Letter of Notification for North Newark-Sharp Road 138 kV Transmission Line Rebuild Project

AEP OHIO TRANSMISSION COMPANY

An AEP Company

BOUNDLESS ENERGY

PUCO Case No. 21-0525-EL-BLN

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

Submitted by:
AEP Ohio Transmission Company, Inc.

May 14, 2021

LETTER OF NOTIFICATION

AEP Ohio Transmission Company, Inc. (AEP Ohio Transco) North Newark-Sharp Road 138 kV Transmission Line Rebuild Project

4906-6-05

AEP Ohio Transmission Company, Inc. ("AEP Ohio Transco" or the "Company") provides the following information to the Ohio Power Siting Board ("OPSB") pursuant to Ohio Administrative Code Section 4906-6-05.

4906-6-05(B) General Information

B(1) Project Description

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

AEP Ohio Transco proposes the North Newark-Sharp Road 138 kilovolt ("kV") Transmission Line Rebuild Project ("Project"), located in Knox County and Licking County, Ohio. The Company proposes to rebuild and upgrade approximately 19.39 miles of 138 kV transmission line between the existing North Newark Station and the existing Sharp Road Station. The Project consists of rebuilding the 138 kV transmission line from North Newark station to Sharp Road station within existing Company right-of-way ("ROW"). The Project is double circuit from North Newark station to structure 10 and single circuit from structure 10 to Sharp Road station. The majority of the existing line structures will be replaced like-for-like except for the lattice towers, which are being replaced with custom deadend monopole structures. The Figures 1 and 2A-2Z in Appendix A show the location of the Project in relation to the surrounding vicinity.

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

> (2) Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing transmission line, or replacing structures with a different type of structure for a distance of:
>
> (b) More than two miles.

The Project has been assigned PUCO Case No. 21-0525-EL-BLN.

B(2) Statement of Need

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

The Project is necessary to rebuild the North Newark-Sharp Road 138 kV transmission line due to the age and condition of the existing asset. A majority of the structures and conductors on this line are vintage 1950's/1960's. Additionally, this Project supports the New Albany, Ohio area, which has seen increased loading due to 1,600 MW of data center demand over the past 5 years with more expected in the coming years. To support the increased load in the area, the Company is upgrading the existing 477 KCM Hawk conductor to 1033 KCM. Without the proposed Project, the line would need to be retired and removed due to the conditions of the line assets. This option is not a viable alternative since this is the only north-to-south 138 kV transmission line in this area and the line is needed to serve subtransmission network and growing load demand. Further, using the 2025 RTEP summer case, if this line is removed from service, the underlying 69 kV portions of the line between North Newark and Utica Stations will overload under certain contingency scenarios. While an outage on the 138 kV line does not result in any direct loss of load, the Project is required to avoid overloads on the underlying subtransmission system.

The Project is a PJM Supplemental Project (s2186). The PJM need was presented and reviewed with stakeholders on July 24, 2019 PJM SRTEP Western meeting. The PJM solution was presented and reviewed with stakeholders on February 21, 2020 PJM SRTEP Western meeting. The Project was listed in the 2021 AEP Ohio Transco Long-Term Forecast Report, page 9 (Form FE-T9, Characteristics of Existing Transmission Lines; Appendix B).

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the Project area.

The Project is located in Clinton Township and Miller Township in Knox County and Burlington Township, Newton Township, McKean Township, and Newark Township in Licking County, Ohio. Figures 1 and 2 in Appendix A show the location of the proposed Project in relation to existing transmission facilities, including existing substations and transmission lines.

B(4) Alternatives Considered

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

The majority of the proposed transmission line rebuild work will occur within existing Company ROW (see Figures 1 and 2 in Appendix A), with much of it occurring along the existing transmission line centerline. Because the Project is a complete rebuild of an existing asset, the most economically viable solution is to

utilize existing ROW to the maximum extent possible. As such, no other primary alternatives were considered.

The Proposed Route is short, efficient, direct, and represents the most suitable location and most appropriate solution for meeting the Company's needs in the area. Socioeconomic, land use, and ecological information is presented in Section B(10).

B(5) Public Information Program

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

The Company informs affected property owners and tenants about its projects through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements under O.A.C. Section 4906-6-08(A)(1-6). Further, the Company mailed (or will mail) a letter, via first class mail, to affected landowners, tenants, contiguous landowners, and any other landowner the Company approached for an easement necessary for the construction, operation, or maintenance of the transmission line. The letter will comply with all the requirements of O.A.C. Section 4906-6-08(B). The Company also maintains a website (https://www.aeptransmission.com/ohio/NorthNewark-SharpRoad/) which provides the public access to an electronic copy of this LON and the public notice for this LON. A paper copy of the LON will be served to the public library in each political subdivision affected by this proposed Project. Lastly, the Company retains ROW land agents who will discuss project timelines, construction and restoration activities with affected owners and tenants.

B(6) Construction Schedule

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

Construction is planned to start in the third quarter of 2021 and the anticipated in-service date will be approximately April 2024.

B(7) Area Map

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

Appendix A, Figure 1 provides a map with existing and proposed facilities, and clearly marked roads and highways at 1:150,000 and Figure 2 provides an aerial map showing roads and highways, clearly marked with Project components, at a scale of 1:7,200.

To visit the Project from Columbus, Merge onto Interstate 670 E, continue for 5.8 miles. Continue to US-62 E for 0.2 miles then use the left two lanes to take the I-270 N exit toward Cleveland. Keep left at the fork and merge onto I-270 N. Take exit 33 toward Easton. Keep left to take Exit 30, then follow signs for New Albany/OH-161 E and merge onto OH-161 E. Continue for 8.3 miles, then take the US-62 exit toward New Albany/ Johnstown. Use any lane to turn left onto US-62 E/Johnstown Road. Turn left onto OH-661 N then continue 8.9 miles and turn right onto Sharp Road. Sharp Road Station will be on the right in approximately 1 mile.

B(8) Property Agreements

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

The Project will be constructed primarily within existing Ohio Power Company ROW. A table of property parcel numbers and road crossing names with an indication as to whether the easement/option necessary to construct and operate the facility has been obtained is provided in Appendix C.

B(9) Technical Features

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

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

The transmission line construction will include the following:

Voltage:	138 kV
Conductors:	(3)1033.5 KCM (54/7) ACSR
Static Wire:	(2) 7#8 Alumoweld for double circuit section between (North Newark Station-Str#10)
	(2) 7#10 Alumoweld (Str#10-Sharp Road Station)
Insulators:	Non-ceramic
ROW Width:	80 Feet (North Newark Station-Str#20)
	100 Feet (Str#20-Sharp Road Station)
Structure Type:	Five (5) double circuit, steel monopole dead-ends
	Five (5) double circuit, steel monopole suspension
	Seven (7) single circuit, steel three pole dead-ends
	One Hundred Eight (108) single circuit, steel H-Frame suspension
	Two (2) single circuit, steel three pole suspension
	Five (5) single circuit, steel guyed steel H-frame
	Four (4) single circuit, steel monopole dead-ends

B(9)(b) Electric and Magnetic Fields

For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

(i) Calculated Electric and Magnetic Field Strength Levels

Three loading conditions were examined: (1) Normal Maximum Loading, (2) Emergency Loading, and (3) Winter Normal Conductor Rating, consistent with the OPSB requirements. Normal Maximum Loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (WN) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that either circuit of this line would operate at its WN rating in the foreseeable future.

EMF levels were computed one meter above ground under the line and at the ROW edges (50/50 feet, left/right, of centerline). The results, calculated using Electric Power Research Institute's ("EPRI's") EMF Workstation 2015 software, are summarized below.

North Newark-Sharp Road 138 KV Transmission Line Double Circuit Section				
Condition	**North Newark - Sharp Road 138 kV / North Newark - Heath 138 kV Load (A)**	**Minimum Ground Clearance (feet)**	**Electric Field (kV/m)***	**Magnetic Field (mG)***
(1) Normal Max. Loading^	267.76/69.87	36	0.24/1.63/0.24	9.52/18.11/4.96
(2) Emergency Line Loading^^	460.20/286.58	30	0.16/2.28/0.15	15.08/42.20/5.44
(3) Winter Conductor Rating^^^	1568.89/878.5765	36	0.24/1.63/0.24	44.84/92.62/18.95

North Newark-Sharp Road 138 KV Transmission Single Circuit Section				
Condition	**North Newark - Sharp Road 138 kV Load (A)**	**Minimum Ground Clearance (feet)**	**Electric Field (kV/m)***	**Magnetic Field (mG)***
(1) Normal Max. Loading^	267.76/69.87	31.7	0.63/1.24/0.63	14.61/45.89/14.61
(2) Emergency Line Loading^^	460.20/286.58	24.4	0.66/2.0/0.66	28.96/124.52/28.96
(3) Winter Conductor Rating^^^	1568.89/878.5765	31.7	0.63/1.24/0.63	85.63/268.86/85.63

*EMF levels (left ROW edge/maximum/right ROW edge) computed one meter above ground at the point of minimum ground clearance, assuming balanced phase currents and 1.0 P.U. Voltages. ROW width is 50 feet (left) and 50 feet (right) of centerline, respectively.

^Peak line flow expected with all system facilities in service.
^^Maximum flow during a critical system contingency
^^^Maximum continuous flow that the line, including its terminal equipment, can withstand during winter conditions.

For power-frequency EMF, IEEE Standard C95.6TM-2002 recommends the following limits:

	General Public	Controlled Environment
Electric Field Limit (kV/m)	5.0	20.0
Magnetic Field Limit (mG)	9,040	27,100

The above EMF levels are well within the limits specified in IEEE Standard C95.6TM-2002. Those limits have been established to "prevent harmful effects in human beings exposed to electromagnetic fields in the frequency range of 0-3 kHz."

