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September 10, 2026

Ms. Tanowa Troupe, Secretary
Public Utilities Commission of Ohio
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RE: 26-0338-EL-BTA
In the matter of Amendment #1 Application of AEP Ohio
Transmission Company Inc. for a Certificate of Environmental
Compatibility and Public Need for the New Liberty – East Leipsic 138kV
Upgrade Project

Dear Ms. Troupe:

Attached, please find a copy of the Amendment Application of AEP Ohio Transmission Company, Inc. for a certificate of Environmental Compatibility and Public Need (“Application”) for the above-references project. The filing is made pursuant to the O.A.C 4906-5-01, *et seq.*, and 4906-2-01, *et seq.*

Filing of this Application electronically is pursuant to the O.A.C. 4906-2-02 (A) and (D). Five printed copies and ten additional electronic copies (USB drives) of this filing will also be submitted to the Staff of the Ohio Power Siting Board for its use.

The following information is pursuant to O.A.C. 4906-2-04(A)(3):

- (a) Applicant:
AEP Ohio Transmission Company, Inc.
c/o American Electric Power
Energy Transmission
8600 Smiths Mill Road
New Albany, Ohio 43054
- (b) Facilities to be Certified:
New Liberty – East Leipsic 138kV Transmission Line Project
- (c) Applicant Authorized Representatives with respect to this Application:
Caleb Gall
Project Manager

8500 Smiths Mill Road
New Albany, Ohio 43054

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

Respectfully submitted,

/s/ Jared Klaus

Jared Klaus (0087780), Counsel of Record
Counsel for AEP Ohio Transmission Company, Inc.

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

BEFORE THE OHIO POWER SITING BOARD

Certificate Application for Electric Transmission Facilities

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Acronyms and Abbreviations

AEP	American Electric Power
AEP Ohio Transco	AEP Ohio Transmission Company, Inc.
the Application	Certificate Application to the Ohio Power Siting Board for the Project on January 3, 2023, in Case Number 22-0856-EL-BTX
BMP	best management practice
Certificate	Certificate of Environmental Compatibility and Public Need
cm	centimeter
Company	AEP Ohio Transmission Company, Inc.
DOW	Division of Wildlife
GIS	geographic information system
HHEI	Headwater Habitat Evaluation Index
ID	identification
kV	kilovolt
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
OPSB	Ohio Power Siting Board
ORAM	Ohio Rapid Assessment Method
PFO	palustrine forested
PHWH	Primary Headwater Habitat
Project	East Leipsic-New Liberty 138 kV Transmission Line Project
PSS	palustrine scrub/shrub
QHEI	Qualitative Habitat Evaluation Index
ROW	right-of-way
SWPPP	stormwater pollution prevention plan
USFWS	United States Fish and Wildlife Service

AMENDMENT CHANGE SUMMARY

American Electric Power (“AEP”) Ohio Transmission Company, Inc. (AEP Ohio Transco or the “Company”) submitted a Certificate Application to the Ohio Power Siting Board (OPSB) for the East Leipsic-New Liberty 138 kV Transmission Line Project (“the Project”) on January 3, 2023, in Case Number 22-0856-EL-BTX (the “Application”). The Application was issued a Certificate of Environmental Compatibility and Public Need (“Certificate”) by the OPSB on October 19, 2023, to construct the Preferred Route.

The purpose of this Amendment is to document modifications to the Preferred Route since the approval of the Application. There are no changes to the Alternate Route under this Amendment; therefore, information provided for the Alternate Route in the original Certificate Application remains unchanged.

Following the issuance of the Certificate in October 2023, several adjustments were made to the Preferred Route to address conflicts with underground utilities, conflicts with distribution crossings, and optimizing span lengths. Some of the adjustments additionally reduce existing land use impacts.

These engineering adjustments were identified during detailed engineering and hydro excavation, where underground utilities were identified that conflicted with the proposed structure locations and did not meet the Company’s minimum clearance requirements. The engineering adjustments are further described in Table 1 and shown on Figure 1.

In addition to engineering adjustments, the right-of-way (ROW) width was reviewed in detail and was reduced from 100 feet to 80 feet. This reduction allows for proper construction and maintenance widths for a single 138 kV circuit and reduces existing land use impacts.

All quantitative values have been recalculated for the adjusted Preferred Route. However, inaccuracies resulting from calculation methods used in the January 3, 2023 Application filing were found in certain sections. These discrepancies, identified along both the Preferred and Alternate Routes, are noted in *italics* here only for the Preferred Route and are included solely for comparison.

Table 1. Engineering Adjustments – Structure Shifts from Approved Transmission Centerline

Project Component	Proposed Structure Number	Distance of Shift from Approved Centerline (feet)	Reason for Shift
East Leipsic – Rader Road	Structures 20 and 21	11 and 4	Shifted closer to County Highway E to reduce impact on landowners and increase clearance over the road.
East Leipsic – Rader Road	Structure 44	39	Optimized span length and allow proper ground clearance.
East Leipsic – Rader Road	Structure 49	10	Shifted due to an underground drainage tile that was found during hydro excavation.
East Leipsic – Rader Road	Structure 50	36	Shifted to accommodate and meet clearance requirements at the Shawtown Switch (approved in OPSB Case No. 20-0365-EL-BNR).
East Leipsic – Rader Road	Structures 62 and 63	5 and 9	Shifted to place structures outside of the Township Road 103 ROW.
East Leipsic – Rader Road	Structure 92	29	Shifted south due to final engineering of the proposed Rader Road Station bay.
Rader Road – New Liberty	Structure 1	26	Shifted south due to final engineering of the proposed Rader Road Station bay.
Rader Road – New Liberty	Structures 14 and 15	26 and 36	Structures were shifted to increase distance from the Community Park building and playground equipment.
Rader Road – New Liberty	Structure 59	8	Shifted to avoid underground gas line.
Rader Road – New Liberty	Structures 72, 73, and 74	<1, 20, and 25	Shifted to avoid underground gas line.

4906-4-02 PROJECT SUMMARY AND APPLICANT INFORMATION**(A) GENERAL PURPOSE OF THE FACILITY**

Text provided in the January 3, 2023 Application filing remains unchanged.

(B) GENERAL LOCATION, SIZE, ACREAGE, AND OPERATING CHARACTERISTICS

The proposed East Leipsic-New Liberty 138 kV Transmission Line Project (Project) extends from the eastern portion of Putnam County near Leipsic, Ohio to the western boundary of Findlay in Hancock County, Ohio, and passes the northern edge of the Village of McComb. The setting is largely flat agricultural land with sparse residences or other development.

The existing transmission line begins at the Company's existing East Leipsic Substation on Road 5 in Leipsic and travels east to the existing McComb Substation (to be retired and replaced as Rader Road Substation) on County Road 126 in McComb, then continues southeast to the existing New Liberty Substation off Township Road 94 in the City of Findlay. The length of the existing transmission line between these substations is approximately 17.6 miles and will be upgraded and installed as an overhead transmission line to 138 kilovolt (kV) standards. Figure 2-1 shows the Project area, Project endpoints, and the Preferred and Alternate Routes identified by the Company.

The existing outdated wooden poles will be replaced with steel monopole structures ranging between 75 to 95 feet in height with an approximate right-of-way (ROW) width of ~~100~~80 feet supporting a single 138 kV circuit. The exact structure, height, and ROW widths may vary, subject to final engineering design.

(C) SUITABILITY OF PREFERRED AND ALTERNATE ROUTES

Text provided in the January 3, 2023 Application filing remains unchanged.

(1) Preferred Route

The Preferred Route from the existing East Leipsic Substation to the existing New Liberty Substation is approximately ~~16.9~~16.6 miles in length and is located on the existing centerline for ~~12.7~~ 11.9 miles.

The Preferred Route exits the existing East Leipsic Station to the south for 0.2 mile and turns east for approximately ~~4.4~~ 4.3 miles on the south side of Road E. The route continues down Township Road 103 for ~~2.1~~ 2.0 miles. The route then turns north for 0.5 mile along County Road 53, then east along Township Road 104 for 1.5 miles. The route continues south along County Road 123 for approximately 0.2 mile. It then continues east along County Road 105 for 0.8 miles where it will tie into the Proposed Rader Road Station. The Preferred Route then runs through an agricultural field for approximately 1 mile to the east then south in the existing ROW for 0.4 mile crossing Rader Creek. The route continues ~~as a rebuild on centerline~~ as it traverses through the Village of McComb Community Park for 0.3 mile then continues ~~1.5~~ 1.4 miles southeast through

agricultural fields. At County Road 97, the route diverts around a residential property (0.1 mile), then continues on existing centerline through an agricultural field for approximately 2.7 miles southeast. It then turns south and continues down County Road 139 for 0.5 mile, then runs east along County Road 94 for 0.7 mile where it will then tie into the New Liberty Station.

(2) Alternate Route

Text provided in the January 3, 2023 Application filing remains unchanged.

(D) APPLICANT DESCRIPTION

Text provided in the January 3, 2023 Application filing remains unchanged.

(E) DESCRIPTION OF FUTURE ADDITIONS OF ELECTRIC POWER GENERATION UNITS

Not Applicable.

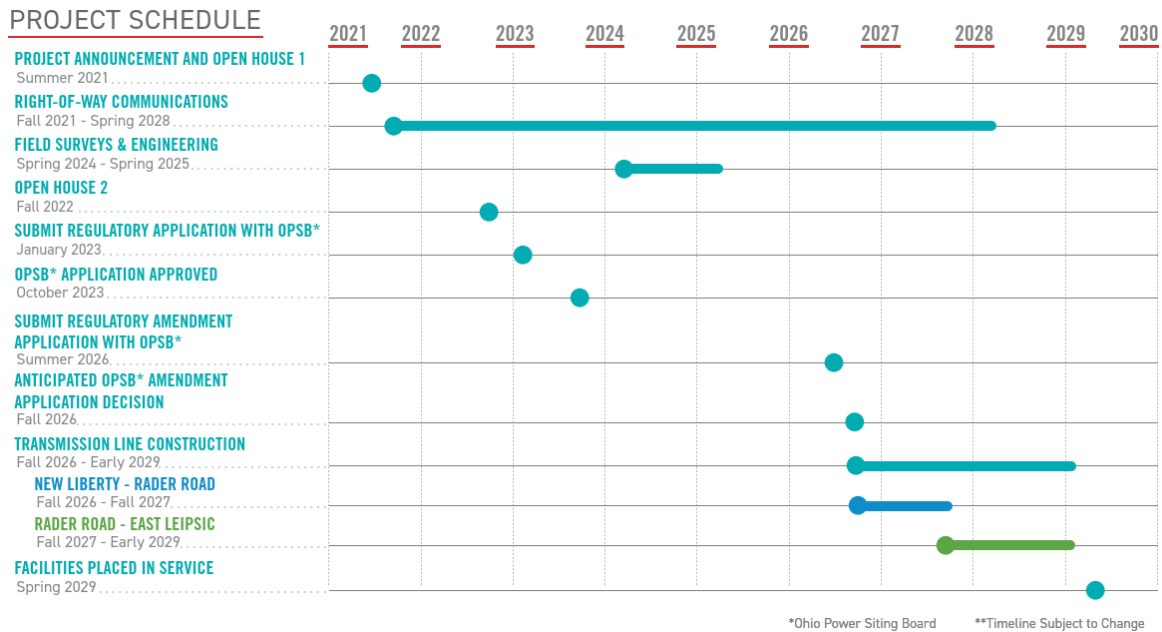
4906-4-03 DETAILED PROJECT DESCRIPTION AND SCHEDULE

(A) PROJECT SCHEDULE

(1) Gantt Chart

Figure 3-1 provides the Project schedule as a Gantt bar chart. Construction of the Project is planned to begin in ~~November 2024~~December 2026, and the anticipated in-service date is ~~August 2027~~April 2029.

Figure 3-1. Project Schedule



(2) Construction Sequence

Text provided in the January 3, 2023 Application filing remains unchanged.

(3) Project Area Description

The map included in this section provides a description of the Project area's geography, topography, population centers, major industries, and landmarks.

(a) Project Area Map

Figure ~~7-13-2~~13-2 provides a map at 1:24,000-scale, showing the land use along the Preferred and Alternate Routes for the Project. This map includes a 1,000-foot buffer on each side of the Preferred and Alternate transmission centerlines (hereafter referred to as the 2,000-foot corridor). These maps depict the Preferred and Alternate Routes; existing transmission lines; roads and railroads; major institutions; publicly owned parks and recreational areas; existing gas pipeline and electric transmission line corridors; population centers and legal boundaries of cities, villages, townships, and counties; and sensitive receptors within 500 feet of the Preferred Route.

There are named streams including Yellow Creek, but no named lakes, canals, and rivers in the Project area. The map uses the Findlay, McComb, and Leipsic (2022) U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles as base maps.

The information on the map was updated by reviewing digital, georeferenced aerial photography, property parcel data from the Putnam and Hancock County Auditor's Offices, and field reconnaissance conducted in July 2021 and March 2022. The aerial photographs are georeferenced, ortho-corrected color images derived from ESRI ArcGIS Online.

Table ~~5-1~~ 3-1 provides information about the Preferred and Alternate Route ROW acreage, length, and properties crossed based on the proposed centerline.

Table ~~3-1~~ 3-1. Right-of-way Area, Length, and Number of Properties Crossed for the Preferred and Alternate Routes

	Route Alternatives	
	Preferred	Alternate
Proposed ROW area (in acres)	199.6 <u>161.00</u>	197.1
Length (in miles)	16.9 <u>16.6</u>	16.7
Number of properties crossed (by ROW)	160 <u>146</u>	188
Number of new or supplemented easements required (by parcel) ^a	147 <u>100</u>	176

Note:

^a Table 8-7 indicates where supplemented easements have been obtained.

(4) Proposed Installation Methods

Text provided in the January 3, 2023 Application filing remains unchanged.

(B) GENERATION FACILITY NEED

Not Applicable.

(C) TRANSMISSION LINE NEED

Text provided in the January 3, 2023 Application filing remains unchanged.

(D) BASIS FOR NEED

Text provided in the January 3, 2023 Application filing remains unchanged.

(E) GAS PIPELINE NEED

Not Applicable.

4906-4-04 PROJECT AREA SELECTION AND DESIGN

Text provided in the January 3, 2023 Application filing remains unchanged.

4906-4-05 ELECTRIC GRID INTERCONNECTION

Text provided in the January 3, 2023 Application filing remains unchanged.

4906-4-06 ECONOMIC IMPACT AND PUBLIC INTERACTION

(A) OWNERSHIP OF PROPOSED FACILITY

Text provided in the January 3, 2023 Application filing remains unchanged.

(B) CONSTRUCTION COSTS
(1) Capital and Intangible Costs Estimate for Electric Power Transmission Facility Alternatives

The applicable capital and intangible costs for a variety of components of the Project are included as follows. Each of the enumerated components is included in Table 6-1. The table also includes estimates of applicable intangible and capital costs for both the Preferred and Alternate Routes of the Project. The items marked as not applicable (-) are components that do not apply to this Project.

The increase in estimates of applicable intangible and capital costs for the Preferred Route from the January 3, 2023 Application filing is primarily driven by a combination of scope changes and refinements, legal expenses, and broader market conditions. The largest contributor to the increase in costs is scope changes that include more detailed engineering, ROW, and constructability decisions, such as the change from gravel access roads to matting, along with stormwater permitting, station support needs, restoration work, and capital tree clearing. Legal challenges due to landowners consulting legal counsel also introduced additional costs and schedule-related impacts. Market conditions further increased costs of easement acquisition, labor, and contract expenses, and increased material pricing that includes conductor, survey, and appraisal costs. It should be noted that the Alternate Route would have similar cost increases if that route was pursued and costs recalculated.

Table 6-1. Estimates of Applicable Intangible and Capital Costs

FERC Account Number	Description	Preferred Route	Alternate Route
350	Land and Land Rights	\$612,000 \$13,441,000	\$767,000
352	Structures and Improvements	-	-
353	Substation Equipment	-	-
354	Towers and Fixtures	-	-
355	Poles and Fixtures	\$6,914,000 \$26,511,000	\$7,809,000
356	Overhead Conductors and Devices	\$2,605,000 \$11,362,000	\$2,606,000
357	Underground Conductors and Insulation	-	-
358	Underground-to-Overhead Conversion Equipment	-	-

FERC Account Number	Description	Preferred Route	Alternate Route
359	ROW Clearing and Roads, Trails or Other Access	\$2,000 \$26,629,000	5,000
TOTAL		\$10,133,000 \$77,943,000	11,187,000

FERC = Federal Energy Regulatory Commission

(2) Comparison of the Total Costs

Text provided in the January 3, 2023 Application filing remains unchanged.

(3) Present Worth and Annualized Costs for Capital Costs

Text provided in the January 3, 2023 Application filing remains unchanged.

(C) OPERATION AND MAINTENANCE EXPENSES

Text provided in the January 3, 2023 Application filing remains unchanged.

(D) ECONOMIC IMPACT OF THE PROJECT

(1) Annual Total and Present Worth of Construction and Operation Payroll

Text provided in the January 3, 2023 Application filing remains unchanged.

(2) Construction and Operation Employment

Text provided in the January 3, 2023 Application filing remains unchanged.

(3) County, Township, and Municipal Tax Revenues

The Preferred and Alternate Routes are located within Hancock and Putnam Counties. Local school districts, park districts, and fire departments will receive tax revenue from the Project. The Company will pay property taxes on utility facilities in each jurisdiction. The approximate annual property taxes associated with the Preferred and Alternate Routes over the first year after the Project is completed are approximately ~~\$431,000~~ \$819,100 and \$476,000, respectively.

~~Based on the 2021 tax rates,~~ The following information in Table 6-2 includes preliminary estimates for these taxing authorities. The Preferred Route estimates are based on 2025 tax rates and the Alternate Route estimates are unchanged from the January 3, 2023 Application filing, based on 2021 tax rates.

Table 6-2. Estimates of Tax Revenue for Both the Preferred and Alternate Routes

County	Levy	Preferred	Alternate
Hancock	Findlay-Hancock Co Public Library	500 <u>1,000</u>	600
	Hancock Co. Park District	4,700 <u>9,200</u>	5,200
	Hancock County	54,300 <u>107,400</u>	60,800
	Liberty Benton Lsd	43,000 <u>77,500</u>	48,000
	Liberty Twp	4,100 <u>8,300</u>	4,600
	Mc Comb Lsd	155,200 <u>308,000</u>	174,000
	Mccomb Corp	400 <u>1,400</u>	-
	Mccomb Public Library District	4,800 <u>9,700</u>	5,400
	Northwest Hancock Fire District	9,800 <u>19,600</u>	11,000
	Pleasant Twp	4,700 <u>9,300</u>	5,200
	Pleasant Twp Exc Mc Comb Corp	5,500 <u>10,600</u>	6,400
	Pmp Jt Ambulance District	21,400 <u>50,700</u>	24,000
	Portage Twp	4,200 <u>8,400</u>	4,700
Hancock Total		312,600 <u>621,100</u>	349,900
Putnam	Leipsic Corp	1,600 <u>2,000</u>	1,600
	Leipsic Lsd	79,200 <u>124,500</u>	84,200
	Putnam County	24,700 <u>46,400</u>	26,300
	Van Buren Twp	4,500 <u>8,200</u>	4,700
	Van Buren Twp Exc Belmore & Leipsic	8,800 <u>16,900</u>	9,400
Putnam Total		118,800 <u>198,000</u>	126,200
Grand Total		431,400 <u>819,100</u>	476,100

(4) Economic Impact on Local Commercial and Industrial Activities

Text provided in the January 3, 2023 Application filing remains unchanged.

(E) PUBLIC INTERACTION

Text provided in the January 3, 2023 Application filing remains unchanged.

4906-4-07 AIR, WATER, SOLID WASTE, AND AVIATION COMPLIANCE

Text provided in the January 3, 2023 Application filing remains unchanged.

4906-4-08 HEALTH AND SAFETY, LAND USE, AND ECOLOGICAL INFORMATION**(A) HEALTH AND SAFETY**

Text provided in the January 3, 2023 Application filing remains unchanged.

(B) ECOLOGICAL RESOURCES**(1) Ecological Information****(a) Map**

~~Maps~~ A map at a scale of ~~1:24,000~~ 1:10,000 including the 1,000 feet buffer on either side of the centerline (referred to as the 2,000-foot corridor) of the Preferred ~~and Alternate Routes are~~ is presented as Figures ~~7-1 8-1 and 7-2. These maps~~ This map depicts the transmission line alignments, substation locations, ~~and~~ land use classifications, including vegetative cover, wildlife areas, nature preserves, and other conservation areas; surface bodies of water, including wetlands, ditches, streams, lakes, reservoirs, ponds, and drainage channels; highly-erodible soils and slopes of 12 percent or greater; and sensitive habitat areas. Features within 1,000 feet of the proposed routes were identified from published data and, where accessible, verified by the field ecological survey.

(b) Field Survey Results

Detailed maps at 1:10,000 scale depicting field-delineated waterbody and wetland features within the 300-foot Ecological Study Corridor, lakes, ponds, and reservoirs, slopes of 12 percent or greater, wildlife areas, nature preserves, and conservation areas within the 2,000-foot corridor are provided as Figures 8-2 ~~and 8-3~~.

(c) Construction Impacts on Vegetation and Surface Waters**(i) Construction Impacts on Vegetation**

The construction impacts on vegetation along the Preferred and Alternate Routes will be limited to initial clearing of vegetation within the 80-foot ~~or 100-foot~~ ROW for the proposed transmission line and the defined access roads. Specific locations for access roads will be identified at the time of the Company transmission line easement acquisition process. Trees adjacent to the proposed ROW that are dead, dying, diseased, leaning, significantly encroaching, or prone to failure may require clearing to allow for safe operation of the transmission line. Vegetative wastes (such as tree limbs and trunks) generated during the construction phase will be windrowed or chipped and disposed of appropriately depending on individual landowner requests. The approximate vegetation impacts, based on geographic information system (GIS) analysis, along the Preferred and Alternate Route ROWs are provided in Table ~~8-58-1~~.

Table 8-58-1. Approximate Vegetation Impacts Along the ROW

Land Use Type	Preferred Route			Alternate Route		
	Length of Route (feet)	Length of Route (miles)	Acreage within ROW	Length of Route (feet)	Length of Route (miles)	Acreage within ROW
Agricultural and Pasture/Hayfields	67,917 <u>68,812</u>	12.9 <u>13.0</u>	121.6 <u>106.6</u>	68,618	13.0	122.8
Delineated Wetlands	1,711 <u>1,673</u>	0.3	2.9 <u>2.5</u>	1,674	0.3	2.8
Forested	1,788 <u>2,116</u>	0.3 <u>0.4</u>	5.8 <u>4.8</u>	2,185	0.4	6.2
Old Field	544 <u>175</u>	≤0.1	0.8 <u>0.3</u>	369	0.1	0.5
Recreational Parks	1,551 <u>1,548</u>	0.3	3.6 <u>2.8</u>	802	0.2	1.5
Residential and Commercial	8,398 <u>8,564</u>	1.6	12.0 <u>12.3</u>	9,460	1.8	13.4
Scrub/Shrub	608 <u>461</u>	0.1	1.2 <u>1.0</u>	591	0.1	1.4
Total	<u>83,349</u>	<u>15.8</u>	<u>130.3</u>			

Notes:

a Approximately 30 acres within Preferred Route ROW contain no vegetation (includes gravel areas, railroad, road, stream/pond, etc.)

b Total may vary slightly from the sum of their parts due to rounding.

c Wetland length and acreages presented in the table are located within the proposed ROW. These values are not equivalent to wetland fill.

(ii) Construction Impacts on Wetland

Preferred Route: During wetland and waterbody delineations, nine Eight wetlands were identified along the Preferred Route within the proposed ROW (varying from 55 to 100 80 feet), totaling ~~2.9~~ 2.5 acres. The delineated wetlands are shown on Figures 8-2A through 8-2R-K. Detailed information about each feature can be found in Table 8-23 in Section ~~4906-5-08(B)(b)(ii)~~ 4906-4-08(B)(2)(a)(ii). Six of these wetlands are crossed by the Preferred Route centerline, totaling ~~1,711~~ 1,673 linear feet. Impacts to the wetlands will be avoided by placing transmission line structures outside of wetland boundaries, where practical. Where temporary construction access through a wetland cannot be avoided, the crossing will occur during dry conditions or protective construction matting will be used to minimize impacts from construction vehicles.

Wetland Ohio Rapid Assessment Method (ORAM) categories delineated in the Preferred Route ROW are detailed as follows:

- Category 1 wetlands: Four Category 1 wetlands with ORAM scores ranging from 17.5 to 25 were identified within the ROW, totaling ~~0.41~~ 0.3 acre. Approximately ~~0.17~~ 0.1 acre of palustrine scrub/shrub (PSS) wetland were identified within the ROW ~~will be impacted during construction.~~
- Category 2 wetlands: ~~Five~~ Four Category 2 wetlands with ORAM scores ranging from 31.5 to 41.5 were identified within the ROW, totaling ~~2.4~~ 2.2 acres. Approximately ~~0.38~~ 0.5 acre of PSS wetland will be impacted during construction. Approximately ~~0.69~~ 0.4 acre of palustrine forested (PFO) wetland were identified within the ROW ~~would be impacted during construction.~~
- Category 3 wetlands: No Category 3 wetlands were identified within the ROW ~~will be crossed; therefore, no construction impacts are anticipated.~~

Alternate Route: During wetland and waterbody delineations, 10 wetlands were identified along the Alternate Route ROW (varying from 55 to 100 feet), totaling 2.8 acres. ~~The delineated wetlands are shown on Figures 8-3A through 8-3S.~~ Detailed information about each feature can be found in Table 8-23 in Section ~~4906-5-08(B)(b)(ii)~~ 4906-4-08(B)(2)(a)(ii). Five wetlands are crossed by the centerline of the proposed Alternate Route, totaling 1,674 linear feet. Impacts to wetlands will be avoided by placing transmission line structures outside wetland boundaries, where practical. Where temporary construction access through a wetland cannot be avoided, the crossing will occur during dry conditions or matting will be used to minimize impacts.

Wetland ORAM categories delineated in the Alternate Route ROW are detailed below:

- Category 1 wetlands: Five Category 1 wetlands with ORAM scores ranging from 16 to 25 were identified within the proposed ROW, totaling 0.35 acre. Approximately 0.1 acre of PSS wetland will be impacted during construction.
- Category 2 wetlands: Five Category 2 wetlands with ORAM scores ranging from 31.5 to 41.5 were identified within the ROW, totaling 2.49 acres. Approximately 0.38 acre of PSS wetland will be impacted during construction. Approximately 0.7 acre of PFO wetland would be impacted during construction.
- Category 3 wetlands: No Category 3 wetlands will be crossed; therefore, no construction impacts are anticipated.

Through appropriate planning and permitting, care will be taken near wetlands to avoid or minimize filling and sedimentation during construction. Selective clearing will be required to remove specific types of woody vegetation in wetlands that might impede construction or interfere with operation of the transmission line. Where wooded or forested wetlands occur within the ROW, the trees will be removed.

To minimize soil erosion and sedimentation during construction, best management practices (BMPs) such as silt fences and construction matting will be implemented as required during

construction. Sedimentation potential at wetlands will be minimal as structure replacement outside of wetlands is preferred. Construction equipment will only cross wetlands if necessary and will do so using construction matting if wet conditions require.

Disturbance of soils in wetland areas during construction will be minimized. ~~No new permanent fill material will be placed in any wetland area. Four~~ Six existing pole structures within wetlands will be replaced during construction outside of the wetlands. ~~Installation~~ Removal of a pole or guy wires within a wetland will be accessed using construction matting if wet conditions exist at the time of construction. No excavation ~~other than the boring or excavation of a hole for pole installation~~ will be performed within the wetland. In the event that pole placement is required within a wetland, no additional fill will be placed in the wetlands beyond the placement of the pole structure and borehole backfill.

Wetland areas will be clearly staked prior to clearing to minimize incidental vehicle impacts. Other than the possibility of pole locations being in wetlands as discussed above, operation of heavy mechanized equipment is not planned within any identified wetland areas. However, some construction equipment may need to cross wetland areas on construction matting if wet conditions exist at the time. Woody vegetation in wetlands will be hand-cut by chainsaws or other non-mechanized techniques where possible to avoid soils being compacted. When necessary, rubber-wheeled vehicles, or vehicles equipped with tracks, will be used to remove vegetation or debris. The Company will perform all construction work in accordance with the conditions and requirements of regulatory permits obtained for the Project.

(iii) Construction Impacts on Waterbodies

The Preferred and Alternate Route centerlines both cross 17 streams. Detailed information about each feature can be found in Table ~~8-38-2~~ in Section ~~4906-05-08(B)(c)(i)~~ 4906-04-08(B)(2)(a)(i).

Approximately ~~9,482~~ 14,844 14,199 linear feet of stream are within the Preferred Route ROW, while approximately 9,459 linear feet are within the Alternate Route ROW.

No streams will be filled or permanently impacted. Some streams may have to be crossed by construction vehicles. Final, exact pole locations have not been determined, although preliminary locations have been identified. Access paths to proposed pole locations will be evaluated when more detailed engineering is performed and landowner negotiations progress. If a new stream crossing were necessary, it would comply with one of the following three proposed methods to cross streams:

- Temporary stream ford
- Temporary culvert stream crossings
- Temporary access bridge

Temporary stream fords are proposed for crossing low quality ephemeral and intermittent streams with a drainage basin less than 1 square mile. This will involve minimum clearing necessary to gain access to the stream and for passage of construction vehicles.

- Disturbance of the stream will be kept to a minimum, stream bank vegetation will be preserved to the maximum extent practical, and the stream crossing width will be kept as narrow as possible. Clearing will be done by hand cutting rather than grubbing to promote re-vegetation after construction.
- Sediment-laden runoff will be prevented from flowing from the access road directly into the stream. Diversions and swales will be used to direct runoff to stormwater management devices. Silt fences will be used as needed according to local topographic conditions.
- Following completion of the work, the areas cleared for the temporary access crossing will be stabilized through plantings of woody species where appropriate. Areas of exposed soil will be stabilized in accordance with the stormwater pollution prevention plan (SWPPP) for the Project.

Culvert stream crossings are proposed for crossing marginal quality perennial, ephemeral, and intermittent streams with a drainage basin of less than 1 mile. These crossings may be removed or remain in place to provide maintenance access to the line (critical if service is to be reliable).

- Stream disturbance will be kept to a minimum, stream bank vegetation will be preserved to the maximum extent practical, and the stream crossing width will be kept as narrow as possible. Clearing will be done by hand-cutting techniques rather than grubbing. Roots and stumps will be left in place to aid stabilization and to accelerate re-vegetation.
- Sediment-laden runoff will be controlled to minimize its flow from the access road directly into the stream. Diversions and swales will be used to direct runoff to stormwater management devices. Silt fence will be used as needed according to local topographic conditions.
- Culvert pipes will be placed on the existing streambed to avoid a drop or waterfall at the downstream end of the pipe, which would be a barrier to fish migration. Crossings will be placed in shallow areas rather than pools.
- Culverts will be sized to be at least three times the depth of the normal stream flow at the crossing location.
- There will be a sufficient number of culvert pipes to cross the stream completely with no more than a 12-inch space between each one.
- Stone, rock, or aggregate of Ohio Department of Transportation (ODOT) number 1 as a minimum size will be placed in the channel, and between culverts. To prevent washouts, larger stone may be used with gabion mattresses. No soil will be placed in the stream channel.
- After construction is complete, some rock aggregate and structures such as culvert pipes used for the crossing will be left in place if approved by the landowner. Care will be taken so that aggregate does not create an impoundment or impede fish passage. Structures such as gabion mattresses will be removed.
- Stream banks will be stabilized, and woody species planted as appropriate.

Temporary access bridges or culvert stream crossings will be used for high quality perennial, ephemeral, and intermittent streams, and streams with a drainage basin greater than 1 square mile.

- Disturbance of the stream will be kept to a minimum, stream bank vegetation will be preserved to the maximum extent practical, and the stream crossing width will be kept as narrow as possible. Clearing will be done by hand cutting rather than grubbing. Roots and stumps will be left in place to aid stabilization and to accelerate re-vegetation.
- Sediment-laden runoff will be controlled to minimize flowing from the access road directly into the stream. Diversions and swales will be used to direct runoff to stormwater management locations. Silt fence will be used as needed according to local topographic conditions.
- Bridges will be constructed to span the entire channel. If the channel width exceeds 8 feet, then a floating pier or bridge support may be placed in the channel. No more than one pier, footing, or support will be allowed for every 8 feet of span width. No footings, piers, or supports will be allowed for spans of less than 8 feet.
- No fill other than clean stone, free from soil, will be placed in the stream channel.

These crossings will be addressed in the two SWPPPs for the Project SWPPP. Some of the access routes may be left in place for maintenance activity. Details on the proposed access road stream crossing methods will be provided to the OPSB separately.

Impacts to ponds are not anticipated by the construction, operation, or maintenance of the proposed transmission line. BMPs, including silt fence or filter sock, will be used as appropriate during construction to minimize runoff siltation.

(d) Literature Survey of Plant and Animal Life Potentially Affected

Text provided in the January 3, 2023 Application filing remains unchanged.

(e) Results of Field Survey of Plant and Animal Species

Text provided in the January 3, 2023 Application filing remains unchanged.

(f) Additional Studies Addressing Ecological Impacts

Text provided in the January 3, 2023 Application filing remains unchanged.

(2) Ecological Impacts

(a) Impacts of Construction

(i) Streams

Streams and drainage channels were delineated and assessed during the ecological survey of the Preferred and Alternate Routes. A total of ~~22~~ 21 streams were identified within the Field Survey Area. Streams with drainage areas greater than 1 square mile or maximum pool depths greater than 40 centimeters (cm) were assessed using the Ohio Environmental Protection Agency (OEPA) Qualitative Habitat Evaluation Index (QHEI). The QHEI is one measure that is used by OEPA, in

association with biotic sampling, to determine a stream's aquatic life use designation in accordance with the Ohio water quality standards (OEPA, 2006). The QHEI method classifies streams based on their drainage area. Streams that drain greater than or equal to 20 square miles are classified as "larger streams," while those that drain less than 20 square miles are classified as "headwaters." Six streams were evaluated using QHEI methodology, all of which crossed both the Preferred and Alternate Routes where the routes overlapped. Field personnel completed the QHEI near the proposed centerline of the transmission line crossing when possible.

The OEPA's Headwater Habitat Evaluation Index (HHEI) is used to evaluate streams with a drainage area less than or equal to 1 square mile, and maximum pools depths less than or equal to 40 cm (OEPA, 2020). The HHEI is generally used to assess Primary Headwater Habitat (PHWH) streams that typically fall under the classification of first or second-order streams. The HHEI rates a stream based on its physical habitat and uses that information to determine the biological potential of the stream. The physical habitats scored for the HHEI are substrate type, pool depth, and bank full width. Scores for Class I PHWH Streams range from 0 to 29.9; scores for Class II PHWH Streams range from 30 to 69.9; and scores for Class III PHWH Streams range from 70 to 100. A "Modified" qualifier may be added as a prefix to Class I or Class II if evidence of anthropogenic alterations, such as channelization and bank stabilization, are observed. A higher score and PHWH class correspond with a more continuous flow regime, corresponding with better quality and more diverse habitat. The flow regime determines the physical habitat of the stream and is therefore indicative of the biological communities it can support. Eleven streams were evaluated using HHEI methodology. All 11 streams were along both the Preferred and Alternate Routes where the routes overlapped. Where possible, the HHEI evaluations were completed near the proposed centerline of the transmission line crossing. Multiple HHEI evaluations were completed at streams that exhibited significant change in either flow regime, substrate, size, and/or other characteristics which could potentially significantly change the stream's score.

The OEPA has established aquatic life use designations for streams throughout Ohio as outlined in the Ohio Administrative Code (OAC) Chapter 3745-1-07. There were five delineated streams that had a designated aquatic life use defined under OAC Chapter 3745-1. Jacobs Engineering Group Inc. defaults to the assigned OAC designations and therefore did not assess these streams.

Table 8-18-2. Streams within the Preferred and Alternate Route Environmental Field Survey Area and Potential Disturbance Area/ROW

Stream ID Waterbody Name	Figure	Flow Regime	Top of Bank Width (feet)	Max. Pool Depth (inches)	Form	Score	OEPA Aquatic Life Use Designation	PHWH Class (HHEI)/ Narrative Rating (QHEI)	Linear Feet within Field Survey Area ^a	Preferred Route		Alternate Route	
										Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b	Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b
Stream EN-01 UNT to Little Yellow Creek	8-2A, 8-3A	Intermittent	20	5	HHEI	43	-	Modified Class II	423 <u>386</u>	Yes	276 <u>279</u> <u>255</u>	Yes	276
Stream EN-02 Little Yellow Creek	8-2A, 8-3A	Perennial	12	10	-	-	LRW	-	338 <u>329</u>	Yes	107 <u>107</u> <u>86</u>	Yes	107
Stream EN-03 UNT to Yellow Creek	8-2A, 8-2B, 8-3A , 8-3B	Intermittent	9	3	HHEI	47	-	Modified Class II	301 <u>0</u>	No	0	No	0
Stream EN-04 UNT to Yellow Creek	8-2A, 8-2B, 8-3A , 8-3B	Intermittent	20	3	HHEI	31	-	Modified Class II	8,238 <u>8,242</u>	Yes	6,255 <u>8,072</u> <u>8,063</u>	Yes	6,334
Stream EN-05 Yellow Creek	8-2B, 8-3B	Perennial	30	36	-	-	WWH	-	357 <u>367</u>	Yes	92 <u>118</u> <u>95</u>	Yes	92
Stream EN-06 UNT to Yellow Creek	8-2B, 8-3B	Perennial	20	10	QHEI	29.5	-	Very Poor	394 <u>301</u>	Yes	61 <u>100</u> <u>80</u>	Yes	61
Stream EN-07 UNT to Yellow Creek	8-2C, 8-3C	Intermittent	9	8	HHEI	58	-	Modified Class II	2,896 <u>2,897</u>	Yes	630 <u>2,696</u> <u>2,676</u>	Yes	630
Stream EN-08 UNT to Yellow Creek	8-2C, 8-3C	Intermittent	8	7	HHEI	59	-	Modified Class II	172 <u>171</u>	Yes	66 <u>72</u> <u>62</u>	Yes	66

Stream ID Waterbody Name	Figure	Flow Regime	Top of Bank Width (feet)	Max. Pool Depth (inches)	Form	Score	OEPA Aquatic Life Use Designation	PHWH Class (HHEI)/ Narrative Rating (QHEI)	Linear Feet within Field Survey Area ^a	Preferred Route		Alternate Route	
										Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b	Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b
Stream EN-09 UNT to Yellow Creek	8-2C ₇ 8-3C	Intermittent	14	14	HHEI	58	-	Modified Class II	2,802 <u>2,803</u>	Yes	508 <u>1,663</u> <u>1,361</u>	Yes	508
Stream EN-10 UNT to Yellow Creek	8-2C ₇ 8-3C	Intermittent	9	8	HHEI	55	-	Modified Class II	325 <u>311</u>	Yes	101 <u>101</u> <u>82</u>	Yes	101
Stream EN-11 West Creek	8-2D ₇ 8-3D	Perennial	18	30	-	-	WWH	-	693 <u>682</u>	Yes	141 <u>227</u> <u>150</u>	Yes	105
Stream EN-12 UNT to Needles Creek	8-2D ₇ 8-3D	Intermittent	10	5	QHEI	32.5	-	Poor	300 <u>309</u>	Yes	60 <u>100</u> <u>80</u>	Yes	60
Stream EN-13 UNT to Needles Creek	8-2E ₇ 8-3E	Intermittent	8	15	QHEI	33	-	Poor	301 <u>302</u>	Yes	67 <u>100</u> <u>80</u>	Yes	67
Stream EN-14 Needles Creek	8-2E ₇ 8-3E	Perennial	7	10	-	-	WWH	-	300 <u>303</u>	Yes	67 <u>100</u> <u>80</u>	Yes	67
Stream EN-15 UNT to Needles Creek	8-2F ₇ 8-3F	Intermittent	8	5	HHEI	54	-	Modified Class II	114 <u>117</u>	No	8 <u>11</u> <u>1</u>	No	8
Stream EN-16 UNT to Rader Creek	8-2F ₇ 8-3F	Perennial	15	20	QHEI	54	-	Fair	466 <u>382</u>	Yes	107 <u>107</u> <u>88</u>	Yes	107

Stream ID Waterbody Name	Figure	Flow Regime	Top of Bank Width (feet)	Max. Pool Depth (inches)	Form	Score	OEPA Aquatic Life Use Designation	PHWH Class (HHEI)/ Narrative Rating (QHEI)	Linear Feet within Field Survey Area ^a	Preferred Route		Alternate Route	
										Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b	Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b
Stream EN-17 Rader Creek	8-2G, 8-3G	Perennial	50	30	-	-	WWH	-	932 <u>973</u>	Yes	738 <u>743</u> <u>720</u>	Yes	672
Stream EN-18 UNT to Blanchard River	8-2I, 8-3I	Intermittent	30	12	HHEI	52	-	Modified Class II	90 <u>91</u>	No	0	No	0
Stream EN-19 UNT to Blanchard River	8-2J, 8-2K, 8-3J , 8-3K	Intermittent	25	30	QHEI	56	-	Good	577 <u>591</u>	Yes	129 <u>154</u> <u>158</u>	Yes	129
Stream EN-20 UNT to Blanchard River	8-2K, 8-3K	Perennial	12	12	QHEI	41	-	Poor	311	Yes	50 <u>80</u> <u>80</u>	Yes	50
Stream EN-21 UNT to Blanchard River	8-2K, 8-3K	Ephemeral	1.5	3	HHEI	32	-	Modified Class II	110 <u>111</u>	No	17 <u>14</u> <u>2</u>	No	17
Stream EN-22 UNT to Blanchard River	8-2K, 8-3K	Ephemeral	2	1	HHEI	22	-	Modified Class I	117 <u>136</u>	No	0	No	0
Total									20,557 <u>20,115</u>		9,482 <u>14,844</u> <u>14,199</u>		9,459

Stream ID Waterbody Name	Figure	Flow Regime	Top of Bank Width (feet)	Max. Pool Depth (inches)	Form	Score	OEPA Aquatic Life Use Designation	PHWH Class (HHEI)/ Narrative Rating (QHEI)	Linear Feet within Field Survey Area ^a	Preferred Route		Alternate Route	
										Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b	Crossed by Centerline	Linear Feet within Potential Disturbance Area/ROW ^b

Notes:

a The total width of the Field Survey Area ~~was~~ is a minimum of 300 feet. The values presented reflect an area 150 feet on either side of the centerline of the Revised Preferred Route and Alternate Route.

b The width of the potential disturbance area and the final maintained ROW is planned to be 80 ~~to 100~~ feet.

c Total may vary slightly from the sum of their parts due to rounding.

d Corrected original values are provided in *italics* for comparative purposes.

ID = identification

LRW = limited resource water

UNT = unnamed tributary

WWH = warmwater habitat

(ii) Wetlands

Fourteen wetlands, totaling approximately 8.0 acres, were delineated within the Field Survey Area. All wetlands were identified in areas where the Preferred and Alternate Routes overlap. These field-delineated wetlands for the Preferred and Alternate Routes are mapped on Figures 8-2 and Figures 8-3, respectively. Detailed information on each wetland for the Preferred and Alternate Routes is provided in Table ~~8-2~~ 8-3. Additional information on field methodology and classification can be found in Appendix 8-2. The anticipated temporary construction impacts, where unavoidable, on these wetlands are included in Table ~~8-2~~ 8-3 and further discussed in Section ~~4906-5-08(B)(3)(b)~~ 4906-4-08(B)(1)(c)(ii).

Table 8-28-3. Delineated Wetlands within the Environmental Field Survey Area

Wetland Name	Figure	Cowardin Wetland Type ^a	ORAM Score	ORAM Category	Acreage within Field Survey Area ^b	Preferred Route		Alternate Route	
						Acreage within Potential Disturbance Area/ROW ^c	Linear Feet Crossed by Centerline	Acreage within Potential Disturbance Area/ROW ^c	Linear Feet Crossed by Centerline
Wetland EN-01	8-2A, 8-3A	PFO	38.0	Category 2	1.14 <u>1.19</u>	0.32 <u>0.20</u>	0	0.32	0
Wetland EN-02	8-2C, 8-3C	PFO	34.5	Category 2	0.84	0.19 0.11	0	0.19	0
	8-2C, 8-3C	PSS			0.09	0.09	137 <u>122</u>	0	0
Wetland EN-03	8-2D, 8-3D	PEM	32.0	Category 2	<0.01	<0.01 <u>0.00</u>	0	<0.01	0
		PFO			0.27	0.00	0	0.01	0
Wetland EN-04	8-2G, 8-3G	PEM	16.0	Category 1	0.10	0.00	0	<0.01	0
Wetland EN-05	8-2G, 8-3G	PSS	24.0	Category 1	0.39	0.08 <u>0.06</u>	37	<0.01	0
Wetland EN-06	8-2G, 8-3G	PSS	25.0	Category 1	0.07	0.07	111	0.07	111
Wetland EN-07	8-2H, 8-3H	PEM	17.5	Category 1	0.54 <u>0.55</u>	0.24 <u>0.20</u>	136 <u>130</u>	0.24	136
Wetland EN-08	8-2H, 8-3H	PFO	42.5	Category 2	0.76 <u>0.70</u>	0.00	0	0.00	0
Wetland EN-09	8-2I, 8-3I	PFO	48.5	Category 2	0.19 <u>0.20</u>	0.00	0	0.00	0
Wetland EN-10	8-2I, 8-3I	PSS	25.0	Category 1	0.27 <u>0.26</u>	0.02 <u>0.01</u>	0	0.02	0

Wetland Name	Figure	Cowardin Wetland Type ^a	ORAM Score	ORAM Category	Acreage within Field Survey Area ^b	Preferred Route		Alternate Route	
						Acreage within Potential Disturbance Area/ROW ^c	Linear Feet Crossed by Centerline	Acreage within Potential Disturbance Area/ROW ^c	Linear Feet Crossed by Centerline
Wetland EN-11	8-21, 8-31	PEM	31.5	Category 2	0.35	0.34	330 <u>331</u>	0.34	330
		PFO			0.34	0.07 <u>0.04</u>	0	0.07	0
Wetland EN-12	8-21, 8-31	PFO	54.5	Category 2	0.33	0.00	0	0.00	0
Wetland EN-13	8-21, 8-31	PFO	42.0	Category 2	0.06	0.00	0	0.00	0
Wetland EN-14	8-21, 8-31	PEM	41.5	Category 2	1.00	0.99 <u>0.98</u>	651 <u>635</u>	0.99	651
		PFO			0.88	0.11 <u>0.04</u>	0	0.11	0
		PSS			0.38	0.38	301 <u>307</u>	0.38	301
Totals ^d					8.00 <u>8.01</u>	2.81 <u>2.5</u>	1,711 <u>1,673</u>	2.74	1,674

Notes:

a Wetland Type: PEM = palustrine emergent, PSS = palustrine scrub/shrub, PFO = palustrine forested.

b The total width of the Field Survey Area ~~was~~ is a minimum of 300 feet. The values presented reflect an area 150 feet on either side of the centerline of the Revised Preferred Route and Alternate Route.

c The width of the potential disturbance area and the final maintained ROW is planned to be 80 ~~to 100~~ feet.

d Total may vary slightly from the sum of their parts due to rounding.

No major lakes or reservoirs were observed within the Field Survey Area. ~~Six~~ Seven ponds totaling 2.63 acres were observed in the Field Survey Area and along the Preferred Route. Five of the ponds, totaling 1.01 acres, were along the Alternate Route. Ponds within the Field Survey Area are shown on Figures 8-2 and ~~8-3~~ and are summarized in Table 8-4.

Table 8-4. Delineated Ponds within the Field Survey Area

Feature Name	Figure	Acreage within Field Survey Area ^c	Preferred Route		Alternate Route	
			Acreage within ROW ^a	Linear Feet Crossed by Centerline	Acreage within ROW ^a	Linear Feet Crossed by Centerline
Pond EN-01	8-2B, 8-3B	0.07 <u>0.26</u>	0.00	0	0.00	0
Pond EN-02	8-2C, 8-3C	0.02	0.00	0	0.00	0
Pond EN-03	8-2G, 8-3G	0.40 <u>1.41</u>	0.00	0	0.00	0
Pond EN-04	8-2H, 8-3H	0.45	0.22 <u>0.18</u>	150 <u>111</u>	0.22	150
Pond EN-05	8-2I, 8-3I	0.21	0.16 <u>0.14</u>	135 <u>100</u>	0.16	135
Pond EN-06	8-2J, 8-3J	0.26 <u>0.27</u>	0.00 <u><0.01</u>	0	0.00	0
Pond EN-07	8-2F	<u>0.01</u>	<u>0</u>	<u>0</u>		
Total		1.44 <u>2.63</u>	0.38 <u>0.32</u>	285 <u>211</u>	0.38	285

Notes:

a "0" indicates the pond is not within the ROW.

b Total may vary slightly from the sum of their parts due to rounding.

c The total width of the Field Survey Area is a minimum of 300 feet. The values presented reflect an area 150 feet on either side of the centerline of the Revised Preferred Route and Alternate Route.

(iii) Vegetation

The construction impacts on vegetation along the Preferred and Alternate Routes will be limited to initial clearing of vegetation within the 80-foot ~~or 100-foot~~ ROW for the proposed transmission line and the defined access roads. Specific locations for access roads will be identified at the time of the Company transmission line easement acquisition process. Trees adjacent to the proposed ROW that are dead, dying, diseased, leaning, significantly encroaching, or prone to failure may require clearing to allow for safe operation of the transmission line. Vegetative wastes (such as tree limbs and trunks) generated during the construction phase will be windrowed or chipped and disposed of appropriately depending on individual landowner requests. The approximate vegetation impacts, based on GIS analysis, along the Preferred and Alternate Route ROWs are provided in Table 8-5.

Table 8-5. Approximate Vegetation Impacts Along the ROW

Land Use Type	Preferred Route			Alternate Route		
	Length of Route (feet)	Length of Route (miles)	Acreage within ROW	Length of Route (feet)	Length of Route (miles)	Acreage within ROW
Agricultural and Pasture/Hayfields	67,917 <u>68,812</u>	12.9 <u>13.0</u>	121.6 <u>106.6</u>	68,618	13.0	122.8
Delineated Wetlands	1,711 <u>1,673</u>	0.3	2.9 <u>2.5</u>	1,674	0.3	2.8
Forested	1,788 <u>2,116</u>	0.3 <u>0.4</u>	5.8 <u>4.8</u>	2,185	0.4	6.2
Old Field	544 <u>175</u>	≤0.1	0.8 <u>0.3</u>	369	0.1	0.5
Recreational Parks	1,551 <u>1,548</u>	0.3	3.6 <u>2.8</u>	802	0.2	1.5
Residential and Commercial	8,398 <u>8,564</u>	1.6	12.0 <u>12.3</u>	9,460	1.8	13.4
Scrub/Shrub	608 <u>461</u>	0.1	1.2 <u>1.0</u>	591	0.1	1.4
TOTAL VEGETATION	<u>83,349</u>	<u>15.8</u>	<u>130.3</u>	<u>83,699</u>	<u>15.9</u>	<u>148.6</u>

Notes:

a Approximately 30 acres within Preferred Route ROW contain no vegetation (includes gravel areas, railroad, road, stream/pond, etc.)

b Total may vary slightly from the sum of their parts due to rounding

(iv) Clearing Work

Text provided in the January 3, 2023 Application filing remains unchanged.

(v) Wildlife

Updated consultation requests were submitted to the United States Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources (ODNR) in May 2026. The USFWS response, dated May 11, 2026 (see Appendix 8-3), stated that the April 14, 2022 response letter for the Project remains valid, and there are no additional listed species observations in the area. The ODNR response, dated June 5, 2026 (see Appendix 8-3), reviewed the National Heritage Database and identified no additional records of state- and/or federally-listed species within a one-mile radius of the Project since their April 1, 2022 response letter. Similarly, ODNR Division of Wildlife (DOW) provided the same comments for the state-listed species that were included in the April 1, 2022 response letter.

(b) Mitigation Procedures

Text provided in the January 3, 2023 Application filing remains unchanged.

(3) Operational Impacts

Text provided in the January 3, 2023 Application filing remains unchanged.

(4) Mitigation Procedures

Text provided in the January 3, 2023 Application filing remains unchanged.

(5) Preventing Noxious Weeds

Text provided in the January 3, 2023 Application filing remains unchanged.

(C) LAND USE AND COMMUNITY DEVELOPMENT**(1) Existing Land Use****(a) Map of Existing Land Use**

Maps at 1:24,000-scale, including the area 1,000 feet on either side of the centerline, are presented as Figure ~~7-13-2~~ and include the following information:

- Centerline for the Preferred and Alternate Routes
- Existing substation locations
- Land use types, road names, structures, and incorporated areas and population centers

Figure 8-3 depicts all parcels and structures including residences, commercial centers or buildings, industrial buildings and installations, schools, hospitals, churches, civic buildings, and other occupied places within 250 feet of the Preferred Route ROW.

(b) Structures Near the Project**(i) Structures and Property Lines within 200 feet of Proposed Right-of-Way**

The January 3, 2023 Application filing structure counts were calculated using building center points, which excluded structures that were only partially located within 200 feet of the ROW. The revised counts provide a more accurate representation by including all structures that intersect the 200-foot buffer. The corrected original values that use the more accurate methodology are provided in italics for comparative purposes. There are ~~54~~ *97* ~~93~~ structures (i.e., residences, commercial, industrial, ~~schools, hospitals, churches, civic buildings, airports, and outbuildings~~) within 200 feet of the Preferred Route ROW and 60 structures within 200 feet of the Alternate Route ROW. There are ~~35~~ *52* ~~48~~ residences within 200 feet of the Preferred Route ROW and 40 residences within 200 feet of the Alternate Route ROW. There are ~~16~~ *10* ~~10~~ commercial buildings within 200 feet of the Preferred Route and 16 commercial buildings within 200 feet of the Alternate Route ROW. There are no ~~industrial buildings, schools, hospitals, churches, civic buildings or airports~~ within 200 feet of the Preferred or Alternate Route ROWs. One industrial building is within 200 feet of the Preferred Route ROW. Two ~~One~~ recreational structures is are within 200 feet of ~~both the Preferred and Alternate Route ROW~~. The remaining structures crossed include outbuildings, such as garages and/or barns. There are ~~13~~ *32* ~~32~~ outbuildings within 200 feet of the Preferred Route ROW and 13 outbuildings within 200 feet of

the Alternate Route ROW. Table 8-6 lists the structures and properties within 200 feet of the Preferred Route ROW.

Table 8-6. Structures and Properties within 200 feet of the Proposed Right-of-Way

<u>Property Parcel Number</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to ROW (feet)</u>
<u>61-102020.1200</u>	<u>Commercial - 1</u>	<u>1</u>	<u>East Leipsic – Rader Road</u>	<u>161</u>
<u>410001028550</u>	<u>Commercial - 2</u>	<u>2</u>	<u>East Leipsic – Rader Road</u>	<u>76</u>
<u>59-023010.0000</u>	<u>Outbuilding - 1</u>	<u>17</u>	<u>East Leipsic – Rader Road</u>	<u>56</u>
<u>59-106060.0000</u>	<u>Outbuilding - 1</u>	<u>21</u>	<u>East Leipsic – Rader Road</u>	<u>48</u>
<u>59-024021.0000</u>	<u>Residential - 1</u>	<u>28</u>	<u>East Leipsic – Rader Road</u>	<u>81</u>
<u>59-026020.0100</u>	<u>Residential - 1</u>	<u>32</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-023110.0100</u>	<u>Outbuilding - 1</u>	<u>33</u>	<u>East Leipsic – Rader Road</u>	<u>86</u>
<u>59-023110.0100</u>	<u>Residential - 1</u>	<u>34</u>	<u>East Leipsic – Rader Road</u>	<u>85</u>
<u>59-023150.0000</u>	<u>Commercial - 1</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>58</u>
<u>59-023150.0100</u>	<u>Commercial - 1</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>58</u>
<u>59-023170.0000</u>	<u>Residential - 1</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>29</u>
<u>59-039140.0000</u>	<u>Residential - 1</u>	<u>36</u>	<u>East Leipsic – Rader Road</u>	<u>188</u>
<u>400000099850</u>	<u>Outbuilding - 1</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>165</u>
<u>400000100010</u>	<u>Residential - 1</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>169</u>
<u>400000100030</u>	<u>Residential - 1</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>5</u>
<u>400000100040</u>	<u>Residential - 1</u>	<u>50</u>	<u>East Leipsic – Rader Road</u>	<u>47</u>
<u>400000100130</u>	<u>Commercial - 1</u>	<u>51</u>	<u>East Leipsic – Rader Road</u>	<u>7</u>
<u>400000100170</u>	<u>Residential - 1</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>175</u>
<u>400001000936</u>	<u>Outbuilding - 1</u>	<u>66</u>	<u>East Leipsic – Rader Road</u>	<u>90</u>
<u>400001000936</u>	<u>Residential - 1</u>	<u>66</u>	<u>East Leipsic – Rader Road</u>	<u>26</u>
<u>400001018018</u>	<u>Outbuilding - 2</u>	<u>79</u>	<u>East Leipsic – Rader Road</u>	<u>65</u>
<u>400001018018</u>	<u>Residential - 1</u>	<u>79</u>	<u>East Leipsic – Rader Road</u>	<u>24</u>
<u>400000096860</u>	<u>Outbuilding - 1</u>	<u>83</u>	<u>East Leipsic – Rader Road</u>	<u>74</u>
<u>400000096860</u>	<u>Residential - 1</u>	<u>83</u>	<u>East Leipsic – Rader Road</u>	<u>20</u>
<u>410001029782</u>	<u>Commercial - 2</u>	<u>89</u>	<u>East Leipsic – Rader Road</u>	<u>165</u>
<u>410001029786</u>	<u>Industrial - 1</u>	<u>90</u>	<u>East Leipsic – Rader Road</u>	<u>156</u>
<u>400001005322</u>	<u>Outbuilding - 1</u>	<u>Radar Road Substation</u>	<u>East Leipsic – Rader Road</u>	<u>178</u>
<u>400001005322</u>	<u>Residential - 1</u>	<u>Radar Road Substation</u>	<u>East Leipsic – Rader Road</u>	<u>161</u>
<u>400001015598</u>	<u>Residential - 1</u>	<u>Radar Road Substation</u>	<u>East Leipsic – Rader Road</u>	<u>39</u>
<u>410000107490</u>	<u>Outbuilding - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>45</u>
<u>410000107850</u>	<u>Outbuilding - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>196</u>
<u>410000107470</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>185</u>
<u>410000107480</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>103</u>
<u>410000107490</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>31</u>
<u>410000107500</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>198</u>
<u>410000107750</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>60</u>

<u>Property Parcel Number</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to ROW (feet)</u>
<u>410000107760</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>56</u>
<u>410000107850</u>	<u>Residential - 2</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>28</u>
<u>410000107980</u>	<u>Outbuilding - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>192</u>
<u>410000107690</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>177</u>
<u>410000107700</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>86</u>
<u>410000107710</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>51</u>
<u>410000107720</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>55</u>
<u>410000107730</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>50</u>
<u>410000107740</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>51</u>
<u>410001015407</u>	<u>Outbuilding - 1</u>	<u>6</u>	<u>Rader Road – New Liberty</u>	<u>168</u>
<u>410000107830</u>	<u>Outbuilding - 2</u>	<u>7</u>	<u>Rader Road – New Liberty</u>	<u>90</u>
<u>410000107830</u>	<u>Residential - 1</u>	<u>7</u>	<u>Rader Road – New Liberty</u>	<u>166</u>
<u>400001010818</u>	<u>Commercial - 2</u>	<u>12</u>	<u>Rader Road – New Liberty</u>	<u>13</u>
<u>400001010818</u>	<u>Outbuilding - 1</u>	<u>12</u>	<u>Rader Road – New Liberty</u>	<u>112</u>
<u>410000097731</u>	<u>Recreational - 2</u>	<u>13</u>	<u>Rader Road – New Liberty</u>	<u>31</u>
<u>420001021397</u>	<u>Outbuilding - 1</u>	<u>26</u>	<u>Rader Road – New Liberty</u>	<u>95</u>
<u>420000111070</u>	<u>Residential - 1</u>	<u>28</u>	<u>Rader Road – New Liberty</u>	<u>42</u>
<u>420001009670</u>	<u>Outbuilding - 1</u>	<u>41</u>	<u>Rader Road – New Liberty</u>	<u>12</u>
<u>420001009670</u>	<u>Residential - 1</u>	<u>41</u>	<u>Rader Road – New Liberty</u>	<u>114</u>
<u>280001019051</u>	<u>Outbuilding - 1</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>145</u>
<u>280000055761</u>	<u>Residential - 1</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>132</u>
<u>280001019051</u>	<u>Residential - 1</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>32</u>
<u>280001019762</u>	<u>Residential - 1</u>	<u>53</u>	<u>Rader Road – New Liberty</u>	<u>191</u>
<u>280001019763</u>	<u>Outbuilding - 1</u>	<u>54</u>	<u>Rader Road – New Liberty</u>	<u>86</u>
<u>280001019763</u>	<u>Residential - 1</u>	<u>55</u>	<u>Rader Road – New Liberty</u>	<u>68</u>
<u>280001016094</u>	<u>Outbuilding - 1</u>	<u>56</u>	<u>Rader Road – New Liberty</u>	<u>90</u>
<u>280001016094</u>	<u>Residential - 1</u>	<u>57</u>	<u>Rader Road – New Liberty</u>	<u>48</u>
<u>280001016095</u>	<u>Outbuilding - 1</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>66</u>
<u>280001007581</u>	<u>Outbuilding - 2</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>68</u>
<u>280001007581</u>	<u>Residential - 1</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001016095</u>	<u>Residential - 1</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>102</u>
<u>280001010507</u>	<u>Residential - 1</u>	<u>59</u>	<u>Rader Road – New Liberty</u>	<u>53</u>
<u>280001010507</u>	<u>Outbuilding - 1</u>	<u>60</u>	<u>Rader Road – New Liberty</u>	<u>63</u>
<u>280000057370</u>	<u>Outbuilding - 1</u>	<u>62</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280000057370</u>	<u>Residential - 1</u>	<u>62</u>	<u>Rader Road – New Liberty</u>	<u>95</u>
<u>280001010508</u>	<u>Outbuilding - 1</u>	<u>63</u>	<u>Rader Road – New Liberty</u>	<u>105</u>
<u>280001010508</u>	<u>Residential - 1</u>	<u>64</u>	<u>Rader Road – New Liberty</u>	<u>90</u>
<u>280000057400</u>	<u>Residential - 1</u>	<u>65</u>	<u>Rader Road – New Liberty</u>	<u>49</u>
<u>280001014301</u>	<u>Outbuilding - 1</u>	<u>66</u>	<u>Rader Road – New Liberty</u>	<u>172</u>

<u>Property Parcel Number</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to ROW (feet)</u>
<u>280001014301</u>	<u>Residential - 1</u>	<u>66</u>	<u>Rader Road – New Liberty</u>	<u>110</u>
<u>280001031330</u>	<u>Residential - 1</u>	<u>66</u>	<u>Rader Road – New Liberty</u>	<u>68</u>
<u>280001025252</u>	<u>Outbuilding - 1</u>	<u>67</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001025252</u>	<u>Residential - 1</u>	<u>67</u>	<u>Rader Road – New Liberty</u>	<u>30</u>
<u>280001025251</u>	<u>Outbuilding - 3</u>	<u>68</u>	<u>Rader Road – New Liberty</u>	<u>66</u>
<u>280001025251</u>	<u>Residential - 1</u>	<u>68</u>	<u>Rader Road – New Liberty</u>	<u>36</u>
<u>280001024959</u>	<u>Residential - 1</u>	<u>69</u>	<u>Rader Road – New Liberty</u>	<u>126</u>
<u>280001024958</u>	<u>Residential - 1</u>	<u>70</u>	<u>Rader Road – New Liberty</u>	<u>133</u>

(ii) Structures and Property Lines within 250 feet of Proposed Right-of-Way

There are 102 structures (i.e., residences, commercial, industrial, recreational, churches, and outbuildings) within 250 feet of the Preferred Route ROW. There are 55 residences within 250 feet of the Preferred Route ROW. There are 10 commercial buildings within 250 feet of the Preferred Route ROW. There is one church within 250 feet of the Preferred Route ROW. Two recreational structures are within 250 feet of the Preferred Route ROW. There are no schools, hospitals, or airports within 250 feet of the Preferred ROW. One industrial building is within 250 feet of the Preferred Route ROW. The remaining structures crossed include outbuildings, such as garages and/or barns. There are 33 outbuildings within 250 feet of the Preferred Route ROW. Table 8-7 lists the structures and properties within 250 feet of the Preferred Route ROW and the proximity of the structures and parcels to the nearest facility.

Table 8-7. Structures and Properties within 250 feet of the Proposed Right-of-Way

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>61-102020.3000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>4</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>61-102020.2900</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>10</u>	<u>East Leipsic – Rader Road</u>	<u>83</u>
<u>61-102020.2800</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>9</u>	<u>East Leipsic – Rader Road</u>	<u>83</u>
<u>61-102020.2700</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>11</u>	<u>East Leipsic – Rader Road</u>	<u>85</u>
<u>61-102020.1200</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Commercial - 1</u>	<u>1</u>	<u>East Leipsic – Rader Road</u>	<u>203</u>
<u>61-102020.1100</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>6</u>	<u>East Leipsic – Rader Road</u>	<u>101</u>
<u>59-106060.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Outbuilding - 1</u>	<u>21</u>	<u>East Leipsic – Rader Road</u>	<u>115</u>
<u>59-040090.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>23</u>	<u>East Leipsic – Rader Road</u>	<u>3</u>
<u>59-039140.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>36</u>	<u>East Leipsic – Rader Road</u>	<u>252</u>
<u>59-027180.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>5</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-027110.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>7</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-027100.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>10</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-027090.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>11</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-027070.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>13</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-026200.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>15</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-026180.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>20</u>	<u>East Leipsic – Rader Road</u>	<u>35</u>
<u>59-026170.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>26</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-026160.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>24</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-026061.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>26</u>	<u>East Leipsic – Rader Road</u>	<u>49</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>59-026060.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>27</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-026030.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>29</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-026020.0100</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>32</u>	<u>East Leipsic – Rader Road</u>	<u>237</u>
<u>59-026020.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>32</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-025200.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>33</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-025160.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>34</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-025150.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-024200.0200</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>39</u>	<u>East Leipsic – Rader Road</u>	<u>20</u>
<u>59-024200.0100</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>38</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-024200.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>39</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-024190.0100</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>38</u>	<u>East Leipsic – Rader Road</u>	<u>48</u>
<u>59-024190.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>37</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-024160.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>41</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-024150.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>43</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>59-024140.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>36</u>	<u>East Leipsic – Rader Road</u>	<u>37</u>
<u>59-024120.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>41</u>	<u>East Leipsic – Rader Road</u>	<u>37</u>
<u>59-024110.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>42</u>	<u>East Leipsic – Rader Road</u>	<u>33</u>
<u>59-024080.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>44</u>	<u>East Leipsic – Rader Road</u>	<u>28</u>
<u>59-024021.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>28</u>	<u>East Leipsic – Rader Road</u>	<u>225</u>
<u>59-024020.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>28</u>	<u>East Leipsic – Rader Road</u>	<u>29</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>59-024010.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>31</u>	<u>East Leipsic – Rader Road</u>	<u>29</u>
<u>59-023200.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>29</u>	<u>East Leipsic – Rader Road</u>	<u>29</u>
<u>59-023190.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>32</u>	<u>East Leipsic – Rader Road</u>	<u>29</u>
<u>59-023170.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>71</u>
<u>59-023160.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>241</u>
<u>59-023150.0100</u>	<u>N/A</u>	<u>N/A</u>	<u>Commercial - 1</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>260</u>
<u>59-023150.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>Commercial - 1</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>192</u>
<u>59-023140.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>35</u>	<u>East Leipsic – Rader Road</u>	<u>282</u>
<u>59-023110.0100</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>33</u>	<u>East Leipsic – Rader Road</u>	<u>228</u>
<u>59-023110.0100</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>34</u>	<u>East Leipsic – Rader Road</u>	<u>205</u>
<u>59-023110.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>34</u>	<u>East Leipsic – Rader Road</u>	<u>31</u>
<u>59-023020.0000</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>18</u>	<u>East Leipsic – Rader Road</u>	<u>45</u>
<u>59-023010.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>17</u>	<u>East Leipsic – Rader Road</u>	<u>97</u>
<u>59-022200.0000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>24</u>	<u>East Leipsic – Rader Road</u>	<u>25</u>
<u>59-022190.0000</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>20</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u><Null></u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>12</u>	<u>Rader Road – New Liberty</u>	<u>16</u>
<u>420001031554</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>37</u>	<u>Rader Road – New Liberty</u>	<u>66</u>
<u>420001031453</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>42</u>	<u>Rader Road – New Liberty</u>	<u>182</u>
<u>420001031452</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>42</u>	<u>Rader Road – New Liberty</u>	<u>216</u>
<u>420001028453</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>25</u>	<u>Rader Road – New Liberty</u>	<u>0</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>420001028452</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>23</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001025848</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>33</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001025847</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>34</u>	<u>Rader Road – New Liberty</u>	<u>100</u>
<u>420001025846</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>34</u>	<u>Rader Road – New Liberty</u>	<u>182</u>
<u>420001025842</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>36</u>	<u>Rader Road – New Liberty</u>	<u>258</u>
<u>420001025841</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>37</u>	<u>Rader Road – New Liberty</u>	<u>118</u>
<u>420001025839</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>35</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001021397</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 1</u>	<u>26</u>	<u>Rader Road – New Liberty</u>	<u>145</u>
<u>420001019210</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>42</u>	<u>Rader Road – New Liberty</u>	<u>383</u>
<u>420001019209</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>42</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001014833</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>44</u>	<u>Rader Road – New Liberty</u>	<u>113</u>
<u>420001013640</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>38</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001009670</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 1</u>	<u>41</u>	<u>Rader Road – New Liberty</u>	<u>70</u>
<u>420001009670</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>41</u>	<u>Rader Road – New Liberty</u>	<u>168</u>
<u>420001007194</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>26</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001006751</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>30</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001002477</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>21</u>	<u>Rader Road – New Liberty</u>	<u>323</u>
<u>420001000978</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>22</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420001000669</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>37</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>420000111140</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>39</u>	<u>Rader Road – New Liberty</u>	<u>0</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>420000111070</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>28</u>	<u>Rader Road – New Liberty</u>	<u>112</u>
<u>420000110830</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>25</u>	<u>Rader Road – New Liberty</u>	<u>75</u>
<u>410001030819</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>13</u>	<u>Rader Road – New Liberty</u>	<u>40</u>
<u>410001029786</u>	<u>N/A</u>	<u>N/A</u>	<u>Industrial - 1</u>	<u>90</u>	<u>East Leipsic – Rader Road</u>	<u>198</u>
<u>410001029782</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Commercial - 2</u>	<u>89</u>	<u>East Leipsic – Rader Road</u>	<u>243</u>
<u>410001028553</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>91</u>	<u>East Leipsic – Rader Road</u>	<u>282</u>
<u>410001028550</u>	<u>N/A</u>	<u>N/A</u>	<u>Commercial - 2</u>	<u>2</u>	<u>East Leipsic – Rader Road</u>	<u>125</u>
<u>410001015407</u>	<u>N/A</u>	<u>N/A</u>	<u>Church/Civic - 1</u>	<u>6</u>	<u>Rader Road – New Liberty</u>	<u>244</u>
<u>410001015407</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>6</u>	<u>Rader Road – New Liberty</u>	<u>208</u>
<u>410001012513</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>7</u>	<u>Rader Road – New Liberty</u>	<u>103</u>
<u>410001001205</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>91</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>410001000905</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>92</u>	<u>East Leipsic – Rader Road</u>	<u>212</u>
<u>410000108010</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>269</u>
<u>410000107990</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>6</u>	<u>Rader Road – New Liberty</u>	<u>135</u>
<u>410000107980</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>233</u>
<u>410000107850</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>311</u>
<u>410000107850</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 2</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>216</u>
<u>410000107830</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 2</u>	<u>7</u>	<u>Rader Road – New Liberty</u>	<u>220</u>
<u>410000107830</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>7</u>	<u>Rader Road – New Liberty</u>	<u>211</u>
<u>410000107760</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>195</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>410000107750</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>265</u>
<u>410000107740</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>334</u>
<u>410000107730</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>259</u>
<u>410000107720</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>194</u>
<u>410000107710</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>145</u>
<u>410000107700</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>134</u>
<u>410000107690</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>223</u>
<u>410000107680</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>286</u>
<u>410000107540</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>298</u>
<u>410000107530</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>344</u>
<u>410000107520</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>5</u>	<u>Rader Road – New Liberty</u>	<u>401</u>
<u>410000107510</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>350</u>
<u>410000107500</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>300</u>
<u>410000107490</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>92</u>
<u>410000107490</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>82</u>
<u>410000107480</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>150</u>
<u>410000107470</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 2</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>230</u>
<u>410000097731</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Recreational - 2</u>	<u>13</u>	<u>Rader Road – New Liberty</u>	<u>249</u>
<u>400001033483</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>89</u>	<u>East Leipsic – Rader Road</u>	<u>125</u>
<u>400001033480</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>87</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>400001033479</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>86</u>	<u>East Leipsic – Rader Road</u>	<u>44</u>
<u>400001033454</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>64</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400001033452</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>64</u>	<u>East Leipsic – Rader Road</u>	<u>6</u>
<u>400001033449</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>69</u>	<u>East Leipsic – Rader Road</u>	<u>70</u>
<u>400001031139</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>54</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400001031138</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>56</u>	<u>East Leipsic – Rader Road</u>	<u>58</u>
<u>400001031078</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>48</u>	<u>East Leipsic – Rader Road</u>	<u>47</u>
<u>400001030815</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>1</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>400001030398</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>16</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>400001030050</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>20</u>	<u>Rader Road – New Liberty</u>	<u>52</u>
<u>400001029785</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>90</u>	<u>East Leipsic – Rader Road</u>	<u>157</u>
<u>400001029780</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>88</u>	<u>East Leipsic – Rader Road</u>	<u>290</u>
<u>400001029779</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>89</u>	<u>East Leipsic – Rader Road</u>	<u>104</u>
<u>400001026481</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>48</u>	<u>East Leipsic – Rader Road</u>	<u>42</u>
<u>400001020006</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>9</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>400001018604</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>54</u>	<u>East Leipsic – Rader Road</u>	<u>41</u>
<u>400001018018</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 2</u>	<u>79</u>	<u>East Leipsic – Rader Road</u>	<u>106</u>
<u>400001018018</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>79</u>	<u>East Leipsic – Rader Road</u>	<u>145</u>
<u>400001018017</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>78</u>	<u>East Leipsic – Rader Road</u>	<u>37</u>
<u>400001017175</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>80</u>	<u>East Leipsic – Rader Road</u>	<u>39</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>400001015598</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>Radar Road Substation</u>	<u>East Leipsic – Rader Road</u>	<u>80</u>
<u>400001015596</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>Radar Road Substation</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400001014841</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>21</u>	<u>Rader Road – New Liberty</u>	<u>338</u>
<u>400001014840</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>20</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>400001010880</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>11</u>	<u>Rader Road – New Liberty</u>	<u>35</u>
<u>400001010818</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Commercial - 2</u>	<u>12</u>	<u>Rader Road – New Liberty</u>	<u>123</u>
<u>400001010818</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Outbuilding - 1</u>	<u>12</u>	<u>Rader Road – New Liberty</u>	<u>231</u>
<u>400001009856</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>1</u>	<u>East Leipsic – Rader Road</u>	<u>62</u>
<u>400001009806</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>12</u>	<u>Rader Road – New Liberty</u>	<u>198</u>
<u>400001007730</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>1</u>	<u>Rader Road – New Liberty</u>	<u>285</u>
<u>400001007378</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>18</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>400001007190</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>67</u>	<u>East Leipsic – Rader Road</u>	<u>84</u>
<u>400001005322</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>Radar Road Substation</u>	<u>East Leipsic – Rader Road</u>	<u>225</u>
<u>400001005322</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>Radar Road Substation</u>	<u>East Leipsic – Rader Road</u>	<u>201</u>
<u>400001005134</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>69</u>	<u>East Leipsic – Rader Road</u>	<u>37</u>
<u>400001004357</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>72</u>	<u>East Leipsic – Rader Road</u>	<u>40</u>
<u>400001002827</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>82</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>400001002179</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>59</u>	<u>East Leipsic – Rader Road</u>	<u>43</u>
<u>400001001206</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>91</u>	<u>East Leipsic – Rader Road</u>	<u>65</u>
<u>400001001187</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400001000936</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 1</u>	<u>66</u>	<u>East Leipsic – Rader Road</u>	<u>154</u>
<u>400001000936</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>66</u>	<u>East Leipsic – Rader Road</u>	<u>160</u>
<u>400001000927</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>89</u>	<u>East Leipsic – Rader Road</u>	<u>48</u>
<u>400000907620</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>3</u>	<u>Rader Road – New Liberty</u>	<u>191</u>
<u>400000100280</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>53</u>	<u>East Leipsic – Rader Road</u>	<u>51</u>
<u>400000100270</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>105</u>
<u>400000100260</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>207</u>
<u>400000100250</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>47</u>
<u>400000100240</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>53</u>	<u>East Leipsic – Rader Road</u>	<u>171</u>
<u>400000100230</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>53</u>	<u>East Leipsic – Rader Road</u>	<u>263</u>
<u>400000100220</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>201</u>
<u>400000100210</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>179</u>
<u>400000100170</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>274</u>
<u>400000100160</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>176</u>
<u>400000100150</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>East Leipsic – Rader Road</u>	<u>128</u>
<u>400000100140</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>50</u>	<u>East Leipsic – Rader Road</u>	<u>23</u>
<u>400000100130</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Commercial - 1</u>	<u>51</u>	<u>East Leipsic – Rader Road</u>	<u>56</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>400000100120</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>51</u>	<u>East Leipsic – Rader Road</u>	<u>81</u>
<u>400000100110</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>50</u>	<u>East Leipsic – Rader Road</u>	<u>160</u>
<u>400000100050</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>50</u>	<u>East Leipsic – Rader Road</u>	<u>269</u>
<u>400000100040</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>50</u>	<u>East Leipsic – Rader Road</u>	<u>91</u>
<u>400000100030</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>108</u>
<u>400000100020</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>115</u>
<u>400000100010</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>227</u>
<u>400000100000</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>259</u>
<u>400000099850</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Outbuilding - 1</u>	<u>49</u>	<u>East Leipsic – Rader Road</u>	<u>307</u>
<u>400000099840</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>48</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000098500</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>45</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000098460</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>56</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000098370</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>58</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000097640</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>11</u>	<u>Rader Road – New Liberty</u>	<u>247</u>
<u>400000097450</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>16</u>	<u>Rader Road – New Liberty</u>	<u>4</u>
<u>400000097410</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>8</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>400000097250</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>10</u>	<u>Rader Road – New Liberty</u>	<u>14</u>
<u>400000097151</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>89</u>	<u>East Leipsic – Rader Road</u>	<u>203</u>
<u>400000097050</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>4</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>400000096931</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>88</u>	<u>East Leipsic – Rader Road</u>	<u>59</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>400000096880</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>78</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000096860</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Outbuilding - 1</u>	<u>83</u>	<u>East Leipsic – Rader Road</u>	<u>114</u>
<u>400000096860</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>83</u>	<u>East Leipsic – Rader Road</u>	<u>88</u>
<u>400000096830</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>67</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000096820</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>74</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000096790</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>77</u>	<u>East Leipsic – Rader Road</u>	<u>37</u>
<u>400000096780</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>70</u>	<u>East Leipsic – Rader Road</u>	<u>40</u>
<u>400000096770</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>71</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000096740</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>76</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000096720</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>56</u>	<u>East Leipsic – Rader Road</u>	<u>48</u>
<u>400000096550</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>65</u>	<u>East Leipsic – Rader Road</u>	<u>38</u>
<u>400000096510</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>Shawtown Station</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>400000096500</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>51</u>	<u>East Leipsic – Rader Road</u>	<u>0</u>
<u>280001031827</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>51</u>	<u>Rader Road – New Liberty</u>	<u>338</u>
<u>280001031331</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>63</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001031330</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>66</u>	<u>Rader Road – New Liberty</u>	<u>121</u>
<u>280001029878</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>New Liberty Substation</u>	<u>Rader Road – New Liberty</u>	<u>209</u>
<u>280001025252</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Outbuilding - 1</u>	<u>67</u>	<u>Rader Road – New Liberty</u>	<u>26</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>280001025252</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>67</u>	<u>Rader Road – New Liberty</u>	<u>74</u>
<u>280001025251</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 3</u>	<u>68</u>	<u>Rader Road – New Liberty</u>	<u>126</u>
<u>280001025251</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>68</u>	<u>Rader Road – New Liberty</u>	<u>81</u>
<u>280001025248</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>71</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001024959</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>69</u>	<u>Rader Road – New Liberty</u>	<u>174</u>
<u>280001024958</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>70</u>	<u>Rader Road – New Liberty</u>	<u>176</u>
<u>280001021183</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>59</u>	<u>Rader Road – New Liberty</u>	<u>84</u>
<u>280001019817</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>47</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001019763</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Outbuilding - 1</u>	<u>54</u>	<u>Rader Road – New Liberty</u>	<u>133</u>
<u>280001019763</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>55</u>	<u>Rader Road – New Liberty</u>	<u>146</u>
<u>280001019762</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>53</u>	<u>Rader Road – New Liberty</u>	<u>238</u>
<u>280001019051</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 1</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>185</u>
<u>280001019051</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>101</u>
<u>280001018136</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>50</u>	<u>Rader Road – New Liberty</u>	<u>278</u>
<u>280001018135</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>50</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001016095</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>116</u>
<u>280001016095</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>153</u>
<u>280001016094</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Outbuilding - 1</u>	<u>56</u>	<u>Rader Road – New Liberty</u>	<u>165</u>
<u>280001016094</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>57</u>	<u>Rader Road – New Liberty</u>	<u>90</u>
<u>280001015754</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>72</u>	<u>Rader Road – New Liberty</u>	<u>0</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>280001014302</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>65</u>	<u>Rader Road – New Liberty</u>	<u>54</u>
<u>280001014301</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>66</u>	<u>Rader Road – New Liberty</u>	<u>216</u>
<u>280001014301</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>66</u>	<u>Rader Road – New Liberty</u>	<u>165</u>
<u>280001011845</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>74</u>	<u>Rader Road – New Liberty</u>	<u>147</u>
<u>280001010508</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>63</u>	<u>Rader Road – New Liberty</u>	<u>155</u>
<u>280001010508</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>64</u>	<u>Rader Road – New Liberty</u>	<u>150</u>
<u>280001010507</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>59</u>	<u>Rader Road – New Liberty</u>	<u>94</u>
<u>280001010507</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 1</u>	<u>60</u>	<u>Rader Road – New Liberty</u>	<u>195</u>
<u>280001010504</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>57</u>	<u>Rader Road – New Liberty</u>	<u>251</u>
<u>280001010503</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>55</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001007581</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 2</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>110</u>
<u>280001007581</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>58</u>	<u>Rader Road – New Liberty</u>	<u>62</u>
<u>280001003718</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>51</u>	<u>Rader Road – New Liberty</u>	<u>320</u>
<u>280001003247</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>64</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001002958</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>N/A</u>	<u>51</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001002762</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>67</u>	<u>Rader Road – New Liberty</u>	<u>50</u>
<u>280001002298</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>244</u>
<u>280001001200</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>75</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280001001199</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>New Liberty Substation</u>	<u>Rader Road – New Liberty</u>	<u>126</u>

<u>Property Parcel Number</u>	<u>Agreement Type</u>	<u>Easement or Option Obtained (Y/N)</u>	<u>Type and Number of Structures</u>	<u>Nearest Project Structure or Facility</u>	<u>Project Component</u>	<u>Distance to Nearest Project Structure (feet)</u>
<u>280000057400</u>	<u>Supplemental Easement</u>	<u>Yes</u>	<u>Residential - 1</u>	<u>65</u>	<u>Rader Road – New Liberty</u>	<u>97</u>
<u>280000057370</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Outbuilding - 1</u>	<u>62</u>	<u>Rader Road – New Liberty</u>	<u>117</u>
<u>280000057370</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>Residential - 1</u>	<u>62</u>	<u>Rader Road – New Liberty</u>	<u>145</u>
<u>280000057170</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>62</u>	<u>Rader Road – New Liberty</u>	<u>86</u>
<u>280000055990</u>	<u>Supplemental Easement</u>	<u>No</u>	<u>N/A</u>	<u>45</u>	<u>Rader Road – New Liberty</u>	<u>0</u>
<u>280000055761</u>	<u>N/A</u>	<u>N/A</u>	<u>Outbuilding - 1</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>303</u>
<u>280000055761</u>	<u>N/A</u>	<u>N/A</u>	<u>Residential - 1</u>	<u>52</u>	<u>Rader Road – New Liberty</u>	<u>174</u>

Note:

N/A = not applicable

(c) Impact on Land Uses

Land use in the Project's Study Area is primarily agricultural with some residential and commercial land uses in the center of Leipsic and McComb.

