AMERICAN TRANSMISSION SYSTEMS, INCORPORATED
A FIRSTENERGY COMPANY

LETTER OF NOTIFICATION

HARDING-JUNIPER 345 kV & CHAMBERLIN-HARDING 345kV TRANSMISSION LINE RELOCATION PROJECT

OPSB Case No.: 26-0017-EL-BLN

January 6, 2026

American Transmission Systems, Incorporated
341 White Pond Drive
Akron, Ohio 44320

LETTER OF NOTIFICATION
HARDING-JUNIPER 345 kV & CHAMBERLIN-HARDING 345 kV
TRANSMISSION LINE RELOCATION PROJECT

The following information is being provided in accordance with Chapter 4906-6 of the Ohio Administrative Code ("Adm.Code") for the application and review of Accelerated Certificate Applications. Based upon the requirements found in Appendix A to Adm.Code 4906-1-01, this Project qualifies for submittal to the Ohio Power Siting Board ("Board") as a Letter of Notification application.

4906-6-05(B): LETTER OF NOTIFICATION REQUIREMENTS

4906-6-05(B)(1): Name and Reference Number

Name of Project: Harding-Juniper 345kV and Chamberlin-Harding 345kV Transmission Line Relocation Project ("Project")

Reference Number: 1043 (Harding-Juniper), 1020 (Chamberlin-Harding)

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

In this Project, American Transmission Systems, Incorporated ("ATSI"), a FirstEnergy company, proposes to relocate approximately 0.75 miles of the existing double circuit Harding-Juniper 345 kV and Chamberlin-Harding 345 kV Transmission Lines approximately 450' to the north of its current location. Currently the existing double circuit transmission line centerline passes through an active construction debris landfill. The landfill owner wants to expand operation to the area currently encumbered by the existing transmission lines and has requested that the transmission lines be relocated to accommodate expansion.

The Project is located in the Village of Valley View, Cuyahoga County, Ohio. The general location of the Project is shown in Exhibit 1, a partial copy of the United States Geologic Survey ("USGS") Topographic Map, Cuyahoga County, OH, Quad Map. Exhibit 2 is a partial copy of ESRI aerial imagery. The general layout of the Project is shown in Exhibit 3.

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

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

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

> *(b) Lines(s) greater than 0.2 miles in length but not greater than two miles in length.*

The proposed Project is within the requirements of Item (1)(b) because it involves the relocation of a transmission line for a distance of approximately 0.75 miles.

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

The Project is needed due to the request of the property owner. Currently the existing double circuit transmission line centerline passes through an active construction debris landfill. The landfill owner wants to expand operation to the area currently encumbered by the existing transmission lines. No advanced transmission technologies were considered due to the nature of the Project being a relocation of existing facilities.

4906-6-05(B)(3): Location of the Project Relative to Existing or Proposed Lines

The location of the Project relative to existing or proposed transmission lines is shown in the ATSI Transmission Network Map, included as part of the confidential portion of the FirstEnergy Corp. 2025 Long-Term Forecast Report ("LTFR"). This map was submitted to the Public Utilities Commission of Ohio ("PUCO") in Case No. 25-0504-EL-FOR under Adm.Code 4901:5-5:04 (C)(2)(b). The map is incorporated by reference

only. This Project is not included in the 2025 LTFR because the Project does not entail any topology or rating change. The general location of the Project area is shown in Exhibits 1 and 2. The general layout is shown in Exhibit 3.

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

Several alternatives were considered at the request of the property owner, all consisting of varying lengths of realignment. The proposed Project was chosen by the property owner due to cost and the amount of land that will be unencumbered as a result of the transmission line relocation.

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

ATSI's manager of External Affairs will advise local officials of the features and the status of the proposed Project as necessary. ATSI will maintain a copy of this Letter of Notification, along with other Project information, on FirstEnergy's website: https://www.firstenergycorp.com/about/transmission_projects/ohio.html.

ATSI will publish notice of the Project in the Cleveland Plain Dealer within 7 days of filing this Letter of Notification application. The notice will comply with Adm.Code 4906-6-08(A)(1)-(6).

Finally, during all phases of this Project, the public may contact ATSI through the transmission projects hotline at 1-888-311-4737 or via email at: transmissionprojects@firstenergycorp.com where the public may ask questions or leave comments on the Project for ATSI.

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

Construction on the Project is expected to begin as early as April 6, 2026, and be completed/in-service by May 22, 2026.

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

Exhibit 1 provides a partial copy of the USGS Topographic Map, Cuyahoga County OH, Quad Map. Exhibit 2 is a copy of ESRI aerial imagery of the Project area. The general layout of the Project is shown in Exhibit 3.

4906-6-05(B)(8): Properties List

The Project will be located on existing Cleveland Electric Illuminating Company ("CEI") fee owned property on parcels 57119001, 5711902 and 57123001, and adjacent to a new relocated ROW on parcel number 57113001, the landfill property.

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

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

The transmission line construction will have the following characteristics:

Voltage:	345 kV
Conductors:	Current – 954 kcmil 48/7 "Towhee" ACSR
	New- 954 kcmil 48/7 "Towhee" ACSR
Static Wire:	Current – 7#8 Alumoweld shield wires
	New – 7#8 Alumoweld shield wires
Insulators:	Glass
ROW Width:	100 feet: ATSI Relocated ROW
	158 feet: CEI Fee Property
Land Requirements:	New
Structure Types:	**Exhibit 4**: 345kV Double Circuit Tubular Steel Suspension Structure, 0-2° Line Angle (2 Structures)
	Exhibit 5: 345kV Double Circuit Tubular Steel Deadend Structure, 0-50° Line Angle (3 Structures)

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

There are no occupied residences or institutions within 100 feet of the Project and therefore no Electric and Magnetic Field ("EMF") calculations are required by this code provision.

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

The estimated cost for the proposed Project is $4,260,000

Although not statutorily required for approval, at the request of OPSB Staff, ATSI confirms that ATSI's costs will be fully reimbursed by the Customer.

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

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

The Project is located in the Village of Valley View in Cuyahoga County, Ohio. The main land use in the Project area is a landfill. Because the Project is relocating the existing transmission line out of the landfill area, no significant changes or impacts to the current land uses are anticipated.

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

Agricultural land does not exist within the Project's Area of Potential Effect ("APE").

4906-6-05(B)(10)(c): Archaeological or Cultural Resources

As part of the investigation for this Letter of Notification, TRC Environmental Corporation, ("TRC") requested database information from the Ohio Historic Preservation Office's ("OHPO") on August 19, 2025, for the Project Study Area (Area of Potential Effect or "APE") with a one (1)-mile search radius. On August 19, 2025, SHPO replied to the request and the response is attached as Exhibit 6. SHPO concurred that the Project, as proposed, will have no effect on historic properties and no cultural resource studies are warranted. No further coordination is required for this Project unless the scope of work changes or archaeological remains are discovered during the course of the Project completion.

The OHPO database includes a catalog of all historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP), including districts, sites, building, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The file review revealed there is one (1) NRHP-listed above-ground historic resource, and two (2) NRHP-listed historic districts

recorded within one (1)-mi of the proposed Project. The NRHP-listed resource is Lock No. 39 and Spillway (Ref. No. 79000292), located 0.96 mi to the southwest. The NRHP-listed historic districts include the Ohio and Erie Canal (Ref. No.: 66000607), located 0.88 mi southwest and the Valley Railway Historic District (Ref. No: 85001123), located 0.99 mi southwest. In addition, there are two (2) OHPO determinations of eligibility for resources situated 0.93 mi northeast and 0.64 mi to the southwest.

The OHPO database also includes listings on the Ohio Historic Inventory (OHI), the Ohio Archaeological Inventory (OAI), previous cultural resource surveys, and the Ohio Genealogical Society (OGS) cemetery inventory. The file search revealed that there are 37 additional above-ground historic resources that have been recorded, but not yet formally evaluated for NRHP eligibility, and five (5) Ohio Genealogical Society (OGS) cemeteries recorded within one (1)-mi of the proposed Project. Two (2) above-ground historic resource surveys have been completed to the northeast and southwest. Neither survey overlaps with the Project Study Area.

Six (6) archaeological surveys have been conducted within one (1)-mi of the proposed Project. None of the surveys overlap with portions of the Project Study Area, with the nearest survey located 0.45 mi to the southeast. Eleven (11) archaeological sites, including six (6) historic sites and five (5) precontact sites have been recorded within one (1)-mi. The historic sites include residential, mortuary, and industrial sites that date from the late eighteenth through nineteenth centuries. The precontact sites include open sites that date to the Paleolithic, Early Archaic, Middle and Late Woodland, and Late Prehistoric Periods.

The Project Study Area consists of an existing, maintained utility ROW, surrounded by a landfill. Currently, as proposed, no new tree clearing is anticipated within or outside the Project Study Area. The proposed Project is not expected to have any adverse effects on known historic properties. To date, TRC has not conducted any on-site cultural resources surveys.

4906-6-05(B)(10)(d): Construction Filings with Local, State, and Federal Governmental Agencies

No construction filings with local, state, or federal governmental agencies are applicable based on the proposed Project. If more than one (1) acre of earth disturbance is proposed in future changes to the Project scope, then submittal of a Notice of Intent (NOI) application to the Ohio EPA would be required for coverage under the general construction stormwater permit (OHC000006), and a Storm Water Pollution Prevention Plan (SWPPP) submitted to the Village of Valley View. All permitting and/or coordination necessary to comply with local, state, and federal agencies with jurisdiction regarding this Project will be completed prior to the commencement of construction.

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

As part of the investigation, ATSI retained TRC to conduct necessary surveys. TRC submitted a request to the Ohio Department of Natural Resources ("ODNR") Office of Real Estate to conduct an Environmental Review. As part of the Environmental Review, the Ohio Department of Natural Resources (ODNR) Office of Real Estate searches the ODNR Division of Wildlife (DOW) Natural Heritage Database in order to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project Study Area. The ODNR's Office of Real Estate's response dated July 28, 2025 indicated that there are no records of state and/or federally listed plants or animals located within a one (1) mile radius of the Project Study Area. In addition, ODNR's response indicated that the Project is within the range of ten (10) state and/or federally listed animal species. A list of all endangered, threatened, and rare species, as identified by ODNR, within the range of the Project is provided in Table 1. A copy of ODNR's Office of Real Estate's response is included as Exhibit 7.

Table 1. List of Endangered and Threatened Species within range of Project Study Area

Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Mammals				
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	Trees, forests, caves, and caverns.
Little Brown Bat	*Myotis lucifugus*	N/A	Endangered	Trees, forests, caves, and caverns.

Common Name	Scientific Name	Federal Listed Status	State Listed Status	Affected Habitat
Northern Long-eared Bat	*Myotis septentrionalis*	Endangered	Endangered	Trees, forests, caves, and caverns.
Tricolored Bat	*Perimyotis subflavus*	Proposed Endangered	Endangered	Trees, forests, caves, and caverns.
Fish				
Bigmouth shiner	*Notropis dorsalis*	N/A	Threatened	Perennial streams.
Channel darter	*Percina copelandi*	N/A	Threatened	Perennial streams.
Lake sturgeon	*Acipenser fulvescens*	Species of Concern	Endangered	Large bodies of water with connections to much smaller streams for spawning.
Reptiles				
Blanding's turtle	*Emydoidea blandingii*	N/A	Threatened	Marshes, ponds, lakes, streams, wet meadows, and swampy forests.
Smooth greensnake	*Opheodrys vernalis*	N/A	Endangered	Prairies, marshy meadows, and roadside ditches.
Spotted turtle	*Clemmys guttata*	N/A	Threatened	Fens, bogs and marshes, wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches.

