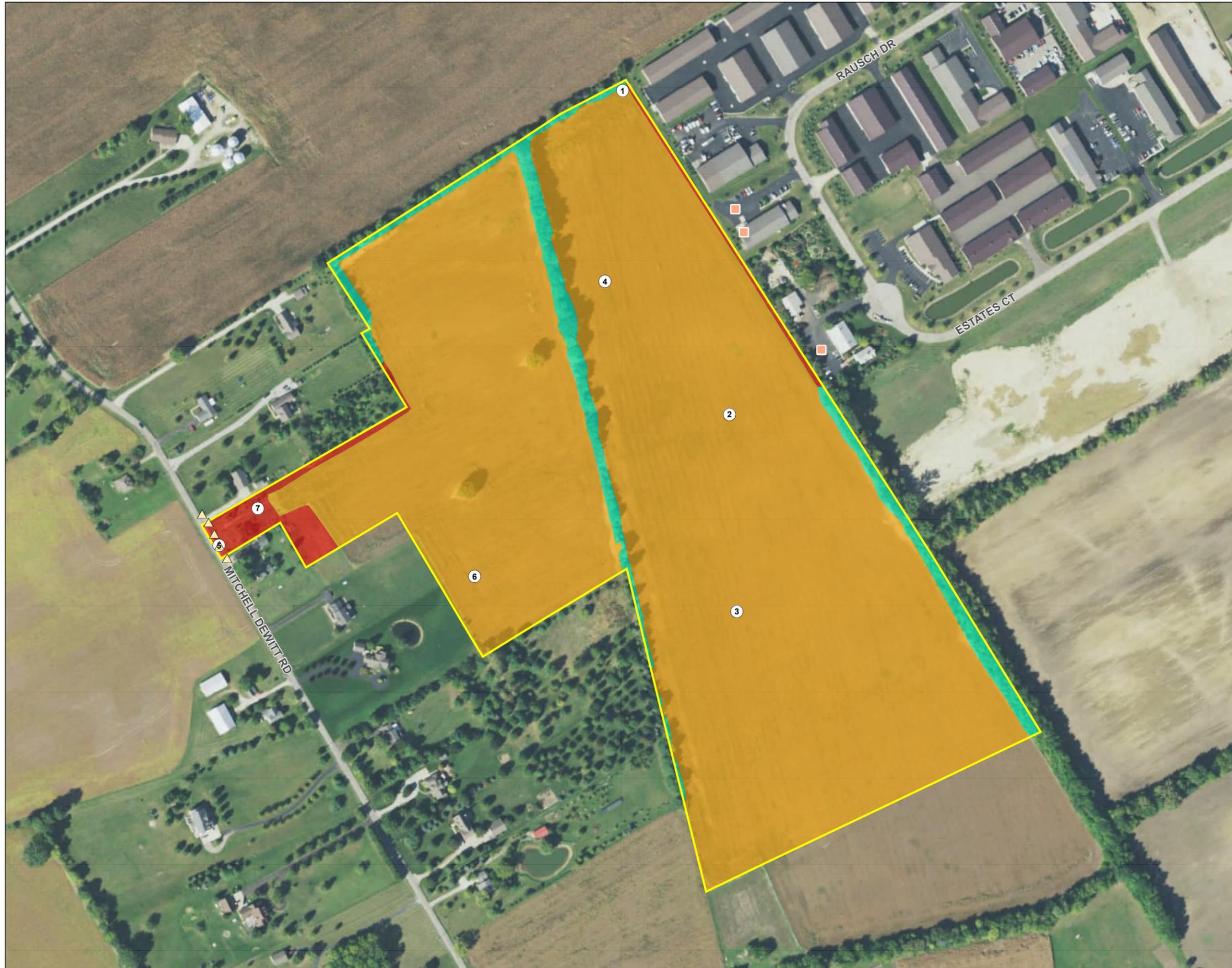


Figure No.

