

**Letter of Notification
Crooksville-North
Newark 138 kV
Transmission Line
Adjustment Project
(North Newark-Newark
Center)**



An **AEP** Company

BOUNDLESS ENERGY™

PUCO Case No. 22-0964-EL-BLN

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

Submitted by:
AEP Ohio Transmission Company, Inc.

December 8, 2022

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

Letter of Notification

AEP Ohio Transmission Company, Inc. Crooksville-North Newark 138 kV Transmission Line Adjustment Project

4906-6-05

AEP Ohio Transmission Company, Inc. (the “Company”) provides the following information in accordance with the requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-05(B) General Information

B(1) Project Description

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

The Company proposes the Crooksville-North Newark 138 kV Transmission Line Adjustment Project (North Newark-Newark Center) (the “Project”), located in Newark Township in Licking County, Ohio. The Project involves adjusting approximately 0.4 miles of the previously approved Crooksville-North Newark 138 kV Transmission Line (Case No. 21-0852-EL-BLN) outside of the North Newark Station. Adjustments to the locations of structures and realignment of the previously approved centerline are required due to foundation design issues identified during construction. The Project will not require any additional right-of-way (“ROW”). **Figure 1** and **Figure 2** in **Appendix A** show the location of the Project in relation to the approved Crooksville-North Newark 138 kV line and surrounding vicinity.

The Project meets the requirements for a LON because it is within the types of projects defined by item 2(a) of Ohio Administrative Code Section 4906-1-01 Appendix A of the Application Requirement Matrix For Electric Power Transmission Lines:

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

a. Line(s) greater than 0.2 miles in length but not greater than two miles in length.

The Project has been assigned PUCO Case No. 22-0964-EL-BLN.

B(2) Statement of Need

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

The Project involves an adjustment in the alignment of an approximately 0.4 mile section of the Crooksville-North Newark 138 kV Transmission Line. The need of the Project remains the same as what was reported in OPSB Case No. 21-0852-EL-BLN.

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

The Company proposes the Crooksville-North Newark 138kV Transmission Line Rebuild (North Newark-Newark Center) Project, which involves rebuilding approximately 8.3 miles of transmission line between AEP's North Newark and Newark Center stations. This Project is a section of the Crooksville –North Newark 138kV rebuild project and the remaining portion of the line from Newark Center station to Crooksville will be filed in a separate application to be consistent with environmental permitting. The 31.6 mile Crooksville – North Newark 138 kV project is wood pole construction from 1951 with 85% of the structures from the original vintage. The remaining poles were replaced between 1963-1973. All of the original conductors remain from 1951. This 31.6 mile line has 338 open conditions, including pole rot, insect damage, damaged conductor, and missing or broken ground and guy wires. There have been two permanent and one momentary outages on this line over the past five years. The Project is required to rebuild the line due to performance, condition, and risk.

There are two distribution delivery points (AEP's Isabella Station and a future Buckeye delivery point) to be served from this line, feeding a total load of 7.5 MW. Failure to move forward with this project will diminish the ability to serve these planned loads, exposing customers served from these proposed stations to outages as the line continues to deteriorate. This line is the only 138 kV line in the area; considering the location of the requested station connection points, retirement of the 138 kV line is not practical.

The need and solution for this Project was presented to PJM on 06/17/2019 and 12/18/2019, then subsequently assigned a PJM # of s2160. The Project was listed in the 2021 AEP Ohio Long-Term Forecast Report, page 78 (Form FE-T7, Characteristics of Existing Transmission Lines), 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 located in Licking County, Ohio. **Figures 1 and 2 in Appendix A** show the location of the proposed Project in relation to the existing 138 kV transmission lines.

B(4) Alternatives Considered

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

The adjustment of the previously approved Crooksville-North Newark 138 kV Transmission Line Rebuild Project (North Newark-Newark Center) will occur within the existing transmission line ROW. No new ROW will be acquired as part of the centerline adjustment, and no additional landowners will be impacted. One new structure is being added to the centerline route. No additional alternatives were considered as a result of the de minimis centerline and structure shifts. The resulting realignment meets the need of the Project while maintaining the most suitable and least impactful alignment.

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

B(5) Public Information Program

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

The Company will inform affected property owners and tenants about this Project through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements of 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 owners and any other landowner the Company may approach for an easement necessary for the construction, operation, or maintenance of the Project. The letter will comply with all requirements of OAC Section 4906-6-08(B). The Company maintains a website (<http://aeptransmission.com/ohio/>) which 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 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.

B(6) Construction Schedule

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

The previously approved Crooksville-North Newark 138 kV Transmission Line Rebuild Project (Case No. 21-0852-EL-BLN) began construction in April 2022 and the anticipated in-service date is December 2024. Construction of the adjustment Project is planned to begin in February 2023.

B(7) Area Map

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

Figure 1 in **Appendix A** provides the proposed Project area on a map of 1:24,000-scale (1-inch equals 2,000 feet) and provides the location of the approximately 0.45-mile long existing North Newark - Newark 138 kV transmission line on the United States Geological Survey (USGS) 7.5-minute topographic map of the Newark, Ohio quadrangle. **Figure 2** shows the Project area on ESRI World Imagery at a scale of 1:1,200-scale (1-inch equals 100 feet). The ESRI World Imagery is dated October 2020.

To visit the Project site from Columbus, Ohio, take I-670 East for approximately 4.6 miles and continue onto US-62 East for 0.2 miles. Take exit on the left towards I-270 North and keep right at the fork to continue onto Exit 10B, following signs for OH-161/ Easton Wy and merge onto I-270 North (1.6 miles). Then take Exit 30 for OH-161 East/New Albany and merge onto OH-161 East for 19.4 miles. OH-161 becomes OH-37, continue onto OH-37 East for 4.1 miles. OH-37 becomes OH-16, continue onto OH-16 East for 6.4 miles and then take the OH-13 Exit toward Hudson Ave/4th Street. From OH-13 South/Mt Bernon Road, turn left onto OH-13 South/Mount Vernon Road and continue for 2.2 miles, then turn right onto Waterworks Road. In 0.2 miles, turn left to the access road for North Newark Station. The

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

approximate address of the North Newark Station is 79 Waterworks Road Newark, OH 43055, at latitude 40.08879, longitude -82.41587.

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 Project area is located within existing right-of-way (ROW). No new permanent ROW is necessary.

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
5426992200000	Supplemental Easement	Yes
5426991600000	Supplemental Easement	Yes
5427067800001	Supplemental Easement	Yes
5426988600000	Supplemental Easement	Yes
5427067800000	Supplemental Easement	Yes
5427067800005	Supplemental Easement	Yes

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 Crooksville-North Newark 138 kV Transmission Line Adjustment Project is estimated to include the following:

Voltage: 138-kV
Conductors: RIGHT - (3) 795 kcmil 26/7 Strands DRAKE ACSR
LEFT - (6) 556.5 kcmil 26/7 Strands DOVE ACSR
Static Wire: (2) 159 kcmil 12/7 Strands GUINEA ACSR
Insulators: Polymer
ROW Width: 100' ROW Width
Structure Types: (1) One double circuit, steel monopole dead-end

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.

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$787,000. Pursuant to the PJM OATT, the costs for this Project will be recovered in the AEP Ohio Transmission Company's FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Economic Impacts

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

B(10)(a) Land Use Characteristics

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

An aerial photograph of the Project vicinity is provided as **Figure 2**. The Project location and vicinity have historically been primarily woodlots with some disturbed industrial lands. The Project is mapped within Newark Township in Licking County. The Project is located within existing ROW, surrounded by forested land, with lesser amounts of industrial land use.

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 Licking County Auditor maintains an online database of agricultural district land in Franklin, Madison, and Newark Townships. No Agricultural District lands are located within the Project area. The Project is located within existing ROW and does not cross agricultural land, therefore no new agricultural districts or other agricultural land uses would be impacted as a result of the Project.

B(10)(c) Archaeological and Cultural Resources

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

A cultural resource survey and report were conducted by the Company's consultant for the Project in October 2020. The Company's consultant indicated in the Phase I Archaeological Investigations report that no cultural materials or above ground resources were identified during the October 2020 investigations and no further archaeological work was considered to be necessary. The Company's consultant also conducted a history/architecture investigation and identified no properties were determined to be eligible for inclusion in the National Registry of Historic Places. Correspondence from the State Historic Preservation Office

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

("SHPO") was issued on November 30, 2020 (**Appendix C**). The SHPO stated that the Project will have no adverse effect on historic properties and that no further archaeological work is necessary.

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 OHC000005. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution Prevention Plan (SWPPP) to minimize erosion control sediment to protect surface water quality during storm events. The Company has obtained floodplain permits and is in the process of obtaining local Stormwater Pollution Prevention Plan (SWPPP) approvals from Licking County, prior to starting construction.

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

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

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

The United States Fish and Wildlife Service (USFWS) *Ohio County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species* (available at <https://www.fws.gov/midwest/Endangered/lists/pdf/OhioCtyList29Jan2018.pdf>) was reviewed to identify the threatened and endangered species known to occur in the Project counties. This USFWS publication lists the Indiana bat (*Myotis sodalis*; federally endangered) and northern long-eared bat (*Myotis septentrionalis*; federally threatened) in the Project county. In October 2019, coordination letters were sent to USFWS and the Ohio Department of Natural Resources (ODNR) soliciting responses.

Responses were received from the USFWS on December 11, 2020 and from the ODNR on November 20, 2019 and July 1, 2022. The USFWS and Division of Wildlife (DOW) advised that the Project area occurs within the range of the state and federal endangered Indiana bat and northern long-eared bat. The USFWS and ODNR proposed implementation of seasonal tree cutting (clearing of trees ≥ 3 inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, if suitable habitat occurs within the Project area. Successional hardwood woodland habitat is present within the Project and presents potentially suitable habitat for the Indiana bat and the northern long-eared bat. If seasonal tree cutting is implemented, impacts to these species are not likely. If seasonal tree cutting is not

AEP Ohio Transmission Company, Inc
December 2022

Crooksville – North Newark 138 kV
Transmission Line Adjustment Project
22-0964-EL-BLN

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

possible, ODNR requests that a net survey be conducted between June 1 and August 15, prior to cutting. Based on review of the Project area, some tree clearing and/or trimming is necessary for the Project, however, the Company anticipates clearing trees between October 1 and March 31.

The ODNR-DOW advised that the Project area occurs within the range of the sheepsnose (*Plethobasus cyphus*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the rabbitsfoot (*Quadrula cylindrica cylindrica*), a state endangered and federally threatened mussel, the Ohio pigtoe (*Pleurobema cordatum*), a state endangered mussel, the long-solid (*Fusconaia maculata maculata*), a state endangered mussel, the sharp-ridged pocketbook (*Lampsilis ovata*), a state endangered mussel, the wartyback (*Quadrula nodulata*), a state endangered mussel, the black sandshell (*Ligumia recta*), a state threatened mussel, the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel, and the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel. Due to the location of the Project, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The ODNR-DOW advised that the Project area occurs within the range of the northern madtom (*Noturus stigmosus*), a state endangered fish, the paddlefish (*Polyodon spathula*) a state threatened fish, the mountain madtom (*Noturus eleutherus*), a state threatened fish, and the channel darter (*Percina copelandi*), a state threatened fish. Due to the location, and that there is no in-water work proposed in a perennial stream, this Project is not likely to impact these species.

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

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

The Project is within the range of the northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, this project is not likely to impact this species. The Company completed a habitat assessment survey in April 2022 and submitted the findings to ODNR for review. ODNR provided concurrence of the habitat survey on July 1, 2022. The Company will comply with time of year requirements for habitat avoidance or will continue coordination with ODNR to minimize potential impacts from clearing. No additional habitat was found during additional field reviews completed in November 2022.

Additional details regarding species are provided in **Appendix C**.

Letter of Notification for Crooksville-North Newark 138 kV Transmission Line Adjustment Project

B(10)(f) Areas of Ecological Concern

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

The Company's consultant prepared a Wetland Delineation and Stream Assessment Report for the entire 32.4 miles of the Crooksville-North Newark 138 kV transmission line rebuild, of which this Project is a part, see **Appendix D**. The ecological survey of the Crooksville-North Newark 138 kV survey corridor delineated a total of 110 wetlands, totaling 22.61 acres, 121 streams or stream segments, totaling 27,993 linear feet, and 0 ponds. Of those, a total of seven delineated wetlands and two delineated streams were located within the Project survey corridor totaling 2.49 acres. Five wetlands were classified as palustrine emergent (PEM), one as palustrine forested (PFO), and one as palustrine unconsolidated bottom (PUB). A total of two streams or stream segments were also delineated within the Project survey corridor, totaling 301 linear feet. Of these streams, one was identified as perennial and one as intermittent. One pond was delineated within the Project survey corridor.

No permanent impacts to the delineated wetlands are anticipated during implementation of the Project. One PEM wetland will be temporarily crossed by timber matting during construction activities. No permitting is required in association with the timber matting.

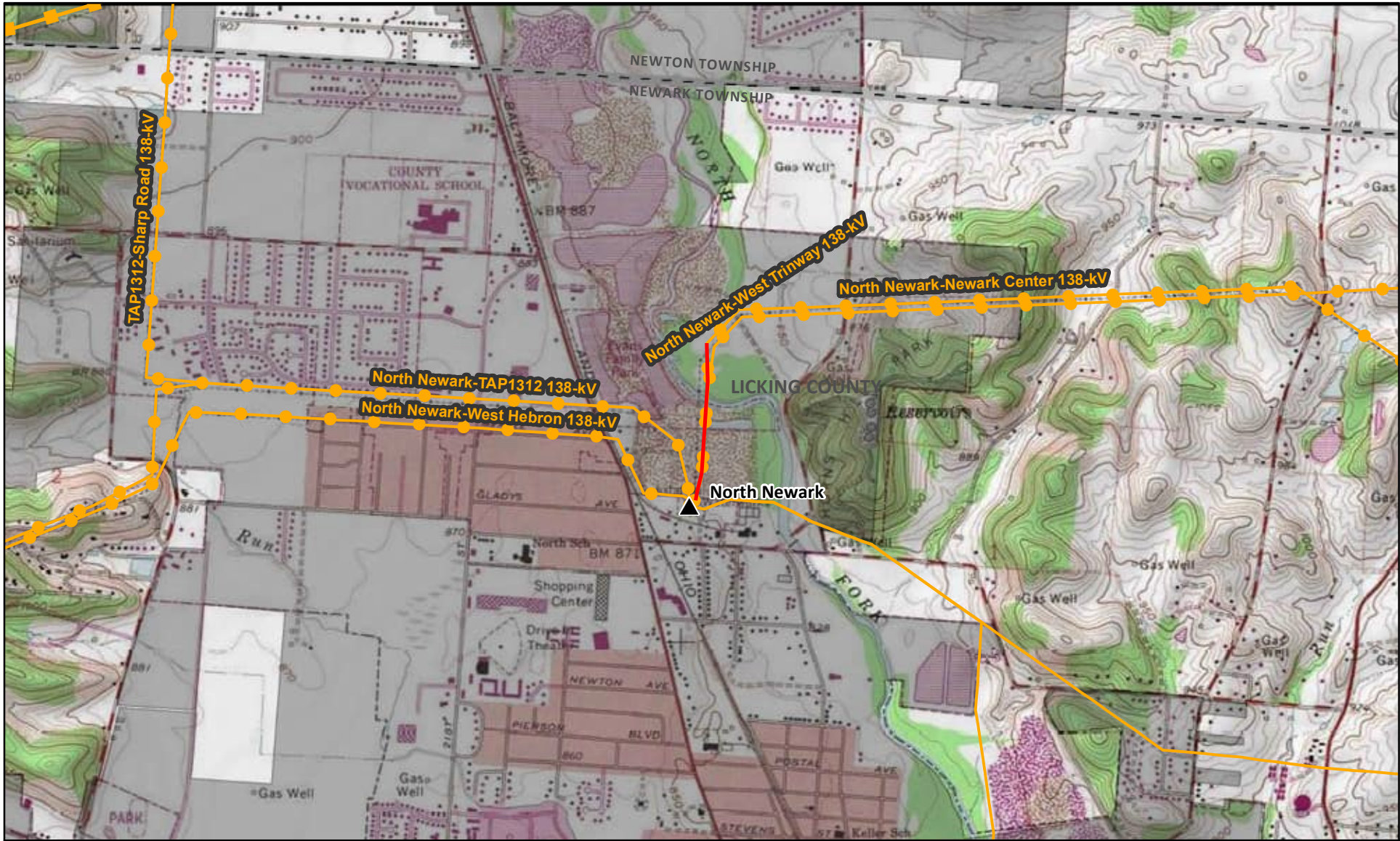
The Project crosses 100-year floodplains and floodways associated with North Fork Licking River based on Flood Map 39089C033J and Flood Map 39089C0331J from the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) datasets.