Based on the information received from correspondence with ODNR, the Project is within the vicinity of records for the northern long-eared bat and the little brown bat. Since the presence of state endangered bat species has been established in the area, summer tree clearing is not recommended by ODNR. The Project is also within the ranges of the Indiana bat, the northern long-eared bat, the little brown bat, and the tricolored bat. These bat species predominantly roost in trees behind loose, exfoliating bark, in crevices, and cavities, or in the leaves. These species are dependent on the forest structure surrounding the roost tress. The DOW recommended a desktop bat hibernaculum assessment be completed for the Project, which TRC completed for FirstEnergy and submitted to ODNR for concurrence on August 18, 2025. ODNR responded on August 19, 2025, included as Exhibit 8, concurring that no caves, cliffs, or mine openings occur in the Project Study Area; therefore, the Project is not likely to

impact hibernating bats. In assessing compliance with NWP General Condition 18, TRC determined that tree clearing is not anticipated within the Project Study Area; therefore, no impacts to bat species are anticipated as a result of the construction of this Project.

The Project is within the range of the lake sturgeon (*Acipenser fulvescens*), a state endangered fish and a federal species of concern, the channel darter (*Percina copelandi*), a state threatened fish, and the bigmouth shiner (*Notropis dorsalis*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. Since no in-water work is proposed in a perennial stream, this Project will not impact these or other aquatic species.

The Project is within the range of the smooth greensnake (*Opheodrys vernalis*), a state endangered species. This species is primarily a prairie inhabitant but can also be found in marshy meadows and roadside ditches. Due to the location, the type of habitat within the Project area, and the type of work proposed, this Project is not likely to impact this species.

The Project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs, and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat within the Project area, and the type of work proposed, this Project is not likely to impact this species.

The Project is also within the range of the Blanding's turtle (*Emydoidea blandingii*), a state threatened species. This species inhabits marshes, ponds, lakes, streams, wet meadows, and swampy forests. Although essentially aquatic, the Blanding’s turtle will travel over land as it moves from one wetland to the next. Due to the location, the type of habitat within the Project area, and the type of work proposed, this Project is not likely to impact this species.

As part of the investigation, TRC submitted a request to the USFWS on June 30, 2025, to research the presence of any endangered, threatened, rare, or designated species within the Project Study Area. A copy of the USFWS' response, dated July 21, 2025, is included as Exhibit 9.

USFWS' response indicated that should the proposed Project Study Area contain trees ≥3 inches dbh, they recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination 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, USFWS recommends the removal of any trees ≥3 inches dbh only occur between October 1 and March 31. If bridges or culverts will be impacted, USFWS recommends reviewing Appendix K in the most recent "Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines" to determine if the bridge/culvert may be suitable roost habitat. To avoid adverse effects, USFWS recommends impacts to suitable bridges and culverts only occur from October 1 and March 31. In addition, the USFWS response stated that Indiana bat and/or northern long-eared bat presence has been confirmed in the Project vicinity. Since no tree clearing is proposed, and that there will be no impacts to bridges, culverts, or underground mines or caves, this Project is not likely to impact these species.

USFWS has proposed to list the monarch butterfly (*Danaus plexippus*) as threatened under the ESA. This species is found throughout the state of Ohio. Threats include habitat loss – particularly the loss of milkweed, the monarch caterpillar's sole food source – and mortality resulting from pesticide use. USFWS recommends the following actions to maintain habitat and avoid impacts to monarchs in Ohio: revegetate disturbed areas with native plant species including nectar-producing plants and milkweed endemic to the area; limit mowing monarch habitat from March 15 to August 31 when monarchs are breeding and from September 1 to October 31 when large numbers of monarchs are migrating; and avoid the use of pesticides and herbicides in and near monarch habitat. Although milkweed was not observed on-site during fieldwork; milkweed does populate disturbed areas, including roadsides. The Study Area, which

includes the utility ROW, is a partially vegetated area which could support monarch habitat. The active landfill, which is very disturbed, is not located directly below the existing utility lines. Therefore, there is a potential for monarch habitat to exist within the Study Area, within the less disturbed, vegetated areas of the Study Area. By adhering to the USFWS restrictions for mowing and spraying within the vegetated landscapes, then impacts to the monarch butterfly are not expected.

USFWS also stated that due to the Project type, size, location, and that no tree clearing is proposed to avoid impacts to the Indiana bat, northern long-eared bat, and tricolored bat, no adverse effects to any federally endangered, threatened, or proposed species, or proposed or designated critical habitat are anticipated.

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

TRC performed field investigations to identify and delineate wetlands and waterbodies located within the 18.99-acre Project Study Area on June 24, 2025. One (1) palustrine emergent wetland (W-JMS-1) and one (1) intermittent stream (S-JMS-1) were identified and delineated within the Project Study Area. A Surface Water Delineation Report of the Project Study Area is included in Exhibit 10.

The Project Study Area consists of an existing, maintained utility ROW surrounded by industrial land use. TRC did not observe the presence of any of the ODNR or federally listed species during the field investigation due to the highly maintained nature of the utility ROW and surrounding industrial land use. Therefore, no impacts are anticipated to any of the listed species detailed in the ODNR correspondence.

The Limits of Disturbance (LOD) will be completely within the Project Study Area and will predominantly include using existing access roads and gravel lots within the industrial land use for the proposed structure relocations. NWP 57 (effective March 15, 2021, valid through March 14, 2026), authorizes the construction of access roads for the construction and maintenance of electric utility lines or telecommunication lines, including overhead lines and substations, in nontidal waters of the United States,

provided the activity does not cause the loss of greater than 0.5-acre of waters of the United States. Nationwide Permit Regional General Conditions were reviewed regarding this Project. This Project is located in the Village of Valley View, Cuyahoga County, Ohio which is within the USACE Buffalo Regulatory District. The Project location is not listed in Appendix 1 to Regional General Condition 5(a) (Endangered Species and Threatened Species). It is anticipated that due to the nature of the Project, jurisdictional resources will not be impacted by the proposed Project activity. Therefore, NWP 57 conditions are met and there is no potential trigger for a Section 404 PCN to USACE.

A review of the USGS Protected Areas Database (www.usgs.gov/programs/gap-analysis-project/science/protected-areas) revealed no conservation easements within the Project Study Area. The National Conservation Easement Database is no longer in use due to the database no longer being actively updated and supported.

4906-6-05(B)(10)(g): Other Information

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code ("NESC") as adopted by the PUCO and will meet all applicable safety standards established by the Occupational Safety and Health Administration.

No other or unusual conditions are expected that will result in significant environmental, social, health or safety impacts.

4906-6-07: Documentation of Letter of Notification Transmittal and Availability for Public Review

This Letter of Notification (LON) application is being provided concurrently with its docketing with the Board to the following officials.

Cuyahoga County

Mr. Chris Ronayne
Cuyahoga County Executive
2079 East Ninth Street
Cleveland, Ohio 44115
executive@cuyahogacounty.gov

Mr. David Ray, P.E., P.S.
Cuyahoga County Engineer
2079 East Ninth Street
Cleveland, Ohio 44115
publicworks@cuyhogacounty.gov

Mr. Robert E. Schleper, Jr.
Cuyahoga County Council
District 6
2079 East Ninth Street – 8th Floor
Cleveland, Ohio 44115
rschleper@cuyahogacounty.gov

Mr. Michael Dever, Chair
Cuyahoga County
Planning Commission
2079 East 9th Street
Cleveland, Ohio 44115
mdever@cuyahogacounty.us

Mr. Michael Jirousek
Cuyahoga County SWCD, Chair
3311 Perkins Ave, Suite #100
Cleveland, Ohio 44114
mjirousek@cuyahogaswcd.org

Village of Valley View

Mr. Matthew March
Mayor
6848 Hathaway Road
Valley View, Ohio 44125
mayor@valleyview.net

Ms. Mary Snyder
Clerk-Treasurer
6848 Hathaway Road
Valley View, Ohio 44125
clerk@valleyview.net

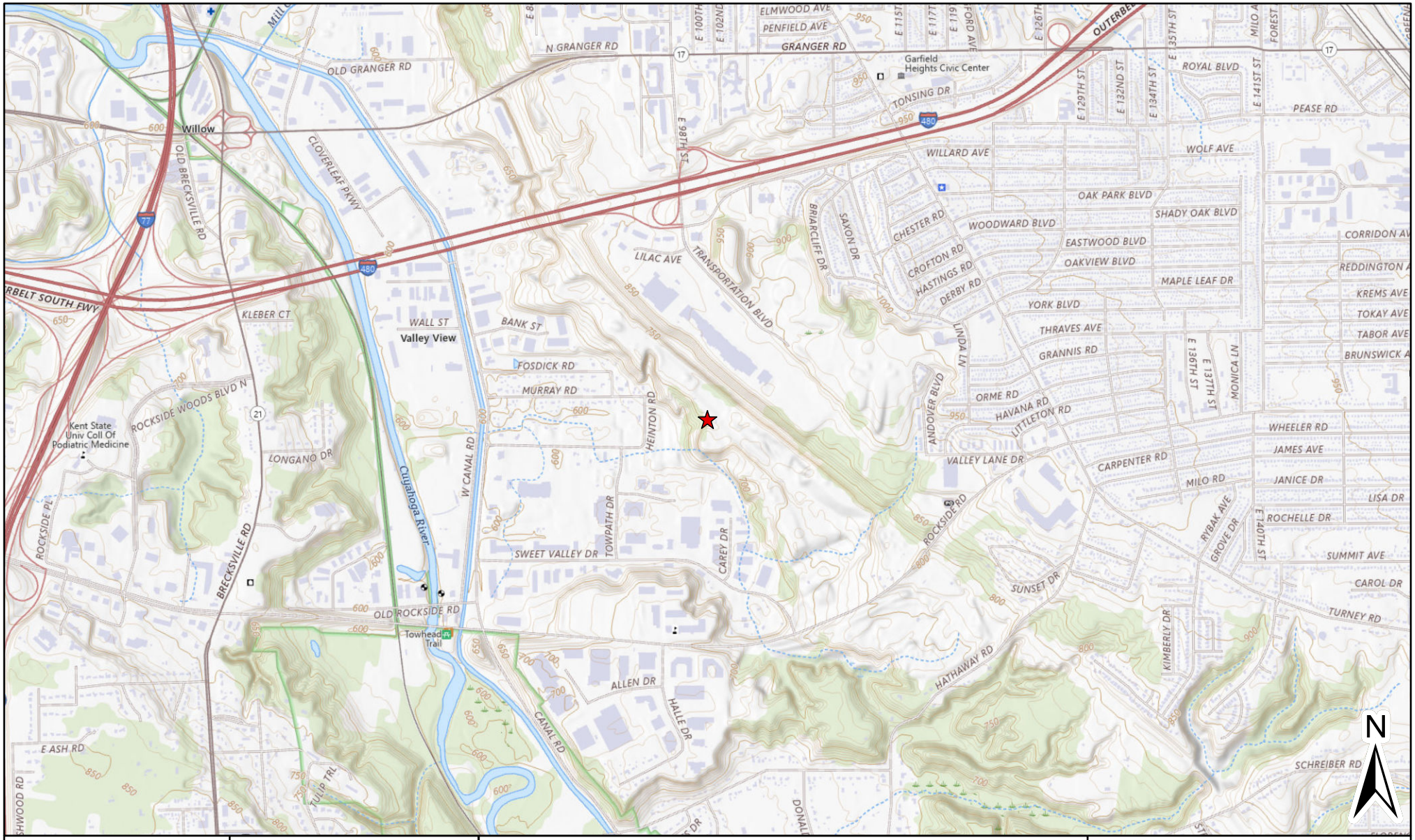
Mr. Todd Sciano
Engineer
Donald G Bohning &
Associates, Inc.
7979 Hub Parkway
Valley View, Ohio 44125
tsciano@dgbassoc.com

Library

Ms. Melanie Rapp-Weiss
Branch Manager
Cuyahoga County Public Library Independence Branch
6361 Selig Drive
Independence, OH 44131
mrapp@cuyahogalibrary.org

Copies of the transmittal letters to these officials have been included with this application as proof of compliance under Adm.Code 4906-6-07(B) to provide the Board with proof of notice to local officials as required by Adm.Code 4906-6-07(A)(1) and to libraries per Adm.Code 4906-6-07(A)(2).