Various land use types and land use features for the Preferred and Alternate Routes are compared in Tables ~~7-5 to 7-7~~ 8-8 and 8-9. The estimates of each land use type being crossed by the transmission line, land use within the construction ROW and the permanent ROW (linear feet, acreage, and percentages) were determined using GIS software calculations.

The potential disturbance area during construction activities (excavation for concrete foundations, equipment traffic, etc.) consists of the ~~80 to 100-foot-wide~~ construction ROW. The construction ROW will be restored by paving road ROW and soil grading, seeding, and mulching where vegetation impacts occur. Thus, the permanent impact to the ROW is primarily limited to removing existing trees and other vegetation. Property owners may continue to use most of the ROW area for general uses that do not affect the safe and reliable operation of the transmission line, such as lawn maintenance. The information presented in Tables 8-8 and 8-9 reflects updated information based on detailed engineering for the proposed transmission line.

Table ~~7-5~~ 8-8. Length and Percent of Land Uses Crossed by Route Alternatives

Land Use	Preferred Route		Alternate Route	
	Linear Feet	Percent	Linear Feet	Percent
Agricultural	<u>68,368</u> 69,310 60,906	<u>78.68</u> 79.68	58,199	60
Commercial	<u>0</u> 0 3,960	<u>0.4</u> 0.4	4,503	6
Industrial	<u>3,777</u> 3,901 0	<u>4.0</u> 4.0	0	0
Institutional	0	0	0	0
Recreational	<u>1,499</u> 1,560 1,614	2	96	0.1
Residential	<u>6,738</u> 6,808 6,402	<u>8.7</u> 8.7	8,356	11
Road Right-of-Way	<u>6,138</u> 6,683 16,157	<u>7.48</u> 7.48	16,781	23
<u>Rail Right-of-Way</u>	<u>100</u>	<u><1</u>		

	<i>100</i>			
Transmission Right-of-Way	<u>1,052</u> <i>1,096</i>	<u>1</u>		
Vacant	0	0	0	0
Total	<u>87,672</u> <i>89,458</i> <i>89,040</i>	100%	87,936	100%

Notes:

a Numbers in the table are for the route centerlines.

b Corrected original values are provided in *italics* for comparative purposes.

Table 7-68-9. Acreage and Percent of Land Uses Crossed by Route Alternatives

Land Use	Preferred Route		Alternate Route	
	Acreage	Percent	Acreage	Percent
Agricultural	<u>103.9</u> <i>130.5</i> 128.9	<u>65</u> <i>65</i> 84	128.6	83
Commercial	<u>0.0</u> <i>0.0</i> 7.9	<u>0</u> <i>0</i> 5	8.6	6
Industrial	<u>5.8</u> <i>7.4</i> 0.0	<u>4</u> <i>4</i> 0	0.0	0
Institutional	0.0	0	0.0	0
Recreational	<u>2.8</u> <i>3.5</i> 3.7	2	1.6	1
Residential	<u>8.9</u> <i>9.9</i> 11.2	<u>6</u> <i>5</i> 7	14.0	9
Road Right-of-Way	<u>37.7</u> <i>46.3</i> 1.9	<u>23</u> <i>23</i> 1	2.7	2
Rail Right-of-Way	<u>0.2</u> <i>0.2</i>	<u><1</u>		
Transmission Right-of-Way	<u>1.7</u> <i>1.8</i>	<u>1</u>		
Vacant	0.0	0	0.0	0
Total	<u>161.0</u> <i>199.60</i> 153.6	100%	155.5	100%

Notes:

a Numbers in the table are for the planned potential disturbance area (80 or 100 feet, dependent on location, with the exception of where road ROW overlaps the ROW).

b Total may vary slightly from the sum of their parts due to rounding.

c Corrected original values are provided in *italics* for comparative purposes.

(d) Structures to be Removed

Text provided in the January 3, 2023 Application filing remains unchanged.

(2) Wind Farm Maps

Not Applicable.

(3) Setback Waivers

Not Applicable.

(4) Land Use Plans

Text provided in the January 3, 2023 Application filing remains unchanged.

(D) CULTURAL AND ARCHAEOLOGICAL RESOURCES**(1) Landmark Mapping**

Formally adopted land and water recreation areas, recreational trails, scenic rivers, scenic routes or byways, and registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance ~~Cultural resources~~ already in the public domain ~~{OH structures}~~ within 1,000 feet on either side of the centerline are identified on Figure ~~7-13-2~~.

(2) Cultural Resources Studies

Additional archaeological investigations were performed for Project areas that extended outside the prior survey parameters. No previously recorded sites were within the Project area, and no new archaeological sites were identified. Updated correspondence letters were submitted to the OHPO in 2025 and 2026. In the OHPO responses dated January 18, 2025, February 14, 2025, May 13, 2025, March 4, 2026, June 1, 2026, and June 3, 2026 (see Appendix 8-3), OHPO stated that the Project, as proposed, will have no effect on historic properties and concurred that no cultural resource management work is considered necessary for this Project.

(3) Impacts

Text provided in the January 3, 2023 Application filing remains unchanged.

(4) Recreation and Scenic Areas

Recreational land (Village of McComb Community Park) is within 1,000 feet of the Preferred and Alternate Routes. The park is within the planned potential disturbance area of the Preferred and Alternate Routes. The Village of McComb Community Park is a public recreation park that features sports fields, walking/fitness trails, fishing reservoirs, and a swimming pool. As shown in Table 7-6, recreational land makes up two percent of the Preferred and one percent of the Alternate Route ROW.

The Preferred Route directly crosses the Village of McComb Community Park; however, the transmission line will be primarily rebuilt in the existing transmission ROW or adjacent to the existing transmission ROW. The Preferred Route will avoid impacts to recreational equipment. ~~As such, and~~ the Company does not anticipate any adverse impacts to recreational land uses as a result of the Project.

(5) Avoid or Mitigate Impacts to Cultural Resources

Text provided in the January 3, 2023 Application filing remains unchanged.

(6) Visual Impacts

Text provided in the January 3, 2023 Application filing remains unchanged.

(E) AGRICULTURAL DISTRICTS AND AGRICULTURAL LAND IMPACTS

The potential impacts of the Project on agricultural land use include potential damage to crops that may be present, disturbance of underground field drainage systems, compaction of soils and potential for temporary reduction of crop productivity. Agricultural land used for crop cultivation within the Preferred and Alternate Routes ROWs is estimated at ~~128.9~~103.9 acres and 128.6 acres, respectively.

(1) Agricultural Land Map

Agricultural land use and Agricultural District lands are depicted on Figure ~~7-28-4~~ for both the Preferred and Alternate Routes.

(2) Agricultural Information

The Putnam County Auditor and Hancock County Auditor were contacted to obtain information on current Agricultural District lands records. ~~The centerline and ROW of the Preferred Route crosses seven Agricultural District parcels. Agricultural Districts crossed are depicted in Figure 7-2. The data were received from the Putnam County Auditor on November 8, 2022 August 10, 2026 and the Hancock County Auditor on November 7, 2022 August 7, 2026. The provided data fulfill the requirement of O.A.C. 4906-5-07 (C)(1)(b), which states these data must be collected not more than 60 days prior to submittal.~~

(a) Impacts to Agricultural Lands and Agricultural Districts

Table ~~7-68-9~~ quantifies the affected acreage of agricultural land use (e.g., crop cultivation, Agricultural District lands, and pasture or open land). Approximately 103.9 acres (or 65 percent of the potential disturbance area) of agricultural land is crossed by the Project. The agricultural land use was based on aerial imagery and field observations.

(b) Evaluation of Construction, Operation, and Maintenance Impacts

Text provided in the January 3, 2023 Application filing remains unchanged.

(c) Mitigation Procedures

Text provided in the January 3, 2023 Application filing remains unchanged.

(3) Drain Tile

Text provided in the January 3, 2023 Application filing remains unchanged.

REFERENCES

Ohio Environmental Protection Agency (OEPA). 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. OEPA Technical Bulletin EAS/2006-06-1. Division of Surface Water, Groveport, OH.

Ohio Environmental Protection Agency (OEPA). 2020. *Field Methods for Evaluating Primary Headwater Streams in Ohio*. Version 4.1. OEPA Division of Surface Water, Columbus, OH.

Figures



- ▲ Existing Substation
- ▲ Proposed Substation
- Switch Station
- Proposed Structures

- Original Filing OPSB Case Number 22-0856-EL-BTX
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NAD 83

May 08, 2026

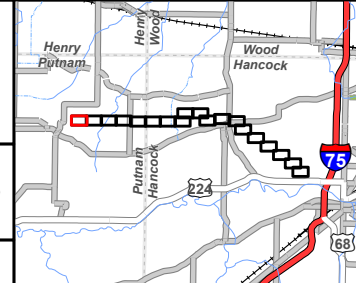
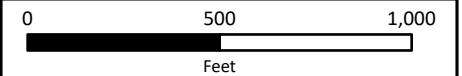
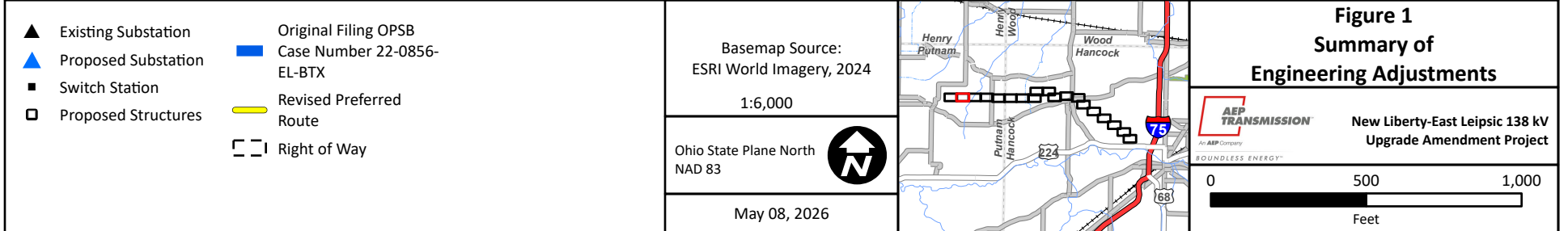


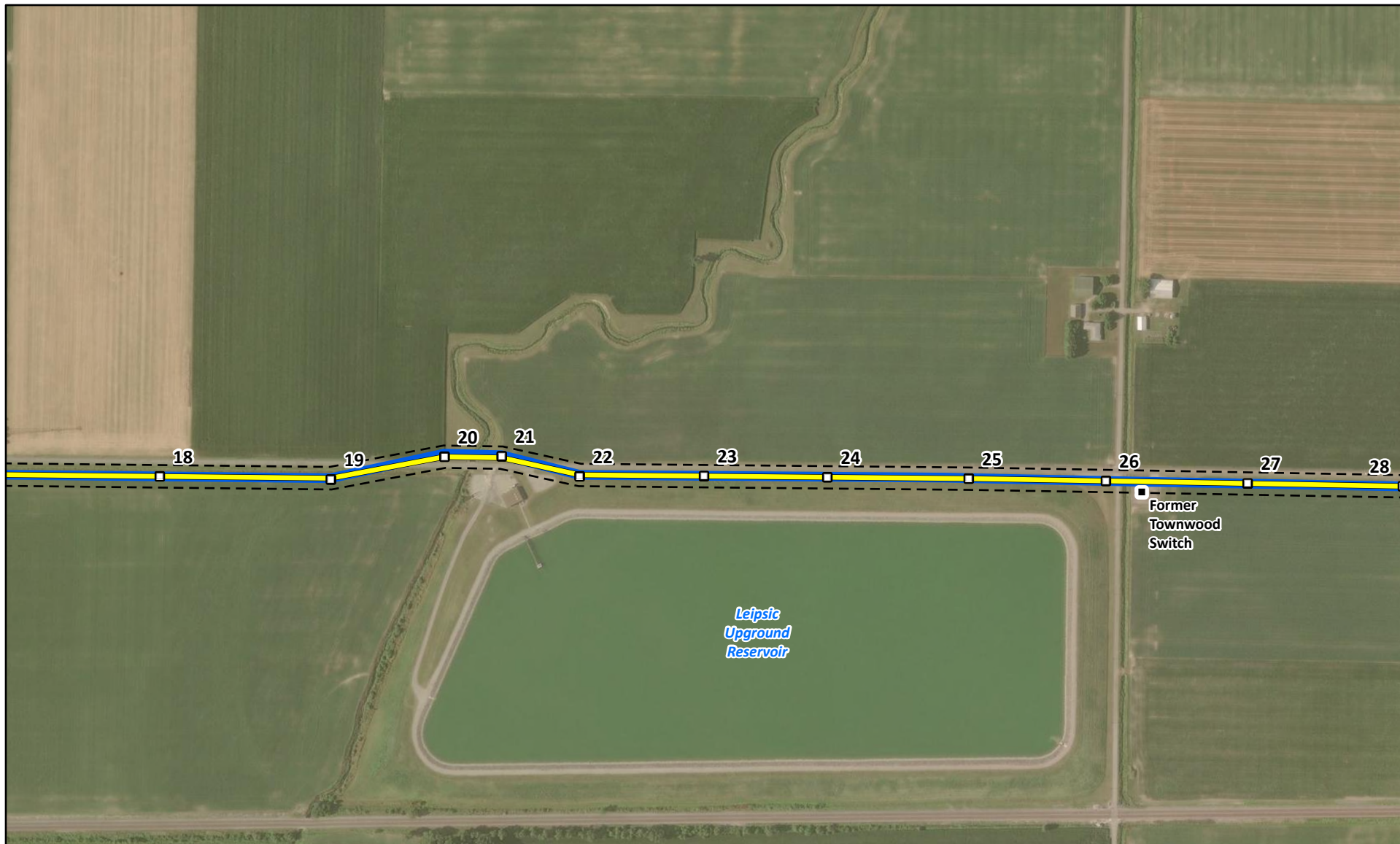
Figure 1 Summary of Engineering Adjustments



New Liberty-East Leipsic 138 kV
Upgrade Amendment Project







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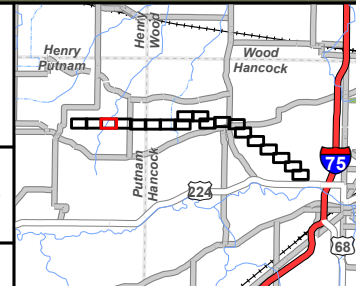
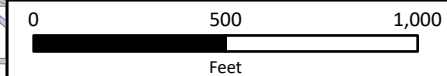


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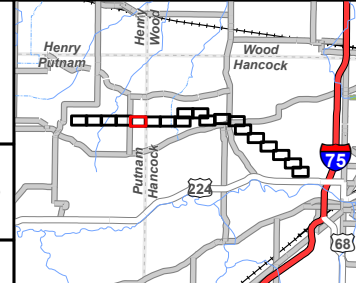
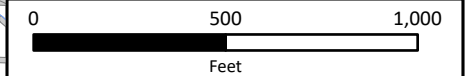
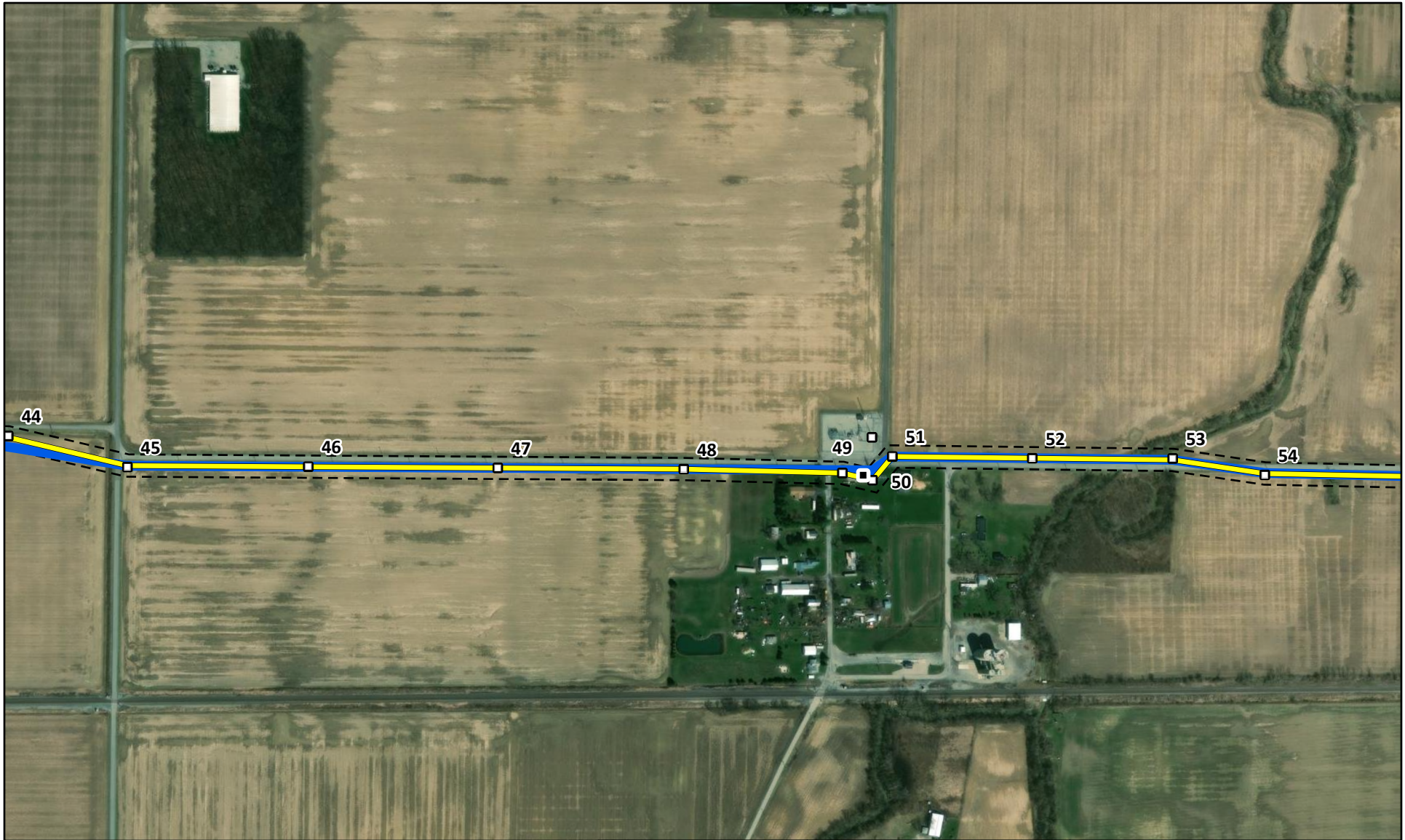


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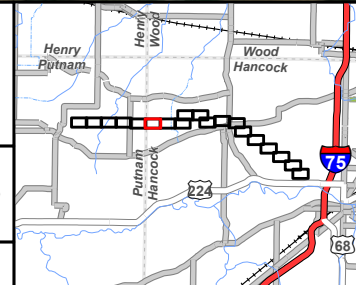
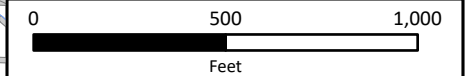


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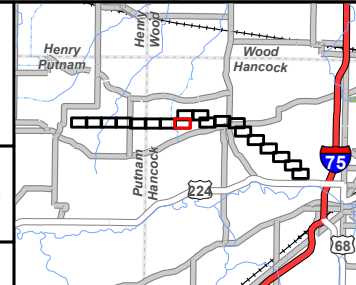
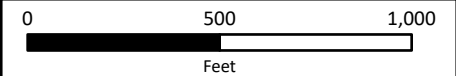


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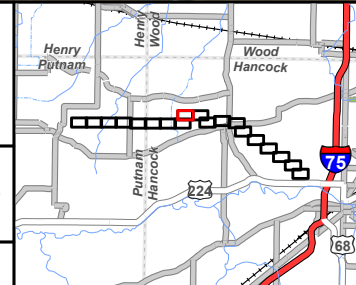
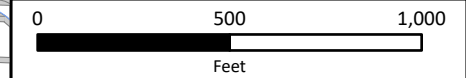
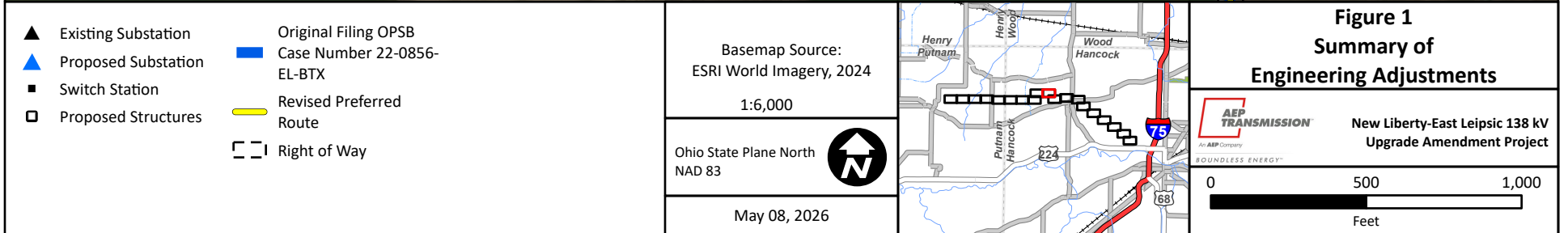


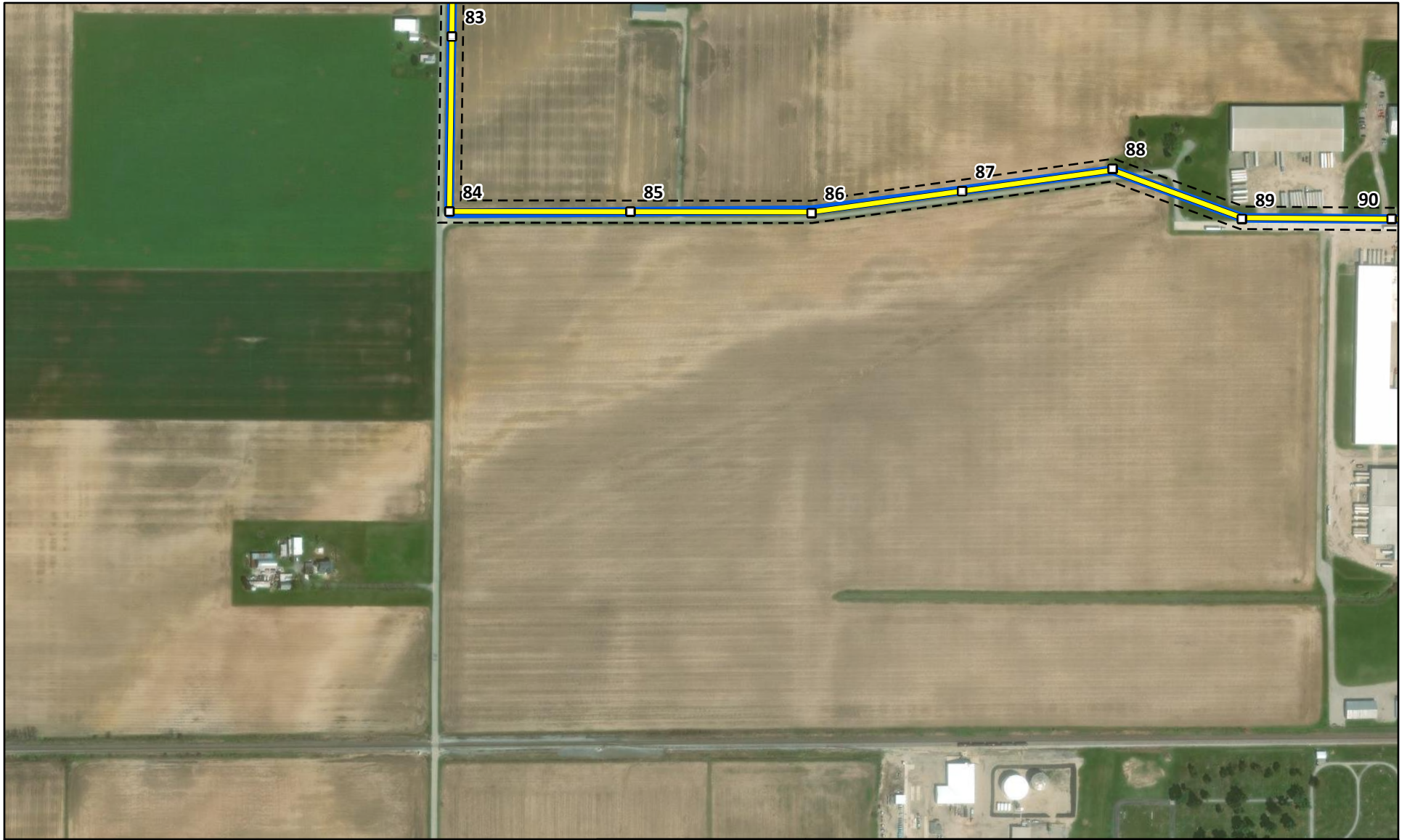
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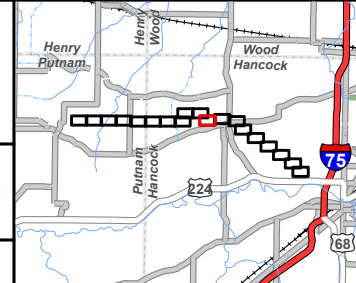
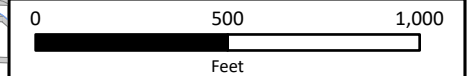
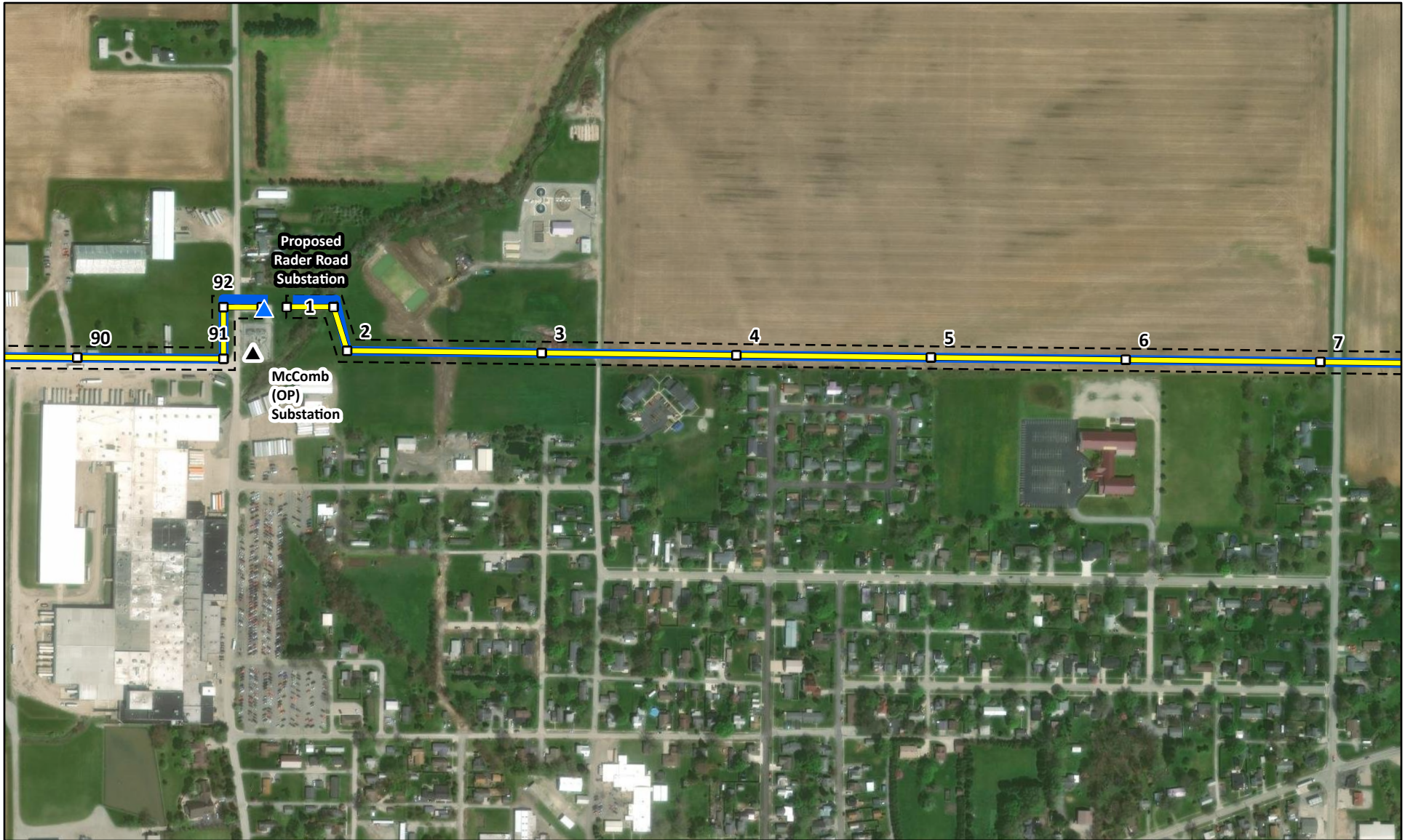


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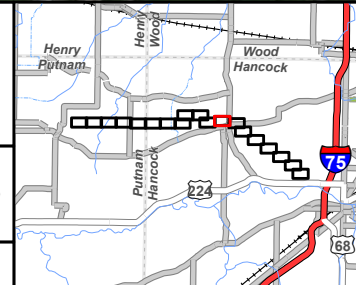
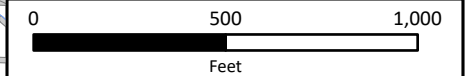


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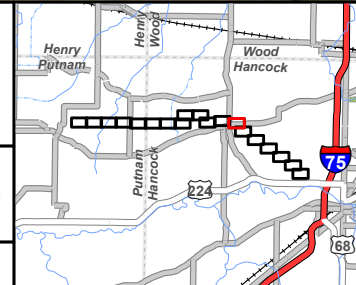
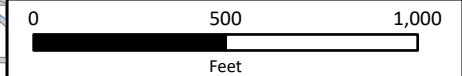


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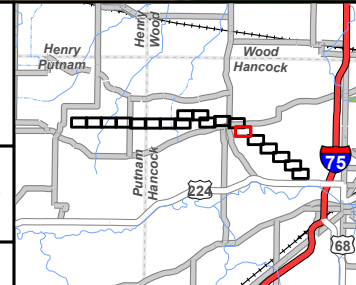
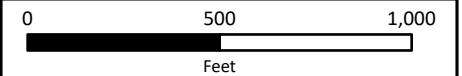


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May 08, 2026

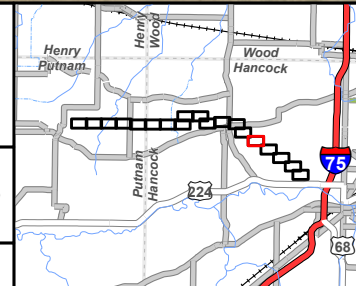
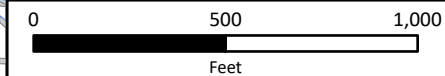


Figure 1
Summary of
Engineering Adjustments



New Liberty-East Leipsic 138 kV
Upgrade Amendment Project





- ▲ Existing Substation
- ▲ Proposed Substation
- Switch Station
- Proposed Structures

- Original Filing OPSB Case Number 22-0856-EL-BTX
- Revised Preferred Route
- Right of Way

Basemap Source:
ESRI World Imagery, 2024

1:6,000

Ohio State Plane North
NAD 83

May 08, 2026

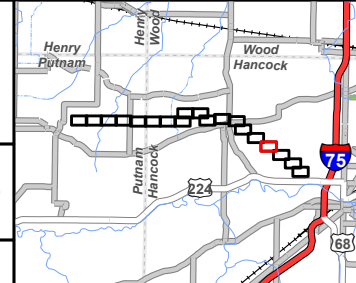
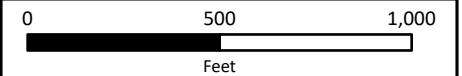


Figure 1
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New Liberty-East Leipsic 138 kV
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Basemap Source:
ESRI World Imagery, 2024

1:6,000

Ohio State Plane North
NAD 83

May 08, 2026

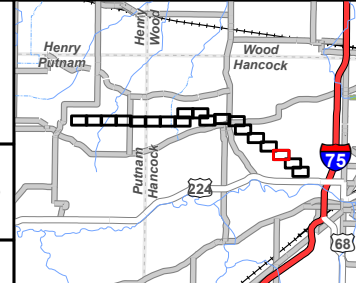
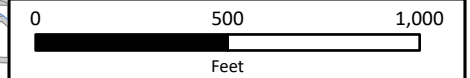


Figure 1 Summary of Engineering Adjustments



New Liberty-East Leipsic 138 kV
Upgrade Amendment Project





- ▲ Existing Substation
- ▲ Proposed Substation
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- Original Filing OPSB
Case Number 22-0856-
EL-BTX
- Revised Preferred
Route
- Right of Way

Basemap Source:
ESRI World Imagery, 2024

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Ohio State Plane North
NAD 83

May 08, 2026

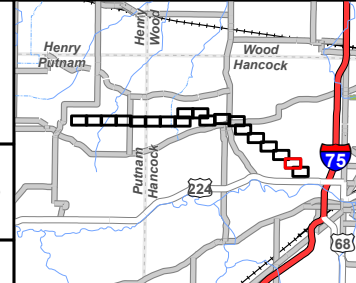
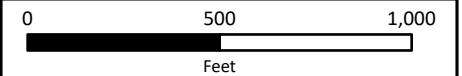
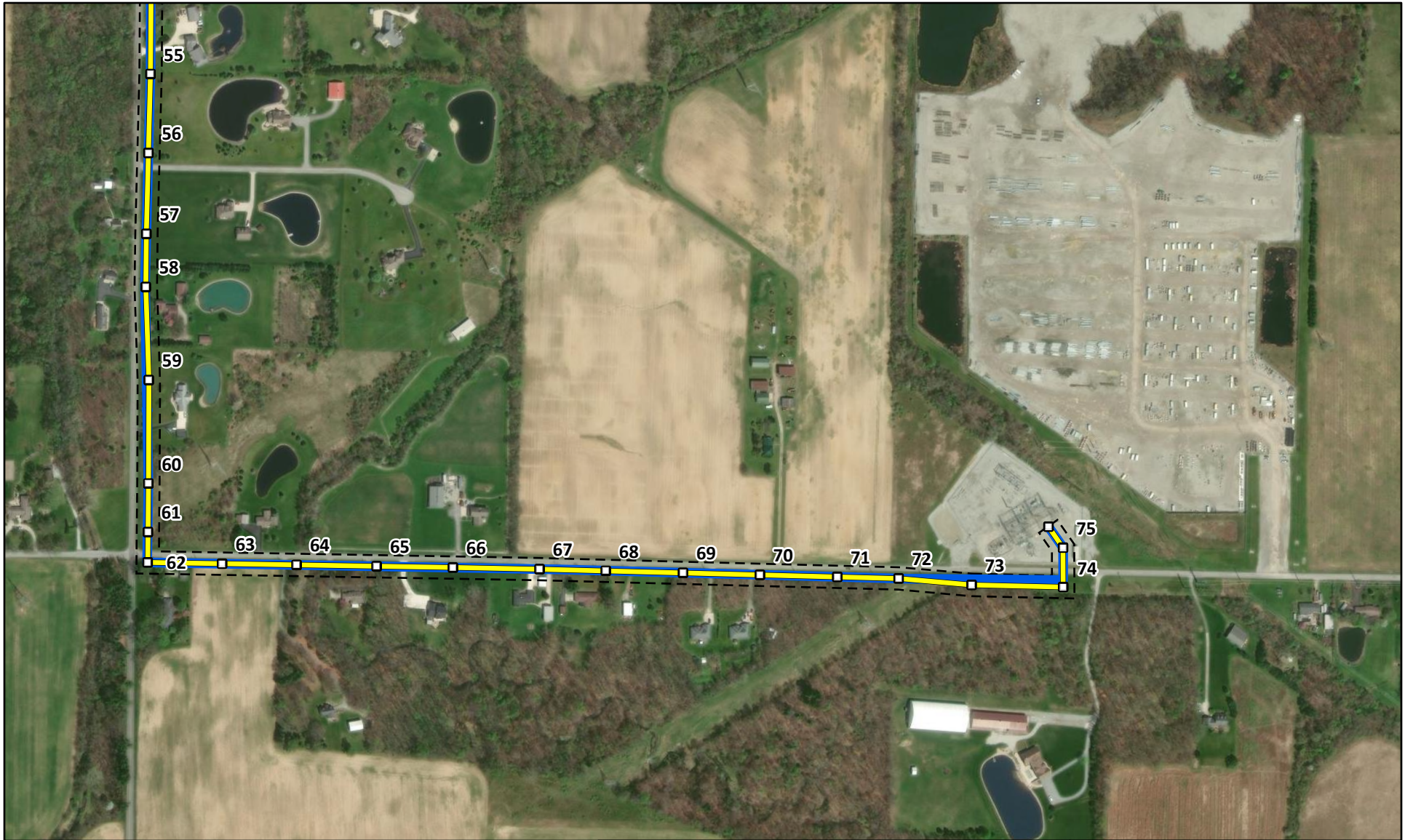


Figure 1 Summary of Engineering Adjustments



New Liberty-East Leipsic 138 kV
Upgrade Amendment Project





- ▲ Existing Substation
- ▲ Proposed Substation
- Switch Station
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- Original Filing OPSB
Case Number 22-0856-
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Route
- Right of Way

Basemap Source:
ESRI World Imagery, 2024

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Ohio State Plane North
NAD 83

May 08, 2026

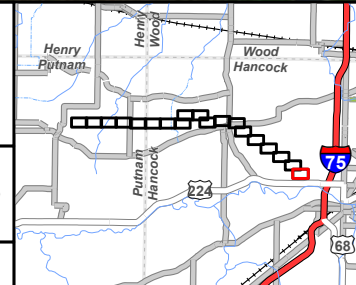
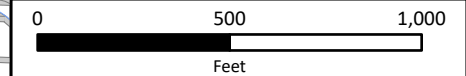
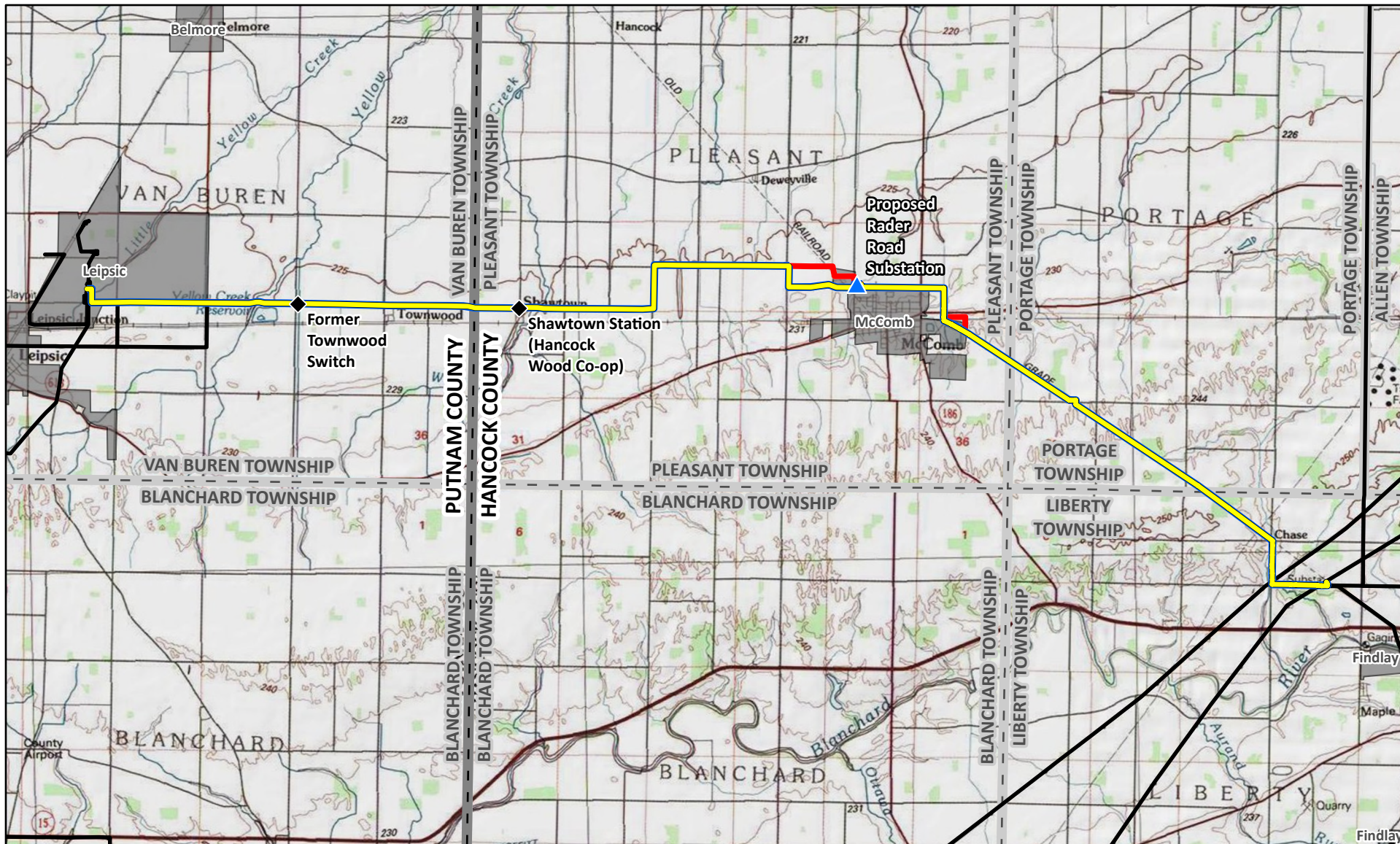


Figure 1 Summary of Engineering Adjustments



New Liberty-East Leipsic 138 kV
Upgrade Amendment Project





- ▲ Existing Substation
- ▲ Proposed Substation
- ◆ Switch Station
- Revised Preferred Route
- Original Filing OPSB Case Number 22-0856-EL-BTX
- Alternate Route

Basemap Source:
United States Geological
Survey (USGS)
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Ohio State Plane North
NAD 83

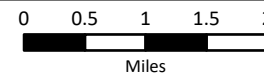
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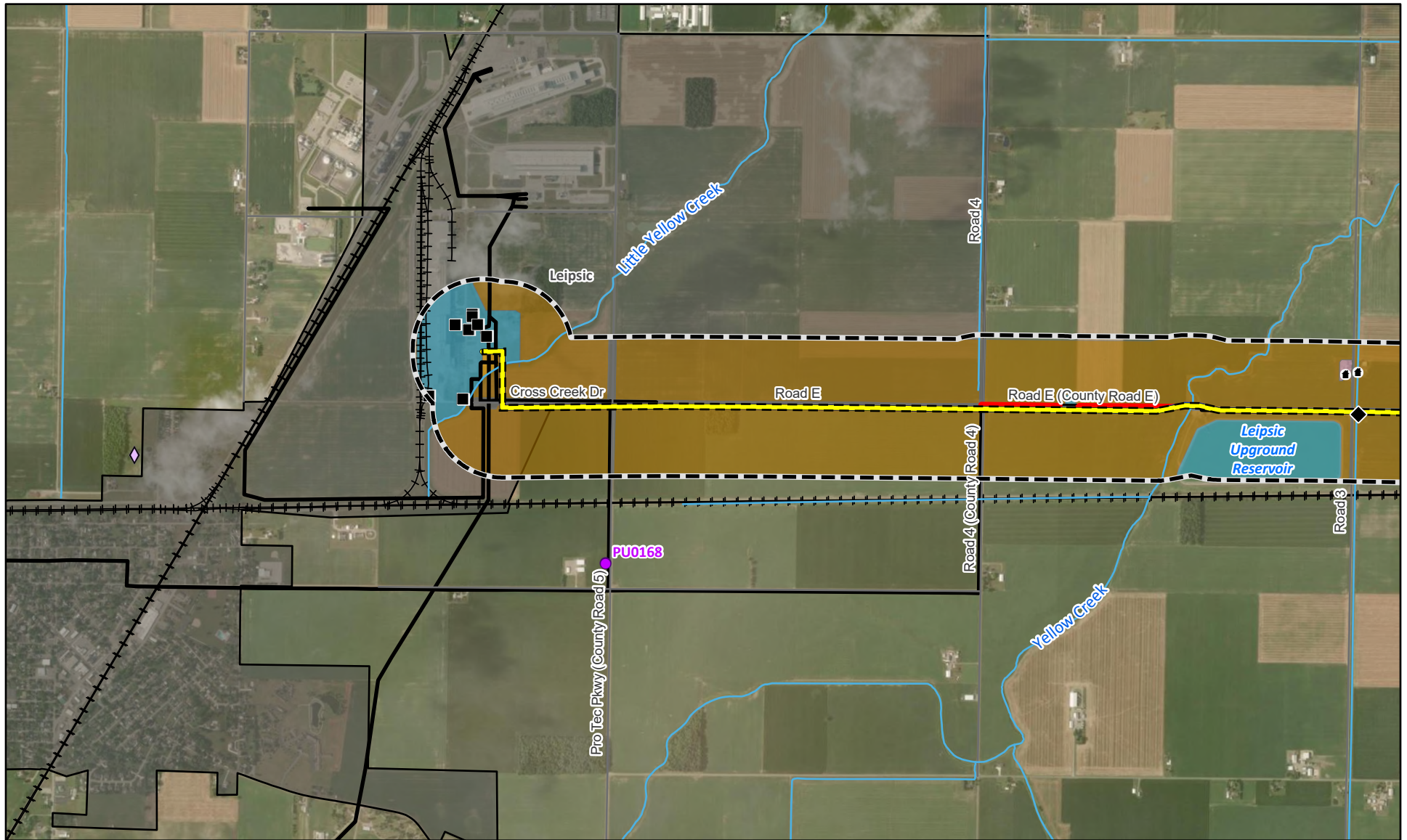


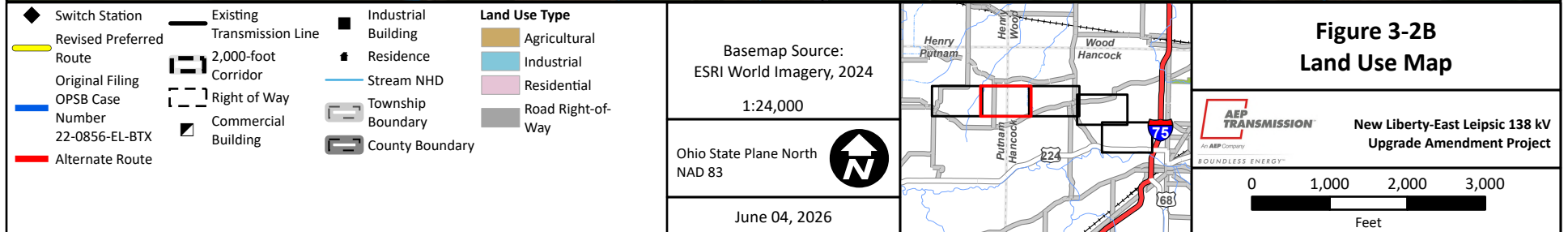
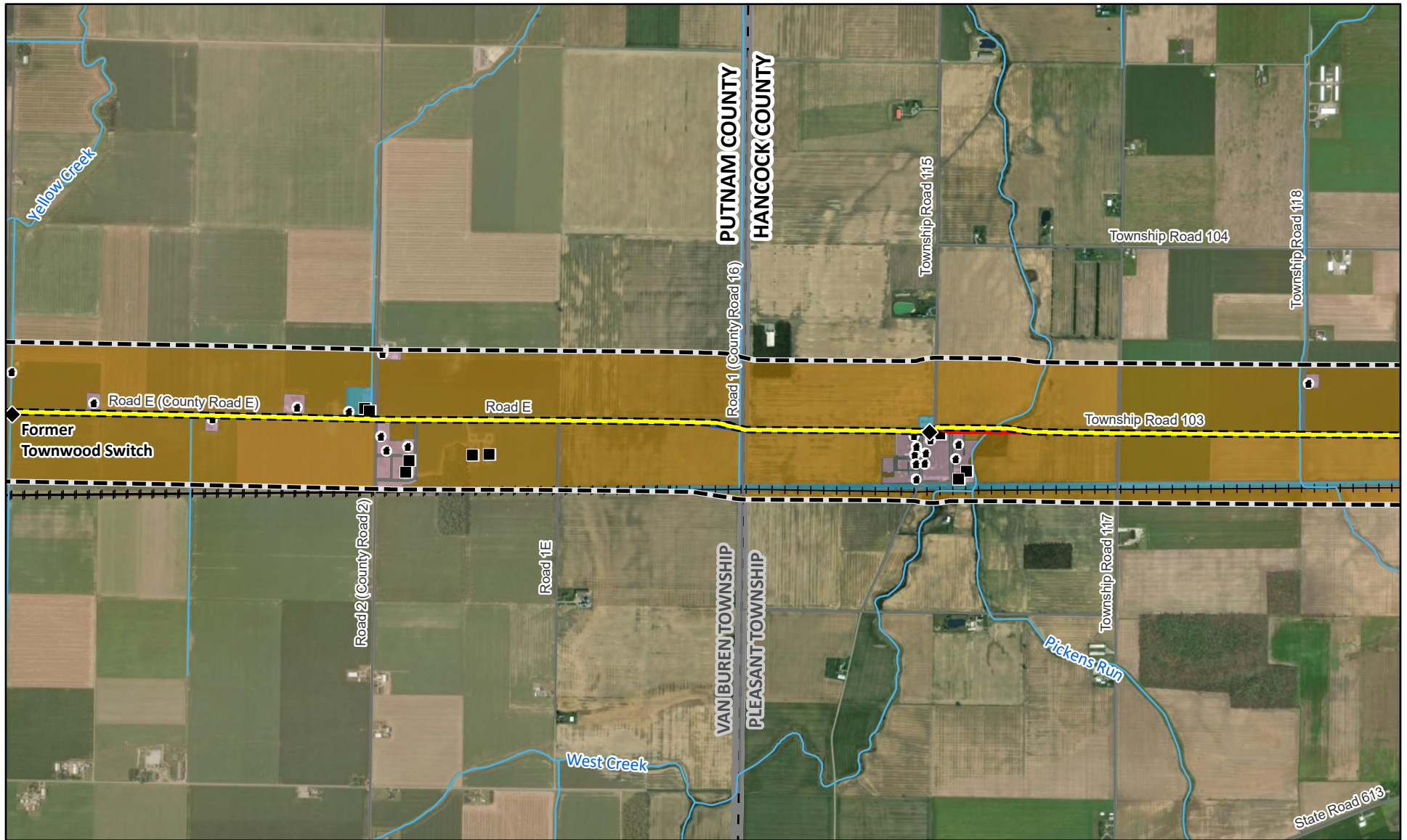
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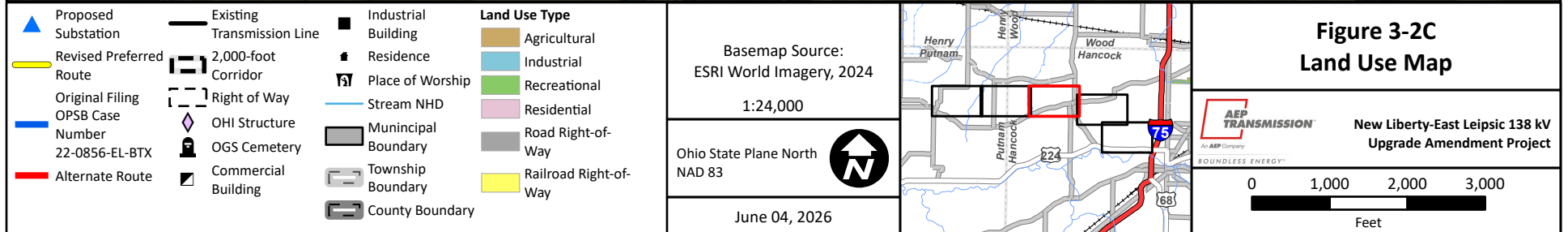
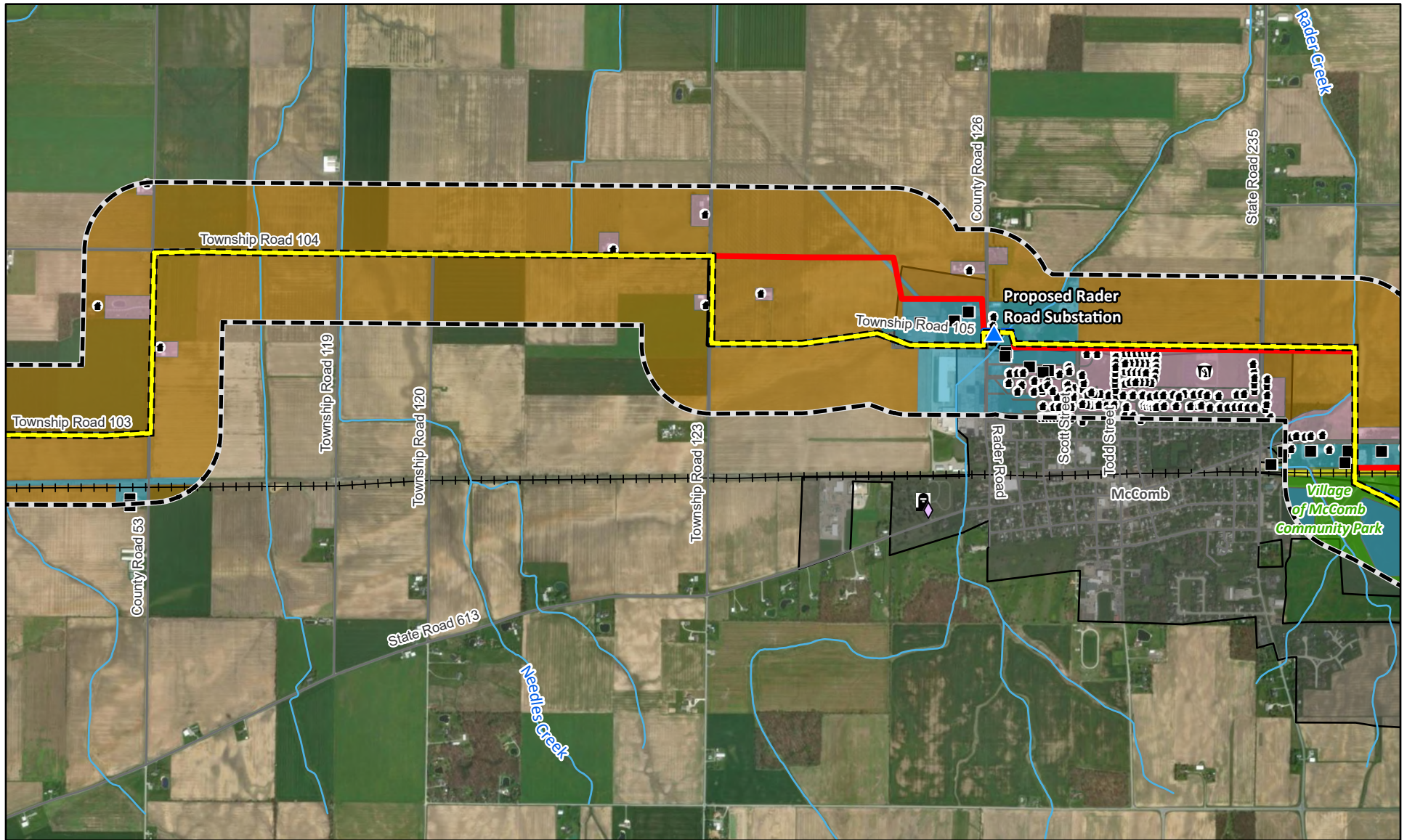


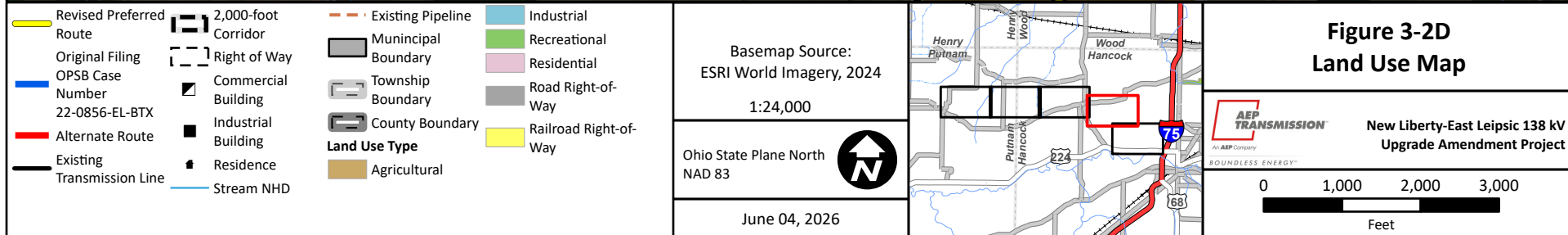
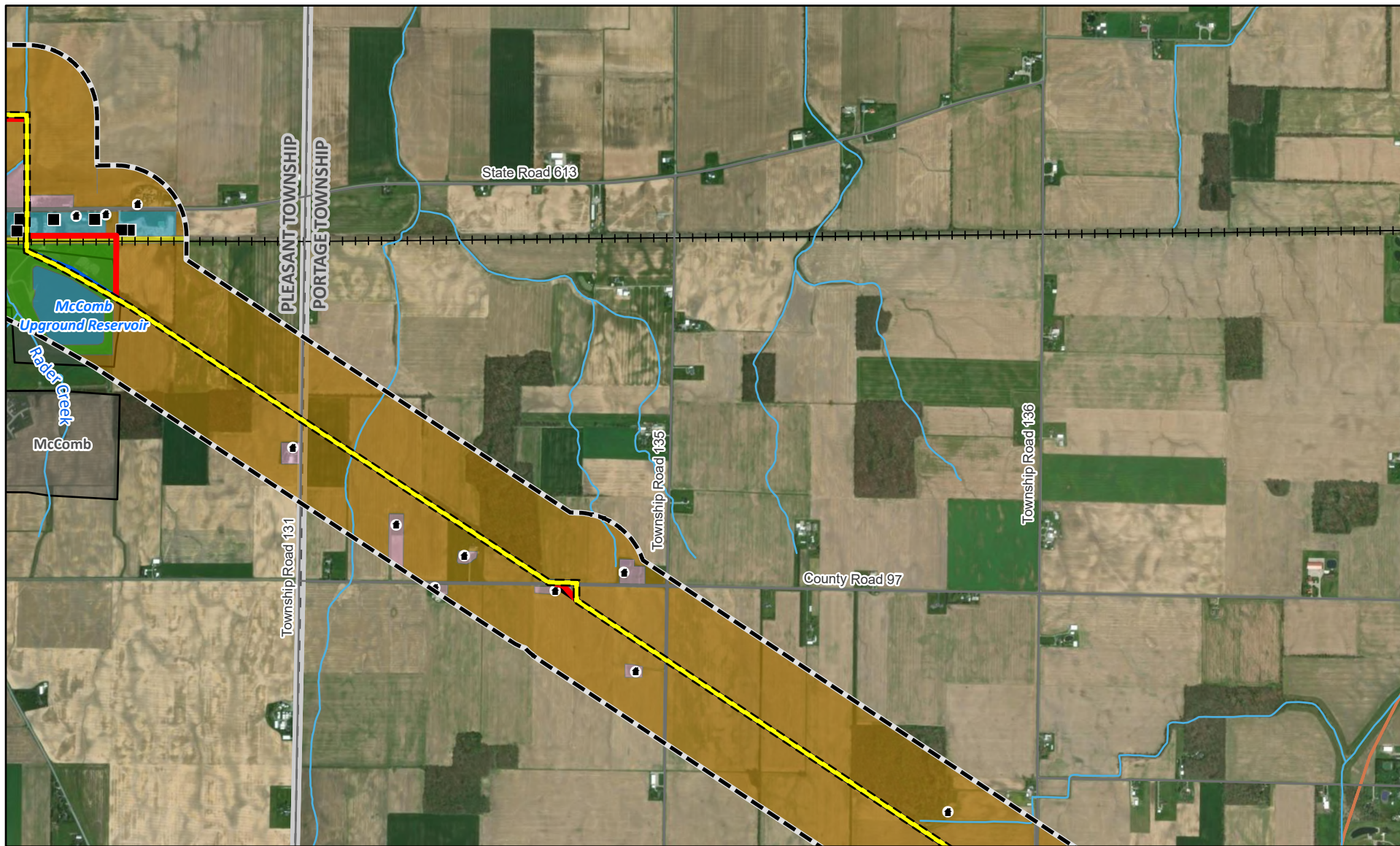
**New Liberty-East Leipsic 138 kV
Upgrade Amendment Project**