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

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

Design alternatives were not considered due to the EMF strength levels. Transmission lines, when energized, generate EMF. Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. However, some people are concerned that EMF have impacts on human health. Due to these concerns, EMF associated with the new circuits was calculated and set forth in the table above. The EMF was computed assuming the highest possible EMF values that could exist along the proposed transmission line. Normal daily EMF levels will operate below these maximum load conditions. Based on studies from the National Institutes of Health, the magnetic field (measured in milliGauss, or mG) associated with emergency loading at the highest EMF value for this transmission line is lower than those associated with normal household appliances like microwaves, electric shavers and hair dryers. For additional information regarding EMF, the National Institutes of Health has posted information on their website: http://www.niehs.nih.gov/health/topics/agents/emf/. Additionally, information on electric and magnetic fields is available on AEP Ohio's website: https://www.aepohio.com/info/projects/emf/OurPosition.aspx. The information found on AEP Ohio's website describes the basics of electromagnetic field theory, scientific research activities, and EMF exposures encountered in everyday life. Similar material will be made available for those affected by the construction activities for this Project.

B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project is approximately $44,373,000 with a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in the AEP Ohio Transmission Company Inc.'s FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Economic Impacts

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

B(10)(a) Land Use Characteristics

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

The Project is located primarily within the Company's property and/or existing Ohio Power Company easements in Clinton Township and Miller Township in Knox County and Burlington Township, Newton Township, McKean Township, Newark Township, and the City of Newark in Licking County, Ohio. Field observations by the Company's consultant indicated that the Project area is comprised primarily of agricultural field, old field, pasture, maintained lawn, and hayfield habitats. Industrial land, existing paved/gravel roadway, early successional deciduous forest, mixed early successional/second growth deciduous forest, and emergent and scrub/shrub wetland habitats are present to a lesser extent (see Figure 3 in Appendix E). Appendix E also contains photographs and descriptions of specific habitat types and land uses within the Project area. There are currently 64 occupied residences and 18 multifamily dwellings within 100 feet of the proposed centerline of the Project and 771 occupied residences and 156 multifamily dwellings located within 1,000 feet of the proposed centerline of the Project. There are two designated places of worship within 1,000 feet of the proposed centerline of the Project. There are no parks, schools, cemeteries, wildlife management areas, or nature preserve lands within 1,000 feet of the Project area.

Approximately 9.32 acres of tree clearing will be required for the Project. Any necessary tree clearing will take place between October 1 and March 31, to adhere to recommendations from the U.S. Fish and Wildlife Service ("USFWS") and Ohio Department of Natural Resources ("ODNR"). Additionally, no significant environmental or cultural resources are expected to be impacted as a result of this Project.

B(10)(b) Agricultural Land Information

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

Based on field survey observations by the Company's consultant, there are approximately 121 acres of agricultural land in the Project area (see Figure 3, Appendix E). As verified by the Knox County Auditor's Office on March 5, 2021, the Project contains seven landowner parcels that are enrolled in the agricultural district land program. These include the following tax parcel numbers: 4400353001; 4600239000; 4600071000; 4600027000; 4600069000; 4600067000, and 4600066000. As verified by the Licking County Auditor's office on March 5, 2021, the Project contains three landowner parcels that are enrolled in the agricultural district land program. These include the following tax parcel numbers: 046-155778-00.000; 046-154506-00.002; and 046-154308-00.000.

B(10)(c) Archaeological and Cultural Resources

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

Phase I Archaeological and Phase I History/Architectural surveys were completed by the Company's consultant in late 2019, early 2020, and early 2021. Cultural resources survey reports for the Project were completed by the Company's consultant in April 2021 and are being reviewed by the Ohio History Connection ("OHC") State Historic Preservation Office ("SHPO"). No previously unrecorded archaeological

sites or identified architectural resources were found that were considered eligible for the National Register of Historic Places ("NRHP"). Additional cultural resources work was not recommended by the Company's consultant and no adverse effects on historic properties are anticipated. The results of the cultural resources surveys are currently being coordinated with the SHPO. Copies of the SHPO correspondence letters will be provided once their responses are received.

B(10)(d) Local, State, and Federal Agency Correspondence

Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.

A Notice of Intent (NOI) will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC000005, and AEP Ohio Transco will implement and maintain best management practices as outlined in the project-specific Storm Water Pollution Prevention Plan to minimize erosion and sediment to project surface water quality during storm events.

The Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Maps were consulted to identify any floodplains/flood hazard areas that have been mapped in the Project area (specifically, map numbers 39089C0070J, 39089C0160J, 39089C0190H, 39089C0327H, 39089C0333J). Based on these maps, mapped FEMA floodplains are located within the Licking County portion of the Project area. Seven existing structures are located within mapped FEMA floodplains and will be replaced by seven new structures within FEMA mapped floodplains. Therefore, a Permit to Develop in an Identified Flood Hazard Area will be required from the Licking County Floodplain Administrator for this Project.

There are 19 palustrine emergent wetlands, two palustrine scrub-shrub wetlands, five mixed palustrine emergent/palustrine scrub shrub wetlands, five ephemeral streams, 24 intermittent streams, and 12 perennial streams located within the Project area (see Appendix E). Two existing structures are currently located within wetlands and will be removed as part of the Project. No new structures are proposed to be installed within wetlands. Several wetlands will be temporarily impacted by timber mat access roads and/or by timber mat structure workspaces. The remaining wetlands within the Project area will be avoided. No structures or culverts for access roads are proposed within streams. Streams will either be avoided or crossed using timber mat bridges/air bridges. The Project is expected to require Clean Water Act Section 404 Permit authorization (under Nationwide Permit 3 or Nationwide Permit 57) from the U.S. Army Corps of Engineers ("USACE"). A Pre-construction Notice will be submitted to the USACE and will be coordinated directly with the OPSB once the Nationwide Permit verification process is complete.

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

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

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare

species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

As part of the ecological study completed for the Project, a coordination letter was submitted to the USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The January 10, 2020 response letter from the USFWS (see Appendix D) indicated that the proposed Project is within the range of the Indiana bat and northern long-eared bat and the Project is in the vicinity of one or more confirmed records of Indiana bats. Therefore, the USFWS recommends trees ≥3 inches diameter at breast height ("dbh") be saved whenever possible. Because the Project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Since Indiana bat presence in the vicinity of the Project has been confirmed, clearing of trees greater than or equal to 3 inches dbh during the summer roosting season may result in direct take of individuals. If any caves or abandoned mines may be disturbed, further coordination with USFWS is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and tree removal is unavoidable, USFWS recommends that removal of any trees greater than or equal to 3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. If implementation of this seasonal tree clearing recommendation is not possible, a summer survey may be conducted to document the presence or probably absence of Indiana bats. The USFWS does not anticipate the Project having any adverse effects to any other federally listed endangered, threatened, proposed, or candidate species.

The Project area includes potential roosting and foraging habitat for the Indiana bat and northern long-eared bat. No suitable winter hibernacula for these species were observed in the Project area. AEP Ohio Transco intends to avoid areas with summer roost habitat to the extent possible. Additionally, the Company intends to clear forested habitat within the limits of construction between October 1 and March 31. If clearing is needed outside of the clearing window of 10/1 to 3/31 AEP will coordinate with USFWS and ODNR to complete appropriate level of survey. The USFWS letter did not include any comments specific to the other federally listed species.

According to the ODNR response letter received on March 6, 2020 (Appendix D), the Project area is within range of the Indiana bat. If suitable Indiana bat roost habitat occurs within the Project area, the ODNR recommends trees be conserved. If suitable habitat occurs in the Project area and trees must be cut, the ODNR recommends cutting occur between October 1 and March 31. If suitable trees must be cut during summer months, the ODNR recommends a presence/probable absence bat mist net survey be conducted between June 1 and August 15, prior to any cutting. If no tree removal is proposed, this project is not likely to impact this species.

According to the ODNR, the state-listed endangered little brown bat (*Myotis lucifugus*; state-listed endangered), northern long-eared bat, and tri-colored bat (*Perimyotis subflavus*; state-listed endangered) occur statewide in Ohio. The Project area contains potentially suitable roosting habitat for these species and the Indiana bat (early successional deciduous forest; mixed early successional/second growth deciduous forest), but no potentially suitable hibernacula for these species were observed within the Project area. Further, the Company intends to conduct any required tree clearing between October 1 and March 31. Therefore, no impacts to these species are anticipated. However, if tree clearing is required outside of the 10/1 and 3/1 then AEP will coordination with USFWS and ODNR regarding appropriate surveys to complete to enable year round tree clearing.

The ODNR response letter also stated that the Project area is within the range of five state-listed mussel species and this Project must not have an impact on native freshwater mussels at the Project site. If in-water work is planned in any streams that meet the criteria outlined in the Ohio Mussel Survey Protocol (ODNR and USFWS 2018), the ODNR recommends mussel surveys or mussel reconnaissance surveys be conducted and the ODNR recommends that the applicant provide information to indicate no mussel impacts will occur. No in-water work will take place in perennial streams as part of the Project. Therefore, no impacts to mussels are anticipated.

The ODNR response letter stated the Project area is within the range of five state-listed fish species and advised that due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact indigenous aquatic species and their habitat. According to the ODNR, due to the location, this project is also not likely to impact the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*; state-listed endangered and a federal species of concern). Because no in-water work is proposed by AEP in a perennial stream, impacts to the state-listed fish species or the eastern hellbender are not anticipated.

The ODNR also stated that they are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the Project area.

B(10)(f) Areas of Ecological Concern

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

The USFWS response letter indicates that there are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the Project area (Appendix D). Additionally, the ODNR response letter stated that no records of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas occur within the Project area (Appendix D).