B(10)(g) Unusual Conditions

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

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

Appendix A Project Figures



▲ Station

— Proposed North Newark - Newark Center 138-kV Line

Existing Transmission Line

- 69-kV
- 138-kV
- 345-kV and Above
- Municipality Boundary

▬ Township Boundary

▭ USGS 7.5' Topographical Quadrangle

Data Sources: AEP (2021), ESRI (2013), PowerMap (2010)
 USGS 7.5' Topographical Quadrangle (Newark)

Coordinate System:
 State Plane Ohio South
 NAD 83

November 18, 2022

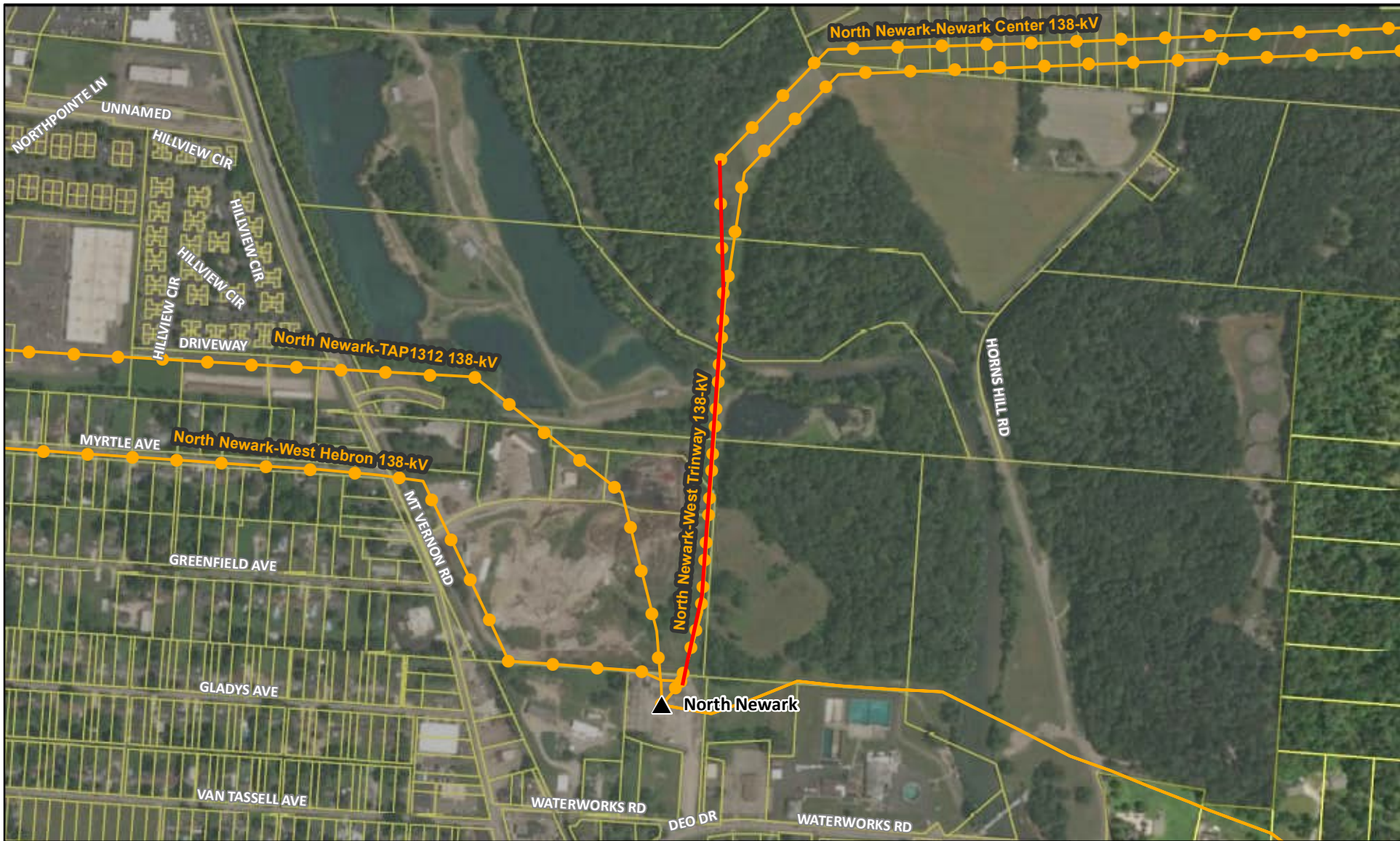


**FIGURE 1
 TOPOGRAPHIC OVERVIEW**

AEP OHIO TRANSMISSION COMPANY

Crooksville - North Newark 138-kV Transmission Line Adjustment Project (North Newark - Newark Center)

0 1,000 2,000 3,000 4,000
 Feet



▲ Stations


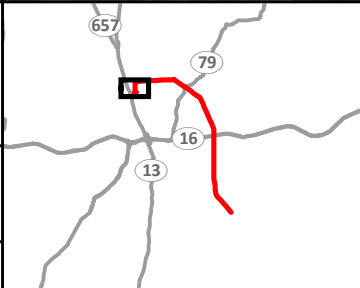
Existing Transmission Line

- 69-kV
- 138-kV
- Proposed North Newark - Newark Center 138-kV Line
- Parcel Boundary

Data Sources: AEP (2021), OSIP Roads (2014), ESRI World Imagery (2020)

Coordinate System: State Plane Ohio South NAD 83

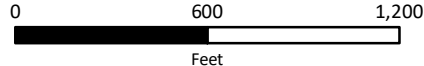
November 18, 2022

**FIGURE 2
AERIAL MAP**

AEP OHIO TRANSMISSION COMPANY

Crooksville - North Newark 138-kV Transmission Line Adjustment Project (North Newark - Newark Center)



0 600 1,200
Feet

Appendix B Agency Coordination

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

LINE NAME AND NUMBER:	Crooksville - North Newark (s2160), TP2019150
POINTS OF ORIGIN AND TERMINATION	Crooksville, North Newark INTERMEDIATE STATION - Isabella
RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	31.6 mi / 100 ft / 1 circuit
VOLTAGE: DESIGN / OPERATE	138 kV/ 138 kV
APPLICATION FOR CERTIFICATE:	2021
CONSTRUCTION:	2022-2023
CAPITAL INVESTMENT:	\$50M
PLANNED SUBSTATION:	N/A
SUPPORTING STRUCTURES:	Steel
PARTICIPATION WITH OTHER UTILITIES	N/A
PURPOSE OF THE PLANNED TRANSMISSION LINE	Rebuild of existing 138 kV line
CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Increased risk of equipment failure.
MISCELLANEOUS:	



AEP Transmission Zone M-3 Process Crooksville – North Newark Rebuild

Need Number: AEP-2019-OH030

Process Stage: Solutions Meeting 12/18/2019

Previously Presented: Need Meeting 06/17/2019

Supplemental Project Driver: Equipment Material/Condition/Performance/Risk

Specific Assumption Reference: AEP Guidelines for Transmission Owner Identified Needs

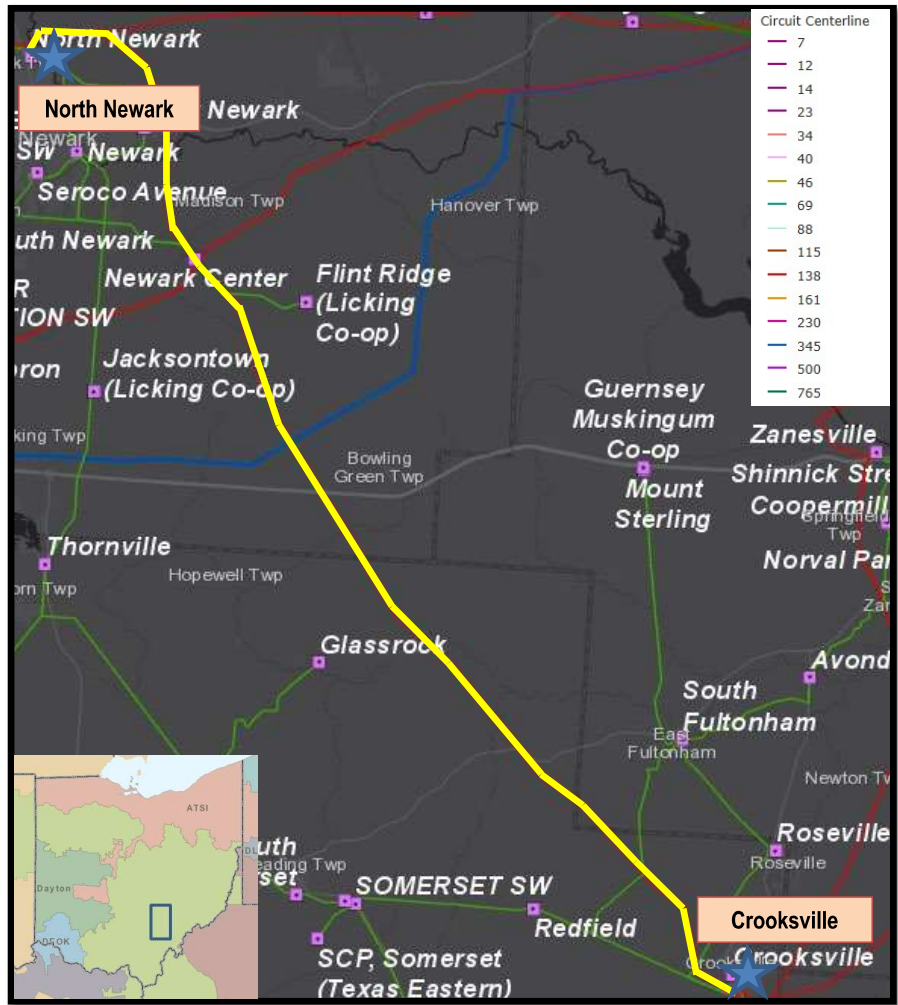
Problem Statement:

Line:

Crooksville – North Newark (Vintage - 1952)

- Length: 30.63 Miles
- Original Construction Type: Wood
- Original Conductor Type: 266,800 CM ACSR 26/7 (Partridge)
- Momentary/Permanent Outages: 5 outages last 5 years
- Number of open conditions: 338
 - Open conditions include: Pole Rot, Insect/Bird Damage, Damaged Conductors, Ground Wires, & Guy Wires.

Model: N/A



AEP Transmission Zone M-3 Process Crooksville – North Newark Rebuild

Need Number: AEP-2019-OH030

Process Stage: Solutions Meeting 12/18/2019

Proposed Solution:

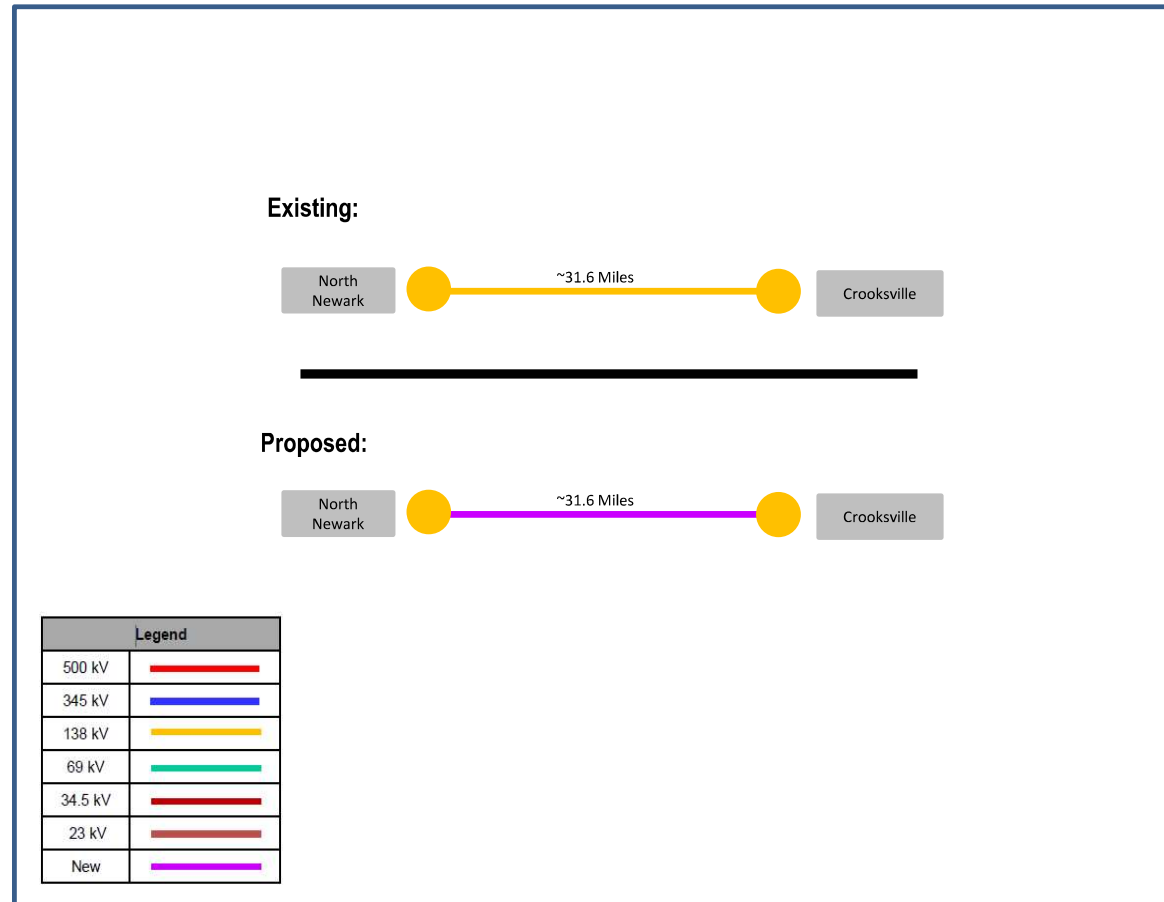
- Rebuild the existing 31.6-mile Crooksville - North Newark line using 795 ACSR. **Estimated Cost: \$55.6M**

Alternatives Considered:

No viable cost-effective alternatives were identified.

Projected In-Service: 12/1/2023

Project Status: Engineering





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

November 20, 2019

Jason Tucker
AECOM
525 Vine Street
Cincinnati, Ohio 45202

Re: 19-862; Crooksville-North Newark 138 kV Transmission Line Rebuild Project

Project: The proposed project involves rebuilding approximately 31.6 miles of transmission line within an existing 100-foot right-of-way (ROW) from Crooksville, Ohio at the Crooksville Station heading northwest toward North Newark Station.

Location: The proposed project is located in Perry Township, Muskingum County, Ohio.

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

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

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

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

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

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

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

The project is within the range of the sheepnose (*Plethobasus cyphus*), a state endangered and federally endangered mussel, the fanshell (*Cyprogenia stegaria*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the rabbitsfoot (*Quadrula cylindrica cylindrica*), a state endangered and federally threatened mussel, the Ohio pigtoe (*Pleurobema cordatum*), a state endangered mussel, the long-solid (*Fusconaia maculata maculata*), a state endangered mussel, the sharp-ridged pocketbook (*Lampsilis ovata*), a state endangered mussel, the wartyback (*Quadrula nodulata*), a state endangered mussel, the black sandshell (*Ligumia recta*), a state threatened mussel, the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel, and the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

The project is within the range of the northern madtom (*Noturus stigmosus*), a state endangered fish, the paddlefish (*Polyodon spathula*) a state threatened fish, the mountain madtom (*Noturus eleutherus*), a state threatened fish, and the channel darter (*Percina copelandi*), a state threatened fish. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.