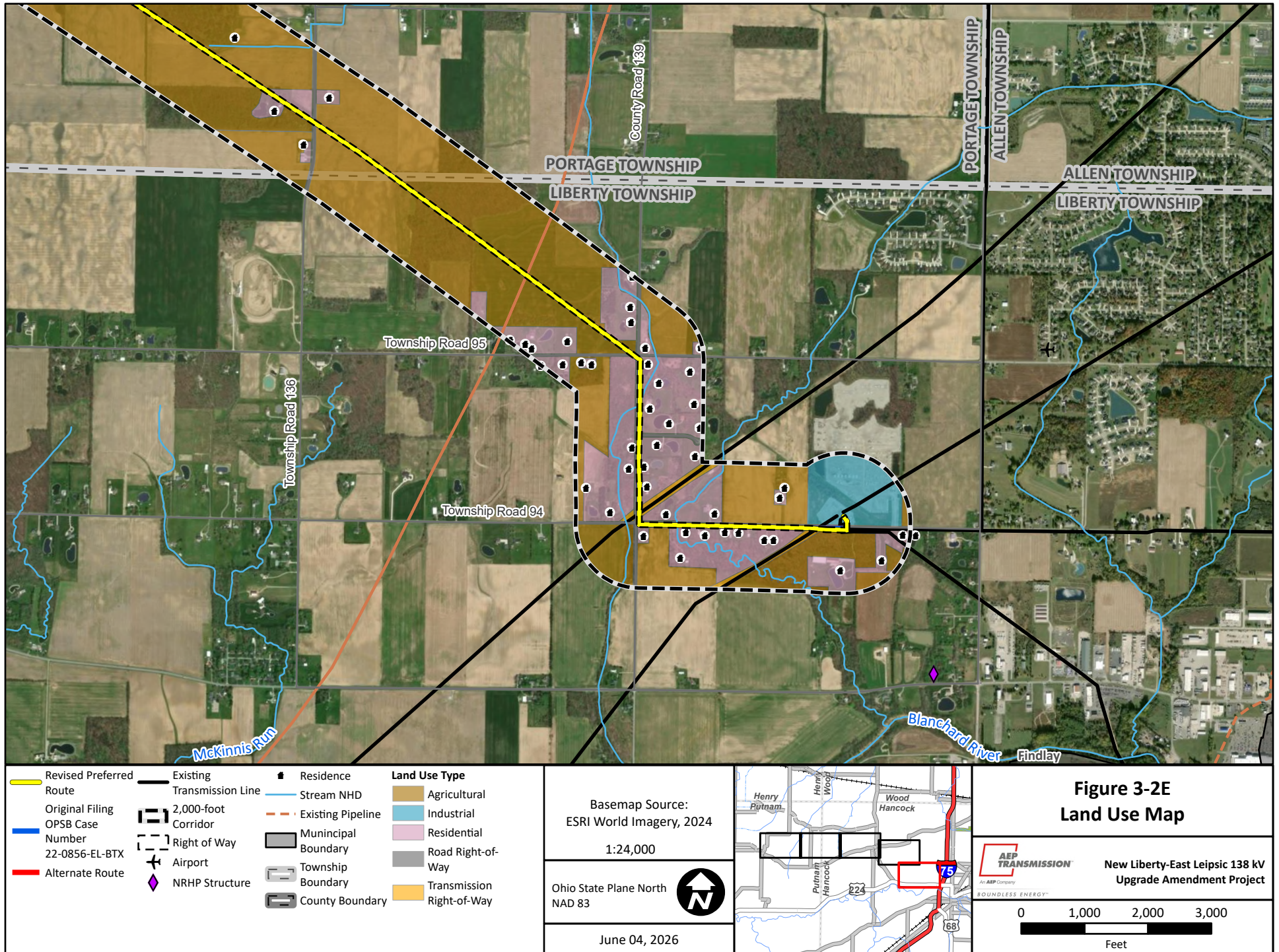




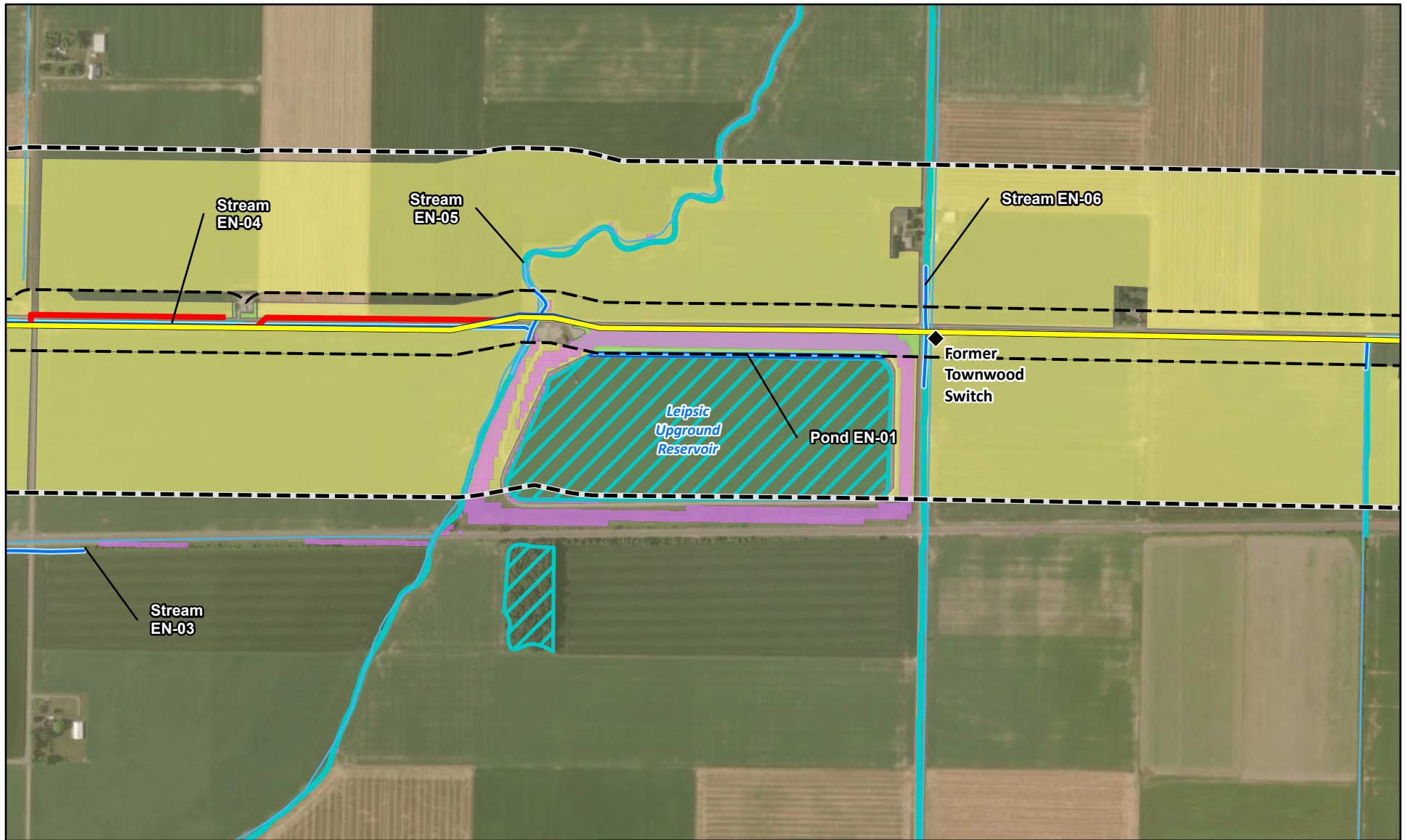


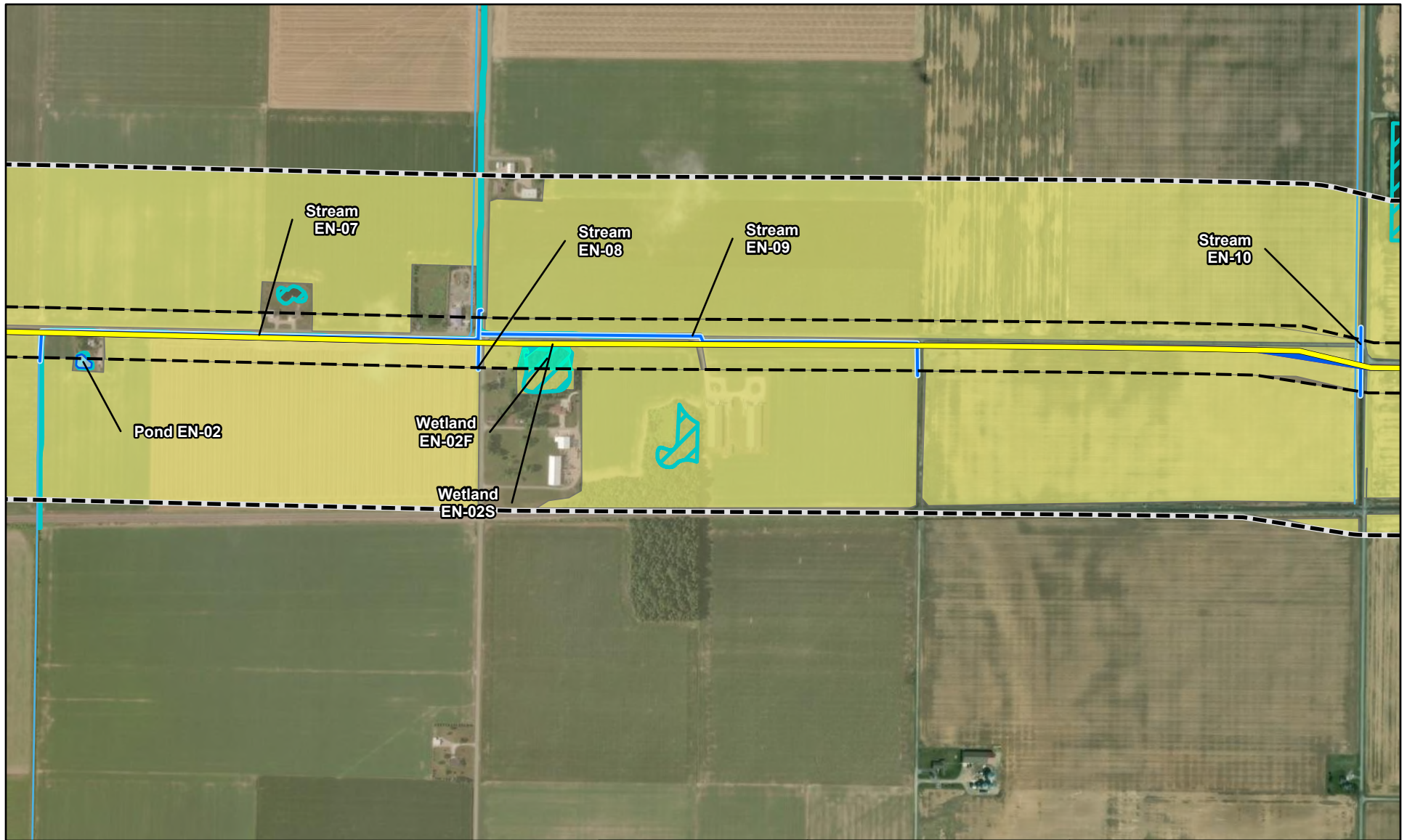


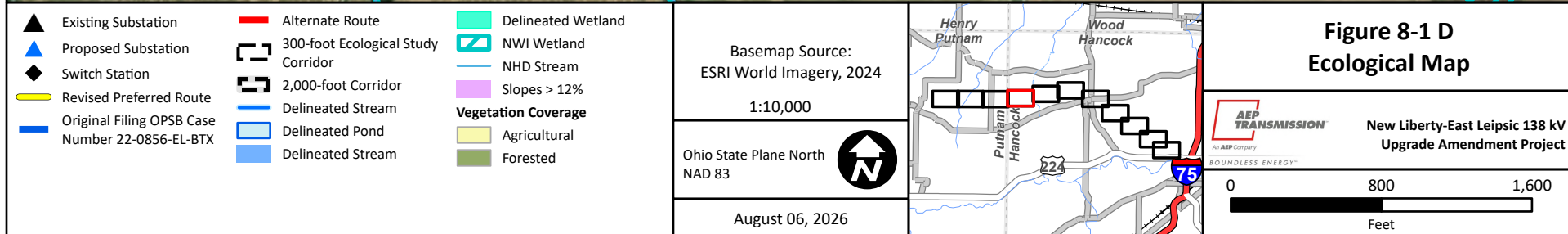
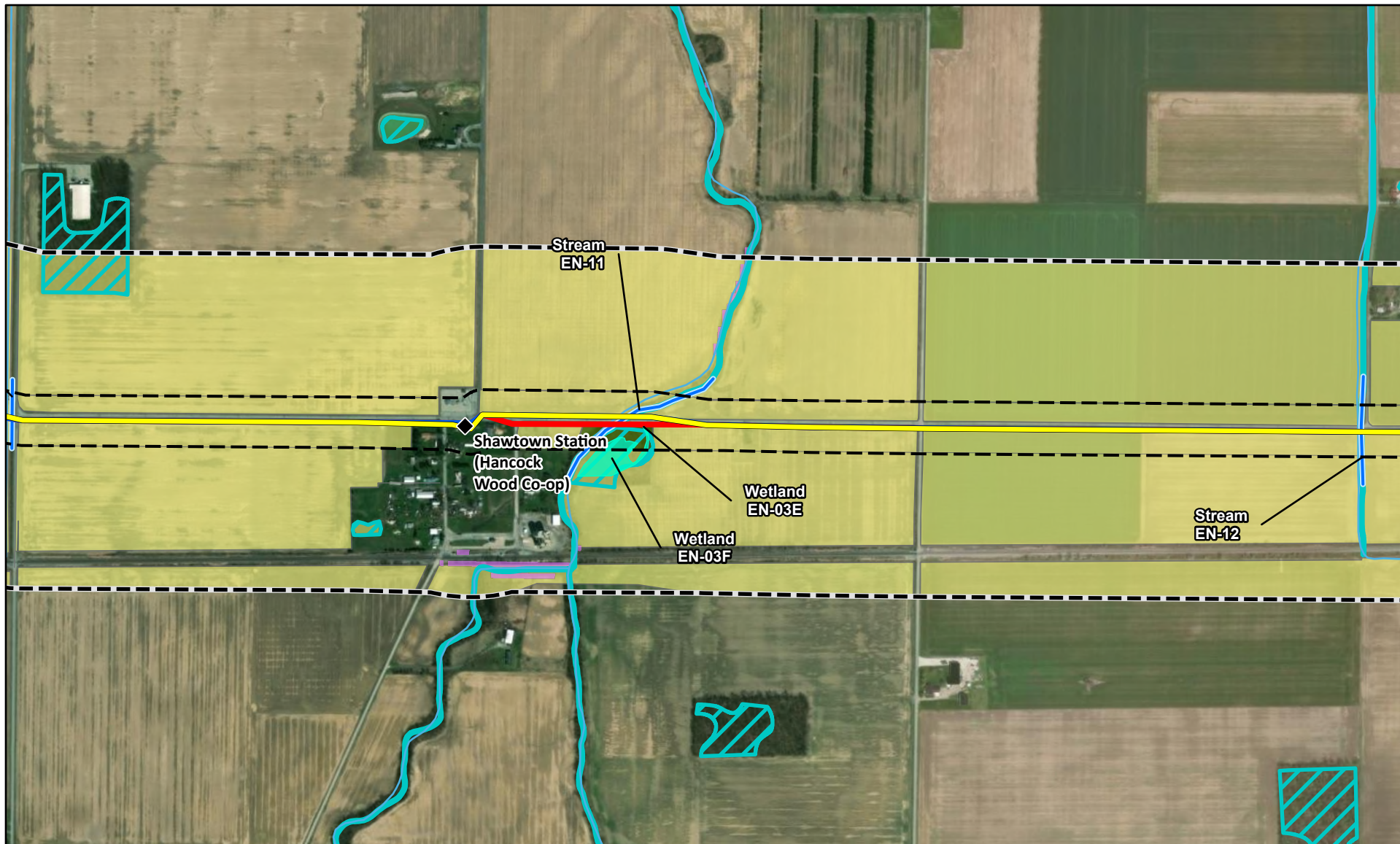


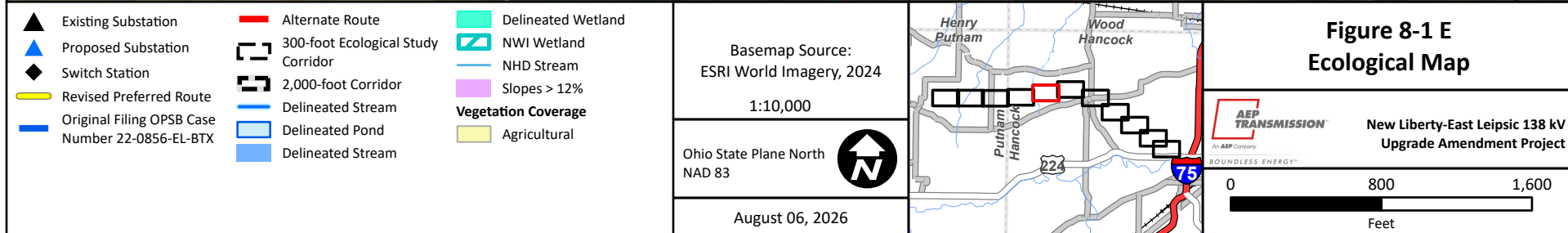
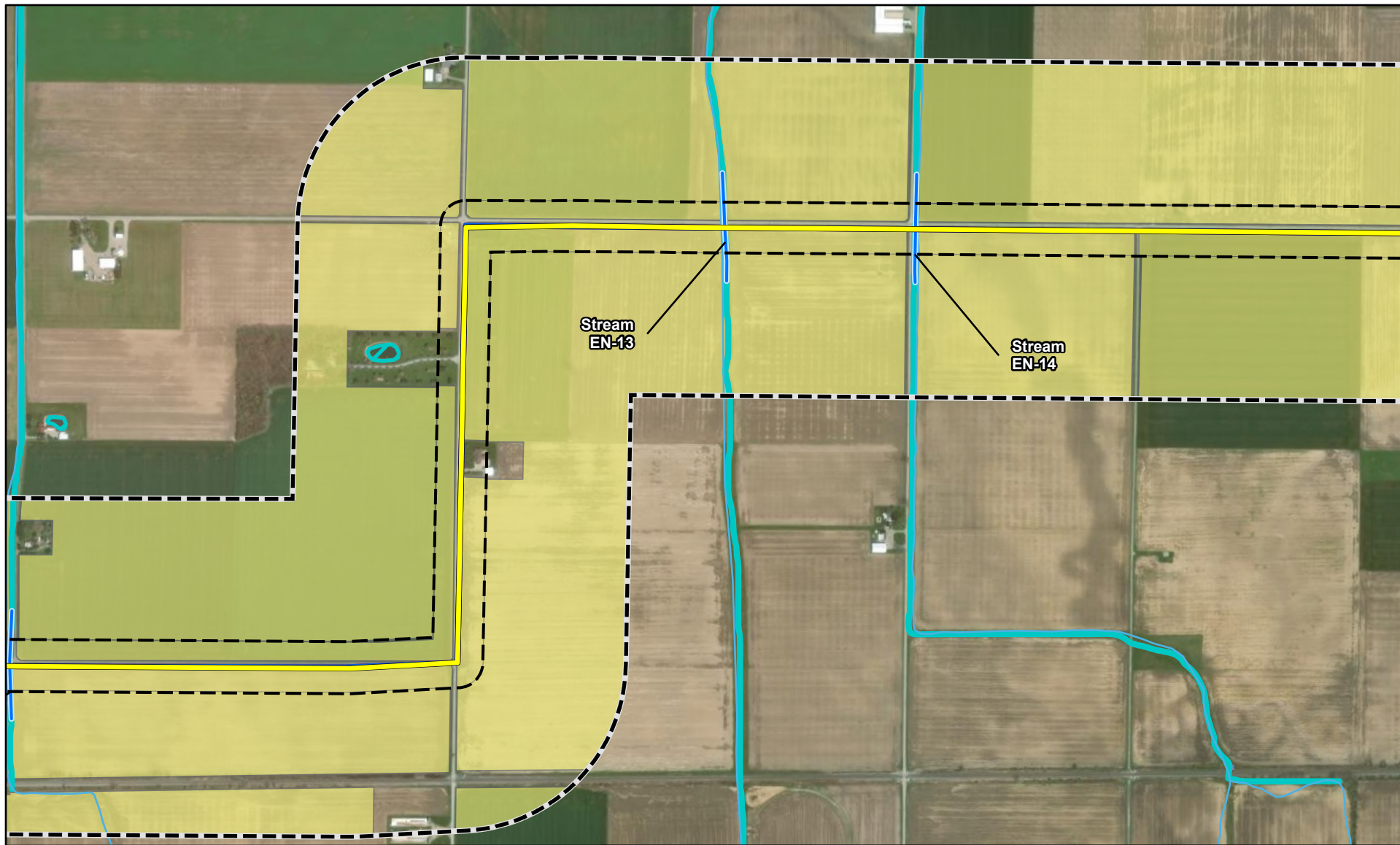


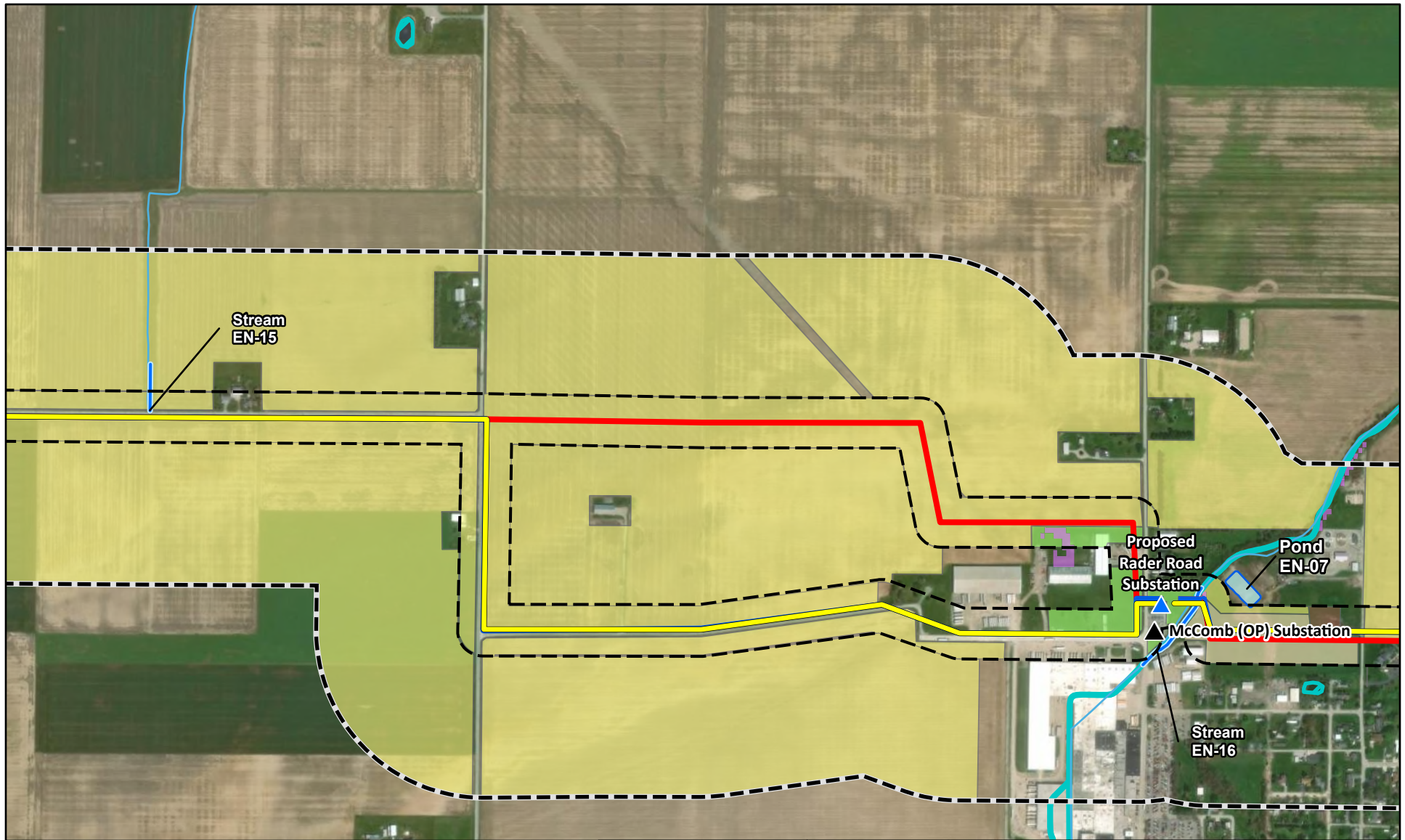


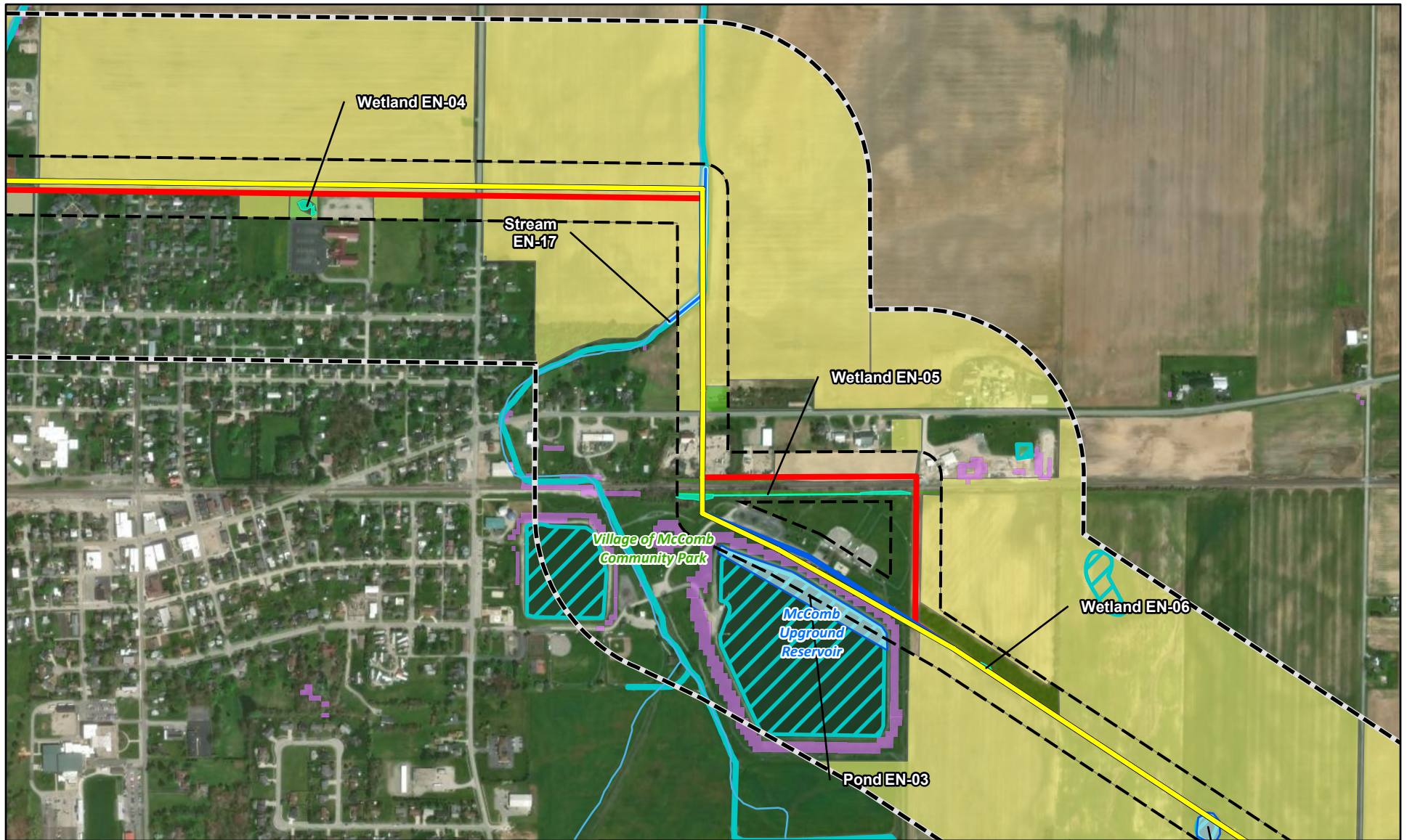


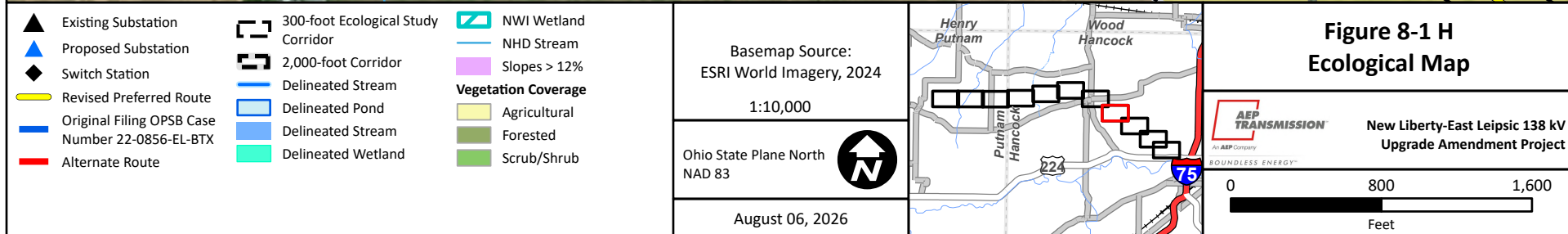
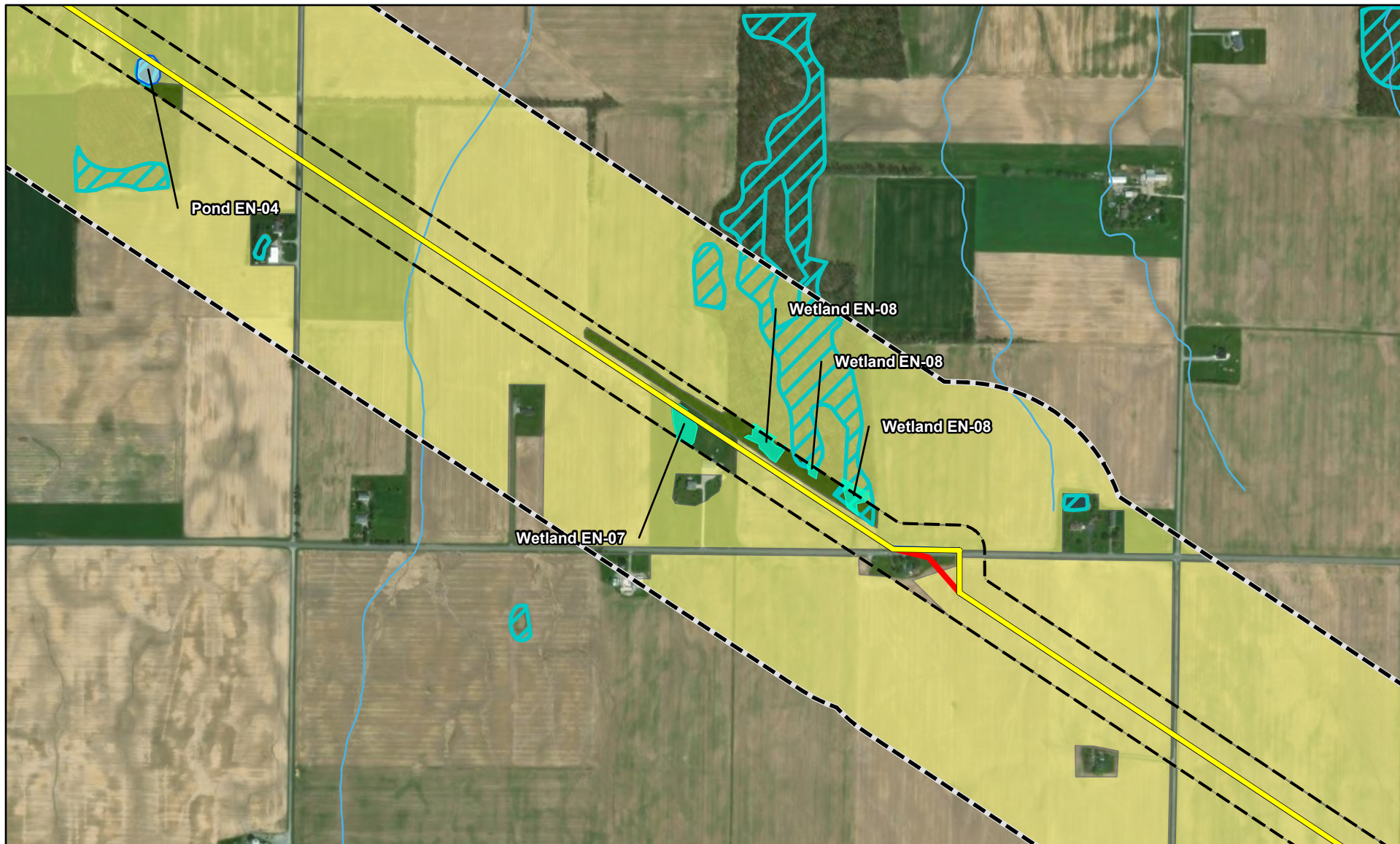


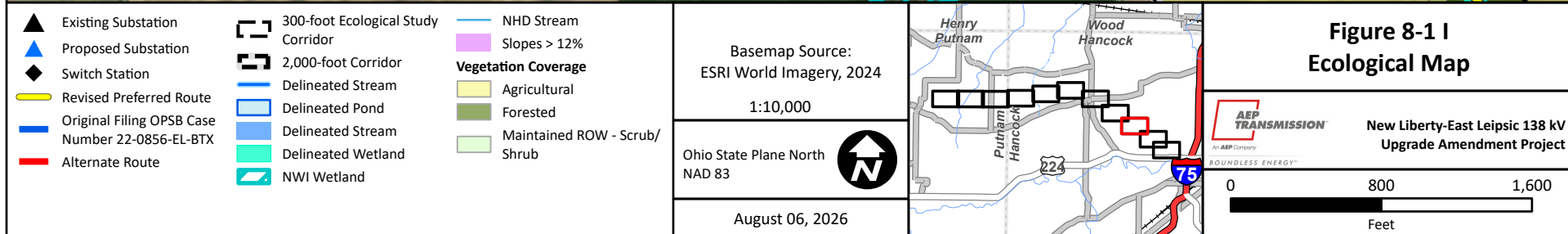
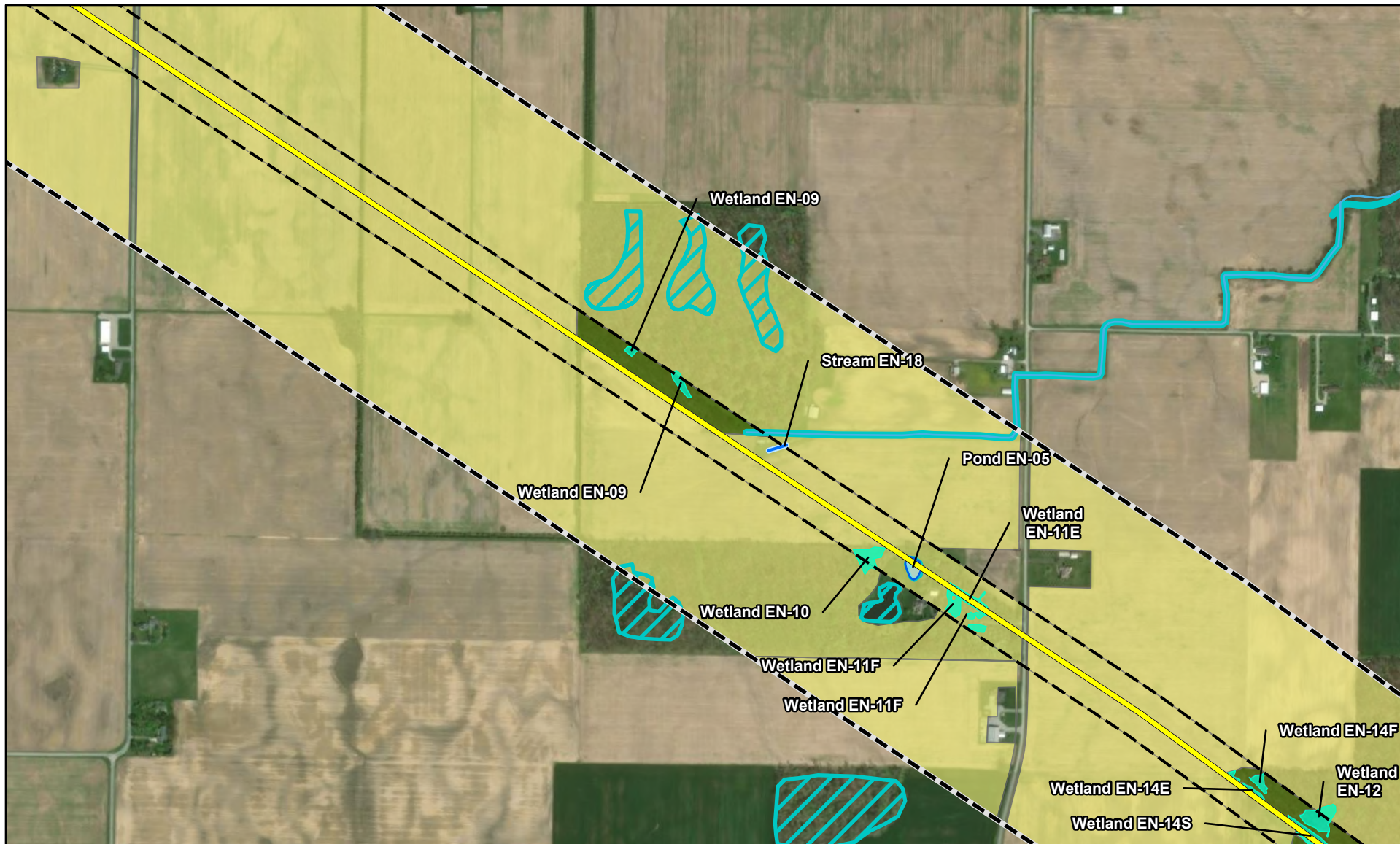


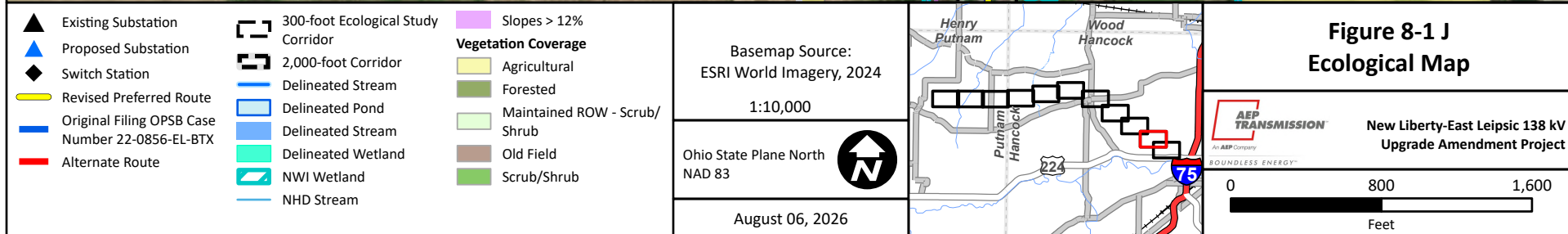
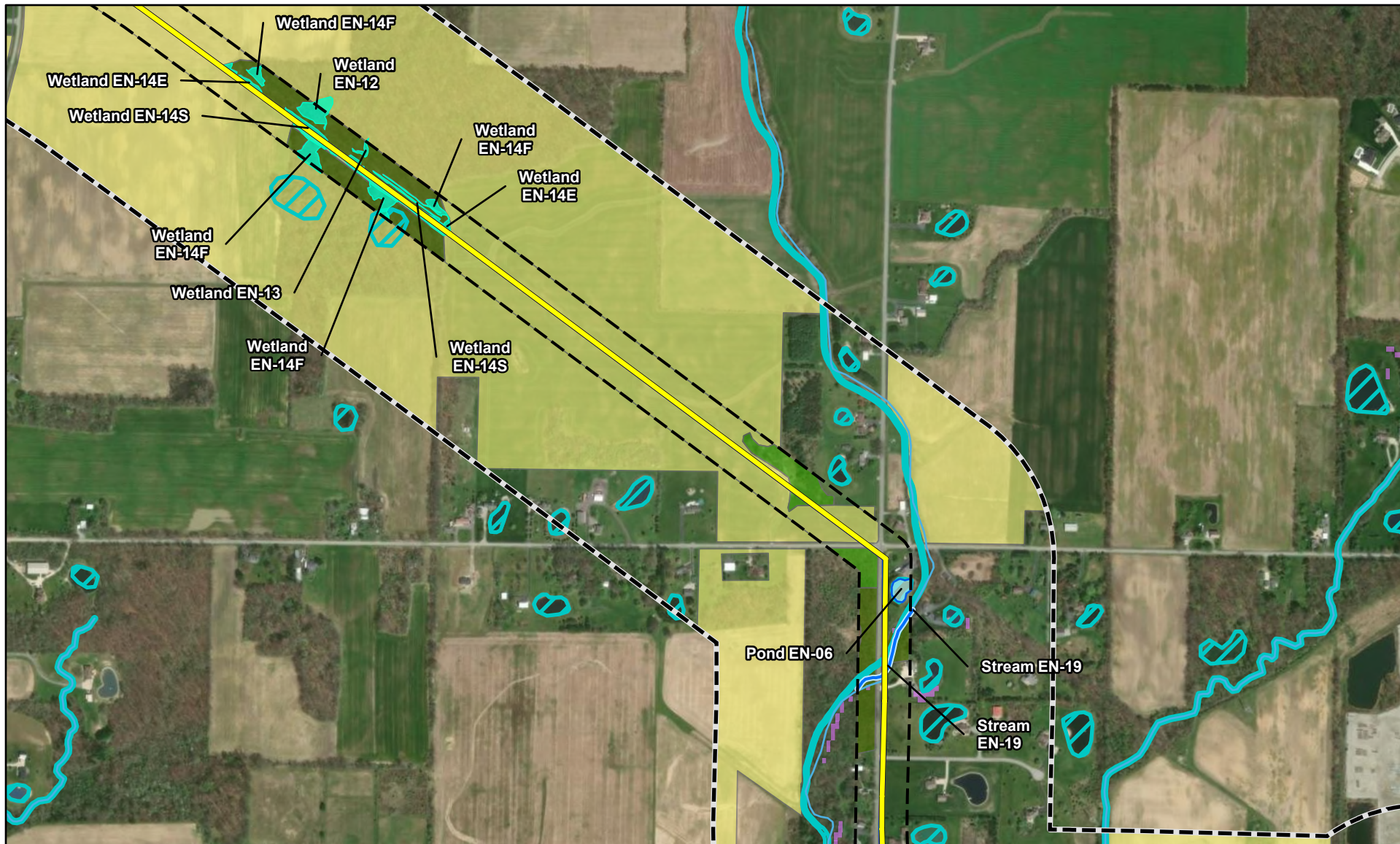


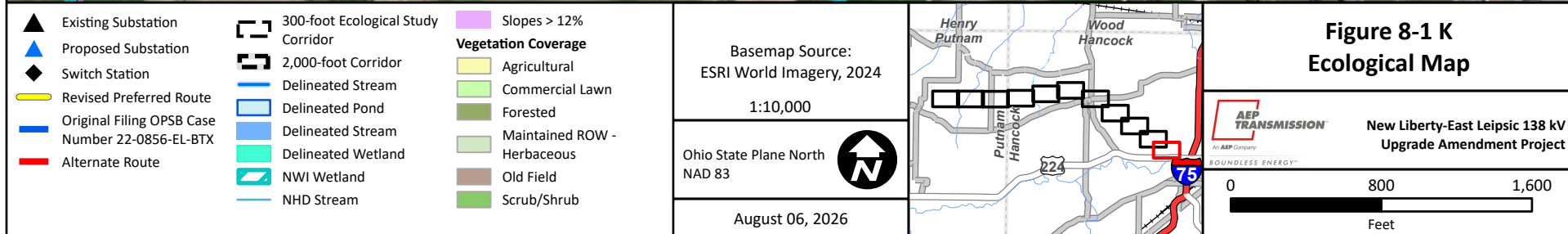
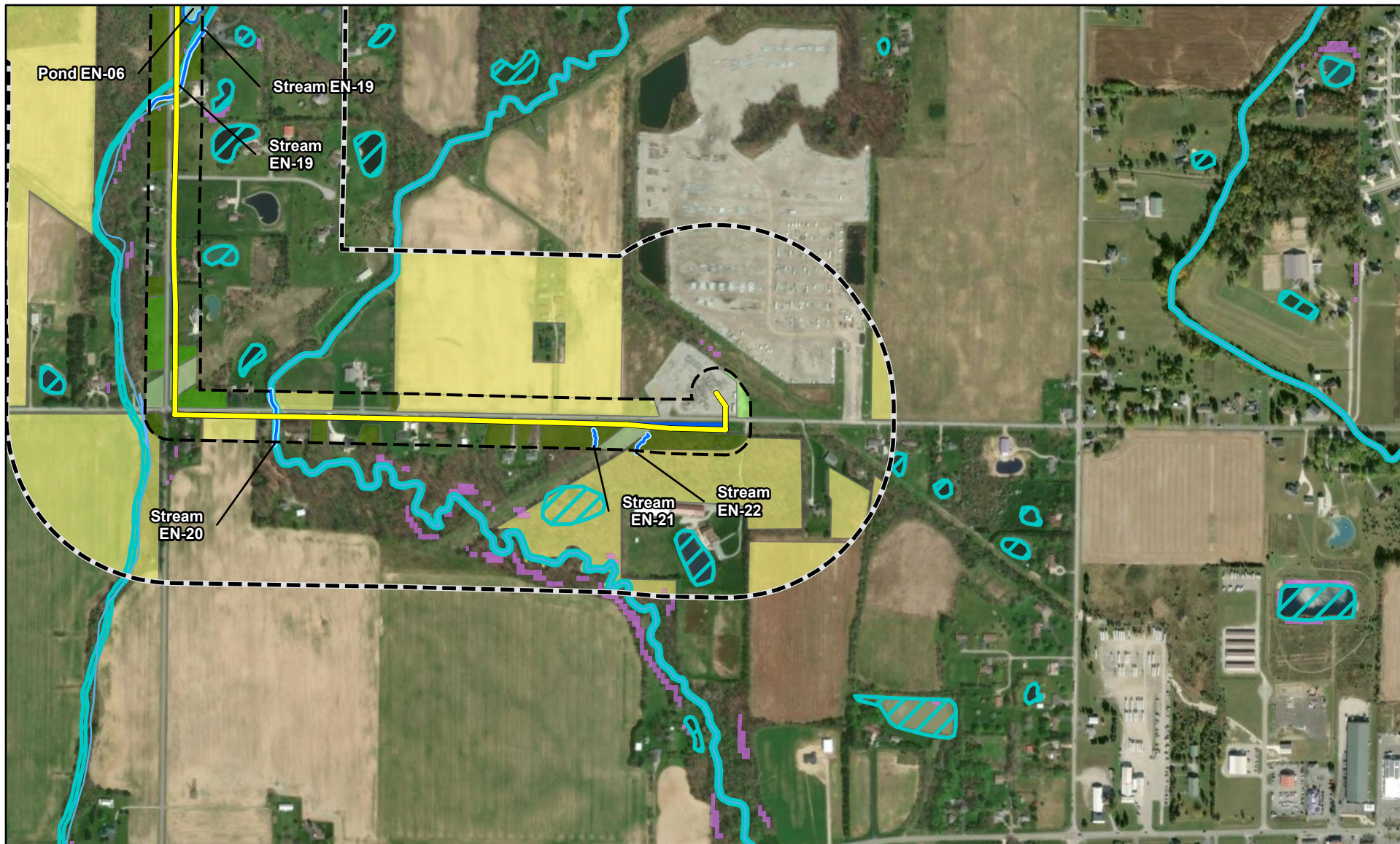


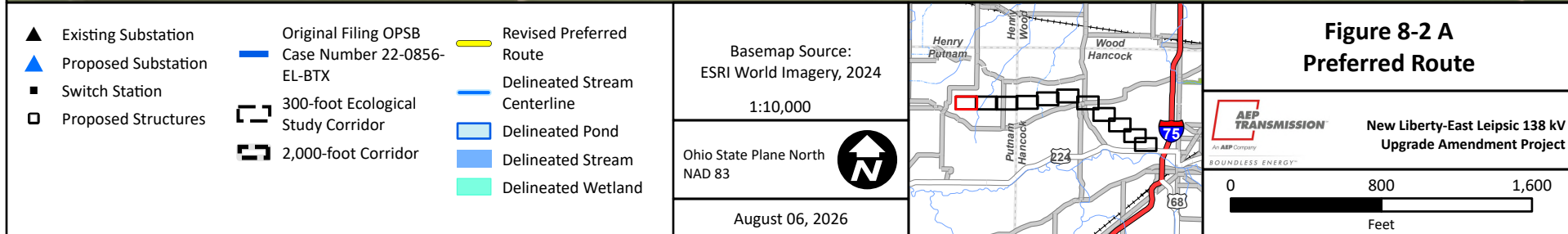


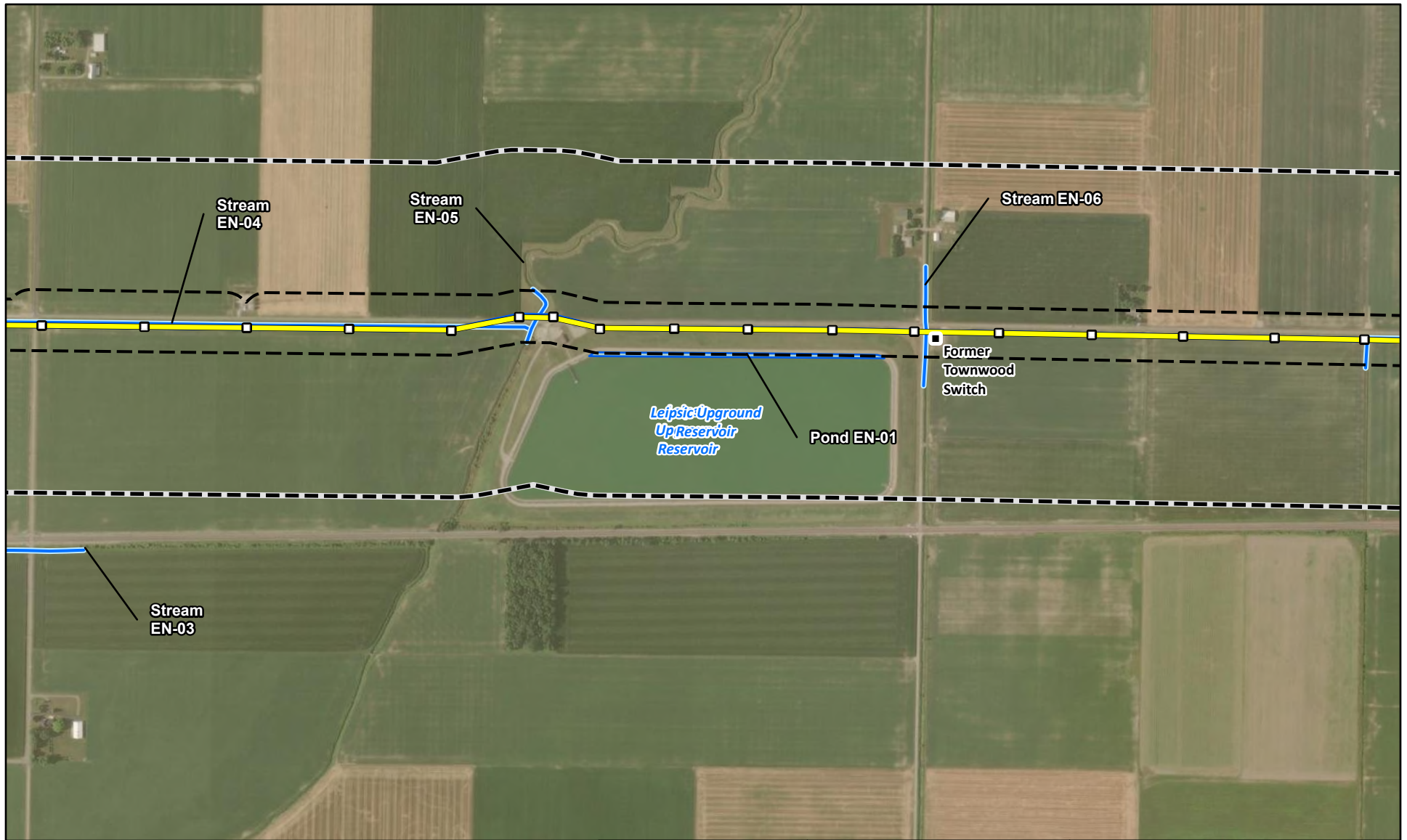












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|-----------------------|------------------------------------|------------------------------|
| ▲ Existing Substation | Original Filing OPSB | Revised Preferred Route |
| ▲ Proposed Substation | Case Number 22-0856-EL-BTX | Delineated Stream Centerline |
| ■ Switch Station | 300-foot Ecological Study Corridor | Delineated Pond |
| □ Proposed Structures | 2,000-foot Corridor | Delineated Stream |
| | | Delineated Wetland |

Basemap Source:
ESRI World Imagery, 2024

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Ohio State Plane North
NAD 83

August 06, 2026

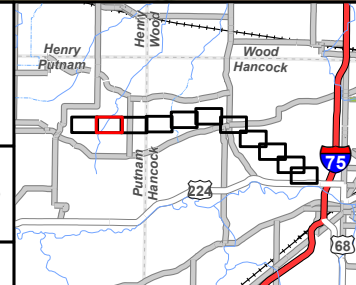
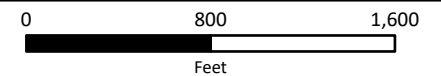
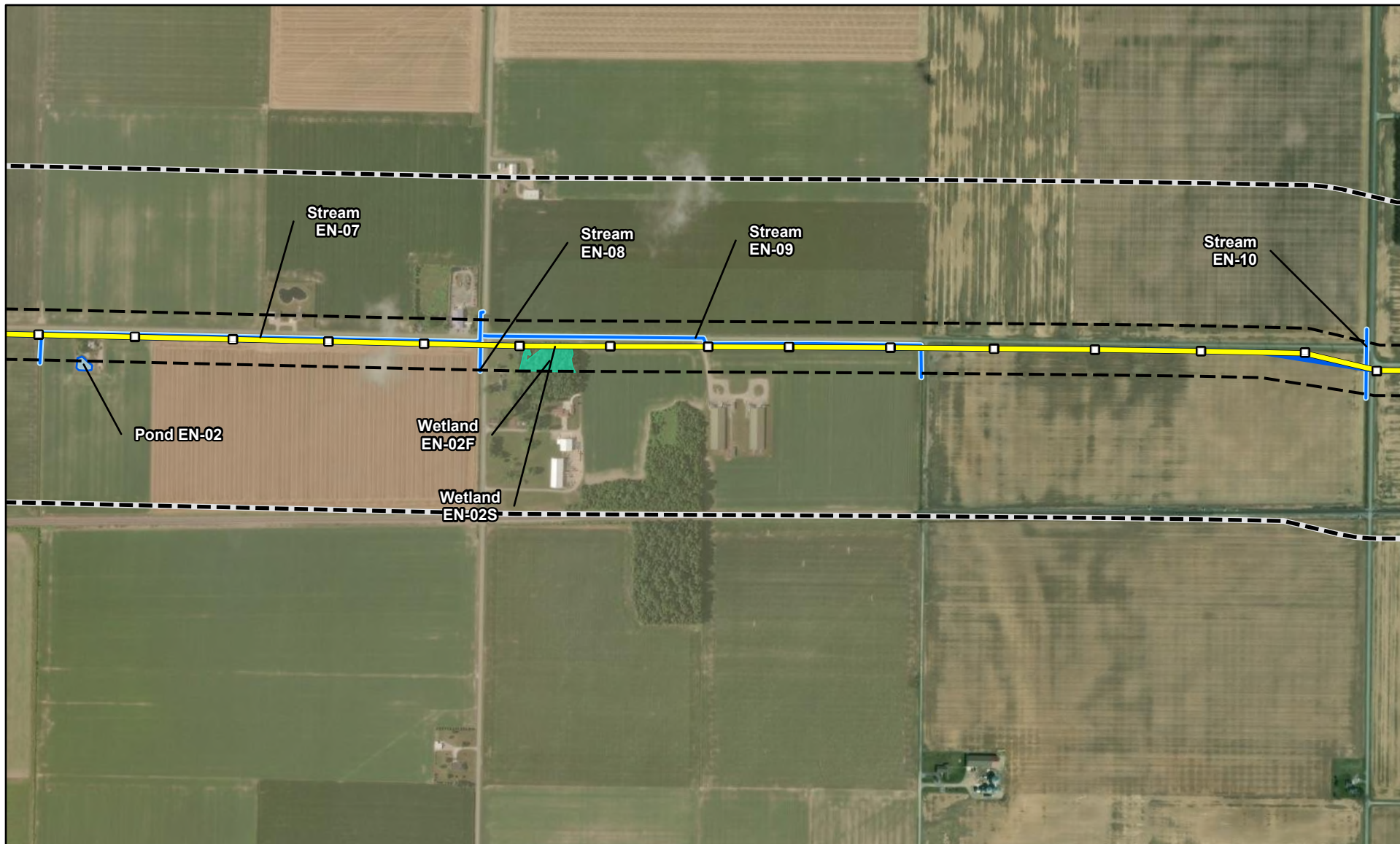


Figure 8-2 B
Preferred Route



New Liberty-East Leipsic 138 kV
Upgrade Amendment Project





- | | | |
|-----------------------|--|---------------------------------|
| ▲ Existing Substation | Original Filing OPSB
Case Number 22-0856-
EL-BTX | Revised Preferred
Route |
| ▲ Proposed Substation | 300-foot Ecological
Study Corridor | Delineated Stream
Centerline |
| ■ Switch Station | 2,000-foot Corridor | Delineated Pond |
| □ Proposed Structures | | Delineated Stream |
| | | Delineated Wetland |

Basemap Source:
ESRI World Imagery, 2024

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Ohio State Plane North
NAD 83

August 06, 2026

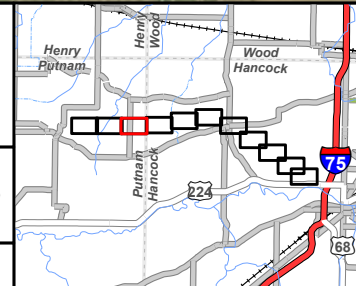
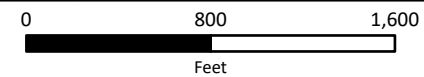
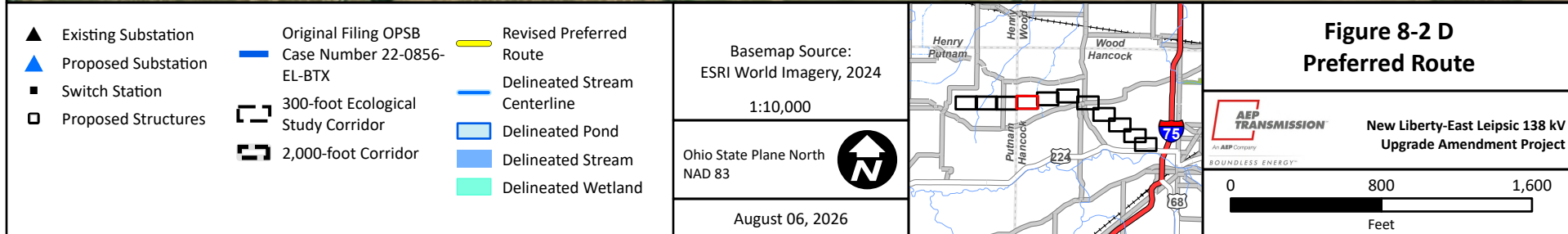
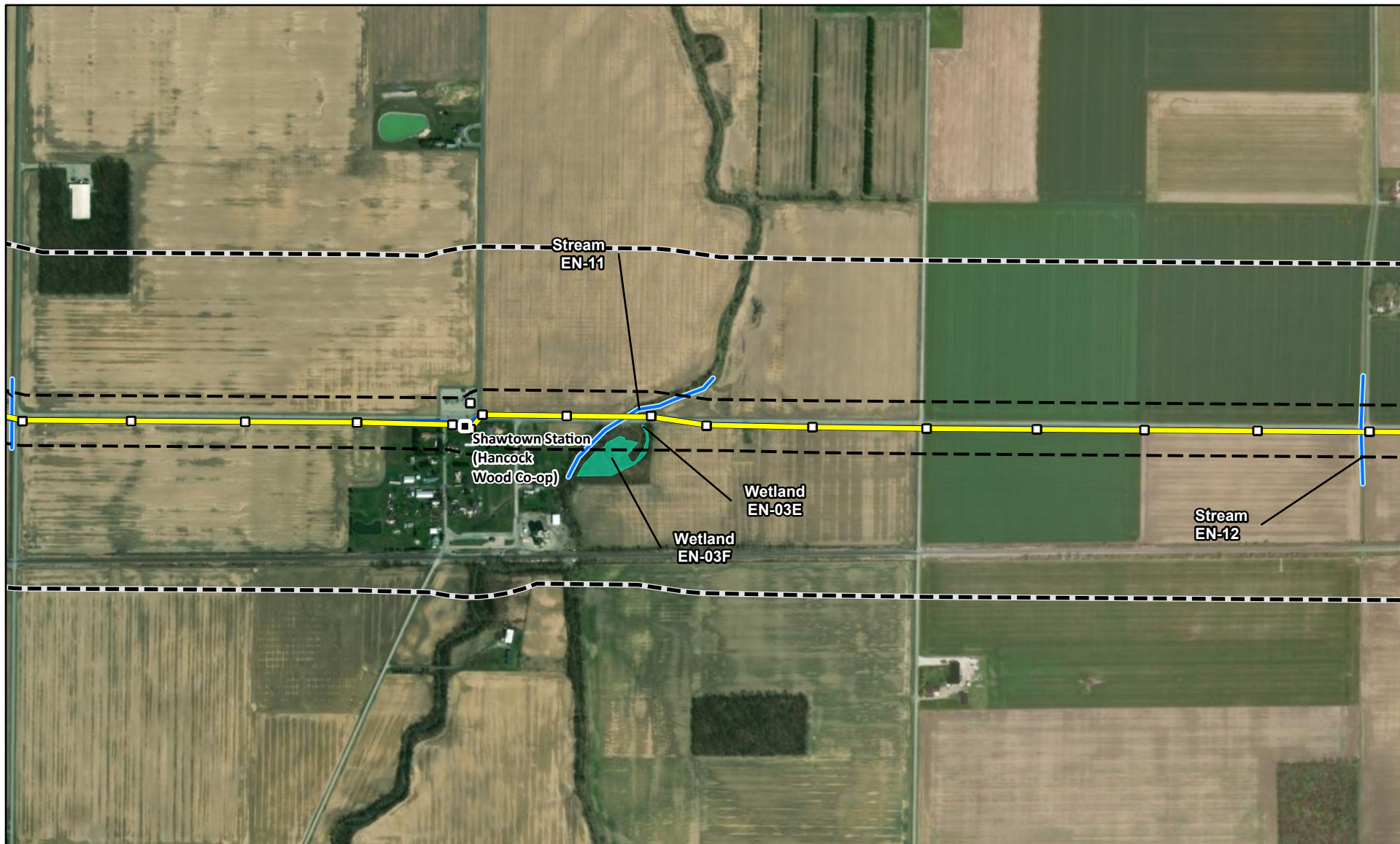


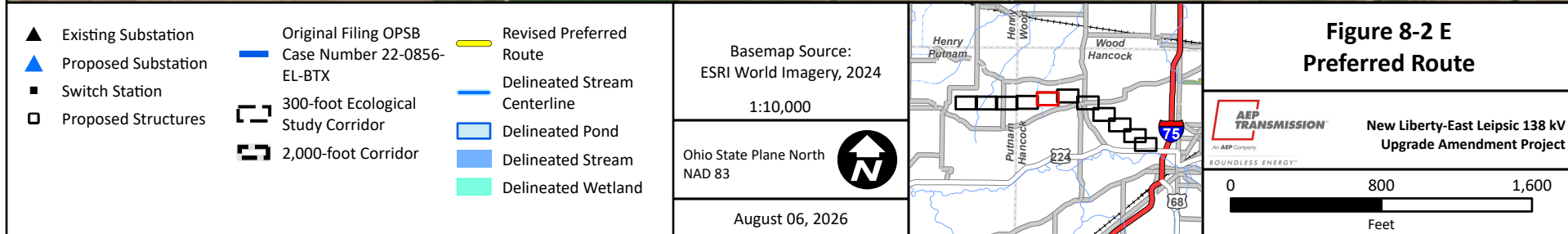
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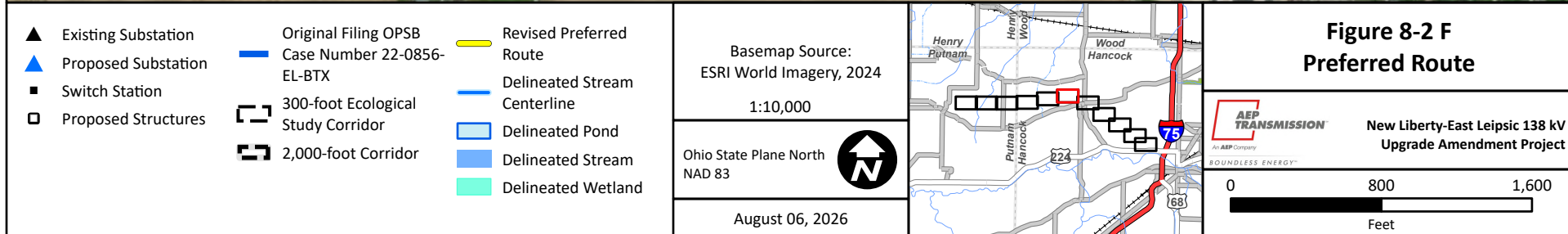
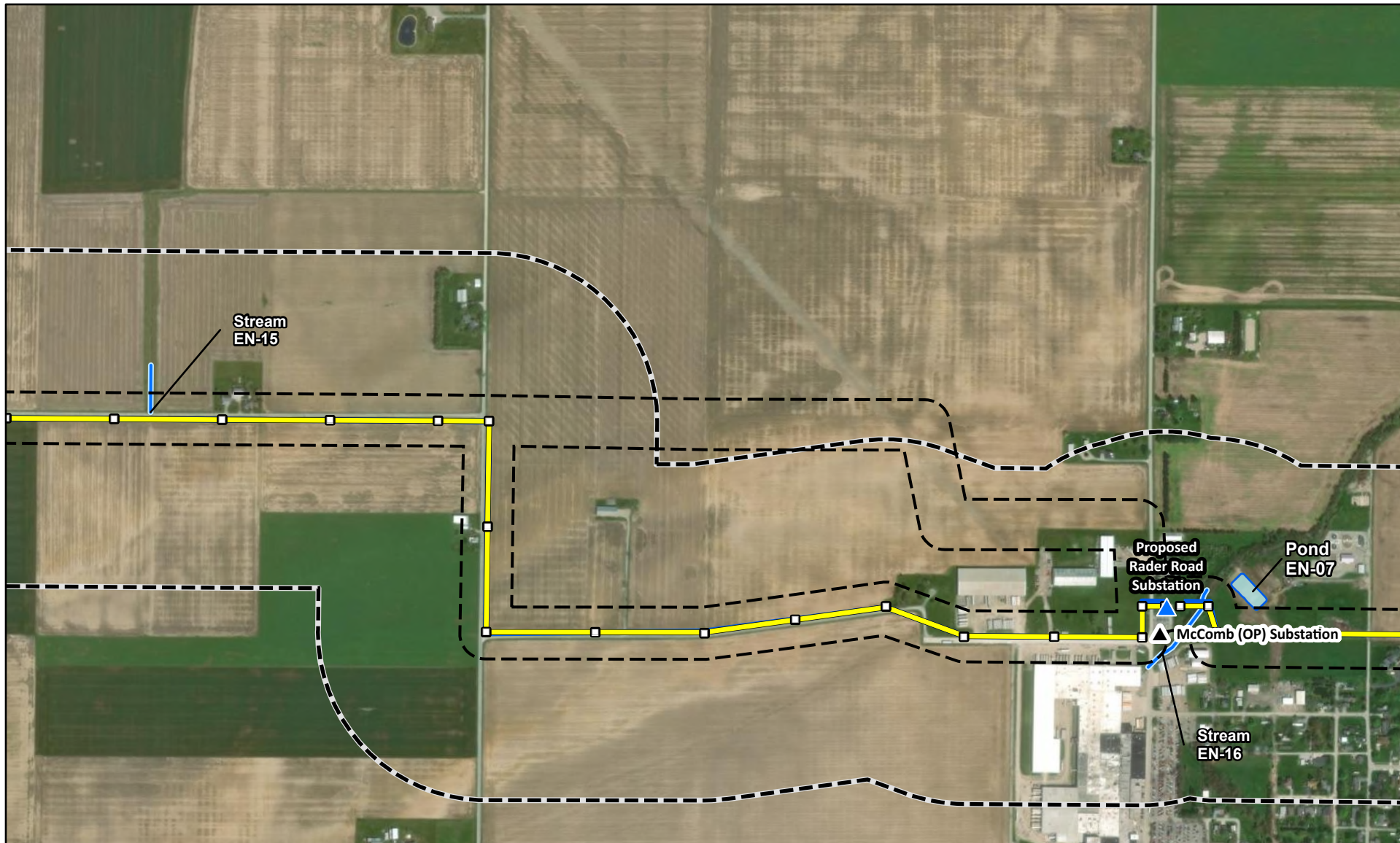


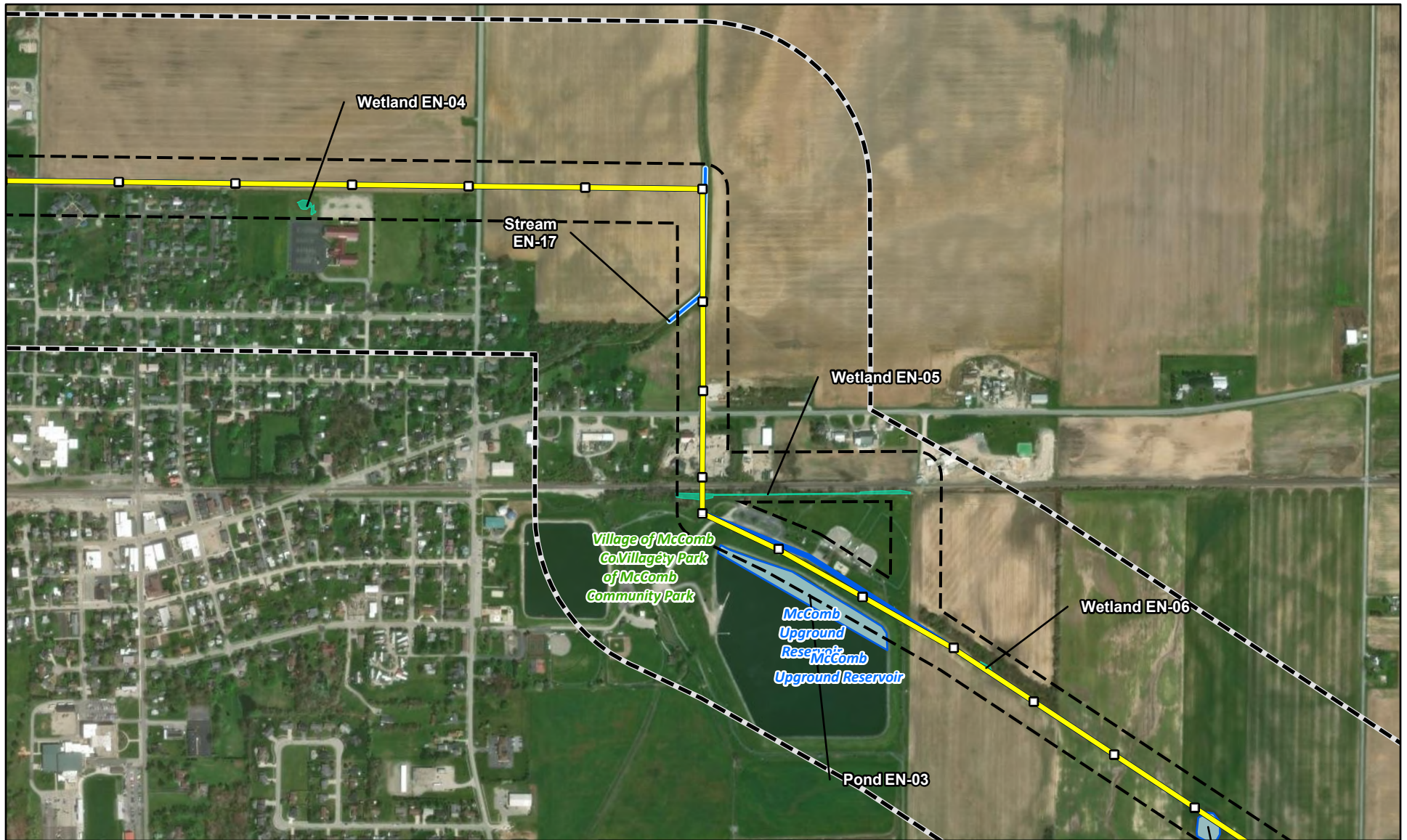
**New Liberty-East Leipsic 138 kV
Upgrade Amendment Project**











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| ▲ Existing Substation | Original Filing OPSB
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| | | Delineated Wetland |

Basemap Source:
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Ohio State Plane North
NAD 83

August 06, 2026

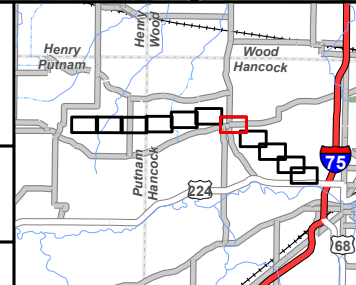
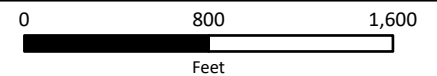
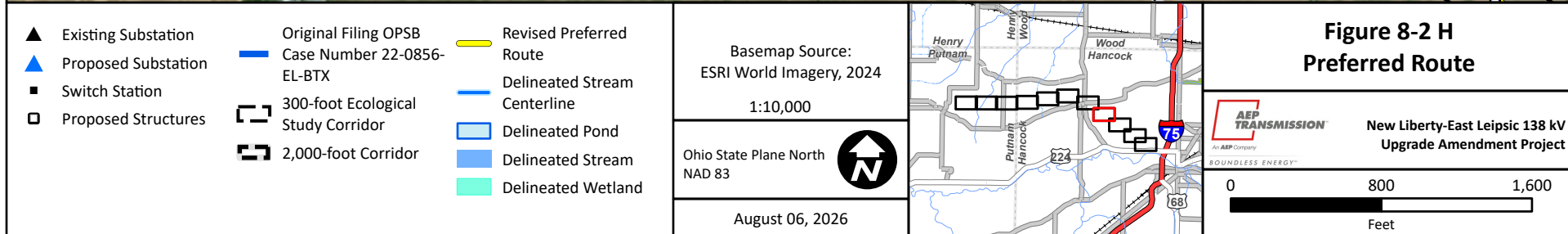
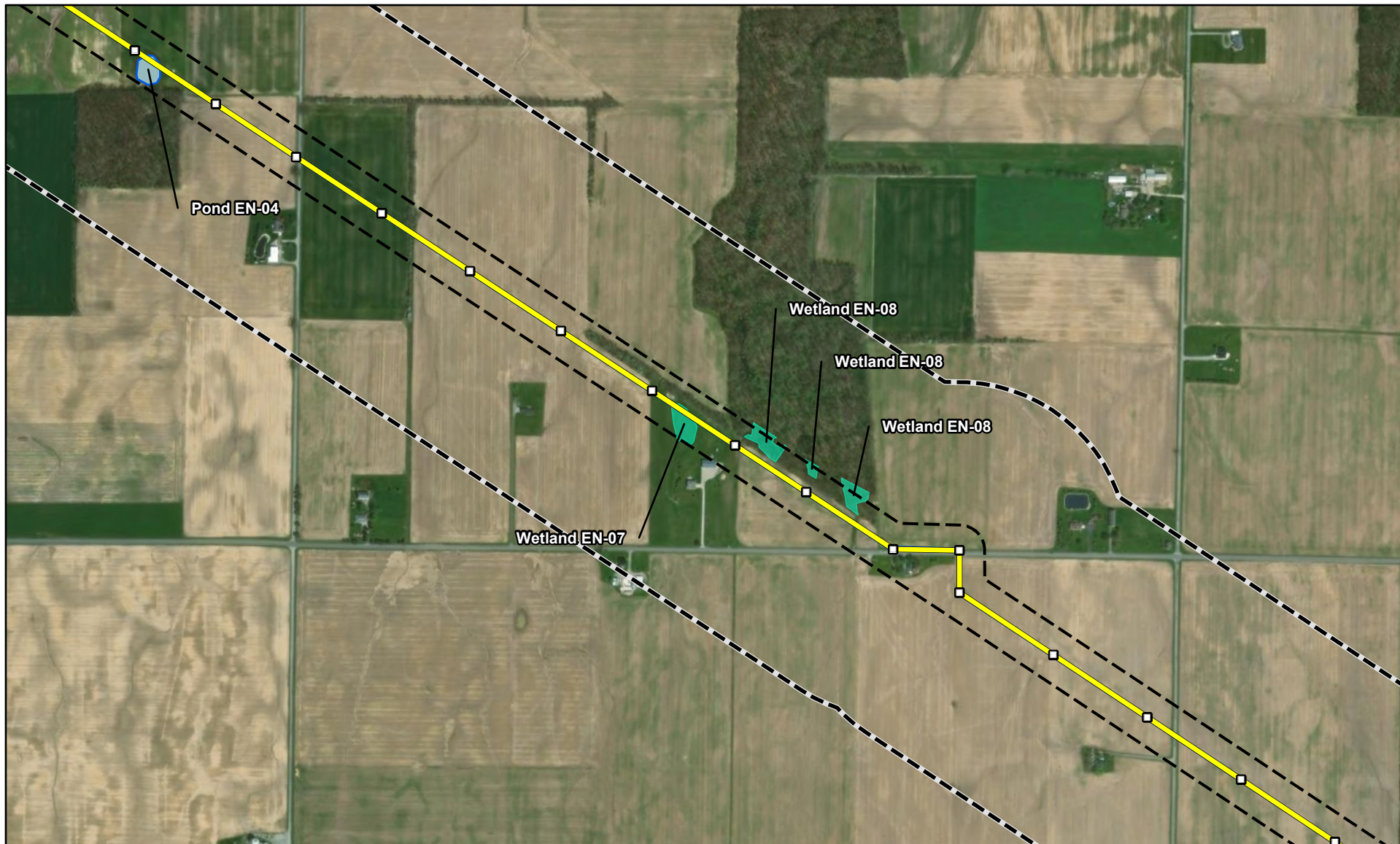


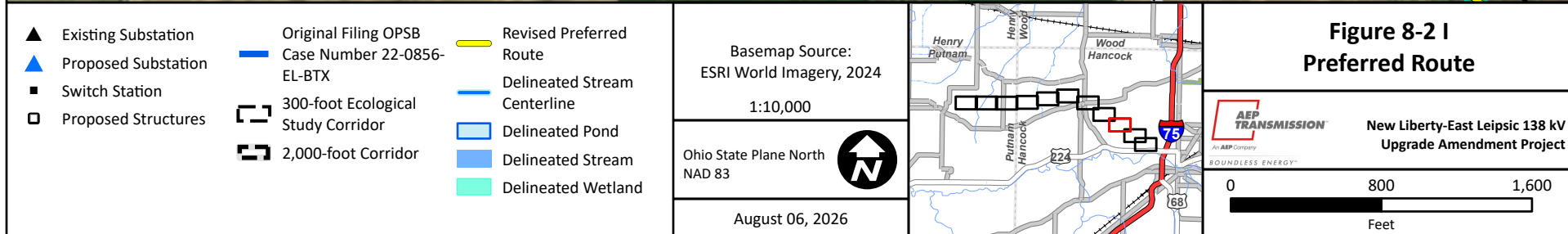
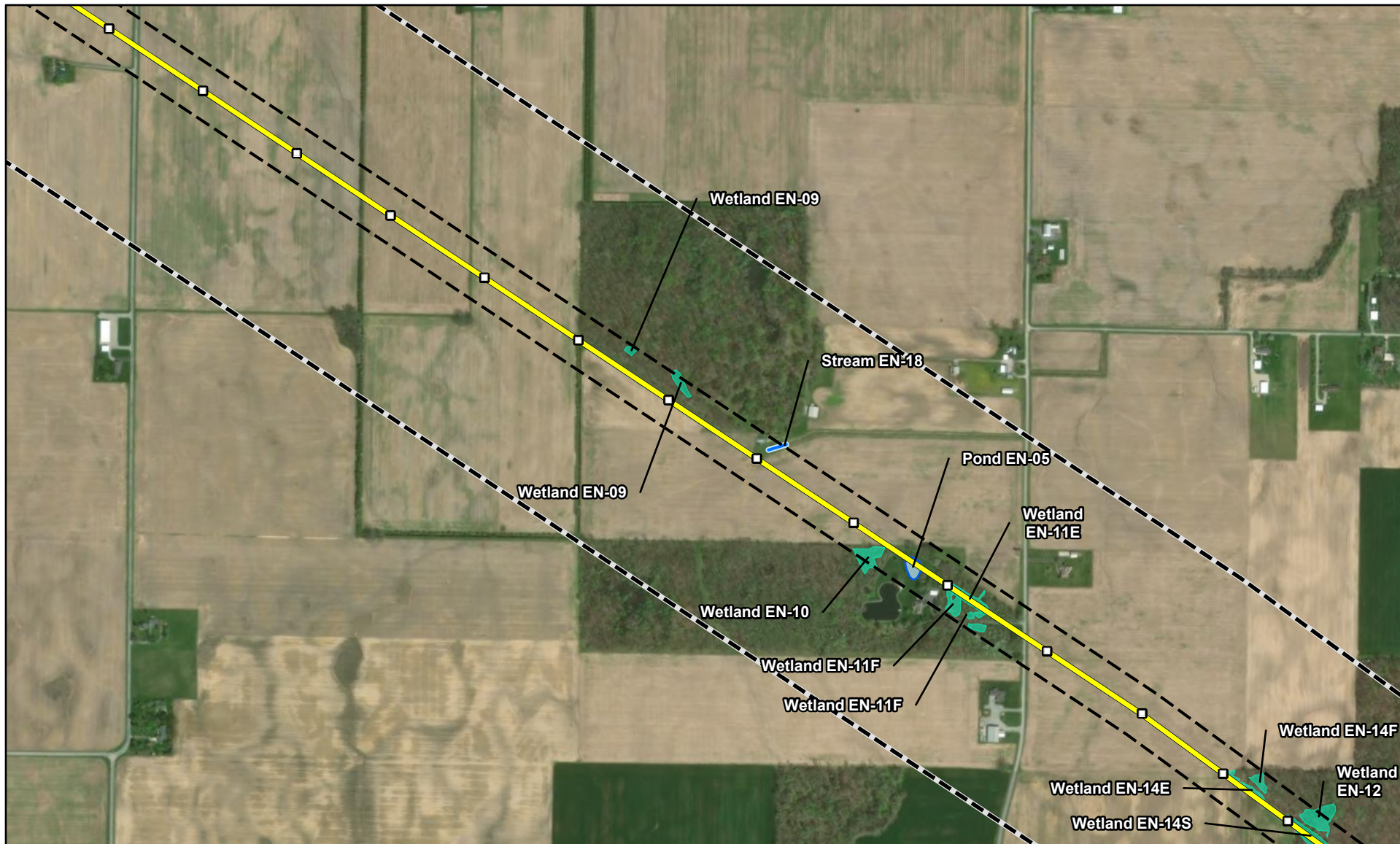
Figure 8-2 G
Preferred Route