An ecological resources inventory report was completed by the Company's consultant on April 23, 2021 (Appendix E). During the ecological field surveys, 19 palustrine emergent wetlands, two palustrine scrub-shrub wetlands, five mixed palustrine emergent/palustrine scrub shrub wetlands, five ephemeral streams, 24 intermittent streams, and 12 perennial streams were identified within the Project area. See Appendix E for more information regarding these aquatic resources. Two existing structures are currently located within wetlands and will be removed as part of the Project. No new structures are proposed to be installed within wetlands. Several wetlands will be temporarily impacted by timber mat access roads and/or by timber mat structure workspaces. The remaining wetlands within the Project area will be avoided. No structures or culverts for access roads are proposed within streams. Streams will either be avoided or crossed using timber mat bridges/air bridges.

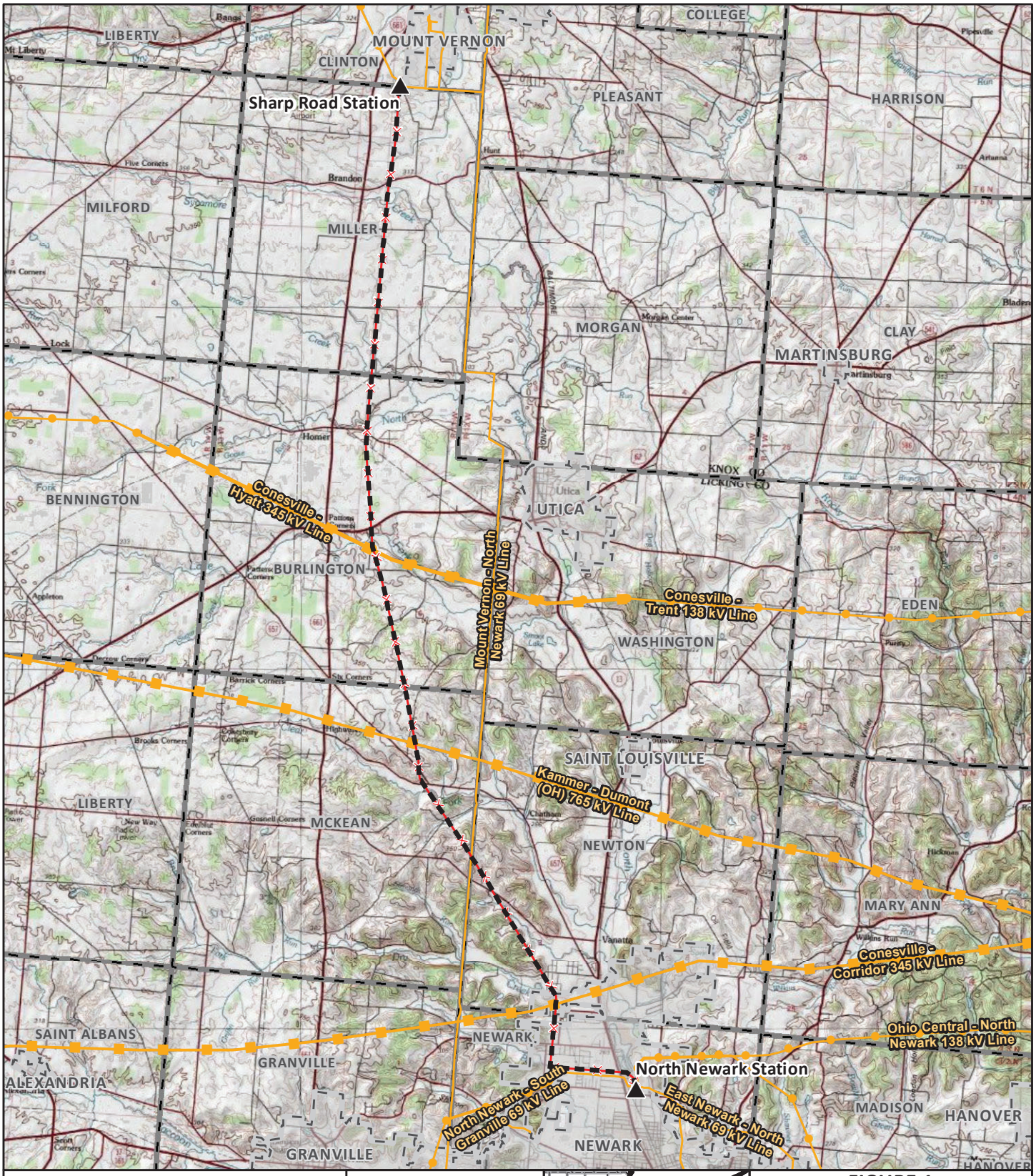
The FEMA Flood Insurance Rate Maps were consulted to identify any floodplains/flood hazard areas that have been mapped in the Project area (specifically, map numbers 39089C0070J, 39089C0160J, 39089C0190H, 39089C0327H, 39089C0333J). Based on these maps, mapped FEMA floodplains are located within the Licking County portion of the Project area. Seven existing structures are located within mapped FEMA floodplains and will be replaced by seven new structures within FEMA mapped floodplains. Therefore, a Permit to Develop in an Identified Flood Hazard Area will be required from the Licking County Floodplain Administrator for this Project.

B(10)(g) Unusual Conditions

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

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

APPENDIX A Project Figures



LEGEND:

- Existing Substation
- Proposed Route
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

- Municipal Boundary
- Township Boundary

Data Sources:
AEP, USGS

Coordinate System and Datum
NAD 83 State Plane
Ohio North

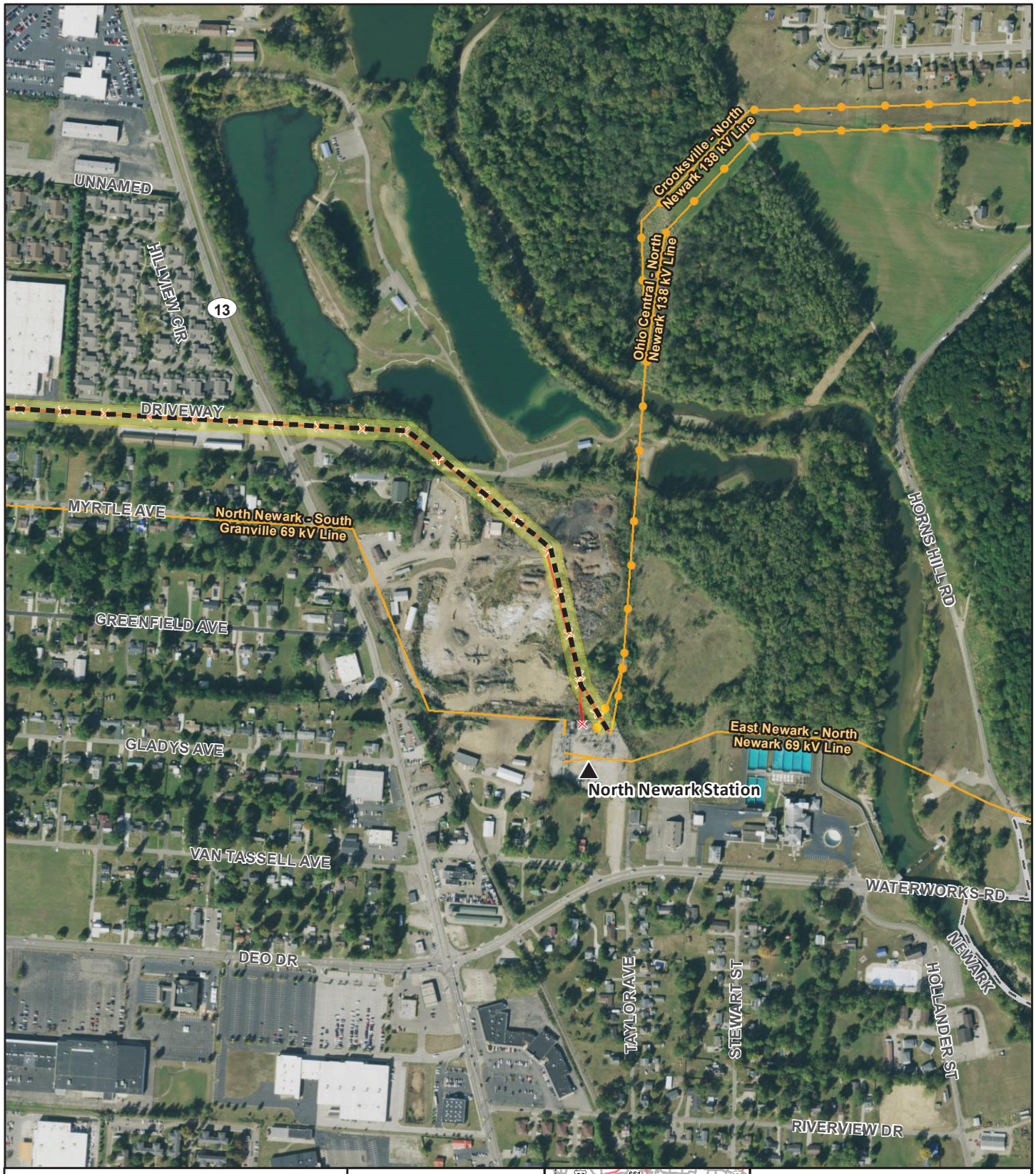
April 23, 2021

FIGURE 1
TOPOGRAPHIC OVERVIEW MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 1 2 3 4
Miles