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

The project is also within the range of the eastern spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding

depressions. Due to the location, and the type of habitat present at the project site, and within the vicinity of the project area, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus cyaneus*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 15 to August 1. If this habitat will not be impacted, this project is not likely to impact this species.

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

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

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

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

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

Mike Pettegrew
Environmental Services Administrator (Acting)



In reply, refer to
2020-LIC-49910

June 28, 2021

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

RE: North Newark- Newark Center 138Kv Rebuild Project, Knox and Licking Counties, Ohio – Access Roads

Dear Mr. Weller:

This letter is in response to the correspondence received on June 22, 2021 regarding the proposed access roads associated with the North Newark- Newark Center 138Kv Rebuild Project, Knox and Licking Counties, 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 letter report titled *Cultural Resource Management Addendum Investigations for Proposed Access Roads Associated with the North Newark-Newark Center 138kV Rebuild Project in Knox and Licking Counties, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2021).

A literature review, visual inspection, and subsurface excavation was completed as part of the investigations. One (1) previously identified archaeological site is located within the addendum project area. Ohio Archaeological Inventory (OAI)# 33LI0263 was not reidentified during fieldwork and the area has been disturbed since the site was originally identified in 1984. One (1) new archaeological sites were identified during survey; OAI# 33LI2721. The site is not recommended eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no further archaeological survey is necessary.

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

Sincerely,

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

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1089057

From: Ohio, FW3 <ohio@fws.gov>
Sent: Friday, December 11, 2020 3:14 PM
To: Hanner, Audrey
Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate
Subject: [EXTERNAL] AEP Crooksville-North Newark 138 kV Transmission Line Rebuild, Perry/Muskingum/Licking Counties, Ohio



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



TAILS# 03E15000-2021-TA-0439

Dear Ms. Hanner,

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

Federally Threatened and Endangered Species: The endangered **Indiana bat** (*Myotis sodalis*) and threatened **northern long-eared bat** (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <http://www.fws.gov/midwest/endangered/mammals/nleeb/index.html>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus 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,

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

Patrice Ashfield
Field Office Supervisor

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

Buchanan, Becky

From: Amy J Toohey <ajtoohey@aep.com>
Sent: Friday, July 1, 2022 3:42 PM
To: Buchanan, Becky; Luz A Cohmer
Subject: [EXTERNAL] FW: AEP North Newark to Newark Center Absence/Presence report ODNR Number 19-862

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Greetings:

Below is ODNR approval on North Newark to Newark Center.

Thanks
Amy

-----Original Message-----

From: Nathan.Reardon@dnr.ohio.gov <Nathan.Reardon@dnr.ohio.gov>
Sent: Friday, July 1, 2022 3:15 PM
To: Amy J Toohey <ajtoohey@aep.com>
Cc: Alicia M Cross <amcross@aep.com>
Subject: [EXTERNAL] RE: AEP North Newark to Newark Center Absence/Presence report ODNR Number 19-862

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments. If suspicious please click the 'Report to Incidents' button in Outlook or forward to incidents@aep.com from a mobile device.

Hi Amy,

The DOW concurs with the findings of the report. No further coordination regarding the northern harrier is necessary. Work can begin as soon as possible.

Thank you,
Nathan

Nathan Reardon
Compliance Coordinator
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229
Phone: 614-265-6741
Email: nathan.reardon@dnr.ohio.gov

Support Ohio's wildlife. Buy a license or stamp at wildohio.gov.

This message is intended solely for the addressee(s). Should you receive this message by mistake, we would be grateful if you informed us that the message has been sent to you in error. In this case, we also ask that you delete this message and any attachments from your mailbox, and do not forward it or any part of it to anyone else. Thank you for your cooperation and understanding.

Please consider the environment before printing this email.

Appendix C Wetland Delineation and Stream Assessment Report

**CROOKSVILLE-NORTH NEWARK 138KV
TRANSMISSION LINE REBUILD PROJECT
ADDENDUM 3 – CROOKSVILLE-NORTH
NEWARK ACCESS ROADS**

**LICKING, MUSKINGUM, AND PERRY COUNTIES,
OHIO**

**ADDENDUM WETLAND DELINEATION AND
STREAM ASSESSMENT REPORT #3**

Prepared for:

American Electric Power Ohio Transmission Company
8600 Smiths Mill Road
New Albany, Ohio 43054



Prepared by:

AECOM

525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 60616110, 60618779, 60616126

October 2022

TABLE OF CONTENTS

1.0	INTRODUCTION.....	4
2.0	METHODOLOGY.....	4
3.0	RESULTS.....	5
3.1	WETLAND DELINEATION	5
3.1.1	Preliminary Soils Evaluation	5
3.1.2	National Wetland Inventory Map Review.....	5
3.1.3	Delineated Wetlands.....	6
3.2	STREAM CROSSINGS	7
3.2.1	OEPA STREAM ELIGIBILITY.....	8
3.3	PONDS	8
3.4	VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY CORRIDOR	8
3.5	RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION	9
4.0	SUMMARY	10
5.0	REFERENCES.....	11

TABLES**Number**

TABLE 1	NWI DISPOSITION SUMMARY TABLE WITHIN THE ADDENDUM 3 PROJECT SURVEY CORRIDOR
TABLE 2	SUMMARY OF DELINEATED WETLANDS WITHIN THE CROOKSVILLE-NORTH NEWARK 138 KV TRANSMISSION LINE REBUILD PROJECT ADDENDUM 3 SURVEY CORRIDOR
TABLE 3	VEGETATIVE COMMUNITIES WITHIN THE CROOKSVILLE-NORTH NEWARK 138 KV TRANSMISSION LINE REBUILD PROJECT – ADDENDUM 3 PROJECT SURVEY AREA

FIGURES**Number**

FIGURE 1	Overview Map
FIGURE 2	Soil Map Unit and National Wetland Inventory Maps
FIGURE 3	Wetland Delineation and Stream Assessment Maps
FIGURE 4	Stream Eligibility Maps
FIGURE 5	Vegetative Communities Assessment Maps

APPENDICES**Number**

APPENDIX A	U.S. Army Corps of Engineers Wetland Data Forms/OEPA Wetland ORAM Forms/Delineated Features Photographs
APPENDIX B	Habitat Photographs

1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to rebuild the existing 138 kV line between Crooksville and North Newark Stations in Perry, Muskingum, and Licking Counties, Ohio (Project). The full rebuild will be approximately 32.4 miles in length. Since the completion of the original wetland delineation and stream assessment report, and the addendum report for proposed access roads between North Newark substation and Newark Center substation, AEP Ohio Transco required the survey of two additional, off right-of-way (ROW) access roads and to reassess the jurisdictional status of Wetland 105a and Wetland 105b. AEP Ohio Transco retained AECOM Technical Services, Inc. (AECOM) to survey a 25-foot buffer of the proposed access roads and reassess Wetland 105a and Wetland 105b within the expanded survey area (Figure 1). Results of the field survey are included within this report.

Originally delineated features associated with the Project have been provided in the *Crooksville-North Newark 138 kV Transmission Line rebuild Project – June 2021* (June 2021 – Report), the *Crooksville-North Newark 138 kV Transmission Line rebuild Project Addendum 1 – North Newark-Newark Center Access Roads – August 2021* (August 2021 – Report / Addendum 1 - Report), the *Crooksville-North Newark 138 kV Transmission Line rebuild Project Addendum 2 – North Newark-Newark Center Access Roads – January 2022* (January 2022 – Report / Addendum 2 – Report) within the text and tables. Previously identified feature data forms, photographs, and supporting information of the previous surveys for the Project are contained within the June 2021 – Report, August 2021 – Report, and the January 2022 - Report and are not provided in this addendum report.

This addendum wetland delineation and stream assessment report includes the results (data forms, photographs, and updated figures) associated with wetlands and/or streams identified within the two proposed off-ROW access roads and the expanded survey area associated with Wetland 105a and Wetland 105b (Addendum 3 Project survey corridor). The Addendum 3 Project survey corridor is approximately 5.28 acres in size. Due to potential overlap between the new and previously delineated features, the extent of delineated features and survey corridors (new and previously identified) are displayed on the attached figures.

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews completed for this report are included within the June 2021 – Report. Therefore, a brief summary of the delineation and agency coordination methodology has been provided below.

Delineations were conducted in accordance with the procedures outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (1987 Manual) (Environmental Laboratory, 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountain and Piedmont Region (Version 2.0) (EMP Regional Supplement) (USACE, 2012). In addition, any wetlands

were classified using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method for Wetlands v. 5.0 (ORAM; Mack, 2001). Stream assessments were conducted using the methods described in the OEPA’s Methods for Assessing Habitat in Flowing Waters: Using OEPA’s Qualitative Habitat Evaluation Index (Rankin, 2006) and in the OEPA’s Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA, 2020).

Initial coordination letters from the U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources (ODNR) were received in December 2020 and November 2019, respectively. Correspondence letters from the USFWS and ODNR for the 32.2-mile Crooksville-North Newark 138 kV transmission line is included in the June 2021 – Report.

3.0 RESULTS

In October and November 2022, AECOM ecologist walked the Addendum 3 Project survey corridor to conduct the wetland delineation, stream assessment and habitat survey. Within the 5.28-acre Addendum 3 Project survey corridor ,no new wetland or streams were identified. However, the boundary of Wetland 105a was expanded.

3.1 WETLAND DELINEATION

3.1.1 Preliminary Soils Evaluation

Soils were observed and documented as part of the delineation methodology. No new additional soil map units were identified within the Addendum 3 Project survey corridor.:

An updated table of soil map units identified within the entire Project survey corridor is provided in the January 2022 - Report.

3.1.2 National Wetland Inventory Map Review

According to the NWI data covering the Project location, the Addendum 3 Project survey corridor contained one mapped NWI wetlands. A summary of NWI-mapped wetlands occurring in the Addendum 3 Project survey corridor are presented in Table 1, below.

TABLE 1 – NWI DISPOSITION SUMMARY TABLE WITHIN THE ADDENDUM 3 PROJECT SURVEY AREA

NWI Code	NWI Description	Related Field Inventoried Resource (Wetland ID/Stream ID)	Comments
PFO1A	Palustrine, Forested, Broad-Leaved Deciduous, Temporary Flooded	Wetland 105a	Wetland 105a continues outside of the study corridor into the mapped NWI wetland

The locations of the mapped NWI wetlands within the Addendum 2 Project survey corridor are illustrated on Figure 2.

3.1.3 Delineated Wetlands

During the October 2022 and November 2022 field survey, AECOM did not identify any new wetlands during the Addendum 3 Project Survey Area. However, the boundary of Wetland 105a was changed within the expanded Addendum 3 Project Survey Area. The modified boundary of Wetland 105a is provided on **Figure 3**.

AECOM has changed the provisional isolated determination of Wetland 105a to now be jurisdictional (non-isolated, i.e., WOTUS) based on its proximity to North Fork Licking River. Final jurisdictional status can only be determined by the USACE, and AECOM assessments are provisional. The location and approximate extent of Wetland 105a identified within the Addendum 3 Project Survey Area is shown on **Figure 3**. Details for the wetland within in the Addendum 3 Project Survey Area are provided in **Table 3**. Completed USACE data forms, ORAM forms, and photographs of the wetland are provided in **Appendix A**.

TABLE 2 - SUMMARY OF DELINEATED WETLANDS WITHIN THE CROOKSVILLE-NORTH NEWARK 138 KV TRANSMISSION LINE REBUILD ADDENDUM 3 PROJECT SURVEY AREA

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 105a	40.095423	-82.415010	No	PFO	1.26	41	2	215	None	None	TBD	N/A	N/A

3.2 DELINEATED STREAMS

During the October 2022 field survey, AECOM did not identify any new streams within the Addendum 3 Project survey corridor.

3.2.1 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for all of the field identified streams. No new sub watersheds were crossed by the Addendum 3 Project Survey Area. A list of all watersheds within the entire Project survey corridor is provided in Table 5 of the June 2021 – Report and Eligibility status for each stream is listed in the Project Stream Table in Appendix C of the January 2022 - Report. OEPA stream eligibility mapping for the Project vicinity, with field identified streams, is provided on Figure 4.

3.3 PONDS

No new ponds were identified within the Addendum 2 Project survey corridor. For ponds identified within the original survey corridor see June 2021 – Report.

3.4 VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY CORRIDOR

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys for the Addendum 3 Project Survey Area. Habitat types within the Addendum 3 Project Survey Area are included agricultural land, young to mature woodland forests, old field, stream/wetland areas, and urban areas. Habitat descriptions, applicable to the Addendum 3 Project Survey Area are provided below in Table 4. Representative photos of the vegetative communities in the Addendum 3 Project Survey Area are provided in Appendix E. Vegetated land cover is illustrated on aerial photography provided on Figure 5.

TABLE 3- VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM 3 PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Project Survey Corridor	Approximate Percentage Within the Project Survey Corridor
Agricultural	Agricultural lands being utilized for row-crop production and associated activities, typically devoid of vegetation outside of the target crop and opportunistic/invasive species.	0.66	12.5%
Forested Land	Successional mixed hardwood woodlands are present along the Project survey corridor. Woody species dominating these areas included American elm (<i>Ulmus americana</i>), sugar maple (<i>Acer saccharum</i>), red maple (<i>Acer rubrum</i>), white oak (<i>Quercus alba</i>), red oak (<i>Quercus rubra</i>), black cherry (<i>Prunus serotina</i>), and shagbark hickory (<i>Carya ovata</i>). The dominant shrub-layer species included Morrow's honeysuckle (<i>Lonicera morrowii</i>), sugar maple, and blackberry (<i>Rubus occidentalis</i>).	0.42	8.0%
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey corridor of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	1.47	27.8%
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	1.47	27.8%
Streams/Wetlands	Streams and wetlands were observed both within and beyond the survey corridor for the Project.	1.26	23.9%
Totals:		5.28	100%

3.5 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation –

Correspondence with USFWS and ODNR for state and federal listed species was conducted as part of the original project and agency letters are included within the June 2021 - Report. AECOM reviewed the previous correspondences with the USFWS and ODNR to identify the potential presence of listed species and/or their habitat within the new work areas associated with the Project. Based on the due-diligence review, the Addendum 3 Project Survey Area includes potentially suitable habitat for the state and federally threatened Indiana bat, the state and federally threatened northern long-eared bat, the state endangered little brown bat, and the state endangered tri-colored bat. One forested area in the Addendum 3 Project Survey Area appears to provide potentially suitable habitat for all listed bat species. USFWS recommends that any clearing of trees greater than three inches diameter breast height (dbh) be conducted between October 1 and March 31 to avoid potential impacts to the species.

The initial review and response from the USFWS and ODNR were associated with the entire extent of the survey corridor associated with the original Project area as described in the June 2021 – Report. As the areas included within this addendum are located within and around the Project area submitted to the agencies, the previous agency correspondence and recommendations are considered valid for these additional areas. As these areas do not display the habitat to support the remaining federal and/state-listed species, it is assumed that the Project would no effect on the additional listed species.

4.0 SUMMARY

This addendum includes wetland delineation and stream assessment results of the proposed off-ROW access roads and the expanded survey area associated with Wetland 105a and Wetland 105b(Addendum 3 Project Survey Area) in Licking, County Ohio. Previously Identified wetlands and streams are not included in this Addendum Report.

As a result of the October 2022 and November 2022 survey of the Addendum 3 Project Survey Area, no new wetlands or streams were identified. However, one wetland, Wetland 105a, was expanded and the provisional determination was changed from isolated to potentially jurisdictional.

The results of the ecological survey conducted by AECOM in October 2022 and November 2022, and the results provided in this Project Addendum 3, are limited to the areas within the Addendum 3 Project Survey Area provided in **Figure 3: Wetland Delineation and Stream Assessment Map**. Areas that fall outside of the Project survey corridor were not evaluated in the field and are not included in the reporting of this survey.