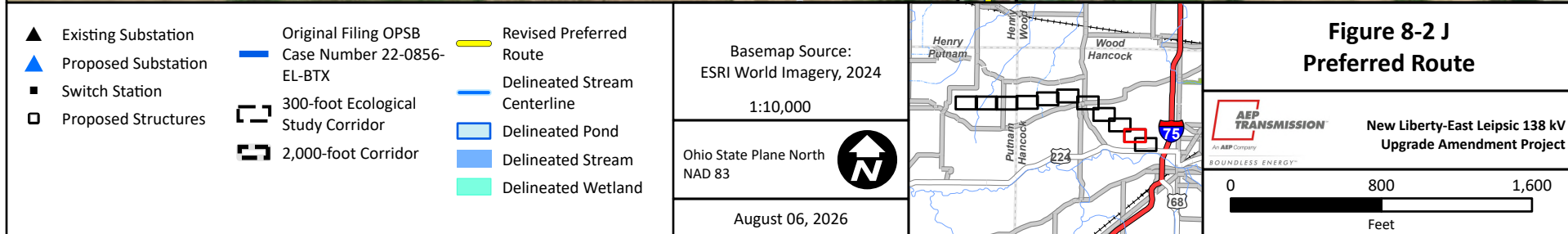
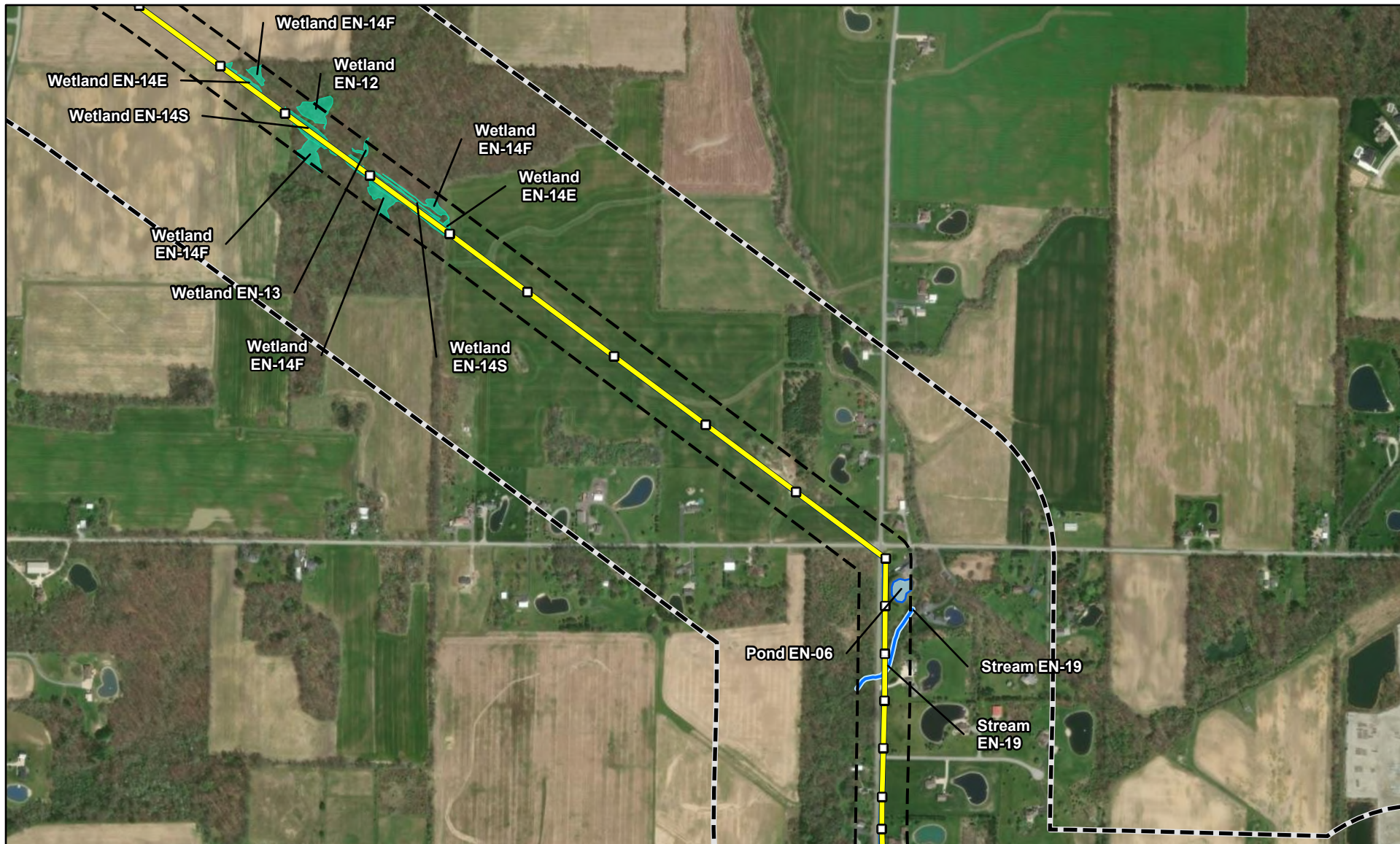


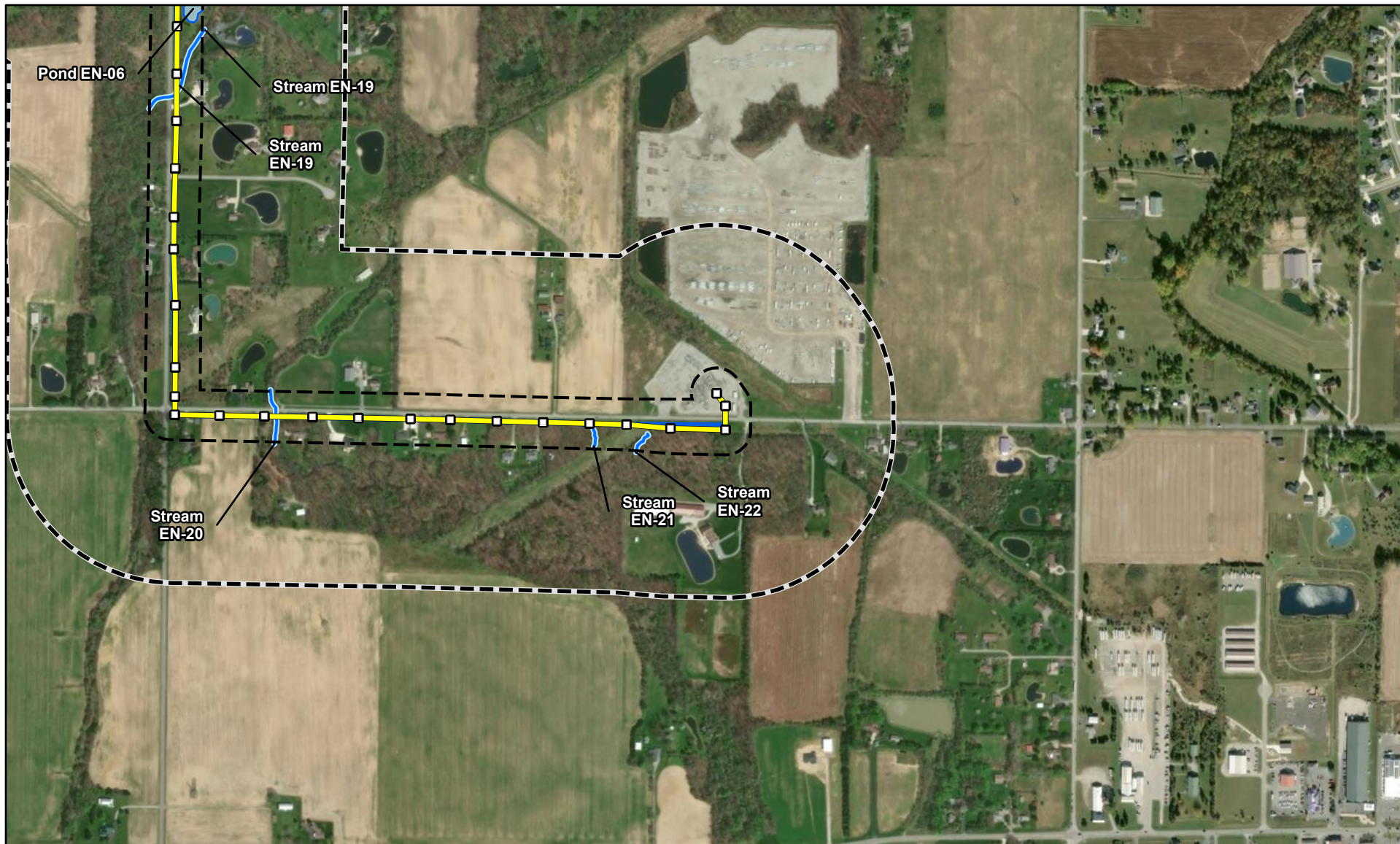
New Liberty-East Leipsic 138 kV
Upgrade Amendment Project











- | | | |
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| ■ Switch Station | 2,000-foot Corridor | Delineated Pond |
| □ Proposed Structures | | Delineated Stream |
| | | Delineated Wetland |

Basemap Source:
ESRI World Imagery, 2024

1:10,000

Ohio State Plane North
NAD 83

August 06, 2026

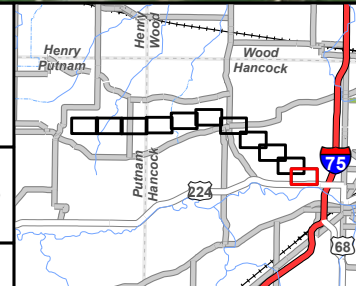
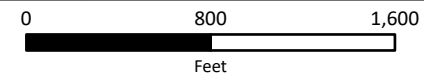


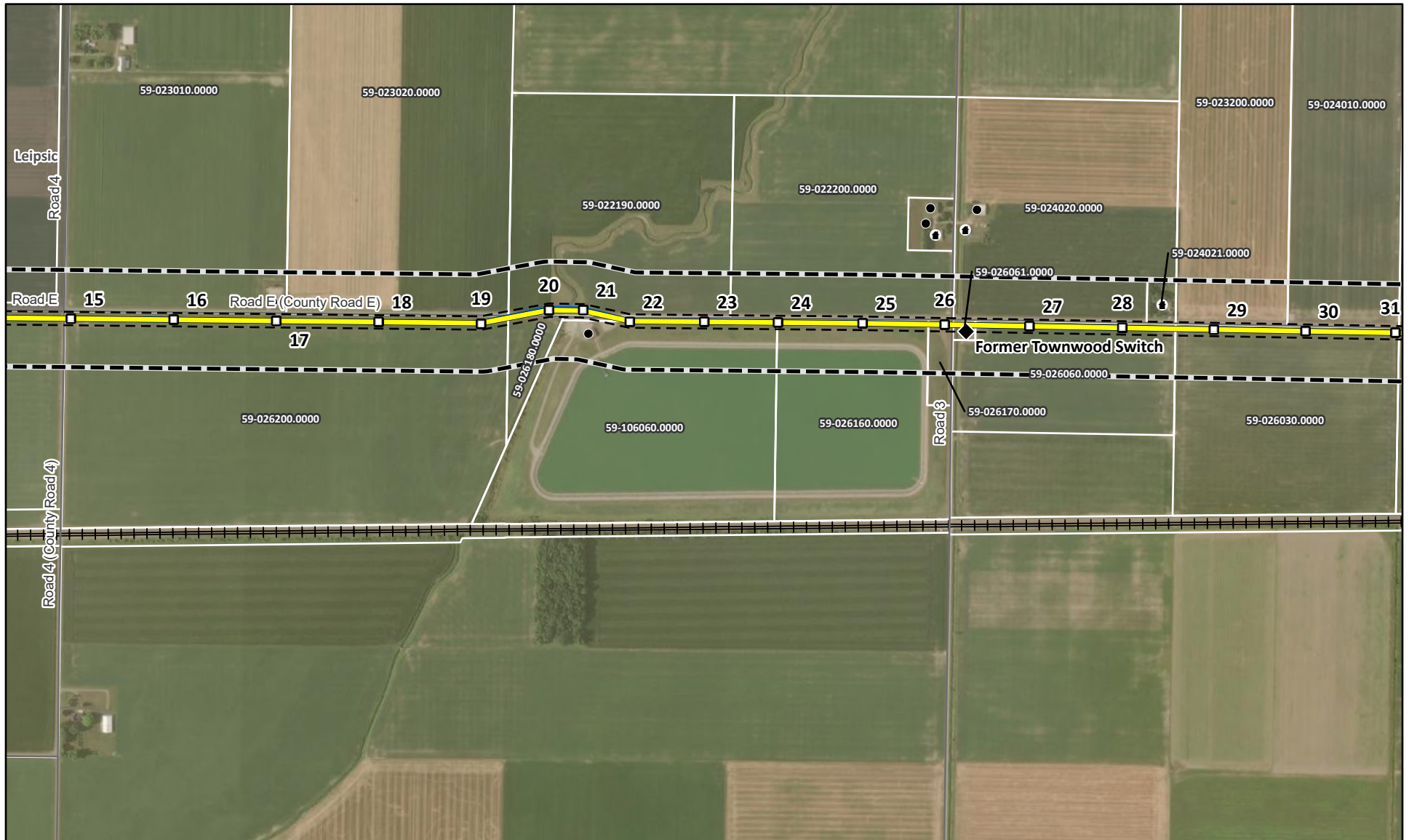
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Preferred Route

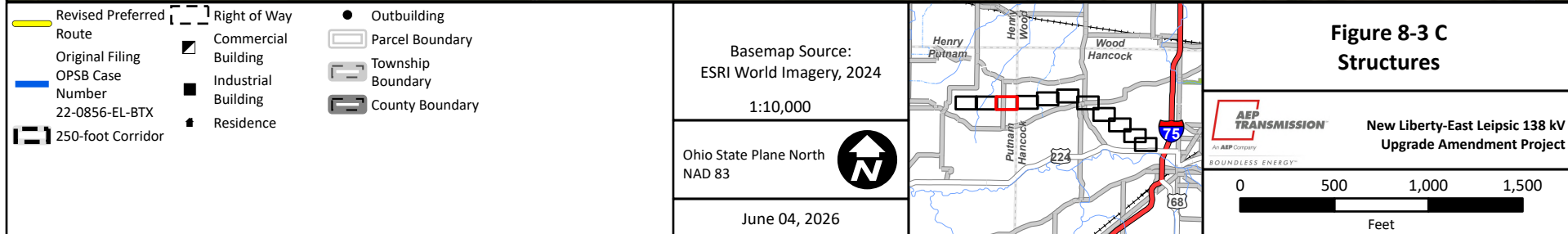


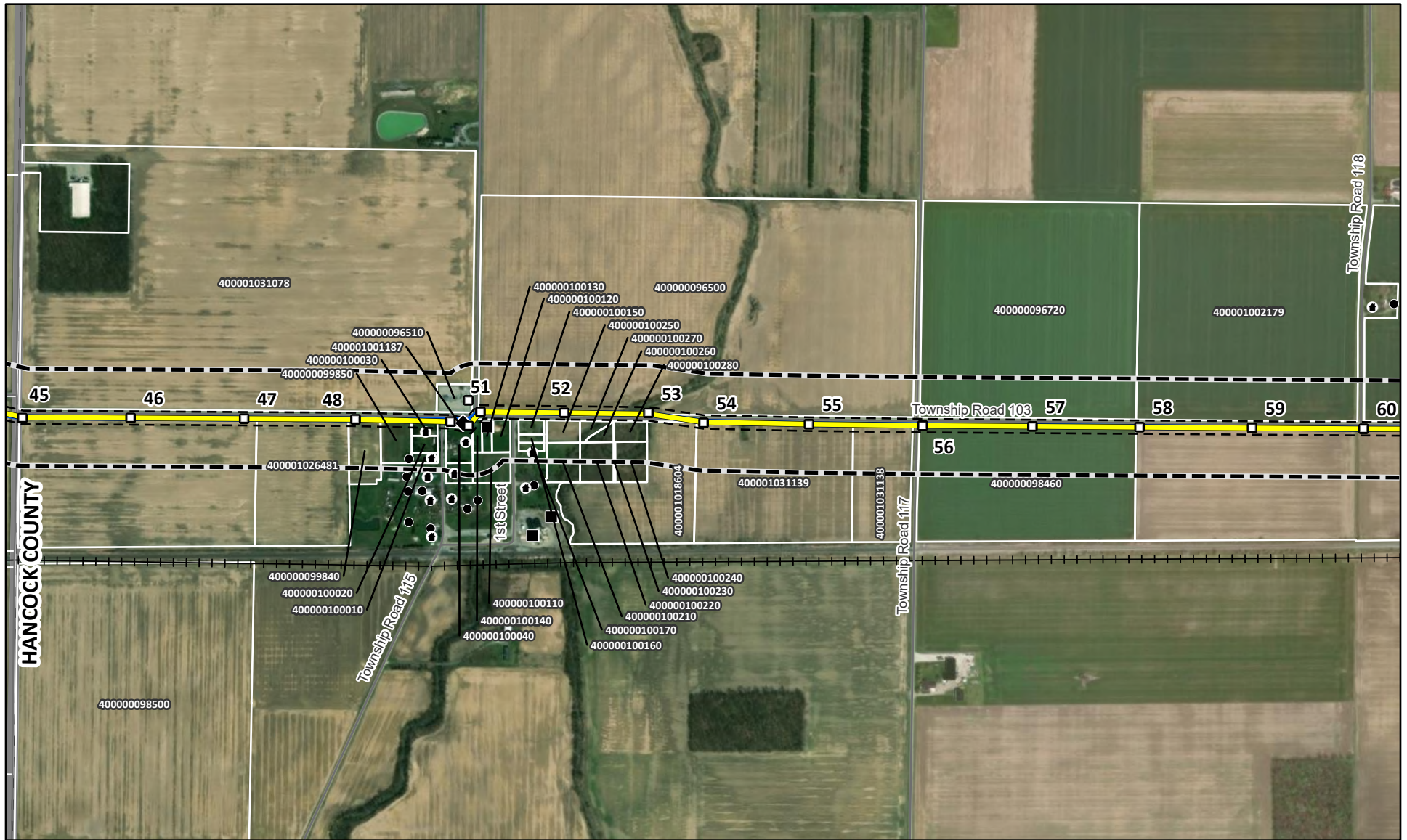
**New Liberty-East Leipsic 138 kV
Upgrade Amendment Project**



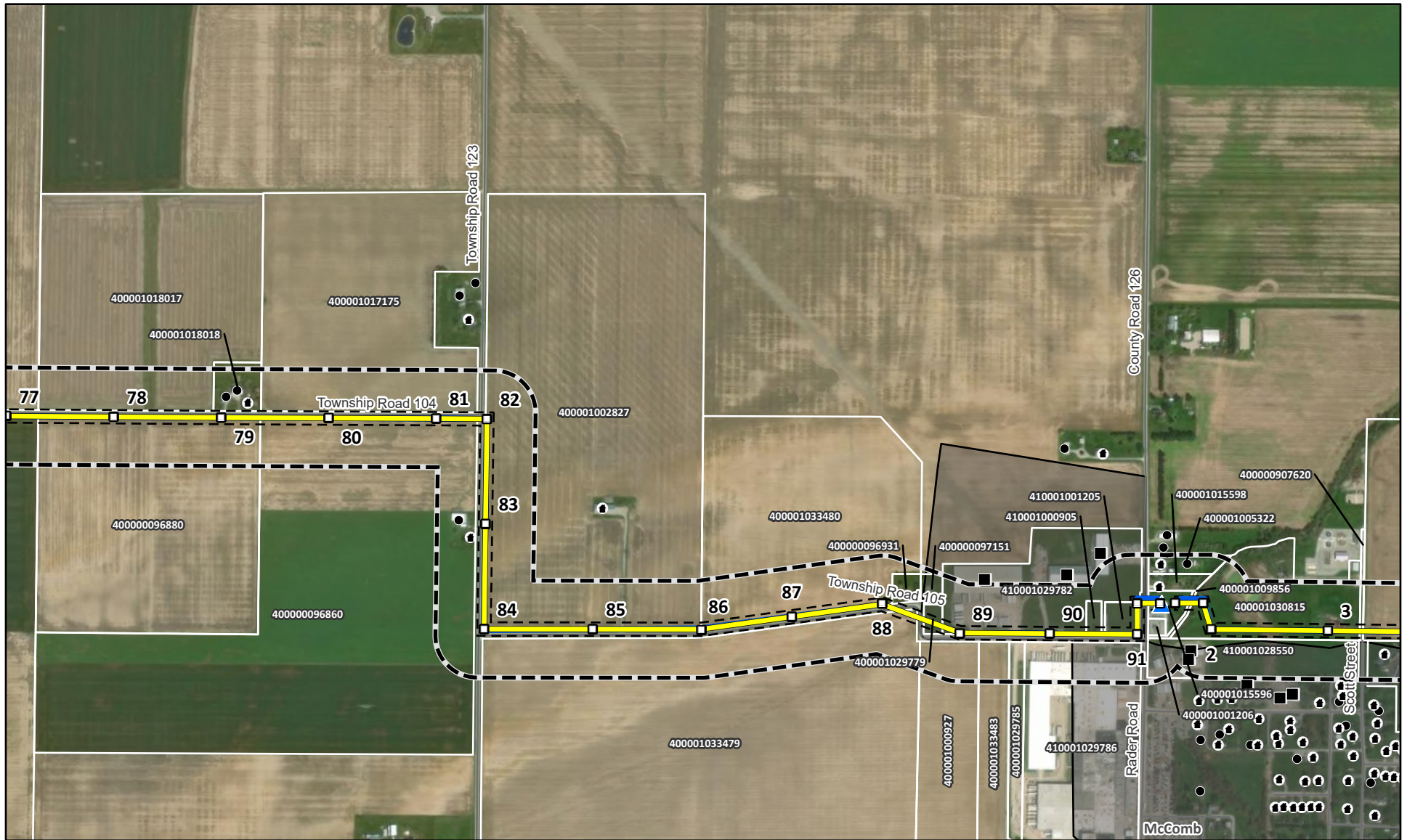


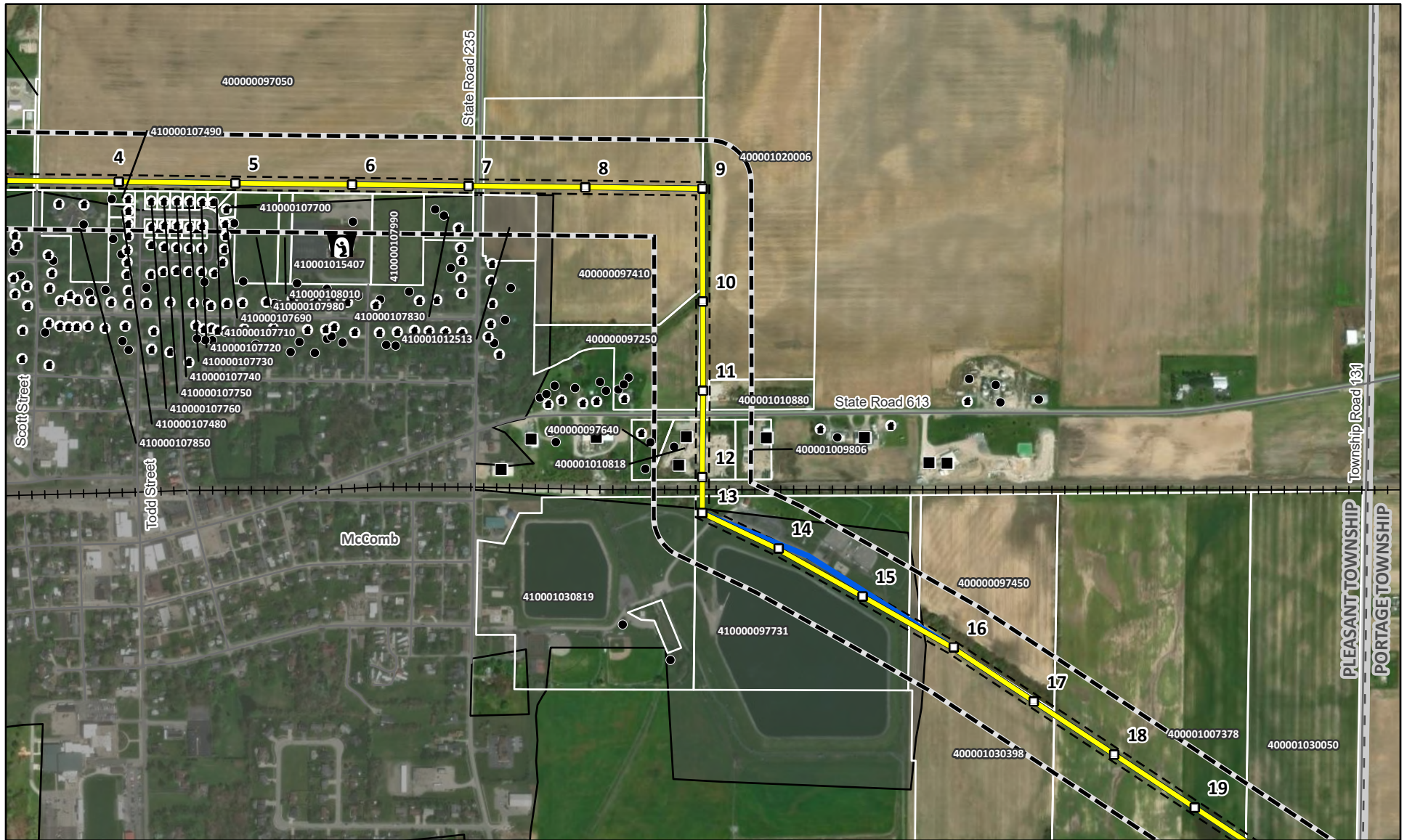


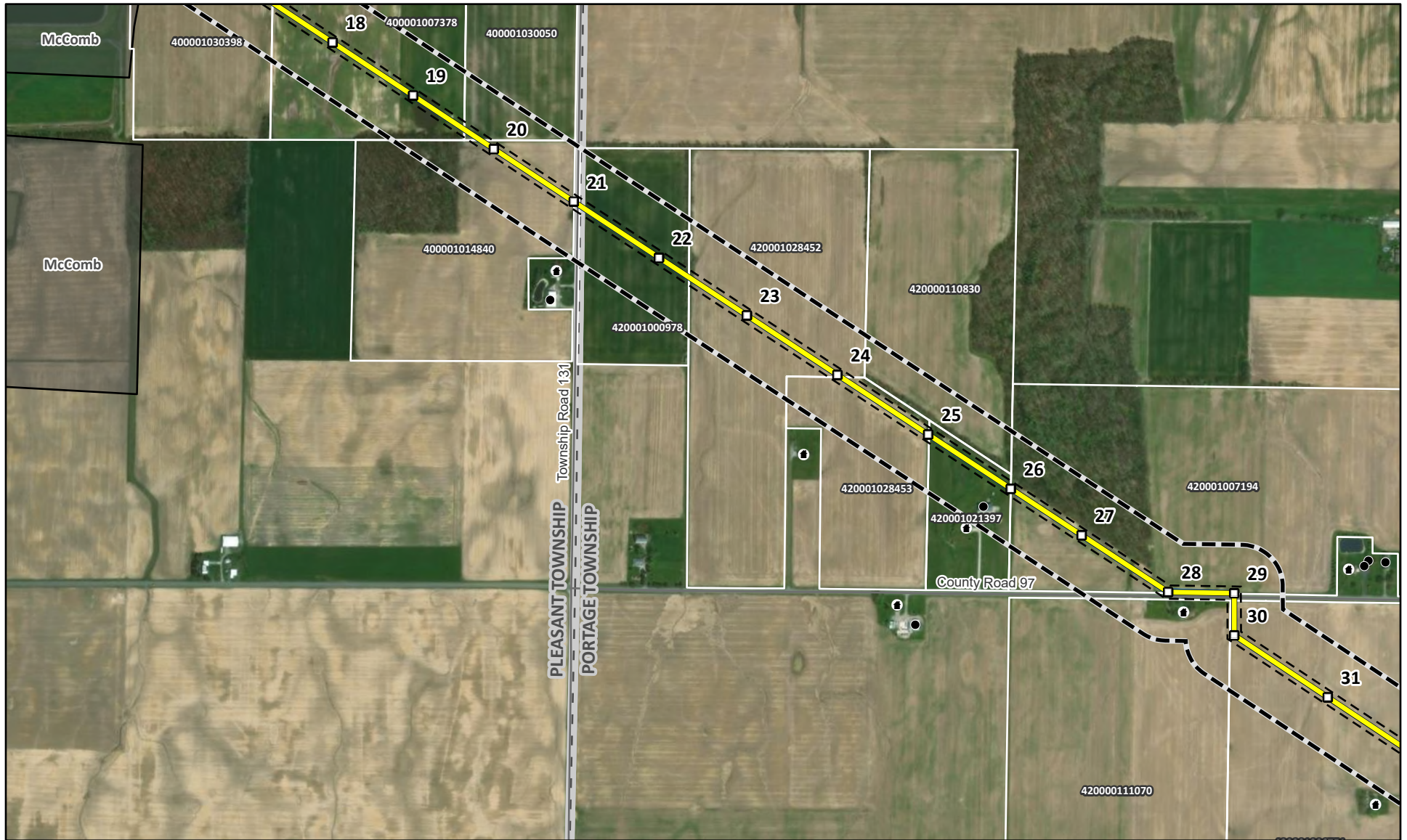


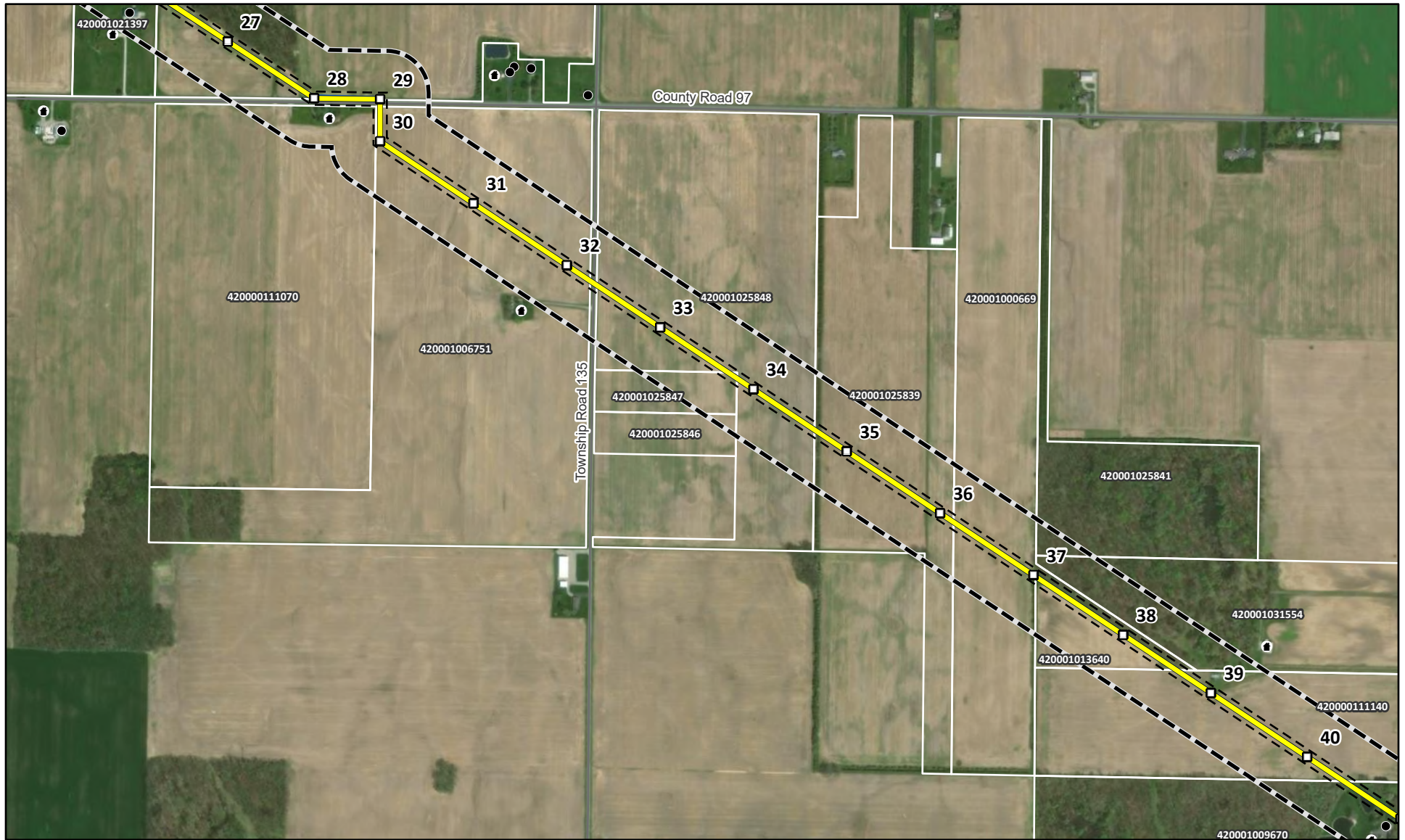


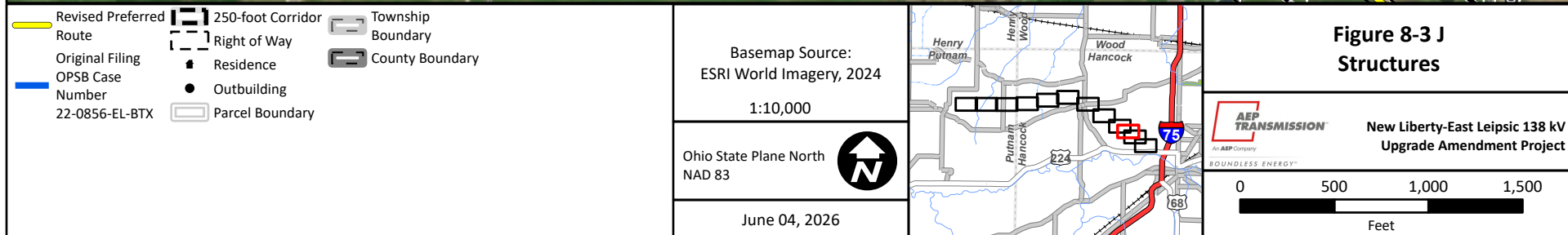
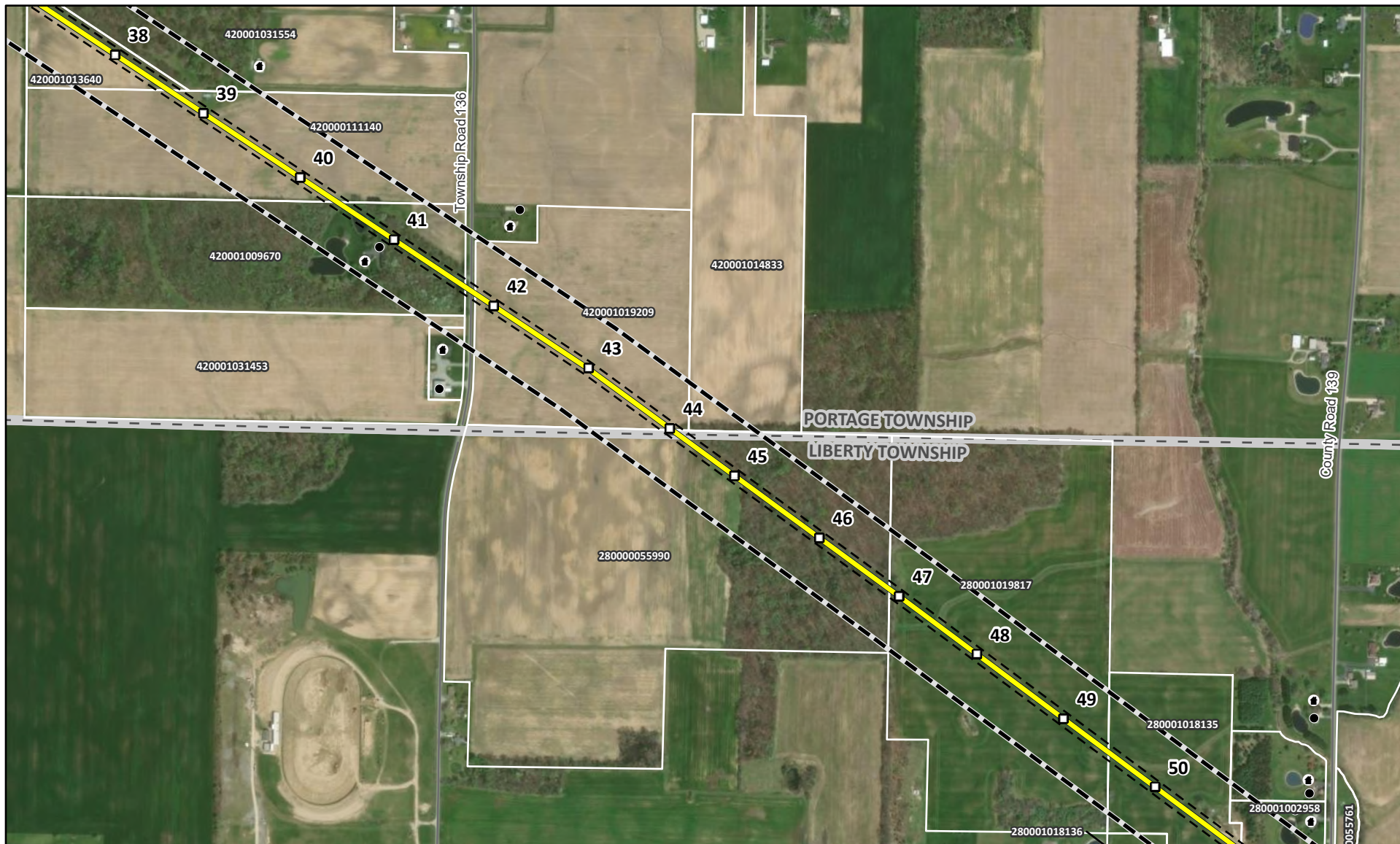


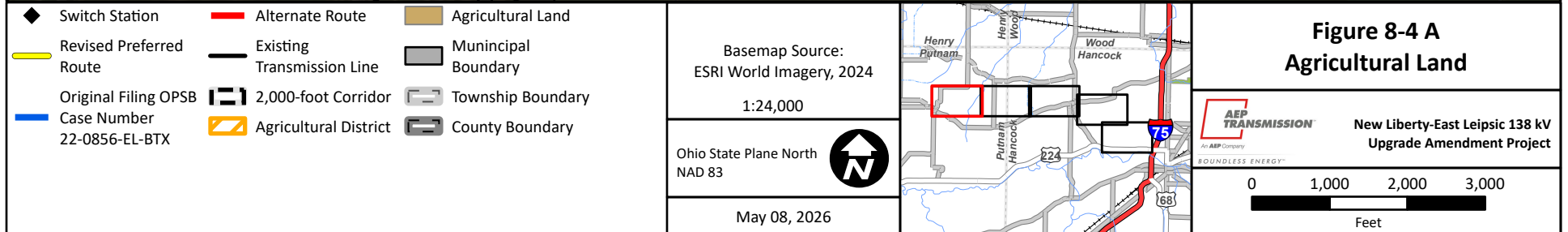
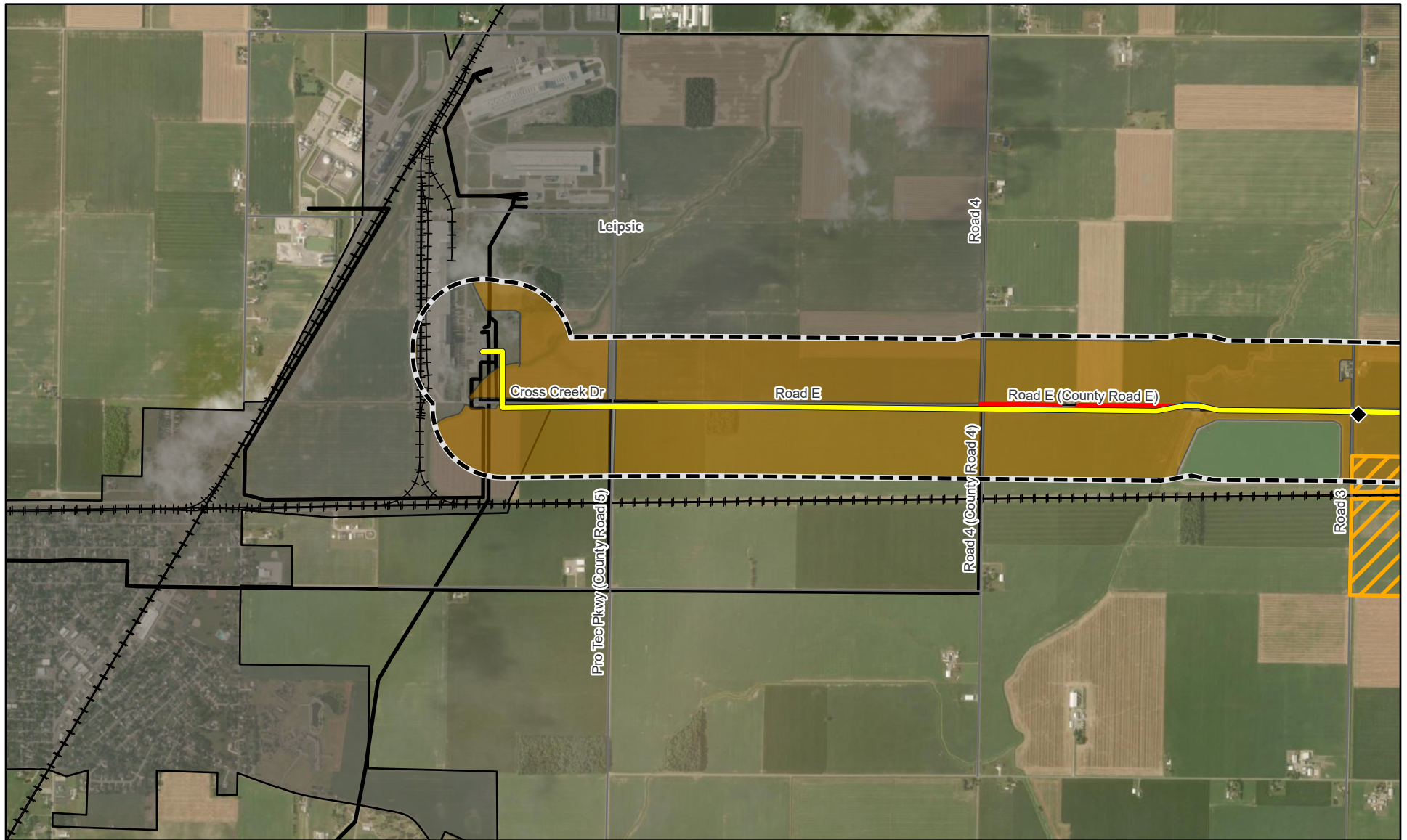


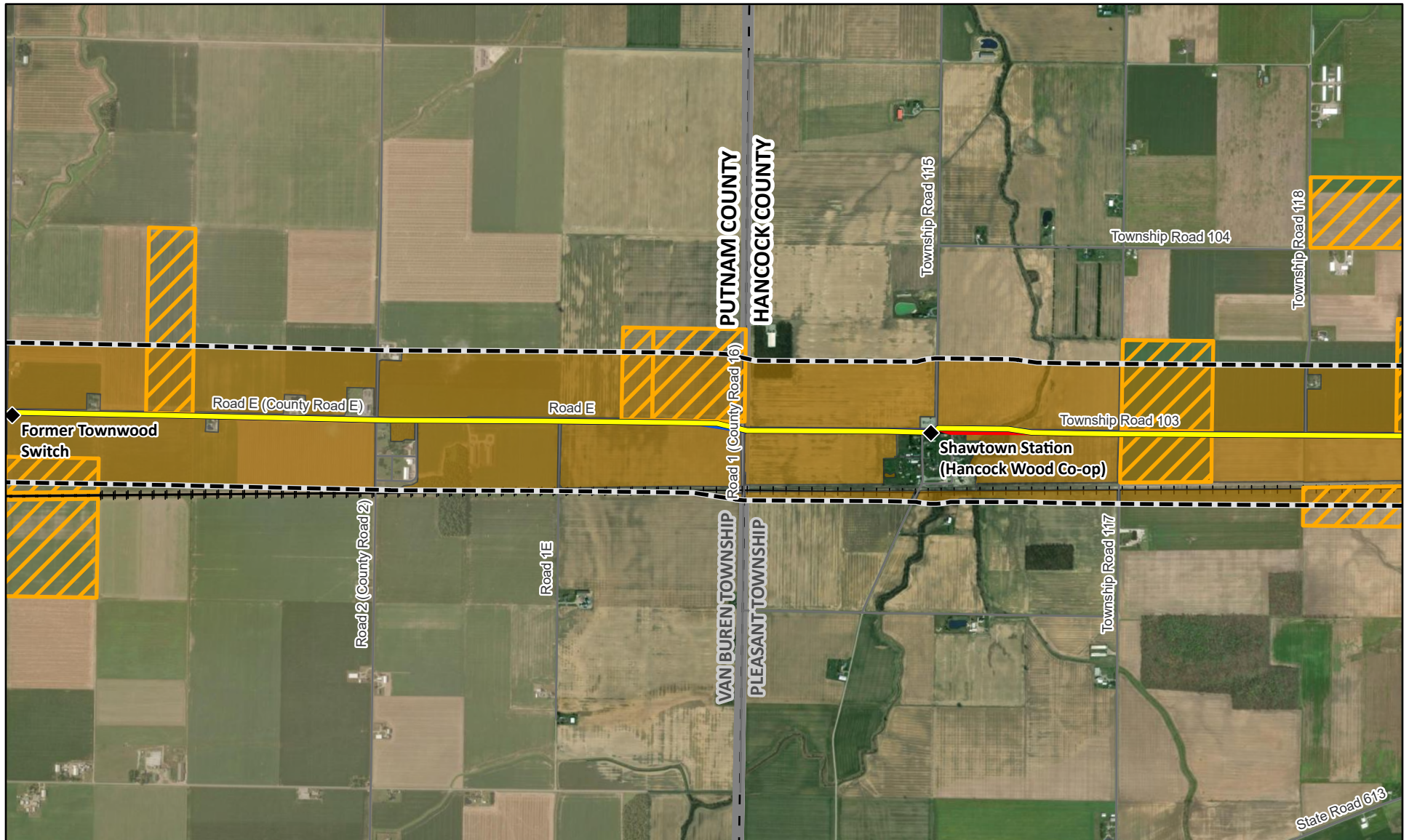


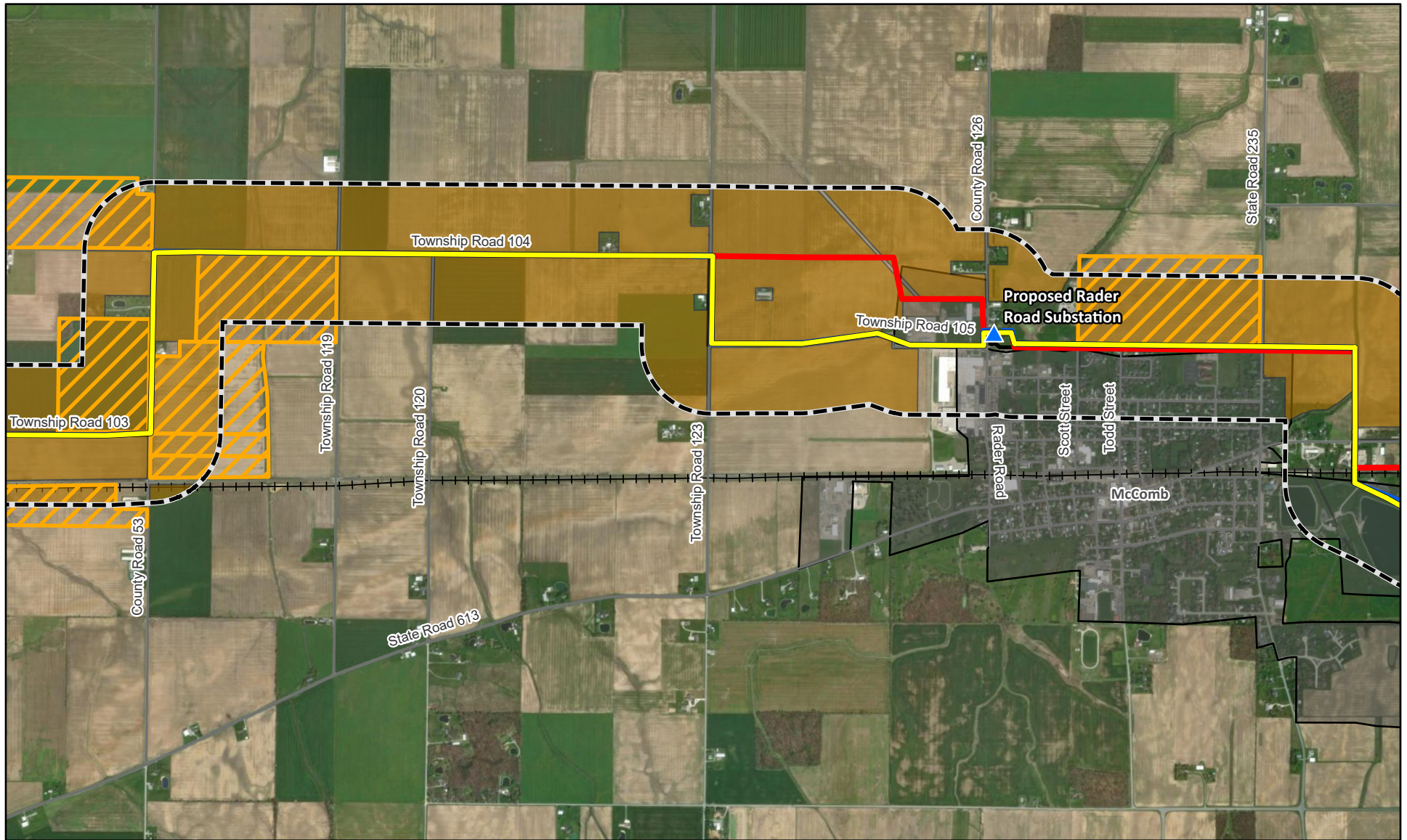


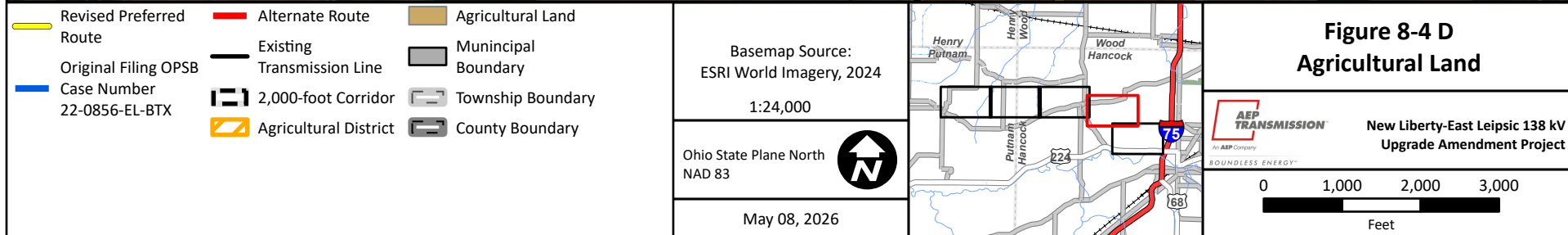
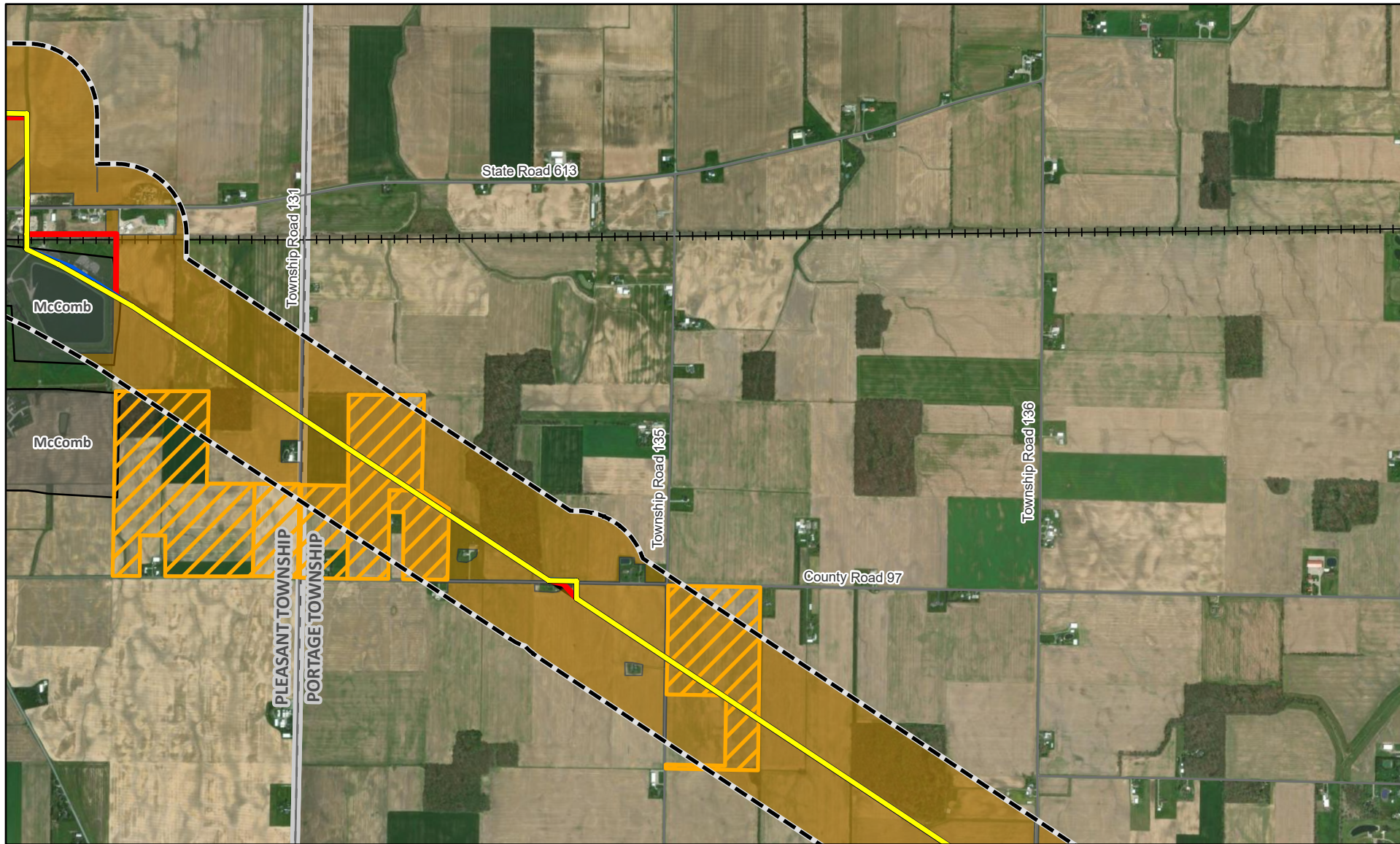


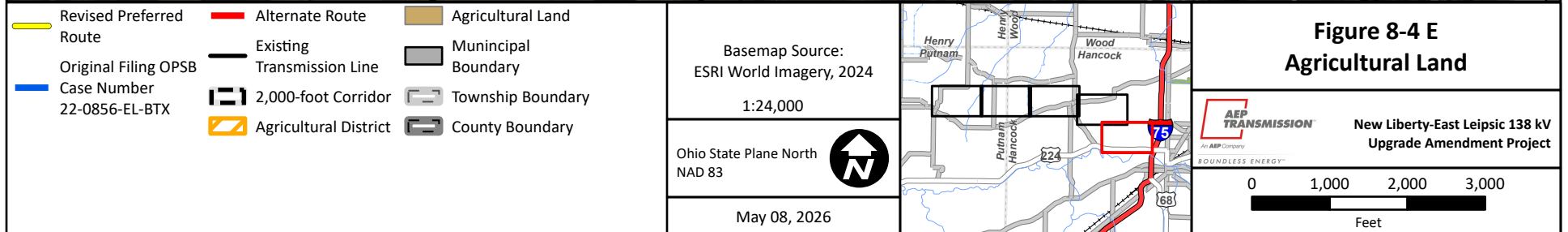
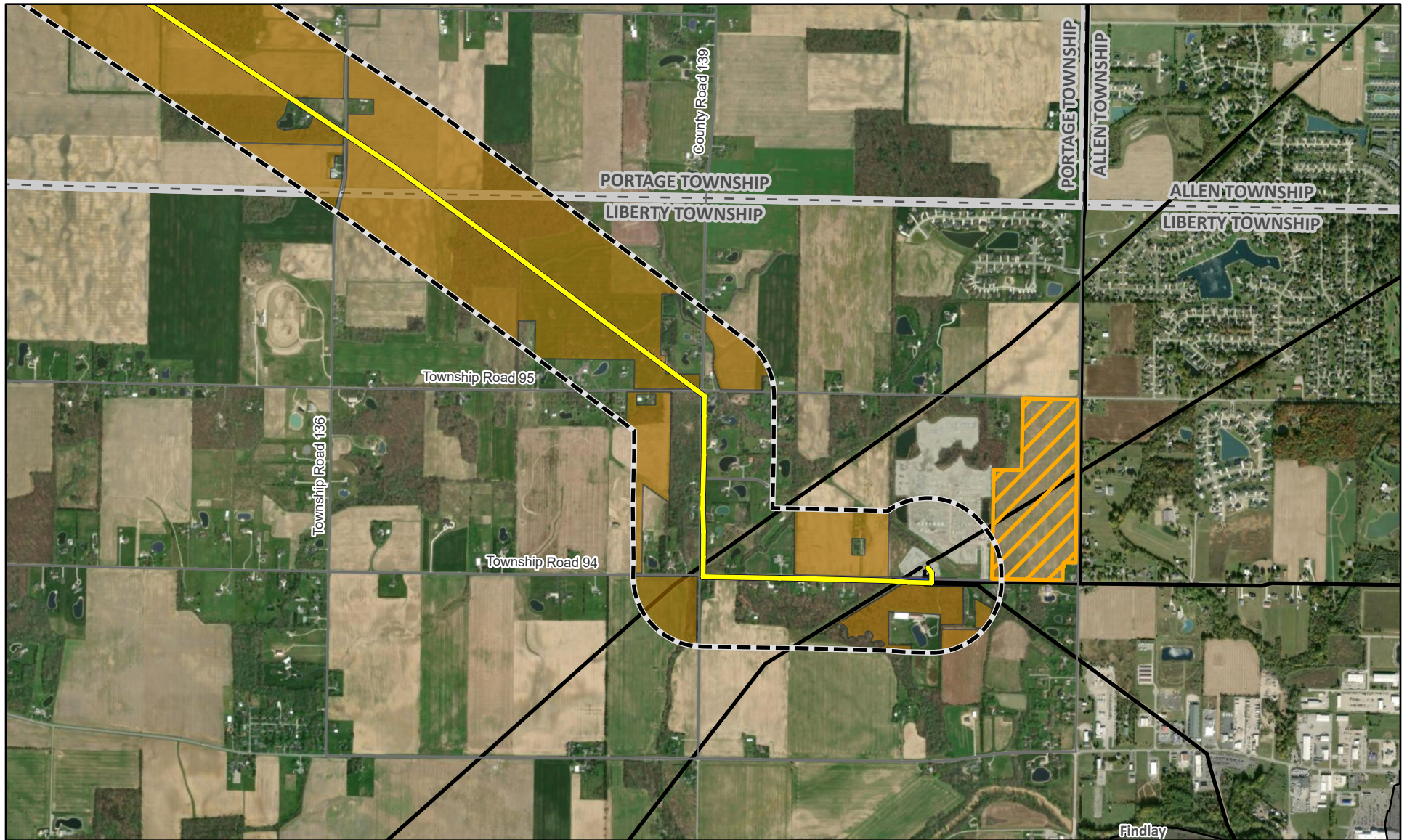












Appendix 8-2
Wetland and Waterbody Delineation Report

Addendum Ecological Survey Report

New Liberty-East Leipsic 138 kV Transmission Line Project Putnam and Hancock Counties, Ohio

Prepared for



January 2025

Jacobs

2 Crowne Point Court
Suite 100
Cincinnati, OH 45241

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1 Introduction

This addendum report summarizes the results of a supplemental ecological survey conducted in November 2024 in Putnam and Hancock Counties, Ohio by Jacobs Engineering Group Inc. (Jacobs) for the American Electric Power Ohio Transco (AEP) New Liberty-East Leipsic 138 kV Transmission Line Project (Project). AEP is proposing to convert approximately 18 miles of 69 kV transmission line to 138 kV transmission line (Figure 1).

This report is an addendum to the previously submitted *Ecological Survey Report - East Leipsic-New Liberty 138 kV Transmission Line Project – December 2022* (referred to as the December 2022 Report). Since the completion of the December 2022 Report, the Project has expanded to include alignment shifts and construction areas/access roads located outside of the previously surveyed areas. This Addendum Report includes the supplemental delineation which assessed an environmental survey boundary (Addendum ESB) consisting of access roads, pull pads/work pads, a line raise near East Leipsic station and adjusted alignment areas located outside of the previously surveyed corridors. Previously identified features, data forms, photographs, and supporting information of the former surveys of the Project are contained within the December 2022 Report and are not discussed in this addendum report. The results of the supplemental delineation are discussed herein.

2 Background Information

The Addendum ESB is located between New Liberty Station on Township Road 94 (41.0663, -83.6963) and extends westward to the East Leipsic Station off Township Road E (41.1115, -83.9645). It crosses the Village of Leipsic and Van Buren Township in Putnam County and the Village of McComb and townships of Liberty, Portage, and Pleasant in Hancock County, Ohio (Figure 1).

The U.S. Geological Survey (USGS) 7.5-minute topographic maps of the area (Leipsic, McComb, and Findlay, OH) indicate that the prominent drainage features in the Project area include Little Yellow Creek, Yellow Creek, West Creek, Needles Creek, Rader Creek, and unnamed tributaries of Blanchard River (USGS 2022). Topographic relief is limited to relatively gradual elevation changes and generally increases in elevation moving southeast, with elevations ranging between 734 feet and 811 feet above sea level throughout the Addendum ESB (Figure 1).

Land use and natural habitats observed within the Addendum ESB include agriculture, commercial lawn, forested, gravel areas, hayfield, herbaceous maintained ROW road, residential, forested, commercial lawn, park, old field gravel lot, scrub/shrub, gravel station pad, and herbaceous maintained ROW.

2.1 Precipitation

Precipitation history from the Findlay Water Pollution Control Center weather station (the nearest weather station with both historical and recent precipitation records) was reviewed before completing the supplemental environmental surveys to determine if climatic conditions were normal during surveys. Monthly precipitation ranged from below normal to above normal in the months leading up to the survey in November 2024 (Table 2.1; USDA 2024). This precipitation history was taken into consideration during the survey.

Table 2.1 Precipitation Data in Findlay, OH

New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)

	August 2024	September 2024	October 2024	November 2024	Totals
Recent Monthly Sum (inches) ¹	2.24	1.78	0.12	2.11	6.25
Historic Normal Range (inches) ¹	2.59-4.76	1.78-3.45	1.61-3.06	1.66-3.17	7.64-14.44
Climatic Condition	below average	average	below average	average	below average

¹USDA 2024

2.2 Drainage Basins

The Addendum ESB is within the Lower Maumee, Cedar-Portage, and Blanchard drainage basins (8-digit Hydrologic Unit Codes [HUCs] 04100009, 04100010, and 04100008, respectively). More specifically it crosses five 12-digit HUC sub-watersheds outlined in Table 2.2.

Table 2.2 Drainage Basins Crossed by the Project

New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)

12-Digit HUC Name	12-Digit HUC
Upper Yellow Creek	04100009-05-04
Lower Yellow Creek	04100009-05-06

Table 2.2 Drainage Basins Crossed by the Project

New Liberty-East Leipsic 138 kV Transmission Line Project
(Addendum)

12-Digit HUC Name	12-Digit HUC
Needles Creek	04100010-01-02
Rader Creek	04100010-01-01
Rocky Ford	04100010-01-03
Howard Run-Blanchard River	04100008-03-04

Source: USGS 2022

3 Wetland and Waterbody Delineation

3.1 Desktop Review

Prior to conducting the field investigations, Jacobs reviewed the following resources to identify the potential for wetlands within the Addendum ESB:

- Aerial photo-based map (Esri 2024)
- USGS Topographic maps (USGS 2022)
- Web Soil Survey (NRCS 2022)
- NHD map (USGS 2022)
- NWI map (USFWS 2022)

Soils were observed and documented as part of the delineation methodology. No new soil map units were identified during the Addendum ESB in November 2024. A list of soil map units identified within the Ecological Survey Corridor is provided in the December 2022 Report. Soil map units identified within the Addendum ESB are provided in Figure 2.

NWI data were obtained from the U.S. Fish and Wildlife Service (USFWS) for review of potential wetlands that may occur within the Addendum ESB. The NWI data (USFWS 2022) identify the type of wetland or open water present at a location using the USFWS classification system (FGDC 2013). The presence of an NWI feature is not a definitive indicator that a wetland or waterbody is present. The information on NWI maps is obtained largely from aerial interpretation, may be outdated, and is only sporadically field-checked. Additional detail regarding the mapped NWI wetlands within the Addendum ESB is provided in Table 4.1.2.

The Addendum ESB crosses the FEMA 100-year floodplain of Yellow Creek (FEMA 2018), as displayed in Figure 2.

3.2 Field Survey Methodology

Jacobs' biologists surveyed the Addendum ESB on November 19, 2024, by walking the area and evaluating for wetlands and other waterbodies. A comprehensive methodology of the field surveys and data reviews completed for this Addendum Report are included within the December 2022 Report.

3.2.1 Jurisdictional Determination

Jacobs defers to the USACE and OEPA for the final determination of hydrologic connectivity and jurisdiction. In May 2023, the SCOTUS decision in *Sackett v. EPA* effectively reduced the scope of which waters (rivers, streams, lakes) and wetlands are protected under the CWA. To conform to key aspects of the *Sackett v. EPA* decision, the Agencies subsequently issued a rule that amends the 2023 Rule. The Revised Definition of "Waters of the United States"; Conforming (referred to as the 'Amended 2023 Rule' or 'Conforming Rule') became effective on September 8, 2023, in 23 states. In the remaining 27 states (including Ohio), because the 2023 Rule had been stayed in those states, the Agencies are interpreting the definition of waters of the United States (WOTUS) consistent with the pre-2015 regulatory regime and the *Sackett v. EPA* decision.

4 Field Survey Results

Jacobs' biologists identified one new pond (Pond EN-07) in the Addendum ESB. In addition, five wetlands, 14 streams, and four ponds identified in the original report were extended into the Addendum ESB. These features are displayed on the Delineated Features Map (Figure 3). Jacobs defaults to the USACE and OEPA for the final determination of hydrologic connectivity and jurisdiction.

4.1 Wetlands

No new wetlands were delineated within the Addendum ESB. A summary of previously delineated wetlands which were extended into the Addendum ESB is provided below.

4.1.1 Wetland Extensions

Five wetlands previously delineated within the original survey corridor were extended into the Addendum ESB. A summary of the wetland extensions is shown in Table 4, and detailed information is provided in Table 4.1. All the wetland extensions were observed to have the same Cowardin classification as the original delineated wetland and the wetland extensions did not result in a change to the ORAM score/category. Forms and representative photographs for the delineated wetlands are provided in the December 2022 Report.

Table 4 Wetland Extensions

New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)

Wetland ID	Cowardin	ORAM Score, Category	Addendum ESB Area (acres) ^{1,2}	Original Area (acres) ^{1,2}	Updated Total Area (acres) ^{1,2}
Wetland EN-01	PFO	38, Category 2	0.07	1.14	1.21
Wetland EN-02F	PFO	34.5, Category 2	0.02	0.84	0.86
Wetland EN-07	PEM	17.5, Category 1	0.01	0.54	0.55
Wetland EN-10	PSS	25, Category 1	<0.01	0.27	0.27
Wetland EN-14F	PFO	41.5, Category 2	0.01	0.88	0.89
Total: 5			0.11	3.67	3.78

¹This acreage only corresponds to the area delineated within the environmental survey boundary.

²Numbers in this table have been rounded for presentation purposes. Thus, the totals may not reflect the exact sum of the addends in all cases.

Table 4.1 Delineated Wetlands*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Wetland ID	Location		Isolated ?	Habitat Type ¹	Delineated Area (ac) ^{2,3}	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Install Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (ac)	Permanent Impact Area (ac)
Wetland EN-01	41.10878	-83.95209	No	PFO	0.07	38	2	str. 12 / str. 9	N/A	TBD	TBD	TBD	TBD
Wetland EN-02F	41.10890	-83.89859	No	PFO	0.02	34.5	2	str. 127 and str. 128 / 36	N/A	TBD	TBD	TBD	TBD
Wetland EN-07	41.09722	-83.75682	No	PEM	0.01	17.5	1	str. 95 / str. 25-26	N/A	TBD	TBD	TBD	TBD
Wetland EN-10	41.08426	-83.73018	No	PSS	<0.01	25	1	str. 56 / str. 40	N/A	TBD	TBD	TBD	TBD
Wetland EN-14F	41.07846	-83.71887	No	PFO	0.01	41.5	2	str.40-43 / str. 45-46	N/A	TBD	TBD	TBD	TBD
Total Wetland Acreage:					0.11	Proposed Impacts Totals:					TBD	TBD	

¹FGDC 2013.²Acreage within the Addendum ESB.³Numbers in this table have been rounded for presentation purposes. Thus, the totals may not reflect the exact sum of the addends in all cases.

4.1.2 NWI Field Verification

The NWI data indicated that there are 18 mapped features within the Addendum ESB: two freshwater forested wetlands, three freshwater ponds, one lake, and 12 riverine systems (Figure 2; USFWS 2022). Wetlands and/or waterbodies were confirmed at 17 of these sites, and the remaining mapped NWI feature were in uplands documented with photographs in the December 2022 Report (Table 4.1.2).

Table 4.1.2 Mapped National Wetland Inventory Features

New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)

Wetland Classification Code ¹	NWI Description	Figure #	Related Field Inventoried Resource	Comments
R2UBH	Riverine lower perennial unconsolidated bottom, permanently flooded	2.1	Stream EN-02	
PFO1C	Palustrine forested, broad-leaved deciduous, seasonally flooded	2.1	Wetland EN-01	
R2UBH	Riverine lower perennial unconsolidated bottom, permanently flooded	2.3	Stream EN-05	
PUBGx	Palustrine unconsolidated bottom, intermittently exposed, excavated	2.3	Pond EN-02	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.3	Stream EN-07	
R5UBFx	Riverine unknown perennial unconsolidated bottom, semipermanently flooded, excavated	2.4	Stream EN-10	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.6	Stream EN-12	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.7	Stream EN-13	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.7	Stream EN-14	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.8	Stream EN-16	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.9	Stream EN-17	
L1UBHx	Lacustrine limnetic unconsolidated bottom, permanently flooded, excavated	2.9	Pond EN-03	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.10	None	Upland drainage feature present with poorly defined bed/bank, upland vegetation, and no OHWM.
PUBGx	Palustrine unconsolidated bottom, intermittently exposed, excavated	2.12	Pond EN-05	
PFO1C	Palustrine forested, broad-leaved deciduous, seasonally flooded	2.12	Wetland EN-14	
PUBGx	Palustrine unconsolidated bottom, intermittently exposed, excavated	2.13	Pond EN-06	
R4SBC	Riverine intermittent streambed, seasonally flooded	2.13	Stream EN-19	

Table 4.1.2 Mapped National Wetland Inventory Features*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Wetland Classification Code ¹	NWI Description	Figure #	Related Field Inventoried Resource	Comments
R5UBH	Riverine unknown perennial unconsolidated bottom, permanently flooded	2.14	Stream EN-20	

¹FGDC 2013.

4.2 Streams

No new streams were delineated within the Addendum ESB. A summary of previously delineated streams which were extended into the Addendum ESB is provided below.

4.2.1 Stream Extensions

Fourteen streams previously delineated within the original survey corridor were extended into the Addendum ESB. A summary of the stream extensions is provided in Table 4.2.1 and a detailed summary is provided in Table 4.2.2. The sections of stream which extended into the Addendum ESB exhibited similar channel conditions and flow regime as the previously surveyed sections identified in the December 2022 Report; therefore, additional data forms were not completed for these stream extensions. Forms and representative photographs of these streams are provided in the December 2022 Report. Figure 3 within this addendum report provides the location of the streams identified within the Addendum ESB.

Table 4.2.1 Stream Extensions*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Stream ID	Flow Regime	Category/Rating/OAC Designation	Addendum ESB Length (feet) ^{1,2}	Original Length (acres) ^{1,2}	Updated Total Length (feet) ^{1,2}
Stream EN-02	Perennial	LRW	122	338	460
Stream EN-05	Perennial	WWH	15	357	372
Stream EN-07	Intermittent	Modified Class II	3	2896	2899
Stream EN-08	Intermittent	Modified Class II	3	172	175
Stream EN-09	Intermittent	Modified Class II	3	2802	2805
Stream EN-10	Intermittent	Modified Class II	2	325	327
Stream EN-12	Intermittent	Poor Warmwater	12	300	312
Stream EN-13	Intermittent	Poor Warmwater	8	301	309
Stream EN-14	Perennial	WWH	7	300	307
Stream EN-16	Perennial	Fair Warmwater	159	466	625
Stream EN-17	Perennial	WWH	54	932	986
Stream EN-19	Intermittent	Good Warmwater	16	577	593
Stream EN-20	Perennial	Poor Warmwater	7	311	318

Table 4.2.1 Stream Extensions*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Stream ID	Flow Regime	Category/Rating/OAC Designation	Addendum ESB Length (feet) ^{1,2}	Original Length (acres) ^{1,2}	Updated Total Length (feet) ^{1,2}
Stream EN-22	Ephemeral	Modified Class I	16	117	133
Total: 14			427	10,194	10,621

¹This length only corresponds to the area delineated within the environmental survey boundary.

²Numbers in this table have been rounded for presentation purposes. Thus, the totals may not reflect the exact sum of the addends in all cases.

OAC = Ohio Administrative Code

Table 4.2.2 Delineated Streams*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Stream ID	Location		Stream Type ¹	Stream Name	Delineated Length (ft) ^{2,3}	Bankfull Width (ft)	OHWM Width (ft)	Method	Field Evaluation		Ohio EPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude							Score	Category / Rating / OAC Designation			Fill Type	Area (acre)
Stream EN-02	41.11017	-83.9643	Perennial	Little Yellow Creek	122	12	8	OAC	-	LRW	Eligible	No	TBD	TBD
Stream EN-05	41.10912	-83.92775	Perennial	Yellow Creek	15	30	20	OAC	-	WWH	Eligible	No	TBD	TBD
Stream EN-07	41.10895	-83.90956	Intermittent	UNT Yellow Creek	3	9	6	HHEI	58	Modified Class II	Eligible	No	TBD	TBD
Stream EN-08	41.10889	-83.90007	Intermittent	UNT Yellow Creek	3	8	6	HHEI	59	Modified Class II	Eligible	No	TBD	TBD
Stream EN-09	41.10896	-83.89054	Intermittent	UNT Yellow Creek	3	14	10	HHEI	58	Modified Class II	Eligible	No	TBD	TBD
Stream EN-10	41.10873	-83.88094	Intermittent	UNT Yellow Creek	2	9	5	HHEI	55	Modified Class II	Eligible	No	TBD	TBD
Stream EN-12	41.10886	-83.8518	Intermittent	UNT Needles Creek	12	10	4	QHEI	32.5	Poor	Eligible	No	TBD	TBD
Stream EN-13	41.11619	-83.8364	Intermittent	UNT Needles Creek	8	8	5	QHEI	33	Poor	Eligible	No	TBD	TBD
Stream EN-14	41.11621	-83.8324	Perennial	Needles Creek	7	7	4.5	OAC	-	WWH	Eligible	No	TBD	TBD
Stream EN-16	41.11402	-83.7976	Perennial	UNT Rader Creek	159	15	10	QHEI	54	Fair	Eligible	No	TBD	TBD
Stream EN-17	41.11381	-83.77953	Perennial	Rader Creek	54	50	10	OAC	-	WWH	Eligible	No	TBD	TBD
Stream EN-19	41.0721	-83.7074	Intermittent	UNT to Blanchard River	16	25	10	QHEI	56	Good	Eligible	No	TBD	TBD
Stream EN-20	41.06545	-83.70571	Perennial	UNT to Blanchard River	7	12	10	QHEI	41	Poor	Eligible	No	TBD	TBD
Stream EN-22	41.06541	-83.6979	Ephemeral	UNT to Blanchard River	16	2	1.5	HHEI	22	Modified Class I	Eligible	No	TBD	TBD
Total Stream Length:					427	Total Proposed Impacts Area:								TBD

¹Flow regime is defined as perennial, intermittent, or ephemeral and is determined using field observations and USGS topographic maps.²Stream length within the Addendum ESB.³Numbers in this table have been rounded for presentation purposes. Thus, the totals may not reflect the exact sum of the addends in all cases.