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

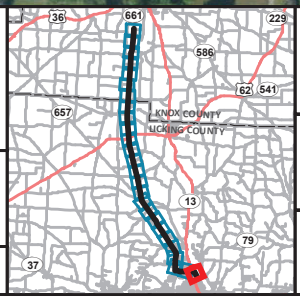
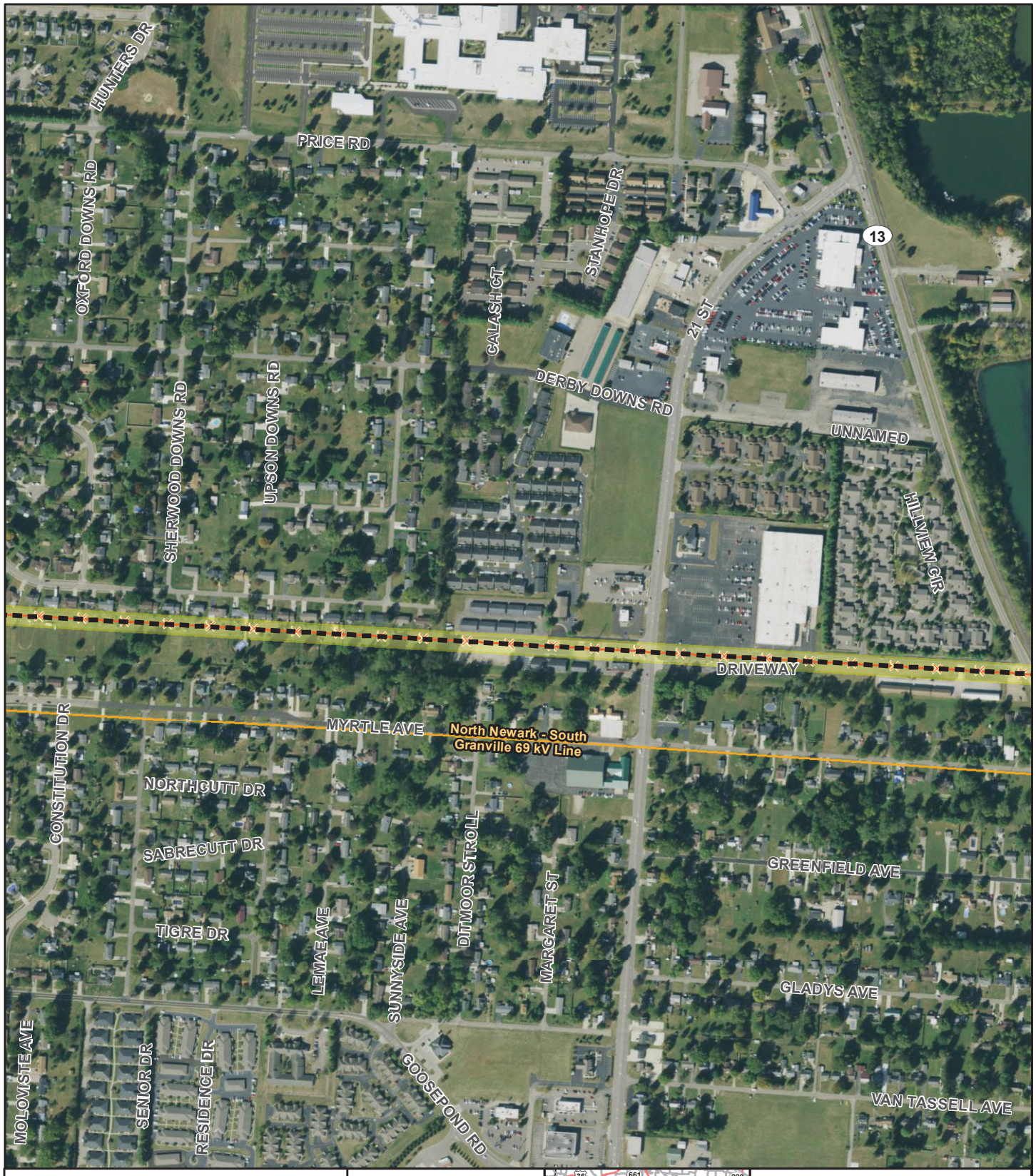


FIGURE 2A
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

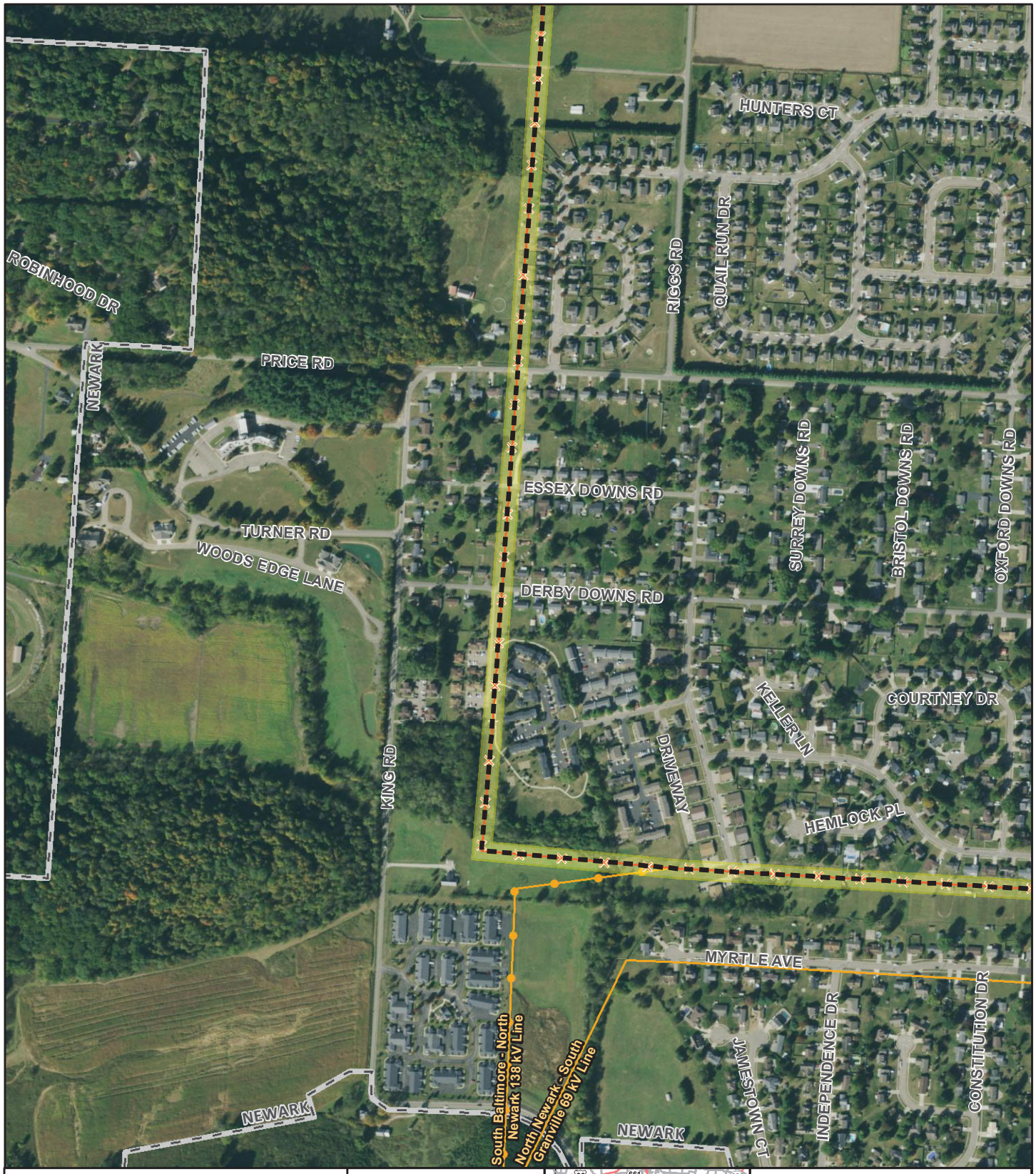
April 23, 2021

FIGURE 2B
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

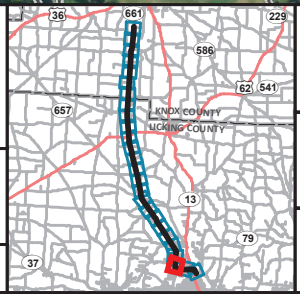
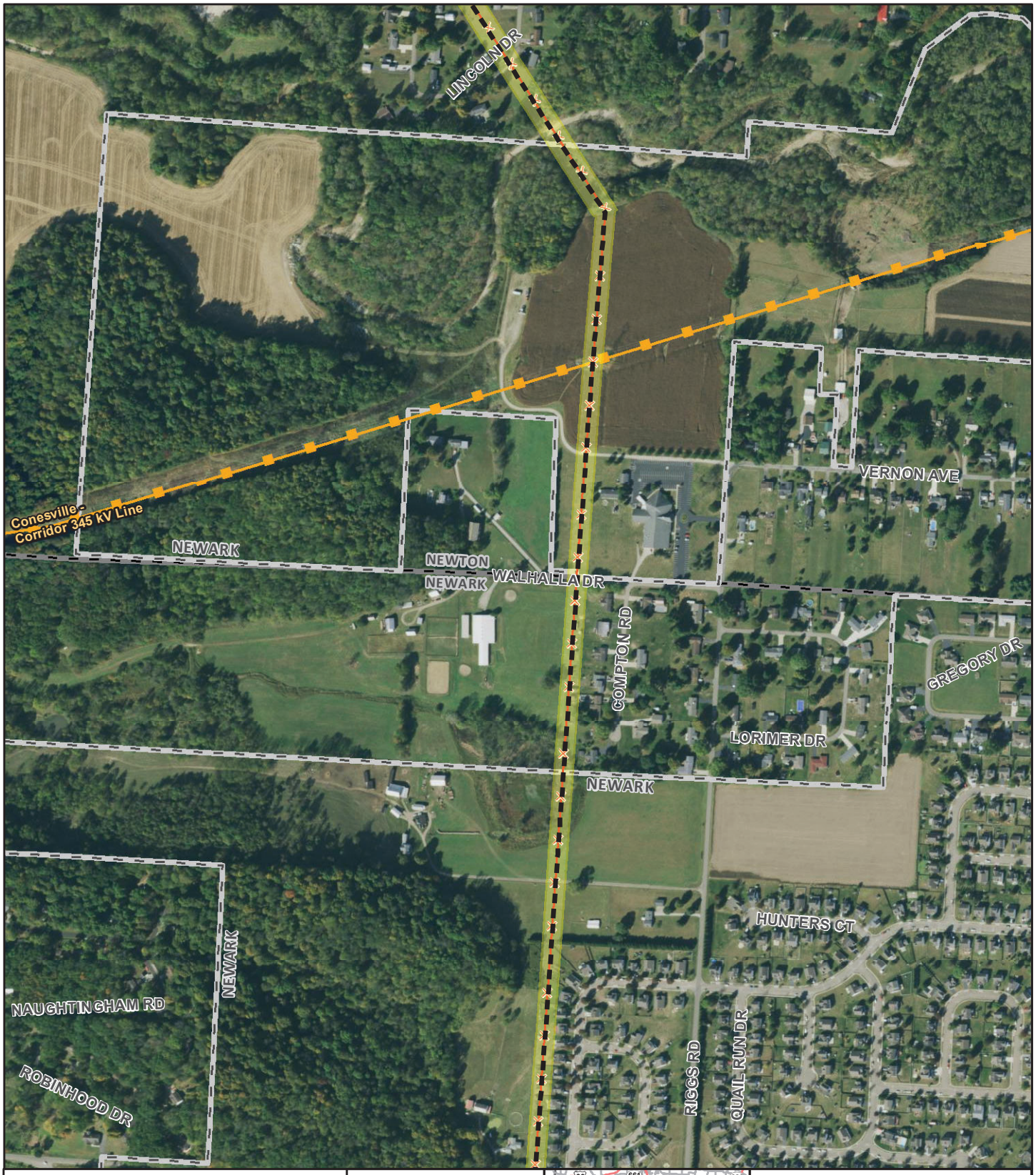