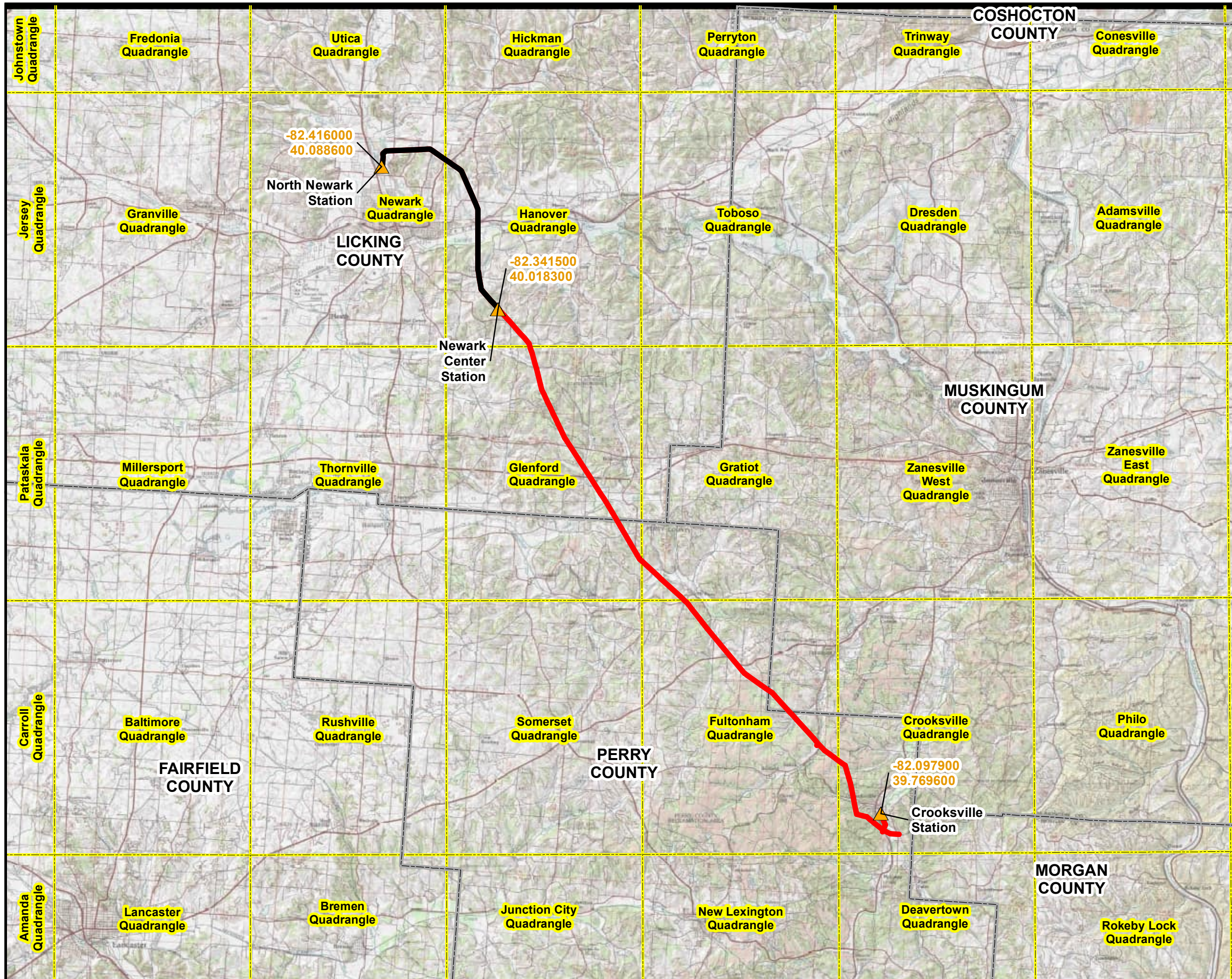
The information contained in this wetland delineation report is for a study area that may be much larger than the actual Project limits-of-disturbance; therefore, lengths and acreages listed in this report may not constitute the actual impacts of the Project defined in subsequent permit applications.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

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

5.0 REFERENCES

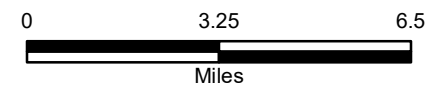
- Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Office of Biological Services, U.S. Fish and Wildlife Service, Washington, D.C.
- Environmental Laboratory. 1987. *U.S. Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.
- Kollmorgen Corporation. 2010. *Munsell Soil Color Charts*. Baltimore, Maryland.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. *Phytoneuron* 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X
- Mack, John J. 2001. *Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms*. OEPA Technical Report WET/2001-1. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.
- Ohio Administrative Code Chapter 3745-1. Water Quality Standards. <https://epa.ohio.gov/Portals/35/rules/01-all.pdf>. Effective July 30, 2018.
- Ohio DNR. 2020. Ohio Mussel Survey Protocol. April 2020. Ohio Department of Natural Resources (ODNR), Division of Wildlife and U.S. Fish and Wildlife Service (USFWS), Ohio Ecological Services Field Office. 57 pp.
- Ohio EPA. 2017. Section 401 Water Quality Certification for the 2017 Nationwide Permits. Appendix D Stream Eligibility Determination Process. Effective March 17, 2017. Ohio Environmental Protection Agency, Division of Surface Water, 401 Water Quality Certification and Isolated Wetland Permitting Section, Columbus, Ohio.
- Ohio EPA. 2017. 401 Water Quality Certification for the Nationwide Permits Stream Eligibility Web Map (2017 Reissuance). <https://data-oea.opendata.arcgis.com/datasets/401-water-quality-certification-for-nationwide-permits>
- Ohio EPA, 2020. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.1. Ohio EPA Division of Surface Water, Columbus, Ohio. May 2020. 130 pp.
- Rankin, Edward T. 1989. *The Qualitative Habitat Evaluation Index (QHEI): Rationale, Methods, and Application*. Ohio EPA Ecological Assessment Section, Division of Surface Water, Columbus, Ohio.
- Rankin, Edward T. 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. OEPA Ecological Assessment Section, Division of Surface Water, Columbus, Ohio.
- U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter No. 05-05: Guidance on Ordinary High Water Mark Identification.
- U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountain and Piedmont Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar,

- J. F. Berkowitz, and C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2018. *National Wetland Plant List*, version 3.3. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. http://wetland_plants.usace.army.mil/
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2019a. Soil Survey Geographic (SSURGO) Database for Licking County, Ohio. September 16, 2019. Available online at: Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2019b. Soil Survey Geographic (SSURGO) Database for Muskingum County, Ohio. September 16, 2019. Available online at: Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2019c. Soil Survey Geographic (SSURGO) Database for Perry County, Ohio. September 16, 2019. Available online at: Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2019d. National Hydric Soils List. <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>. Accessed June 2021.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2021. Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed June 2021.
- U.S. Fish and Wildlife Service. 2018. National Wetlands Inventory Geodatabase for Ohio. Available online at <http://www.fws.gov/wetlands/Data/Mapper.html>. Accessed 6/18/21.
- U.S. Geological Survey. 2016. National Hydrography Dataset, Ohio Statewide Geodatabase. Published August 2016. Earth Science Information Center, USGS, Reston, VA.



LEGEND:

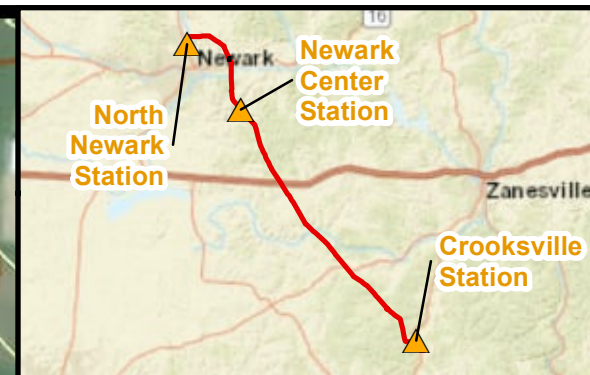
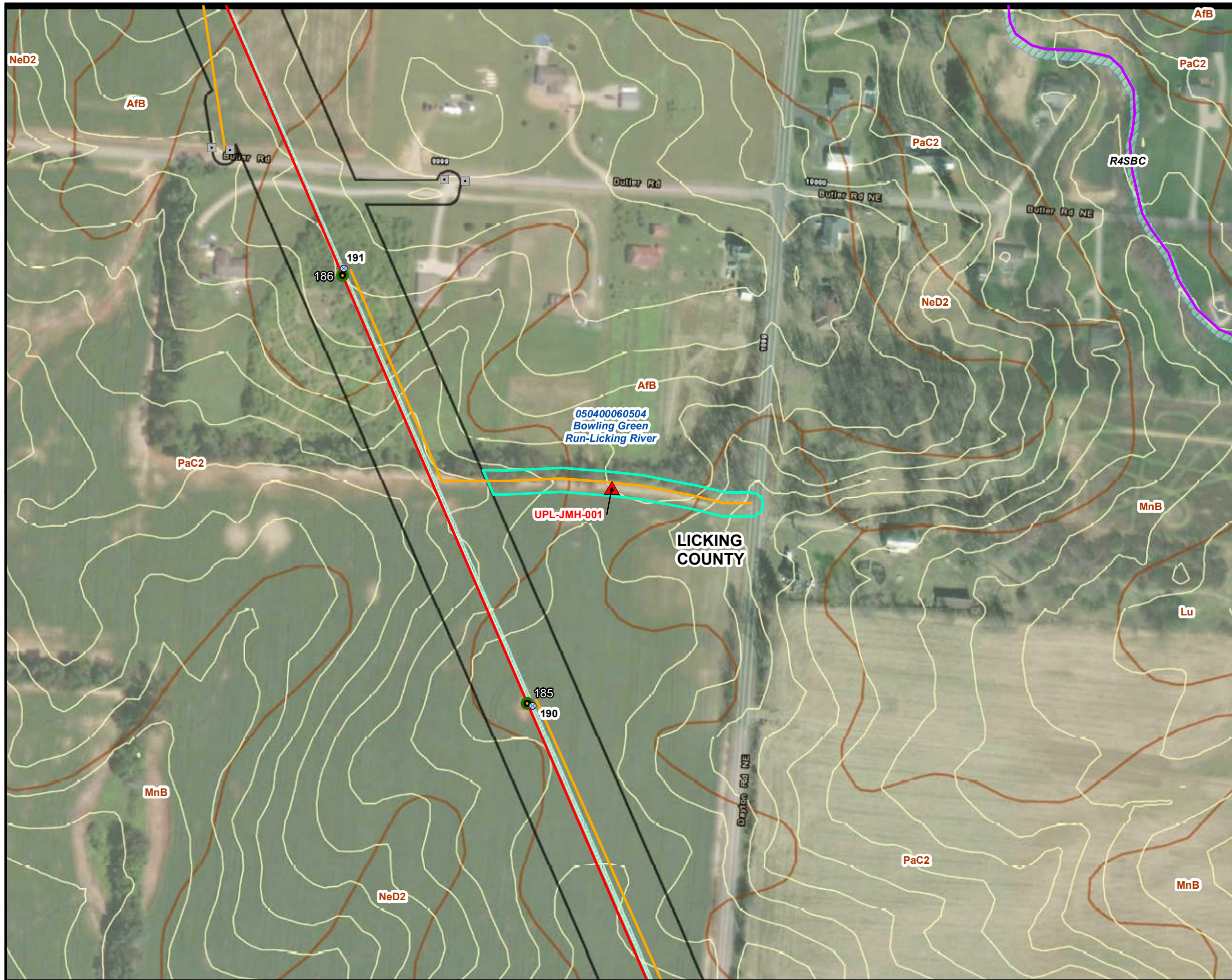
- Station
- Newark Center-North Newark 138 kV Transmission Line
- Crooksville-North Newark 138 kV Transmission Line
- Ohio USGS 7.5" Topographical Quadrangle
- County Boundary



BASE MAP SOURCE:
Copyright: © 2013 National Geographic Society, i-cubed

AEP OHIO TRANSMISSION COMPANY Crooksville-North Newark 138kV Transmission Line Rebuild Project Addendum 1

FIGURE 1
OVERVIEW MAP

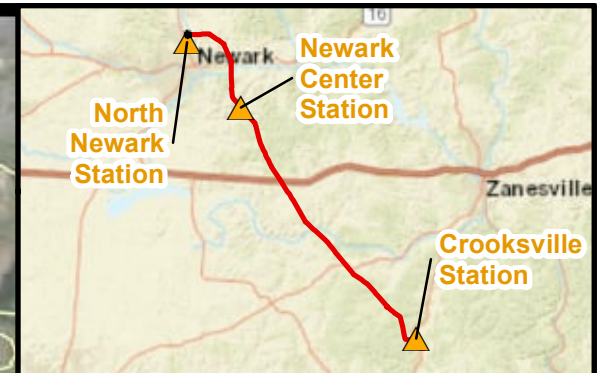
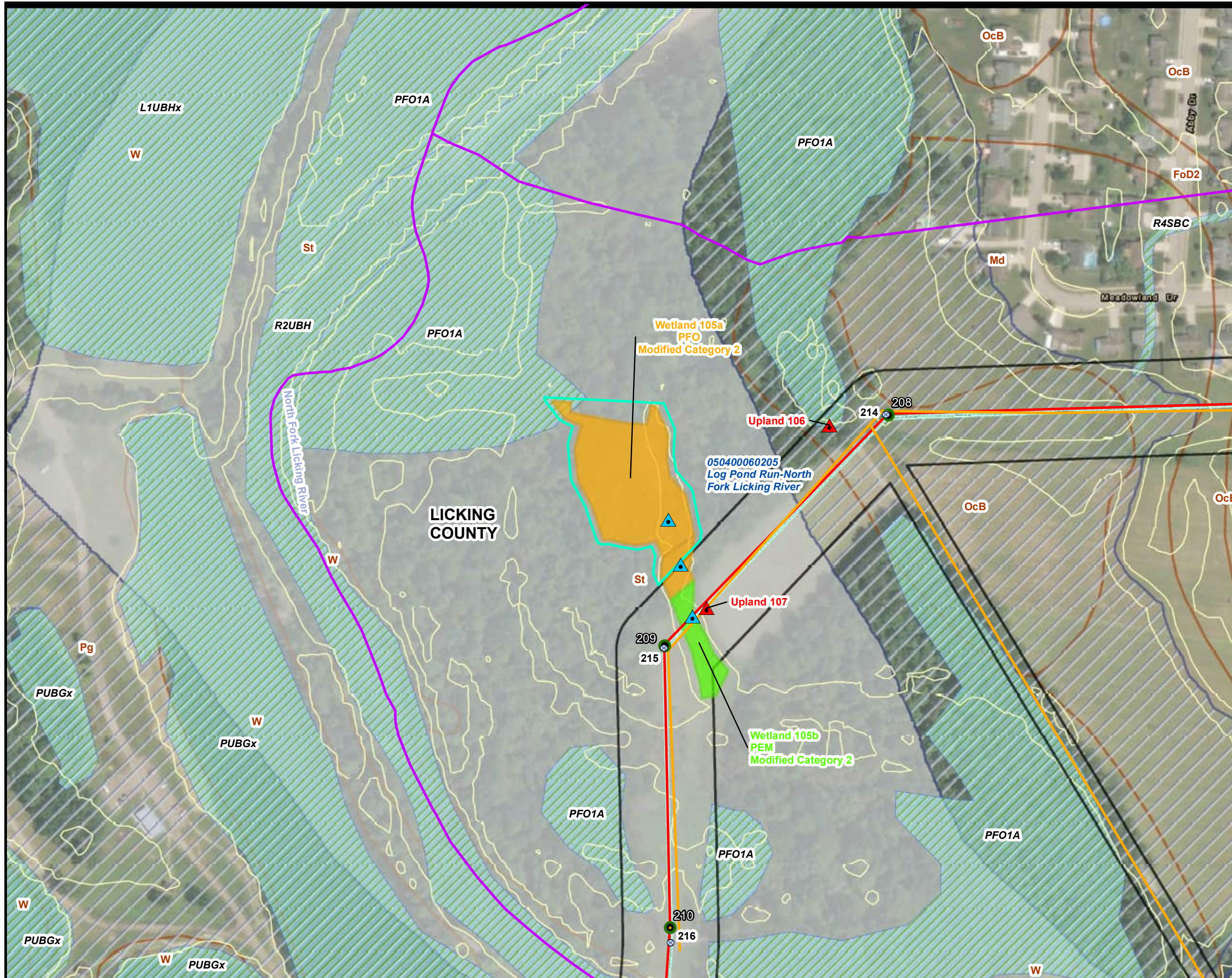