4.3 Ponds/Open Water

One portion of one new pond was identified (Pond EN-07), with approximately <0.01-acre within the Addendum ESB (Table 4.3). The Jacobs' pond/open water evaluation form is provided in Appendix B and representative photographs are appended to the form.

Table 4.3 Delineated Ponds

*New Liberty-East Leipsic 138 kV Transmission Line Project
(Addendum)*

Pond Name	Location		Delineated Area (ac) ¹
	Latitude	Longitude	
Pond EN-07	41.11385	-83.7964	<0.01
Total Pond Acreage:			<0.01

¹Acreage within the Addendum ESB.

4.3.1 Pond Extensions

Four ponds delineated within the original survey corridor were extended into the Addendum ESB (Table 4.3.1). Forms and representative photographs are provided in the December 2022 Report.

Table 4.3.1 Pond Extensions

*New Liberty-East Leipsic 138 kV Transmission Line Project
(Addendum)*

Pond Name	Location		Addendum ESB Area (ac) ^{1,2}	Original Area (ac) ^{1,2}	Updated Total Area (ac) ^{1,2}
	Latitude	Longitude			
Pond EN-01	41.10897	-83.9228	0.31	0.07	0.38
Pond EN-02	41.1069	-83.7771	<0.01	0.02	0.02
Pond EN-03	41.10895	-83.9087	1.02	0.4	1.42
Pond EN-06	41.07256	-83.7074	0.01	0.26	0.27
Total Pond Acreage:			1.34	0.75	2.09

¹Acreage within the Addendum ESB.

²Numbers in this table have been rounded for presentation purposes. Thus, the totals may not reflect the exact sum of the addends in all cases.

4.4 Land Use/Habitat

In addition to the delineated wetland and waterbody features, Jacobs observed the following land use types and natural habitats within the Addendum ESB: agriculture, commercial lawn, forested, gravel areas, hayfield, herbaceous maintained ROW, roadways, residential, park, old field, railroad and scrub-shrub (Figure 4). Based on Jacobs' observations, the primary land use in the Addendum ESB is agriculture. All the land use types within the Addendum ESB were previously identified within the December 2022 Report. Land use descriptions and percentages within the Addendum ESB are outlined in Table 4.4.

Table 4.4 Land Use and Natural Habitat*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Land Use and Natural Habitats	Land Use and Habitat Description	Approximate Acreage in Addendum ESB	Approximate Percentage of Addendum ESB
Agriculture	Areas currently used or recently used for farming purposes and may include existing row crop and similar areas.	15.96	68%
Commercial Lawn	Areas where residential and commercial properties are present. This includes associated yards, outbuildings (garages, sheds, etc.), gardens, golf courses, and other maintained landscaped areas associated with the residential and commercial property. These landscaped areas contain frequently mowed grasses and forbs.	1.68	7%
Delineated Pond	Areas of permanent or nearly permanent water, often constructed for water retention or cattle watering purposes, but sometimes naturally formed.	1.35	6%
Delineated Stream	Areas with a defined bed and bank, or evidence of an ordinary high water mark which lacked a dominance of upland vegetation in the channel.	0.17	1%
Delineated Wetland	Areas that satisfy wetland criteria as defined in the USACE Delineation Manual (Environmental Laboratory 1987) and regional supplements.	0.13	1%
Forested	Areas that are dominated by primarily upland forested vegetation, such as maples (<i>Acer</i> spp.), oaks (<i>Quercus</i> spp.), shagbark hickory (<i>Carya ovata</i>), black cherry (<i>Prunus serotina</i>), black walnut (<i>Juglans nigra</i>), and other upland tree species. This community may have some upland vegetation in the shrub or herbaceous strata, but the predominant vegetation is comprised of upland tree species.	0.77	3%
Gravel Lot	Areas that are developed and are dominated by gravel fill.	0.26	1%
Gravel Station Pad	Areas that include an existing substation and the surrounding gravel pad.	0.54	2%
Herbaceous Maintained ROW	Areas that are regularly maintained and dominated by primarily upland herbaceous vegetation, such as smooth brome (<i>Bromus inermis</i>), tall fescue (<i>Schedonorus arundinaceus</i>), Queen Anne's lace (<i>Daucus carota</i>), tall goldenrod (<i>Solidago altissima</i>), common mullein (<i>Verbascum thapsus</i>), and others. This community may have some wetland vegetation and/or upland shrub vegetation present to a lesser extent.	0.15	1%
Old Field	Areas that may have been previously cultivated but are now dominated by perennial grasses and other herbaceous plants.	0.21	1%
Park	Areas that tend to be dominated by maintained lawns where the public can hike, fish, or engage in other outdoor activities.	0.18	1%
Residential	Areas where residential properties are present. This includes yards, outbuildings (garages, sheds, etc.), gardens, and other maintained landscaped areas that contain frequently mowed grasses and forbs.	1.67	7%

Table 4.4 Land Use and Natural Habitat*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Land Use and Natural Habitats	Land Use and Habitat Description	Approximate Acreage in Addendum ESB	Approximate Percentage of Addendum ESB
Roadway	Areas where public or private dirt, gravel, or paved roads are present.	0.22	1%
Scrub/Shrub	Areas that are dominated by primarily upland shrub vegetation, such as sumacs (<i>Rhus</i> spp.), raspberries (<i>Rubus</i> spp.), multiflora rose (<i>Rosa multiflora</i>), apple or crabapples (<i>Malus</i> spp.), hawthorns (<i>Crataegus</i> spp.), saplings of trees identified in upland forested species description, and other upland shrub species. This community may have some upland vegetation in the herbaceous or tree strata, but the predominant vegetation is comprised of upland shrub species.	0.17	1%

5 Protected Species

Correspondence for state and federal listed species were completed as part of the original project and included within the December 2022 Report. Jacobs reviewed the previous correspondences with the USFWS and ODNR to identify the potential presence of listed species and/or their habitat within the Addendum ESB. Based on the review, the Addendum ESB presents potentially suitable habitat for the Indiana bat, northern long-eared bat, little brown bat and tricolored bat, as well as multiple species of fish and mussels associated with perennial streams. This is consistent with the findings in the December 2022 Report, as Jacobs had identified potentially suitable habitat for these species.

Due to the proposed seasonal tree clearing between October 1 and March 31, no impacts to the four listed bat species are anticipated. Due to no in-water work proposed in a perennial stream or pond, no impacts to the listed fish/mussel species and their habitat are anticipated. Table 5 provides additional information regarding the agency responses and potential avoidance recommendations.

Table 5 Protected Species Summary

New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat*	Habitat Observed	Avoidance Dates*	Agency Comment*	Potential Impacts
Indiana bat (<i>Myotis sodalis</i>)	E	E	A wide variety of forested/ wooded habitats	Yes – limited number of wooded areas were identified which appear to be potentially suitable habitat	April 1 to September 30	USFWS: Avoid removal of trees $\geq 3"$ dbh; if not, seasonal clearing recommended; if not, summer presence/absence survey ODNR: conserve trees with loose, shaggy bark and/or dbh $\geq 20"$; seasonal cutting for other trees; survey if cutting during summer; desktop habitat assessment recommended	Agency guidelines on tree clearing will be followed, therefore no impacts to this species are anticipated.
Northern long-eared bat (<i>Myotis septentrionalis</i>)	E	E	A wide variety of forested/ wooded habitats, plus roosting in human-made structures	Yes – limited number of wooded areas were identified which appear to be potentially suitable habitat	April 1 to September 30	USFWS: Avoid removal of trees $\geq 3"$ dbh; if not, seasonal clearing recommended ODNR: conserve trees with loose, shaggy bark and/or dbh $\geq 20"$; seasonal cutting for other trees; survey if cutting during summer; desktop habitat assessment recommended	Agency guidelines on tree clearing will be followed, therefore no impacts to this species are anticipated.

Table 5 Protected Species Summary*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat*	Habitat Observed	Avoidance Dates*	Agency Comment*	Potential Impacts
Little brown bat (<i>Myotis lucifugus</i>)	E	-	Trees with loose bark and cavities during spring and summer	Yes – limited number of wooded areas were identified which appear to be potentially suitable habitat	April 1 to September 30	USFWS: none ODNR: conserve trees with loose, shaggy bark and/or dbh ≥ 20 "; seasonal cutting for other trees; survey if cutting during summer; desktop habitat assessment recommended	Agency guidelines on tree clearing will be followed, therefore no impacts to this species are anticipated.
Tricolored bat (<i>Perimyotis subflavus</i>)	E	-	Trees with loose bark and cavities during spring and summer	Yes – limited number of wooded areas were identified which appear to be potentially suitable habitat	April 1 to September 30	USFWS: none ODNR: conserve trees with loose, shaggy bark and/or dbh ≥ 20 "; seasonal cutting for other trees; survey if cutting during summer; desktop habitat assessment recommended	Agency guidelines on tree clearing will be followed, therefore no impacts to this species are anticipated.
Clubshell (<i>Pleurobema clava</i>)	E	E	Small to medium rivers and streams; sand and gravel in riffle/runs ¹	Yes – perennial streams may provide potentially suitable habitat	N/A	USFWS: none ODNR: must not have an impact on native mussels; in-water work requires surveys or indication that impacts will not occur	No in-water work is proposed in a perennial stream. No impacts to mussel species and their habitat are anticipated.
Rayed bean (<i>Villosa fabalis</i>)	E	E	Small headwater creeks to larger rivers; gravel and sand; often associated with vegetation ¹	Yes – perennial streams may provide potentially suitable habitat	N/A	USFWS: none ODNR: must not have an impact on native mussels; in-water work requires surveys or indication that impacts will not occur	No in-water work is proposed in a perennial stream. No impacts to mussel species and their habitat are anticipated.
Purple lilliput (<i>Toxolasma lividum</i>)	E	-	All substrates; headwaters of small to medium rivers ¹	Yes – perennial streams may provide potentially suitable habitat	N/A	USFWS: none ODNR: must not have an impact on native mussels; in-water work requires surveys or indication that impacts will not occur	No in-water work is proposed in a perennial stream. No impacts to mussel species and their habitat are anticipated.
Pondhorn (<i>Uniomerus tetralasmus</i>)	T	-	Slow-moving, shallow waters of sloughs, borrow pits,	Yes – perennial streams and ponds may	N/A	USFWS: none ODNR: must not have an impact on native mussels; in-water work	No in-water work is proposed in a perennial stream. No impacts to

Table 5 Protected Species Summary*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat*	Habitat Observed	Avoidance Dates*	Agency Comment*	Potential Impacts
			ponds, ditches, and meandering streams; fine silt or mud ¹	provide potentially suitable habitat		requires surveys or indication that impacts will not occur	mussel species and their habitat are anticipated.
Black sandshell (<i>Ligumia recta</i>)	T	-	Medium to large rivers with strong currents; sand, gravel, or silt ¹	Yes – perennial streams and ponds may provide potentially suitable habitat	N/A	USFWS: none ODNR: must not have an impact on native mussels; in-water work requires surveys or indication that impacts will not occur	No in-water work is proposed in a perennial stream. No impacts to mussel species and their habitat are anticipated.
Western banded killifish (<i>Fundulus diaphanous menona</i>)	E	-	Perennial streams	Yes – perennial streams may provide potentially suitable habitat	March 15 to June 30	USFWS: none ODNR: not likely to impact if no in-water work in perennial streams	No in-water work is proposed in a perennial stream. No impacts to this species or its habitat are anticipated.
Kirtland's snake (<i>Clonophis kirtlandii</i>)	T	-	Wet meadows and other wetlands	No – potentially suitable habitat for this species was not observed	N/A	USFWS: none ODNR: due to location, habitat, and type of work, not likely to impact species	Potentially suitable habitat for this species was not observed. No impacts to this species and its habitat are anticipated.
Black-crowned night-heron (<i>Nycticorax nycticorax</i>)	T	-	Roost in trees near wetlands or large waterbodies; forage in wetlands; nest in small trees, shrubs, or on ground	No – potentially suitable habitat for this species was not observed	May 1 to July 31	USFWS: none ODNR: if habitat is not impacted, project is not likely to impact species	Potentially suitable habitat for this species was not observed within the Addendum ESB. No impacts to this species and its habitat are anticipated.
Least bittern (<i>Ixobrychus exilis</i>)	T	-	Dense emergent wetlands with thick stands of cattails or sedges interspersed with woody vegetation and open water	No – potentially suitable habitat for this species was not observed	May 1 to July 31	USFWS: none ODNR: if habitat is not impacted, project is not likely to impact species	Potentially suitable habitat for this species was not observed within the Addendum ESB. No impacts to this species and its habitat are anticipated.

Table 5 Protected Species Summary*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Common Name (<i>Scientific Name</i>)	State Listed Status	Federal Listed Status	Typical Habitat*	Habitat Observed	Avoidance Dates*	Agency Comment*	Potential Impacts
Northern harrier (<i>Circus hudsonis</i>)	E	-	Breed in large marshes and grasslands; nest in loose colonies on the ground	No – potentially suitable habitat for this species was not observed	April 15 to July 31	USFWS: none ODNR: if habitat is not impacted, project is not likely to impact species	Potentially suitable habitat for this species was not observed within the Addendum ESB. No impacts to this species and its habitat are anticipated.

E = Endangered; T = Threatened

* Source: Appendix I in the December 2022 Report, unless otherwise noted

¹ NatureServe 2024

6 Conclusion

Jacobs conducted an environmental survey of the Addendum ESB of AEP's New Liberty-East Leipsic 138 kV Transmission Line Project in November 2024. Since the completion of the December 2022 Report, the Project has expanded to include alignment shifts and construction areas/access roads located outside of the previously surveyed areas.

A total of one new pond, totaling less than 0.01-acre, was delineated within the Addendum ESB. No new wetlands or streams were delineated within the Addendum ESB. Fourteen previously delineated streams, five previously delineated wetlands, and four previously delineated ponds were extended into the Addendum ESB. Data forms, photographs, and supporting information of the previously delineated features are provided within the December 2022 Report. Final jurisdictional status of the identified waterbodies can only be determined by the USACE. Further coordination is recommended prior to the submittal of any permit or construction activities.

The results of the wetland and waterbody survey described in this report conducted by Jacobs are limited to what was identified within the Addendum ESB, as depicted in Figure 3. The information contained in this ecological survey report is for a study area that may be much larger than the actual Project limits-of-disturbance for construction; therefore, lengths and acreages listed in this report may likely not constitute the actual impacts of the Project at the time of construction. If permits are determined to be necessary, actual impacted lengths and/or acreages will be submitted in subsequent permit applications.

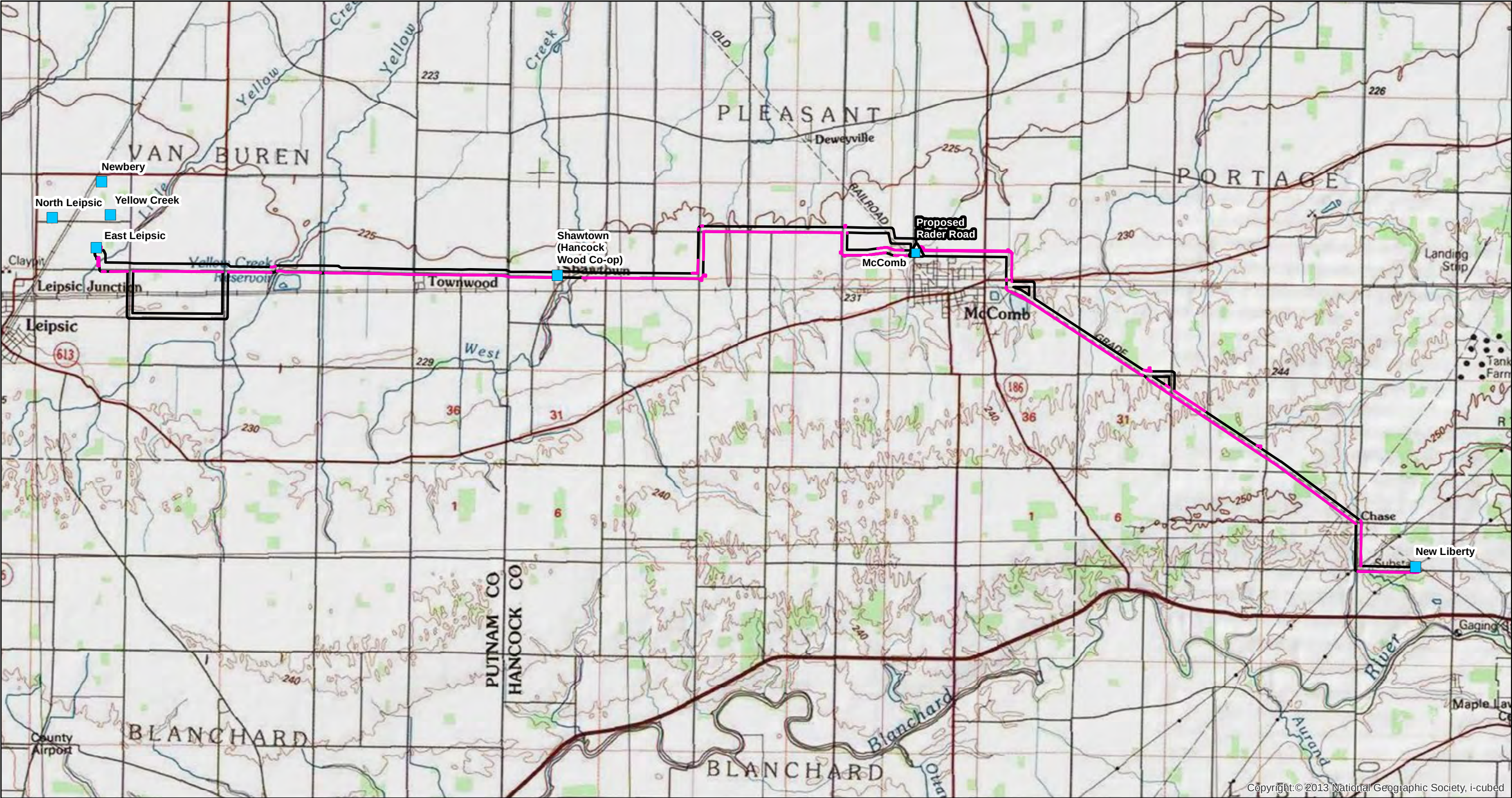
The wetland and waterbodies delineation survey results presented within this report apply to the site conditions at the time of our assessment. Changes within the Addendum ESB that may occur with time due to natural processes or human impacts at the project site or on adjacent properties, could invalidate the findings of this report, especially if Jacobs is unaware and has not had the opportunity to revisit the Addendum ESB. Additionally, changes in applicable standards and regulations may also occur as a result of legislation or the expansion of scientific research over time. Therefore, the findings of this wetland and waterbodies delineation report may be invalidated, wholly or in part, by changes that are beyond the control of Jacobs.

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Appendix A

Figures



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- Legend
- Existing Station
 - Proposed Station
 - Original Environmental Survey Corridor
 - Addendum Environmental Survey Boundary

Data Sources:
AEP, 2022/2024;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

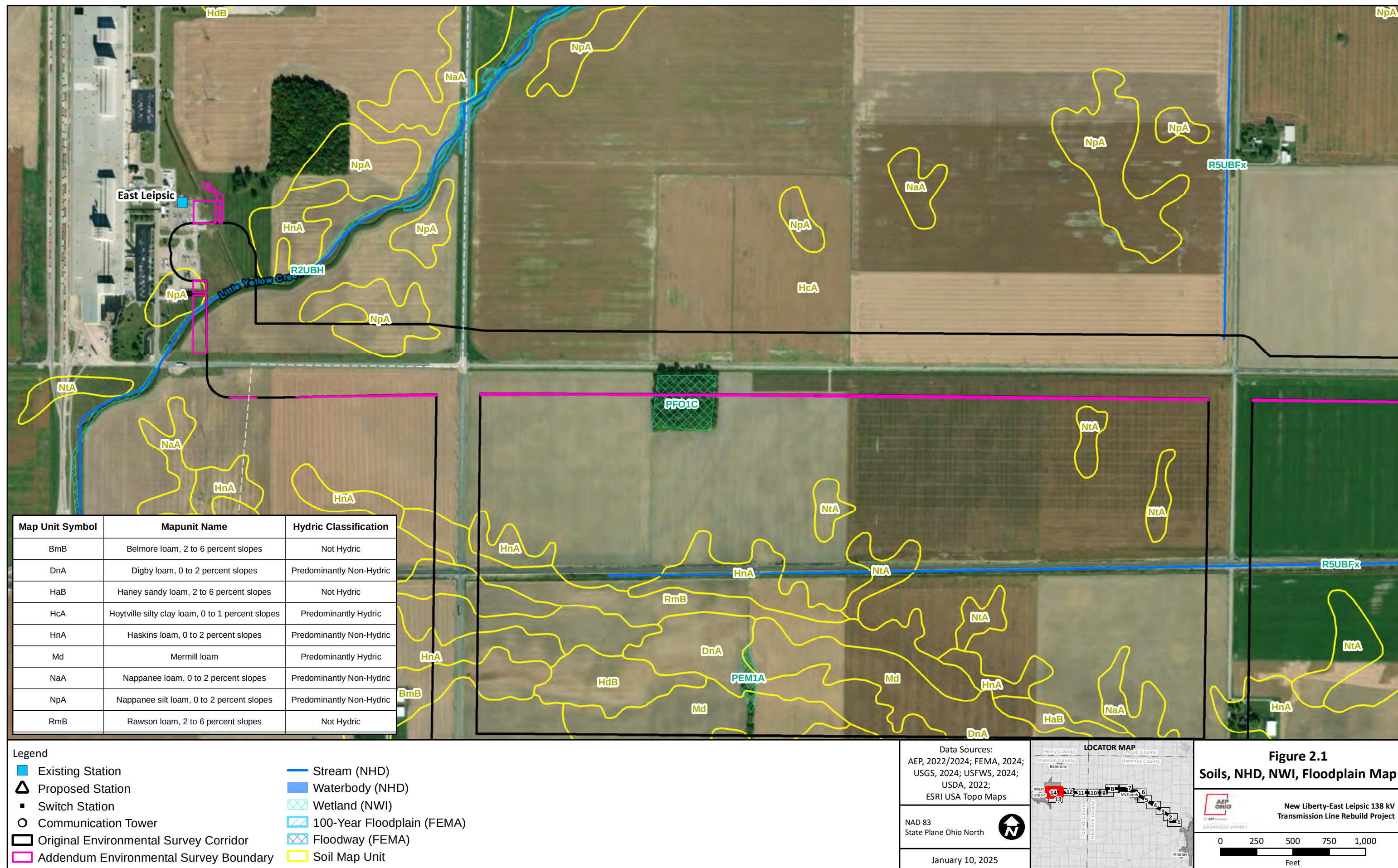
January 10, 2025

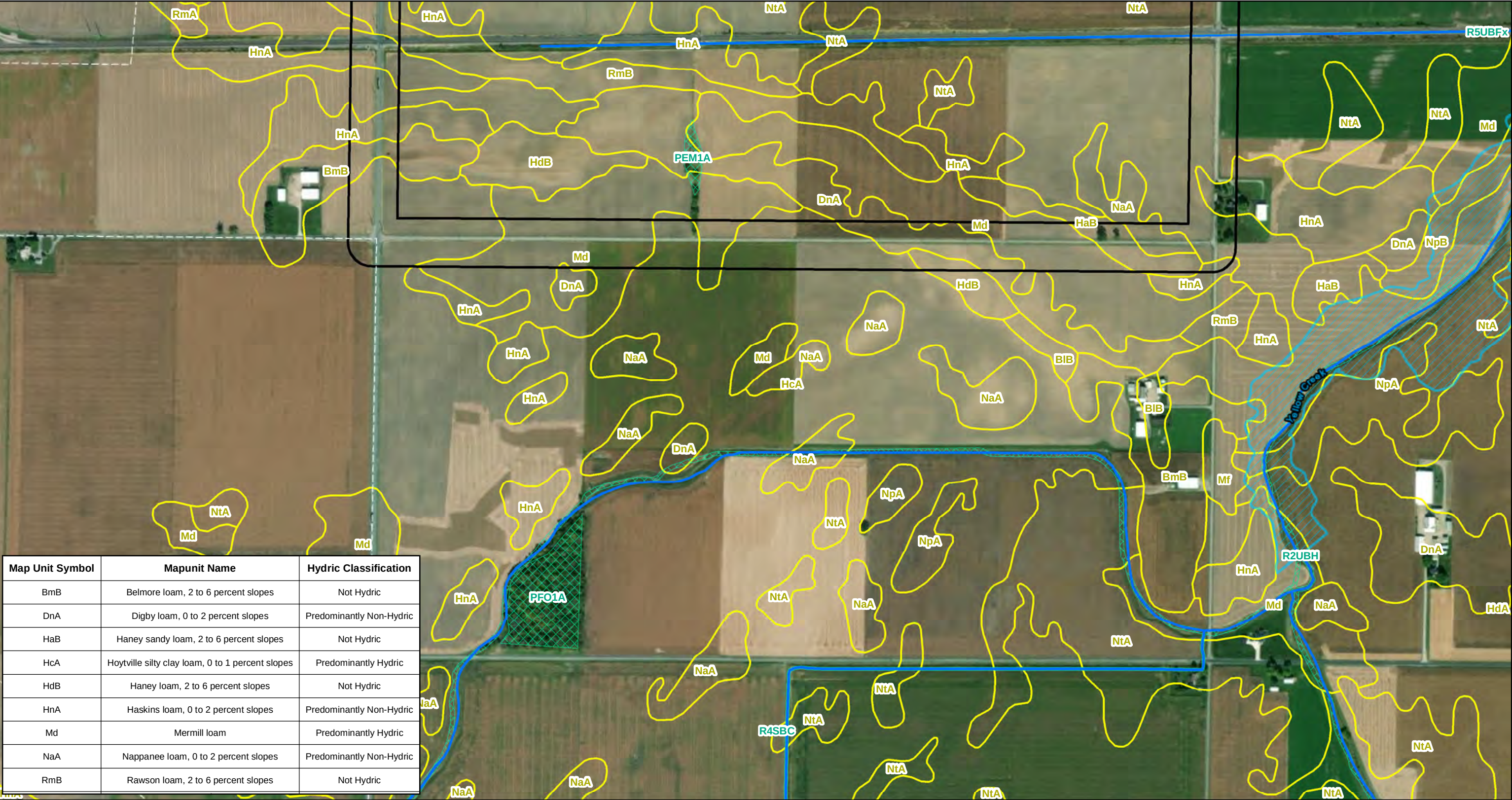


Figure 1
Project Overview

**New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 0.25 0.5 0.75 1
Miles





Map Unit Symbol	Mapunit Name	Hydric Classification
BmB	Belmore loam, 2 to 6 percent slopes	Not Hydric
DnA	Digby loam, 0 to 2 percent slopes	Predominantly Non-Hydric
HaB	Haney sandy loam, 2 to 6 percent slopes	Not Hydric
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
HdB	Haney loam, 2 to 6 percent slopes	Not Hydric
HnA	Haskins loam, 0 to 2 percent slopes	Predominantly Non-Hydric
Md	Mermill loam	Predominantly Hydric
NaA	Nappanee loam, 0 to 2 percent slopes	Predominantly Non-Hydric
RmB	Rawson loam, 2 to 6 percent slopes	Not Hydric

Legend

Existing Station

Proposed Station

Switch Station

Communication Tower

Original Environmental Survey Corridor

Addendum Environmental Survey Boundary

Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

N

January 10, 2025

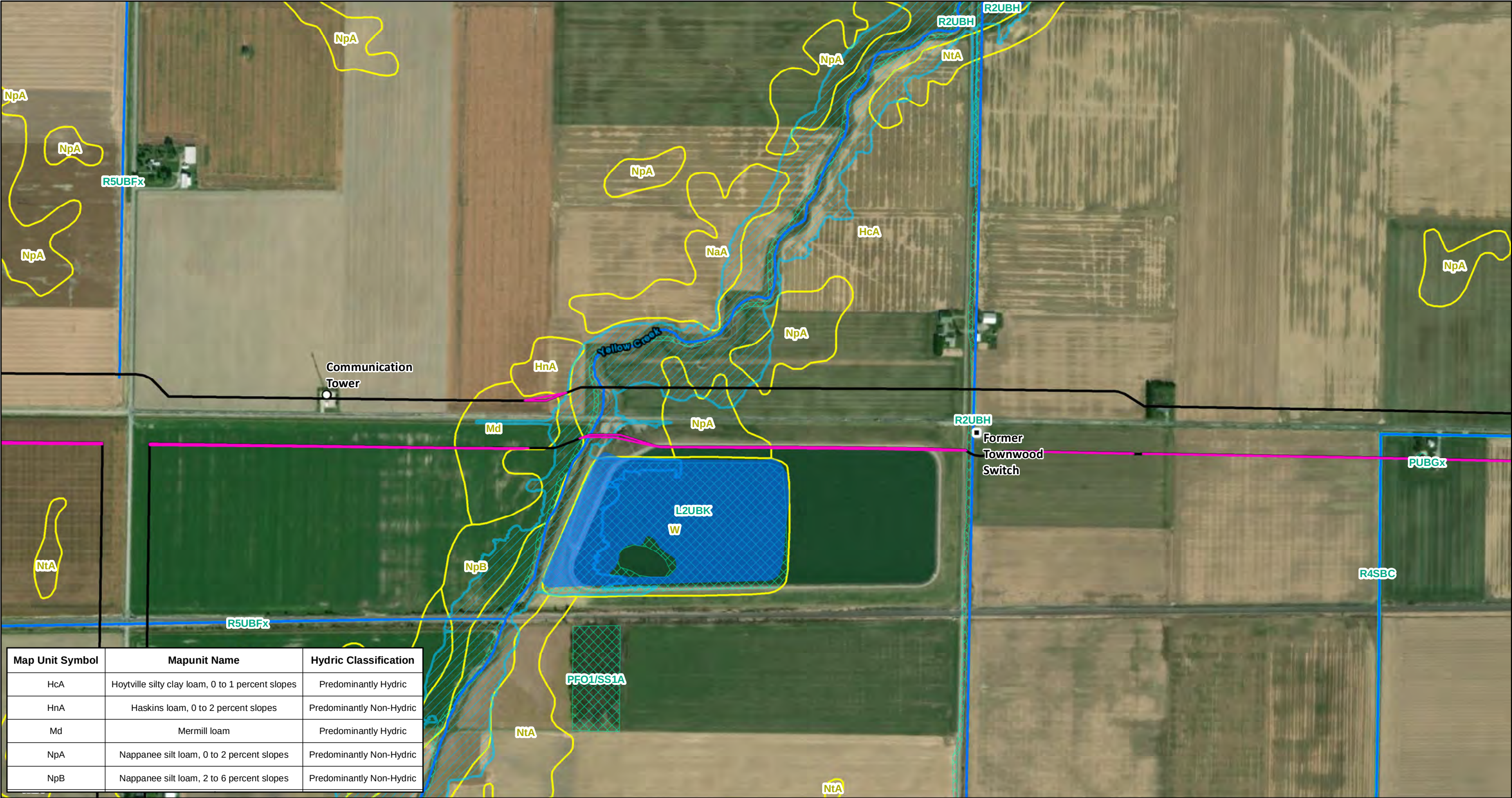
Figure 2.2
Soils, NHD, NWI, Floodplain Map

AEP OHIO

NEW LIBERTY-EAST LEIPSIC 138 KV
TRANSMISSION LINE REBUILD PROJECT

02505007501,000

Feet



Map Unit Symbol	Mapunit Name	Hydric Classification
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
HnA	Haskins loam, 0 to 2 percent slopes	Predominantly Non-Hydric
Md	Mermill loam	Predominantly Hydric
NpA	Nappanee silt loam, 0 to 2 percent slopes	Predominantly Non-Hydric
NpB	Nappanee silt loam, 2 to 6 percent slopes	Predominantly Non-Hydric

Legend

■

 Existing Station

▲

 Proposed Station

■

 Switch Station

○

 Communication Tower

▭

 Original Environmental Survey Corridor

▭

 Addendum Environmental Survey Boundary

—

 Stream (NHD)

▭

 Waterbody (NHD)

▨

 Wetland (NWI)

▨

 100-Year Floodplains (FEMA)

▨

 Floodway (FEMA)

▭

 Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

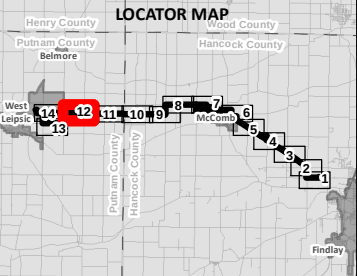


Figure 2.3
Soils, NHD, NWI, Floodplain Map

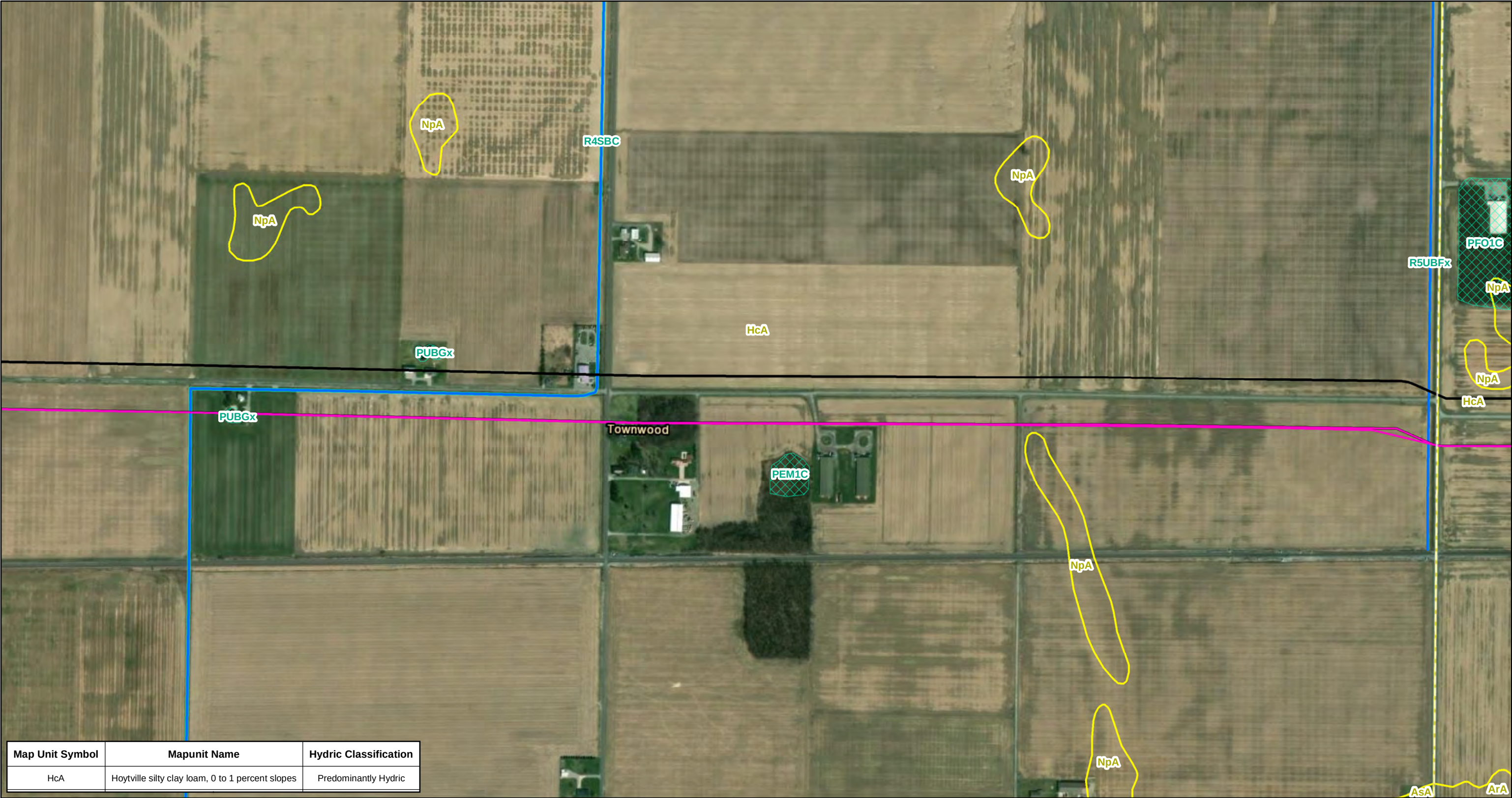
AEP

OHIO

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

02505007501,000

Feet



Map Unit Symbol	Mapunit Name	Hydric Classification
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	Predominantly Hydric

Legend

Existing Station

Proposed Station

Switch Station

Communication Tower

Original Environmental Survey Corridor

Addendum Environmental Survey Boundary

Stream (NHD)Waterbody (NHD)Wetland (NWI)100-Year Floodplain (FEMA)Floodway (FEMA)Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North



January 10, 2025

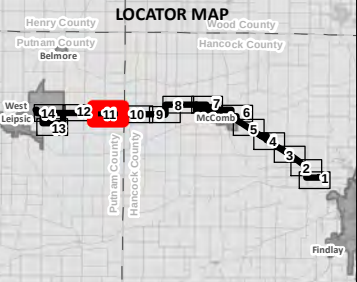
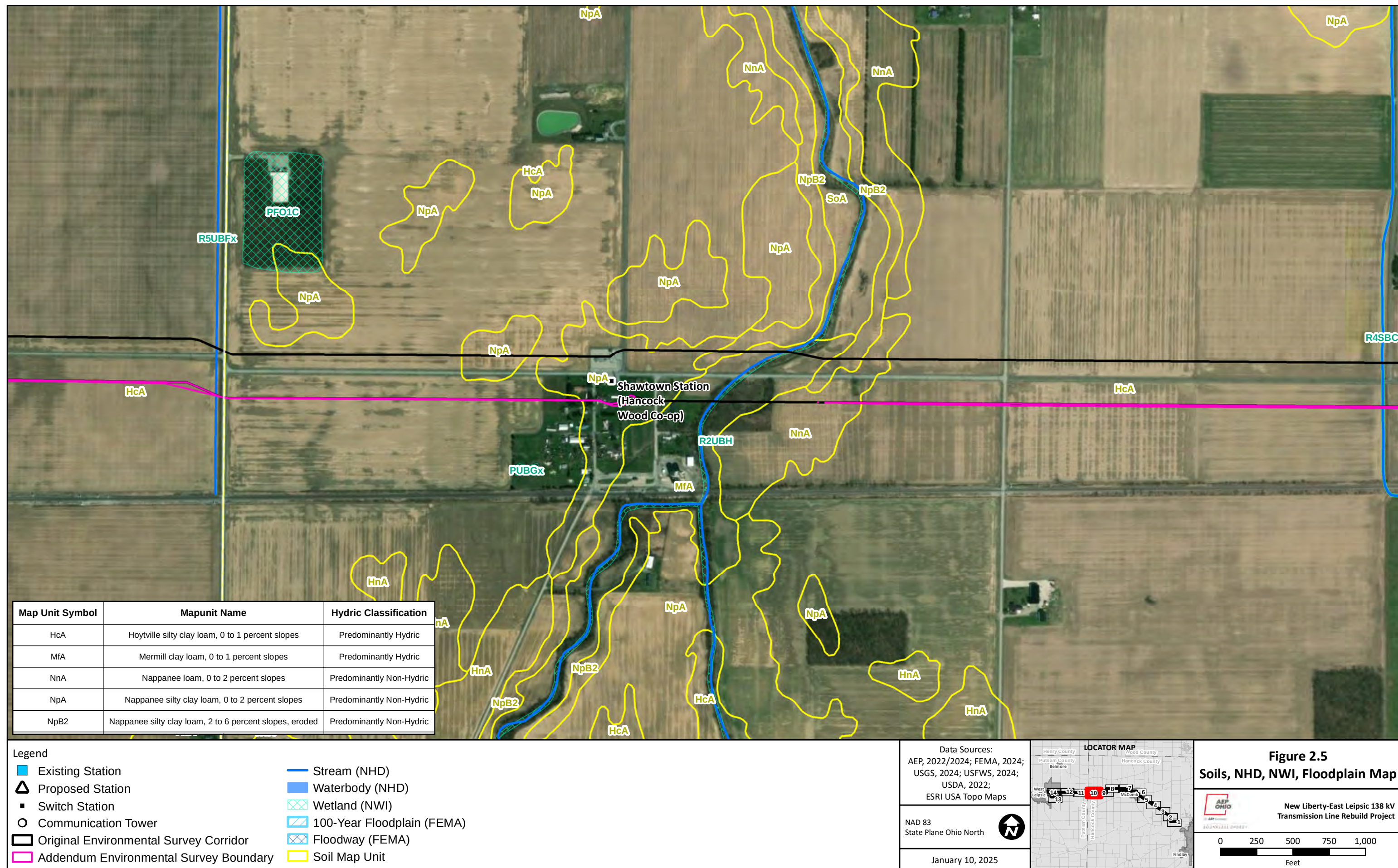


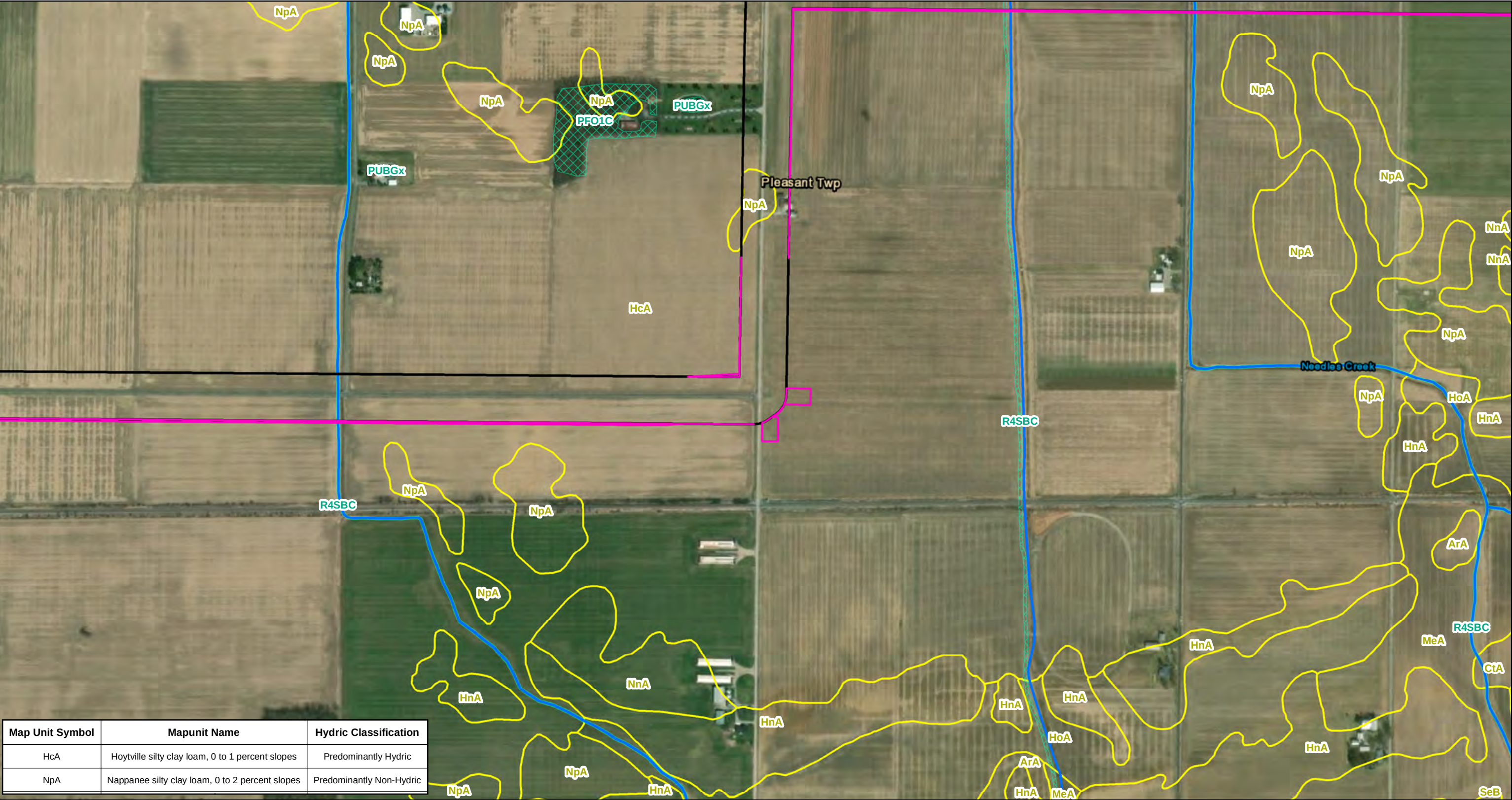
Figure 2.4
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

02505007501,000

Feet





Map Unit Symbol	Mapunit Name	Hydric Classification
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
NpA	Nappanee silty clay loam, 0 to 2 percent slopes	Predominantly Non-Hydric

Legend

Existing Station

Proposed Station

Switch Station

Communication Tower

Original Environmental Survey Corridor

Addendum Environmental Survey Boundary

Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

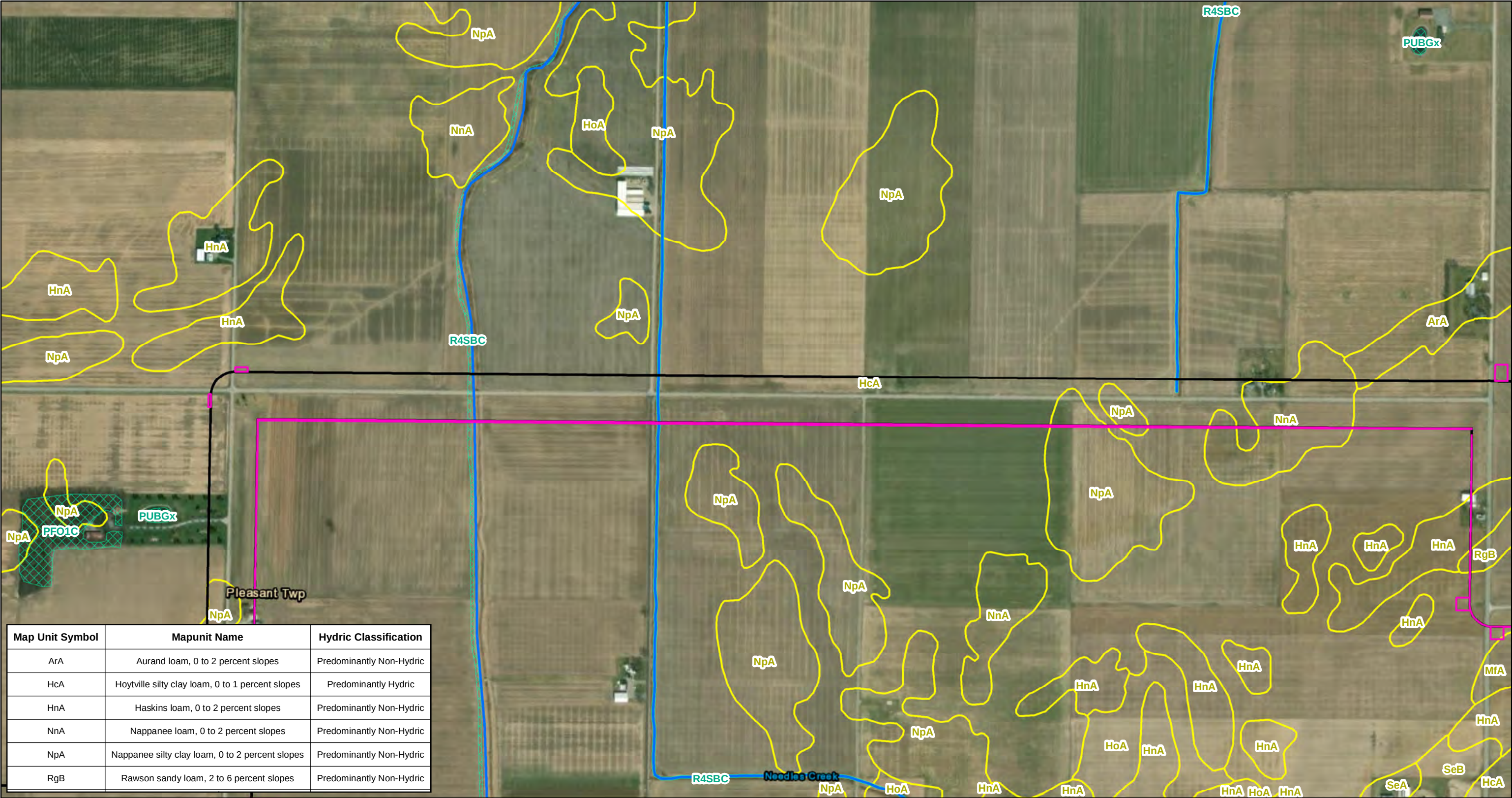
NAD 83
State Plane Ohio North

January 10, 2025

Figure 2.6
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet



Map Unit Symbol	Mapunit Name	Hydric Classification
ArA	Aurand loam, 0 to 2 percent slopes	Predominantly Non-Hydric
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
HnA	Haskins loam, 0 to 2 percent slopes	Predominantly Non-Hydric
NnA	Nappanee loam, 0 to 2 percent slopes	Predominantly Non-Hydric
NpA	Nappanee silty clay loam, 0 to 2 percent slopes	Predominantly Non-Hydric
RgB	Rawson sandy loam, 2 to 6 percent slopes	Predominantly Non-Hydric

Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Original Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary

— Stream (NHD)

— Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▭ Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025



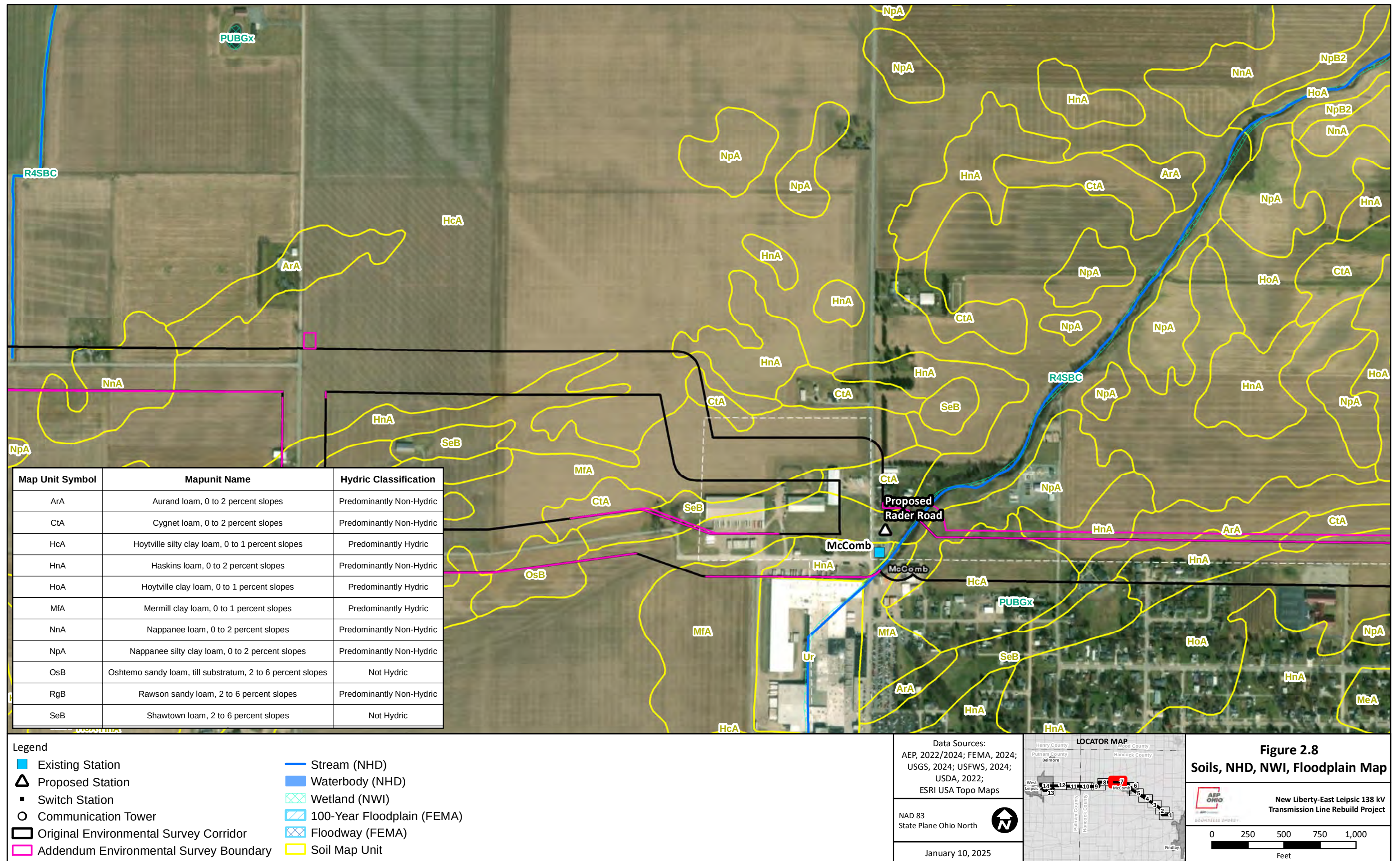
Figure 2.7
Soils, NHD, NWI, Floodplain Map

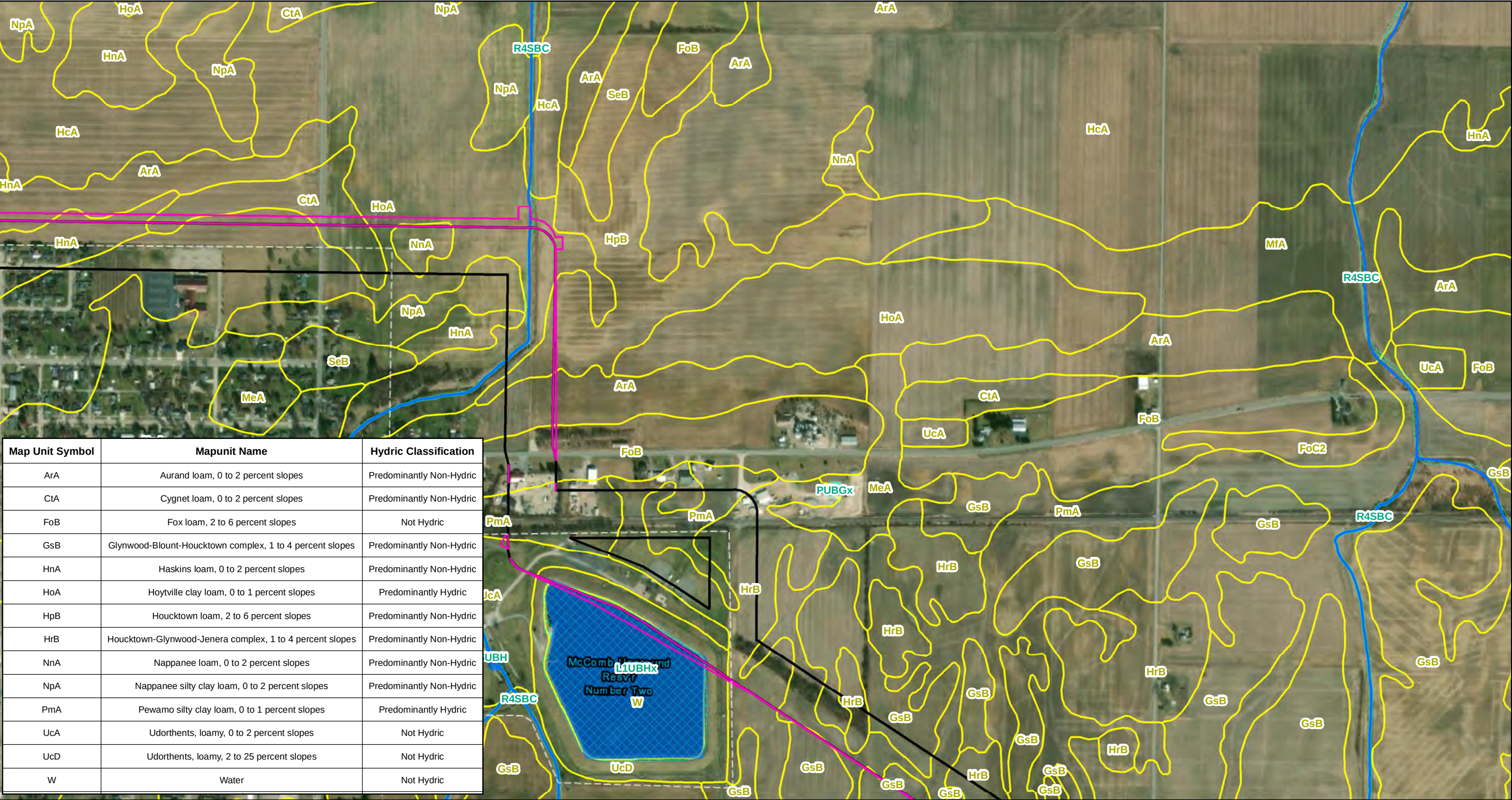
AEP OHIO

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000

Feet





Map Unit Symbol	Mapunit Name	Hydric Classification
ArA	Aurand loam, 0 to 2 percent slopes	Predominantly Non-Hydric
CtA	Cygnets loam, 0 to 2 percent slopes	Predominantly Non-Hydric
FoB	Fox loam, 2 to 6 percent slopes	Not Hydric
GsB	Glynwood-Blount-Houcktown complex, 1 to 4 percent slopes	Predominantly Non-Hydric
HnA	Haskins loam, 0 to 2 percent slopes	Predominantly Non-Hydric
HoA	Hoytville clay loam, 0 to 1 percent slopes	Predominantly Hydric
HpB	Houcktown loam, 2 to 6 percent slopes	Predominantly Non-Hydric
HrB	Houcktown-Glynwood-Jenera complex, 1 to 4 percent slopes	Predominantly Non-Hydric
NnA	Nappanee loam, 0 to 2 percent slopes	Predominantly Non-Hydric
NpA	Nappanee silty clay loam, 0 to 2 percent slopes	Predominantly Non-Hydric
PmA	Pewamo silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
UcA	Udorthents, loamy, 0 to 2 percent slopes	Not Hydric
UcD	Udorthents, loamy, 2 to 25 percent slopes	Not Hydric
W	Water	Not Hydric

Legend

- Existing Station

Proposed Station

Switch Station

Communication Tower

Original Environmental Survey Corridor

Addendum Environmental Survey Boundary
- Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North



January 10, 2025

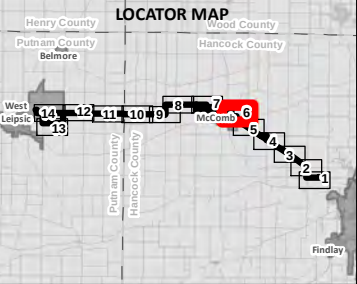
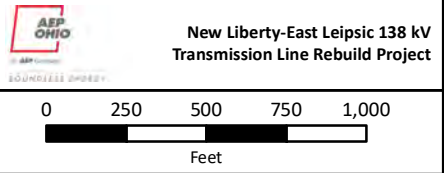
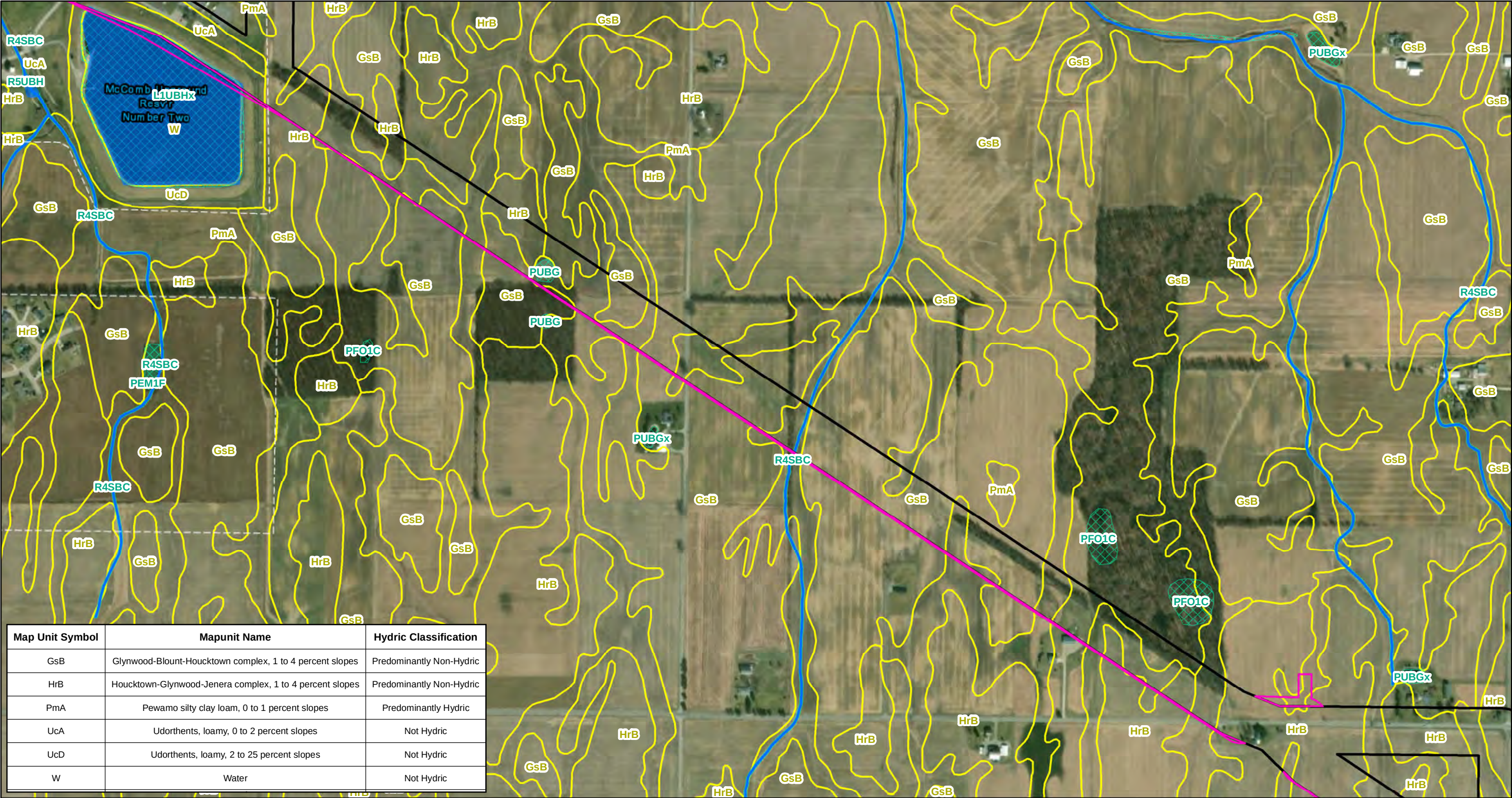


Figure 2.9
Soils, NHD, NWI, Floodplain Map





Legend

Existing Station

Proposed Station

Switch Station

Communication Tower

Original Environmental Survey Corridor

Addendum Environmental Survey Boundary

Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

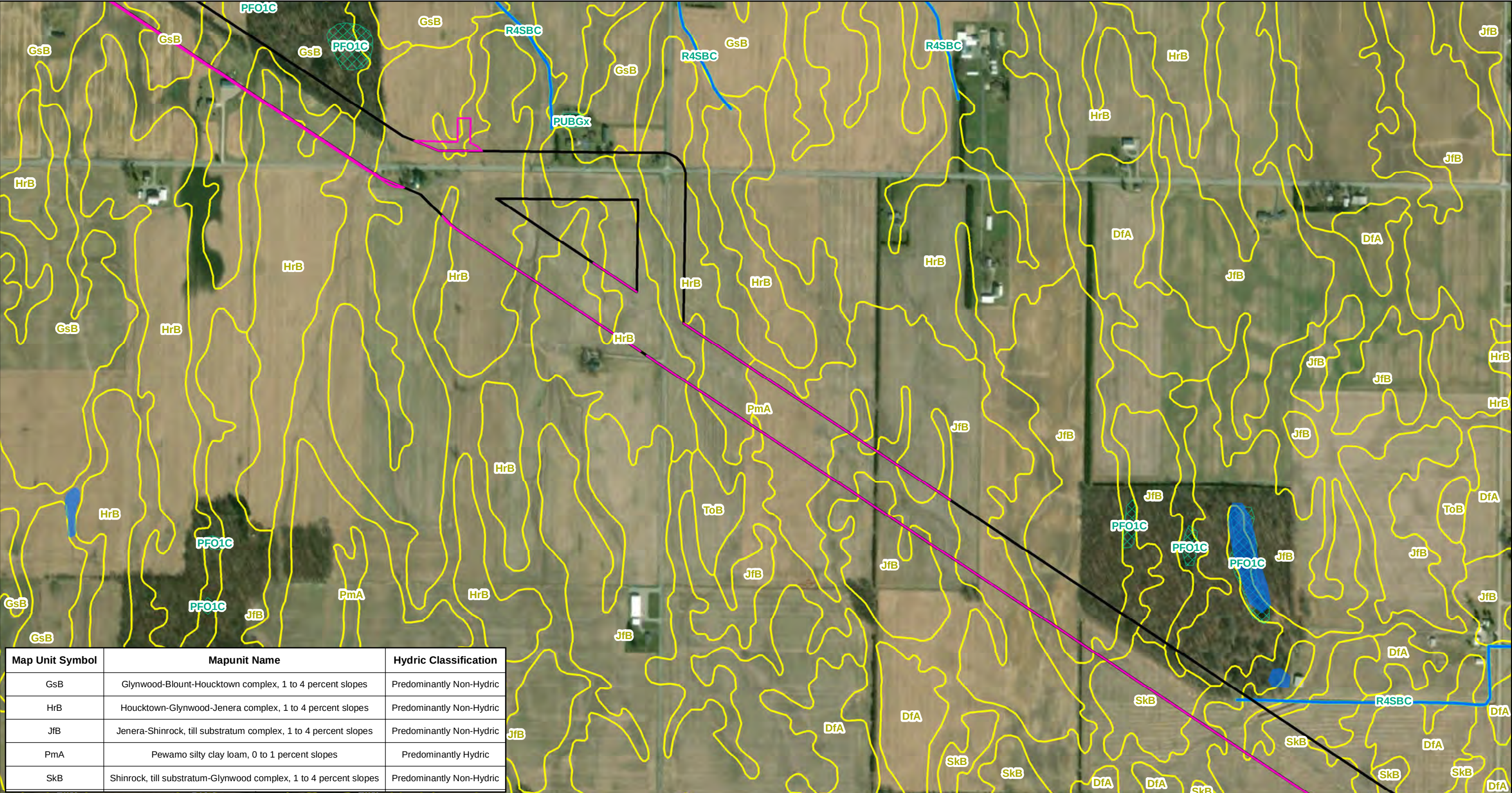
January 10, 2025

LOCATOR MAP

Figure 2.10
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet



Map Unit Symbol	Mapunit Name	Hydric Classification
GsB	Glynwood-Blount-Houcktown complex, 1 to 4 percent slopes	Predominantly Non-Hydric
HrB	Houcktown-Glynwood-Jenera complex, 1 to 4 percent slopes	Predominantly Non-Hydric
JfB	Jenera-Shinrock, till substratum complex, 1 to 4 percent slopes	Predominantly Non-Hydric
PmA	Pewamo silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
SkB	Shinrock, till substratum-Glynwood complex, 1 to 4 percent slopes	Predominantly Non-Hydric

Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Original Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary

— Stream (NHD)

■ Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▭ Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

LOCATOR MAP

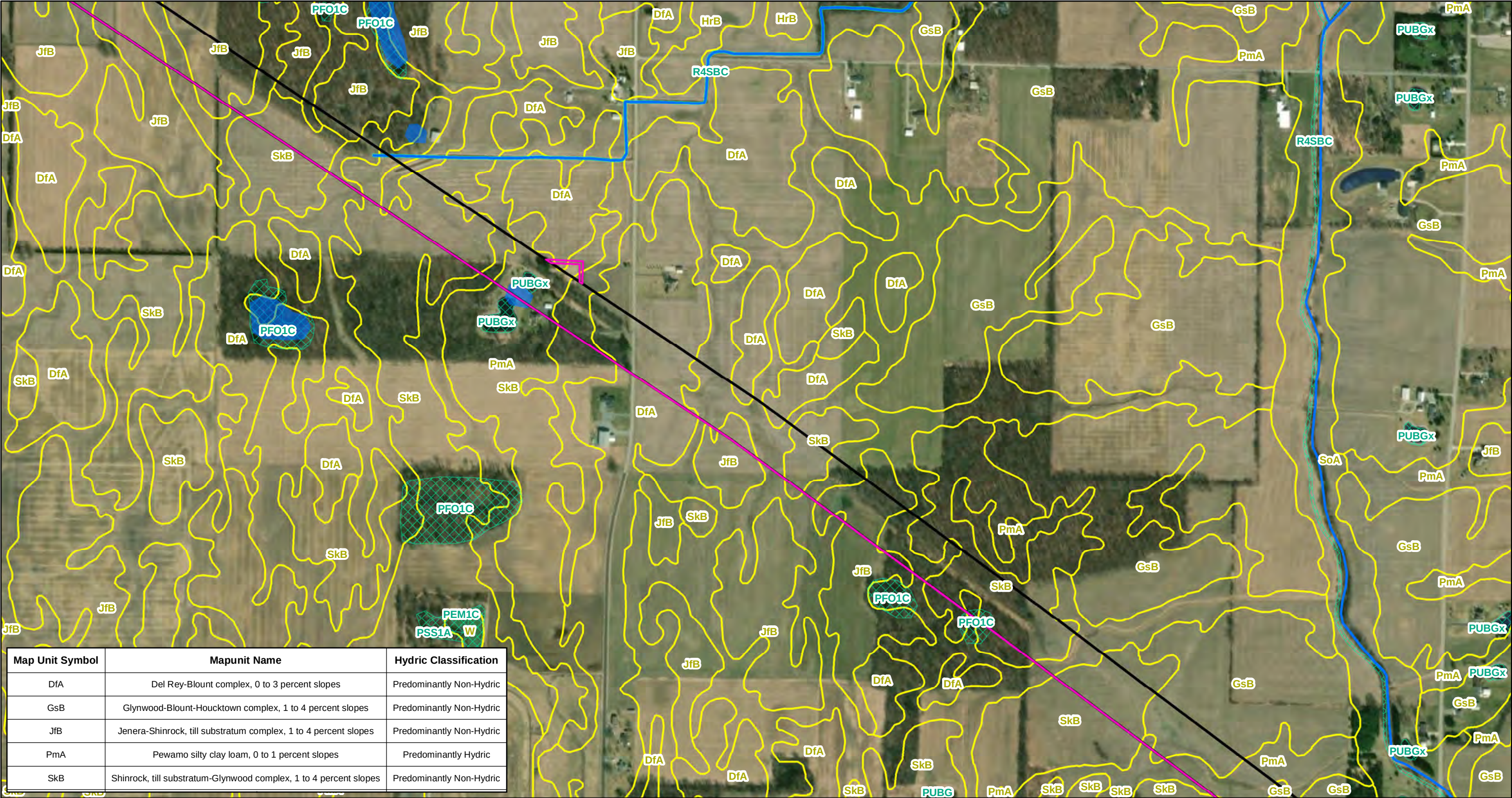
Figure 2.11
Soils, NHD, NWI, Floodplain Map

AEP OHIO

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

02505007501,000

Feet



Map Unit Symbol	Mapunit Name	Hydric Classification
DfA	Del Rey-Blount complex, 0 to 3 percent slopes	Predominantly Non-Hydric
GsB	Glynwood-Blount-Houcktown complex, 1 to 4 percent slopes	Predominantly Non-Hydric
JfB	Jenera-Shinrock, till substratum complex, 1 to 4 percent slopes	Predominantly Non-Hydric
PmA	Pewamo silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
SkB	Shinrock, till substratum-Glynwood complex, 1 to 4 percent slopes	Predominantly Non-Hydric

Legend

■

Existing Station

▲

Proposed Station

■

Switch Station

○

Communication Tower

▭

Original Environmental Survey Corridor

▭

Addendum Environmental Survey Boundary

—

Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

Figure 2.12
Soils, NHD, NWI, Floodplain Map

AEP

OHIO

Source: AEP

Source: USFWS

0

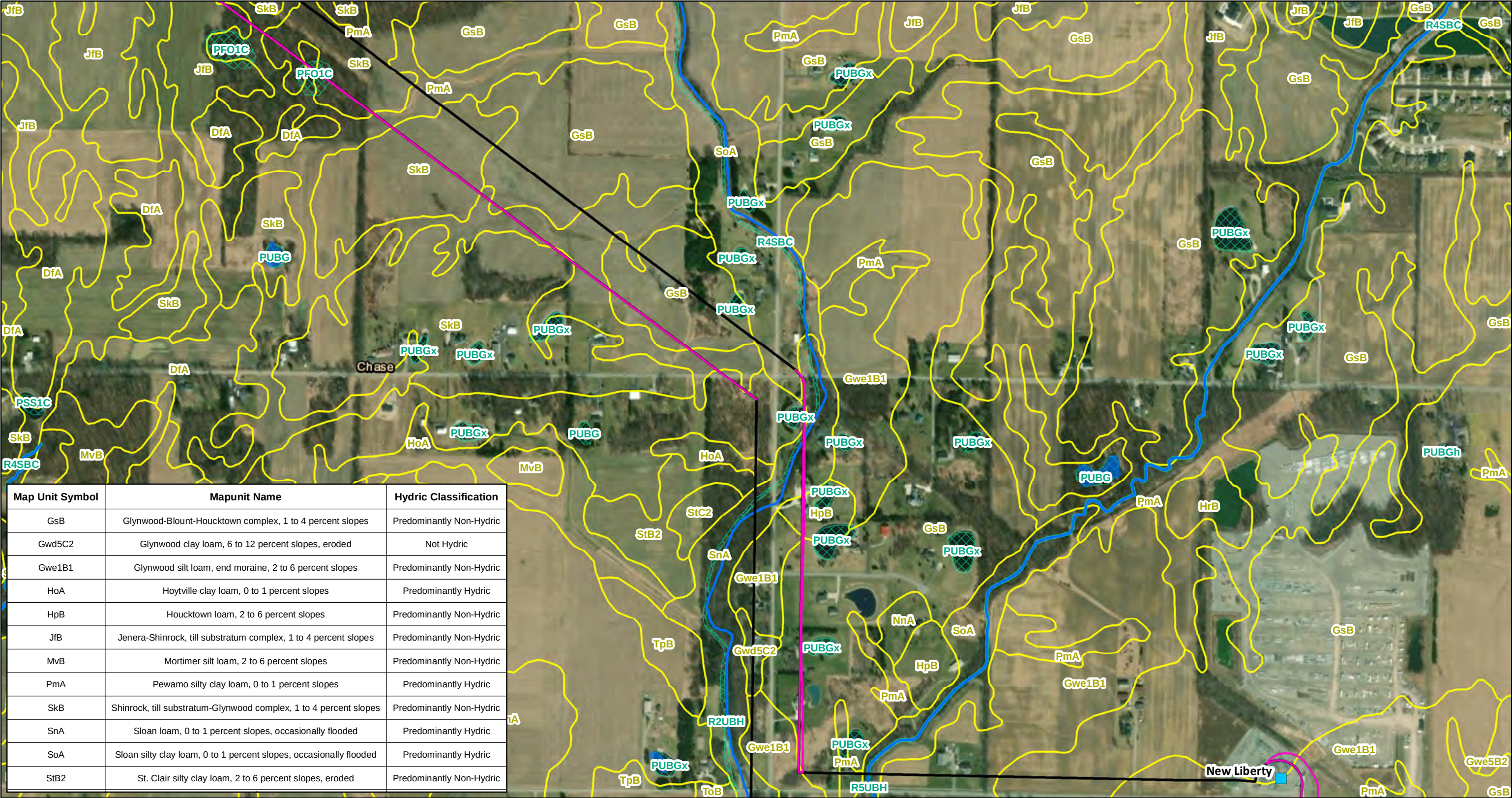
250

500

750

1,000

Feet



Map Unit Symbol	Mapunit Name	Hydric Classification
GsB	Glynwood-Blount-Houcktown complex, 1 to 4 percent slopes	Predominantly Non-Hydric
Gwd5C2	Glynwood clay loam, 6 to 12 percent slopes, eroded	Not Hydric
Gwe1B1	Glynwood silt loam, end moraine, 2 to 6 percent slopes	Predominantly Non-Hydric
HoA	Hoytville clay loam, 0 to 1 percent slopes	Predominantly Hydric
HpB	Houcktown loam, 2 to 6 percent slopes	Predominantly Non-Hydric
JfB	Jenera-Shinrock, till substratum complex, 1 to 4 percent slopes	Predominantly Non-Hydric
MvB	Mortimer silt loam, 2 to 6 percent slopes	Predominantly Non-Hydric
PmA	Pewamo silty clay loam, 0 to 1 percent slopes	Predominantly Hydric
SkB	Shinrock, till substratum-Glynwood complex, 1 to 4 percent slopes	Predominantly Non-Hydric
SnA	Sloan loam, 0 to 1 percent slopes, occasionally flooded	Predominantly Hydric
SoA	Sloan silty clay loam, 0 to 1 percent slopes, occasionally flooded	Predominantly Hydric
StB2	St. Clair silty clay loam, 2 to 6 percent slopes, eroded	Predominantly Non-Hydric