FIGURE 2C
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

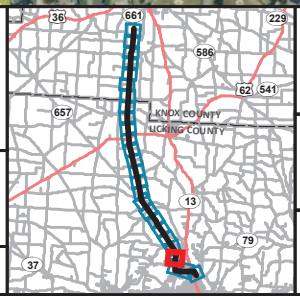
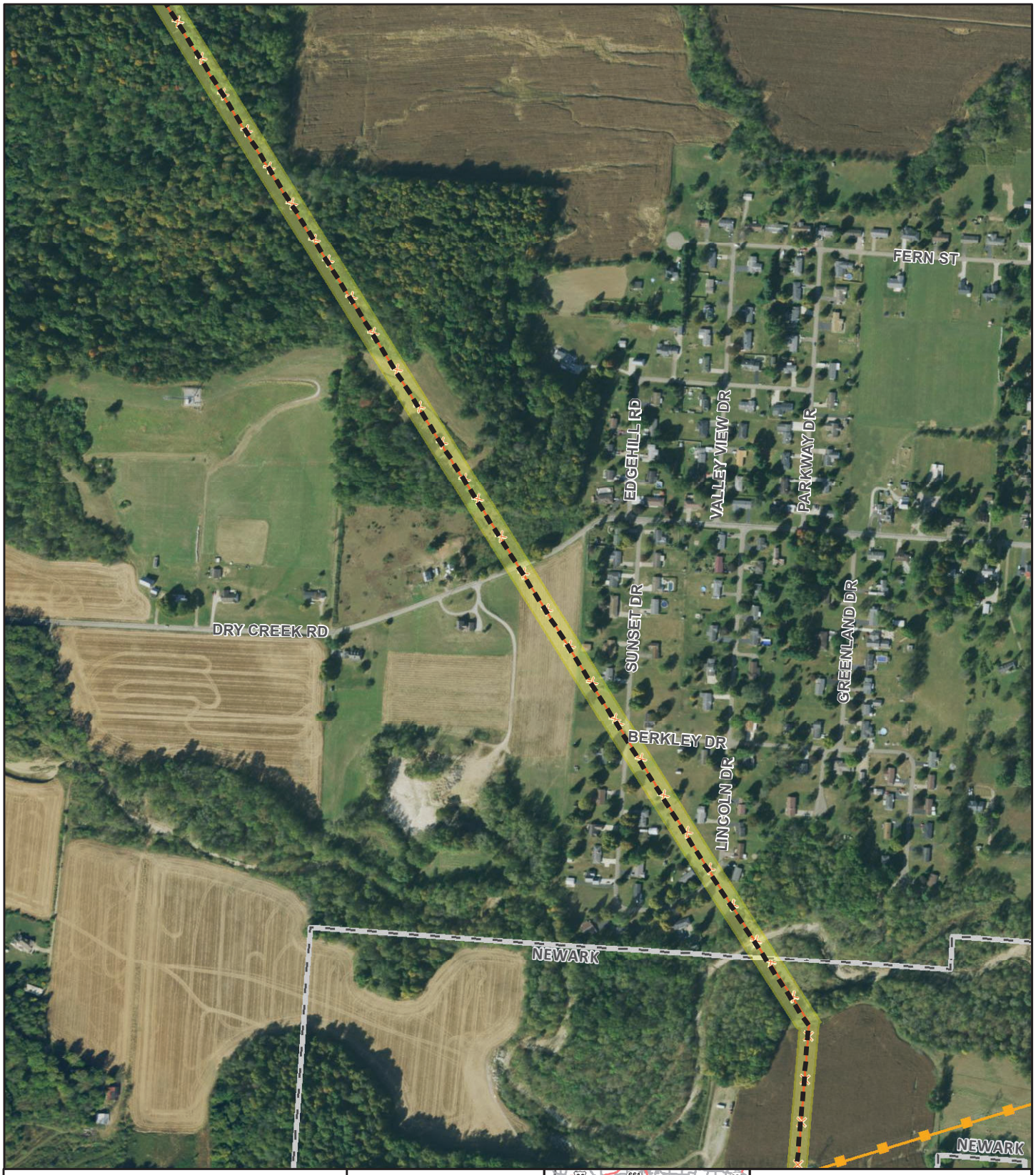


FIGURE 2D
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

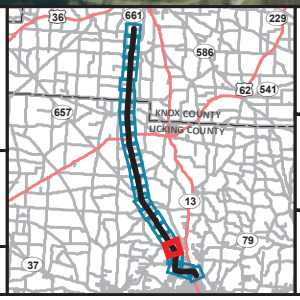


FIGURE 2E
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

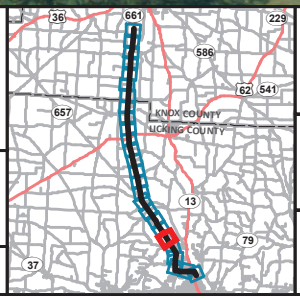
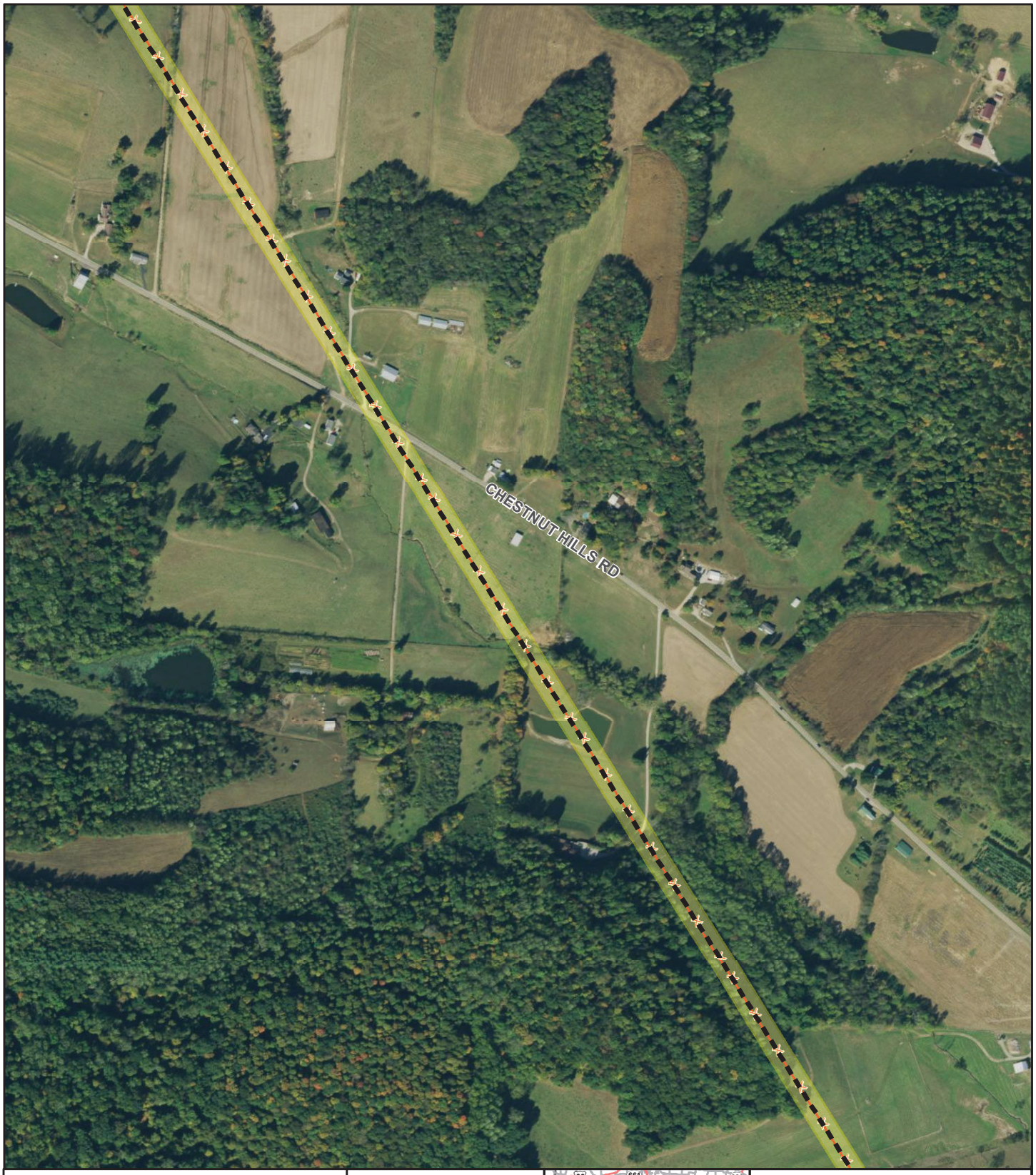