Information is posted at:
https://www.firstenergycorp.com/about/transmission_projects/ohio.html on how to request an electronic or paper copy of this Construction Notice application. The link to this website is being provided to meet the requirements of Adm.Code 4906-6-07(B) and to provide the Board with proof of compliance with the notice requirements in Adm.Code 4906-6-07(A)(3).



Legend

★ Project Location

0 1,000 2,000 4,000

Feet

Reference Scale: 1:24,000

References:
ESRI Aerial Imagery, USGS National Map, ODOT

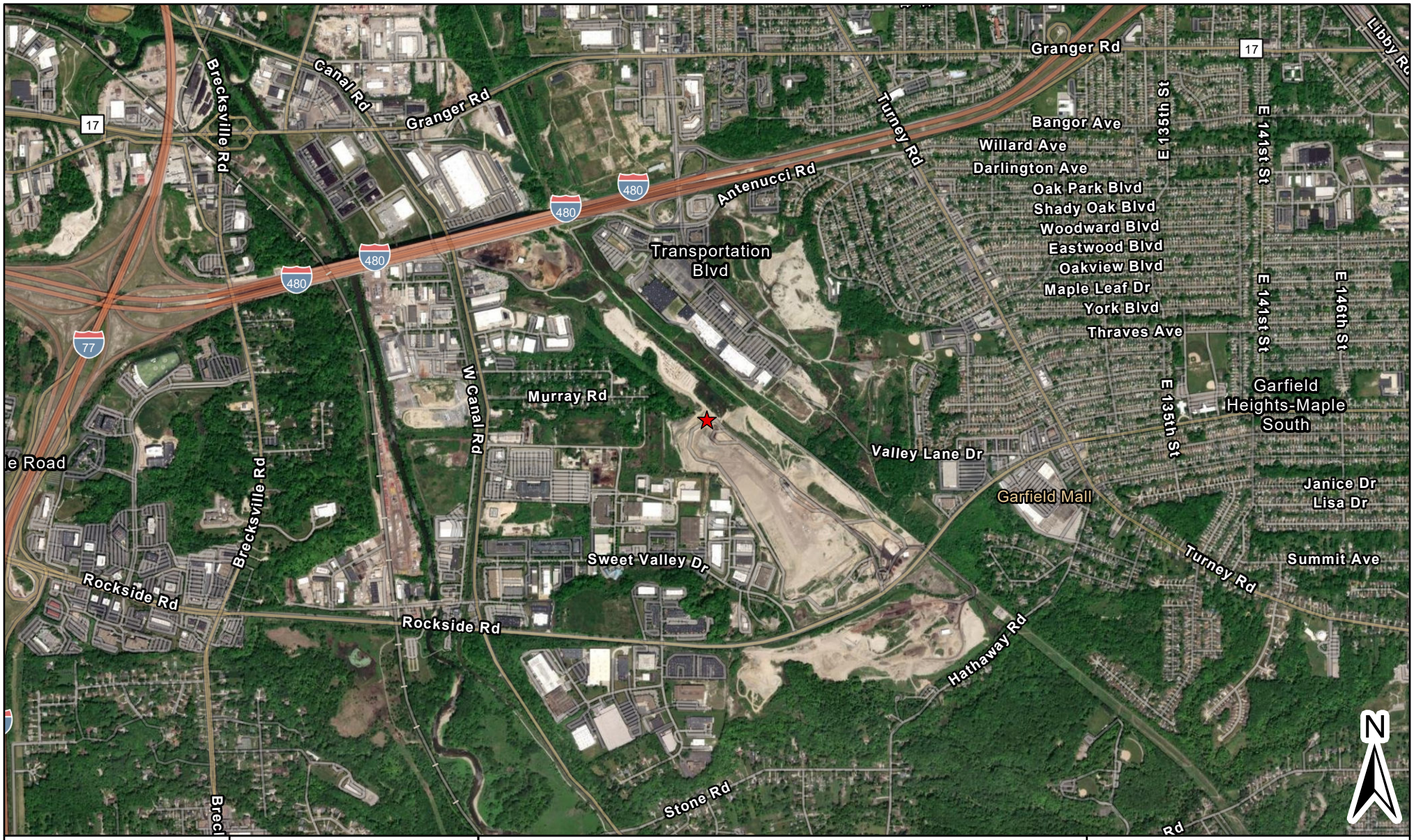
Coordinate System:
NAD 1983 2011 StatePlane Ohio North FIPS 3401 Ft US

ATSI®

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

Harding-Juniper 345kV and
Chamberlin-Harding 345kV
Transmission Line Structure

EXHIBIT 1



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Feet

Reference Scale: 1:24,000

References:
ESRI Aerial Imagery, USGS National Map, ODOT

Coordinate System:
NAD 1983 2011 StatePlane Ohio North FIPS 3401 Ft US

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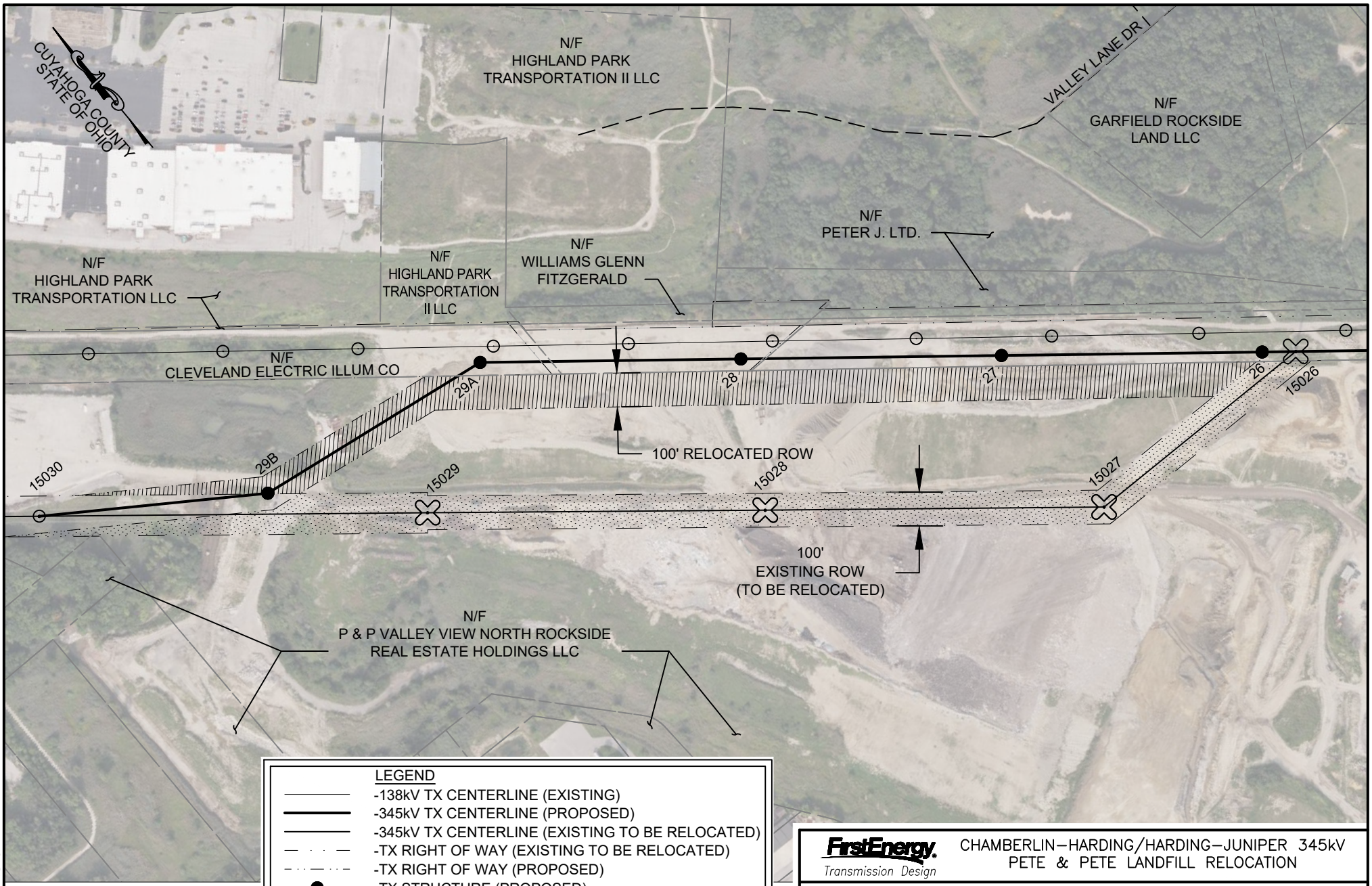
Harding-Juniper 345kV and
Chamberlin-Harding 345kV
Transmission Line Structure

EXHIBIT 2



LEGEND

- -138kV TX CENTERLINE (EXISTING)
- -345kV TX CENTERLINE (PROPOSED)
- -345kV TX CENTERLINE (EXISTING TO BE RELOCATED)
- -TX RIGHT OF WAY (EXISTING TO BE RELOCATED)
- -TX RIGHT OF WAY (PROPOSED)
- -TX STRUCTURE (PROPOSED)
- -TX STRUCTURE (EXISTING TO BE REMOVED)
- -EXISTING STRUCTURE
- -PROPERTY LINE
- -UNPAVED ROAD