Legend

Existing Station

Proposed Station

Switch Station

Communication Tower

Original Environmental Survey Corridor

Addendum Environmental Survey Boundary

Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2022/2024; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

LOCATOR MAP

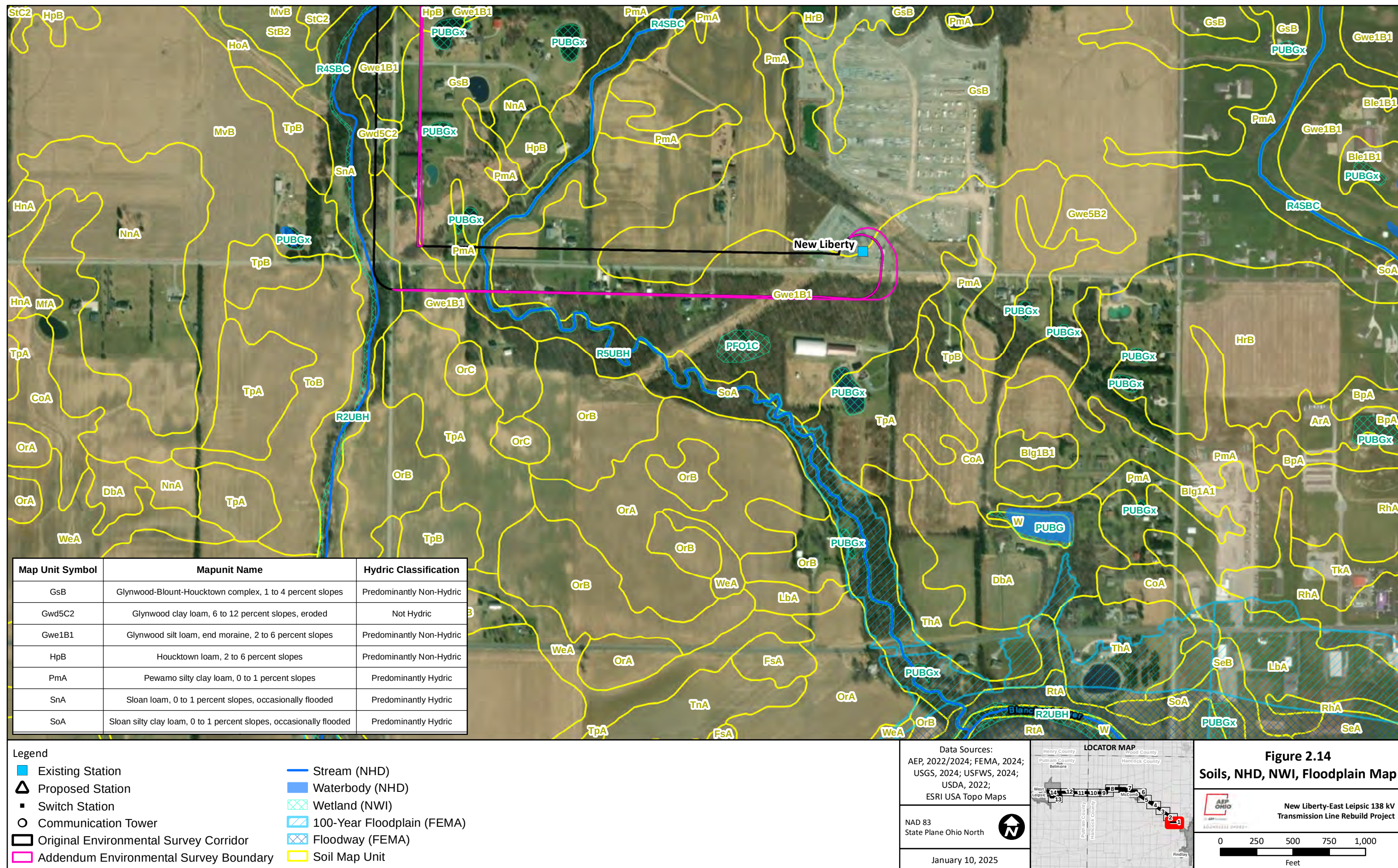
Figure 2.13

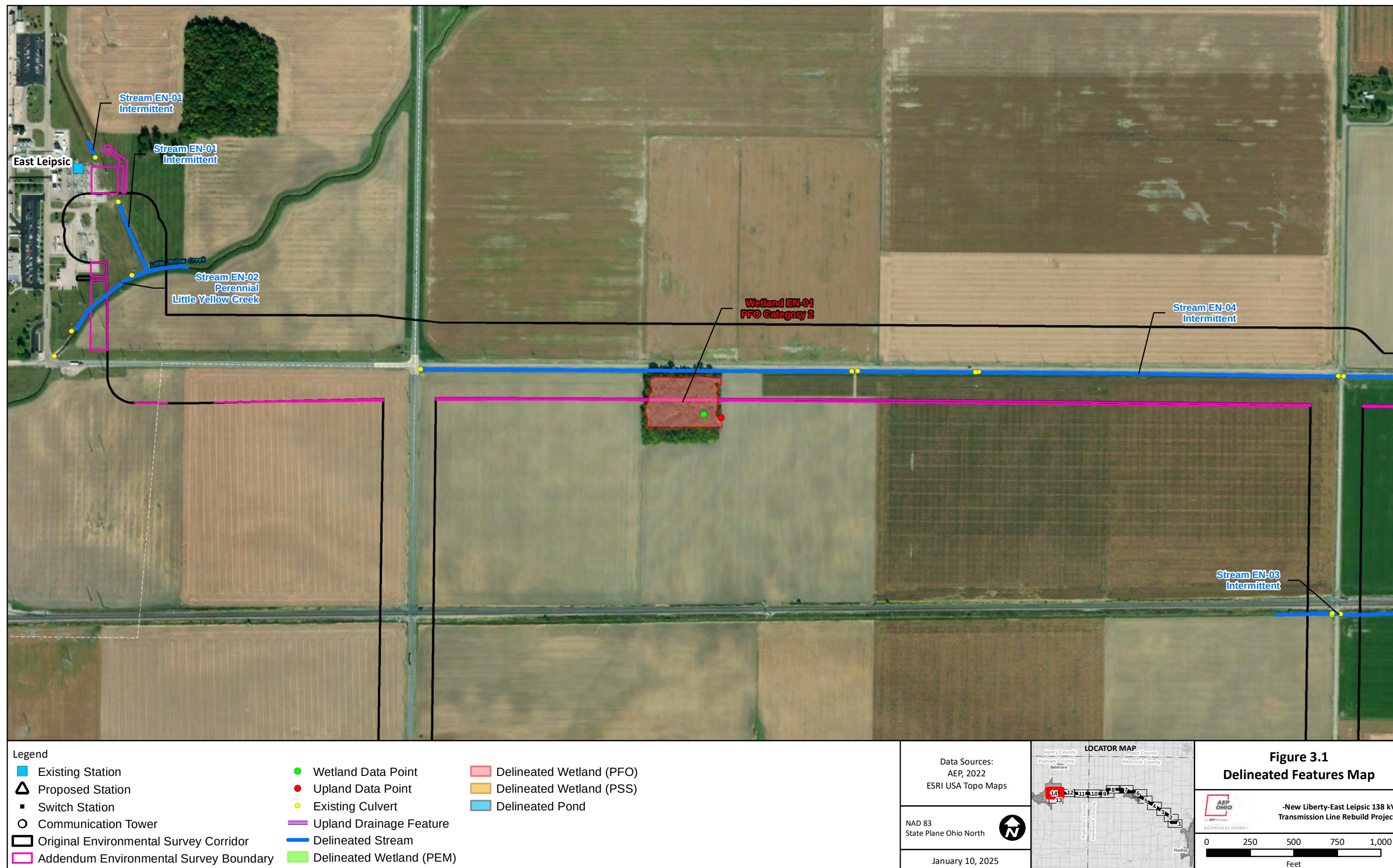
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

02505007501,000

Feet







- Legend

 - Existing Station
 - Proposed Station
 - Switch Station
 - Communication Tower
 - Original Environmental Survey Corridor
 - Addendum Environmental Survey Boundary
- Wetland Data Point
 - Upland Data Point
 - Existing Culvert
 - Upland Drainage Feature
 - Delineated Stream
 - Delineated Wetland (PEM)
- Delineated Wetland (PFO)
 - Delineated Wetland (PSS)
 - Delineated Pond

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

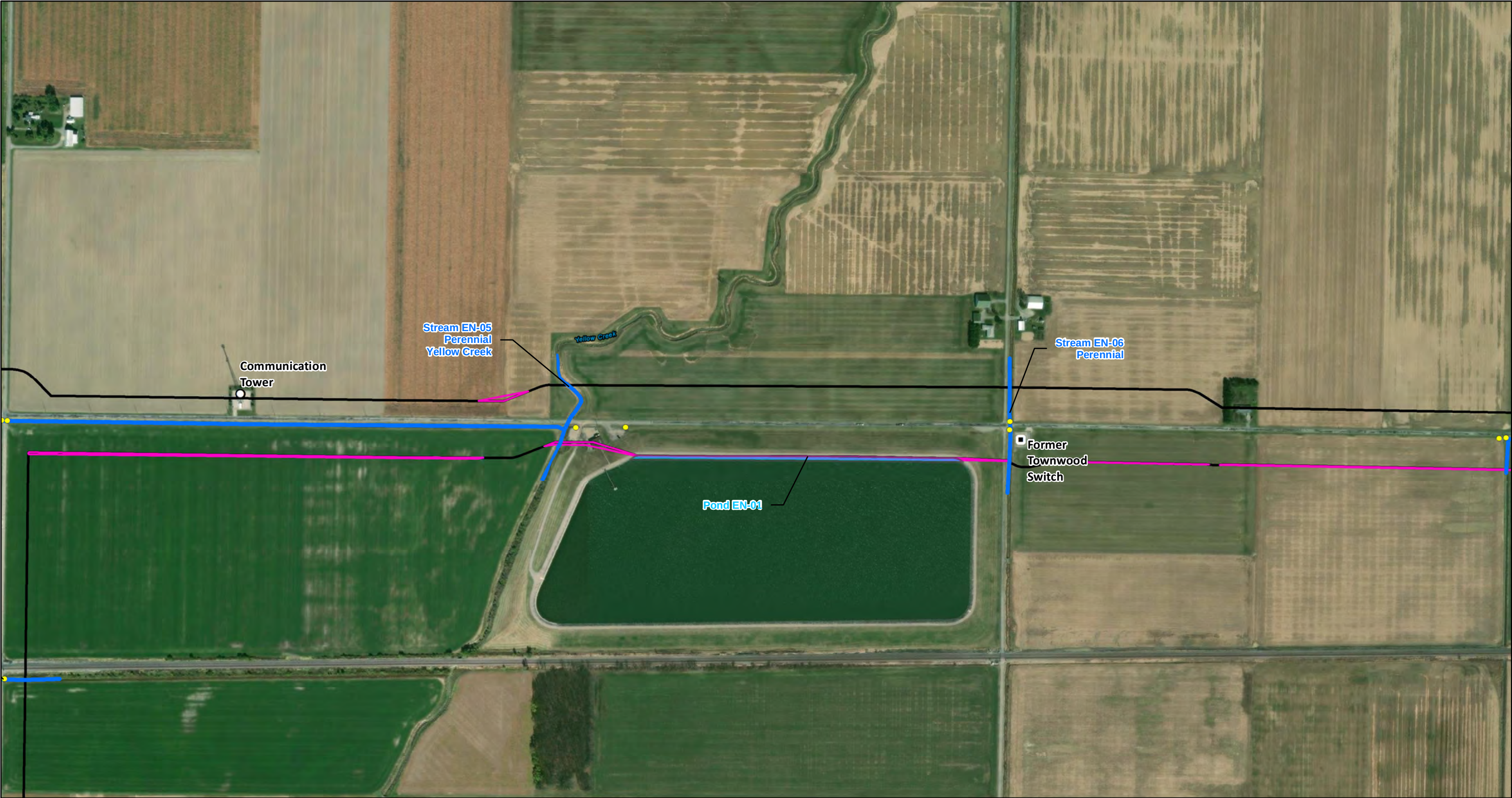
January 10, 2025

LOCATOR MAP

**Figure 3.2
Delineated Features Map**

-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet



- Legend
- | | | |
|--|--|--|
|  Existing Station |  Wetland Data Point |  Delineated Wetland (PFO) |
|  Proposed Station |  Upland Data Point |  Delineated Wetland (PSS) |
|  Switch Station |  Existing Culvert |  Delineated Pond |
|  Communication Tower |  Upland Drainage Feature | |
|  Original Environmental Survey Corridor |  Delineated Stream | |
|  Addendum Environmental Survey Boundary |  Delineated Wetland (PEM) | |

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

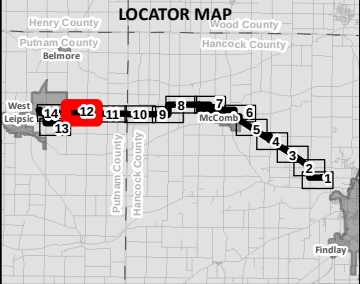
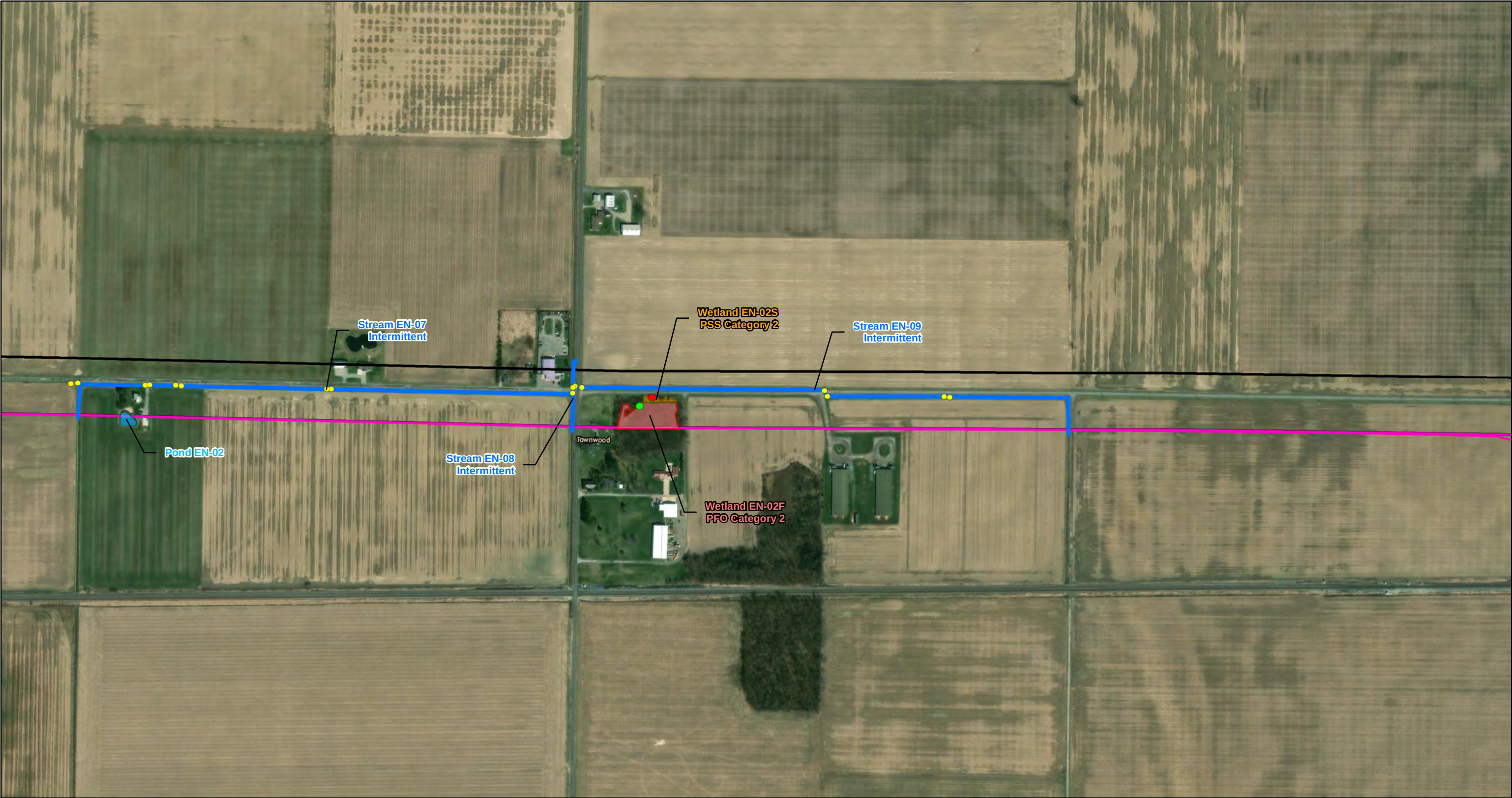


Figure 3.3
Delineated Features Map

 -New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet



Legend			Data Sources: AEP, 2022 ESRI USA Topo Maps	LOCATOR MAP 	Figure 3.4 Delineated Features Map -New Liberty-East Leipsic 138 kV Transmission Line Rebuild Project Feet
Existing Station	Wetland Data Point	Delineated Wetland (PFO)			
Proposed Station	Upland Data Point	Delineated Wetland (PSS)			
Switch Station	Existing Culvert	Delineated Pond			
Communication Tower	Upland Drainage Feature				
Original Environmental Survey Corridor	Delineated Stream				
Addendum Environmental Survey Boundary	Delineated Wetland (PEM)				
NAD 83 State Plane Ohio North					
January 10, 2025					



- Legend

 - Existing Station
 - Proposed Station
 - Switch Station
 - Communication Tower
 - Original Environmental Survey Corridor
 - Addendum Environmental Survey Boundary
- Wetland Data Point
 - Upland Data Point
 - Existing Culvert
 - Upland Drainage Feature
 - Delineated Stream
 - Delineated Wetland (PEM)
- Delineated Wetland (PFO)
 - Delineated Wetland (PSS)
 - Delineated Pond

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

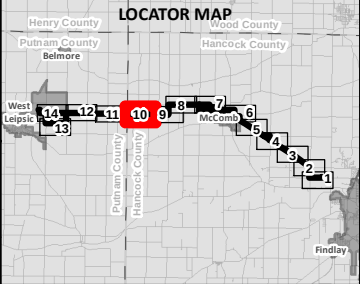
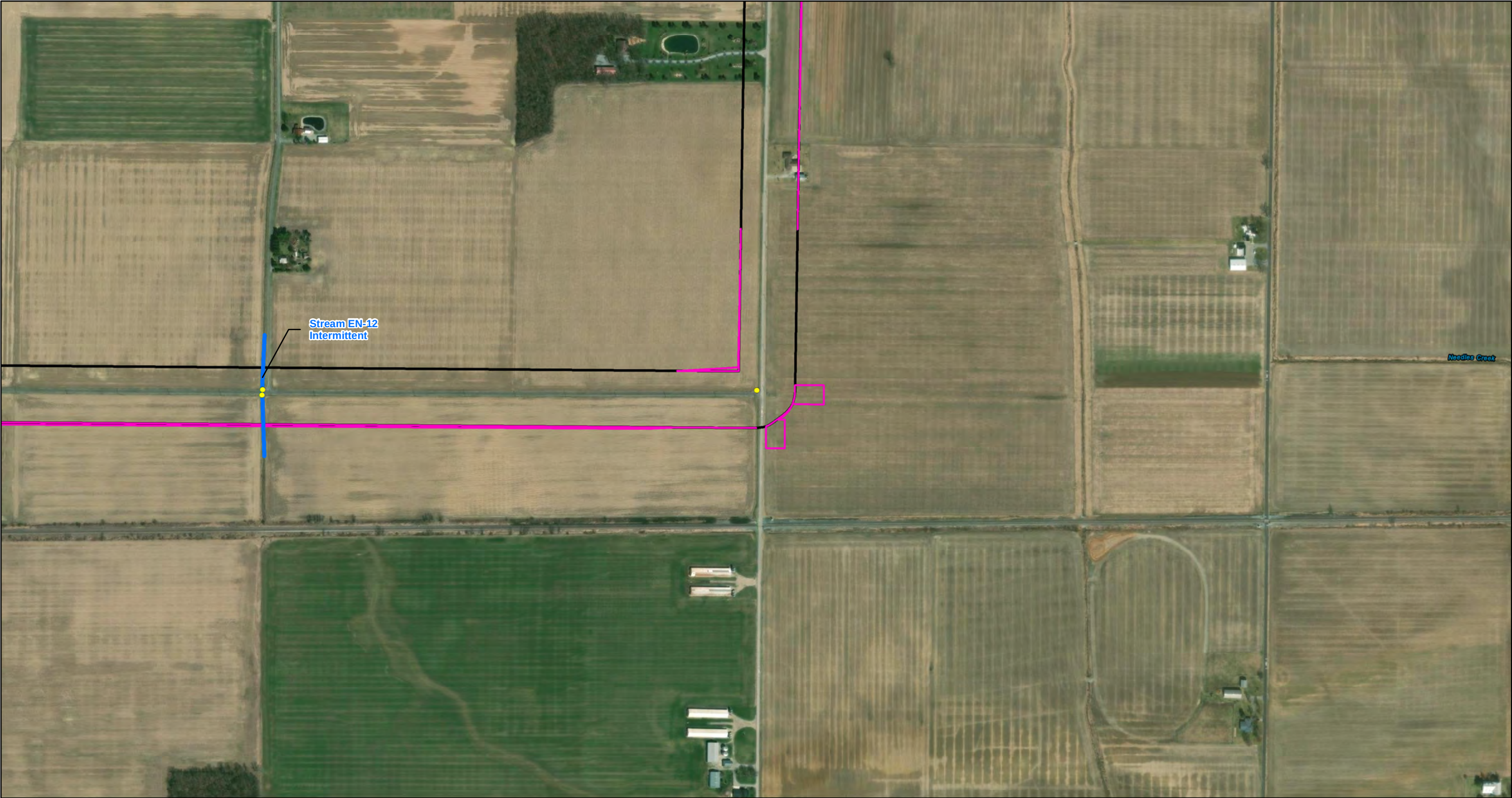


Figure 3.5
Delineated Features Map

**-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 250 500 750 1,000
Feet



- Legend
- Existing Station

▲

 Proposed Station

■

 Switch Station

○

 Communication Tower

▭

 Original Environmental Survey Corridor

▭

 Addendum Environmental Survey Boundary

●

 Wetland Data Point

●

 Upland Data Point

●

 Existing Culvert

—

 Upland Drainage Feature

—

 Delineated Stream

▭

 Delineated Wetland (PEM)

▭

 Delineated Wetland (PFO)

▭

 Delineated Wetland (PSS)

▭

 Delineated Pond

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

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January 10, 2025

LOCATOR MAP

Figure 3.6
Delineated Features Map

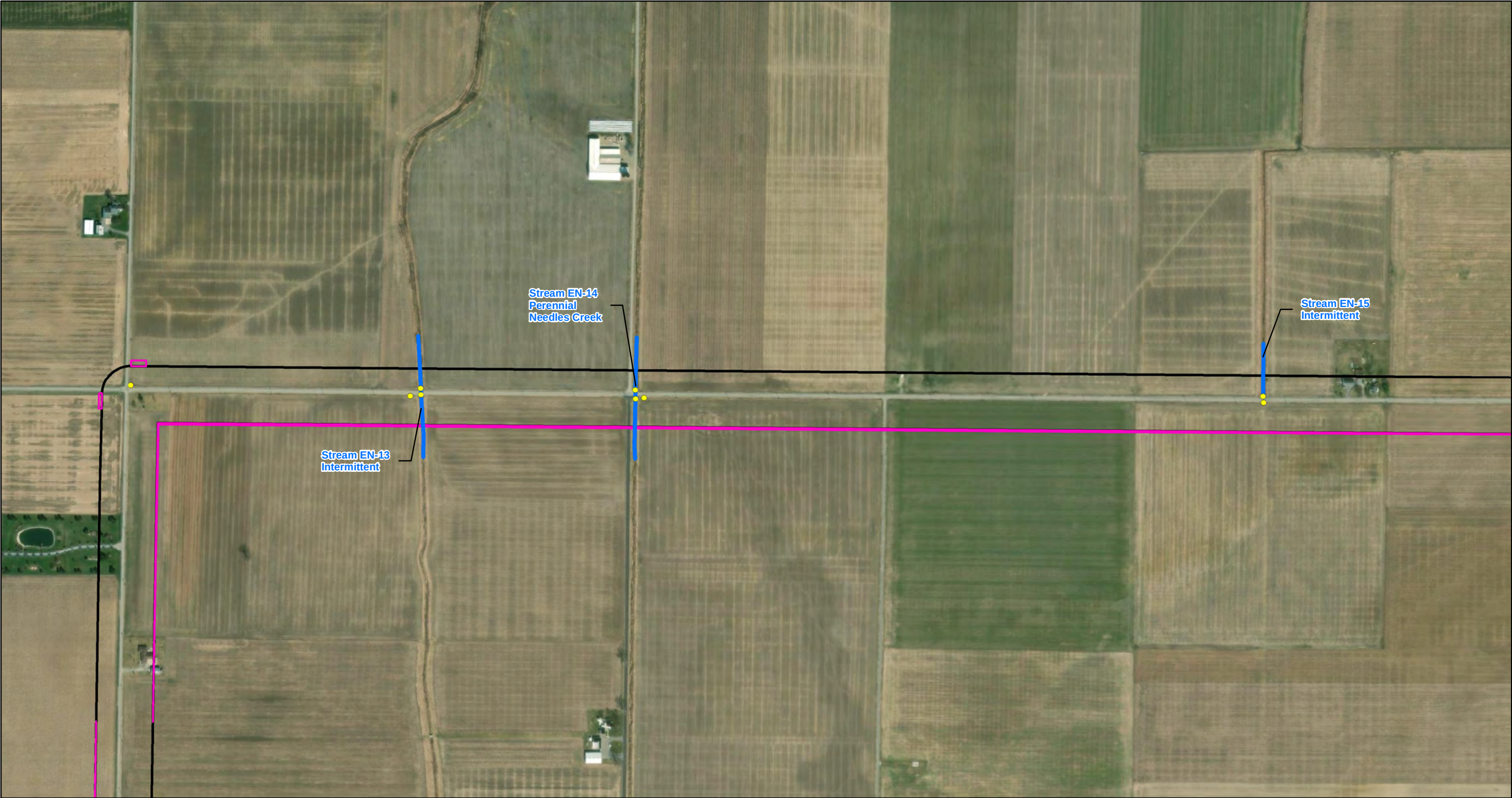
AEP OHIO

BOUNDLESS DMEDIA

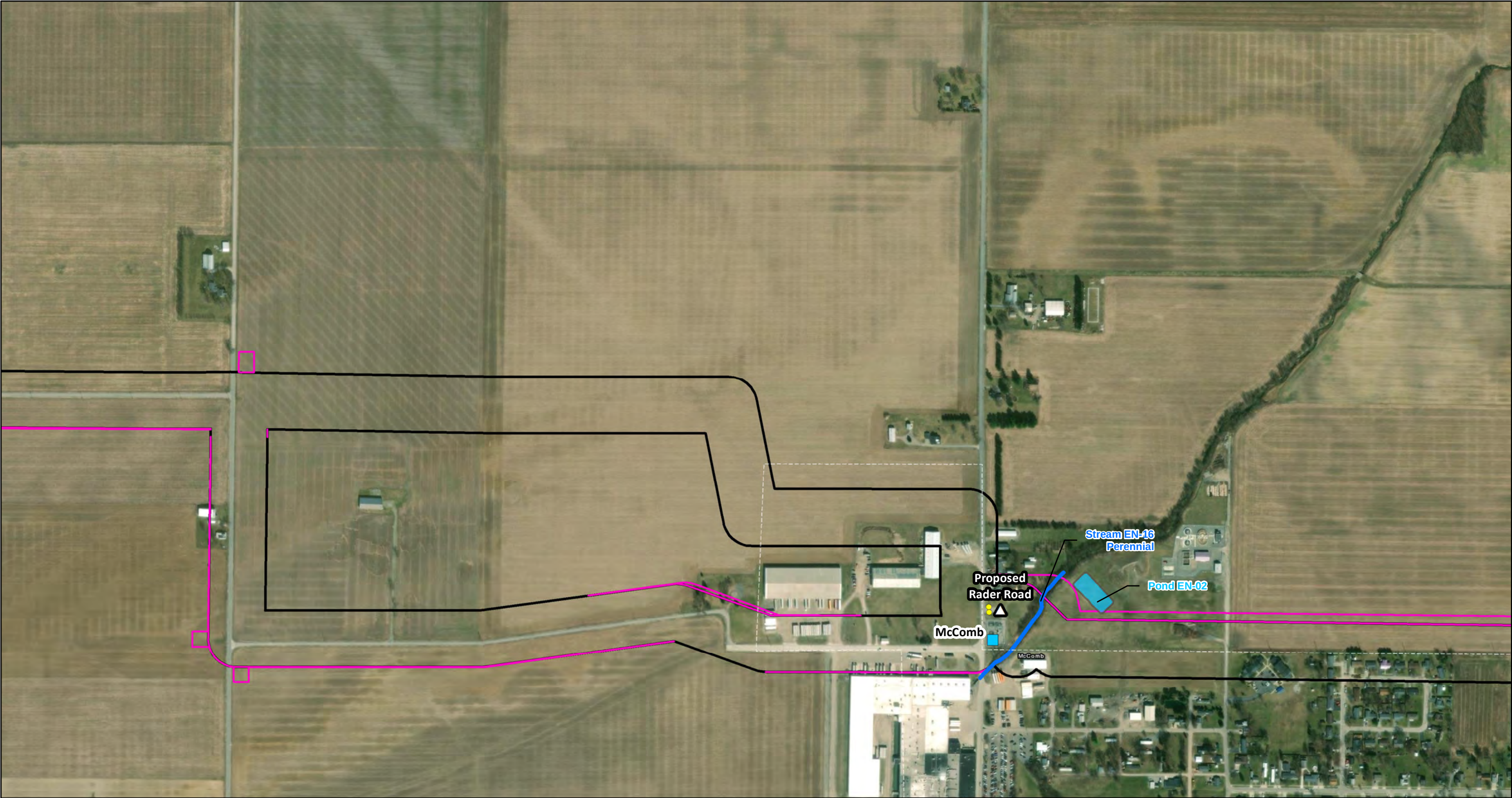
-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

02505007501,000

Feet



Legend			Data Sources: AEP, 2022 ESRI USA Topo Maps NAD 83 State Plane Ohio North January 10, 2025	LOCATOR MAP	Figure 3.7 Delineated Features Map -New Liberty-East Leipsic 138 kV Transmission Line Rebuild Project 02505007501,000 Feet
Existing Station Proposed Station Switch Station Communication Tower Original Environmental Survey Corridor Addendum Environmental Survey Boundary	Wetland Data Point Upland Data Point Existing Culvert Upland Drainage Feature Delineated Stream Delineated Wetland (PEM)	Delineated Wetland (PFO) Delineated Wetland (PSS) Delineated Pond			



- Legend
- Existing Station
 - Proposed Station
 - Switch Station
 - Communication Tower
 - Original Environmental Survey Corridor
 - Addendum Environmental Survey Boundary
 - Wetland Data Point
 - Upland Data Point
 - Existing Culvert
 - Upland Drainage Feature
 - Delineated Stream
 - Delineated Wetland (PEM)
 - Delineated Wetland (PFO)
 - Delineated Wetland (PSS)
 - Delineated Pond

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

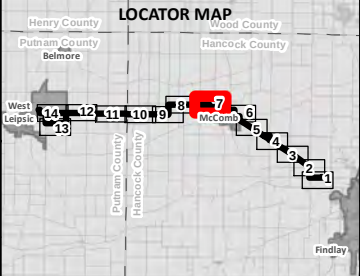
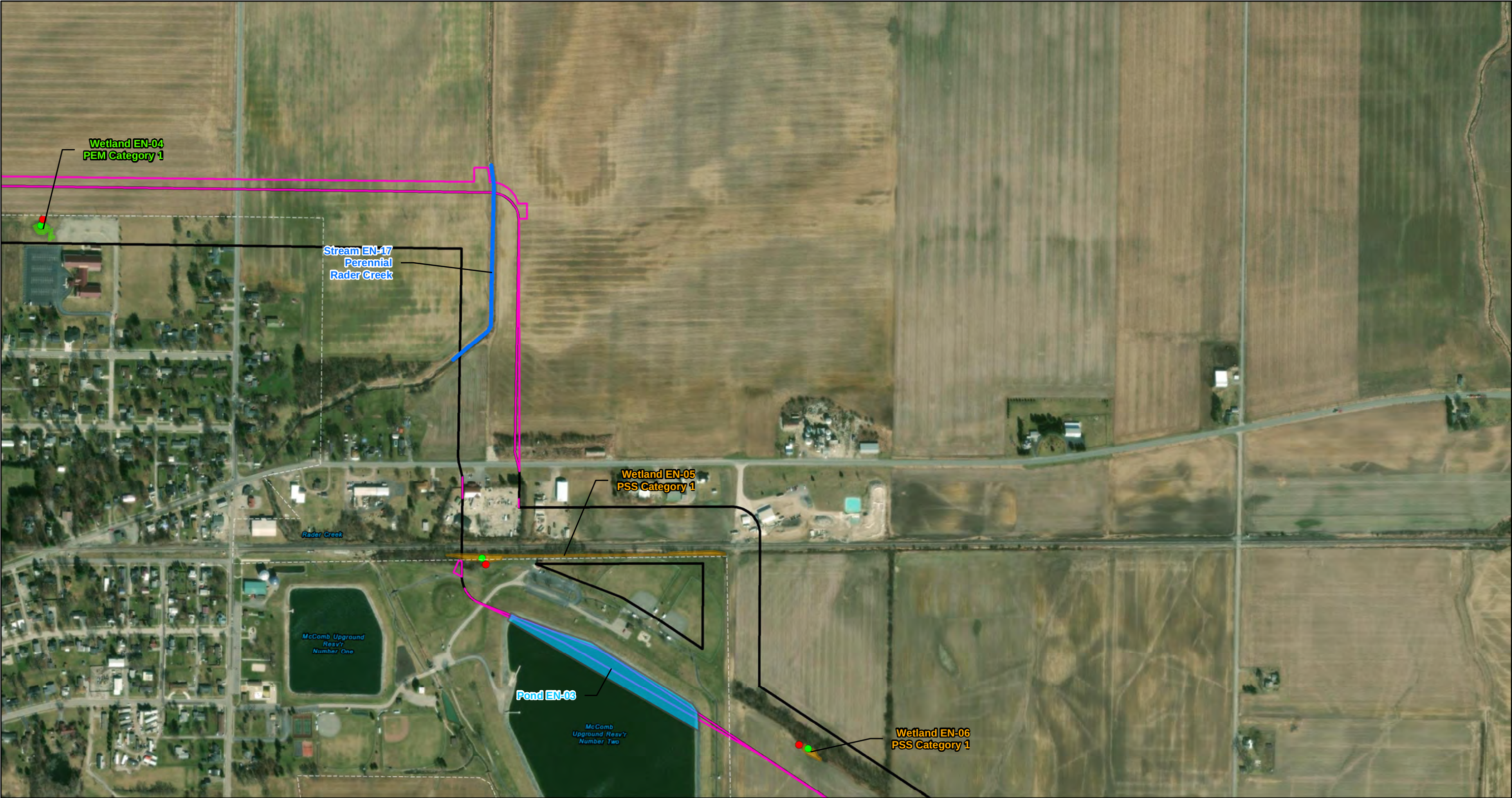


Figure 3.8
Delineated Features Map

**-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 250 500 750 1,000
Feet



- Legend
- | | | |
|--|--------------------------|--------------------------|
| Existing Station | Wetland Data Point | Delineated Wetland (PFO) |
| Proposed Station | Upland Data Point | Delineated Wetland (PSS) |
| Switch Station | Existing Culvert | Delineated Pond |
| Communication Tower | Upland Drainage Feature | |
| Original Environmental Survey Corridor | Delineated Stream | |
| Addendum Environmental Survey Boundary | Delineated Wetland (PEM) | |

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

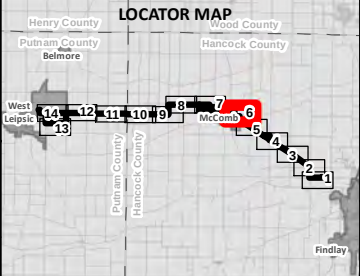
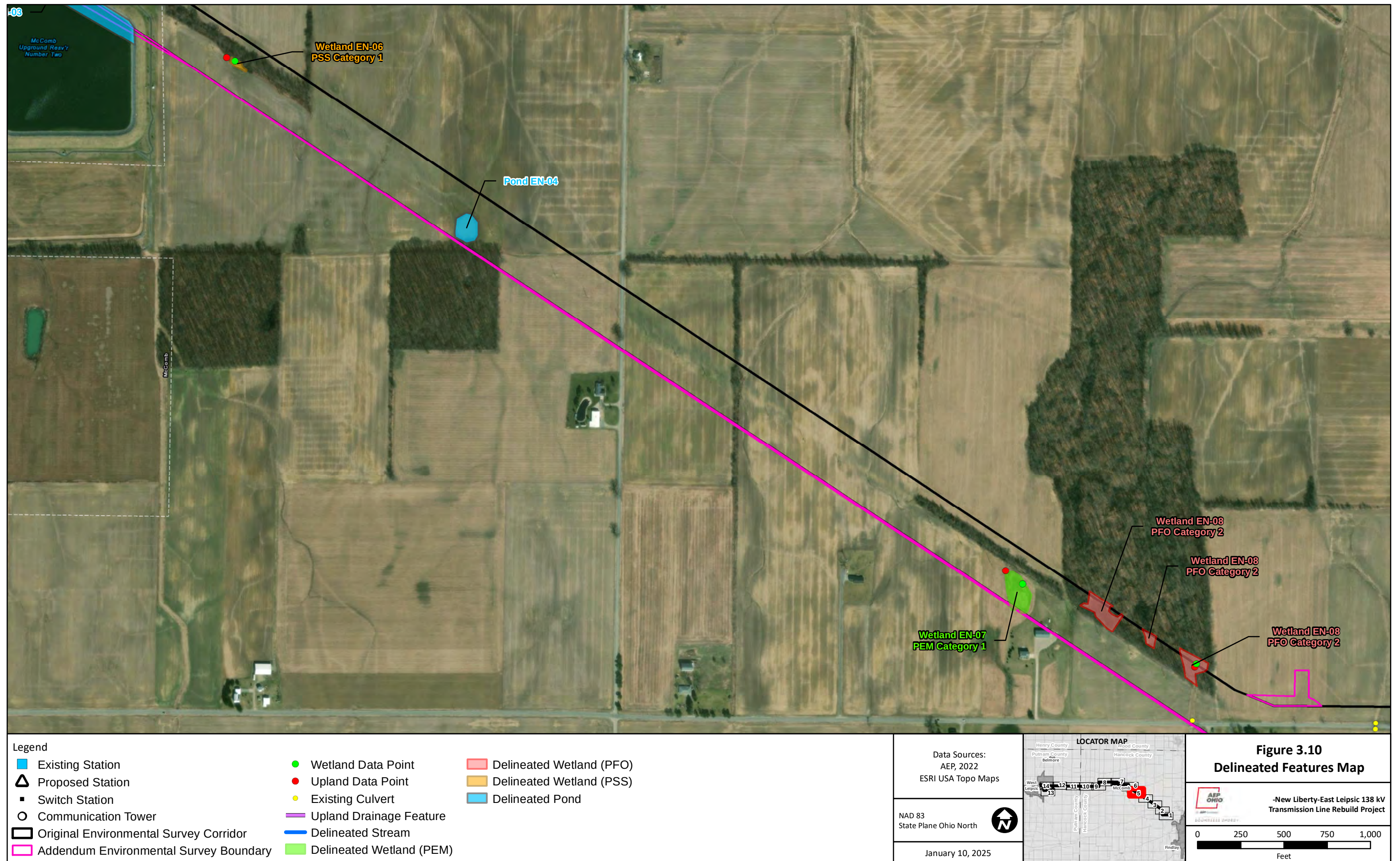
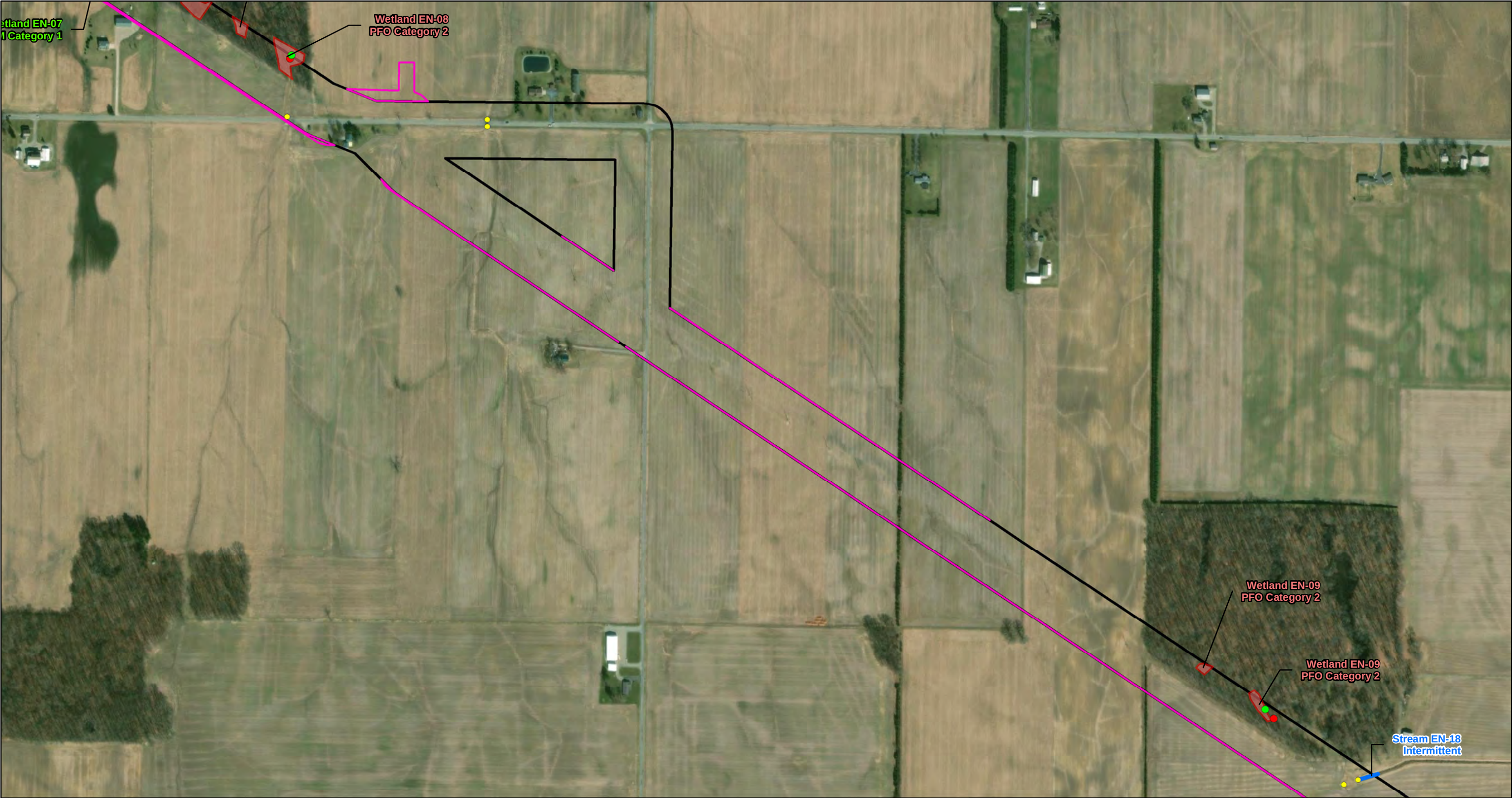


Figure 3.9
Delineated Features Map

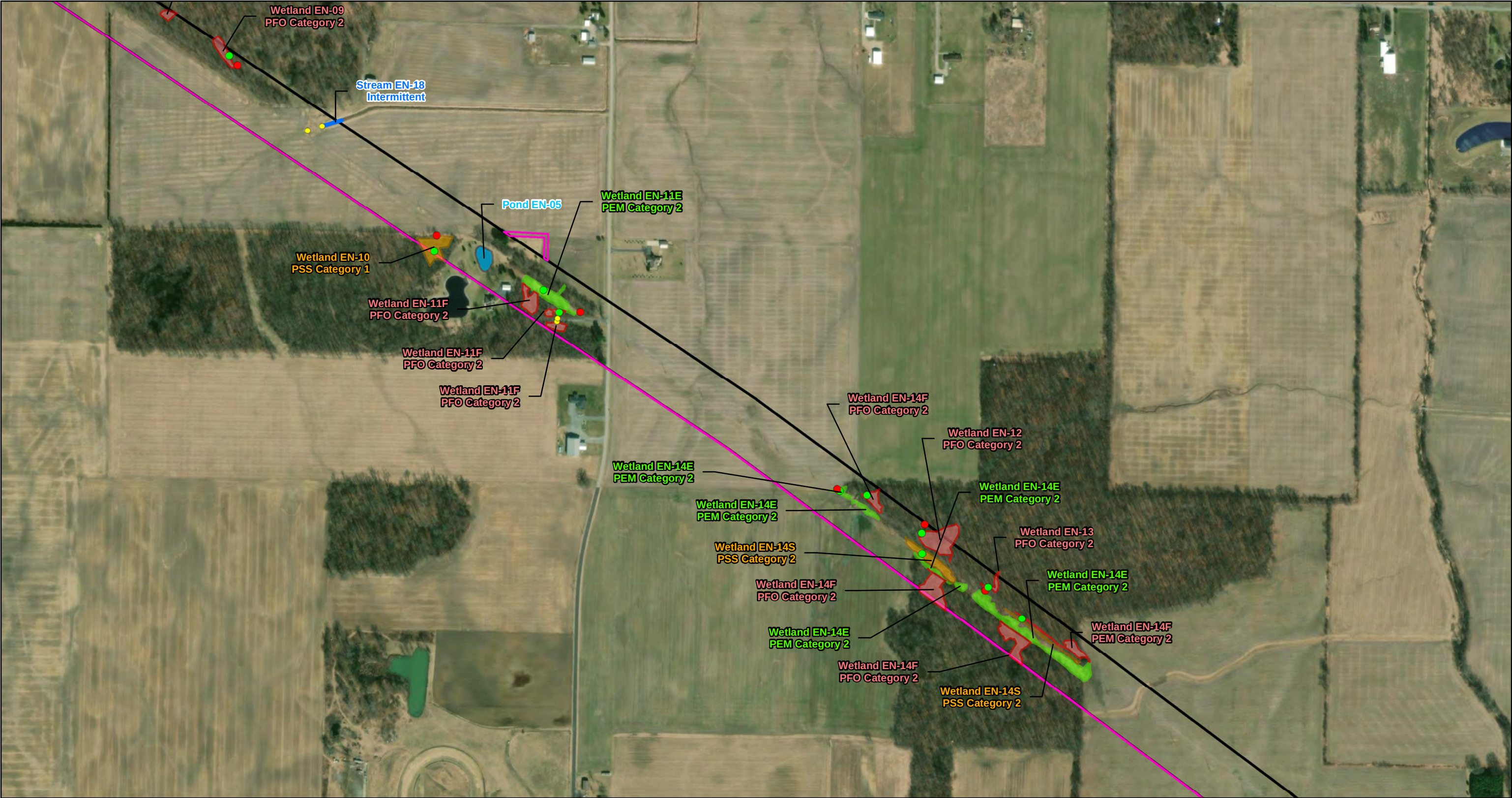
**-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 250 500 750 1,000
Feet





Legend			Data Sources: AEP, 2022 ESRI USA Topo Maps		LOCATOR MAP 	Figure 3.11 Delineated Features Map -New Liberty-East Leipsic 138 kV Transmission Line Rebuild Project
Existing Station	Wetland Data Point	Delineated Wetland (PFO)				
Proposed Station	Upland Data Point	Delineated Wetland (PSS)				
Switch Station	Existing Culvert	Delineated Pond	NAD 83 State Plane Ohio North			
Communication Tower	Upland Drainage Feature		January 10, 2025			
Original Environmental Survey Corridor	Delineated Stream					
Addendum Environmental Survey Boundary	Delineated Wetland (PEM)					



- Legend

 - Existing Station
 - Proposed Station
 - Switch Station
 - Communication Tower
 - Original Environmental Survey Corridor
 - Addendum Environmental Survey Boundary
- Wetland Data Point
 - Upland Data Point
 - Existing Culvert
 - Upland Drainage Feature
 - Delineated Stream
 - Delineated Wetland (PEM)
- Delineated Wetland (PFO)
 - Delineated Wetland (PSS)
 - Delineated Pond

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

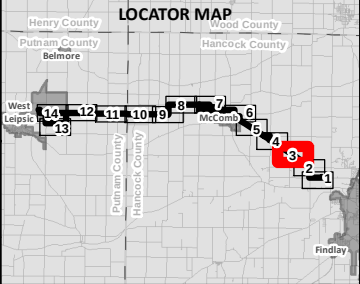


Figure 3.12
Delineated Features Map

-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet



- Legend

 - Existing Station
 - Proposed Station
 - Switch Station
 - Communication Tower
 - Original Environmental Survey Corridor
 - Addendum Environmental Survey Boundary
- Wetland Data Point
 - Upland Data Point
 - Existing Culvert
 - Upland Drainage Feature
 - Delineated Stream
 - Delineated Wetland (PEM)
- Delineated Wetland (PFO)
 - Delineated Wetland (PSS)
 - Delineated Pond

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

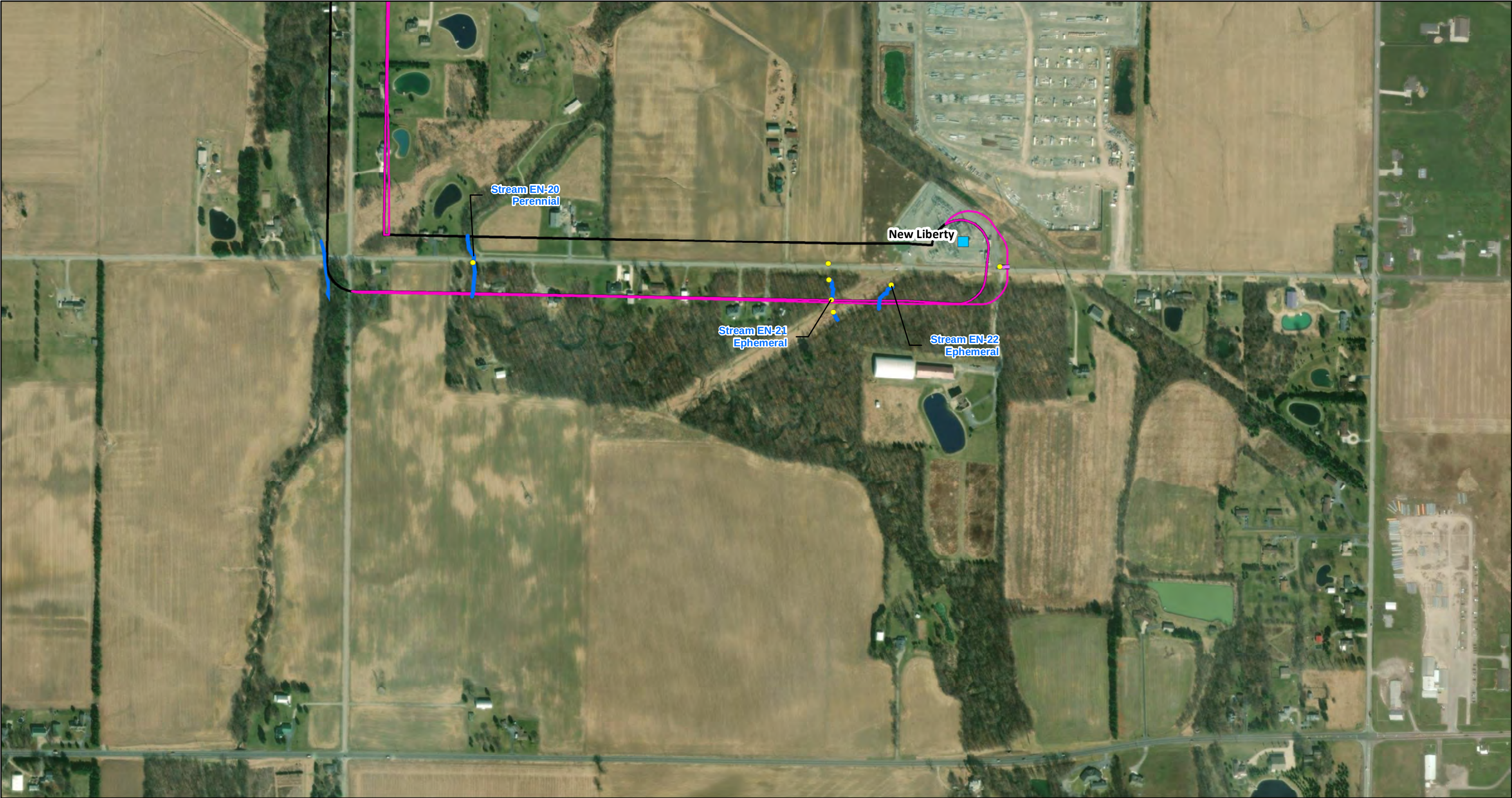
January 10, 2025

LOCATOR MAP

Figure 3.13
Delineated Features Map

-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet



Legend

■

 Existing Station

▲

 Proposed Station

■

 Switch Station

○

 Communication Tower

▭

 Original Environmental Survey Corridor

▭

 Addendum Environmental Survey Boundary

●

 Wetland Data Point

●

 Upland Data Point

●

 Existing Culvert

▬

 Upland Drainage Feature

▬

 Delineated Stream

▬

 Delineated Wetland (PEM)

▭

 Delineated Wetland (PFO)

▭

 Delineated Wetland (PSS)

▭

 Delineated Pond

Data Sources:
AEP, 2022
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

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N

January 10, 2025

LOCATOR MAP

Henry County

Putnam County

Belmore

West Leipsic

14

13

12

11

10

9

8

7

6

5

4

3

2

1

McComb

Putnam County

Franklin County

Wood County

Hancock County

Rindlay

Figure 3.14

Delineated Features Map

AEP OHIO

© AEP 2022

BOUNDLESS DMDS

-New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0

250

500

750

1,000

Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

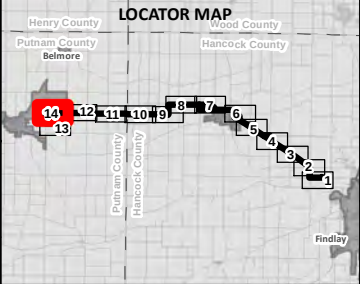


Figure 4.1
Habitat/Land Use Map

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

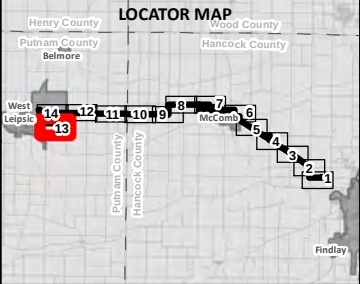
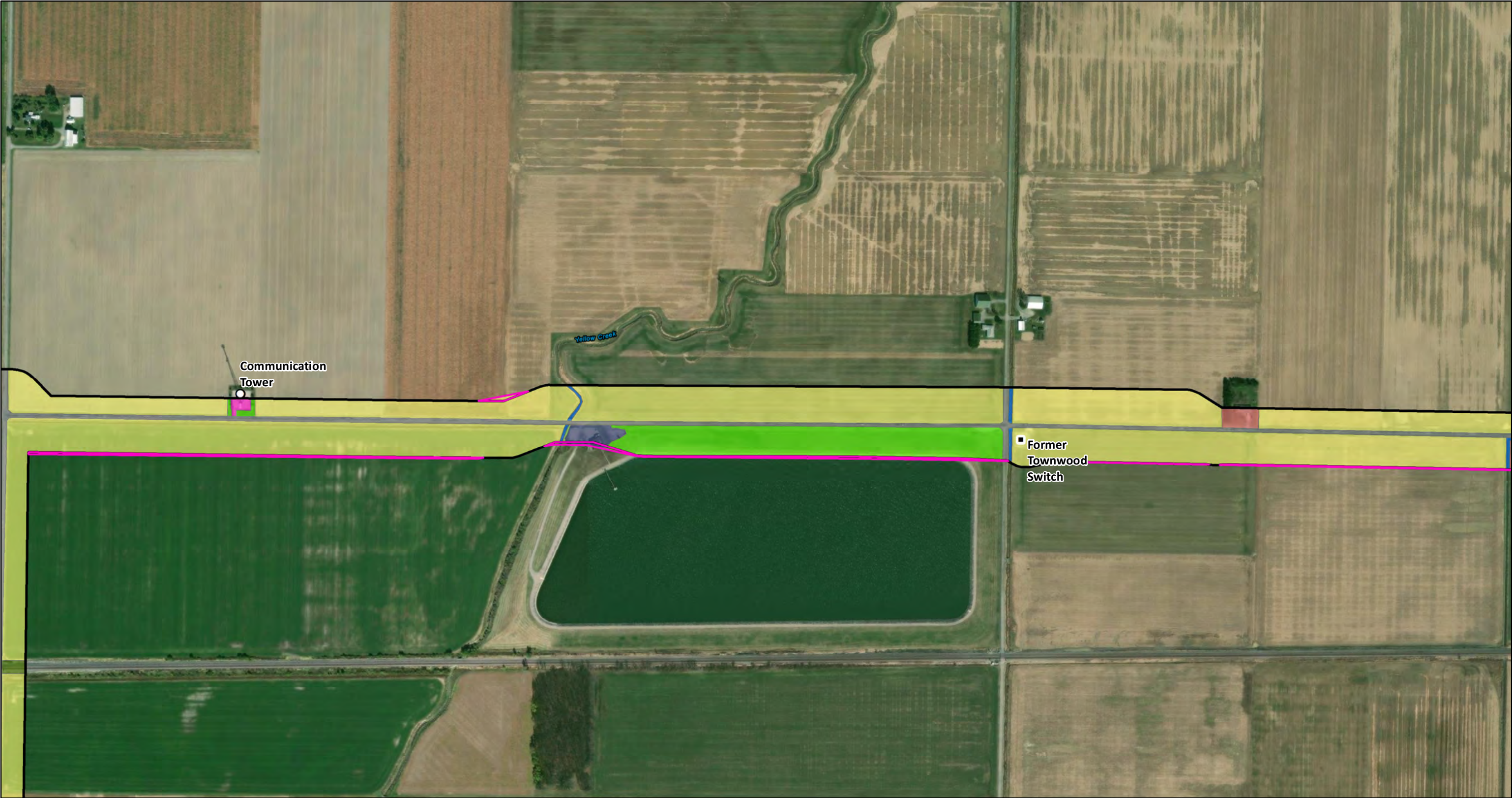


Figure 4.2
Habitat/Land Use Map

**New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

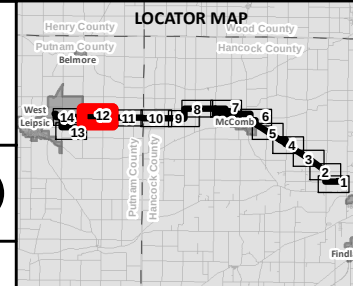
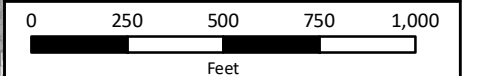
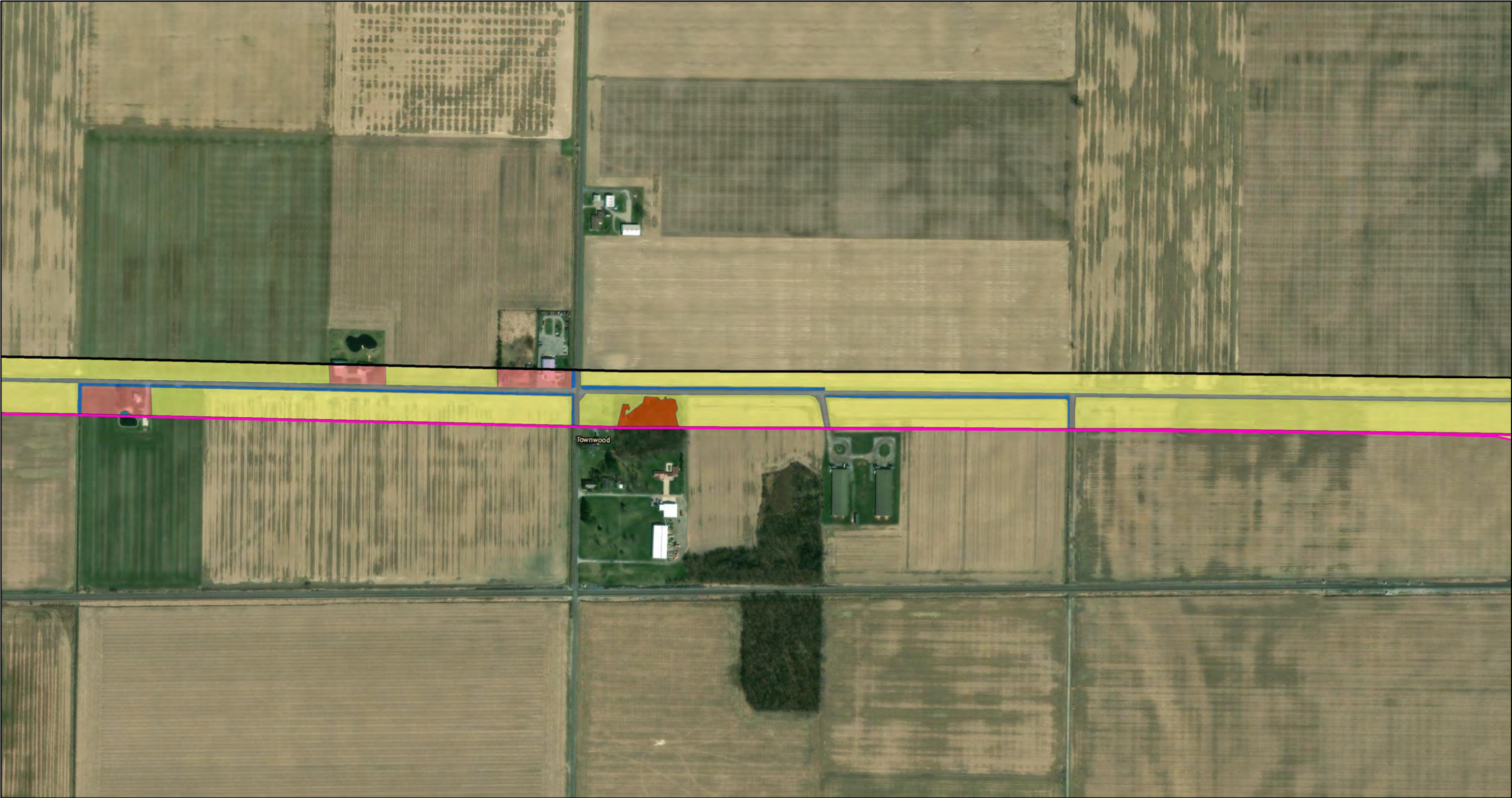


Figure 4.3
Habitat/Land Use Map



New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

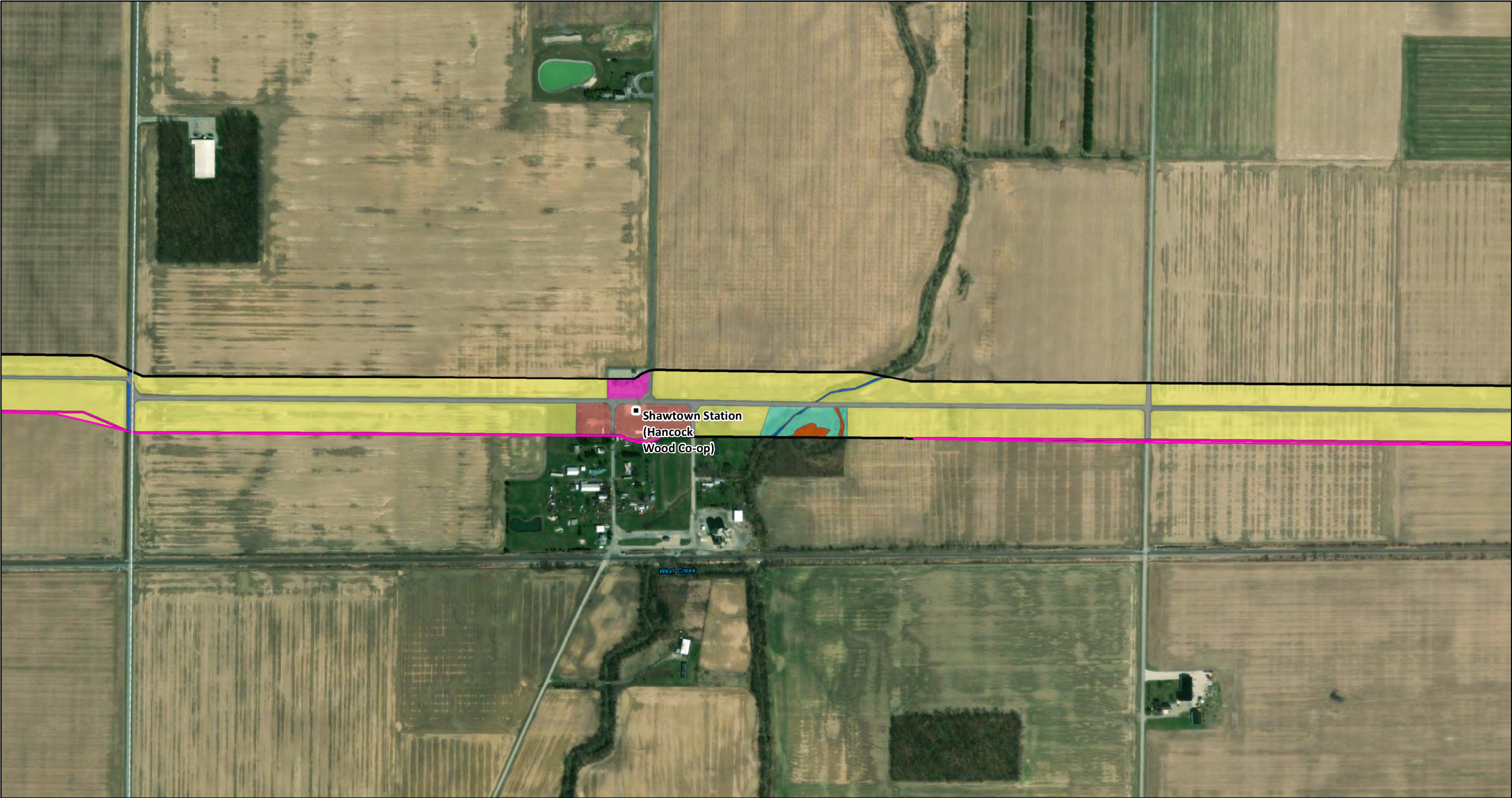




Legend				Data Sources: AEP, 2022/2024 ESRI USA Topo Maps		LOCATOR MAP 	Figure 4.4 Habitat/Land Use Map New Liberty-East Leipsic 138 kV Transmission Line Rebuild Project
Existing Station	Agricultural	Maintained ROW - Herbaceous	Residential				
Proposed Station	Commercial Lawn	Maintained ROW - Scrub/Shrub	Road				
Switch Station	Forested	Old Field	Scrub/Shrub				
Communication Tower	Gravel Lot	Park	Stream				
Original Environmental Survey Corridor	Gravel Substation Pad	Pond	Wetland				
Addendum Environmental Survey Boundary	Hayfield	Railroad					

NAD 83
State Plane Ohio North

January 10, 2025



Legend				Data Sources: AEP, 2022/2024 ESRI USA Topo Maps		LOCATOR MAP 	Figure 4.5 Habitat/Land Use Map New Liberty-East Leipsic 138 kV Transmission Line Rebuild Project
Existing Station	Agricultural	Maintained ROW - Herbaceous	Residential				
Proposed Station	Commercial Lawn	Maintained ROW - Scrub/Shrub	Road				
Switch Station	Forested	Old Field	Scrub/Shrub				
Communication Tower	Gravel Lot	Park	Stream				
Original Environmental Survey Corridor	Gravel Substation Pad	Pond	Wetland				
Addendum Environmental Survey Boundary	Hayfield	Railroad					

NAD 83
State Plane Ohio North

January 10, 2025



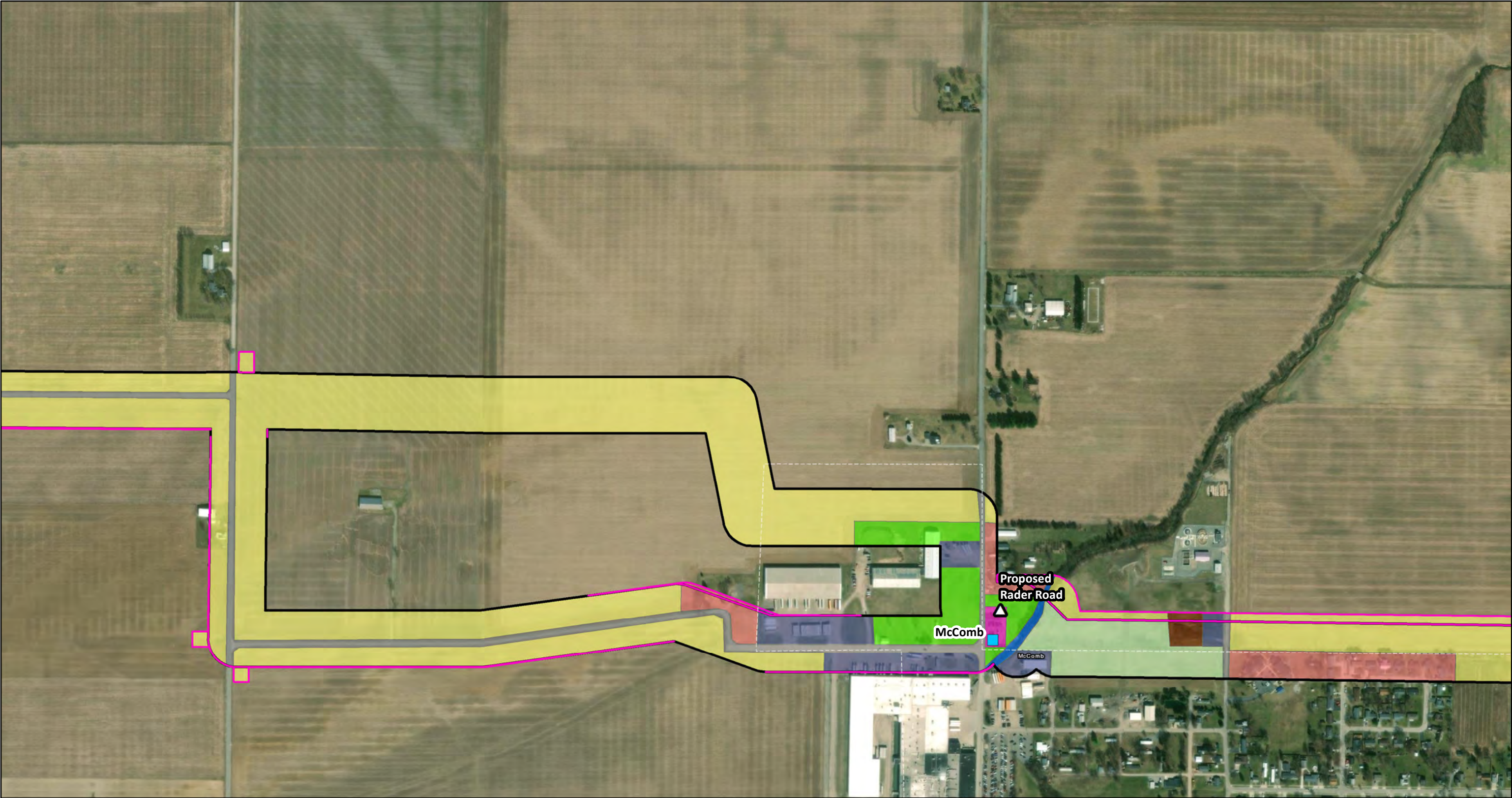
Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources: AEP, 2022/2024 ESRI USA Topo Maps	
NAD 83 State Plane Ohio North	
January 10, 2025	



Figure 4.7 Habitat/Land Use Map	
New Liberty-East Leipsic 138 kV Transmission Line Rebuild Project	
0 250 500 750 1,000 Feet	



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

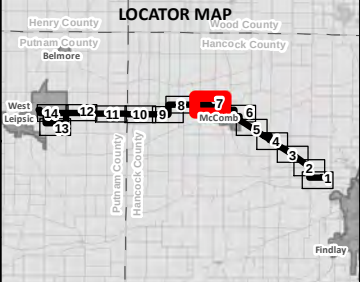
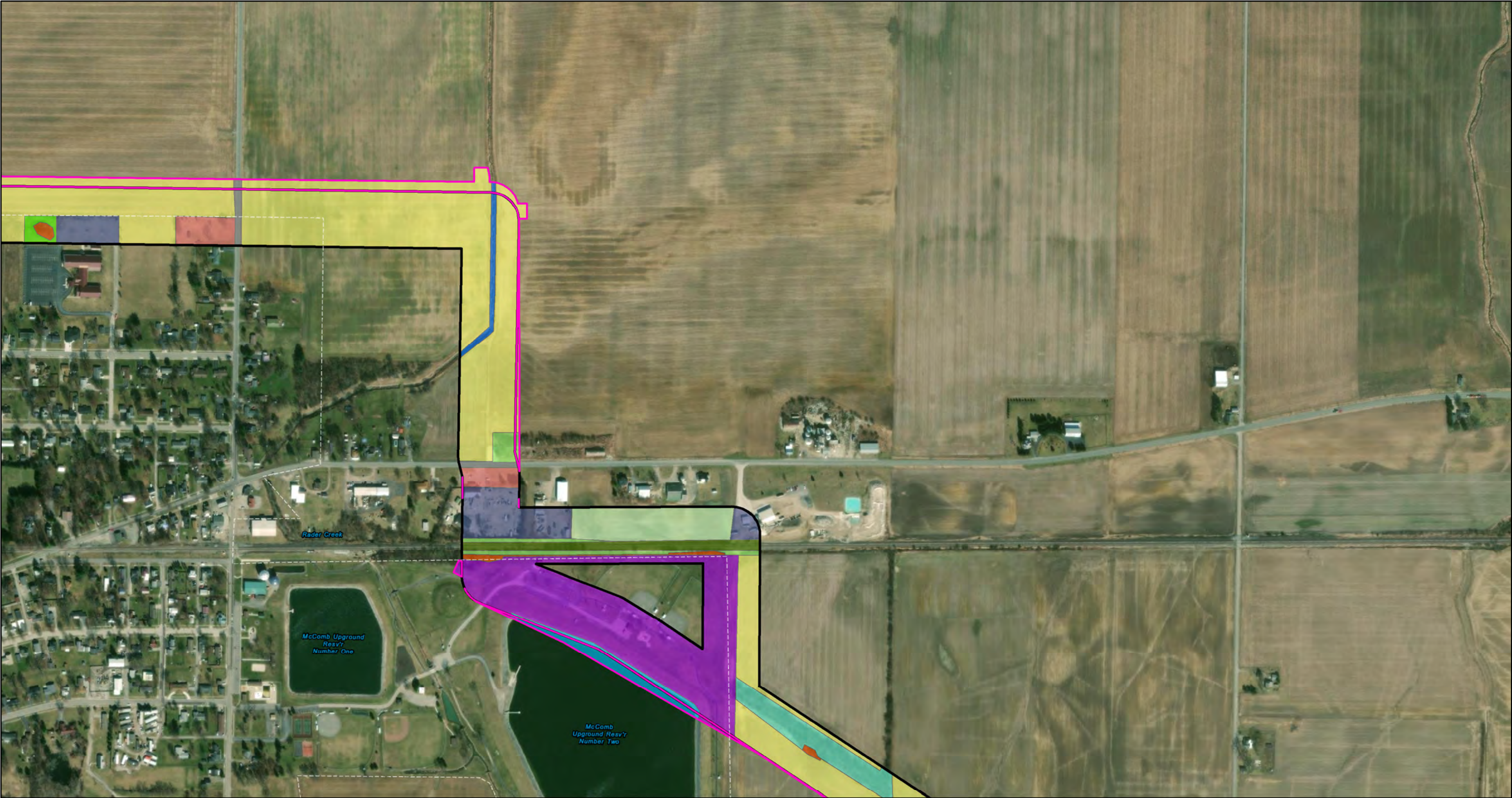