LEGEND:

- Existing Structure
- Proposed Structure
- Culvert
- Upland Data Point
- Access Road
- Crooksville-North Newark 138 kV Transmission Line
- Existing Transmission Line
- NHD Stream (USGS)
- Contour (5-Ft)
- Project Survey Area (Addendum 3)
- Completed Project Survey Area
- NWI Wetland (USFWS)
- HUC 12 (USGS)
- County Boundary
- SSURGO Soil Map Unit (NRCS)

AfB - Alford silt loam, 2 to 6 percent slopes
 Lu - Luray silty clay loam
 MnB - Mentor silt loam, 2 to 6 percent slopes
 NeD2 - Negley loam, 12 to 18 percent slopes, eroded
 PaC2 - Parke silt loam, 6 to 12 percent slopes, eroded

0 200 400
 Feet



LEGEND:

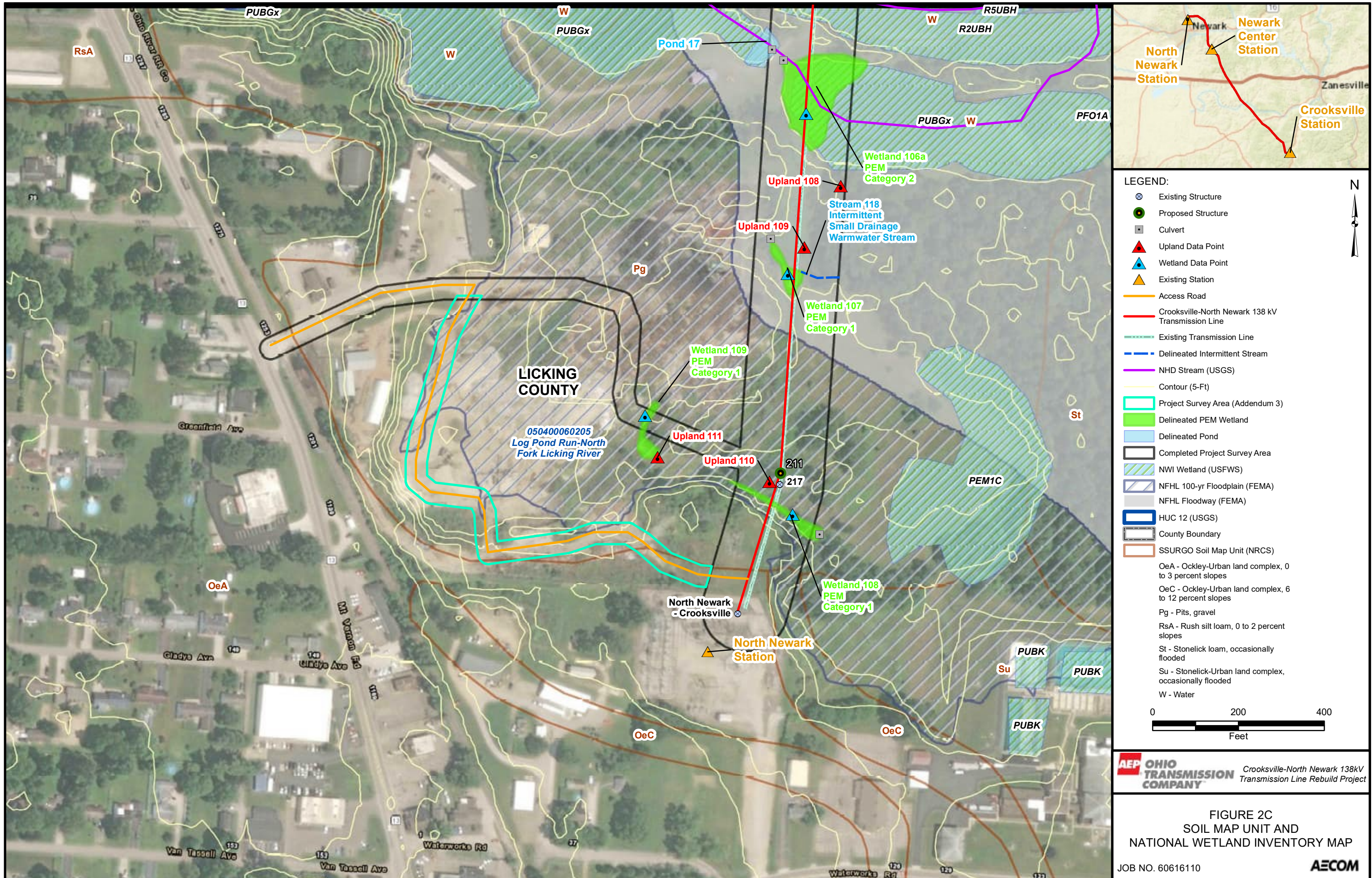
- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Access Road
- Crooksville-North Newark 138 kV Transmission Line
- Existing Transmission Line
- NHD Stream (USGS)
- Contour (5-Ft)
- Project Survey Area (Addendum 3)
- Delineated PEM Wetland
- Delineated PFO Wetland
- Completed Project Survey Area
- NWI Wetland (USFWS)
- NFHL 100-yr Floodplain (FEMA)
- NFHL Floodway (FEMA)
- HUC 12 (USGS)
- County Boundary
- SSURGO Soil Map Unit (NRCS)

FoD2 - Fox gravelly loam, 12 to 18 percent slopes, eroded
 Md - Medway silt loam, occasionally flooded
 OcB - Ockley silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes
 Pg - Pits, gravel
 St - Stonelick loam, occasionally flooded
 W - Water

0 200 400
Feet

AEP OHIO TRANSMISSION COMPANY Crooksville-North Newark 138kV Transmission Line Rebuild Project

FIGURE 2B
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP
JOB NO. 60616110 **AECOM**



LEGEND:

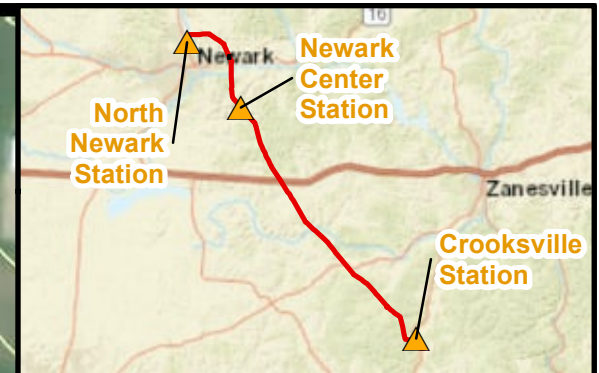
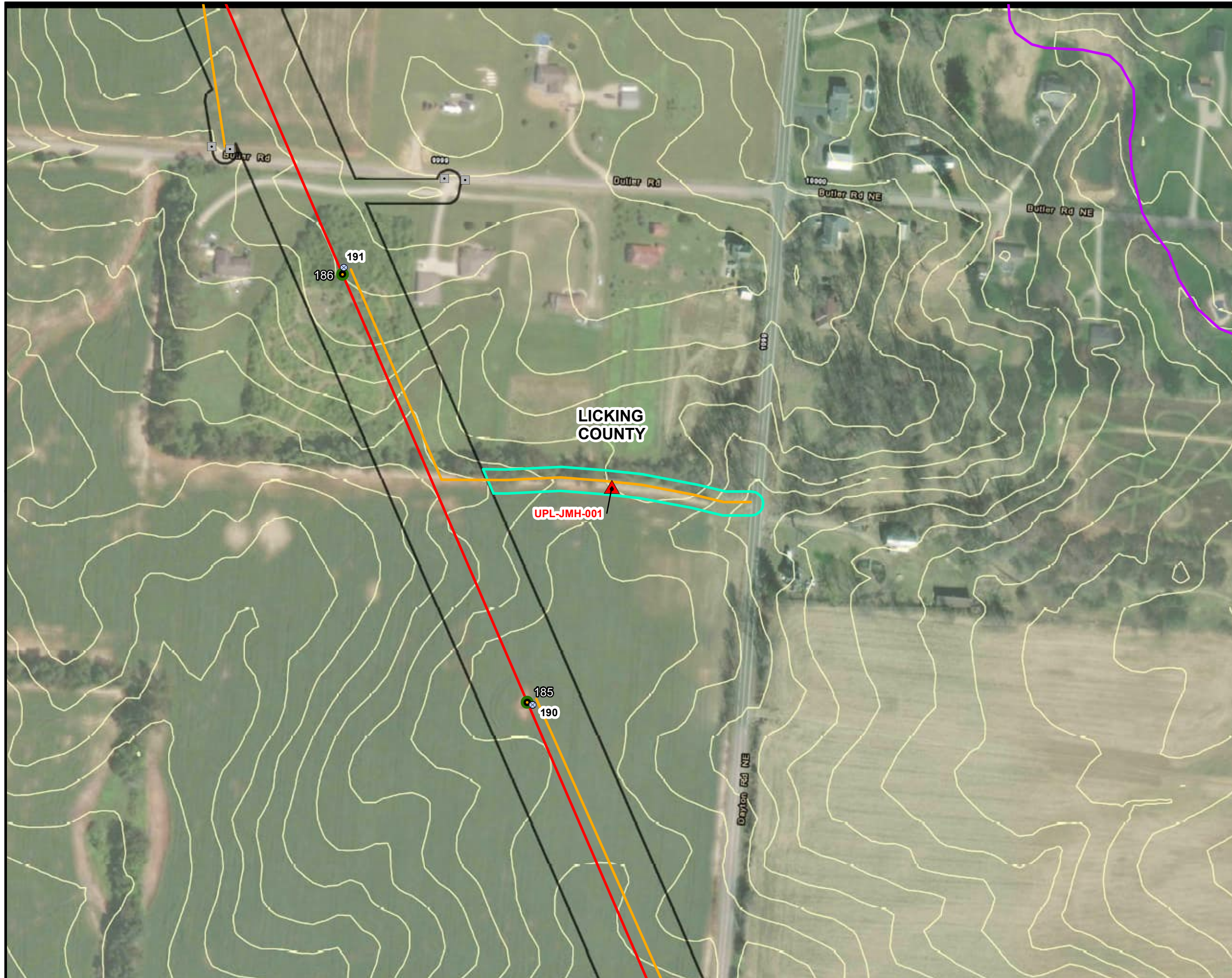
- ⊗ Existing Structure
- Proposed Structure
- Culvert
- ▲ Upland Data Point
- ▲ Wetland Data Point
- ▲ Existing Station
- Access Road
- Crooksville-North Newark 138 kV Transmission Line
- Existing Transmission Line
- Delineated Intermittent Stream
- NHD Stream (USGS)
- Contour (5-Ft)
- ▭ Project Survey Area (Addendum 3)
- ▭ Delineated PEM Wetland
- ▭ Delineated Pond
- ▭ Completed Project Survey Area
- ▭ NWI Wetland (USFWS)
- ▭ NFHL 100-yr Floodplain (FEMA)
- ▭ NFHL Floodway (FEMA)
- ▭ HUC 12 (USGS)
- ▭ County Boundary
- ▭ SSURGO Soil Map Unit (NRCS)

OeA - Ockley-Urban land complex, 0 to 3 percent slopes
 OeC - Ockley-Urban land complex, 6 to 12 percent slopes
 Pg - Pits, gravel
 RsA - Rush silt loam, 0 to 2 percent slopes
 St - Stonelick loam, occasionally flooded
 Su - Stonelick-Urban land complex, occasionally flooded
 W - Water

0 200 400
Feet

AEP OHIO TRANSMISSION COMPANY Crooksville-North Newark 138kV Transmission Line Rebuild Project

FIGURE 2C
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP
 JOB NO. 60616110 **AECOM**



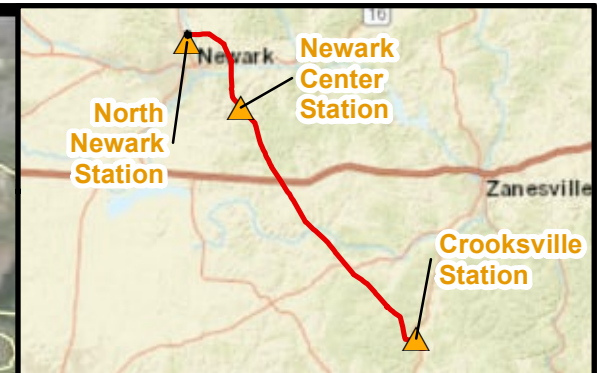
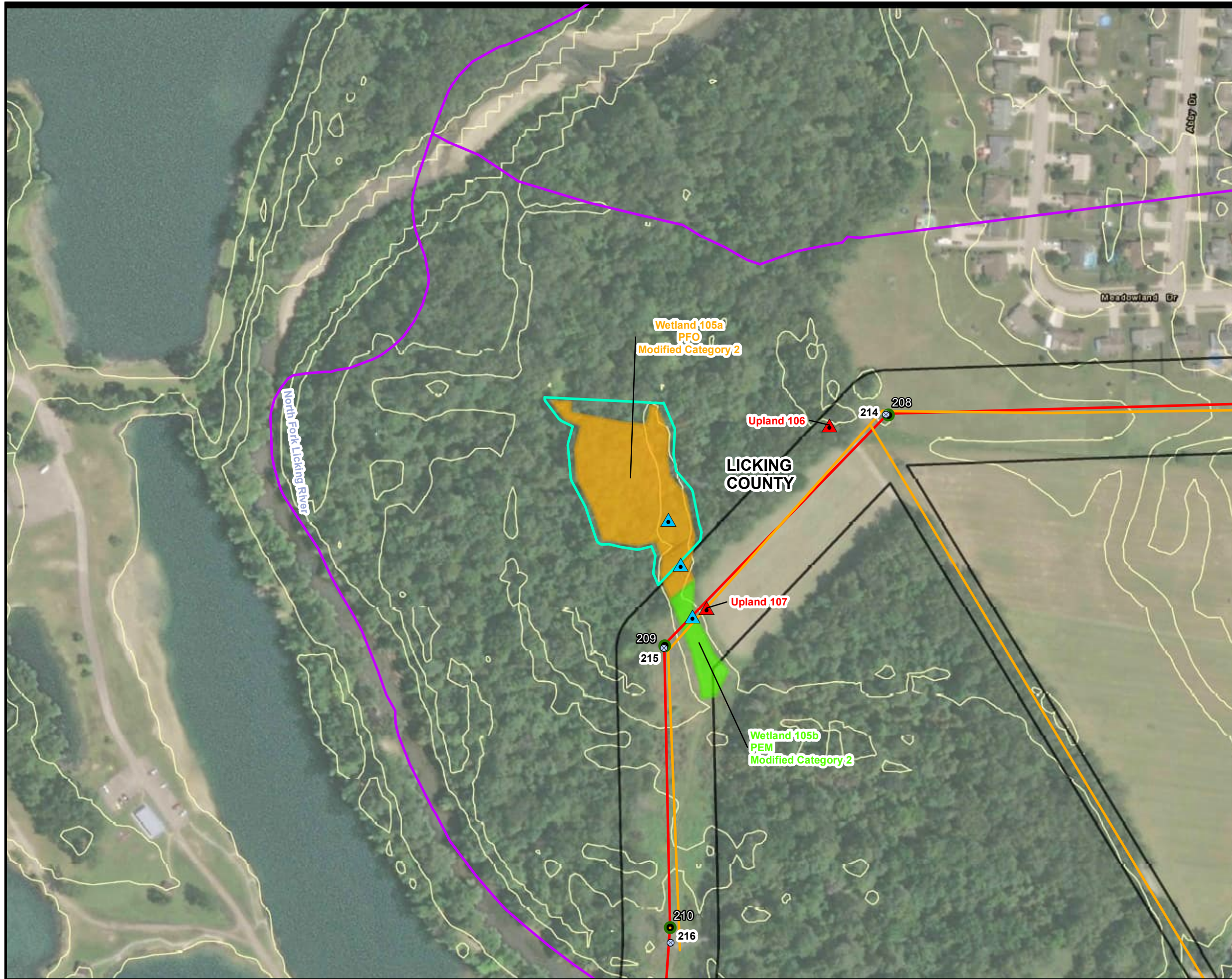
LEGEND:

- Existing Structure
- Proposed Structure
- Culvert
- Upland Data Point
- Access Road
- Crooksville-North Newark 138 kV Transmission Line
- NHD Stream (USGS)
- Contour (5-Ft)
- Project Survey Area (Addendum 3)
- Completed Project Survey Area
- County Boundary



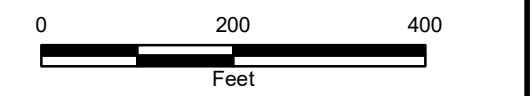
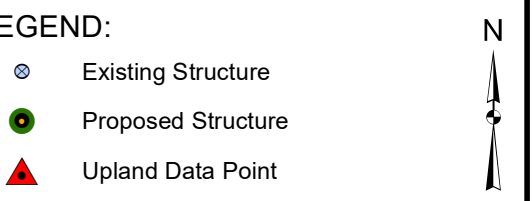
AEP OHIO TRANSMISSION COMPANY Crooksville-North Newark 138kV Transmission Line Rebuild Project

FIGURE 2A
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP
 JOB NO. 60616110 **AECOM**



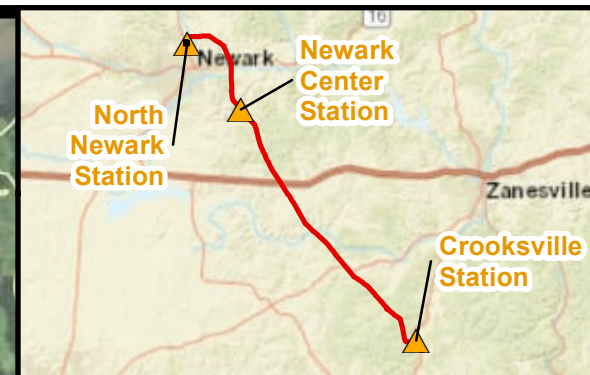
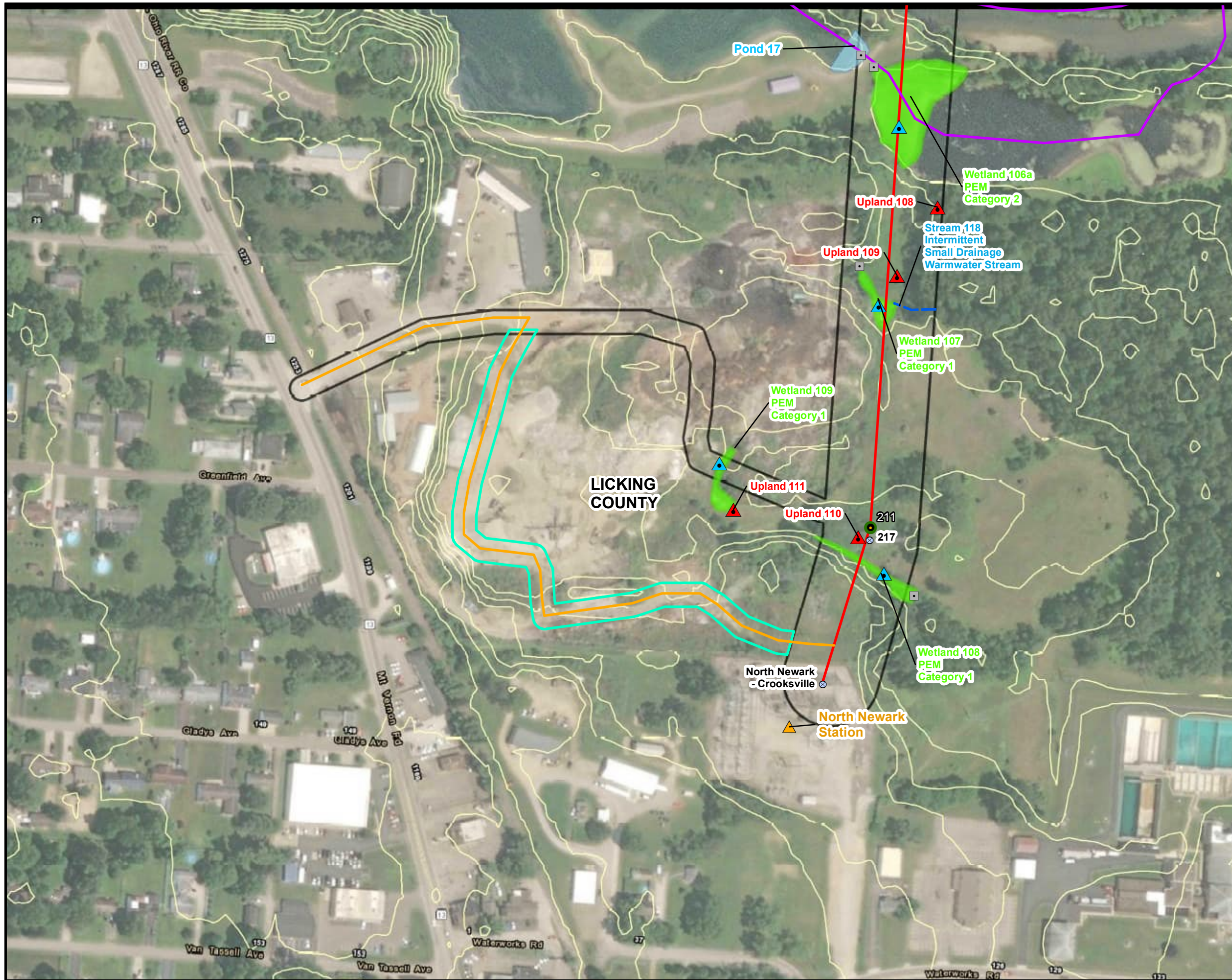
LEGEND:

- ⊗ Existing Structure
- Proposed Structure
- ▲ Upland Data Point
- ▲ Wetland Data Point
- Access Road
- Crooksville-North Newark 138 kV Transmission Line
- NHD Stream (USGS)
- Contour (5-Ft)
- ▭ Project Survey Area (Addendum 3)
- ▭ Delineated PEM Wetland
- ▭ Delineated PFO Wetland
- ▭ Completed Project Survey Area
- ▭ County Boundary



AEP OHIO TRANSMISSION COMPANY Crooksville-North Newark 138kV Transmission Line Rebuild Project

FIGURE 2B
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP
 JOB NO. 60616110 **AECOM**



LEGEND:

- ⊗ Existing Structure
- Proposed Structure
- Culvert
- ▲ Upland Data Point
- ▲ Wetland Data Point
- ▲ Existing Station
- Access Road
- Crookville-North Newark 138 kV Transmission Line
- Delineated Intermittent Stream
- NHD Stream (USGS)
- Contour (5-Ft)
- ▭ Project Survey Area (Addendum 3)
- ▭ Delineated PEM Wetland
- ▭ Delineated Pond
- ▭ Completed Project Survey Area
- ▭ County Boundary

N

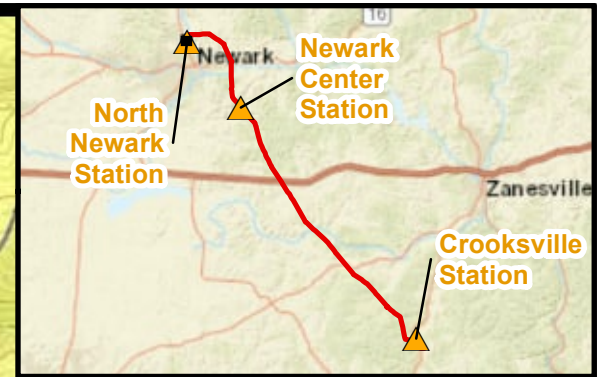
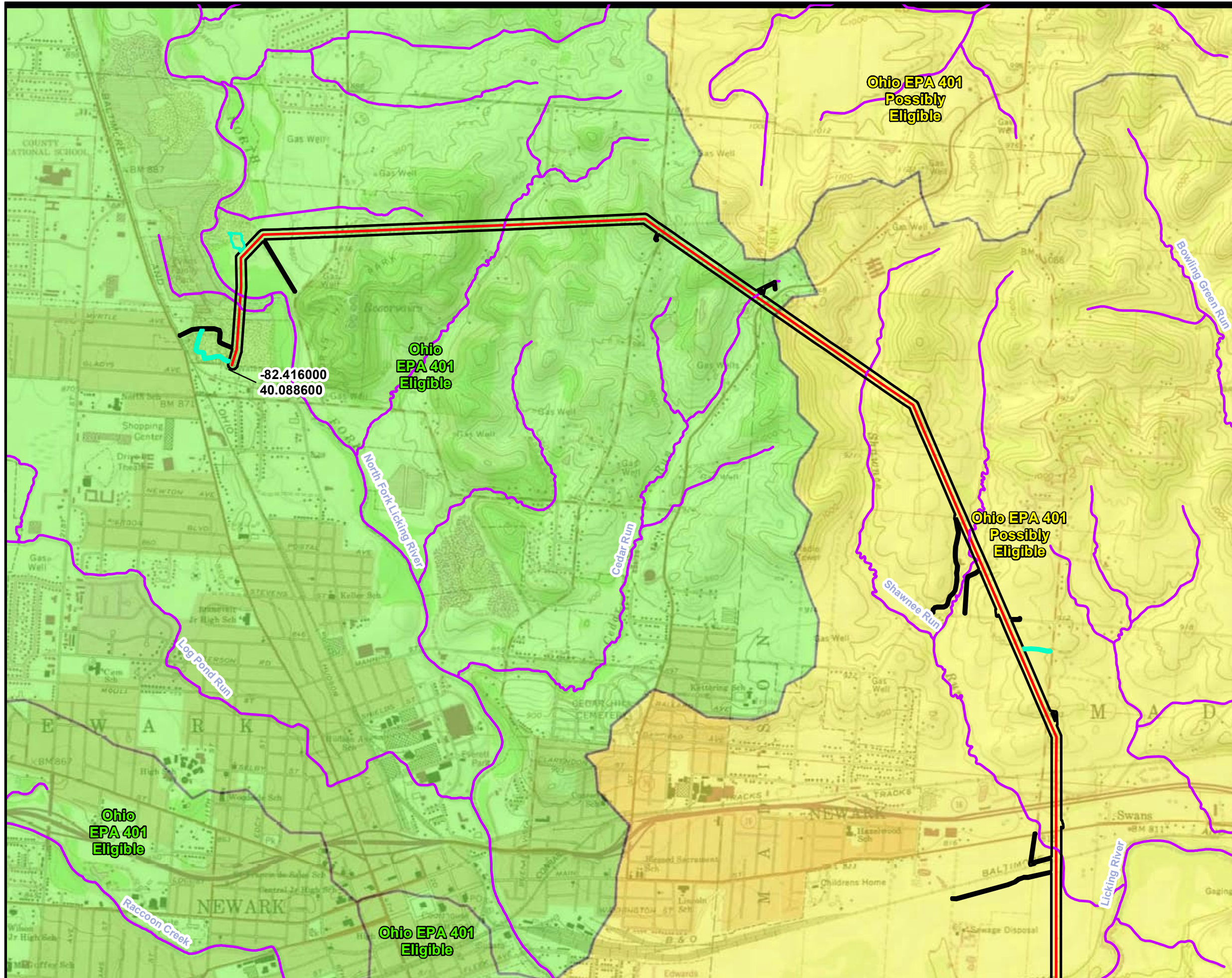
0 200 400
Feet

AEP OHIO TRANSMISSION COMPANY Crookville-North Newark 138kV Transmission Line Rebuild Project

**FIGURE 2C
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP**

JOB NO. 60616110

AECOM

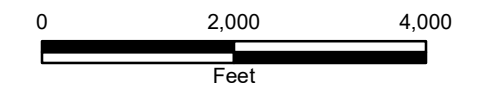


LEGEND:

- Crooksville-North Newark 138 kV Transmission Line
- NHD Stream (USGS)
- Project Survey Area (Addendum 3)
- Project Survey Area

OEPA Stream Eligibility

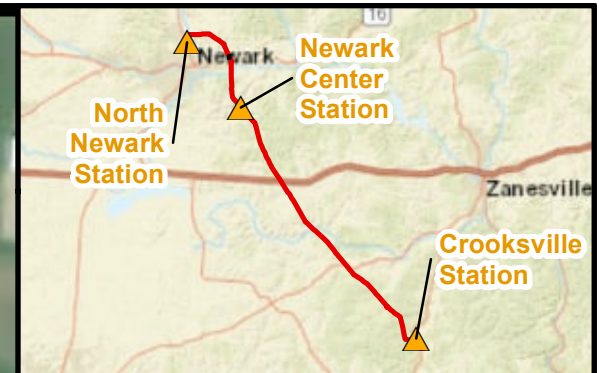
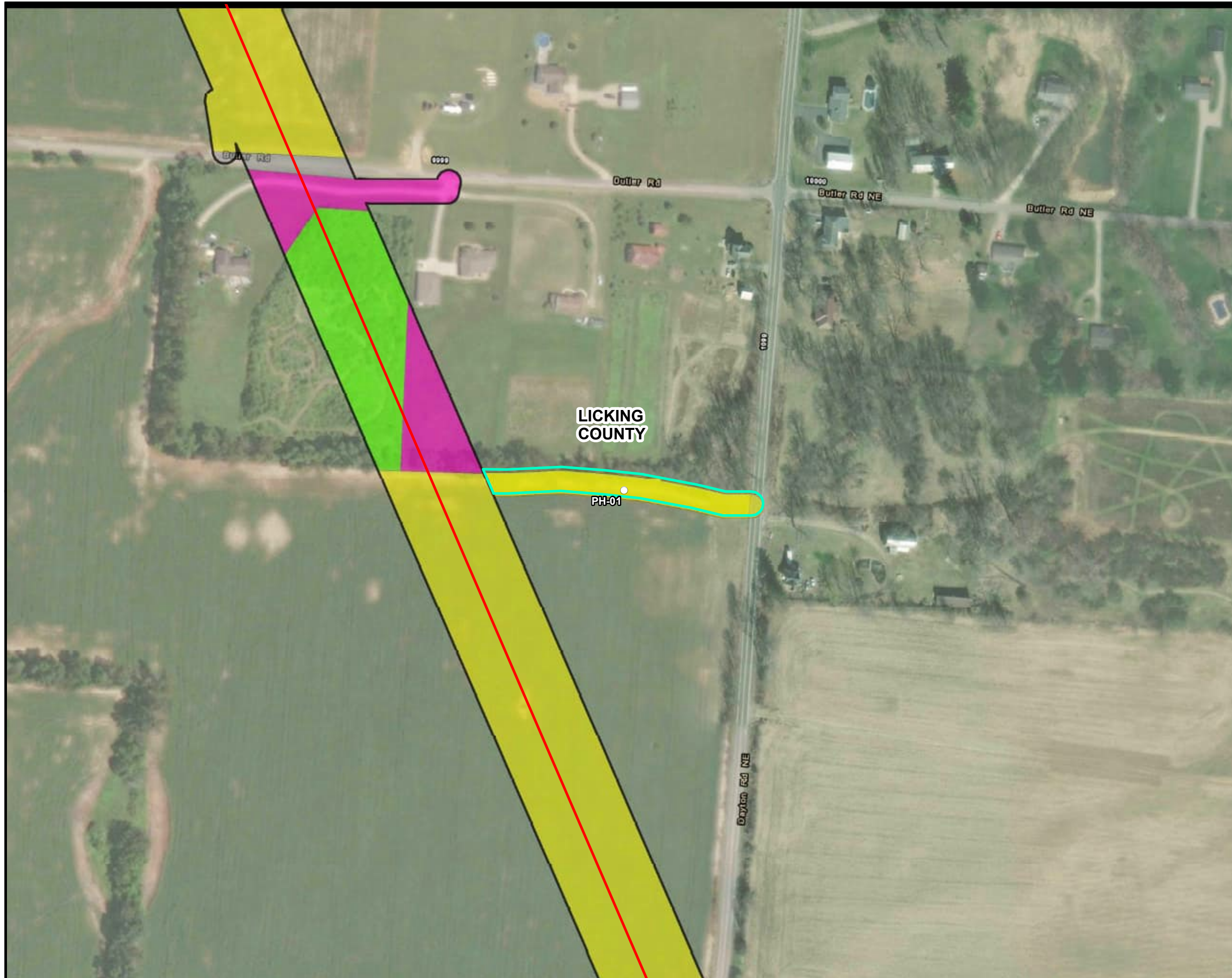
- Eligible
- Possibly Eligible