FirstEnergy Transmission Design

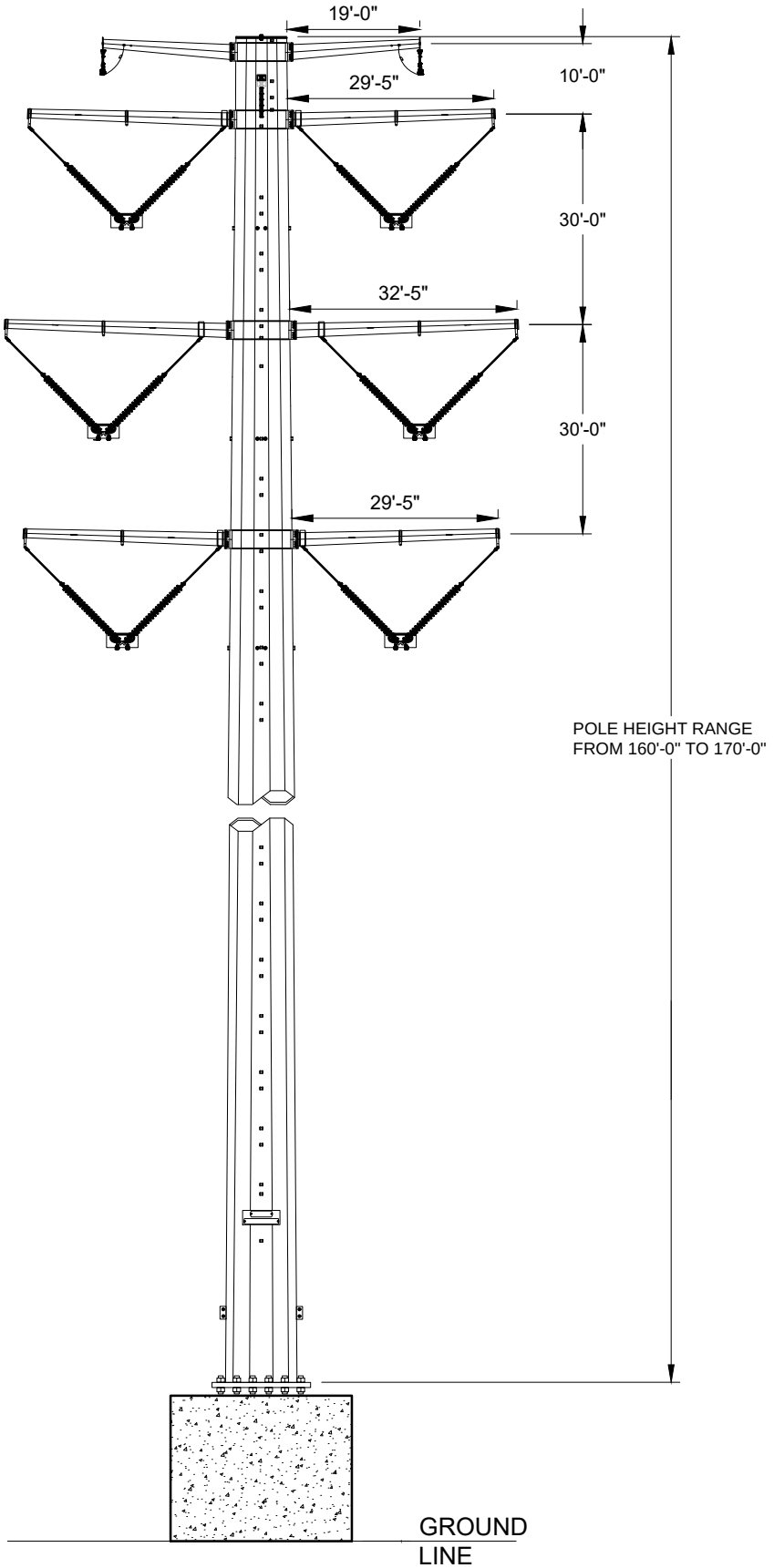
CHAMBERLIN–HARDING/HARDING–JUNIPER 345kV
PETE & PETE LANDFILL RELOCATION

GENERAL LAYOUT
NEW ROW EXHIBIT

EXHIBIT 3

PAPER SIZE: 11X8.5

SCALE: NTS



FirstEnergy
Transmission Design

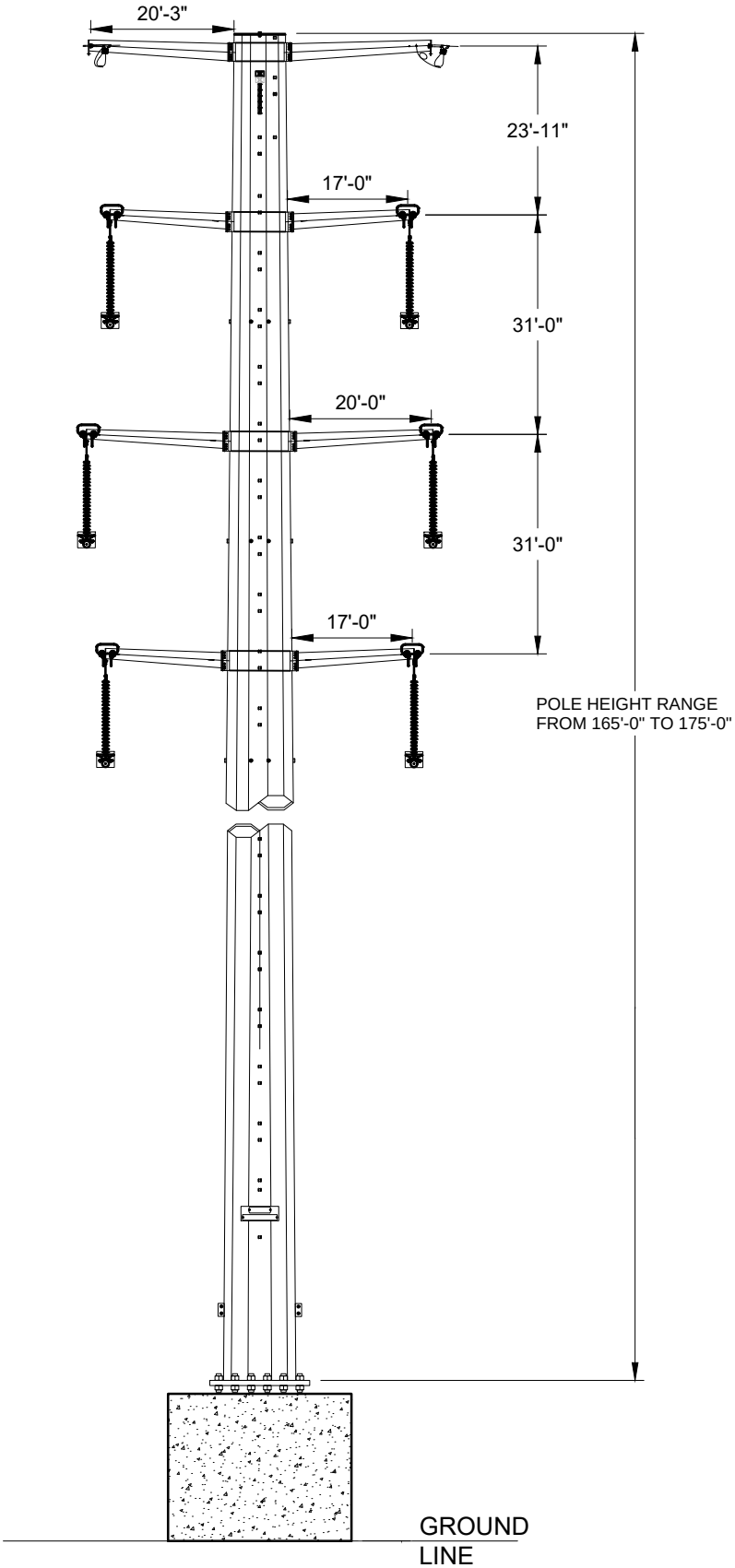
HARDING-JUNIPER 345kV AND CHAMBERLIN-HARDING 345kV
TRANSMISSION LINE STRUCTURE RELOCATION

DOUBLE CIRCUIT
TUBULAR STEEL STRUCTURE
VERTICAL SUSPENSION SINGLE POLE

EXHIBIT 4

SCALE: NTS

PAPER SIZE: 8.5X11



FirstEnergy Transmission Design

HARDING-JUNIPER 345kV AND CHAMBERLIN-HARDING 345kV
TRANSMISSION LINE STRUCTURE RELOCATION

DOUBLE CIRCUIT
TUBULAR STEEL STRUCTURE
VERTICAL DEADEND SINGLE POLE

EXHIBIT 5

SCALE: NTS

PAPER SIZE: 8.5X11

EXHIBIT 6

In reply refer to:
2025-CUY-65713

August 19, 2025

Justin McKissick, MA, RPA
Project Archaeologist/Field Director
TRC Environmental Corporation
317 E Carson Street, Suite 113
Pittsburgh, PA 15219
Email: JMcKissick@trccompanies.com

RE: Section 106 Review: Harding-Juniper 345kV Relocation Project, Valley View, Cuyahoga County, Ohio

Dear Mr. McKissick:

This letter is in response to the correspondence received on July 14, 2025, regarding the above referenced-project in Cuyahoga County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code (O.R.C.) and the Ohio Power Siting Board rules for siting this project. 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 project will involve the relocation of structures on the existing Harding-Juniper 345kV transmission line. Based on information submitted by you, no historic properties, districts, or archaeological sites are located within the direct Area of Potential Effect (APE), as defined by you. Based on the information submitted, it is the SHPO's opinion that no cultural resource studies are warranted for the project. Furthermore, as proposed, the project will have no effect on historic properties. No further coordination is required for this project unless the scope of work changes or archaeological remains are discovered during the course of the project. In such a situation, this office should be contacted. If you have any questions concerning this review, please contact me via email at sbiehl@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Stephen M. Biehl, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1109928

EXHIBIT 7

Department of Natural Resources
ohiodnr.gov

Office of Real Estate & Land Management
Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

July 28, 2025

Jenna Slabe
TRC Companies, Inc.
1382 West 9th Street, Suite 400
Cleveland, Ohio 44113

Re: 25-0980_Harding-Juniper 345kV Relocation

Project: The proposed project involves the relocation of structures on the Harding-Juniper 345kV transmission line.

Location: The proposed project is located in Valley View, Cuyahoga County, Ohio.

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

Natural Heritage Database: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

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

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

The project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, and the little brown bat (*Myotis lucifugus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree clearing is not recommended, and additional summer surveys would not constitute

presence/absence in the area. However, limited summer tree clearing inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in clusters of dead leaves on tree limbs. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree and/or tree limb clearing only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with a Diameter Breast Height (DBH) ≥ 20" if possible.

For every project, the DOW also recommends that a winter bat habitat assessment is conducted to determine if potential hibernacula are present within the project area. This is to limit possible disturbances that seasonal tree clearing and/or subsurface work (e.g., trenching, blasting, etc.) may cause to hibernating bats. Potential hibernacula include rocky outcroppings, caves, and underground mines. Direction on how to conduct winter habitat assessments can be found in the joint guidance OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile permanent tree clearing buffer around the hibernaculum entrance. Limited summer or winter tree clearing may be acceptable after consultation with the DOW. If a habitat assessment for projects involving subsurface disturbance finds that a potential hibernaculum is present within 5 miles of the project area, please consult with Eileen Wyza for project recommendations. If no tree clearing or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the lake sturgeon (*Acipenser fulvescens*), a state endangered fish and a federal species of concern, the channel darter (*Percina copelandi*), a state threatened fish, and the bigmouth shiner (*Notropis dorsalis*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the smooth greensnake (*Opheodrys vernalis*), a state endangered species. This species is primarily a prairie inhabitant but can also be found in marshy meadows and roadside ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the Blanding's turtle (*Emydoidea blandingii*), a state threatened species. This species inhabits marshes, ponds, lakes, streams, wet meadows, and swampy forests. Although essentially aquatic, the Blanding's turtle will travel over land as it moves from one wetland to

the next. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

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

Water Resources: The Division of Water Resources has not conducted a project specific review and/or comments, however, the guidance provided below should be reviewed by the Environmental Review applicant for applicability on this project and subsequent compliance.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer website can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

Ohio Revised Code (ORC) Section 1521.16 mandates that any owner of a property or a facility that has the capacity of withdrawing 100,000 gallons per day (gpd) of water from groundwater, surface water, or both must register with the Division of Water Resources' Water Withdrawal Facilities Registration (WWFR) Program and report their withdrawals annually.