FIGURE 2F
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

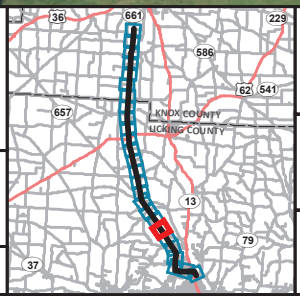
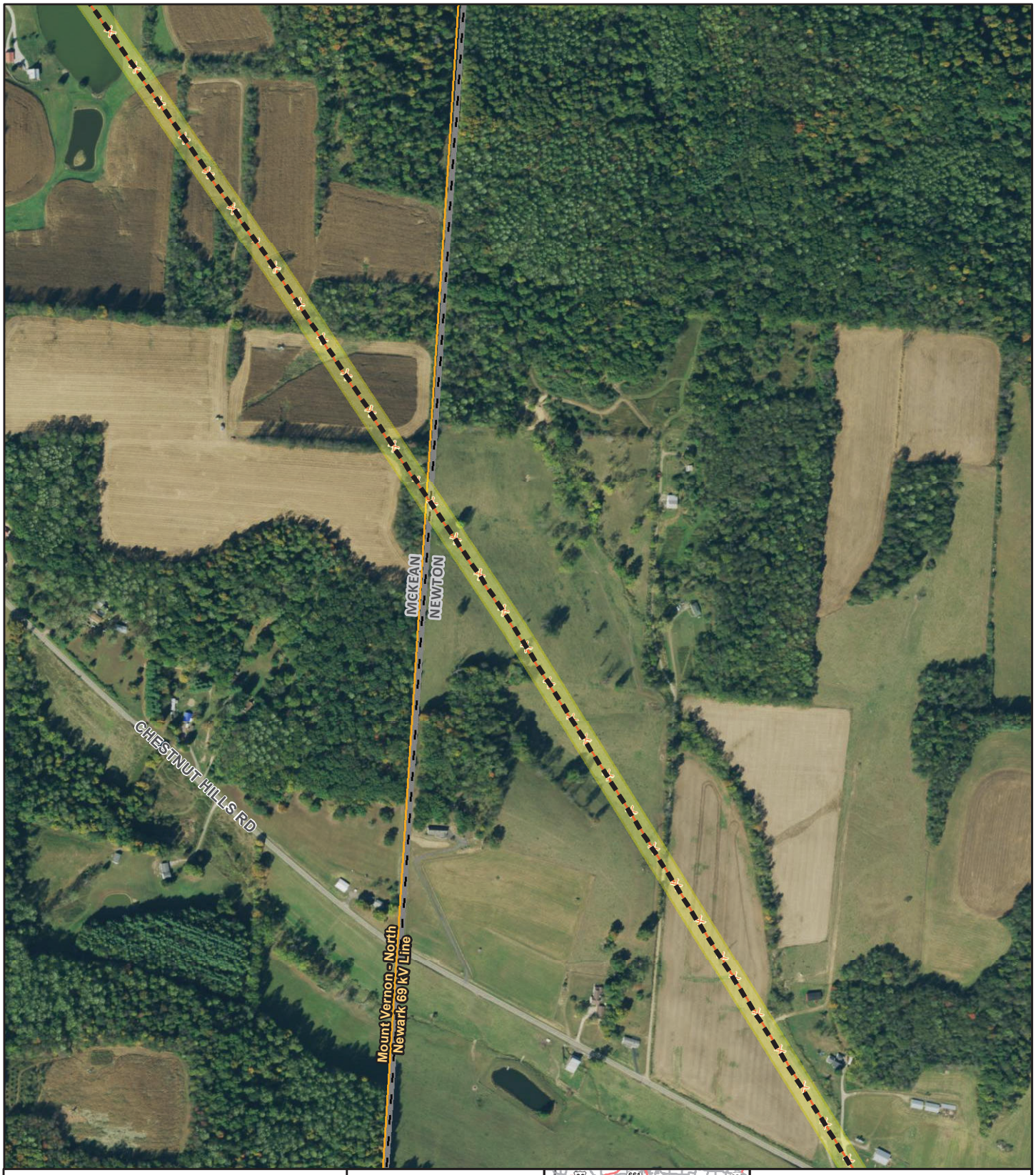


FIGURE 2G
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

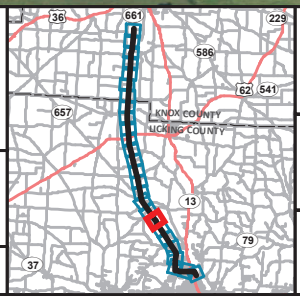


FIGURE 2H
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

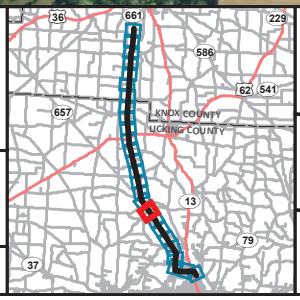
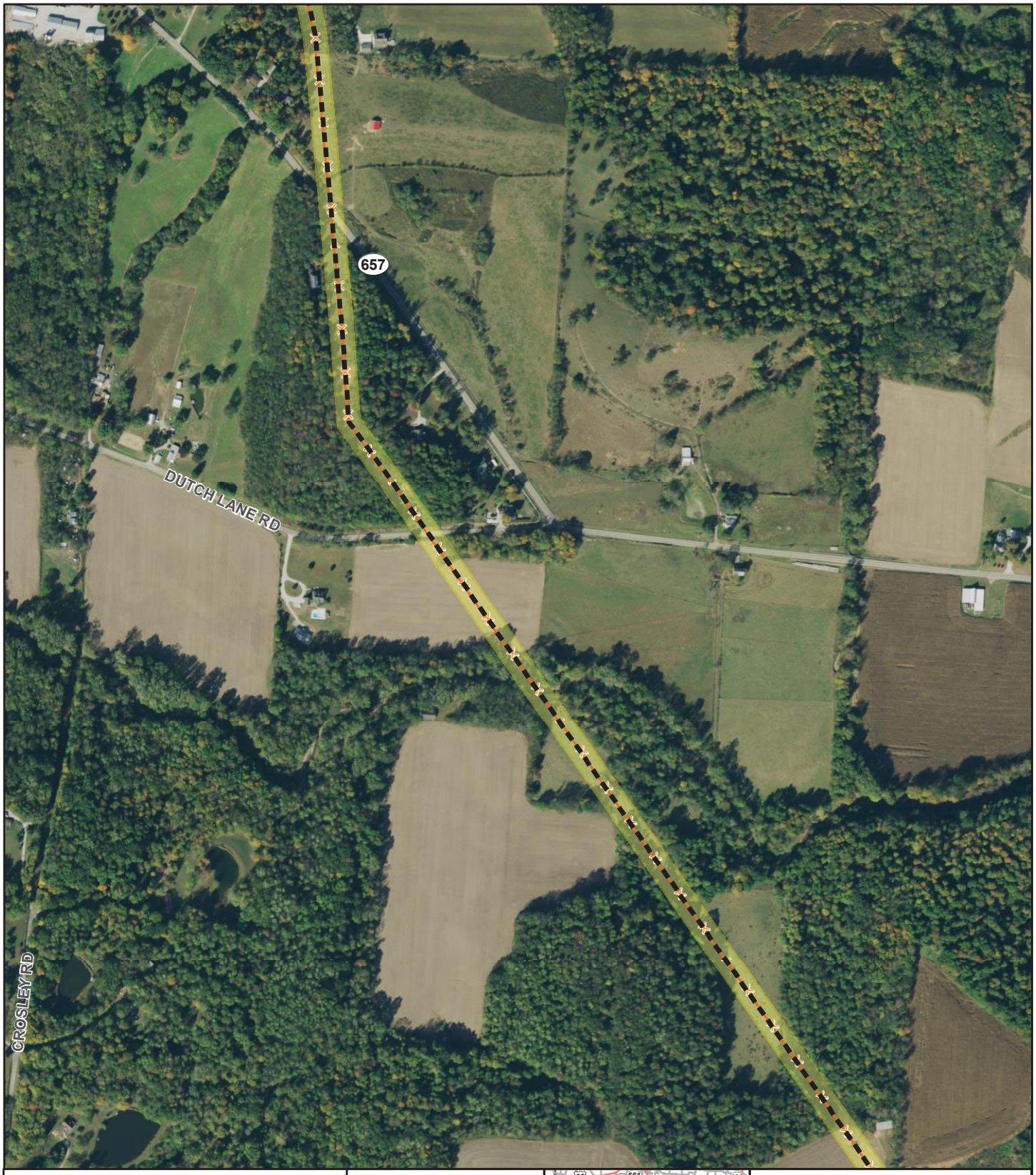