BASE MAP SOURCE:
Sources: Esri, HERE, Garmin, USGS, Intermap,

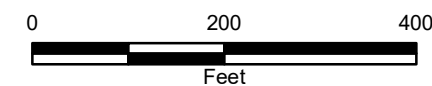
AEP OHIO TRANSMISSION COMPANY Crooksville-North Newark 138kV Transmission Line Rebuild Project Addendum 1

FIGURE 4
STREAM ELIGIBILITY MAP

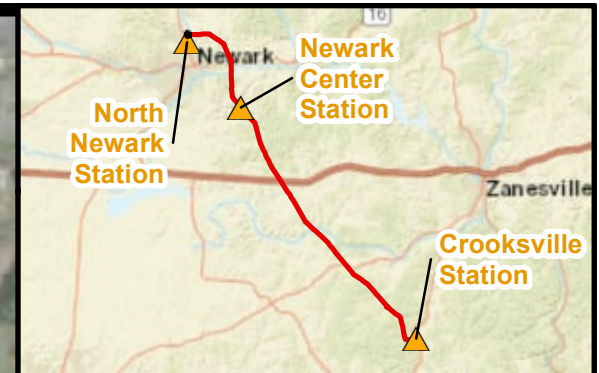
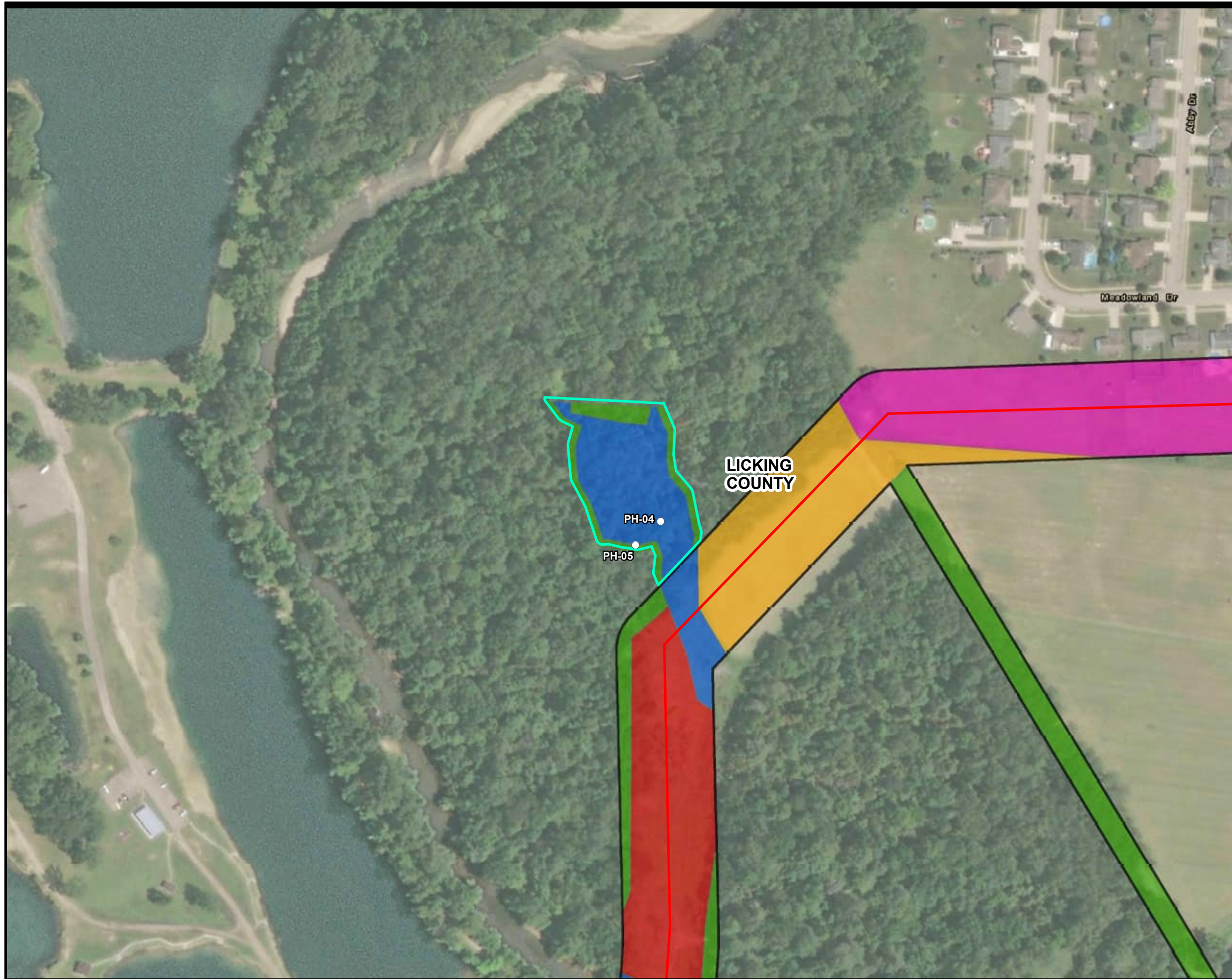


LEGEND:

- Photo Location
 - Crooksville-North Newark 138 kV Transmission Line
 - ▭ Project Survey Area (Addendum 3)
 - ▭ Completed Project Survey Area
 - ▭ County Boundary
- Vegetative Community Type**
- Agricultural Land
 - Landscaped Area
 - Shrub/Scrub
 - Urban

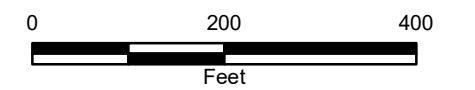


**FIGURE 5A
VEGETATIVE COMMUNITIES
ASSESSMENT MAP**

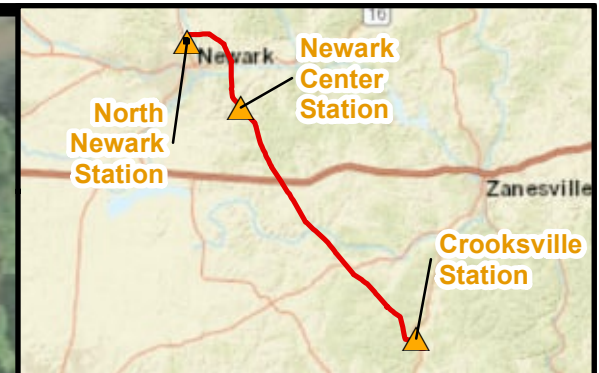
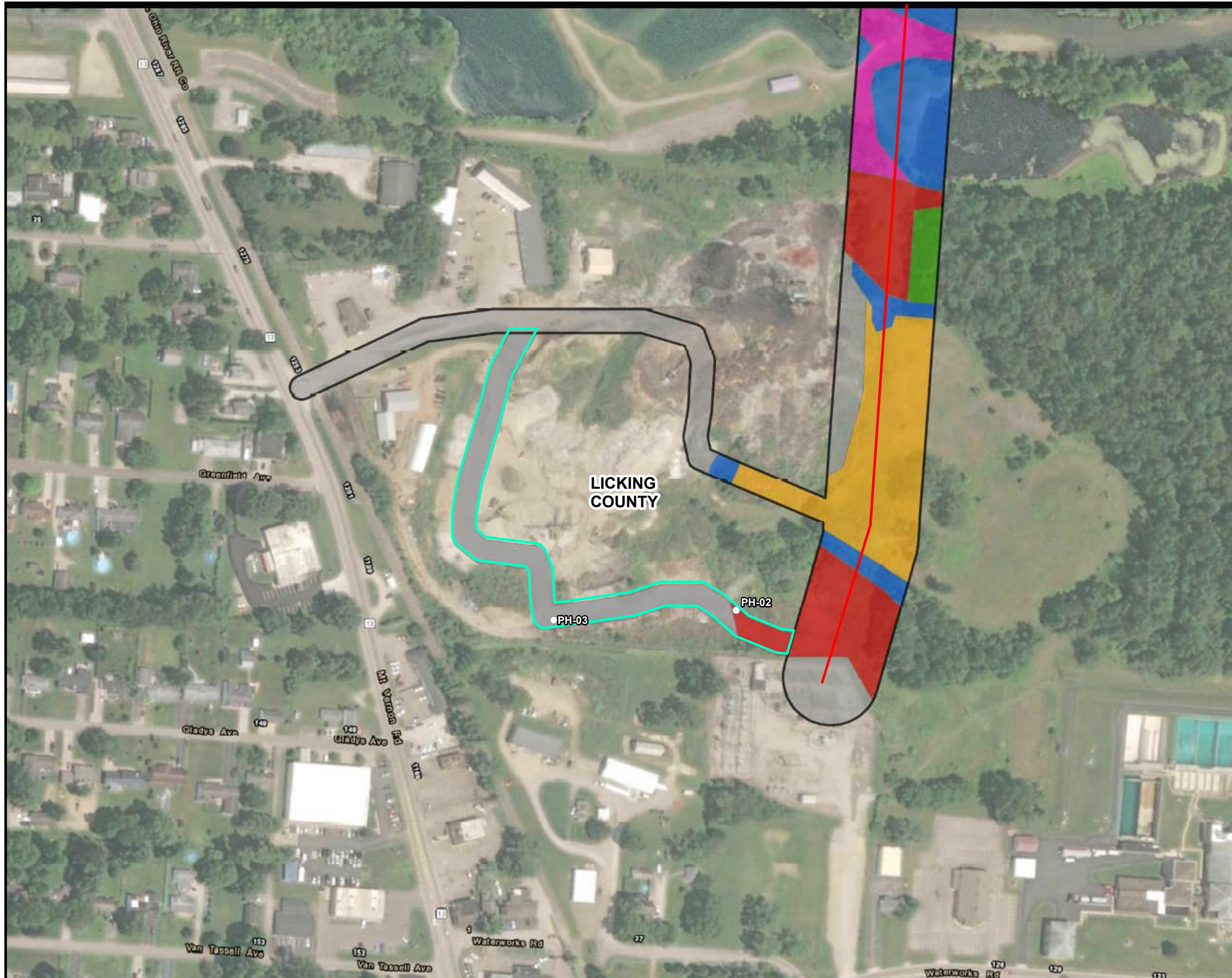


LEGEND:

- Photo Location
 - Crooksville-North Newark 138 kV Transmission Line
 - ▭ Project Survey Area (Addendum 3)
 - ▭ Completed Project Survey Area
 - ▭ County Boundary
- Vegetative Community Type**
- Successional Woodland
 - Hay Field/Pasture
 - Landscaped Area
 - Old Field
 - Stream/Wetland

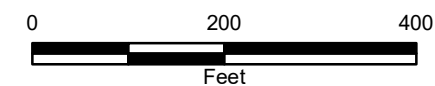


**FIGURE 5B
VEGETATIVE COMMUNITIES
ASSESSMENT MAP**



LEGEND:

- Photo Location
- Crooksville-North Newark 138 kV Transmission Line
- ▭ Project Survey Area (Addendum 3)
- ▭ Completed Project Survey Area
- ▭ County Boundary
- Vegetative Community Type**
- ▭ Successional Woodland
- ▭ Hay Field/Pasture
- ▭ Landscaped Area
- ▭ Old Field
- ▭ Stream/Wetland
- ▭ Urban



**FIGURE 5C
VEGETATIVE COMMUNITIES
ASSESSMENT MAP**

APPENDIX A**U.S. Army Corps of Engineers Wetland Data Forms/OEPA Wetland ORAM Forms/Delineated Features Photographs**

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 11/1/2022
 Applicant/Owner: AEP State: OH Sampling Point: Wetland 105a
 Investigator(s): JMH, RLP Section, Township, Range: Q SW T2N R11W
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None
 Slope (%): 1 Lat: 40.095648 Long: -82.415064 Datum: NAD83
 Soil Map Unit Name: St NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: This sample point is representative of the upland agriculture field located along the edge of a corn field.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status																	
1.	<u>Ulmus americana</u>	35	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		35 =Total Cover																			
Sapling/Shrub Stratum	(Plot size: <u>15'</u> radius)																				
1.	_____	_____	_____	_____	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x 2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>240</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.29</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>75</u>	x 2 = <u>150</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>240</u> (B)	Prevalence Index = B/A = <u>2.29</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>75</u>	x 2 = <u>150</u>																				
FAC species <u>30</u>	x 3 = <u>90</u>																				
FACU species <u>0</u>	x 4 = <u>0</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>105</u> (A)	<u>240</u> (B)																				
Prevalence Index = B/A = <u>2.29</u>																					
2.	_____	_____	_____	_____																	
3.	_____	_____	_____	_____																	
4.	_____	_____	_____	_____																	
5.	_____	_____	_____	_____																	
		=Total Cover																			
Herb Stratum	(Plot size: <u>5'</u> radius)																				
1.	<u>Persicaria longiseta</u>	30	Yes	FAC	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</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) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2.	<u>Poa palustris</u>	20	Yes	FACW																	
3.	<u>Verbesina alternifolia</u>	10	No	FACW																	
4.	<u>Impatiens capensis</u>	10	No	FACW																	
5.	_____	_____	_____	_____																	
6.	_____	_____	_____	_____																	
7.	_____	_____	_____	_____																	
8.	_____	_____	_____	_____																	
9.	_____	_____	_____	_____																	
10.	_____	_____	_____	_____																	
		70 =Total Cover																			
Woody Vine Stratum	(Plot size: <u>30'</u> radius)																				
1.	_____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>																
2.	_____	_____	_____	_____																	
		=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)
 A preponderance of hydrophytic vegetation was present

SOIL

Sampling Point: Wetland 105z

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		
0-20	7.5YR 4/2	95	7.5YR 5/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

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 checked="" 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)

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

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

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input 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 checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input 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: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

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

Remarks:
 Multiple secondary wetland hydrology indicators were present.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Crooksville-North Newark 138 kV Transmission Line City/County: Licking County Sampling Date: 10/18/2022
 Applicant/Owner: AEP State: OH Sampling Point: UPL-JMH-001
 Investigator(s): JMH, LMP Section, Township, Range: Q SW T2N R11W
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None
 Slope (%): 1 Lat: 40.072537 Long: -82.355924 Datum: NAD83
 Soil Map Unit Name: AfB NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: This sample point is representative of the upland agriculture field located along the edge of a corn field.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u> radius)	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																	
2.	_____	_____	_____	_____																		
3.	_____	_____	_____	_____																		
4.	_____	_____	_____	_____																		
5.	_____	_____	_____	_____																		
		=Total Cover																				
Sapling/Shrub Stratum	(Plot size: <u>15'</u> radius)				Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>		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>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
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>100</u>	x 4 = <u>400</u>																					
UPL species <u>0</u>	x 5 = <u>0</u>																					
Column Totals: <u>100</u> (A)	<u>400</u> (B)																					
Prevalence Index = B/A = <u>4.00</u>																						
1.	_____	_____	_____	_____																		
2.	_____	_____	_____	_____																		
3.	_____	_____	_____	_____																		
4.	_____	_____	_____	_____																		
5.	_____	_____	_____	_____																		
		=Total Cover																				
Herb Stratum	(Plot size: <u>5'</u> radius)				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) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
1.	<u>Dactylis glomerata</u>	50	Yes	FACU																		
2.	<u>Phleum pratense</u>	30	Yes	FACU																		
3.	<u>Setaria faberi</u>	20	Yes	FACU																		
4.	_____	_____	_____	_____																		
5.	_____	_____	_____	_____																		
6.	_____	_____	_____	_____																		
7.	_____	_____	_____	_____																		
8.	_____	_____	_____	_____																		
9.	_____	_____	_____	_____																		
10.	_____	_____	_____	_____																		
		100 =Total Cover																				
Woody Vine Stratum	(Plot size: <u>30'</u> radius)				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>																	
1.	_____	_____	_____	_____																		
2.	_____	_____	_____	_____																		
		=Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.) No hydrophytic vegetation indicators present as dominance test is not > 50%, dominant species are FACW, FACU and UPL.																						