Additional coordination may be required depending on the location of the withdrawal and consumptive use. Restrictions or permitting may be required for:

- New or increased consumptive use of water over 2 million gallons per day (mpg) within 30 days at a facility within the Ohio River basin.
- New or increased withdrawal and consumptive water use in the Lake Erie watershed averaging 1 million gallons per day (mpg) or more in 90 days.
- New or increased water withdrawal directly from Lake Erie averaging 2.5 million gallons per day (mpg) or more in 90 days.
- Diversion or movement of water across the Ohio River and Lake Erie basin divide.

If the project does not involve activities that are subject to water withdrawal regulatory requirements as described above, then no further action is required. For more information, visit the Water Inventory & Planning website.

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

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

EXHIBIT 8

From: Eileen.Wyza@dnr.ohio.gov
To: Van Nort, Erin
Cc: Molnar, Maggie
Subject: [EXTERNAL] RE: Desktop Hibernacula Assessment - FirstEnergy: Harding-Juniper 345kV Relocation Project
Date: Tuesday, August 19, 2025 9:01:59 AM
Attachments: image002.png
image004.png
image005.png
image006.png
image007.png
image008.png
image001.png

Hello Erin,

Per review of the desktop survey provided for the FirstEnergy's Harding-Juniper 345kV Relocation Project, the Ohio Division of Wildlife concurs with your assessment that no caves, cliffs, or mine openings occur in the project area. Therefore, the project is not likely to impact hibernating bats.

Should any reported conditions change before or during construction, please contact me for additional guidance.

Thank you,

Eileen Wyza, Ph.D.
(she/her/hers)
Wildlife Biologist
Ohio Division of Wildlife
Phone: 614-265-6764
Email: Eileen.Wyza@dnr.ohio.gov

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

From: Van Nort, Erin <EVanNort@trccompanies.com>
Sent: Monday, August 18, 2025 8:43 AM
To: Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Molnar, Maggie <MMolnar@trccompanies.com>
Subject: Desktop Hibernacula Assessment - FirstEnergy: Harding-Juniper 345kV Relocation Project

Eileen,

Please find attached a Desktop Hibernacula Assessment, including mapping and a photographic record (PDF). This assessment was completed for FirstEnrgy's proposed project known as Harding-Juniper 345kV Relocation located in the village of Valley View, Cuyahoga County Ohio.

If you need any additional information to complete this review, please feel free to contact us.

Thank you,
Erin

Erin Van Nort, PWS
Senior Wetland Scientist

TRCCOMPANIES.COM

1382 W 9th St, Suite 400
Cleveland, OH 44113

m 216.347.3342
evannort@trccompanies.com

United States Department of the Interior

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

July 21, 2025

Project Code: 2025-0113694

Dear Ms. Slabe:

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 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. Bridges and culverts have also been used as roosts. Additionally, northern long-eared bats have been observed roosting in other human-made structures, such as buildings, barns, 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 Restrictions 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. If bridges or culverts will be impacted, we recommend reviewing Appendix K in the most recent "Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines" to determine if the bridge/culvert may be suitable roost habitat. We recommend impacts to suitable bridges and culverts only occur from October 1 and March 31. These seasonal restrictions are recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared

bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

On December 12, 2024 the Service proposed to list the monarch butterfly (*Danaus plexippus plexippus*) as threatened under the ESA. Monarch butterflies are found throughout Ohio and some populations migrate vast distances across multiple generations each year. Many monarchs fly between the U.S., Mexico and Canada – a journey of over 3,000 miles. Monarch populations have declined significantly in recent years. Threats include habitat loss – particularly the loss of milkweed, the monarch caterpillar's sole food source – and mortality resulting from pesticide use. The Service recommends the following actions to maintain habitat and avoid impacts to monarchs in Ohio: revegetate disturbed areas with native plant species including nectar-producing plants and milkweed endemic to the area; limit mowing monarch habitat from March 15 to August 31 when monarchs are breeding and from September 1 to October 31 when large numbers of monarchs are migrating; and avoid the use of pesticides and herbicides in and near monarch habitat.

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

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat.Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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

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

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,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

1382 West Ninth St.
Suite 400
Cleveland, OH 44113

T 216.344.3072
TRCcompanies.com

June 30, 2025

Mr. Auggie Ruggiero
FirstEnergy Corporation
341 White Pond Drive
Akron, OH 44320

Reference: Technical Memorandum for the Surface Water Delineation of the Harding-Juniper 345kV Relocation Project located in the Village of Valley View, Cuyahoga County, Ohio.
(TRC Project No. 664675 Phase 24)

Dear Mr. Ruggiero:

On behalf of FirstEnergy Corporation (FirstEnergy), TRC Environmental Corporation (TRC) conducted a surface water delineation for Harding-Juniper 345kV Relocation Project (Project). The Project is in the Village of Valley View, Cuyahoga County, Ohio and the Study Area is 18.99 acres in size (**Attachment A, Figures 1 and 2**). The Project Study Area is located at the following approximate coordinates: 41.404043, -81.616956 (northwestern terminus) and 41.397572, -81.604575 (southeastern terminus). This Project involves the relocation of structures on FirstEnergy's Harding-Juniper 345kV Line.

The delineation was conducted by qualified wetland scientists on June 24th, 2025, in accordance with the United States Army Corps of Engineers (USACE) parameters. The objective was to evaluate and delineate potential surface water resources within the Project Study Area, such that the resources could be considered during each phase of the Project. Prior to the site visit, TRC reviewed available secondary source information such as the National Wetlands Inventory (NWI), National Hydrography Dataset (NHD), United States Geological Survey (USGS) topographic maps, County Soil Survey maps, and aerial imagery of the Project Study Area to use in addition to field investigations.

The Project Study Area is shown on the attached map (**Attachment A, Figure 1**), which was derived from the USGS Shaker Heights, Ohio 7.5-minute quadrangle topographic map. Soil mapped within the Project Study Area includes non-hydric soils and non-hydric with hydric inclusions (**Attachment A, Figure 3**). The proposed Project Study Area includes two (2) mapped NWI features (one freshwater pond and one riverine), and one (1) mapped NHD feature (**Attachment A, Figure 4**). According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map panel, 39035C0213E (eff. 12/3/2010), the proposed Project is not located within a FEMA mapped 100-Year Flood Zone. During the field investigation, land use within the Project Study Area was observed to be an existing, maintained utility right-of-way within industrial land use, surrounded by residential, commercial, and forested habitat. See attached mapping in **Attachment A** and the Photographic Record in **Attachment B** for further details of the Project Study Area.

During the field investigation, one (1) palustrine emergent wetland (W-JMS-1) and one (1) intermittent stream (S-JMS-1) were identified and delineated within the Project Study Area. No other ecological resources were observed within the Project Study Area. See **Table 1** and **Table 2** on the following page for a summary of these resources observed. The delineated wetland boundaries and USACE sample points are shown on **Figure 5** in **Attachment A**. Data was collected and recorded on the USACE Wetland Determination Data Sheets – Northcentral and Northeast Region, the Ohio Environmental Protection Agency's (Ohio EPA) Ohio Rapid Assessment Method (ORAM) data form, and the Ohio EPA Headwater Habitat Evaluation Index (HHEI) data form. The USACE Wetland Determination Data Sheets, the Ohio EPA ORAM, and the Ohio EPA HHEI are provided in **Attachment C.**

Table 1. Wetland

Wetland ID	Cowardin Classification within Study Area	Connection[1]	ORAM Score and Category	Delineated Area within Project Study Area (acres)
W-JMS-1	PEM	Adjacent	15 (Cat.1)	1.019

[1] Wetland connection is pending an update from Ohio EPA and USACE based on the USA vs. Sackett case.

Table 2. Stream

Stream ID	Resource Name[1]	Flow Re-gime	HHEI Score[2]	Classification[3]	Delineated Length within Pro-ject Study Area (Linear Feet/ Acres)
S-JMS-1	UNT to Cuyahoga River	Intermittent	56	Modified Class II PHW	40 ft (0.012-acre)

[1] UNT= Unnamed Tributary.
[2] HHEI, for streams with drainage areas of less than 1.0 square mile and a maximum pool depth of less than 40 centimeters.
[3] PHW= Primary Headwater.

This Technical Memorandum represents the conditions within the Project Study Area identified herein, as of the inspection dates. Should you require any additional information or have any questions concerning this letter, please feel free to contact me at (440) 666-2890 or by email at BFalkinburg@TRCCompanies.com.