FIGURE 2I
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

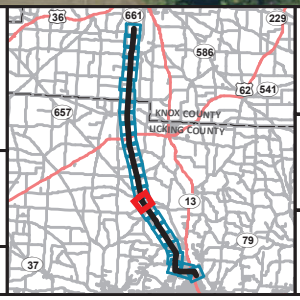
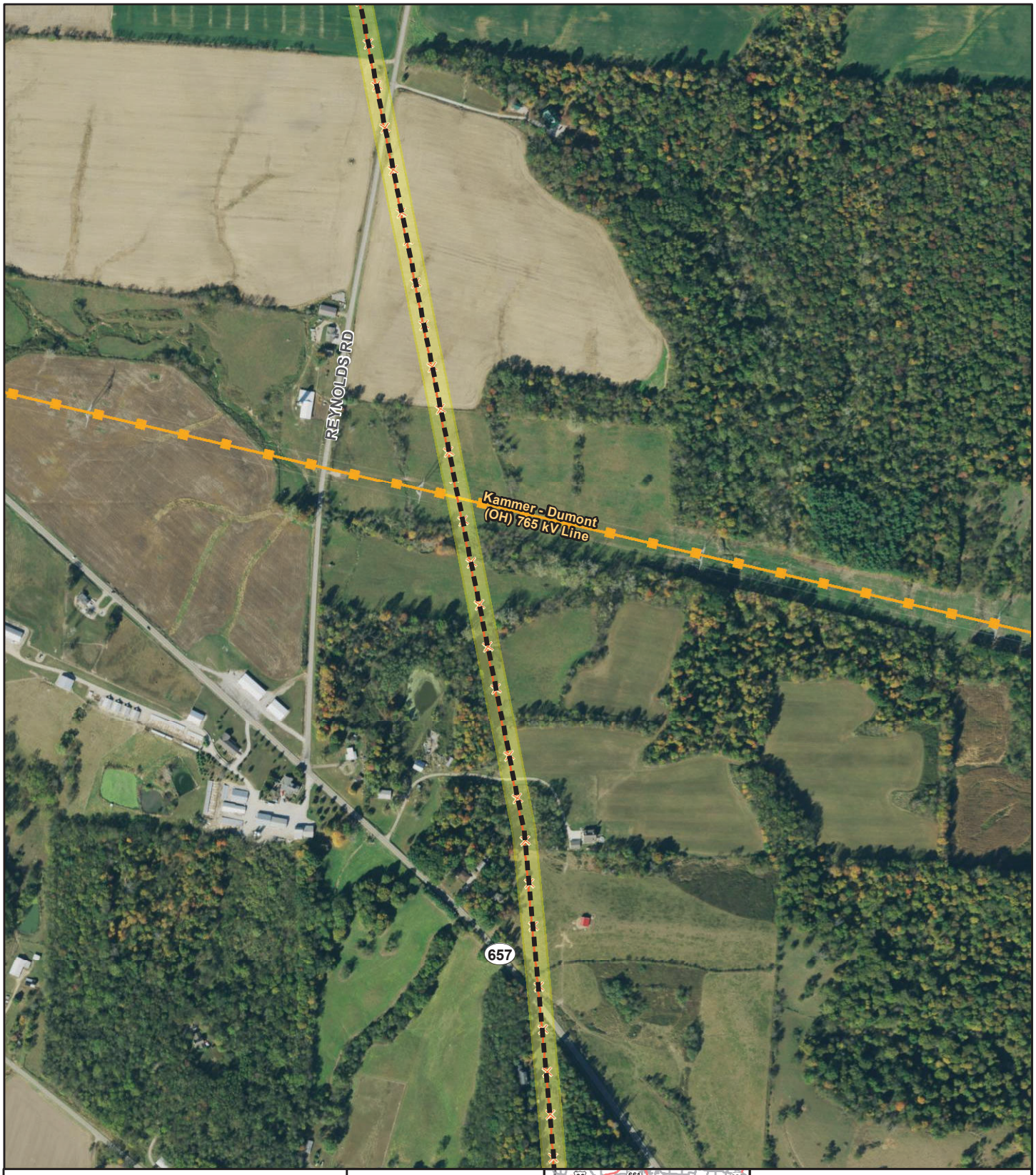


FIGURE 2J
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

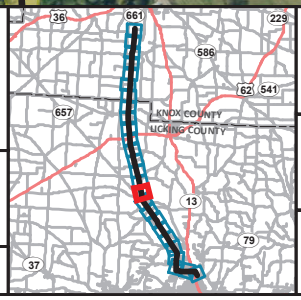


FIGURE 2K
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

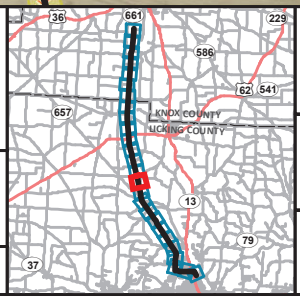


FIGURE 2L
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

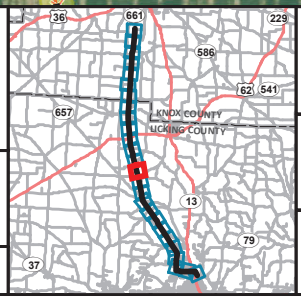
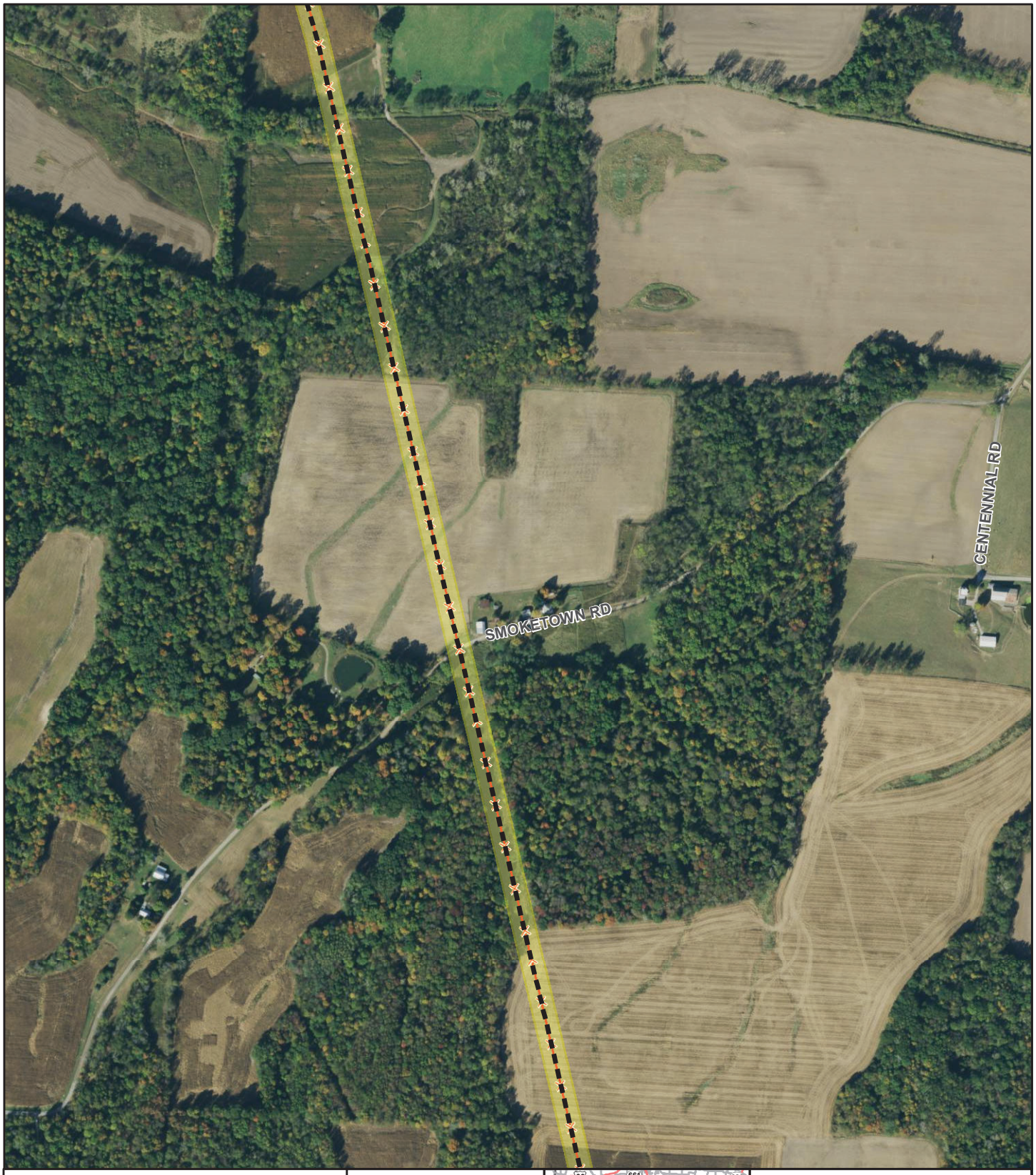