3

Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
Celtic Station 345kV Install

193708933

Project Location
Union County, Ohio

Prepared by RA on 2023-02-13
TR by CA on 2023-03-17
IR by TG on 2023-03-20



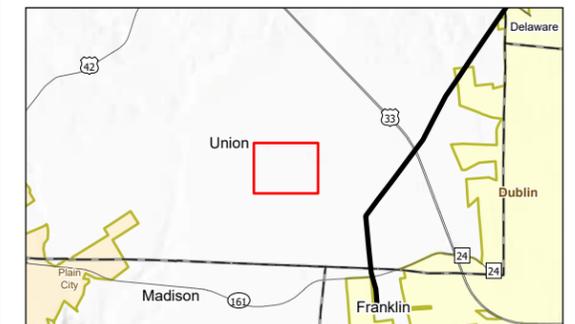
0 150 300
Feet
(At original document size of 11x17)
1:3,600

Legend

- Project Area
- Photo Location
- Culvert
- Storm Drain

Habitat Area

- Agricultural Field
- Early Successional Forest
- Maintained Lawn



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2021 NAIP



Figures
April 28, 2023

A.4 HIBERNACULA DESKTOP STUDY MAP

V:\1937\Active\193708932-193708936_Jerome_Loop\03_data\analysis_cad\gis\mxd\eco\193708933_CelticInstall_Eco.aprx Revised: 2023-03-21 By: carmer

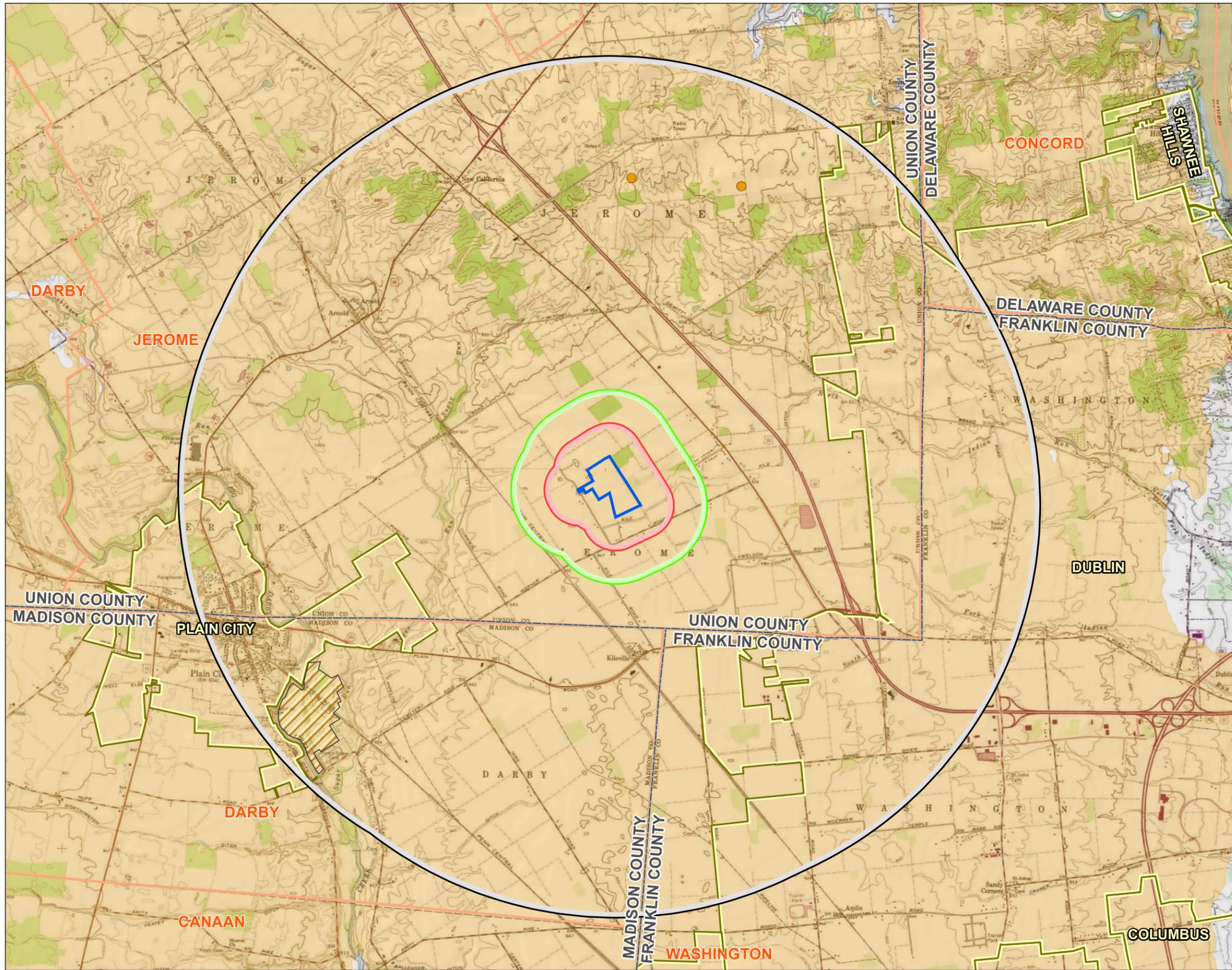
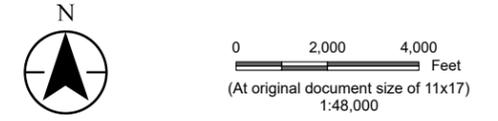