Kind Regards,

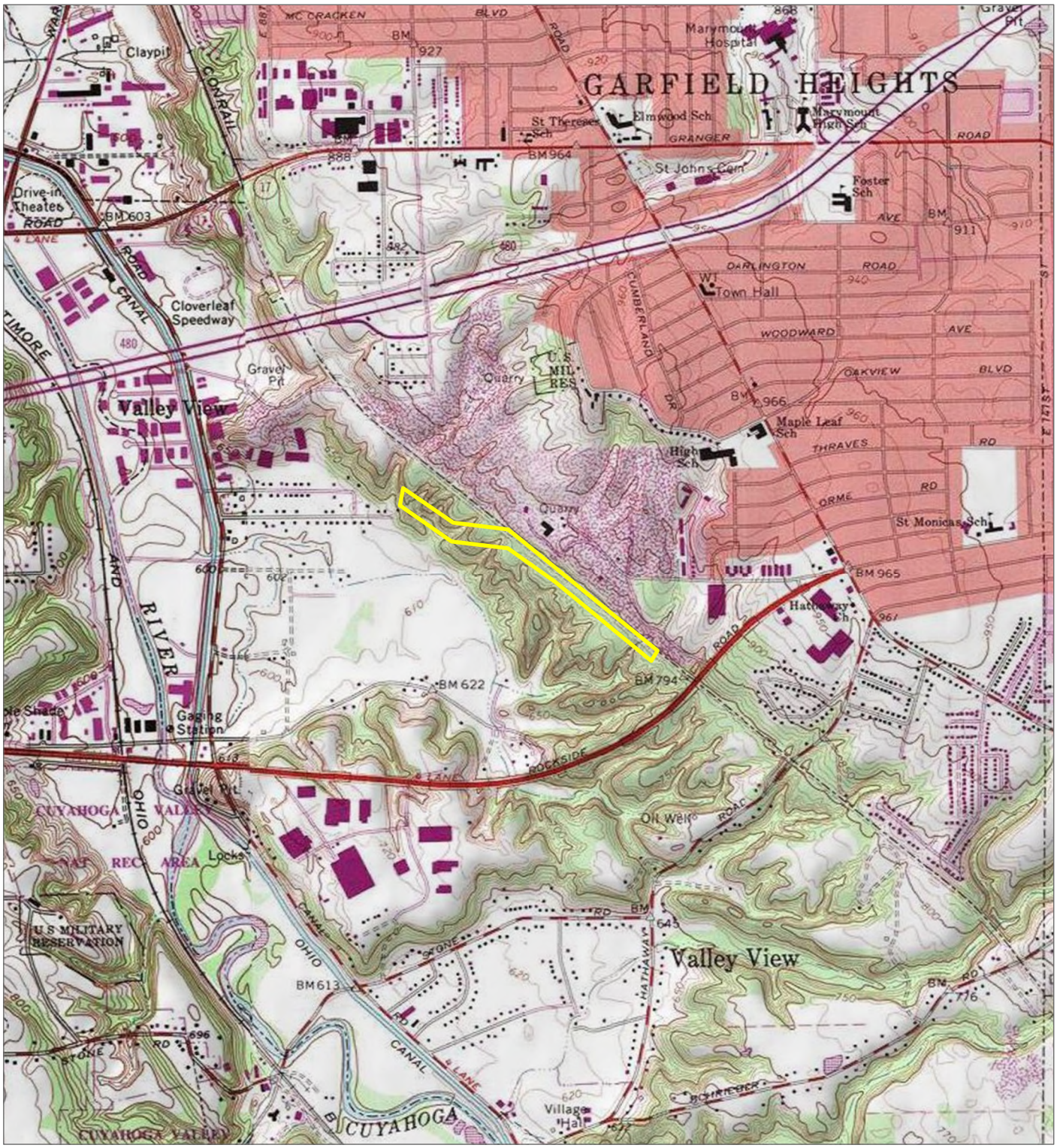
TRC

Brad M. Falkinburg, PWS
Ecological Office Practice Leader

cc: Maggie Molnar, PWS – TRC Environmental Corporation

Attachments
Attachment A: Figures
Attachment B: Photographic Record
Attachment C: Data Sheets

ATTACHMENT A – Figures



PROJECT STUDY AREA

BASE MAP: USA TOPO MAPS MAP SERVICE, SHAKER HEIGHTS QUAD

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'

PROJECT:

FIRSTENERGY
HARDING-JUNIPER 345KV RELOCATION PROJECT
CUYAHOGA COUNTY, OH

TITLE:

SITE LOCATION MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	664675 P24
CHECKED BY:	M. MOLNAR		
APPROVED BY:	B. FALKINBURG		**FIGURE 1**
DATE:	JUNE 2025		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: WDR

COORDINATE SYSTEM: NAD 1983 STATEPLANE OHIO NORTH FIPS 3401 FEET; MAP ROTATION: 0
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PROJECT STUDY AREA

EXISTING STRUCTURE

BASE MAP: GOOGLE MAPS.

1:4,200

1" = 350'

0 300 600 FEET

PROJECT:
FIRSTENERGY
HARDING-JUNIPER 345KV RELOCATION PROJECT
CUYAHOGA COUNTY, OH

TITLE:
AERIAL MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	664675 P24
CHECKED BY:	M. MOLNAR		**FIGURE 2**
APPROVED BY:	B. FALKINBURG		
DATE:	JUNE 2025		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet Map Rotation: 0
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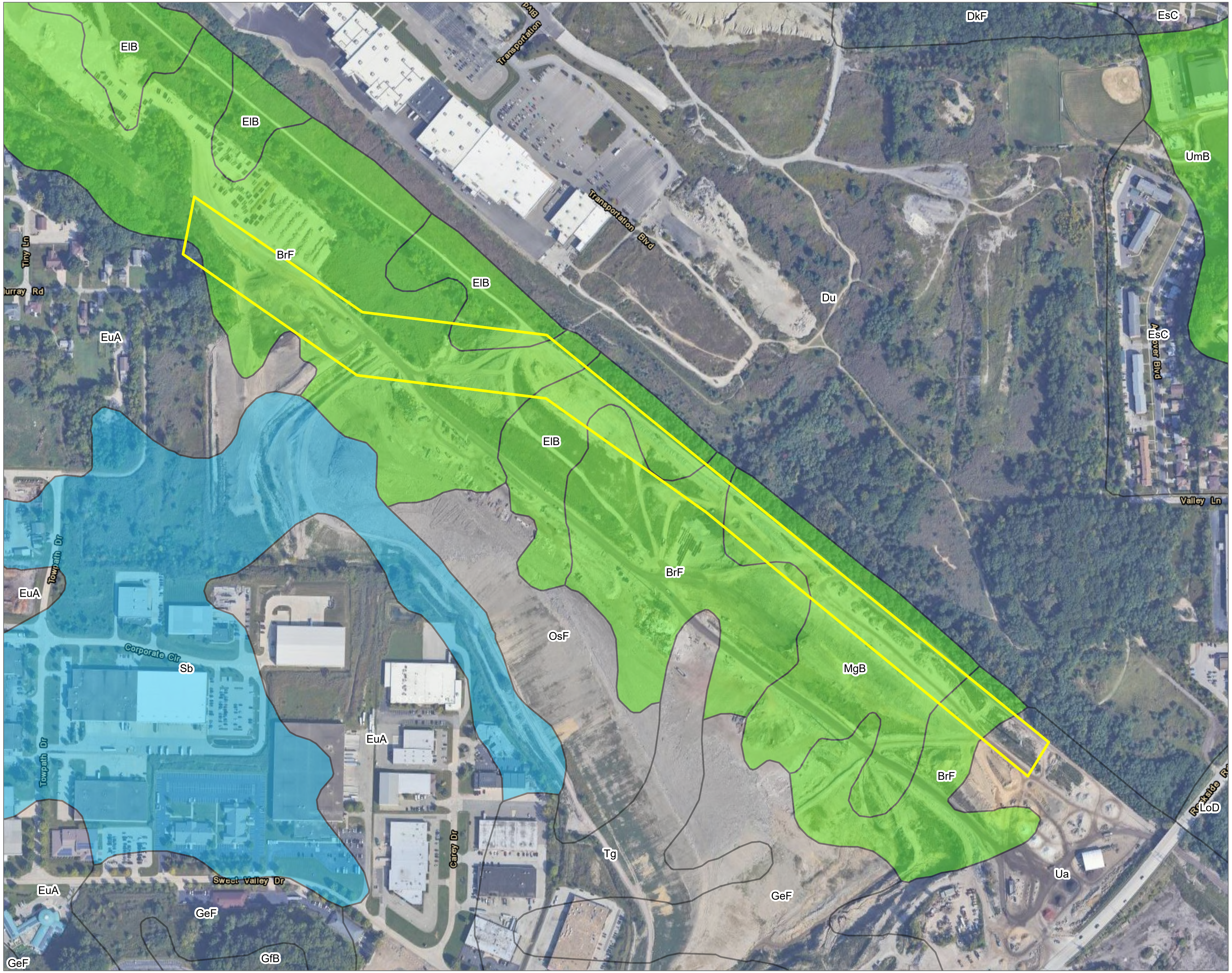
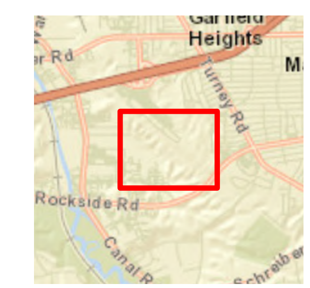


PROJECT STUDY AREA
HYDRIC SOIL
NON-HYDRIC W/ HYDRIC INCLUSIONS SOIL
NON-HYDRIC SOIL

BASE MAP: GOOGLE MAPS.
DATA SOURCES: SOILS DATA ACQUIRED FROM USDA/NRCS SSURGO DATABASE.



1:4,800
1" = 400'
0 400 800 FEET

PROJECT:	FIRSTENERGY HARDING-JUNIPER 345KV RELOCATION PROJECT CUYAHOGA COUNTY, OH		
TITLE:	SOILS MAP		
DRAWN BY:	M. OPEL	PROJ. NO.:	664675 P24
CHECKED BY:	M. MOLNAR	FIGURE 3	
APPROVED BY:	B. FALKINBURG		
DATE:	JUNE 2025		
TRC		1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072	
FILE:			WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
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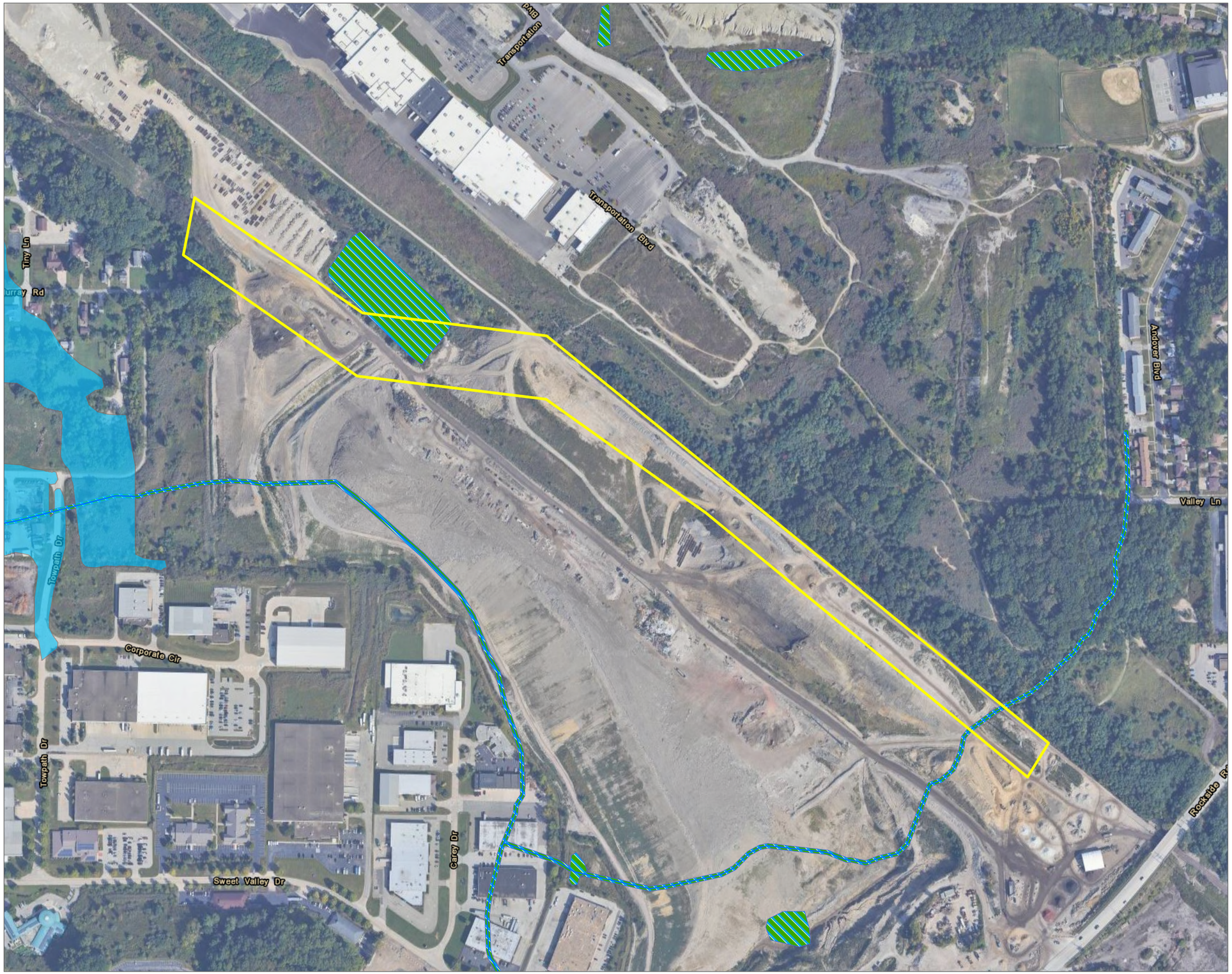
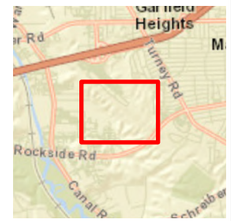


PROJECT STUDY AREA
NATIONAL HYDROGRAPHY DATASET (NHD) STREAM
NATIONAL WETLANDS INVENTORY (NWI) FEATURE
100-YEAR FLOOD ZONE

BASE MAP: GOOGLE MAPS.
DATA SOURCES: WETLAND DATA ACQUIRED FROM U.S. FISH & WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY (NWI). STREAM DATA ACQUIRED FROM USGS, NATIONAL HYDROGRAPHY DATASET (NHD). FLOOD DATA ACQUIRED FROM FEMA, NATIONAL FLOOD HAZARD LAYER (NFHL).