Figure 4.8
Habitat/Land Use Map

**New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

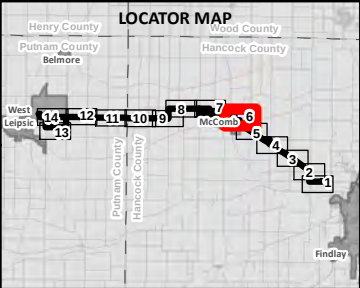


Figure 4.9
Habitat/Land Use Map

**New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

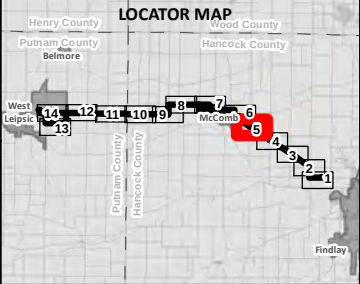
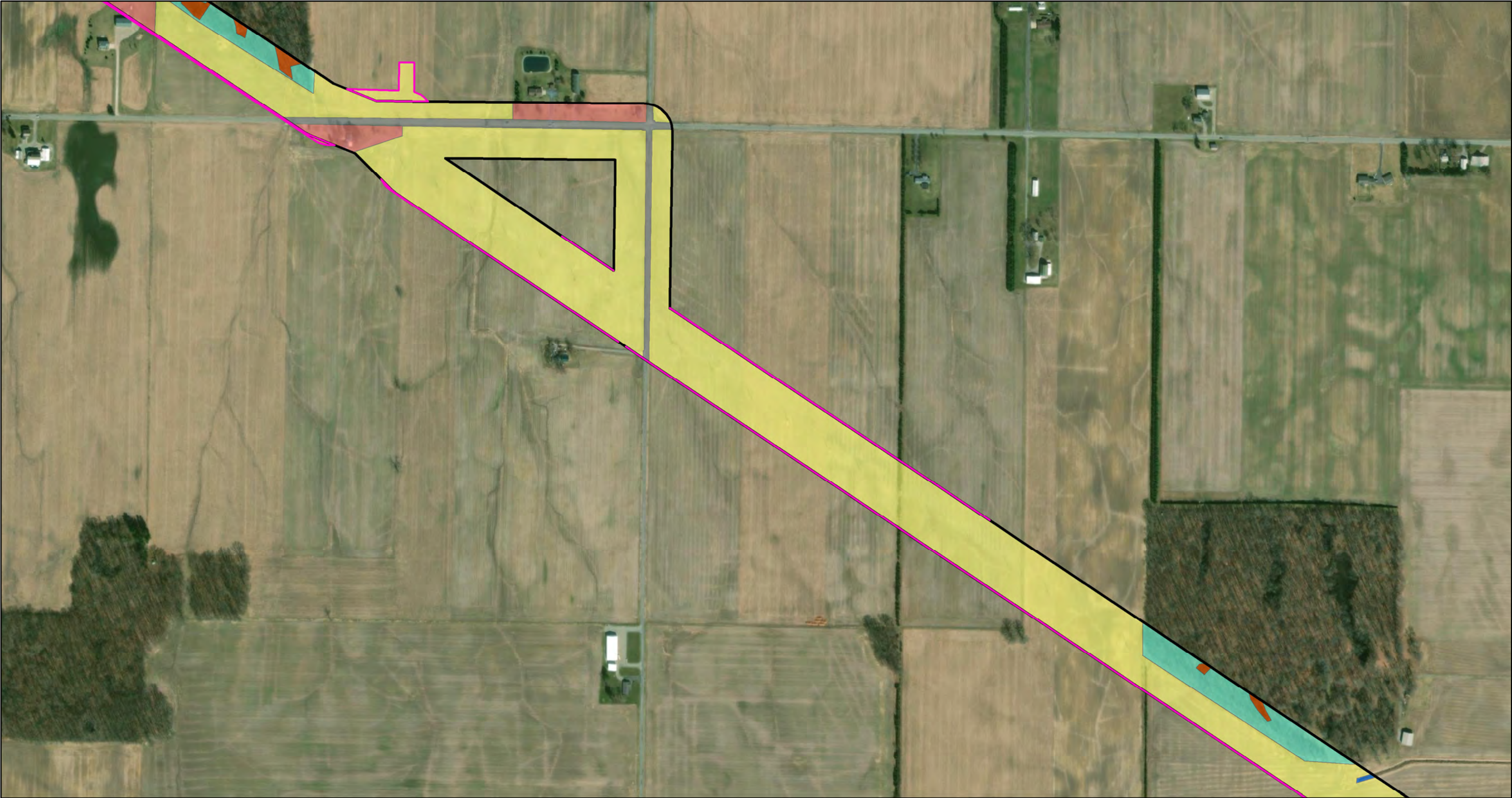


Figure 4.10
Habitat/Land Use Map

**New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

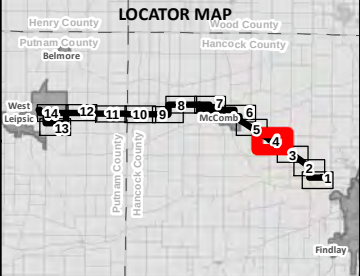


Figure 4.11
Habitat/Land Use Map

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

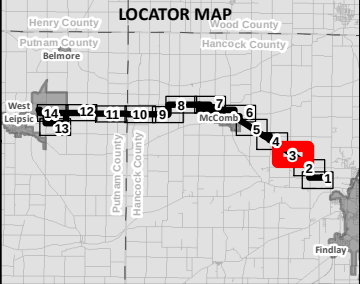
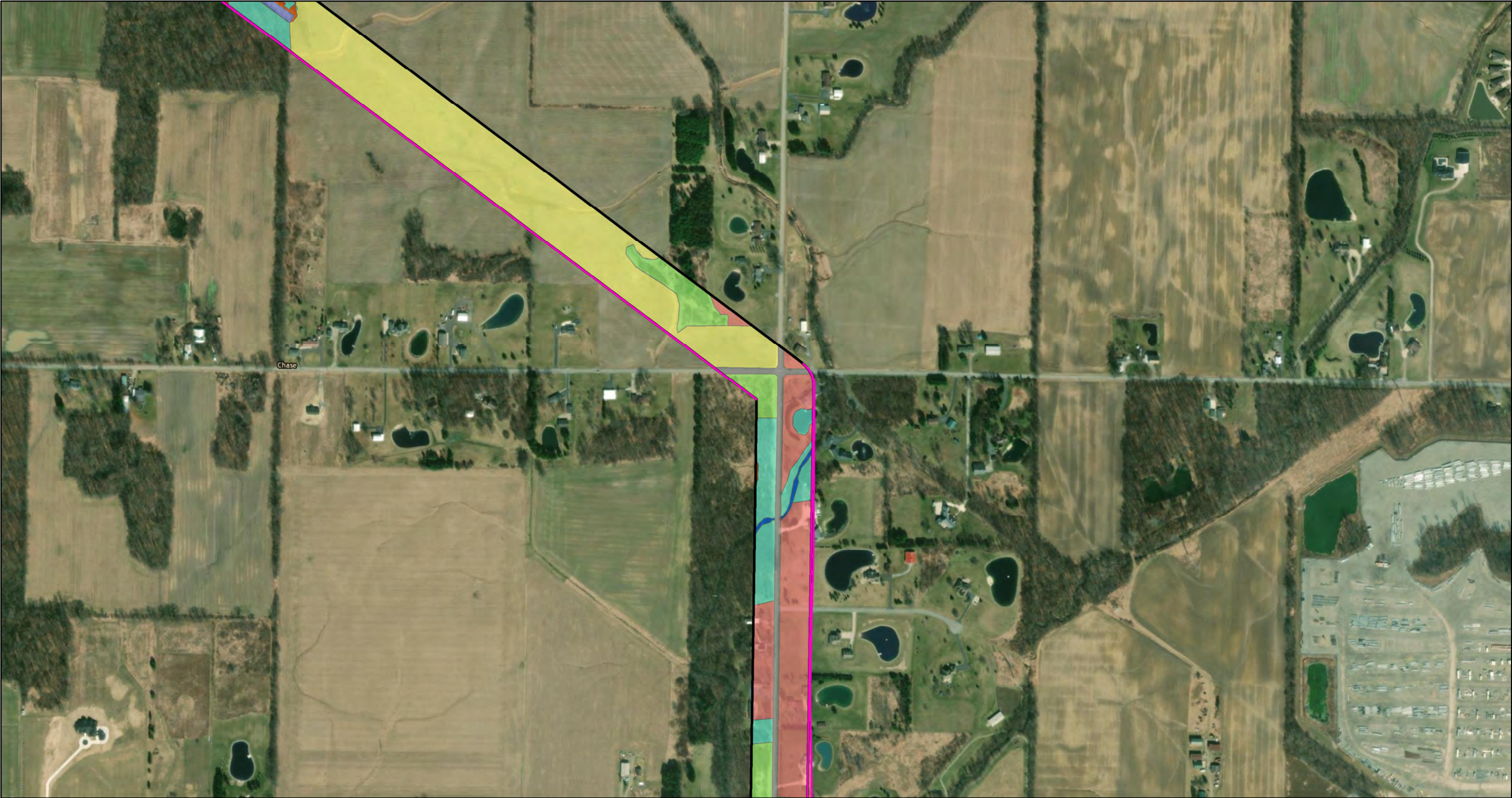


Figure 4.12
Habitat/Land Use Map

**New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project**

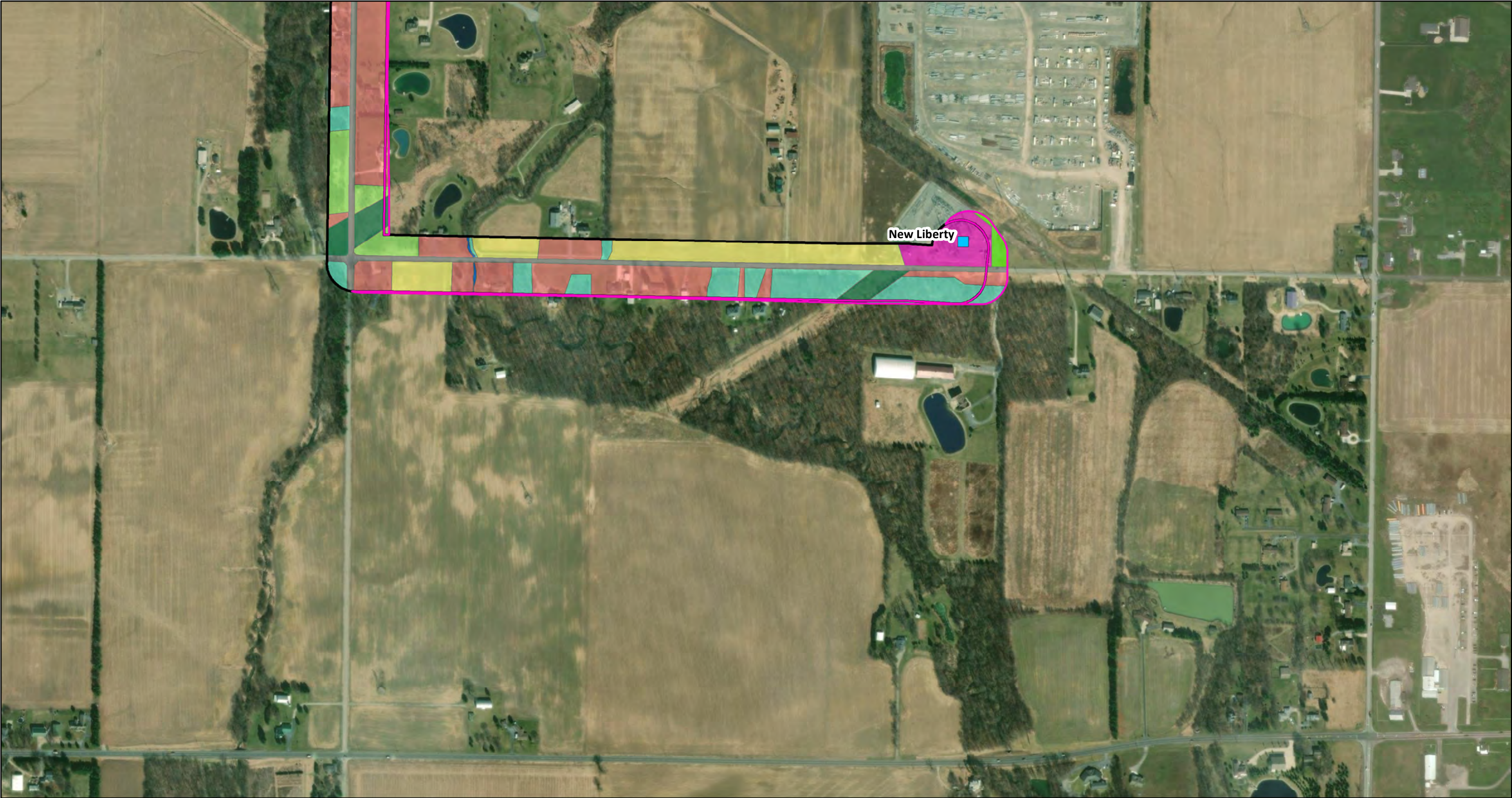
0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources: AEP, 2022/2024 ESRI USA Topo Maps		Figure 4.13 Habitat/Land Use Map New Liberty-East Leipsic 138 kV Transmission Line Rebuild Project 0 250 500 750 1,000 Feet
NAD 83 State Plane Ohio North		
January 10, 2025		



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2022/2024
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

January 10, 2025

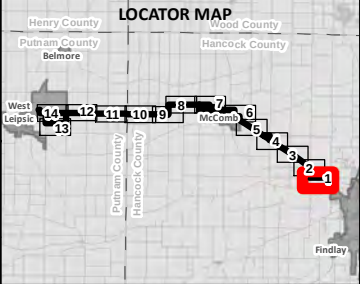


Figure 4.14
Habitat/Land Use Map

New Liberty-East Leipsic 138 kV
Transmission Line Rebuild Project

0 250 500 750 1,000
Feet

Appendix B

Jacobs Pond Forms

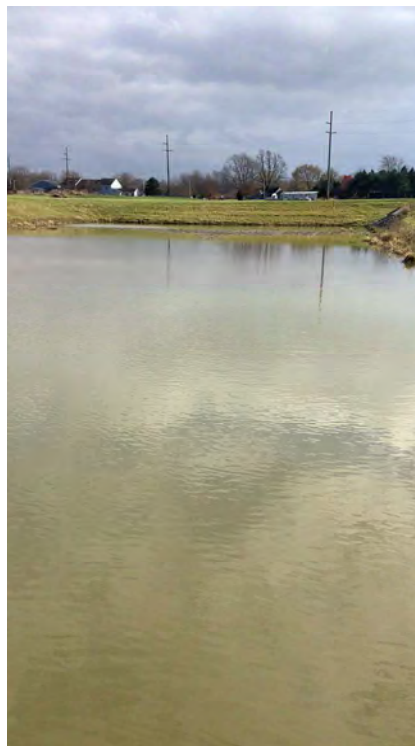
POND DATA SHEET

FEATURE ID: Pond EN-07		ASSOCIATED FEATURES:	
SURVEY TYPE: Wetland and waterbodies delineation			
DATE: 11/19/2024	CLIENT/PROJECT NAME: AEP New Liberty-East Leipsic		
INVESTIGATORS: JBL		ROUTE:	
STATE/COUNTY: Ohio Hancock		IS THIS A MAPPED NWI FEATURE?: no N/A	
WATERBODY CHARACTERISTICS			
WATERBODY TYPE:	pond		
AVG. DEPTH:	5		
AVG. WIDTH (WATER SURFACE):	100		
APPROXIMATE SIZE:	0.5 acre		
QUALITATIVE ATTRIBUTES			
AVERAGE WATER APPEARANCE:	Cloudy		
PRIMARY SUBSTRATE (IF OBSERVED):	Silt		
POTENTIAL HABITAT FOR:	Fish, frogs		
SURROUNDING LAND USE:	Mowed lawn		
WETLAND FRINGE (IF PRESENT):	None		
COMMENTS			
Pond P-JBL-111924-01			

Site Photos



NE



E

Addendum Ecological Survey Report

New Liberty-East Leipsic 138 kV Transmission Line Project Putnam and Hancock Counties, Ohio

Prepared for



April 2026

Jacobs

2 Crowne Point Court
Suite 100
Cincinnati, OH 45241

Contents

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3	Wetland and Waterbody Delineation	3-1
3.1	Desktop Review	3-1
3.2	Field Survey Methodology	3-1
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5	Protected Species	5-1
6	Conclusion.....	6-1
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Tables

- 2.2 Drainage Basins Crossed by the Project
- 4.4 Land Use and Natural Habitat

Appendices**A Figures**

- 1 Overview Map
- 2 Soils, NHD, NWI, Floodplain Map
- 3 Delineated Features Map
- 4 Land Use/Habitat Map

1 Introduction

This Addendum Report summarizes the results of ecological surveys conducted in Putnam and Hancock Counties, Ohio by Jacobs Engineering Group Inc. (Jacobs) for the American Electric Power Ohio Transco (AEP) New Liberty-East Leipsic 138 kV Transmission Line Project (Project). AEP is proposing to convert approximately 18 miles of 69 kV transmission line to 138 kV transmission line (Figure 1).

This report is an addendum to the previously submitted *Ecological Survey Report - East Leipsic-New Liberty 138 kV Transmission Line Project – December 2022* (referred to as the December 2022 Report) and the *Addendum Ecological Survey Report - East Leipsic-New Liberty 138 kV Transmission Line Project – January 2025* (January 2025 Addendum Report). Since the completion of the December 2022 Report and the January 2025 Addendum Report, the Project has expanded to include construction areas/access roads located outside of the previously surveyed areas. This Addendum Report includes the supplemental delineations which assessed an environmental survey boundary (Addendum ESB) consisting of access roads and pull pads/work pads, located outside of the previously surveyed areas. Previously identified features, data forms, photographs, and supporting information of the former surveys of the Project are contained within the December 2022 Report and the January 2025 Addendum Report and are not discussed in this addendum report. The results of the supplemental delineation are discussed herein.

2 Background Information

The Addendum ESB is located between New Liberty Station on Township Road 94 (41.0663, -83.6963) and extends westward to the East Leipsic Station off Township Road E (41.1115, -83.9645). It crosses the Village of Leipsic and Van Buren Township in Putnam County and the Village of McComb and townships of Liberty, Portage, and Pleasant in Hancock County, Ohio (Figure 1).

The U.S. Geological Survey (USGS) 7.5-minute topographic maps of the area (Leipsic, McComb, and Findlay, OH) indicate that the prominent drainage features in the Project area include Little Yellow Creek, Yellow Creek, West Creek, Needles Creek, Rader Creek, and unnamed tributaries of Blanchard River (USGS 2022). Topographic relief is limited to relatively gradual elevation changes and generally increases in elevation moving southeast, with elevations ranging between 734 feet and 811 feet above sea level throughout the Addendum ESB (Figure 1).

Land use and natural habitats observed within the Addendum ESB include agriculture, commercial lawn, residential, park and herbaceous maintained ROW.

2.1 Drainage Basins

The Addendum ESB is within the Lower Maumee, Cedar-Portage, and Blanchard drainage basins (8-digit Hydrologic Unit Codes [HUCs] 04100009, 04100010, and 04100008, respectively). More specifically it crosses five 12-digit HUC sub-watersheds outlined in Table 2.2.

Table 2.2 Drainage Basins Crossed by the Project

*New Liberty-East Leipsic 138 kV Transmission Line Project
(Addendum)*

12-Digit HUC Name	12-Digit HUC
Upper Yellow Creek	04100009-05-04
Needles Creek	04100010-01-02
Rader Creek	04100010-01-01
Rocky Ford	04100010-01-03
Howard Run-Blanchard River	04100008-03-04

Source: USGS 2022

3 Wetland and Waterbody Delineation

3.1 Desktop Review

Prior to conducting the field investigations, Jacobs reviewed the following resources to identify the potential for wetlands within the Addendum ESB:

- Aerial photo-based map (Esri 2026)
- USGS Topographic maps (USGS 2023)
- Web Soil Survey (NRCS 2025)
- NHD map (USGS 2025)
- NWI map (USFWS 2025)

Soils were observed and documented as part of the delineation methodology. No new soil map units were identified during the Addendum ESB. A list of soil map units identified within the Ecological Survey Boundary is provided in the December 2022 Report and the January 2025 Addendum Report. Soil map units identified within the Addendum ESB are provided in Figure 2.

NWI data were obtained from the U.S. Fish and Wildlife Service (USFWS) for review of potential wetlands that may occur within the Addendum ESB. The NWI data (USFWS 2025) identify the type of wetland or open water present at a location using the USFWS classification system (FGDC 2013). The presence of an NWI feature is not a definitive indicator that a wetland or waterbody is present. The information on NWI maps is obtained largely from aerial interpretation, may be outdated, and is only sporadically field-checked.

The Addendum ESB does not cross any FEMA 100-year floodplains (FEMA 2025), as displayed in Figure 2.

3.2 Field Survey Methodology

Jacobs' biologists surveyed the Addendum ESB by walking the area and evaluating for wetlands and other waterbodies. A comprehensive methodology of the field surveys and data reviews completed for this Addendum Report are included within the December 2022 Report.

4 Field Survey Results

Jacobs' biologists identified no new wetlands, streams or ponds in the Addendum ESB. In addition, no previously identified wetlands, streams or ponds were extended into the Addendum ESB. The locations of the previously delineated features are displayed on the Delineated Features Map (Figure 3). Forms and representative photographs of previously delineated wetlands, streams and ponds are provided in the December 2022 Report and the January 2025 Addendum Report. Jacobs defaults to the USACE and OEPA for the final determination of hydrologic connectivity and jurisdiction.

4.1 Wetlands

No new wetlands were delineated within the Addendum ESB. Additionally, no previously delineated wetlands were extended into the Addendum ESB.

4.1.1 NWI Field Verification

The NWI data indicated that there are no mapped features within the Addendum ESB (Figure 2; USFWS 2025).

4.2 Streams

No new streams were delineated within the Addendum ESB. Additionally, no previously delineated streams were extended into the Addendum ESB.

4.3 Ponds/Open Water

No new ponds were identified within the Addendum ESB. No previously delineated ponds were extended into the Addendum ESB.

4.4 Land Use/Habitat

In addition to the delineated wetland and waterbody features, Jacobs observed the following land use types and natural habitats within the Addendum ESB: agriculture, commercial lawn, herbaceous maintained ROW, residential and park areas (Figure 4). Based on Jacobs' observations, the primary land use in the Addendum ESB is agriculture. All the land use types within the Addendum ESB were previously identified within the December 2022 Report. Land use descriptions and percentages within the Addendum ESB are outlined in Table 4.4.

Table 4.4 Land Use and Natural Habitat

New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)

Land Use and Natural Habitats	Land Use and Habitat Description	Approximate Acreage in Addendum ESB	Approximate Percentage of Addendum ESB
Agriculture	Areas currently used or recently used for farming purposes and may include existing row crop and similar areas.	2.78	73%
Commercial Lawn	Areas where commercial properties are present. This includes associated yards, outbuildings (garages, sheds, etc.), gardens, golf courses, and other maintained landscaped areas associated with the commercial property. These landscaped areas contain frequently mowed grasses and forbs.	0.36	10%

Table 4.4 Land Use and Natural Habitat*New Liberty-East Leipsic 138 kV Transmission Line Project (Addendum)*

Land Use and Natural Habitats	Land Use and Habitat Description	Approximate Acreage in Addendum ESB	Approximate Percentage of Addendum ESB
Herbaceous Maintained ROW	Areas that are regularly maintained and dominated by primarily upland herbaceous vegetation, such as smooth brome (<i>Bromus inermis</i>), tall fescue (<i>Schedonorus arundinaceus</i>), Queen Anne's lace (<i>Daucus carota</i>), tall goldenrod (<i>Solidago altissima</i>), common mullein (<i>Verbascum thapsus</i>), and others. This community may have some wetland vegetation and/or upland shrub vegetation present to a lesser extent.	0.02	1%
Park	Areas that tend to be dominated by maintained lawns where the public can hike, fish, or engage in other outdoor activities.	0.48	12%
Residential	Areas where residential properties are present. This includes yards, outbuildings (garages, sheds, etc.), gardens, and other maintained landscaped areas that contain frequently mowed grasses and forbs.	0.16	4%

5 Protected Species

Correspondence for state and federal listed species were completed as part of the original project and included within the December 2022 Report. Jacobs reviewed the previous correspondences with the USFWS and ODNR to identify the potential presence of listed species and/or their habitat within the Addendum ESB. Based on the field survey, the Addendum ESB is primarily agricultural fields and regularly maintained lawns. The Addendum ESB does not provide potentially suitable habitat for any of the identified species. A summary of USFWS and ODNR listed species is provided in the December 2022 Report and the January 2025 Addendum Report.

6 Conclusion

This report summarizes the results of environmental surveys of the Addendum ESB of AEP's New Liberty-East Leipsic 138 kV Transmission Line Project. Since the completion of the December 2022 Report and the January 2025 Addendum Report, the Project has expanded to include construction areas/access roads located outside of the previously surveyed areas.

No new wetlands, streams or ponds were delineated within the Addendum ESB. Additionally, no previously delineated streams, wetlands or ponds were extended into the Addendum ESB. Data forms, photographs, and supporting information of the previously delineated features are provided within the December 2022 Report and the January 2025 Addendum Report. Final jurisdictional status of the identified waterbodies can only be determined by the USACE. Further coordination is recommended prior to the submittal of any permit or construction activities.

The results of the environmental survey described in this report conducted by Jacobs are limited to what was identified within the Addendum ESB. The information contained in this ecological survey report is for a study area that may be much larger than the actual Project limits-of-disturbance for construction; therefore, lengths and acreages listed in this report may likely not constitute the actual impacts of the Project at the time of construction. If permits are determined to be necessary, actual impacted lengths and/or acreages will be submitted in subsequent permit applications.

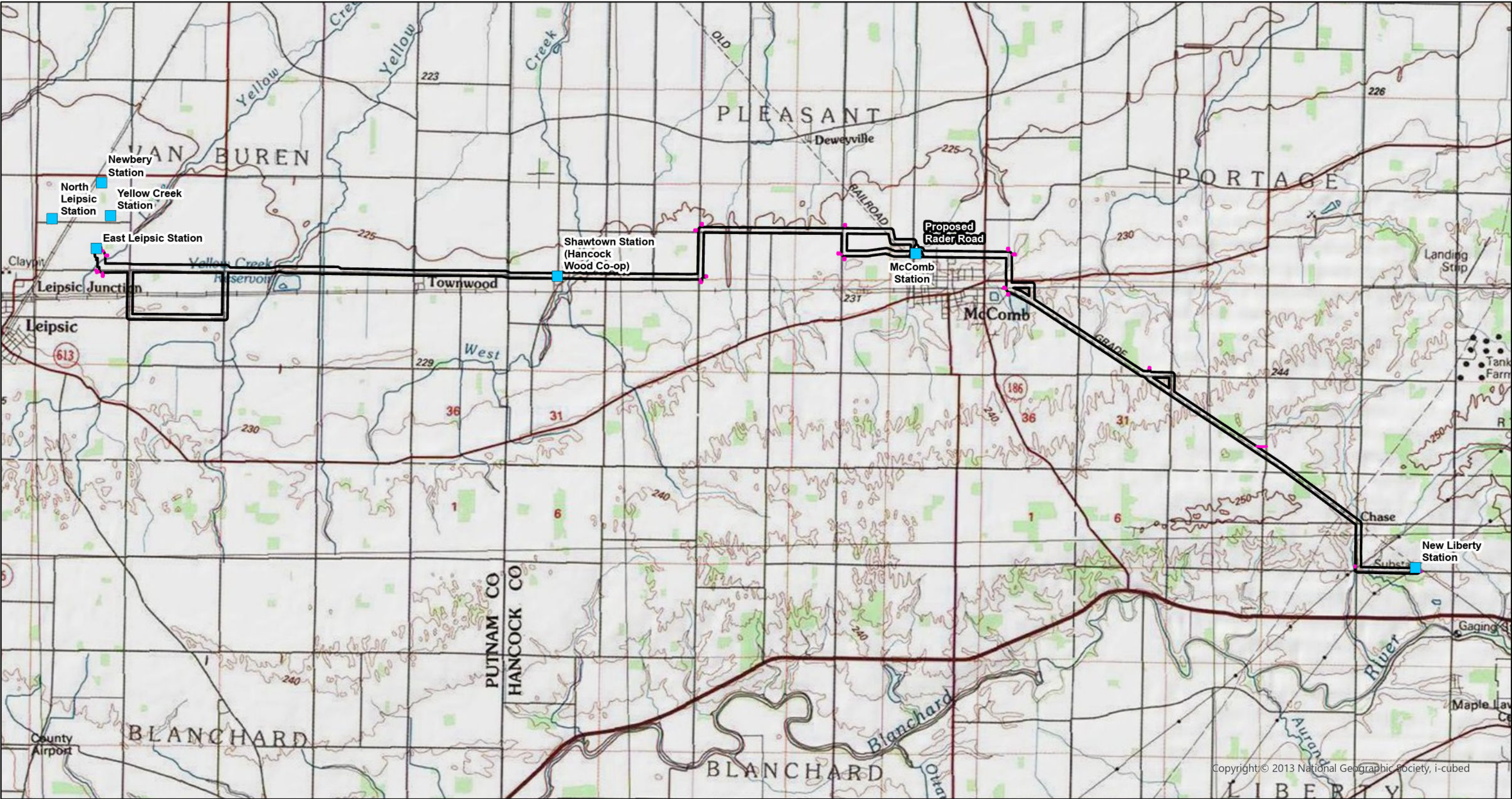
The wetland and waterbodies delineation survey results presented within this report apply to the site conditions at the time of our assessment. Changes within the Addendum ESB that may occur with time due to natural processes or human impacts at the project site or on adjacent properties, could invalidate the findings of this report, especially if Jacobs is unaware and has not had the opportunity to revisit the Addendum ESB. Additionally, changes in applicable standards and regulations may also occur as a result of legislation or the expansion of scientific research over time. Therefore, the findings of this wetland and waterbodies delineation report may be invalidated, wholly or in part, by changes that are beyond the control of Jacobs.

7 References

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Appendix A

Figures



- Legend
- Existing Station
 - Proposed Station
 - Previous Environmental Survey Corridor
 - Addendum Environmental Survey Boundary (2026)

Data Sources:
AEP, 2026;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

April 21, 2026

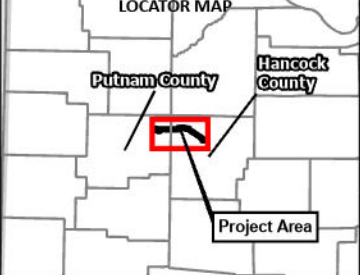
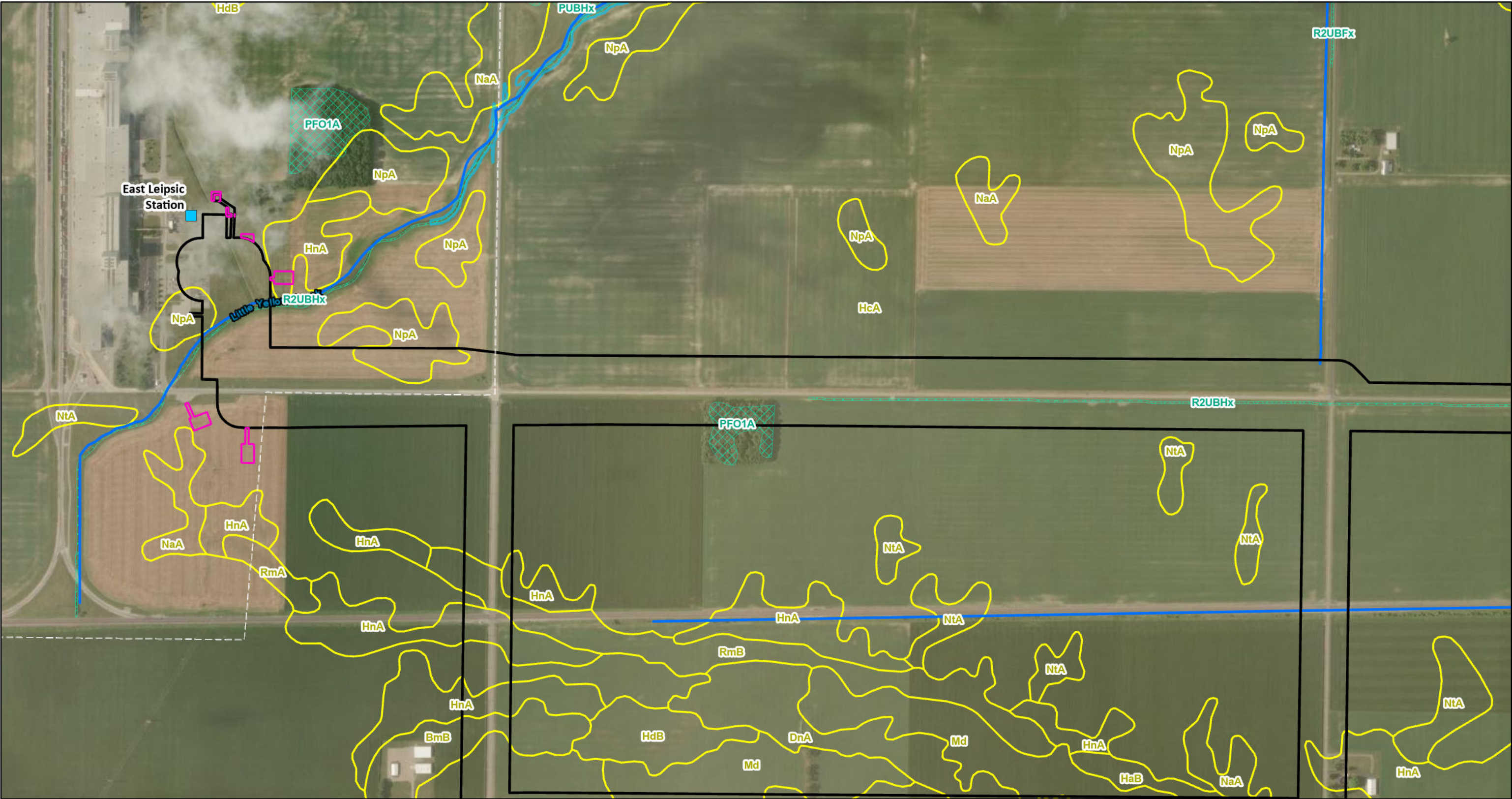


Figure 1
Project Overview

**New Liberty-East Leipsic 138-kV
Transmission Line Project Addendum**

0 0.25 0.5 0.75 1
Miles



Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Previous Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary (2026)

— Stream (NHD)

— Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▭ Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

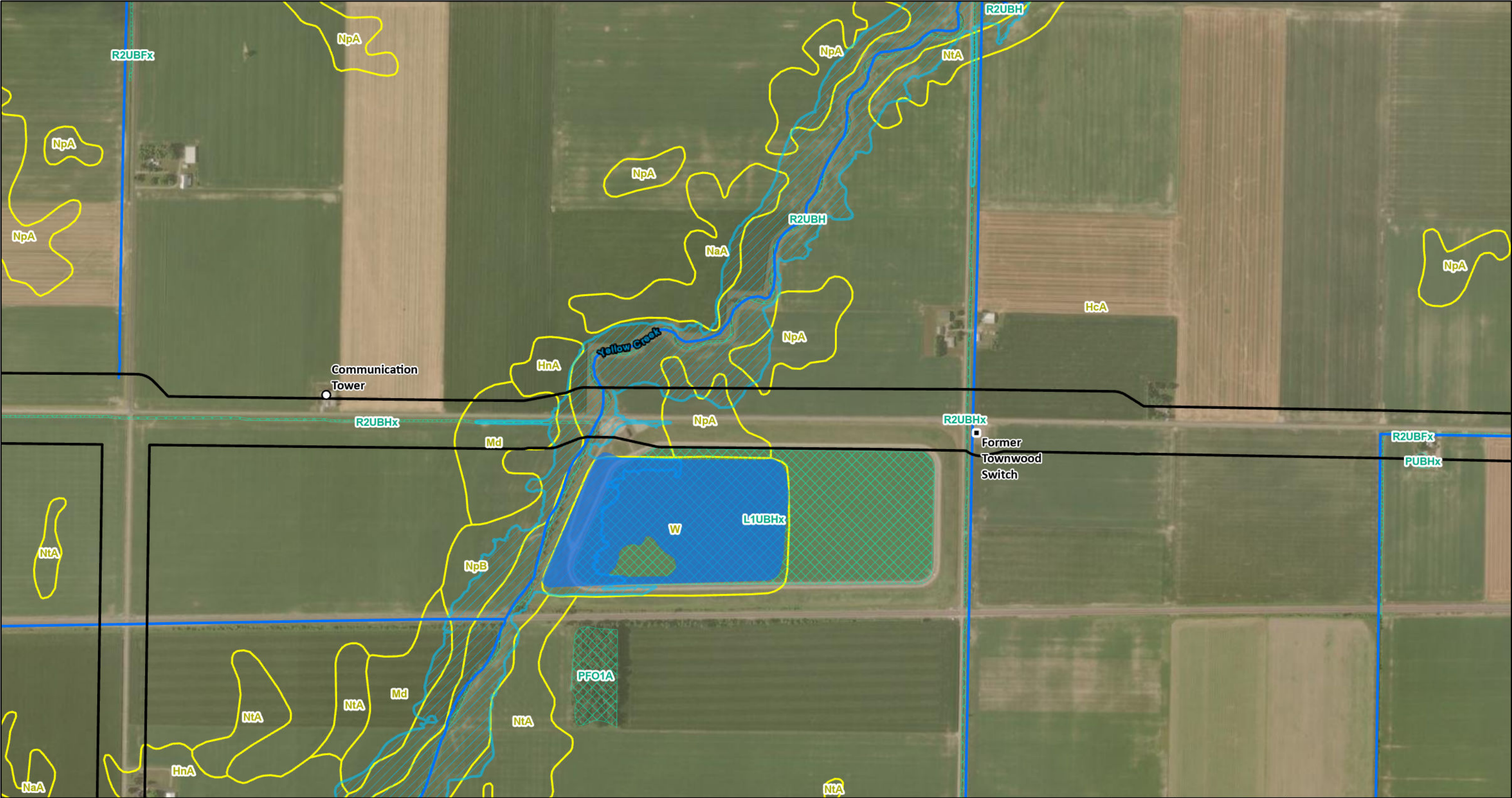
April 21, 2026

LOCATOR MAP

Figure 2.1
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Previous Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary (2026)

— Stream (NHD)

■ Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▭ Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

April 21, 2026

LOCATOR MAP

Figure 2.2
Soils, NHD, NWI, Floodplain Map

**New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum**

AEP OHIO
POWERLESS ENERGY

0 250 500 750 1,000
Feet



Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▬ Previous Environmental Survey Corridor

▬ Addendum Environmental Survey Boundary (2026)

— Stream (NHD)

— Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▭ Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

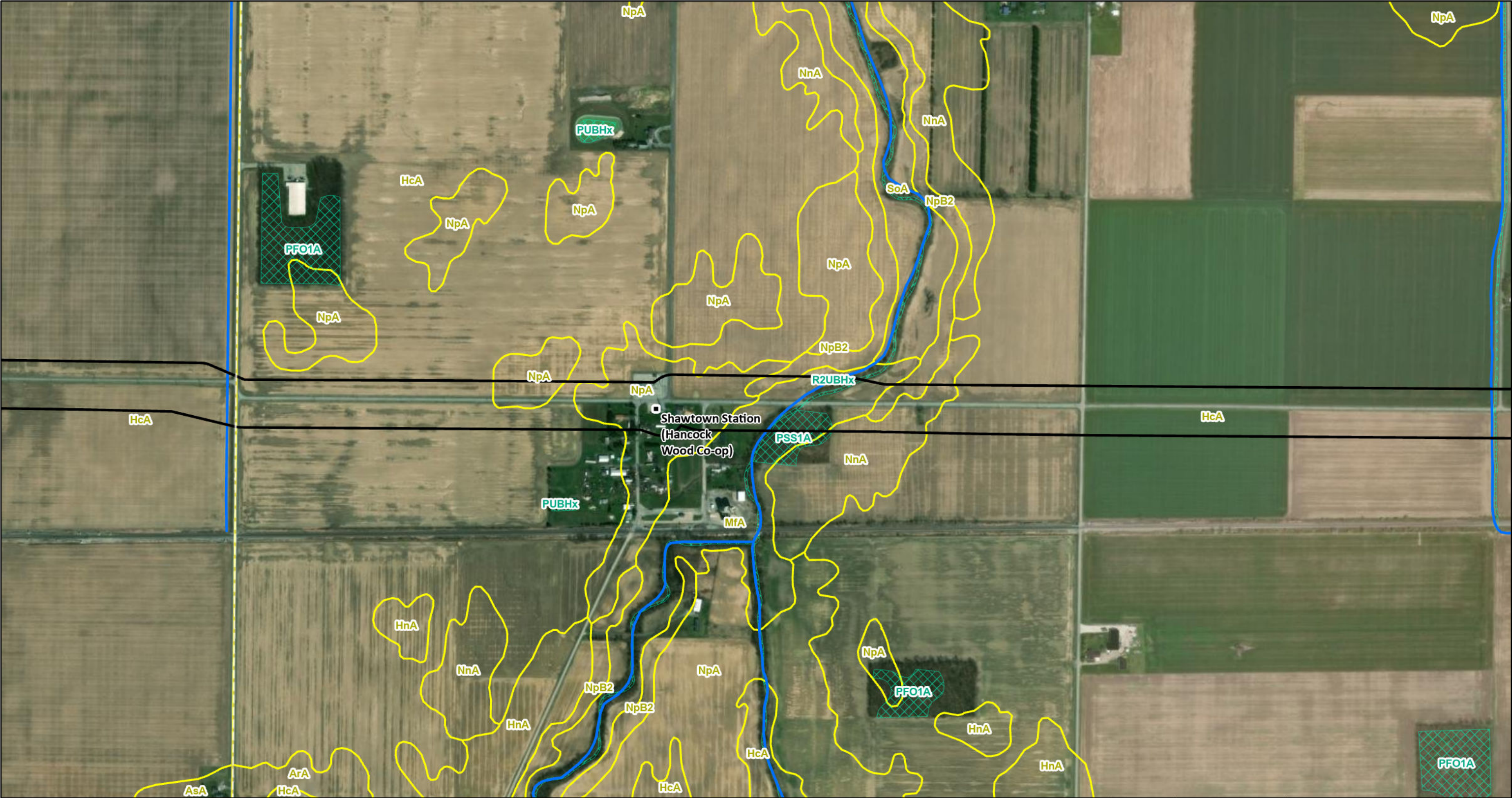
April 21, 2026

LOCATOR MAP

Figure 2.3
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Previous Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary (2026)

— Stream (NHD)

— Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▨ Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

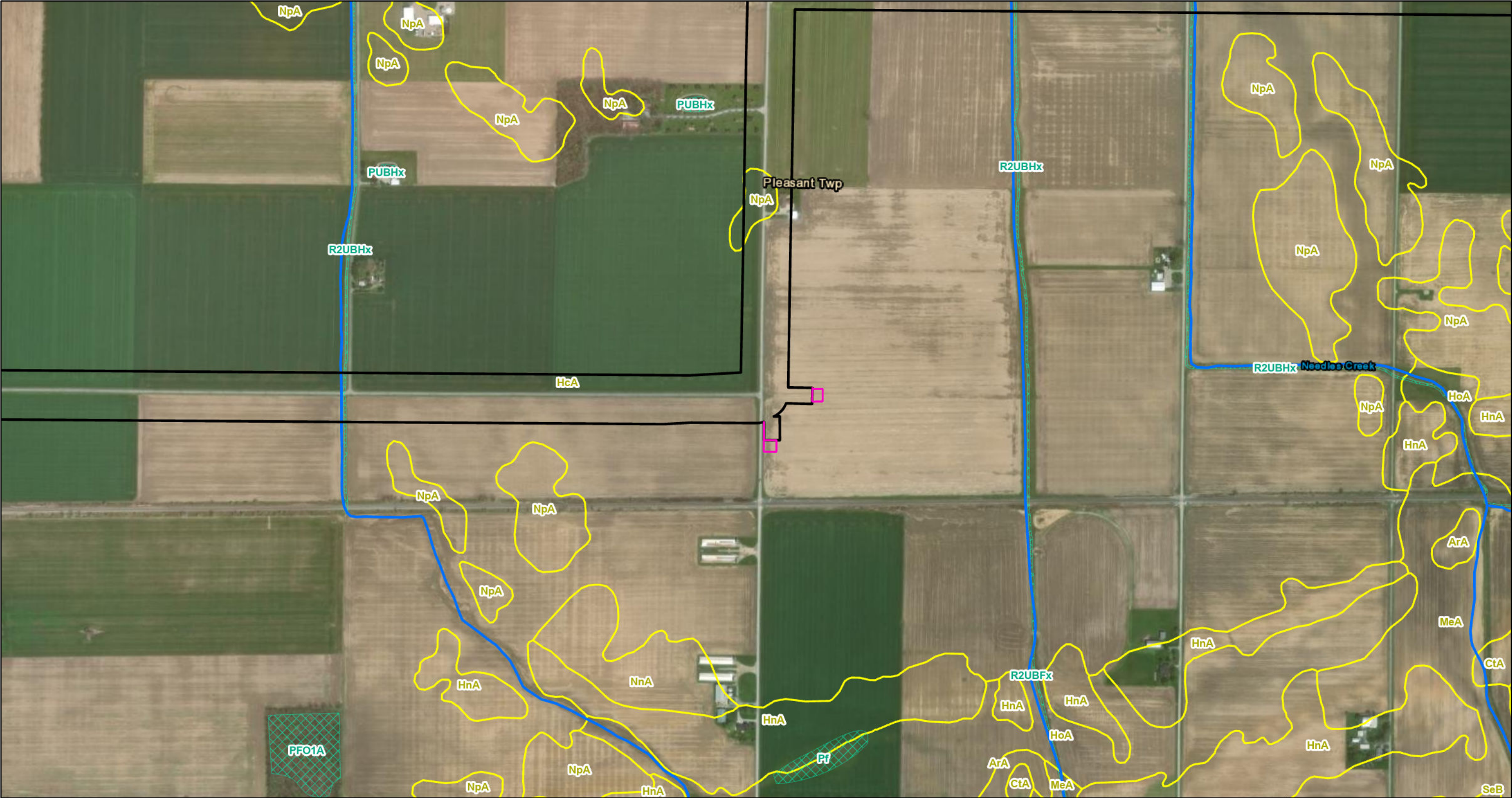
April 21, 2026

LOCATOR MAP

Figure 2.4
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

Existing Station

Proposed Station

Switch Station

Communication Tower

Previous Environmental Survey Corridor

Addendum Environmental Survey Boundary (2026)

Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

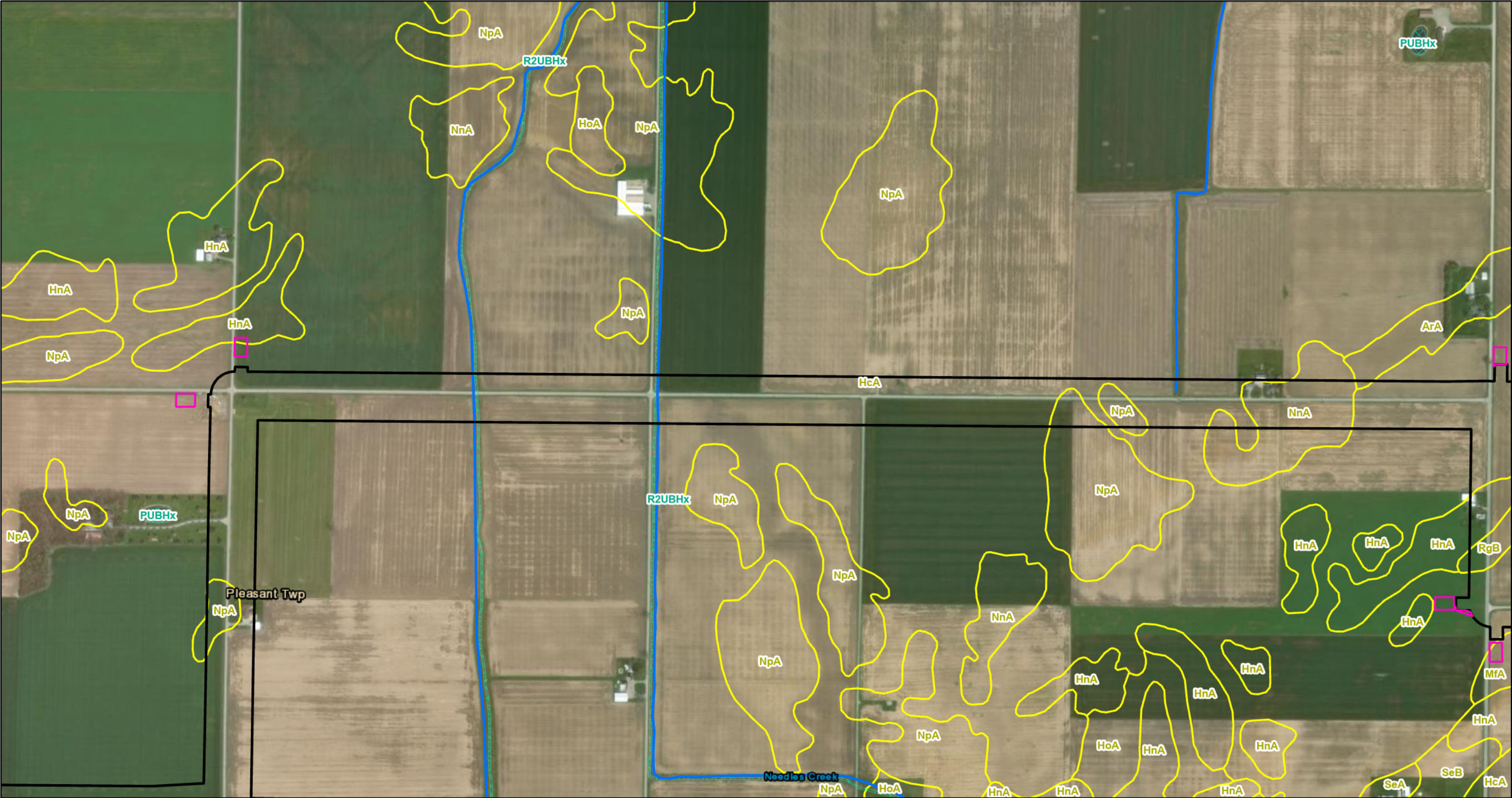
April 21, 2026

LOCATOR MAP

Figure 2.5
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Previous Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary (2026)

— Stream (NHD)

— Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▭ Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

▲

N

April 21, 2026

LOCATOR MAP

Belmore

Leipsic

14

13

12

11

10

9

8

7

6

5

4

3

2

1

Findlay

Figure 2.6

Soils, NHD, NWI, Floodplain Map

AEP OHIO

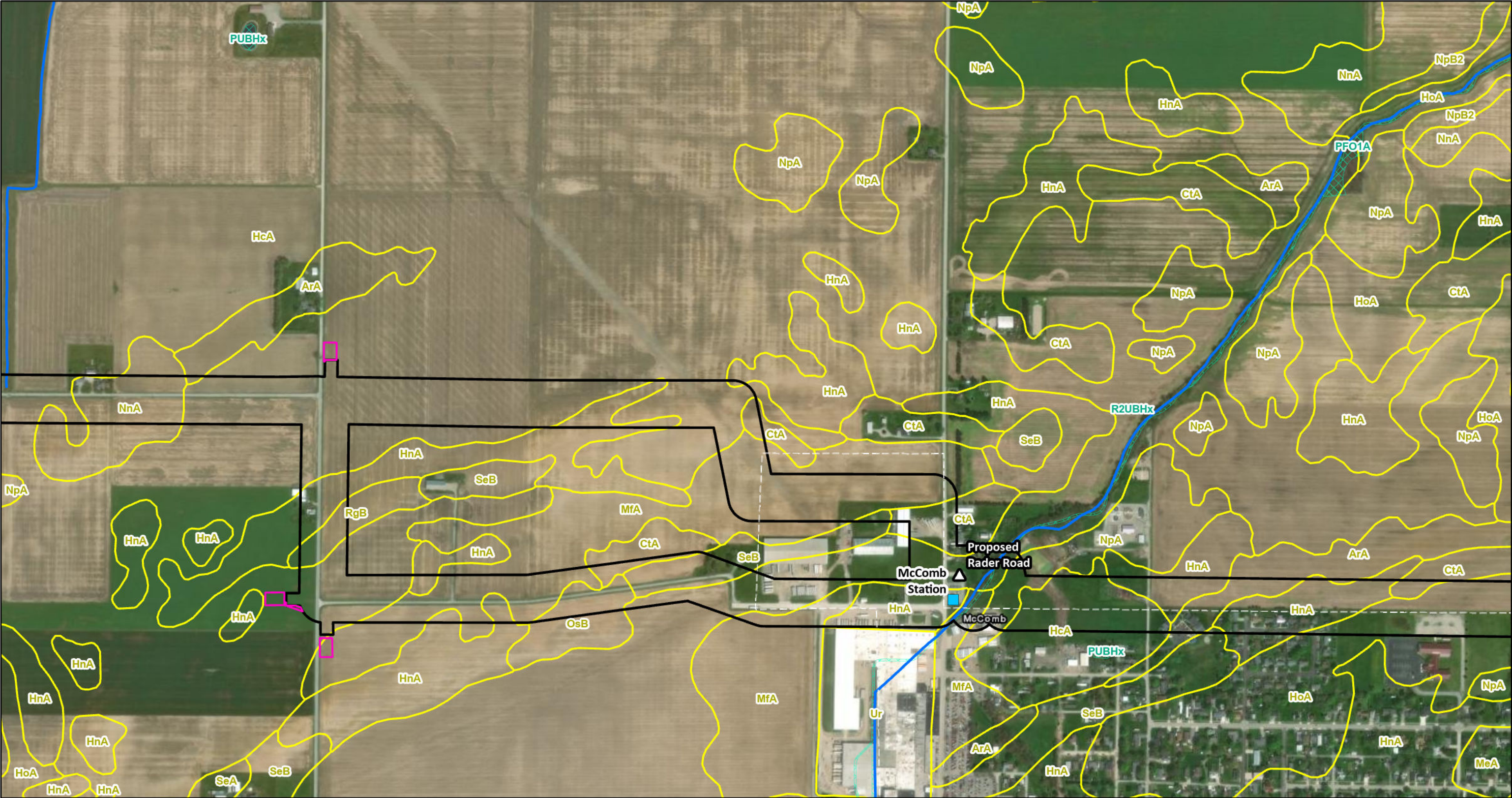
in partnership with

BOUNDLESS ENERGY

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000

Feet



Legend

Existing Station

Proposed Station

Switch Station

Communication Tower

Previous Environmental Survey Corridor

Addendum Environmental Survey Boundary (2026)

Stream (NHD)

Waterbody (NHD)

Wetland (NWI)

100-Year Floodplain (FEMA)

Floodway (FEMA)

Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

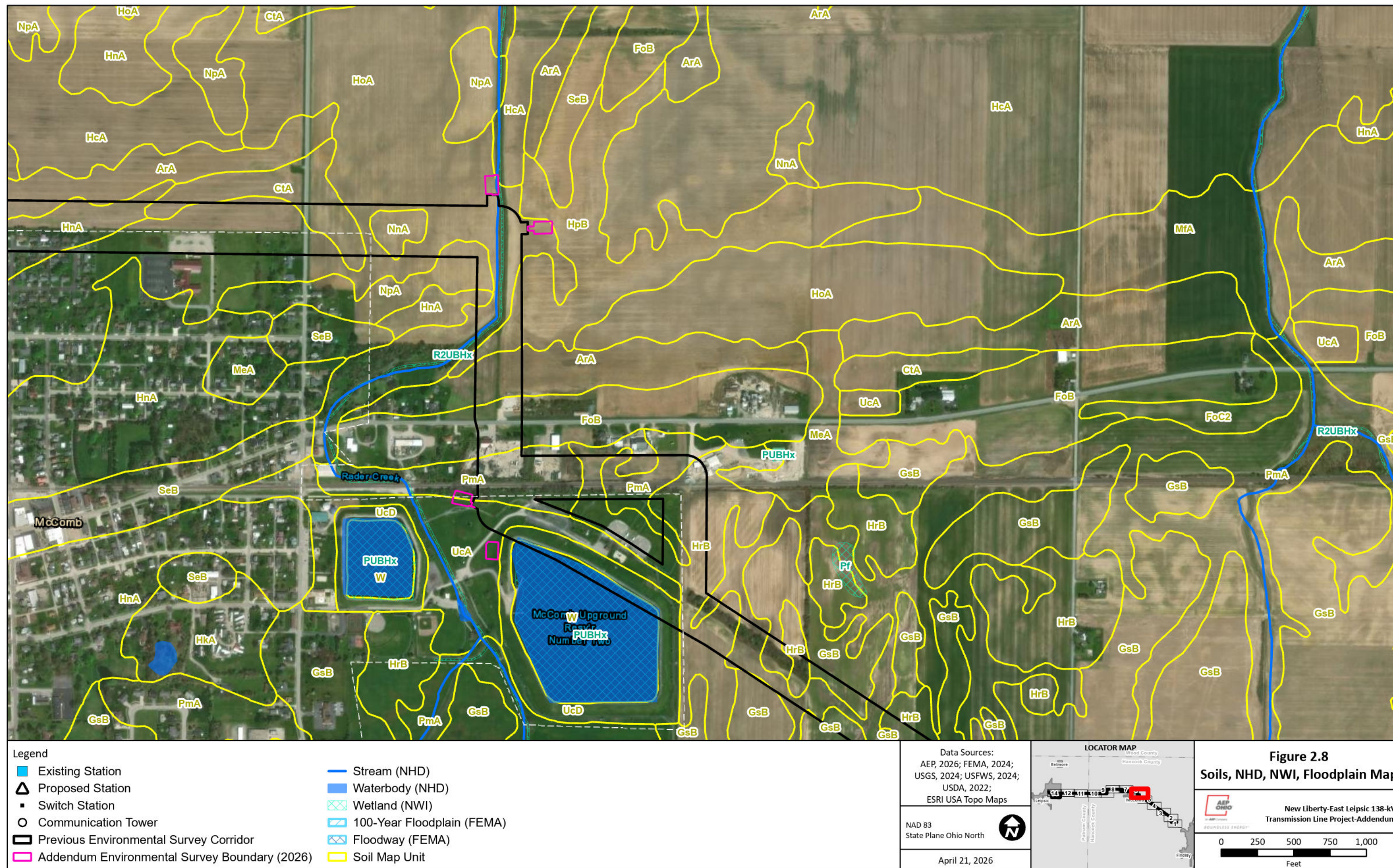
April 21, 2026

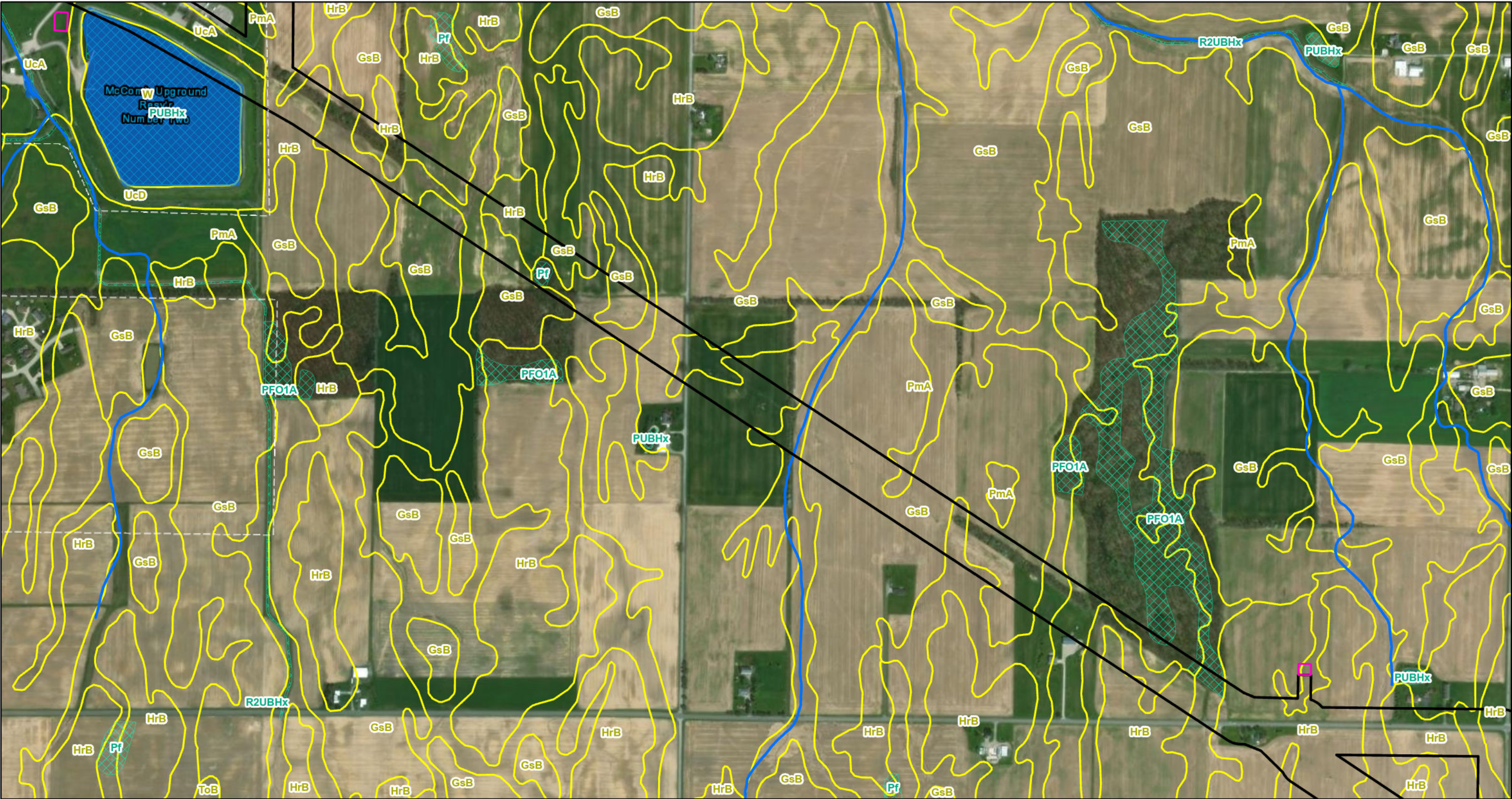
LOCATOR MAP

Figure 2.7
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

Feet





Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Previous Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary (2026)

— Stream (NHD)

— Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▨ Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

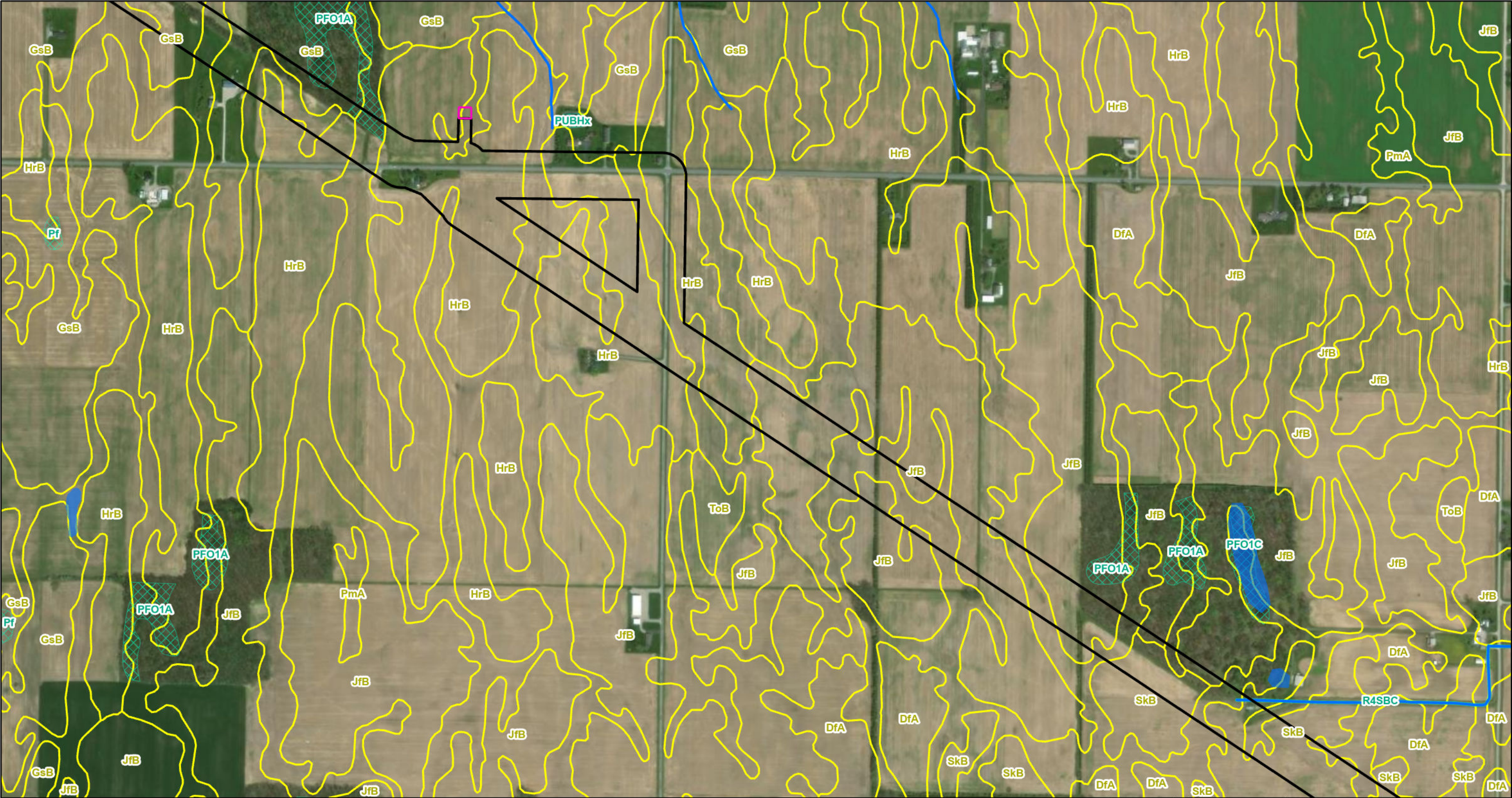
April 21, 2026

LOCATOR MAP

Figure 2.9
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

■ Existing Station

▲ Proposed Station

■ Switch Station

○ Communication Tower

▭ Previous Environmental Survey Corridor

▭ Addendum Environmental Survey Boundary (2026)

— Stream (NHD)

— Waterbody (NHD)

▨ Wetland (NWI)

▨ 100-Year Floodplain (FEMA)

▨ Floodway (FEMA)

▨ Soil Map Unit

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

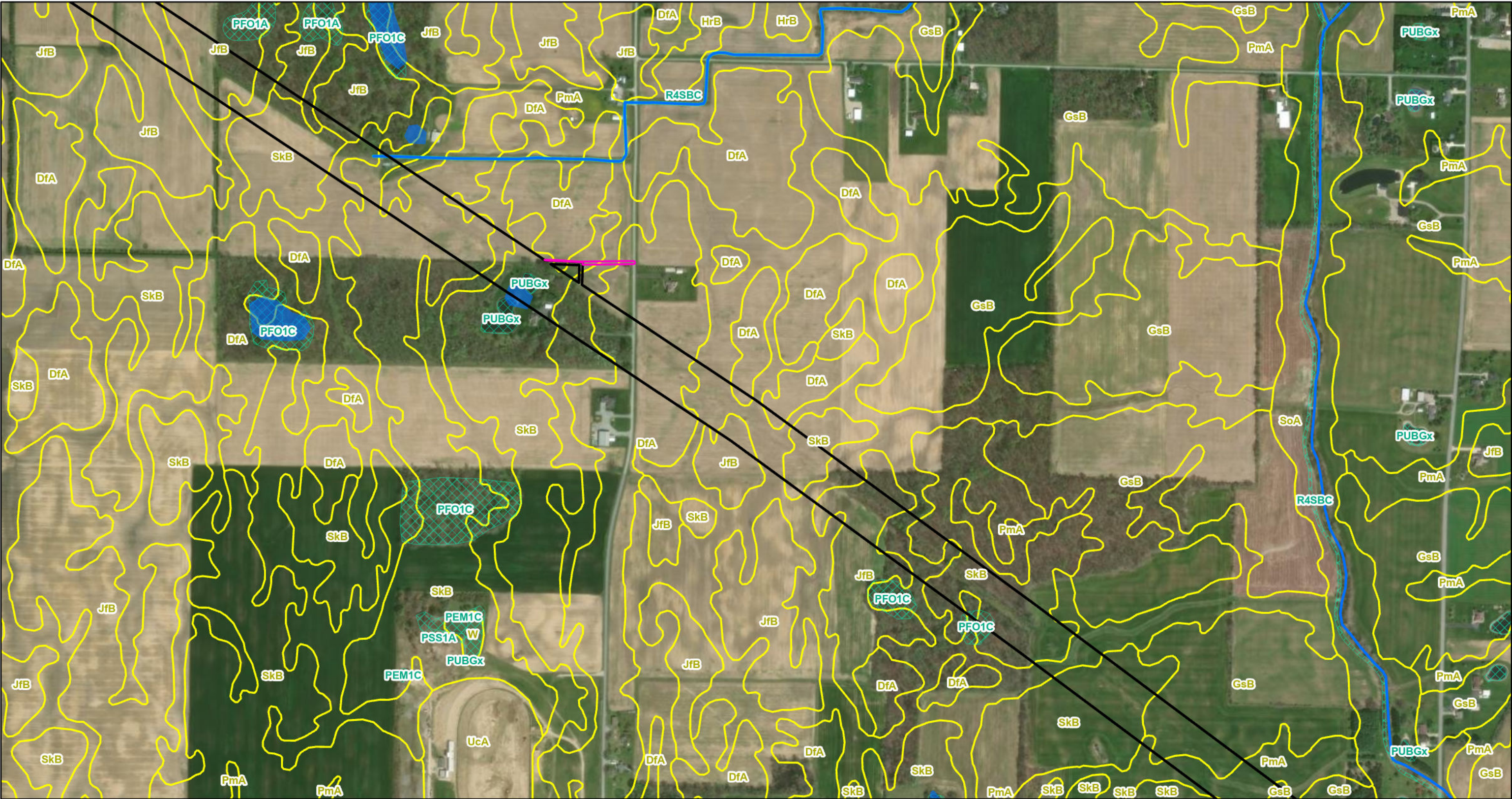
April 21, 2026

LOCATOR MAP

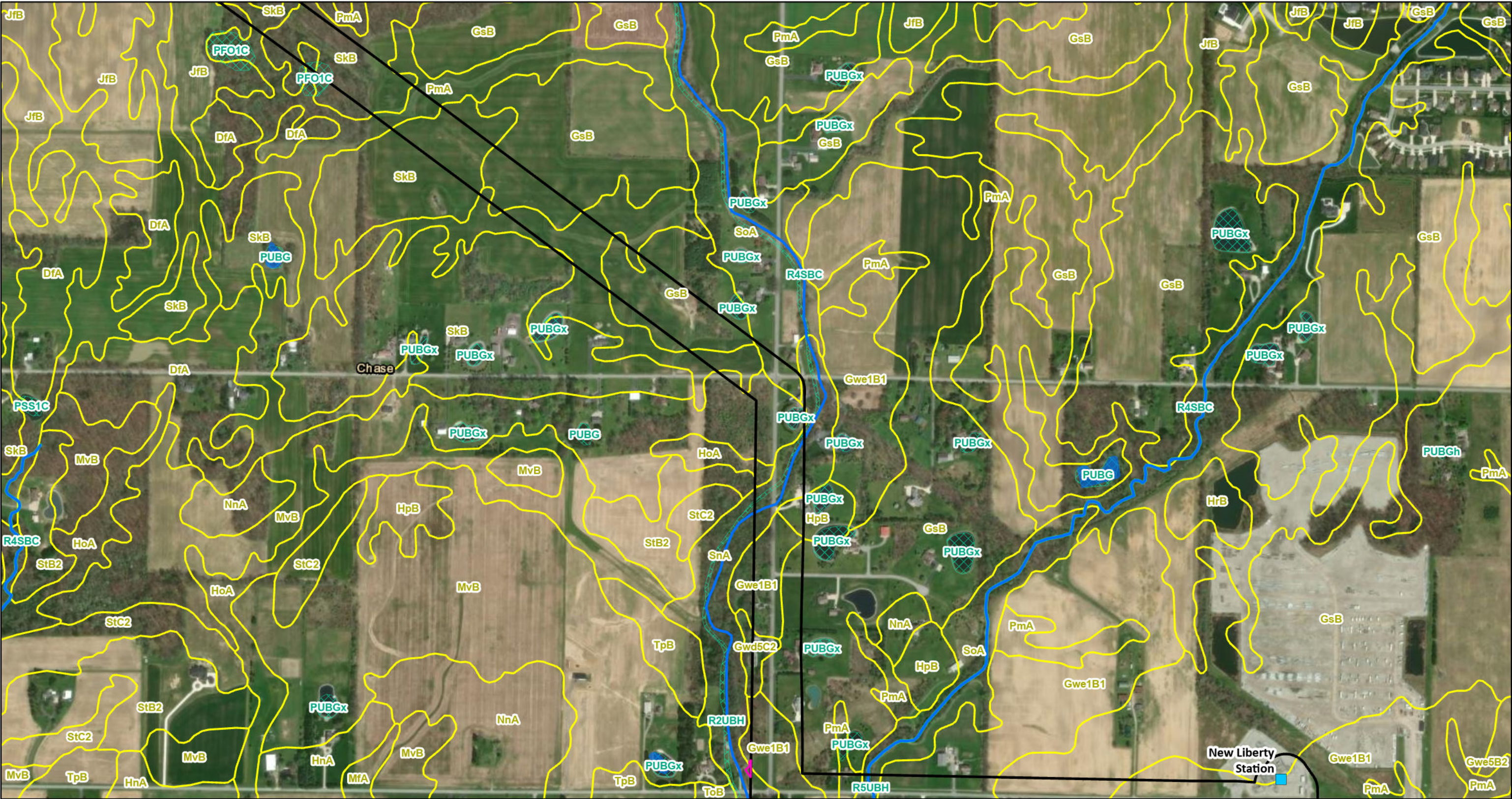
Figure 2.10
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