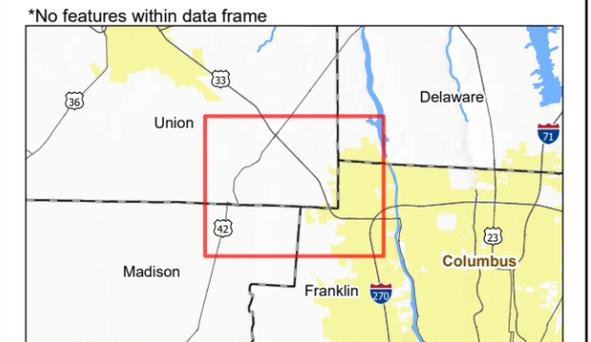
Figure No. 4
Title Bat Hibernacula Desktop Study Map

Client/Project AEP Ohio Transmission Company, Inc. 193708933
Celtic Station 345kV Install

Project Location Union County, Ohio Prepared by RA on 2023-02-13
TR by CA on 2023-03-17
IR by TG on 2023-03-20



- 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 North FIPS 3401 Feet
2. Data Sources: Stantec, AEP, USGS, ODN, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Hilliard, OH (1974), Shawnee Hills, OH (1975)



Field Collected Data Forms
April 28, 2023

APPENDIX B **FIELD COLLECTED DATA FORMS**

B.1 **WETLAND DETERMINATION FORMS**

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Celtic Station 345kV Install City/County: Union Sampling Date: 02/09/2023
 Applicant/Owner: AEP Transmission Company Inc. State: Ohio Sampling Point: SP01
 Investigator(s): S. Heitzenrater, A. Hansen Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Linear Slope %: 0
 Subregion (LRR or MLRA): LRR M, MLRA Lat: 40.123674 Long: -83.213389 Datum: WGS84
 Soil Map Unit Name: Brookston silty clay loam, fine texture, 0 to 2 percent slopes NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.)	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>6</u> x 4 = <u>24</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>6</u> (A) <u>24</u> (B) Prevalence Index = B/A = <u>4</u>	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover				Hydrophytic Vegetation Indicators: - <u> </u> 1 - Rapid Test for Hydrophytic Vegetation - <u> </u> 2 - Dominance Test is >50% - <u> </u> 3 - Prevalence Index is ≤3.0 ¹ - <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) - <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)	
Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Taraxacum officinale</u>	<u>3</u>	<u>Yes</u>	<u>FACU</u>		
2. <u>Glechoma hederacea</u>	<u>3</u>	<u>Yes</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	
Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
_____ = Total Cover					

Remarks: (Include photo numbers here or on a separate sheet.)
 94% bare ground and corn and soybean stubble

SOIL

Sampling Point: SP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-21	10YR 3/3	100					Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- Coast Prairie Redox (A16)
- Iron-Manganese Masses (F12)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: NA
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present Yes X No _____ Depth (inches): 1
 Water Table Present Yes X No _____ Depth (inches): 8
 Saturation Present Yes X No _____ Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Celtic Extension 345kV Line City/County: Jerome Sampling Date: 03/06/2023
 Applicant/Owner: AEP Ohio Transmission Company Inc State: Ohio Sampling Point: SP02
 Investigator(s): S. Heitzenrater, A. Hansen Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): Linear Slope %: 0
 Subregion (LRR or MLRA): LRR M, MLRA Lat: 40.123592 Long: -83.212183 Datum: WGS84
 Soil Map Unit Name: Brookston silty clay loam, fine texture, 0 to 2 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: (Explain alternative procedures here or in a separate report.) Heavy rainfall on previous days	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
0 = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
0 = Total Cover					
Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. <u>Poa pratensis</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
3 = Total Cover					
Woody Vine Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0 = Total Cover					

Remarks: (Include photo numbers here or on a separate sheet.)
 Remaining is open ground & corn/soybean stubble.