1:4,800
1" = 400'
0 400 800 FEET

PROJECT:
FIRSTENERGY
HARDING-JUNIPER 345KV RELOCATION PROJECT
CUYAHOGA COUNTY, OH

TITLE:
NHD, NWI AND FEMA FLOODPLAIN MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	664675 P24
CHECKED BY:	M. MOLNAR		**FIGURE 4**
APPROVED BY:	B. FALKINBURG		
DATE:	JUNE 2025		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
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PROJECT STUDY AREA
EXISTING STRUCTURE
CULVERT
INTERMITTENT STREAM (40 FEET)
PEM WETLAND (1.019 ACRES)
WETLAND CONTINUES
WETLAND DATA POINT
UPLAND DATA POINT

BASE MAP: GOOGLE MAPS.
DATA SOURCES: TRC WETLAND DELINEATION COMPLETED JUNE 24, 2025.

1:3,600
1" = 300'
0 300 600 FEET

PROJECT:
FIRSTENERGY
HARDING-JUNIPER 345KV RELOCATION PROJECT
CUYAHOGA COUNTY, OH

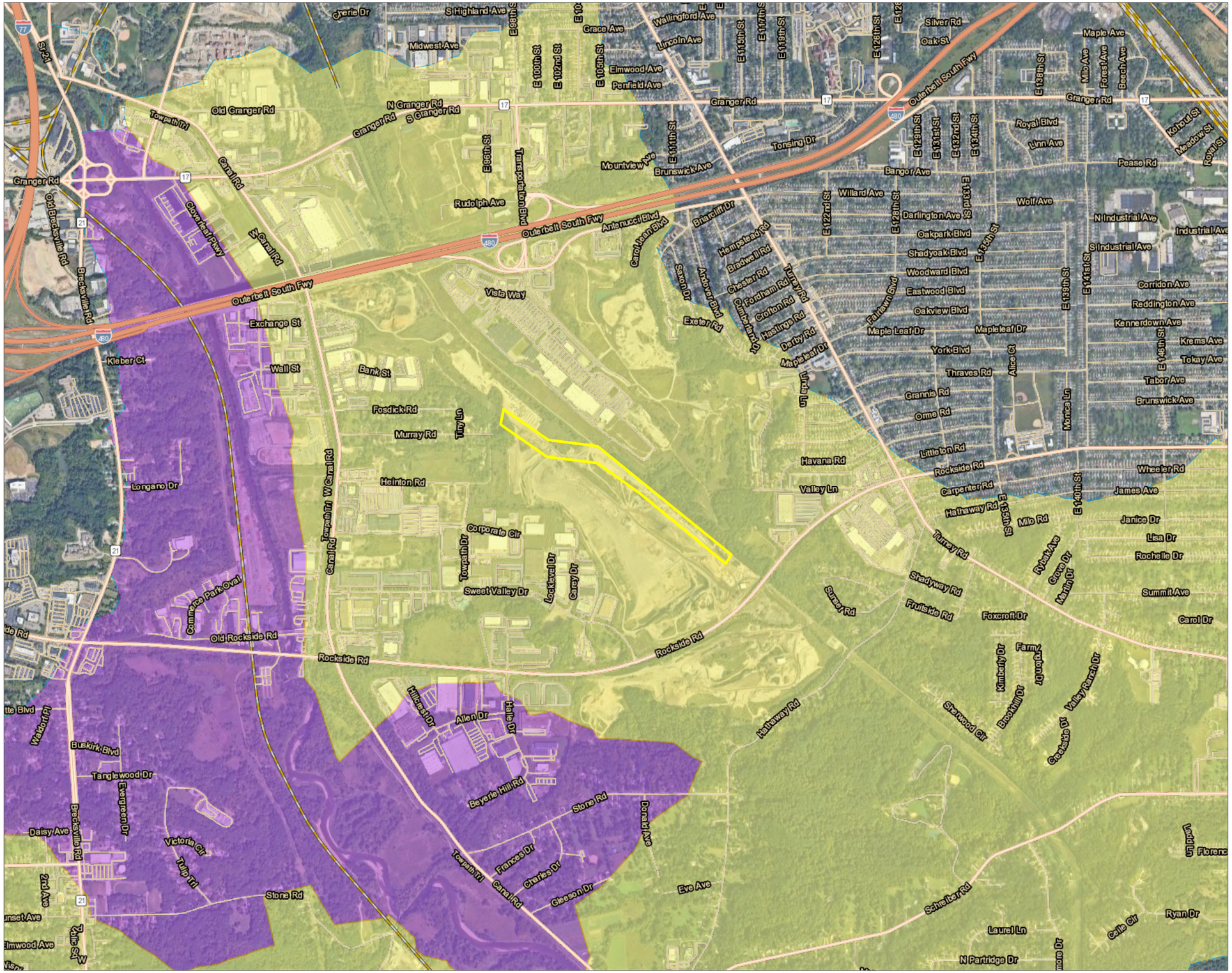
TITLE:
DELINEATED RESOURCES MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	664675 P24
CHECKED BY:	M. MOLNAR		
APPROVED BY:	B. FALKINBURG		**FIGURE 5**
DATE:	JUNE 2025		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: WDR.aprx

Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet: Map Rotation: 0
Saved By MOPEL on 8/27/2025, 1:35:40 PM, File Path: T:\PROJECTS\First_Energy\664675_024_Harding\Juniper\2-4\RPX\WDR.aprx; Layout Name: Fig05_Delineation



PROJECT STUDY AREA

OHIO EPA 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMIT ELIGIBILITY

- INELIGIBLE
- POSSIBLY ELIGIBLE
- ELIGIBLE

BASE MAP: GOOGLE MAPS.
DATA SOURCES: NATIONWIDE PERMITS STREAM DATA ACQUIRED FROM THE OHIO EPA.

1:18,000
1" = 1,500'

0 1,500 3,000 FEET

PROJECT:
FIRSTENERGY
HARDING-JUNIPER 345KV RELOCATION PROJECT
CUYAHOGA COUNTY, OH

TITLE:
NATIONWIDE PERMITS
STREAM ELIGIBILITY MAP

DRAWN BY:	M. OPEL	PROJ. NO.:	664675 P24
CHECKED BY:	M. MOLNAR		**FIGURE 6**
APPROVED BY:	B. FALKINBURG		
DATE:	JUNE 2025		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: WDR.aprx

Projection System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet; Map Rotation: 0
Saved By: MOPEL on 6/27/2025, 1:34:42 PM; File Path: T:\1-PROJECTS\First_Energy\664675_024_Harding-Juniper\2-ARR\WDR.aprx; Layout Name: Fig06_NWP

ATTACHMENT B – Photographic Record

PHOTOGRAPHIC RECORD

Harding-Juniper 345kV Relocation Project

Client Name:	Site Location:	Project No.
FirstEnergy	Village of Valley View, Cuyahoga County, Ohio	664675 Phase 24

Photo No. 1. **Photo Date:** 6/24/2025 **Description:** Photo of Wetland W-JMS-1, facing north.	

Photo No. 2. **Photo Date:** 6/24/2025 **Description:** Photo of Wetland W-JMS-1, facing east.	

Client Name:	Site Location:	Project No.
FirstEnergy	Village of Valley View, Cuyahoga County, Ohio	664675 Phase 24

Photo No. 3.
Photo Date: 6/24/2025
Description: Photo of Wetland W-JMS-1, facing south.

Photo No. 4.
Photo Date: 6/24/2025
Description: Photo of Wetland W-JMS-1, facing west.

Client Name:	Site Location:	Project No.
FirstEnergy	Village of Valley View, Cuyahoga County, Ohio	664675 Phase 24

Photo No. 5. **Photo Date:** 6/24/2025 **Description:** Photo of Stream S-JMS-1 looking downstream, facing south.	

Photo No. 6. **Photo Date:** 6/24/2025 **Description:** Photo of Stream S-JMS-1 looking upstream, facing northeast.	

Client Name:	Site Location:	Project No.
FirstEnergy	Village of Valley View, Cuyahoga County, Ohio	664675 Phase 24

Photo No. 7. **Photo Date:** 6/24/2025 **Description:** Photo of Stream S-JMS-1, showing the observed substrate.	

Photo No. 8. **Photo Date:** 6/24/2025 **Description:** Representative photo from the northwest portion of the Project Study Area, facing south.	

Client Name:	Site Location:	Project No.
FirstEnergy	Village of Valley View, Cuyahoga County, Ohio	664675 Phase 24

Photo No. 9.
Photo Date: 6/24/2025
Description: Representative photo from the northwest portion of the Project Study Area, facing north.

Photo No. 10.
Photo Date: 6/24/2025
Description: Representative photo from the southeast portion of the Project Study Area, facing northwest.

Client Name:	Site Location:	Project No.
FirstEnergy	Village of Valley View, Cuyahoga County, Ohio	664675 Phase 24

Photo No. 11. **Photo Date:** 6/24/2025 **Description:** Representative photo from the southeast portion of the Project Study Area, facing southeast.	

Photo No. 12. **Photo Date:** 6/24/2025 **Description:** Representative photo of the Project Study Area near W-JMS-1, facing west.	

Client Name:	Site Location:	Project No.
FirstEnergy	Village of Valley View, Cuyahoga County, Ohio	664675 Phase 24

Photo No. 13.	
Photo Date: 6/24/2025	
Description: Representative photo of the Project Study Area near W-JMS-1, facing east.	