SOIL

Sampling Point: JPL-JMH-00

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		
0-20	10YR 4/3	100					Loamy/Clayey	

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"/> Coast Prairie Redox (A16)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Iron-Manganese Masses (F12)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Other (Explain in Remarks)	
<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)		

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

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
---	--

Remarks:
 This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

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

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

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

Remarks:
 No hydrology indicators present.

Version 5.0	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization
	<div style="display: flex; justify-content: space-between;"> <div style="width: 70%;"> <p>Background Information Scoring</p> <p>Boundary Worksheet Narrative Rating</p> <p>Field Form Quantitative Rating</p> <p>ORAM Summary Worksheet</p> <p>Wetland Categorization Worksheet</p> </div> <div style="width: 25%; text-align: right; vertical-align: top;"> <p>Ohio EPA, Division of Surface Water Final: February 1, 2001</p> </div> </div>

Instructions

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

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

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

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

Background Information

Name:	Josh Holmes
Date:	11/1/2022
Affiliation:	AECOM
Address:	707 Grant Street, Pittsburgh Pa 15219
Phone Number:	(724) 882-6958
e-mail address:	Joshua.Holmes@aecom.com
Name of Wetland:	Wetland 105
Vegetation Communit(ies):	PFO/PEM
HGM Class(es):	DEPRESSIONAL

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



Lat/Long or UTM Coordinate:	40.09518, -82.41491
USGS Quad Name:	Newark
County:	Licking
Township:	T2N
Section and Subsection:	Q NE
Hydrologic Unit Code:	050400060205: Log Pond Run-North Fork Licking River Watershed
Site Visit:	6/2/2020
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	Wetland 105		
Wetland Size (delineated acres):	1.49	Wetland Size (Estimated total acres):	2.95

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



Comments, Narrative Discussion, Justification of Category Changes:

Sample Point in for wetland 105a (w-jbl-20200602-01a), PFO component of larger PEM/PFO wetland complex. Wetland extends to north outside study area, drains to south downslope towards North Fork Licking River. Sample Point in for wetland 105b , PEM component of larger PEM/PFO wetland complex. Wetland extends to south outside study area, drains to south downslope towards North Fork Licking River, potentially isolated.

Final score:	41	Category:	2
--------------	----	-----------	---

Wetland ID:	Wetland 105
--------------------	--------------------

Scoring Boundary Worksheet

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

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

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

Wetland ID: Wetland 105

Narrative Rating

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

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

Wetland ID:	Wetland 105
--------------------	--------------------

8b Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Go to Question 9a
9a Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Go to Question 10
9b Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Go to Question 9c
9c Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Go to Question 10
9d Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Go to Question 9e
9e Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Go to Question 10
10 Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Go to Question 11
11 Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	<div style="background-color: #cccccc; border: 1px solid red; padding: 2px;">*NO</div> Complete Quantitative Rating

Wetland ID:	Wetland 105
--------------------	--------------------

Table 1. Characteristic plant species.				
invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

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

Wetland ID: Wetland 105

Site: Crooksville-North Newark 138kV Transmission Line Rebuild Project
Rater(s): Audrey Hanner
Date: 6/2/2020

2.0 **2.0**
max 6 pts subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

Field ID:

W-JBL-20200602-01

Delineated acres:	0.26
Total acres:	0.65

12.0 **14.0**
max 14 pts. subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

14.0 **28.0**
max 30 pts. subtotal

Metric 3. Hydrology.

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

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

3c. Maximum water depth. Select one.

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

- ditch
- tile
- dike
- weir
- stormwater input
- point source (nonstormwater)
- filling/grading
- road bed/RR track
- dredging
- Other:

12.0 **40.0**
max 20 pts. subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

Check all disturbances observed

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

40.0
subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID: Wetland 105

Site: Crooksville-North Newark 138kV Transmis Rater(s): Audrey Hanner Date: 6/2/2020

40.0 subtotal this page

Field ID: W-JBL-20200602-01

0.0 40.0 max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1.0 41.0 max 20pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add

or deduct points for coverage

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

41.0 TOTAL (Max 100 pts)
2 Category

Wetland ID:	Wetland 105
--------------------	--------------------

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1. Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	*NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Question 10. Oak Openings	YES	*NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	2		
	Metric 2. Buffers and surrounding land use	12		
	Metric 3. Hydrology	14		
	Metric 4. Habitat	12		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	1		
	TOTAL SCORE	41		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	Wetland 105
--------------------	--------------------

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	*Category 2	Category 3
------------	------------	--------------------	------------

End of Ohio Rapid Assessment Method for Wetlands.

Client Name: AEP	Site Location: CROOKSVILLE-NORTH NEWARK 138KV TRANSMISSION LINE REBUILD PROJECTADDENDUM 3	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 105a	
Date: Novemeber 1, 2022	
Description: PFO Cateogry 2 Facing North	

Wetland 105a	
Date: Novemeber 1, 2022	
Description: PFO Cateogry 2 Facing East	

Client Name: AEP	Site Location: CROOKSVILLE-NORTH NEWARK 138KV TRANSMISSION LINE REBUILD PROJECTADDENDUM 3	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 105a
Date: Novemeber 1, 2022
Description: PFO Cateogry 2 Facing South



Wetland 105a
Date: Novemeber 1, 2022
Description: PFO Cateogry 2 Facing West



Client Name: AEP	Site Location: CROOKSVILLE-NORTH NEWARK 138KV TRANSMISSION LINE REBUILD PROJECTADDENDUM 3	Project No. 60616110
----------------------------	---	--------------------------------

Wetland 105a
Date: Novemeber 1, 2022
Description: PFO Cateogry 2 Facing Soil




APPENDIX B**Habitat Photographs**

Client Name: AEP	Site Location: CROOKSVILLE-NORTH NEWARK 138KV TRANSMISSION LINE REBUILD PROJECTADDENDUM 3	Project No. 60616110
----------------------------	---	--------------------------------

Agricultural Habitat	
Date: August 23, 2022	
Description: Agricultural Habitat Facing South	

Old Field Habitat	
Date: October 18, 2022	
Description: Old Field Habitat Facing North	

Client Name: AEP	Site Location: CROOKSVILLE-NORTH NEWARK 138KV TRANSMISSION LINE REBUILD PROJECTADDENDUM 3	Project No. 60616110
----------------------------	---	--------------------------------

Urban	
Date: October 18, 2022	
Description: Urban Habitat Facing South	

Wetland/Stream	
Date: November 1, 2022	
Description: Wetland Habitat Facing North	

Client Name: AEP	Site Location: CROOKSVILLE-NORTH NEWARK 138KV TRANSMISSION LINE REBUILD PROJECTADDENDUM 3	Project No. 60616110
----------------------------	---	--------------------------------

Forested Habitat	
Date: November 1, 2022	
Description: Forested Habitat Facing West	

Background Information

Name:	Josh Holmes
Date:	11/1/2022
Affiliation:	AECOM
Address:	707 Grant Street, Pittsburgh Pa 15219
Phone Number:	(724) 882-6958
e-mail address:	Joshua.Holmes@aecom.com
Name of Wetland:	Wetland 105
Vegetation Communit(ies):	PFO/PEM
HGM Class(es):	DEPRESSIONAL

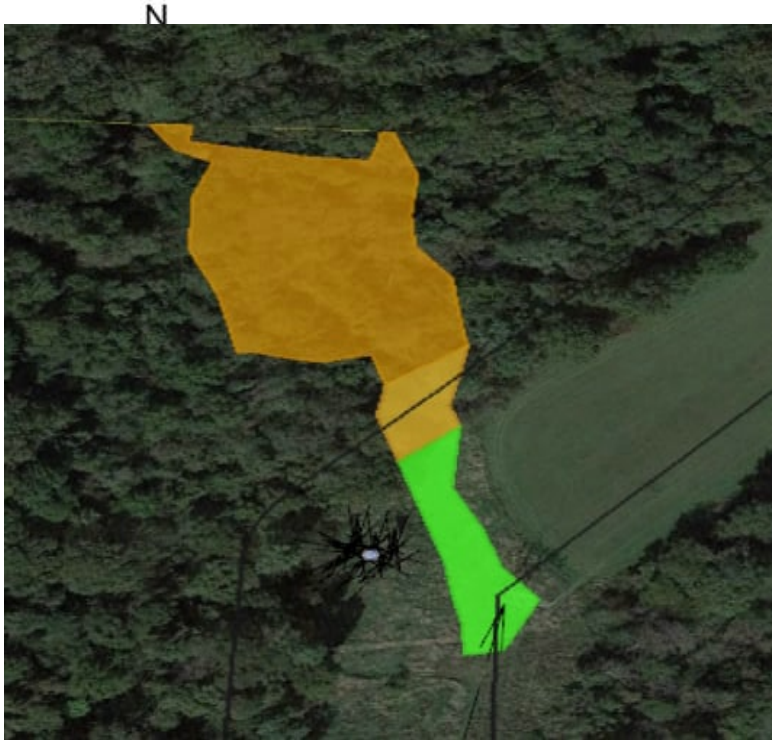
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	40.09518, -82.41491
USGS Quad Name:	Newark
County:	Licking
Township:	T2N
Section and Subsection:	Q NE
Hydrologic Unit Code:	050400060205: Log Pond Run-North Fork Licking River Watershed
Site Visit:	6/2/2020
National Wetland Inventory Map:	See Figure 2
Ohio Wetland Inventory Map:	N/A
Soil Survey:	See Figure 2
Delineation report/map:	See Figure 3

Name of Wetland:	Wetland 105		
Wetland Size (delineated acres):	1.49	Wetland Size (Estimated total acres):	2.95

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



Comments, Narrative Discussion, Justification of Category Changes:

Sample Point in for wetland 105a (w-jbl-20200602-01a), PFO component of larger PEM/PFO wetland complex. Wetland extends to north outside study area, drains to south downslope towards North Fork Licking River. Sample Point in for wetland 105b , PEM component of larger PEM/PFO wetland complex. Wetland extends to south outside study area, drains to south downslope towards North Fork Licking River.

Final score:	41	Category:	2
--------------	----	-----------	---

Wetland ID:	Wetland 105
--------------------	--------------------

Scoring Boundary Worksheet

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

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

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

Wetland ID: Wetland 105

Narrative Rating

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

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

Wetland ID:	Wetland 105
--------------------	--------------------

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

Wetland ID:	Wetland 105
--------------------	--------------------

Table 1. Characteristic plant species.				
invasive/exotic spp	fen species	bog species	oak opening species	wet prairie species
<i>Lythrum salicaria</i>	<i>Zygadenus elegans</i> var. <i>glaucus</i>	<i>Calla palustris</i>	<i>Carex cryptolepis</i>	<i>Calamagrostis canadensis</i>
<i>Myriophyllum spicatum</i>	<i>Cacalia plantaginea</i>	<i>Carex atlantica</i> var. <i>capillacea</i>	<i>Carex lasiocarpa</i>	<i>Calamagrostis stricta</i>
<i>Najas minor</i>	<i>Carex flava</i>	<i>Carex echinata</i>	<i>Carex stricta</i>	<i>Carex atherodes</i>
<i>Phalaris arundinacea</i>	<i>Carex sterilis</i>	<i>Carex oligosperma</i>	<i>Cladium mariscoides</i>	<i>Carex buxbaumii</i>
<i>Phragmites australis</i>	<i>Carex stricta</i>	<i>Carex trisperma</i>	<i>Calamagrostis stricta</i>	<i>Carex pellita</i>
<i>Potamogeton crispus</i>	<i>Deschampsia caespitosa</i>	<i>Chamaedaphne calyculata</i>	<i>Calamagrostis canadensis</i>	<i>Carex sartwellii</i>
<i>Ranunculus ficaria</i>	<i>Eleocharis rostellata</i>	<i>Decodon verticillatus</i>	<i>Quercus palustris</i>	<i>Gentiana andrewsii</i>
<i>Rhamnus frangula</i>	<i>Eriophorum viridicarinum</i>	<i>Eriophorum virginicum</i>		<i>Helianthus grosseserratus</i>
<i>Typha angustifolia</i>	<i>Gentianopsis</i> spp.	<i>Larix laricina</i>		<i>Liatris spicata</i>
<i>Typha xglauca</i>	<i>Lobelia kalmii</i>	<i>Nemopanthus mucronatus</i>		<i>Lysimachia quadriflora</i>
	<i>Parnassia glauca</i>	<i>Scheuchzeria palustris</i>		<i>Lythrum alatum</i>
	<i>Potentilla fruticosa</i>	<i>Sphagnum</i> spp.		<i>Pycnanthemum virginianum</i>
	<i>Rhamnus alnifolia</i>	<i>Vaccinium macrocarpon</i>		<i>Silphium terebinthinaceum</i>
	<i>Rhynchospora capillacea</i>	<i>Vaccinium corymbosum</i>		<i>Sorghastrum nutans</i>
	<i>Salix candida</i>	<i>Vaccinium oxycoccos</i>		<i>Spartina pectinata</i>
	<i>Salix myricoides</i>	<i>Woodwardia virginica</i>		<i>Solidago riddellii</i>
	<i>Salix serissima</i>	<i>Xyris difformis</i>		
	<i>Solidago ohioensis</i>			
	<i>Tofieldia glutinosa</i>			
	<i>Triglochin maritimum</i>			
	<i>Triglochin palustre</i>			

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

Wetland ID: Wetland 105

Site: Crooksville-North Newark 138kV Transmission Line Rebuild Project
Rater(s): Audrey Hanner
Date: 6/2/2020

2.0 **2.0**
max 6 pts subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

Field ID:

W-JBL-20200602-01

Delineated acres:	0.26
Total acres:	0.65

12.0 **14.0**
max 14 pts. subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

14.0 **28.0**
max 30 pts. subtotal

Metric 3. Hydrology.

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

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

3c. Maximum water depth. Select one.

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

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

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

3b. Connectivity. Score all that apply.

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

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

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

Check all disturbances observed

- ditch
- tile
- dike
- weir
- stormwater input
- point source (nonstormwater)
- filling/grading
- road bed/RR track
- dredging
- Other:

12.0 **40.0**
max 20 pts. subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

Check all disturbances observed

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

40.0
subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID: Wetland 105

Site: Crooksville-North Newark 138kV Transmis Rater(s): Audrey Hanner Date: 6/2/2020

40.0 subtotal this page

Field ID: W-JBL-20200602-01

0.0 40.0 max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1.0 41.0 max 20pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add

or deduct points for coverage

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

41.0 TOTAL (Max 100 pts)
2 Category

Wetland ID:	Wetland 105
--------------------	--------------------

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1. Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	*NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Question 10. Oak Openings	YES	*NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	2		
	Metric 2. Buffers and surrounding land use	12		
	Metric 3. Hydrology	14		
	Metric 4. Habitat	12		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	1		
	TOTAL SCORE	41		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	Wetland 105
--------------------	--------------------

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	*Category 2	Category 3
------------	------------	--------------------	------------

End of Ohio Rapid Assessment Method for Wetlands.