SOIL

Sampling Point: SP02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-21	10YR 3/2	100					Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> 2 cm Muck (A10)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> Coast Prairie Redox (A16)
	<input type="checkbox"/> Iron-Manganese Masses (F12)
	<input type="checkbox"/> Red Parent Material (F21)
	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (if observed): Type: <u>N/A</u> Depth (inches): <u>N/A</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u>	
Water Table Present Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	
Saturation Present Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	

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

Remarks:

Representative Photographs
April 28, 2023

APPENDIX C REPRESENTATIVE PHOTOGRAPHS

C.1 WETLAND AND WATERBODY PHOTOGRAPHS

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 1. View of wetland determination sample point (SP02; Upland). Photograph taken facing east.



Photo Location 1. View of wetland determination sample point (SP02: upland), soil profile.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 2. View of wetland determination sample point (SP01; Upland). Photograph taken facing north.



Photo Location 2. View of wetland determination sample point (SP01: Upland), soil profile.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 3. View of typical upland drainage feature (UDF). Photograph taken facing north.



Photo Location 3. View of typical upland drainage feature (UDF). Photograph taken facing south.

CELTIC STATION 345 KV INSTALL PROJECT ECOLOGICAL SURVEY REPORT

Representative Photographs
April 28, 2023

C.2 HABITAT PHOTOGRAPHS

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 1. View of early successional forest habitat. Photograph taken facing west.



Photo Location 2. View of agriculture field habitat. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 2. View of agriculture field habitat. Photograph taken facing west.



Photo Location 3. View of agriculture field habitat. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 3. View of agriculture field habitat. Photograph taken facing south.



Photo Location 4. View of agriculture field habitat. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 4. View of early successional forest habitat. Photograph taken facing west.



Photo Location 5. View of typical culvert. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 5. View of typical culvert. Photograph taken facing north.



Photo Location 6. View of agriculture field habitat. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 6. View of agriculture field habitat. Photograph taken facing south.



Photo Location 7. View of maintain lawn habitat. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
Celtic Station 345 kV Install Project
Union County, Ohio



Photo Location 7. View of maintain lawn habitat. Photograph taken facing west.

Agency Correspondence
April 28, 2023

APPENDIX D **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

March 8, 2023

Michelle Kearns
Stantec Consulting Services, Inc.
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204

Re: 23-0177; AEP Celtic Station Project

Project: The proposed project involves the construction of a new 345 kV substation.

Location: The proposed project is located in Jerome Township, Union 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: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. 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.

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

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

The project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, 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 bat species 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. The DOW recommends tree 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 ≥ 20 if possible.

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 & NORTHERN LONG-EARED 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 Eileen Wyza 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

snuffbox (*Epioblasma triquetra*)

Northern riffleshell (*Epioblasma torulosa rangiana*)

clubshell (*Pleurobema clava*)

rayed bean (*Villosa fabalis*)

Federally Threatened

rabbitsfoot (*Quadrula cylindrica cylindrica*)

State Endangered

elephant-ear (*Elliptio crassidens crassidens*)

State Threatened

pondhorn (*Unio merus tetralasmus*)

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 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 king rail (*Rallus elegans*), a state endangered bird. Nests for this species are deep bowls constructed out of grass and usually hidden very well in marsh vegetation. 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 no wetland habitat will be impacted, the 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.

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.

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

United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994



March 2, 2023

Project Code: 2023-0043051

Dear Ms. Kearns:

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: The proposed project is in the vicinity of one or more confirmed records of Indiana bats. 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 <https://ecos.fws.gov/ecp/species/9045>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are known or assumed present. Please note that, because Indiana bat presence has already been

confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for this species.

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 it is 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
Eileen Wyza, ODNR-DOW