ATTACHMENT C – Data Sheets

USACE Wetland Determination Data Forms – Northcentral and Northeast Region

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Harding-Juniper 345kV City/County: Valley View, Cuyahoga County Sampling Date: 2025-6-24
Applicant/Owner: FirstEnergy State: OH Sampling Point: W-JMS-01_PEM-1
Investigator(s): Jenna Slabe, Leah Cavanaugh Section, Township, Range: NA
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.4022315612 Long: -81.6137161227 Datum: WGS84
Soil Map Unit Name: Brecksville silt loam, 25 to 70 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No _____ (If no, explain in Remarks.)
Are Vegetation _____ , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ No _____
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ✘ No _____
Hydric Soil Present? Yes ✘ No _____
Wetland Hydrology Present? Yes ✘ No _____

Is the Sampled Area within a Wetland? Yes ✘ No _____

If yes, optional Wetland Site ID: W-JMS-01

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

HYDROLOGY

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

- ✘ Surface Water (A1)
- ✘ High Water Table (A2)
- ✘ Saturation (A3)
- _____ Water Marks (B1)
- _____ Sediment Deposits (B2)
- _____ Drift Deposits (B3)
- _____ Algal Mat or Crust (B4)
- _____ Iron Deposits (B5)
- _____ Inundation Visible on Aerial Imagery (B7)
- _____ Sparsely Vegetated Concave Surface (B8)
- _____ Water-Stained Leaves (B9)
- _____ Aquatic Fauna (B13)
- _____ Marl Deposits (B15)
- ✘ Hydrogen Sulfide Odor (C1)
- _____ Oxidized Rhizospheres on Living Roots (C3)
- _____ Presence of Reduced Iron (C4)
- _____ Recent Iron Reduction in Tilled Soils (C6)
- _____ Thin Muck Surface (C7)
- _____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- _____ Surface Soil Cracks (B6)
- _____ Drainage Patterns (B10)
- _____ Moss Trim Lines (B16)
- _____ Dry-Season Water Table (C2)
- _____ Crayfish Burrows (C8)
- _____ Saturation Visible on Aerial Imagery (C9)
- _____ Stunted or Stressed Plants (D1)
- ✘ Geomorphic Position (D2)
- _____ Shallow Aquitard (D3)
- _____ Microtopographic Relief (D4)
- ✘ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes ✘ No _____ Depth (inches): 18
Water Table Present? Yes ✘ No _____ Depth (inches): 0
Saturation Present? Yes ✘ No _____ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes ✘ No _____

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

Remarks:
The criterion for wetland hydrology is met.

VEGETATION — Use scientific names of plants. Sampling Point: W-JMS-01_PEM-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Phragmites australis*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

✘ 1 - Rapid Test for Hydrophytic Vegetation

✘ 2 - Dominance Test is >50%

✘ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines — All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✘ No __

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

The criterion for hydrophytic vegetation is met.

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 16	10YR 4/1	85	10YR 5/8	15	C	M	Clay Loam	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✘ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ✘ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ 5 cm Muck Peat or Peat (S3) **(LRR K, L, R)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✘ **No** ___

Remarks:
The criterion for hydric soil is met.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Harding-Juniper 345kV City/County: Valley View, Cuyahoga County Sampling Date: 2025-6-25
Applicant/Owner: FirstEnergy State: OH Sampling Point: W-JMS-01_UPL-1
Investigator(s): Jenna Slabe, Leah Cavanaugh Section, Township, Range: NA
Landform (hillslope, terrace, etc): Hilltop Local relief (concave, convex, none): Convex Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.4025991097 Long: -81.6124680986 Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No _____ (If no, explain in Remarks.)
Are Vegetation _____ , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ No _____
Are Vegetation _____ , Soil _____ , or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No ✘	**Is the Sampled Area within a Wetland?** Yes _____ No ✘
Hydric Soil Present?	Yes _____	No ✘	
Wetland Hydrology Present?	Yes _____	No ✘	If yes, optional Wetland Site ID: W-JMS-01

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✘	Depth (inches): _____
Water Table Present?	Yes _____	No ✘	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✘	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✘

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

Remarks:
The criterion for wetland hydrology is not met.

VEGETATION — Use scientific names of plants. Sampling Point: W-JMS-01_UPL-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)				
1.	*Artemisia vulgaris*	40	Yes	UPL
2.	*Lotus corniculatus*	25	Yes	FACU
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	65	= Total Cover		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	25	x 4 =	100
UPL species	40	x 5 =	200
Column Totals:	65 (A)		300 (B)

Prevalence Index = B/A = 4.6

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines — All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✘

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

The criterion for hydrophytic vegetation is not met.

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 to 0								

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

Hydric Soil Indicators:

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Iron Monosulfide (A18)
- __ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Dark Surface (S7)
- __ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- __ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- __ High Chroma Sands (S11) **(LRR K, L)**
- __ Loamy Mucky Mineral (F1) **(LRR K, L)**
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Marl (F10) **(LRR K, L)**
- __ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- __ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- __ 5 cm Muck Peat or Peat (S3) **(LRR K, L, R)**
- __ Polyvalue Below Surface (S8) **(LRR K, L)**
- __ Thin Dark Surface (S9) **(LRR K, L)**
- __ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- __ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- __ Red Parent Material (F21) **(outside MLRA 145)**
- __ Very Shallow Dark Surface (F22)
- __ Other (Explain in Remarks)

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

Restrictive Layer (if present):
Type: Fill,Gravel
Depth (inches): 0

Hydric Soil Present? Yes _____ **No** ✘

Remarks:
Soil is significantly disturbed due to grading. The criterion for hydric soil is not met.

Ohio EPA ORAM Data Forms

Background Information

Name: Jenna Slabe, Leah Cavanaugh
Date: 6/24/2025
Affiliation: TRC Environmental Corporation
Address: 1382 West Ninth Street, Suite 400 Cleveland, OH 44113
Phone Number: (330) 998-0481
e-mail address: JSlabe@trccompanies.com
Name of Wetland: W-JMS-1
Vegetation Communit(ies): PEM
HGM Class(es): Depression
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See Figure 5: Delineated Resources Map and Surface Water Delineation Technical Memorandum for further details.

Lat/Long or UTM Coordinate	41.402063, -81.611613
USGS Quad Name	Shaker Heights, OH
County	Cuyahoga
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020602
Site Visit	6/24/2025
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-JMS-1	
Wetland Size (acres, hectares):	3.40 acres (1.38 ha)

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

See Figure 5: Delineated Resources Map and Surface Water Delineation Technical Memorandum for further details.

Comments, Narrative Discussion, Justification of Category Changes:

Final score : 15	**Category:**	1

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.

Narrative Rating

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

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

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

Table 1. Characteristic plant species.

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

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

Site: FirstEnergy, Harding-Juniper 345kV	Rater(s): Leah Cavanaugh, Jenna Slabe	Date: 2025-06-24

Metric 1. Wetland Area (size).

3 (max 6 pts.) | 3 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [x] 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)

Metric 2. Upland buffers and surrounding land use.

1 (max 14 pts.) | 4 (subtotal)

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

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [x] 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), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

11 (max 30 pts.) | 15 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select only one and assign score.

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

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

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

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

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

Check all disturbances observed

[ ] ditch	[ ] point source (nonstormwater)
[ ] tile	[x] filling/grading
[ ] dike	[x] road bed/RR track
[ ] weir	[x] dredging
[x] stormwater input	[ ] other

Metric 4. Habitat Alteration and Development.

3 (max 20 pts.) | 18 (subtotal)

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

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [x] 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)
- [x] Poor (1)

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

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

Check all disturbances observed

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

18 subtotal this page

TRC Environmental Corp.
781 Science Boulevard, Suite 200
Gahanna, Ohio 43230

Site: FirstEnergy, Harding-Juniper 345kV	Rater(s): Leah Cavanaugh, Jenna Slabe	Date: 2025-06-24

18
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 18 subtotal

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 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-3 max 20 pts. | 15 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic Bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

Invasive Species Present:
phragmites

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

- [x] Extensive >75% cover (-5)
- [ ] 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.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, 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
high	A predominance of native species, with nonnative spp 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

15

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

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	3	
	Metric 2. Buffers and surrounding land use	1	
	Metric 3. Hydrology	11	
	Metric 4. Habitat	3	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-3	
	TOTAL SCORE	15	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	(Category 1)	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Ohio EPA HHEI Data Forms

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **56**

SITE NAME/LOCATION S-JMS-01. FirstEnergy - Harding-Juniper 345kV.

SITE NUMBER ___ RIVER CODE 041100020602 RIVER BASIN Cuyahoga River DRAINAGE AREA (mi^2) 0.06

LENGTH OF STREAM REACH (ft) 40 LAT. 41.4021089435 LONG. -81.613416736 RIVER MILE ___

DATE 2025-06-24 SCORER JMS COMMENTS ___

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☑ RECENT OR NO RECOVERY

1. SUBSTRATE: Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS **[16 pts]**	___	☑ ☐	SILT **[3 pts]**	65
☐ ☐	BOULDER (>256 mm) **[16 pts]**	___	☐ ☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	___
☐ ☐	BEDROCK **[16 pts]**	___	☐ ☐	FINE DETRITUS **[3 pts]**	___
☐ ☐	COBBLE (65-256 mm) **[12 pts]**	___	☐ ☐	CLAY or HARDPAN **[0 pts]**	___
☐ ☐	GRAVEL (2-64 mm) **[9 pts]**	___	☐ ☐	MUCK **[0 pts]**	___
☐ ☑	SAND (<2 mm) **[6 pts]**	35	☐ ☐	ARTIFICIAL **[3 pts]**	___

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

2. Maximum Pool Depth ***Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☑	> 30 centimeters **[20 pts]**	☐	> 5 cm - 10 cm **[15 pts]**
☐	> 22.5 - 30 cm **[30 pts]**	☐	< 5 cm **[5 pts]**
☐	> 10 - 22.5 cm **[25 pts]**	☐	NO WATER OR MOIST CHANNEL **[0 pts]**

COMMENTS___

MAXIMUM POOL DEPTH (centimeters): 35

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

☐	> 4.0 meters (> 13') **[30 pts]**	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") **[15 pts]**
☑	> 3.0 m - 4.0 m (> 9' 7" - 13') **[25 pts]**	☐	≤ 1.0 m (≤3' 3") **[5 pts]**
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") **[20 pts]**		

COMMENTS___

AVERAGE BANKFULL WIDTH (meters): 4

HHEI Metric Points

Substrate Max = 40 11

A + B

Pool Depth Max = 30 20

Bankfull Width Max=30 25

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☑	☑	None	☐	☐	Fenced Pasture	☑	☑	Mining or Construction

COMMENTS ___

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☐	Stream Flowing	☑	Moist Channel, isolated pools, no flow (Intermittent)
☐	Subsurface flow with isolated pools (Interstitial)	☐	Dry channel, no water (Ephemeral)

COMMENTS ___

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐	None	☑	1.0	☐	2.0	☐	3.0
☐	0.5	☐	1.5	☐	2.5	☐	>3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☑ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score ____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: Cuyahoga River — Distance from Evaluated Stream 0.75 miles

☐ CWH Name: ____ — Distance from Evaluated Stream ____

☐ EWH Name: ____ — Distance from Evaluated Stream ____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Shaker Heights — NRCS Soil Map Page: See Report NRCS Soil Map Stream Order See Report

County: Cuyahoga — Township / City: Village of Valley View

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 2025-06-21 Quantity: 0.19

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): Y Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 30.2 Dissolved Oxygen (mg/l) _ pH (S.U.) 6.93 Conductivity (µmhos/cm) _

Is the sampling reach representative of the stream (Y/N) Y If not, please explain:

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _

Salamanders Observed? (Y/N) N Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _

Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-JMS-01