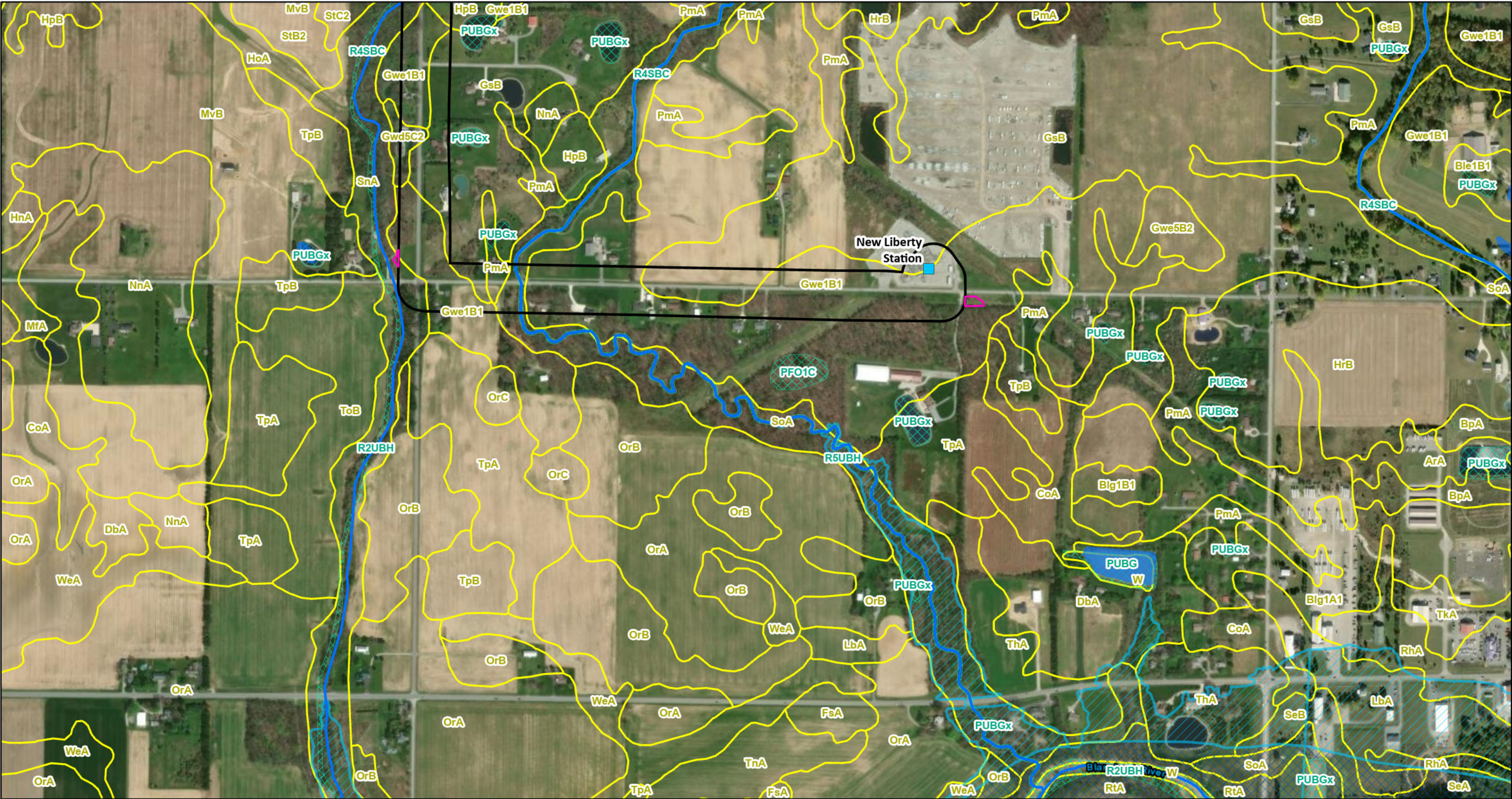
0 250 500 750 1,000
Feet



Legend - Existing Station - Proposed Station - Switch Station - Communication Tower - Previous Environmental Survey Corridor - Addendum Environmental Survey Boundary (2026)	- Stream (NHD) - Waterbody (NHD) - Wetland (NWI) 100-Year Floodplain (FEMA) - Floodway (FEMA) - Soil Map Unit	Data Sources: AEP, 2026; FEMA, 2024; USGS, 2024; USFWS, 2024; USDA, 2022; ESRI USA Topo Maps NAD 83 State Plane Ohio North April 21, 2026	LOCATOR MAP	Figure 2.11 Soils, NHD, NWI, Floodplain Map New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum 0 250 500 750 1,000 Feet
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Legend		Data Sources: AEP, 2026; FEMA, 2024; USGS, 2024; USFWS, 2024; USDA, 2022; ESRI USA Topo Maps NAD 83 State Plane Ohio North April 21, 2026	LOCATOR MAP	Figure 2.12 Soils, NHD, NWI, Floodplain Map New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum
Existing Station	Stream (NHD)			
Proposed Station	Waterbody (NHD)			
Switch Station	Wetland (NWI)			
Communication Tower	100-Year Floodplain (FEMA)			
Previous Environmental Survey Corridor	Floodway (FEMA)			
Addendum Environmental Survey Boundary (2026)	Soil Map Unit			



Legend

- | | |
|---|--|
|  Existing Station |  Stream (NHD) |
|  Proposed Station |  Waterbody (NHD) |
|  Switch Station |  Wetland (NWI) |
|  Communication Tower |  100-Year Floodplain (FEMA) |
|  Previous Environmental Survey Corridor |  Floodway (FEMA) |
|  Addendum Environmental Survey Boundary (2026) |  Soil Map Unit |

Data Sources:
AEP, 2026; FEMA, 2024;
USGS, 2024; USFWS, 2024;
USDA, 2022;
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

April 21, 2026



Figure 2.13
Soils, NHD, NWI, Floodplain Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

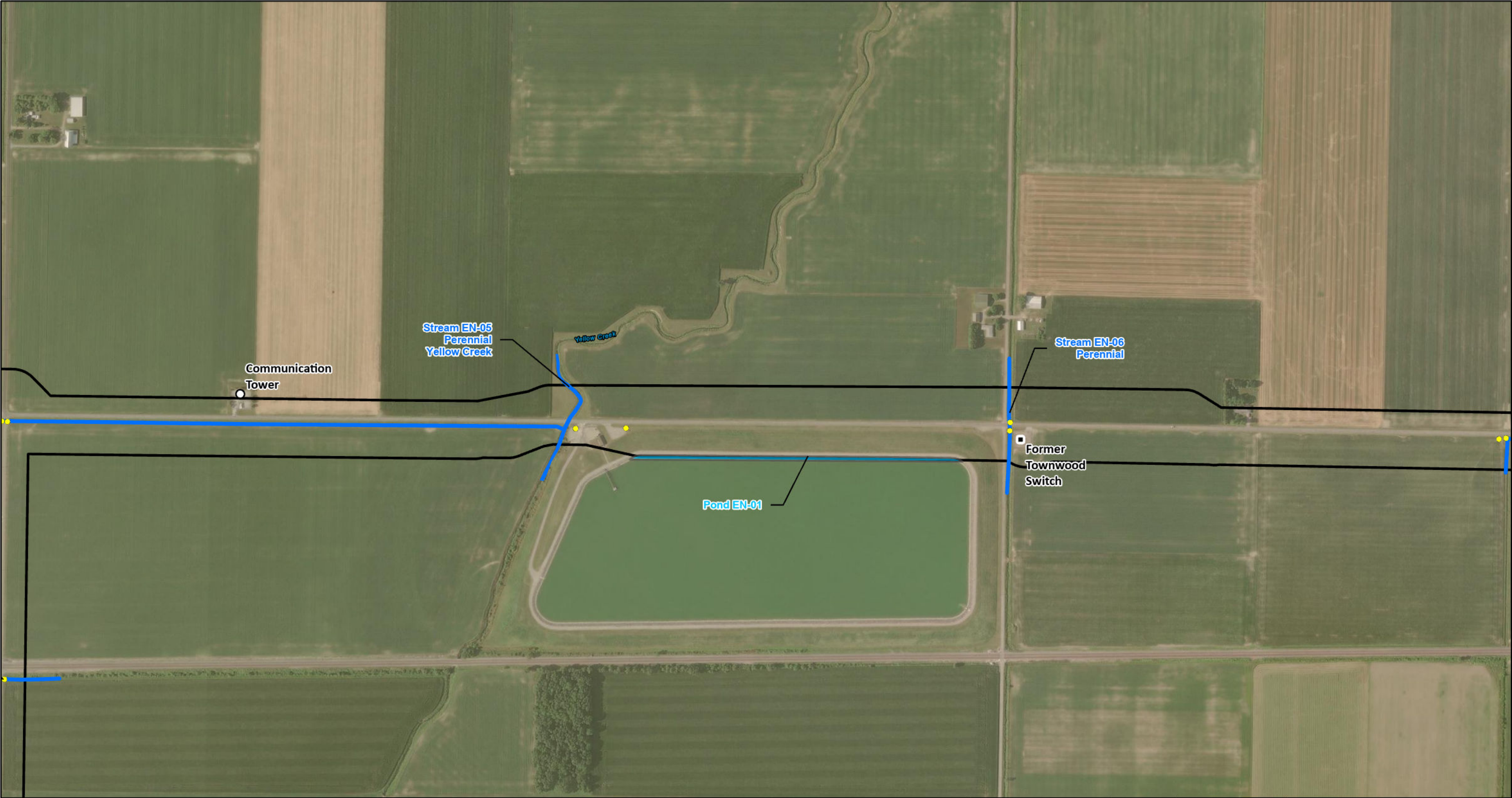
0 250 500 750 1,000
Feet



Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources: AEP, 2026 ESRI USA Topo Maps NAD 83 State Plane Ohio North April 21, 2026		Figure 3.1 Delineated Features Map
		 AEP OHIO AEP OHIO
		New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum 0 250 500 750 1,000 Feet



Legend

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|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North



April 21, 2026

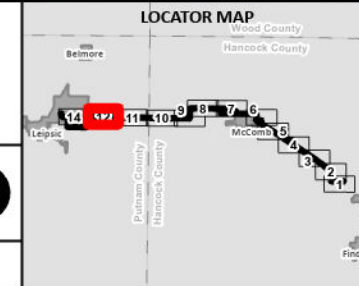
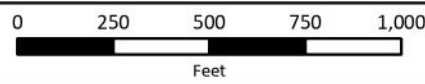


Figure 3.2
Delineated Features Map



New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum





Legend

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|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

April 21, 2026

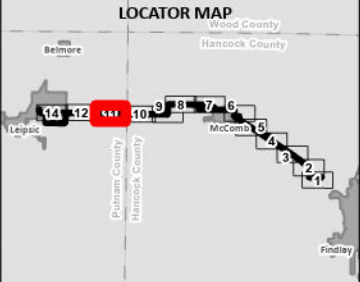


Figure 3.3
Delineated Features Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend			Data Sources: AEP, 2026 ESRI USA Topo Maps	LOCATOR MAP 	Figure 3.4 Delineated Features Map New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum	
Existing Station	Addendum Environmental Survey Boundary (2026)	Delineated Stream				 Feet
Proposed Station	Wetland Data Point	Delineated Wetland (PEM)				
Switch Station	Upland Data Point	Delineated Wetland (PFO)				
Communication Tower	Existing Culvert	Delineated Wetland (PSS)				
Previous Environmental Survey Corridor	Upland Drainage Feature	Delineated Pond				
			NAD 83 State Plane Ohio North April 21, 2026			



Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North



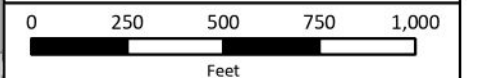
April 21, 2026



Figure 3.5
Delineated Features Map



New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum





Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

April 21, 2026

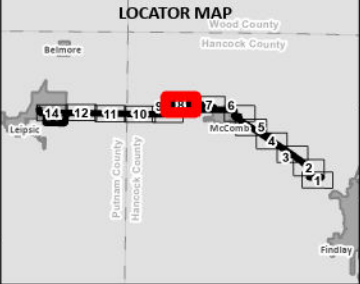
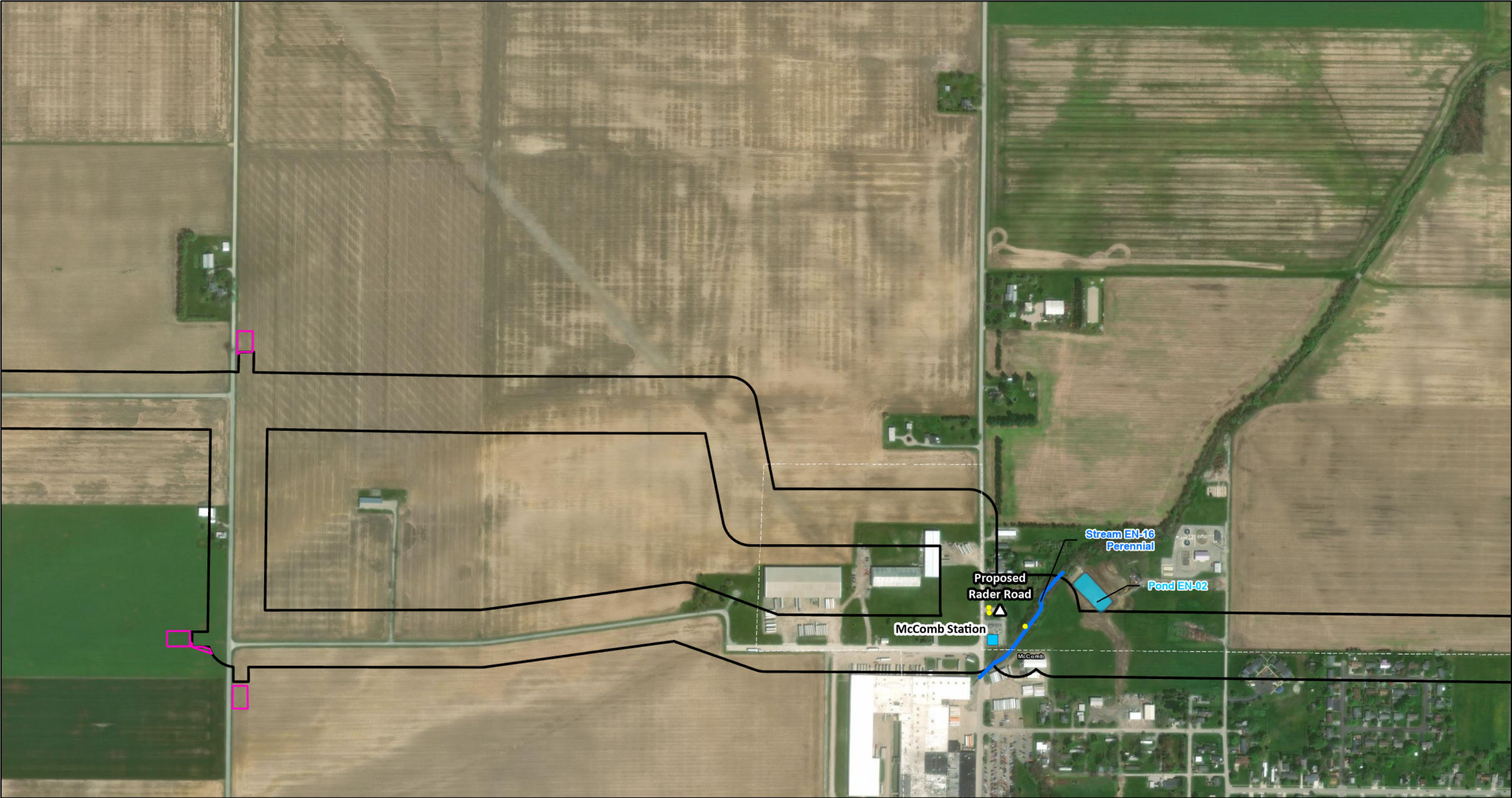


Figure 3.6
Delineated Features Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

April 21, 2026



Figure 3.7
Delineated Features Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North



April 21, 2026

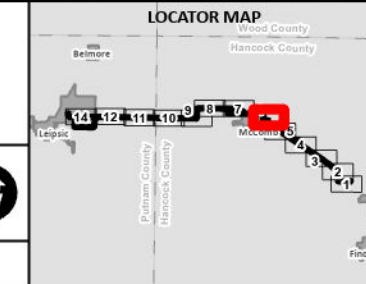


Figure 3.8
Delineated Features Map

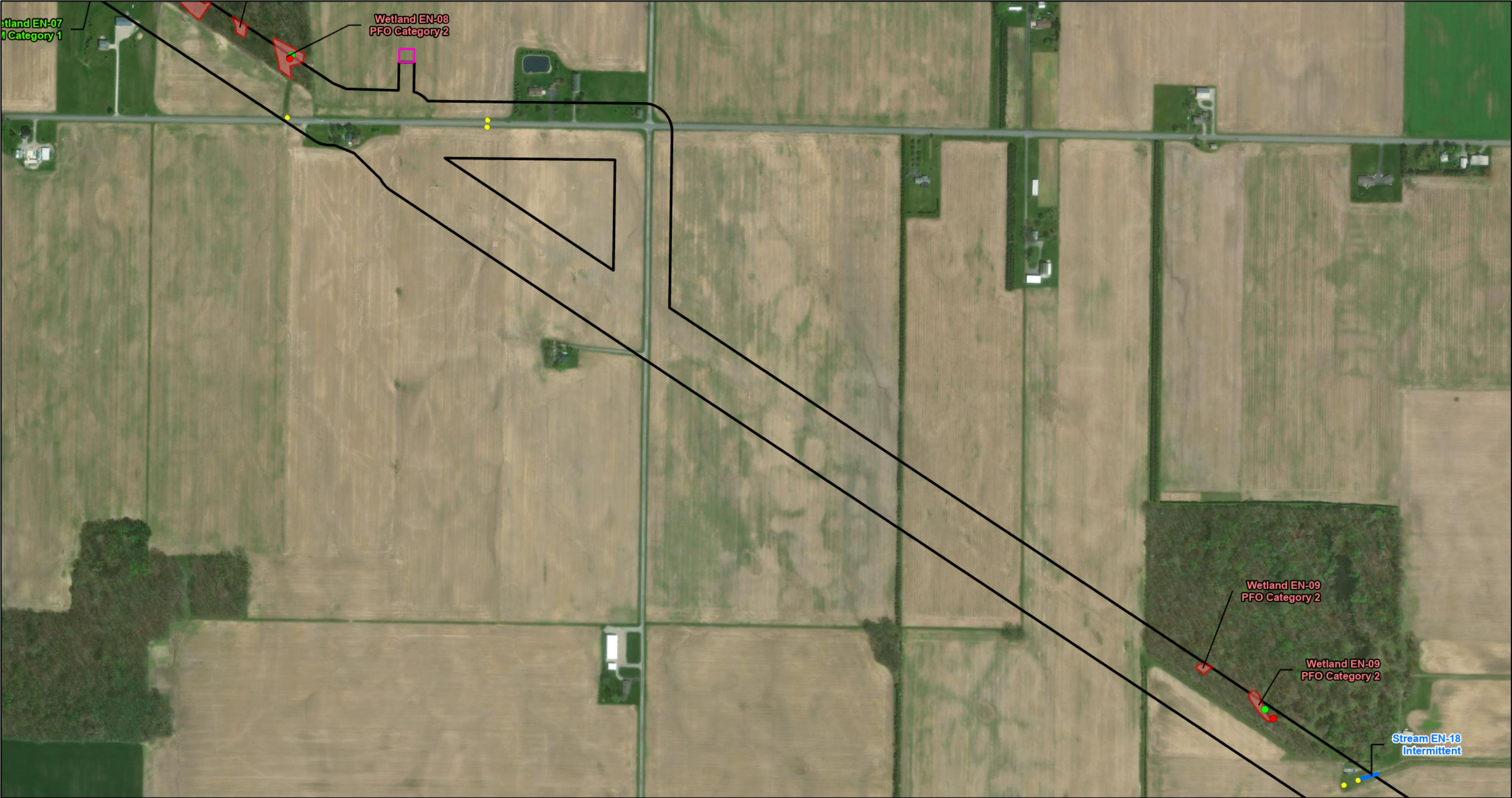


New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

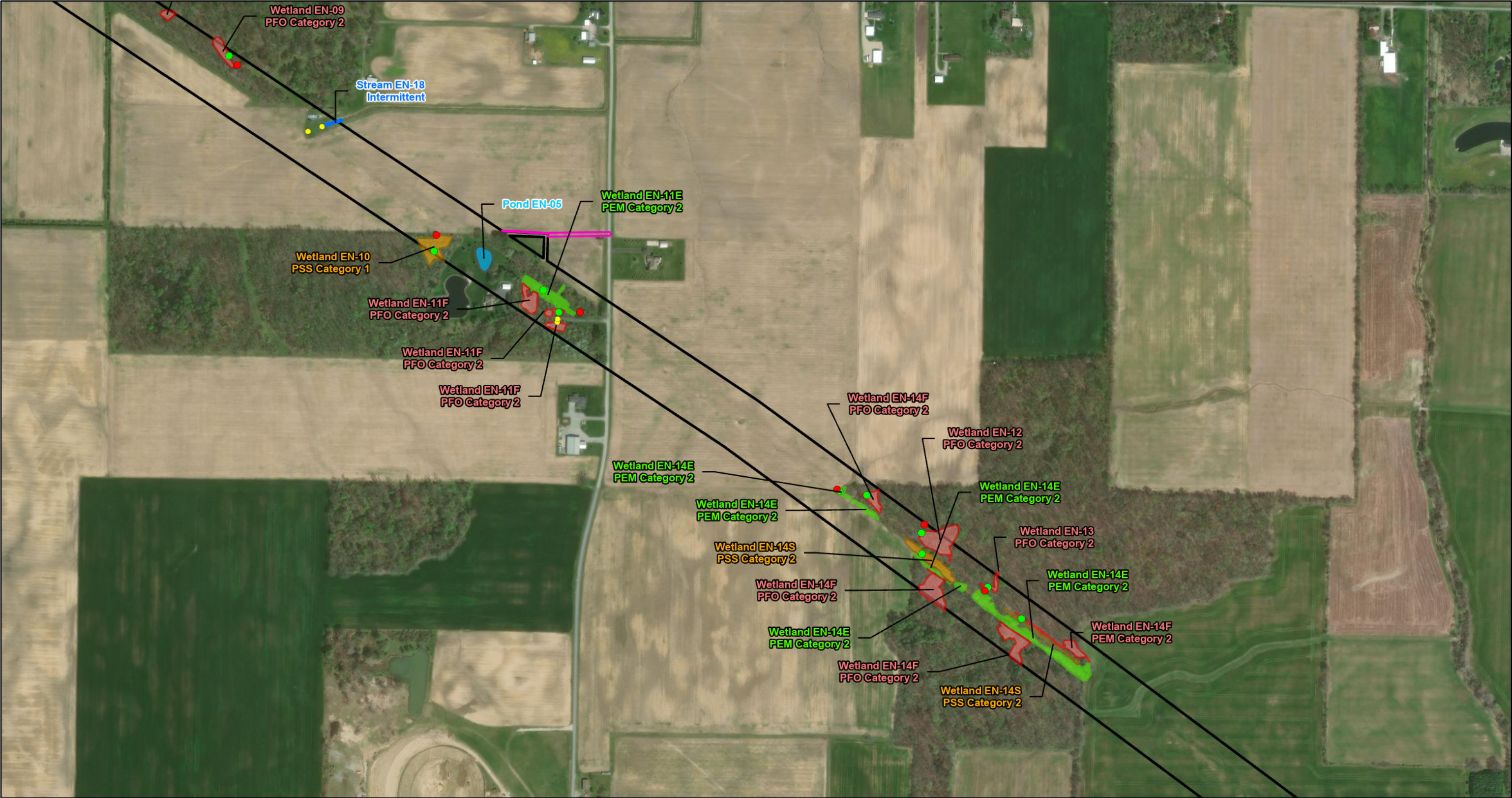




Legend			Data Sources: AEP, 2026 ESRI USA Topo Maps	LOCATOR MAP 	Figure 3.9 Delineated Features Map New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum	
Existing Station	Addendum Environmental Survey Boundary (2026)	Delineated Stream				
Proposed Station	Wetland Data Point	Delineated Wetland (PEM)				
Switch Station	Upland Data Point	Delineated Wetland (PFO)				
Communication Tower	Existing Culvert	Delineated Wetland (PSS)				
Previous Environmental Survey Corridor	Upland Drainage Feature	Delineated Pond				
			April 21, 2026			



Legend			Data Sources: AEP, 2026 ESRI USA Topo Maps	LOCATOR MAP 	Figure 3.10 Delineated Features Map	
Existing Station	Addendum Environmental Survey Boundary (2026)	Delineated Stream				 New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum
Proposed Station	Wetland Data Point	Delineated Wetland (PEM)				
Switch Station	Upland Data Point	Delineated Wetland (PFO)				
Communication Tower	Existing Culvert	Delineated Wetland (PSS)				
Previous Environmental Survey Corridor	Upland Drainage Feature	Delineated Pond				
			NAD 83 State Plane Ohio North			
			April 21, 2026			



Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

April 21, 2026



Figure 3.11
Delineated Features Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum

0 250 500 750 1,000
Feet



Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

Data Sources: AEP, 2026 ESRI USA Topo Maps NAD 83 State Plane Ohio North April 21, 2026		Figure 3.12 Delineated Features Map
		New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum
		0 250 500 750 1,000 Feet



Legend

- | | | |
|--|---|--------------------------|
| Existing Station | Addendum Environmental Survey Boundary (2026) | Delineated Stream |
| Proposed Station | Wetland Data Point | Delineated Wetland (PEM) |
| Switch Station | Upland Data Point | Delineated Wetland (PFO) |
| Communication Tower | Existing Culvert | Delineated Wetland (PSS) |
| Previous Environmental Survey Corridor | Upland Drainage Feature | Delineated Pond |

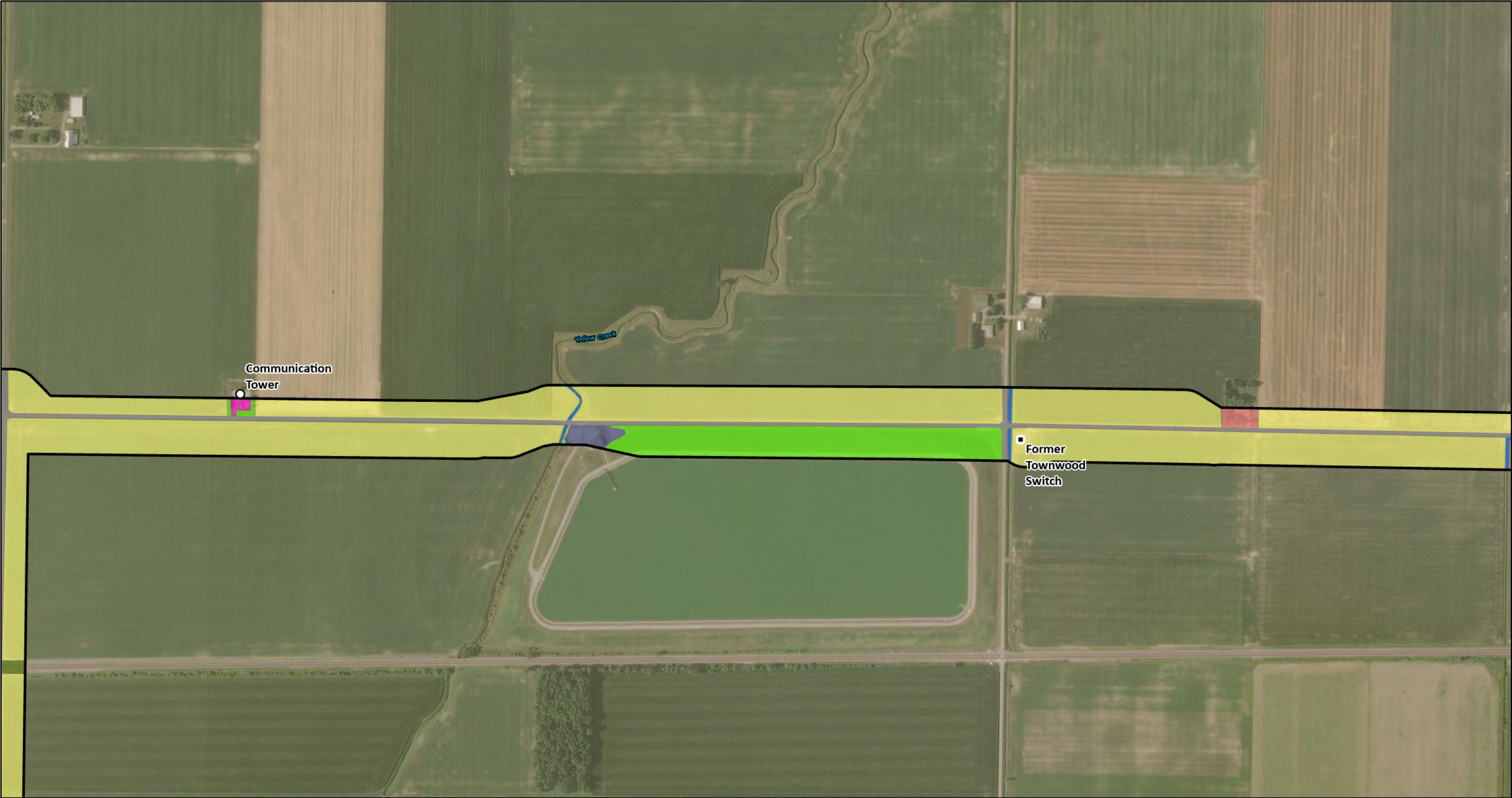
Data Sources: AEP, 2026 ESRI USA Topo Maps		Figure 3.13 Delineated Features Map	
			New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum
NAD 83 State Plane Ohio North			
April 21, 2026			

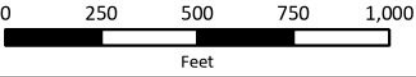


Legend				Data Sources: AEP, 2026 ESRI USA Topo Maps		LOCATOR MAP 	Figure 4.1 Habitat/Land Use Map New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum 2	
Existing Station Proposed Station Switch Station Communication Tower Original Environmental Survey Corridor Addendum Environmental Survey Boundary				Agricultural Commercial Lawn Forested Gravel Lot Gravel Substation Pad Hayfield				 0 250 500 750 1,000 Feet
Maintained ROW - Herbaceous Maintained ROW - Scrub/Shrub Old Field Park Pond Railroad				Residential Road Scrub/Shrub Stream Wetland				
NAD 83 State Plane Ohio North 						March 31, 2026		



Legend				Data Sources: AEP, 2026 ESRI USA Topo Maps		LOCATOR MAP 	Figure 4.2 Habitat/Land Use Map New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum 2
Existing Station	Agricultural	Maintained ROW - Herbaceous	Residential				
Proposed Station	Commercial Lawn	Maintained ROW - Scrub/Shrub	Road				
Switch Station	Forested	Old Field	Scrub/Shrub	NAD 83 State Plane Ohio North			
Communication Tower	Gravel Lot	Park	Stream	March 31, 2026			
Original Environmental Survey Corridor	Gravel Substation Pad	Pond	Wetland				
Addendum Environmental Survey Boundary	Hayfield	Railroad					



Legend				Data Sources: AEP, 2026 ESRI USA Topo Maps	LOCATOR MAP 	Figure 4.3 Habitat/Land Use Map New Liberty-East Leipsic 138-kV Transmission Line Project-Addendum 2  
 Existing Station	 Agricultural	 Maintained ROW - Herbaceous	 Residential			
 Proposed Station	 Commercial Lawn	 Maintained ROW - Scrub/Shrub	 Road			
 Switch Station	 Forested	 Old Field	 Scrub/Shrub			
 Communication Tower	 Gravel Lot	 Park	 Stream			
 Original Environmental Survey Corridor	 Gravel Substation Pad	 Pond	 Wetland			
 Addendum Environmental Survey Boundary	 Hayfield	 Railroad				
NAD 83 State Plane Ohio North						
March 31, 2026						



Legend

Existing Station	Agricultural	Maintained ROW - Herbaceous	Residential
Proposed Station	Commercial Lawn	Maintained ROW - Scrub/Shrub	Road
Switch Station	Forested	Old Field	Scrub/Shrub
Communication Tower	Gravel Lot	Park	Stream
Original Environmental Survey Corridor	Gravel Substation Pad	Pond	Wetland
Addendum Environmental Survey Boundary	Hayfield	Railroad	

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

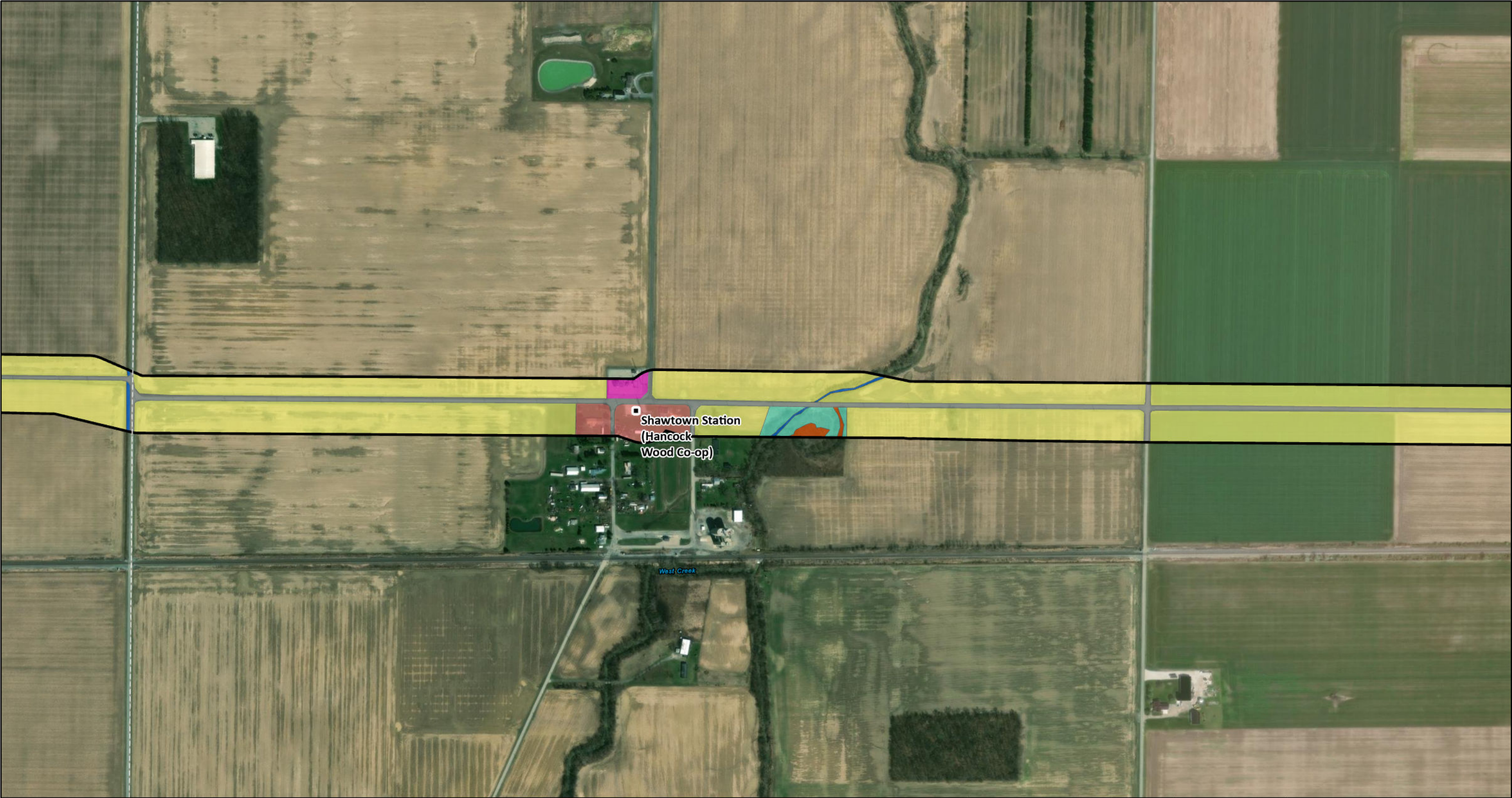
March 31, 2026

LOCATOR MAP

**Figure 4.4
Habitat/Land Use Map**

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2

0 250 500 750 1,000
Feet



Legend

Existing Station	Agricultural	Maintained ROW - Herbaceous	Residential
Proposed Station	Commercial Lawn	Maintained ROW - Scrub/Shrub	Road
Switch Station	Forested	Old Field	Scrub/Shrub
Communication Tower	Gravel Lot	Park	Stream
Original Environmental Survey Corridor	Gravel Substation Pad	Pond	Wetland
Addendum Environmental Survey Boundary	Hayfield	Railroad	

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

March 31, 2026

LOCATOR MAP

**Figure 4.5
Habitat/Land Use Map**

**New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2**

0 250 500 750 1,000
Feet



Legend

Existing Station	Agricultural	Maintained ROW - Herbaceous	Residential
Proposed Station	Commercial Lawn	Maintained ROW - Scrub/Shrub	Road
Switch Station	Forested	Old Field	Scrub/Shrub
Communication Tower	Gravel Lot	Park	Stream
Original Environmental Survey Corridor	Gravel Substation Pad	Pond	Wetland
Addendum Environmental Survey Boundary	Hayfield	Railroad	

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

March 31, 2026

LOCATOR MAP

**Figure 4.6
Habitat/Land Use Map**

**New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2**

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North



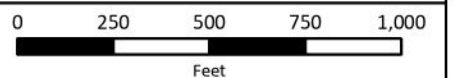
March 31, 2026

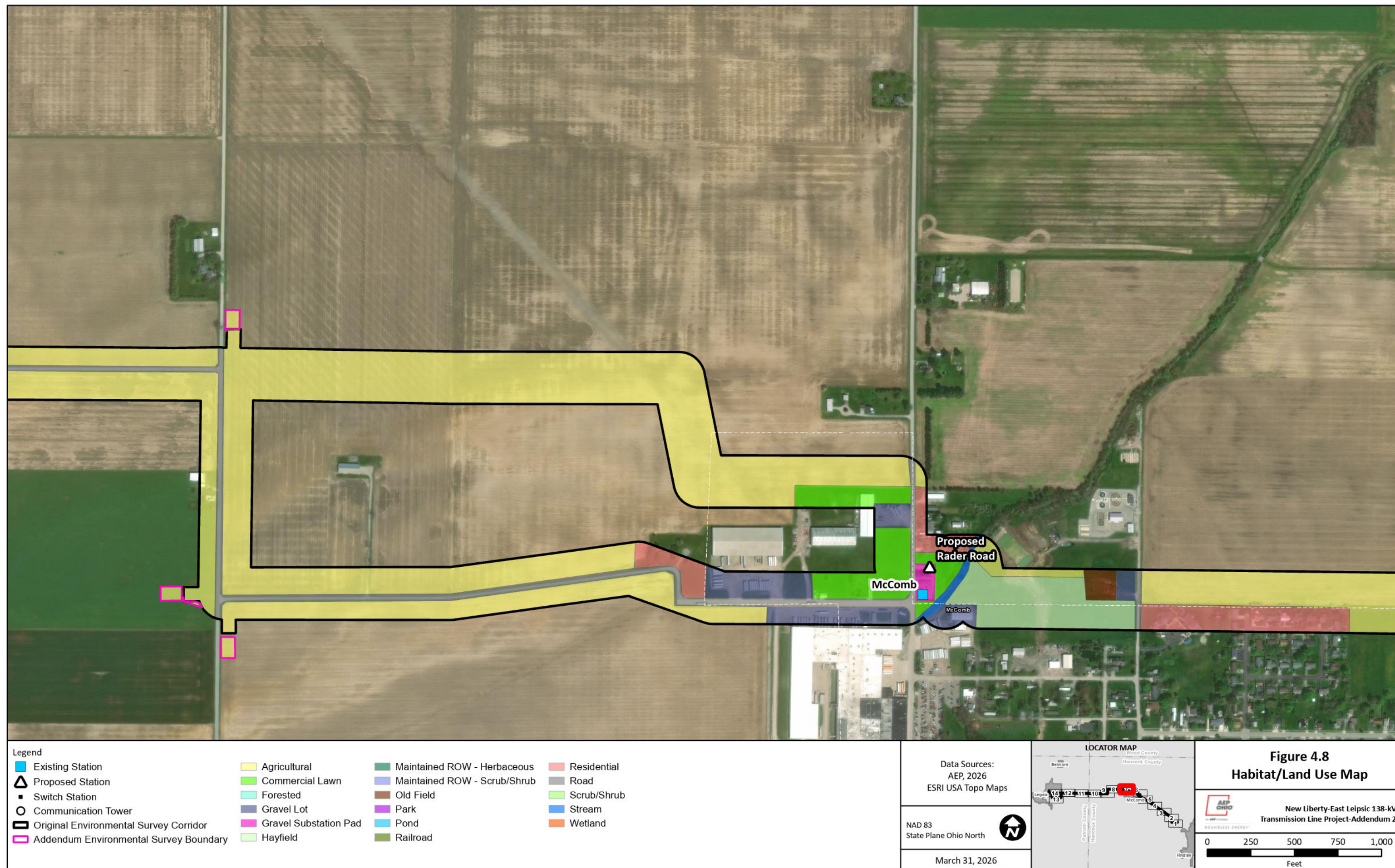


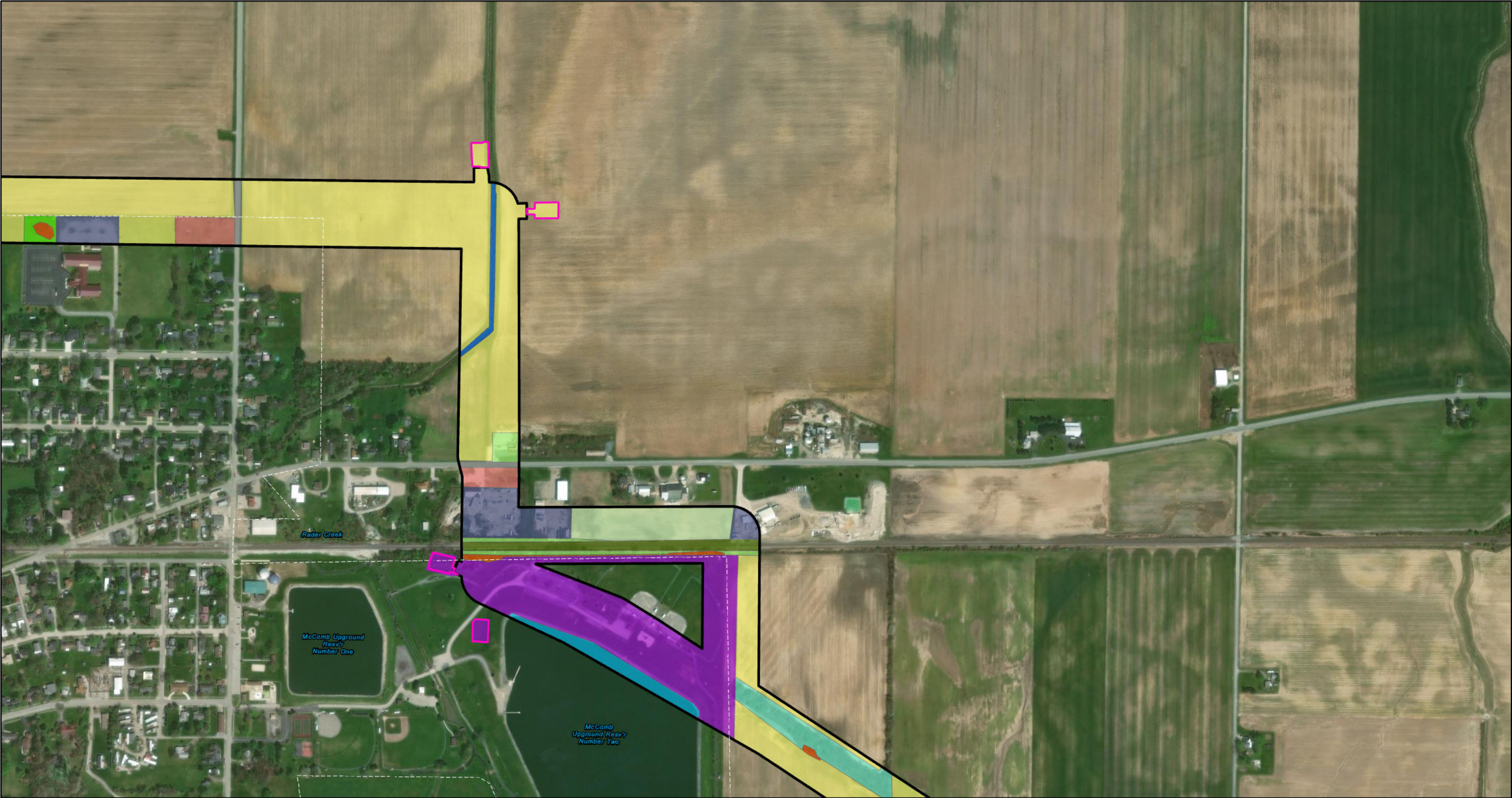
Figure 4.7
Habitat/Land Use Map



New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2







Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

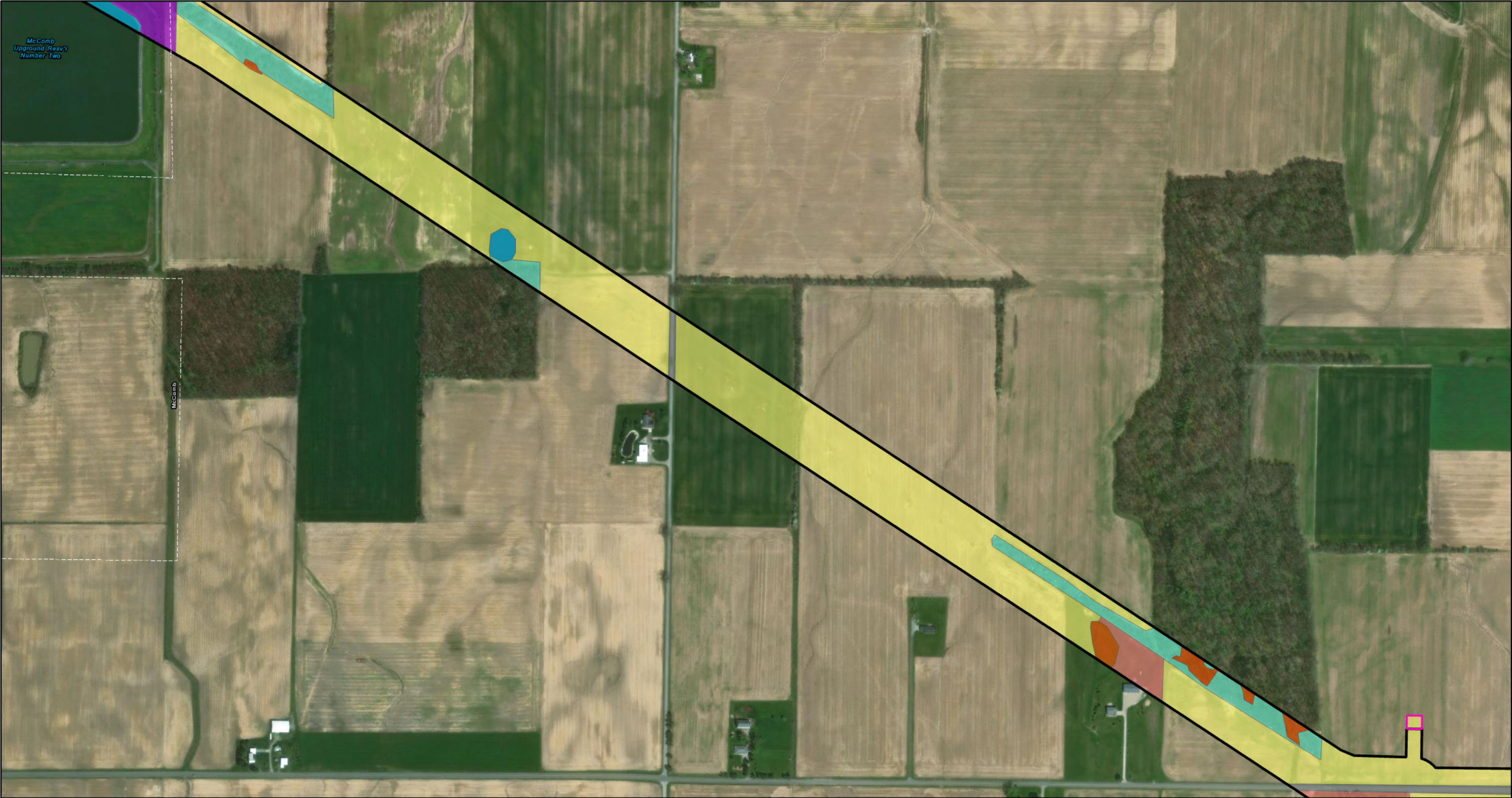
March 31, 2026



Figure 4.9
Habitat/Land Use Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

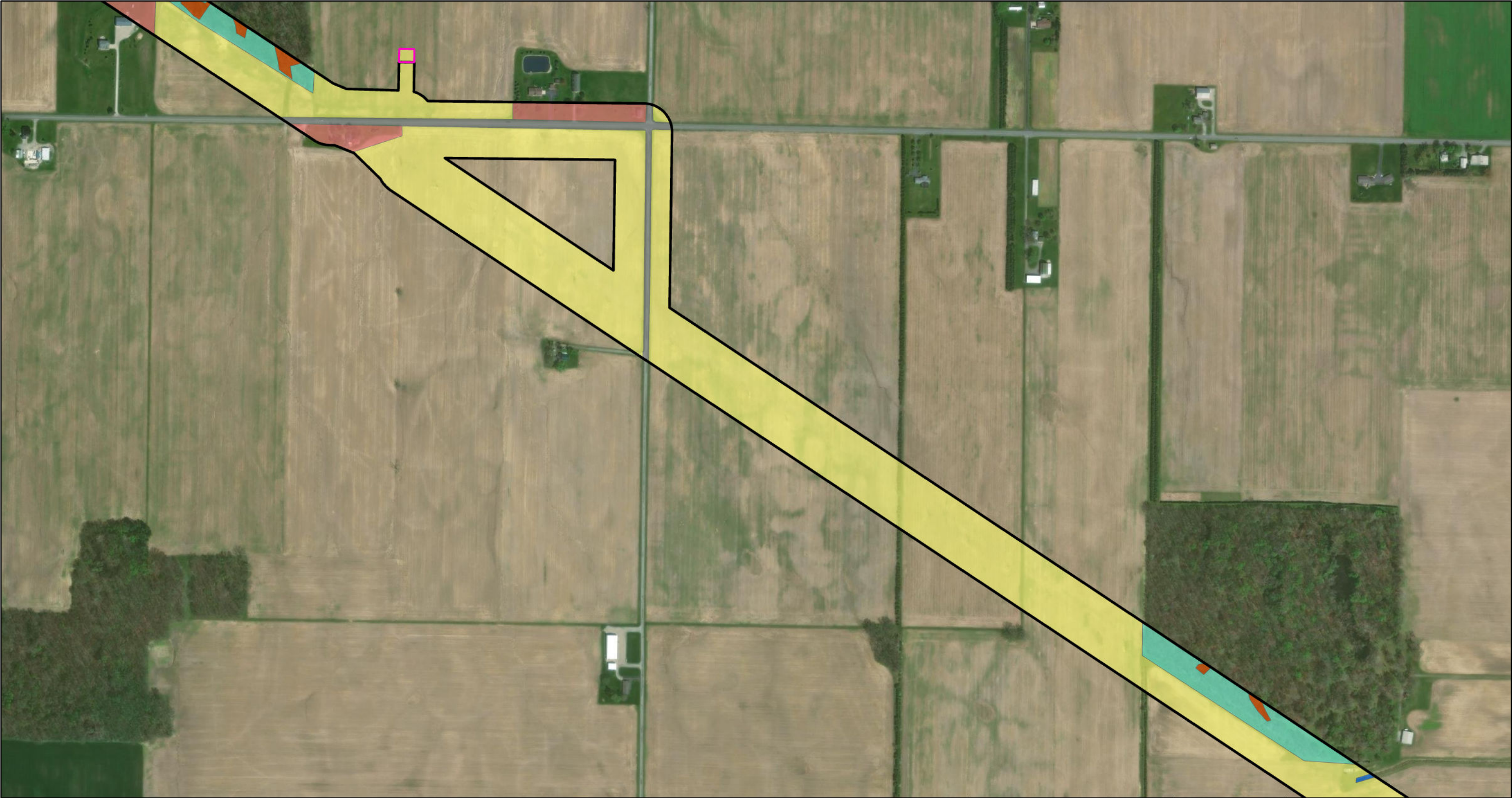
March 31, 2026



Figure 4.10
Habitat/Land Use Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2

0 250 500 750 1,000
Feet



Legend

Existing Station	Agricultural	Maintained ROW - Herbaceous	Residential
Proposed Station	Commercial Lawn	Maintained ROW - Scrub/Shrub	Road
Switch Station	Forested	Old Field	Scrub/Shrub
Communication Tower	Gravel Lot	Park	Stream
Original Environmental Survey Corridor	Gravel Substation Pad	Pond	Wetland
Addendum Environmental Survey Boundary	Hayfield	Railroad	

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

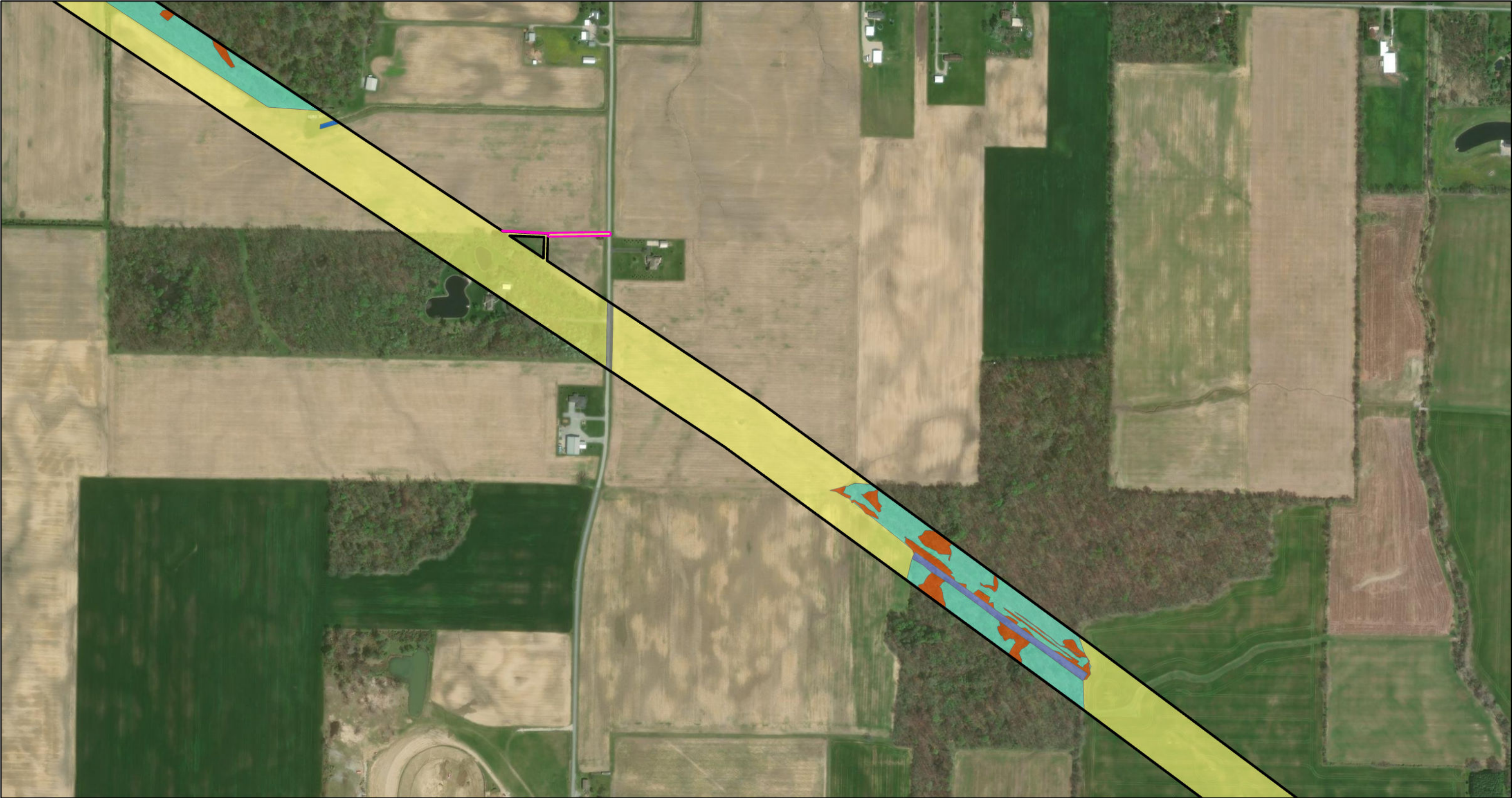
March 31, 2026

LOCATOR MAP

Figure 4.11
Habitat/Land Use Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2

0 250 500 750 1,000
Feet



- Legend

 - Existing Station
 - Proposed Station
 - Switch Station
 - Communication Tower
 - Original Environmental Survey Corridor
 - Addendum Environmental Survey Boundary
- Agricultural
 - Commercial Lawn
 - Forested
 - Gravel Lot
 - Gravel Substation Pad
 - Hayfield
- Maintained ROW - Herbaceous
 - Maintained ROW - Scrub/Shrub
 - Old Field
 - Park
 - Pond
 - Railroad
- Residential
 - Road
 - Scrub/Shrub
 - Stream
 - Wetland

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

March 31, 2026

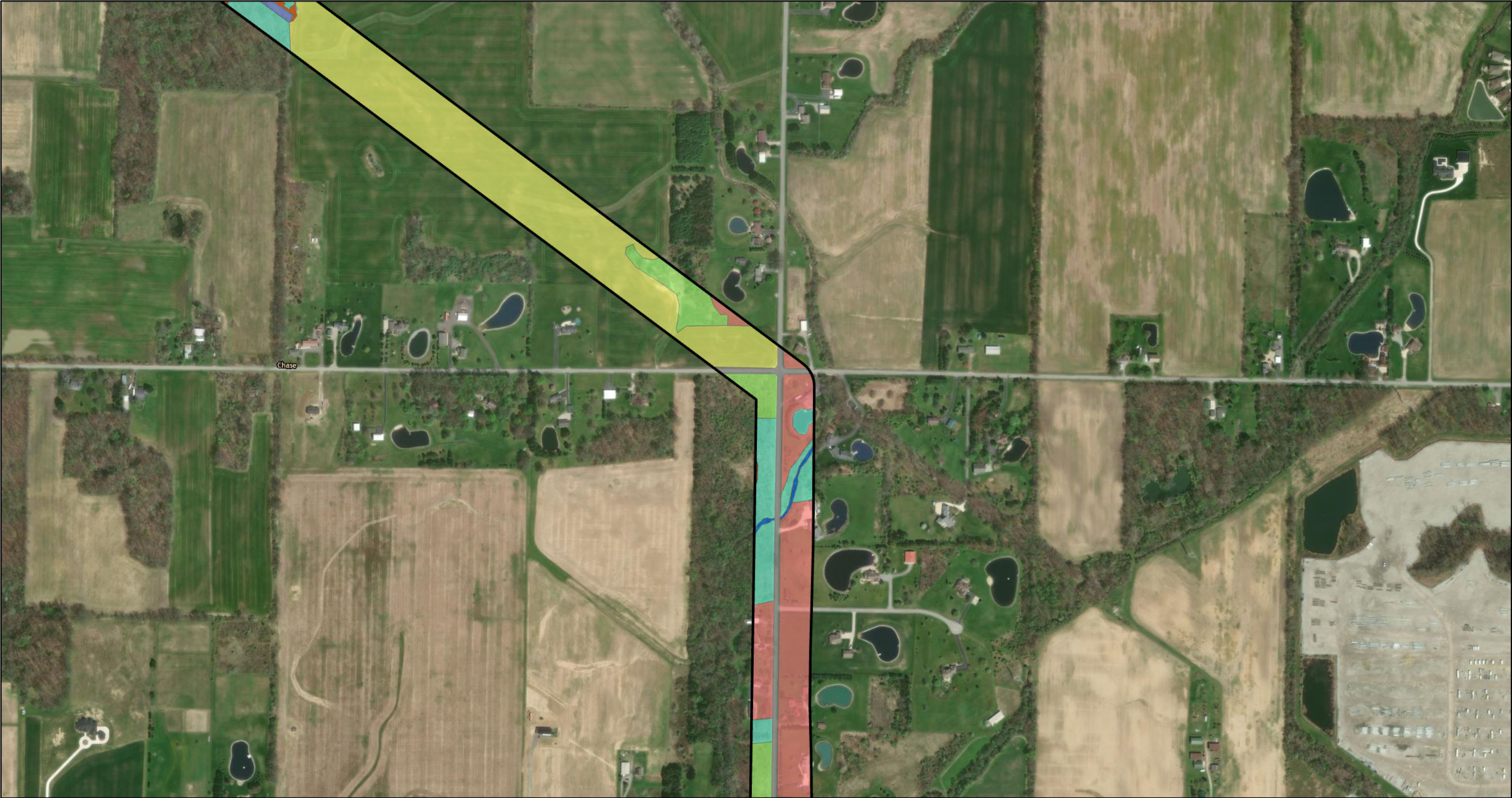
LOCATOR MAP

Figure 4.12
Habitat/Land Use Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2

AEP OHIO
An AEP Company
POWERLESS ENERGY

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

March 31, 2026

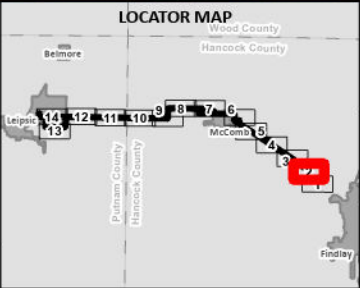


Figure 4.13
Habitat/Land Use Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2

0 250 500 750 1,000
Feet



Legend

- | | | | |
|--|-----------------------|------------------------------|-------------|
| Existing Station | Agricultural | Maintained ROW - Herbaceous | Residential |
| Proposed Station | Commercial Lawn | Maintained ROW - Scrub/Shrub | Road |
| Switch Station | Forested | Old Field | Scrub/Shrub |
| Communication Tower | Gravel Lot | Park | Stream |
| Original Environmental Survey Corridor | Gravel Substation Pad | Pond | Wetland |
| Addendum Environmental Survey Boundary | Hayfield | Railroad | |

Data Sources:
AEP, 2026
ESRI USA Topo Maps

NAD 83
State Plane Ohio North

March 31, 2026



Figure 4.14
Habitat/Land Use Map

New Liberty-East Leipsic 138-kV
Transmission Line Project-Addendum 2

0 250 500 750 1,000
Feet

Appendix 8-3
Agency Correspondence Letters

Re: [EXTERNAL] Re: Project Submittal For Review (IPaC # 2022-0013594)

From Ohio, FW3 <ohio@fws.gov>
Date Mon 5/11/2026 10:32 AM
To Lubbers, Jake <Jake.Lubbers@jacobs.com>

This Message Is From an External Sender

This message came from outside your organization.

Good Morning,

Our April 14, 2022 letter recommending seasonal clearing (tree clearing only between October 1 and March 31) remains valid for this project.

There are no additional listed species observations in the area since the letter was sent. Please contact Jenny at jennifer_finfera@fws.gov if you have any questions.

Sincerely,

USFWS

From: Lubbers, Jake <Jake.Lubbers@jacobs.com>
Sent: Tuesday, May 5, 2026 1:21 PM
To: Ohio, FW3 <ohio@fws.gov>
Cc: Otto, Ben <Ben.Otto@jacobs.com>; Mia R Hall <mrhall@aep.com>
Subject: [EXTERNAL] Re: Project Submittal For Review (IPaC # 2022-0013594)

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Greetings,

On behalf of AEP Ohio Transmission Company, Inc. (AEP), Jacobs requests your review and updated comments of the proposed New Liberty-East Leipsic 138 kilovolt (kV) Upgrade Project (Project) in Hancock and Putnam Counties, Ohio. Please find the attached letter with Project details and Overview Map, GIS shapefile of the route alignment, and the IPaC generated Official Species List for the Project.

Please do not hesitate to contact us if you need any other information or have any questions.

Thank you,

Jake Lubbers | [Jacobs](#) | Ecologist & Project Manager, CESSWI
859-652-2160 | jake.lubbers@jacobs.com

2 Crowne Point Court, Suite 100 | Cincinnati, OH 45241 | United States

From: Lubbers, Jake
Sent: Wednesday, April 13, 2022 5:03 PM
To: Ohio, FW3
Cc: Otto, Ben
Subject: Re: Project Submittal For Review (IPaC # 2022-0013594)

Greetings,

On behalf of AEP Ohio Transmission Company, Inc. (AEP), Jacobs requests your review of the proposed New Liberty-East Leipsic 138 kilovolt (kV) Transmission Line Project (Project) in Hancock and Putnam Counties, Ohio. Please find the attached letter with Project details and Overview Map, GIS shapefile of the proposed route alignment and station areas and the IPaC generated Official Species List for the Project. Please do not hesitate to contact us if you need any other information or have any questions. Thank you,

Jake Lubbers | [Jacobs](#) | Environmental Permitting Scientist
859-652-2160 | jake.lubbers@jacobs.com
2 Crowne Point Court, Suite 100 | Cincinnati, OH 45241 | United States

From: Ohio, FW3 <ohio@fws.gov>
Sent: Wednesday, April 13, 2022 2:05 PM
To: Lubbers, Jake <Jake.Lubbers@jacobs.com>
Cc: Boyer, Angela <angela_boyer@fws.gov>
Subject: Re: [EXTERNAL] New Liberty-East Leipsic Project Review; IPaC code 2022-0013594

Hello Mr. Lubbers,

We really appreciate that you entered your project into the new IPAC system, unfortunately, this is a two step process where you still have to send (to this address) the project package because the system still doesn't distinguish between looking for a species list - or that you need an actual review of the project.

If you look at the auto reply that you received when sending this to us today, you will see the instructions have changed.

We look forward to your project package, and we will do our best to get this back to you as soon as we can.

Sincerely,
Susan

From: Lubbers, Jake <Jake.Lubbers@jacobs.com>
Sent: Wednesday, April 13, 2022 1:53 PM
To: Ohio, FW3 <ohio@fws.gov>; Boyer, Angela <angela_boyer@fws.gov>
Cc: Otto, Ben/CIN <Ben.Otto@jacobs.com>
Subject: [EXTERNAL] New Liberty-East Leipsic Project Review; IPaC code 2022-0013594

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Greetings,

I wanted to follow up on recent request for a project review of the New Liberty-East Leipsic Project in Hancock and Putnam Counties, Ohio. On February 28, 2022, we obtained an Official Species List from IPaC, and we noted "For FWS Review" in the Project Description Field to request USFWS review the project. I have attached a copy of the Official Species List.

We have not yet received a response from USFWS. When you have a chance, can you please let me know if you need any additional information for your review? Please feel free to call if you have any questions.

Thank you for your time,

Jake Lubbers | [Jacobs](#) | Environmental Permitting Scientist

859-652-2160 | jake.lubbers@jacobs.com

2 Crowne Point Court, Suite 100 | Cincinnati, OH 45241 | United States

NOTICE - This communication may contain confidential and privileged information that is for the sole use of the intended recipient. Any viewing, copying or distribution of, or reliance on this message by unintended recipients is strictly prohibited. If you have received this message in error, please notify us immediately by replying to the message and deleting it from your computer.

Jake Lubbers | [Jacobs](#) | Ecologist & Project Manager, CESSWI

859-652-2160 | jake.lubbers@jacobs.com

2 Crowne Point Court, Suite 100 | Cincinnati, OH 45241 | United States

NOTICE - This communication may contain confidential and privileged information that is for the sole use of the intended recipient. Any viewing, copying or distribution of, or reliance on this message by unintended recipients is strictly prohibited. If you have received this message in error, please notify us immediately by replying to the message and deleting it from your computer.



**Department of
Natural Resources**
ohiodnr.gov

Mike DeWine, Governor
Jim Tressel, Lt. Governor
Mary Mertz, Director

Office of Real Estate & Land Management

Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

June 5, 2026

Jake Lubbers
Jacobs Engineering Group, Inc.
2 Crowne Point Court, Suite 100
Cincinnati, Ohio 45241

Re: 26-0761_New Liberty-East Leipsic 138-kV Upgrade

Project: The proposed project involves the upgrade of approximately 18 miles of 34.5-kV or 69-kV transmission line to 138-kV standards by replacing the aging wooden poles with single-structure steel poles and new conductors.

Location: The proposed project is located in Putnam and Hancock counties, Ohio.

Center Coordinates: (41.1133, -83.7797)

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

Natural Heritage Database: The Natural Heritage Database has the following data within one mile of the project area:

Sora Rail (*Porzana carolina*), SC
Virginia Rail (*Rallus limicola*), SC
Elktoe (*Alasmidonta marginata*), SC
Creek Heelsplitter (*Lasmigona compressa*), SC
Kidneyshell (*Ptychobranhus fasciolaris*), SC
Deertoe (*Truncilla truncata*), SC

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and

animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

The species listed above are not recorded within the boundaries of the specified project area. However, please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an 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 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 species of bats 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. If trees are present within the project area, and trees must be cleared, 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) $\geq 20''$ if possible. If trees are present within the project area, and trees and/or tree limbs must be cleared during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any clearing. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the [OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE \(OH-FIELD OFFICE\) JOINT GUIDANCE FOR BAT SURVEYS](#). If state-listed bats are documented, DOW recommends tree clearing only occur from October 1 through March 31. However, limited summer tree clearing may be acceptable after consultation with the DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

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 linked above. 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 following listed mussel species.

Federally Endangered

clubshell (*Pleurobema clava*)

rayed bean (*Villosa fabalis*)

State Endangered

purple lilliput (*Toxolasma lividum*)

State Threatened

pondhorn (*Unio merus tetralasmus*)

Salamander Mussel (*Simpsonaias ambigua*)

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2025), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the [Ohio Mussel Survey Protocol](#). If there is no in-water work proposed, impacts to mussels are not likely.

The project is within the range of the western banded killifish (*Fundulus diaphanus menona*), a state endangered 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 this or other aquatic species.

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

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. Permitting may be required for:

- New or increased consumptive use of water averaging 2 million gallons per day (mgd) within 30 days within the Ohio River basin.
- New or increased withdrawal and consumptive water use in the Lake Erie watershed averaging 1 million gallons per day (mgd) or more in 90 days.
- New or increased water withdrawal directly from Lake Erie averaging 2.5 million gallons per day (mgd) 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.*



In reply, refer to
2022-HAN-54568

January 18, 2025

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

RE: Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild Project, Hancock County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on December 17, 2024, regarding the proposed Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild Project located in Hancock County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum: Archaeological Investigations for Additional Work Areas Associated with the Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild Project in Hancock County, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2024). This project investigated disconnected locations, such as access roads, reroutes, pull pads, and expanded work areas, located outside previously surveyed areas. A literature review, visual inspection, surface collection, and shovel test unit excavations were completed as part of the investigations. These investigations noted disturbances from construction activities and underground utility easements and portions of the addendum project areas had been previously professionally surveyed. There were no previously documented archaeological sites located within the addendum project areas and no new archaeological sites were identified. Our office agrees that no additional archaeological survey is necessary.

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

Sincerely,

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1106239



In reply, refer to
2022-HAN-54538

February 14, 2025

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

RE: East Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project, Putnam and Hancock Counties, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on January 21, 2025, regarding the proposed East Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project located in Putnam and Hancock Counties, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum: Archaeological Investigations for Additional Work Areas Associated with the East Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project in Putnam and Hancock Counties, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2024). This project investigated disconnected locations, such as access roads, reroutes, pull pads, and expanded work areas, located outside previously surveyed areas. A literature review, visual inspection, photographic documentation, surface collection, and shovel test unit excavations were completed as part of the investigations. These investigations noted areas of disturbance and inundation, which were not subjected to testing. One Ohio Archaeological Inventory (OAI) site (33HK1041) was reidentified through this survey. It is Weller's recommendation that OAI site 33HK1041 is not eligible for the National Register of Historic Places (NRHP). Our office agrees with these recommendations. Our office agrees that no additional archaeological survey is necessary.

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

Sincerely,

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1107059



In reply, refer to
2022-HAN-54538

May 13, 2025

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

**RE: East Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project, Putnam and Hancock Counties, Ohio
— Addendum 2**

Dear Mr. Weller:

This letter is in response to the correspondence received on April 14, 2025, regarding the proposed East Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project located in Putnam and Hancock Counties, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum 2: Archaeological Investigations for Additional Work Areas Associated with the East Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project in Putnam and Hancock Counties, Ohio* by Seth T. Cooper (Weller & Associates, Inc. 2025). This project investigated areas located outside those previously surveyed for this project. A literature review, visual inspection, photographic documentation, surface collection, and shovel test unit excavations were completed as part of the investigations. One previously documented Ohio Archaeological Inventory (OAI) site (33HK1041) was reidentified through this survey. Site 33HK1041 is a historic-era scatter lacking temporally diagnostic artifacts. It is Weller's recommendation that OAI site 33HK1041 is not eligible for the National Register of Historic Places (NRHP). Our office continues to agree with these recommendations. No additional archaeological survey is necessary.

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

Sincerely,

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1108469



In reply, refer to
2022-HAN-54568

May 13, 2025

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

RE: Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild Project, Hancock County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on April 14, 2024, regarding the proposed Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild Project located in Hancock County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum 2: Archaeological Investigations for Additional Work Areas Associated with the Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild Project in Hancock County, Ohio* by Seth T. Cooper (Weller & Associates, Inc. 2025). This project investigated disconnected locations, such as access roads, reroutes, pull pads, and expanded work areas, located outside previously surveyed areas. A literature review, visual inspection, photographic documentation, surface collection, shovel probes, and shovel test unit excavations were completed as part of the investigations. There were no previously documented archaeological sites located within the addendum project areas and no new archaeological sites were identified. Our office agrees that no additional archaeological survey is necessary.

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

Sincerely,

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1108470



In reply refer to:
2022-HAN-54568

March 4, 2026

Chad Porter
Weller & Associates, Inc.
1395 West 5th Ave.
Columbus, OH 43212
Email: c.porter@wellercrm.com

RE: **Section 106 Review: Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild/Upgrade Project, Hancock County, Ohio**

Dear Mr. Porter:

This letter is in response to the correspondence received on February 9, 2026, regarding the proposed Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild/Upgrade Project in Hancock County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum 3: Archaeological Investigations for Small Additional Work Areas Associated with the Rader Road-New Liberty 69V to 138kV Transmission Line Rebuild Project in Hancock County, Ohio (BPID P20017006; WO T10160389002; PO 80424719)* (Weller & Associates, Inc., 2026). This project investigated disconnected locations, such as access roads, pull pads, and/or expanded work areas, located outside previously surveyed areas. A visual inspection, subsurface testing, photographic documentation, and an updated literatures review were completed as part of the investigations. There were no previously documented archaeological sites located within the addendum project areas and no new archaeological sites were identified. Our office agrees that no additional archaeological survey is necessary.

Based on the information provided, our office continues to agree that the project, as proposed, will have no effect on historic properties. Therefore, no further coordination is required, unless the project changes or additional cultural resources are discovered during the implementation of this project. In such a situation, this office should be contacted as required by 36 CFR § 800.13. If you have any questions concerning this review, please contact me via email at broddy@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Bridget C. Roddy, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1112788

"Please be advised that this is a Section 106 decision. This review decision may not extend to other SHPO programs."

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org



In reply refer to:
2022-HAN-54538

June 1, 2026

Chad Porter
Weller & Associates, Inc.
1395 West 5th Ave.
Columbus, OH 43212
Email: c.porter@wellercrm.com

RE: **Section 106 Review: East Leipsic-Rader Road 69kV to a 138kV Conversion/Rebuild Project, Hancock County, Ohio**

Dear Mr. Porter:

This letter is in response to the correspondence received on May 6, 2026, regarding the proposed East-Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project in Putnam and Hancock Counties, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum 3: Archaeological Investigations for Additional Work Areas Associated with the East Leipsic-Rader Road 69kV to 138kV Conversion/Rebuild Project in Putnam and Hancock Counties, Ohio (BPID P20017004; WO T10160388002) (Weller Contract 20005621)* (Weller & Associates, Inc. 2026). The current archaeological investigations were conducted in project areas that extended outside the prior survey parameters. For this project, the archaeological field investigations included visual inspection, subsurface testing, surface collection, and photographic documentation. No previously recorded sites were within the project area, and no new archaeological sites were identified. Weller recommended that no cultural resource management work is considered necessary for this project. Our office agrees with this determination.

Based on the information provided, our office continues to agree that the project, as proposed, will have no effect on historic properties. Therefore, no further coordination is required, unless the project changes or additional archaeological resources are discovered during the implementation of this project. In such a situation, this office should be contacted as required by 36 CFR § 800.13. If you have any questions concerning this review, please contact me via email at broddy@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Bridget C. Roddy, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1113929



In reply refer to:
2022-HAN-54568

June 3, 2026

Chad Porter
Weller & Associates, Inc.
1395 West 5th Ave.
Columbus, OH 43212
Email: c.porter@wellercrm.com

RE: **Section 106 Review: Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild/Upgrade Project, Hancock County, Ohio**

Dear Mr. Porter:

This letter is in response to the correspondence received on May 13, 2026, regarding the proposed Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild/Upgrade Project in Hancock County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board (OPSB) for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum 4: Archaeological Investigations for Small Additional Work Areas and Transmission Line Reroutes Associated with the Rader Road-New Liberty 69kV to 138kV Transmission Line Rebuild Project in Hancock County, Ohio (BPID P20017006; WO T10160389002; PO 80424719)* (Weller & Associates, Inc. 2026). The current archaeological investigations were conducted in project areas that extended outside of what had previously been investigated. For this project, the archaeological field investigations included visual inspection, shovel testing, and surface collection. No previously recorded sites were within the project area, and no new archaeological sites were identified. Weller recommended that no cultural resource management work is considered necessary for this project. Our office agrees with this determination.

Based on the information provided, our office continues to agree that the project, as proposed, will have no effect on historic properties. Therefore, no further coordination is required, unless the project changes or additional archaeological resources are discovered during the implementation of this project. In such a situation, this office should be contacted as required by 36 CFR § 800.13. If you have any questions concerning this review, please contact me via email at broddy@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink that reads "Bridget C. Roddy".

Bridget C. Roddy, Project Reviews Manager-Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1114011