FIGURE 2M
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

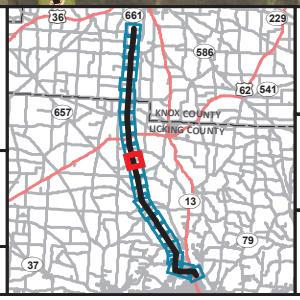
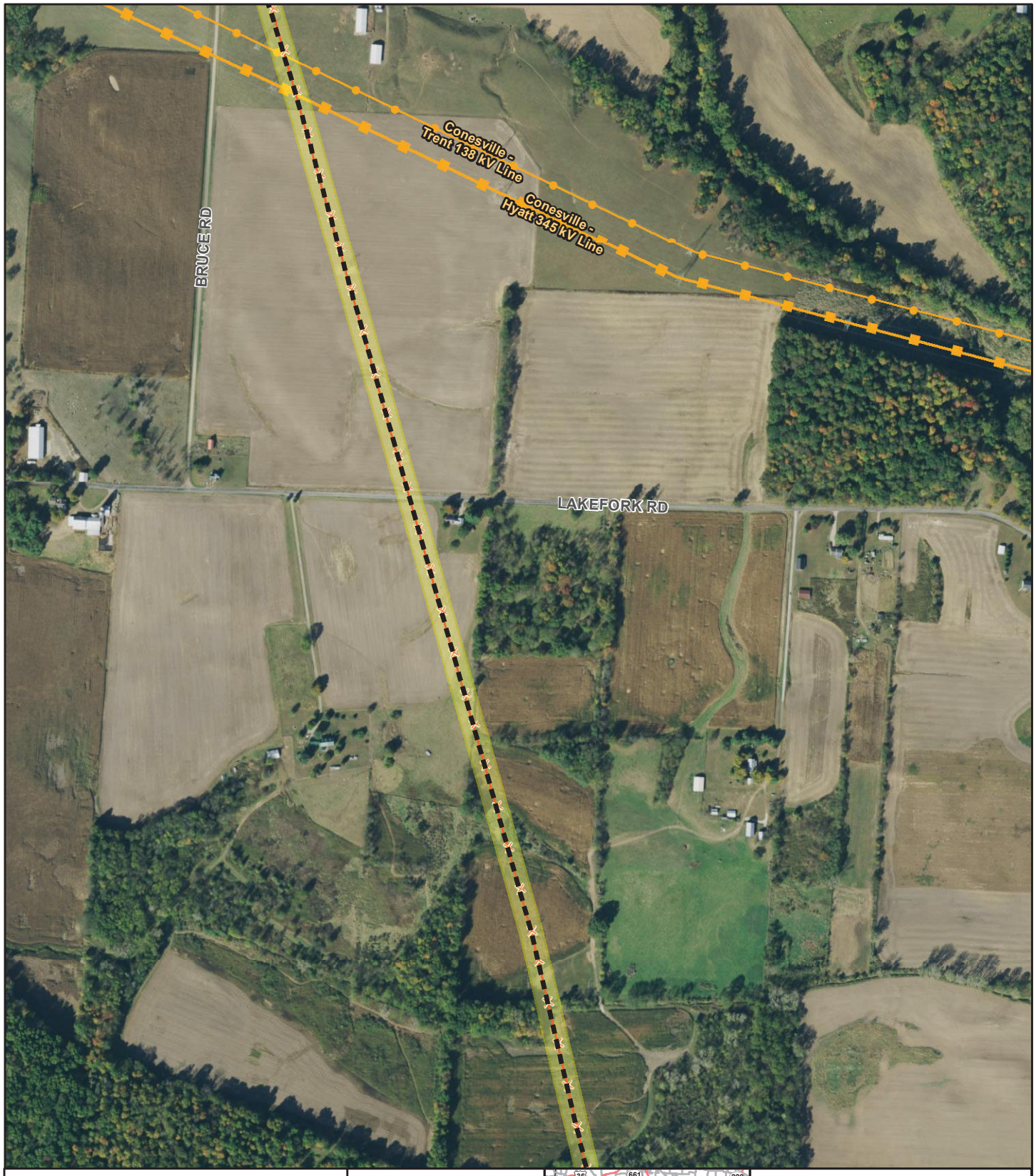


FIGURE 2N
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

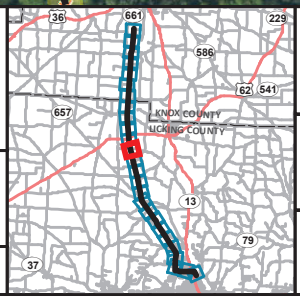


FIGURE 2O
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

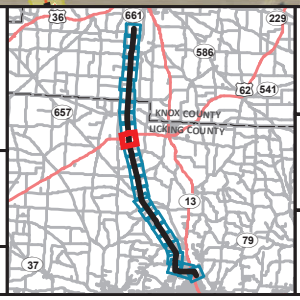


FIGURE 2P
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

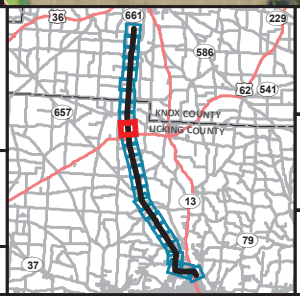


FIGURE 2Q
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

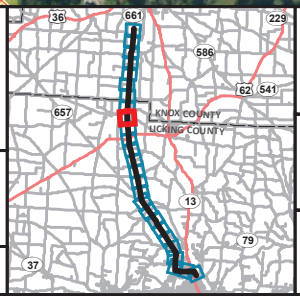


FIGURE 2R
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

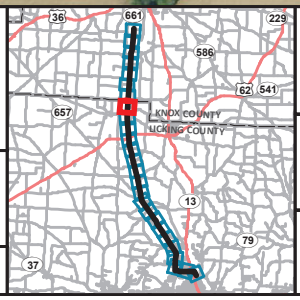


FIGURE 2S
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

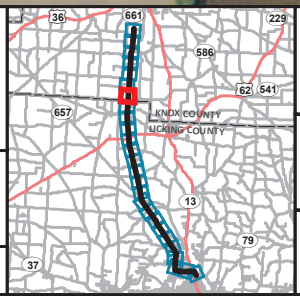


FIGURE 2T
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

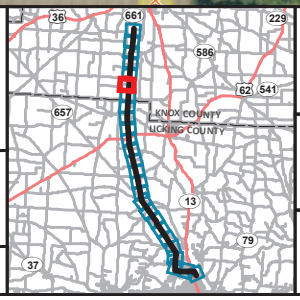


FIGURE 2U
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

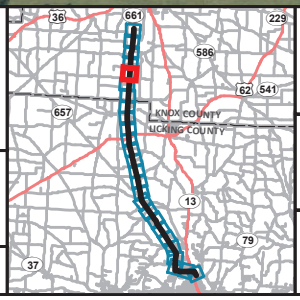
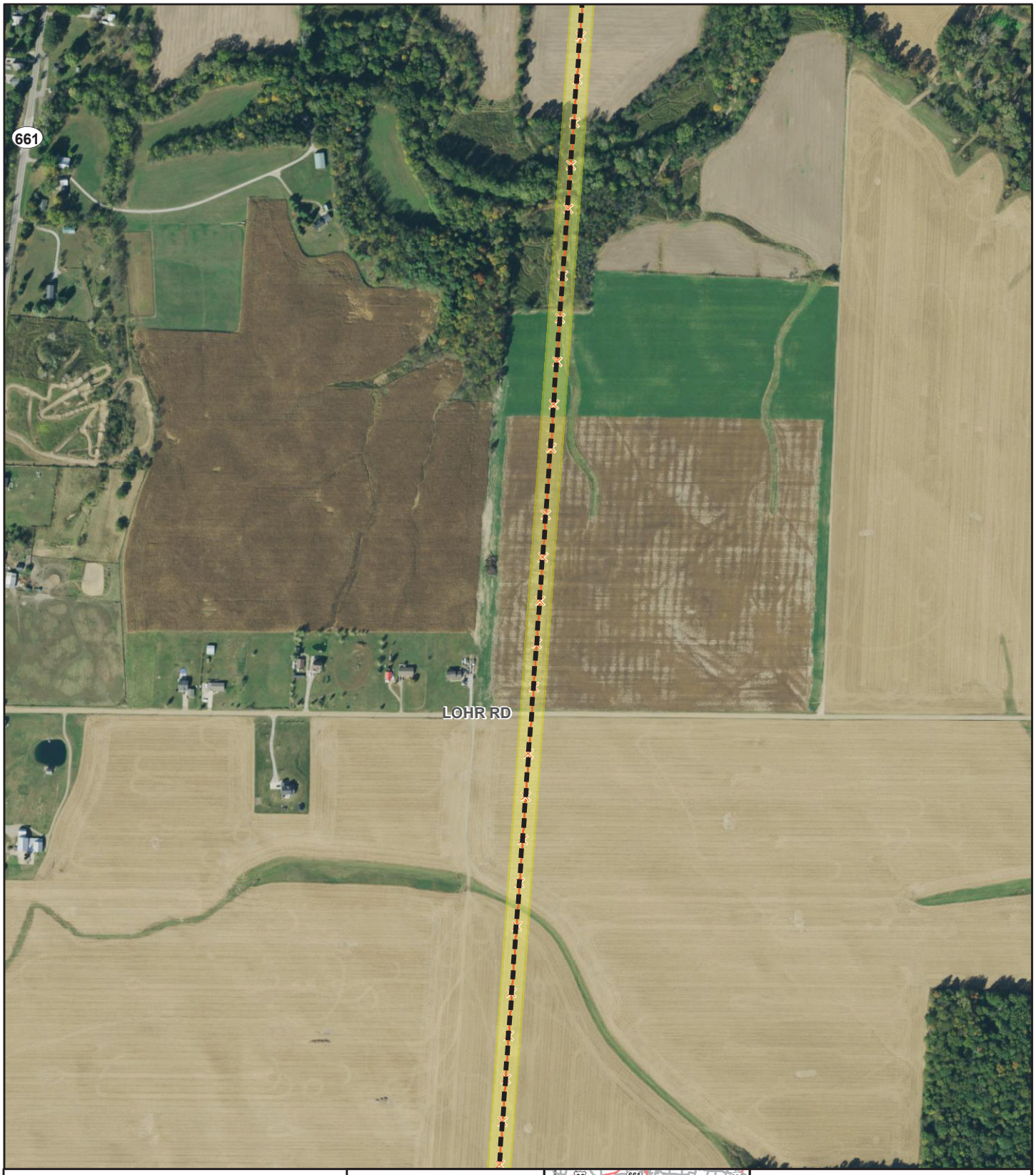


FIGURE 2V
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

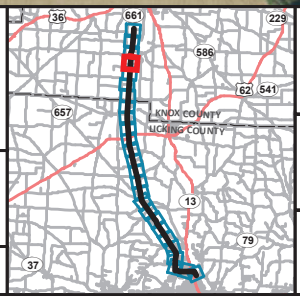
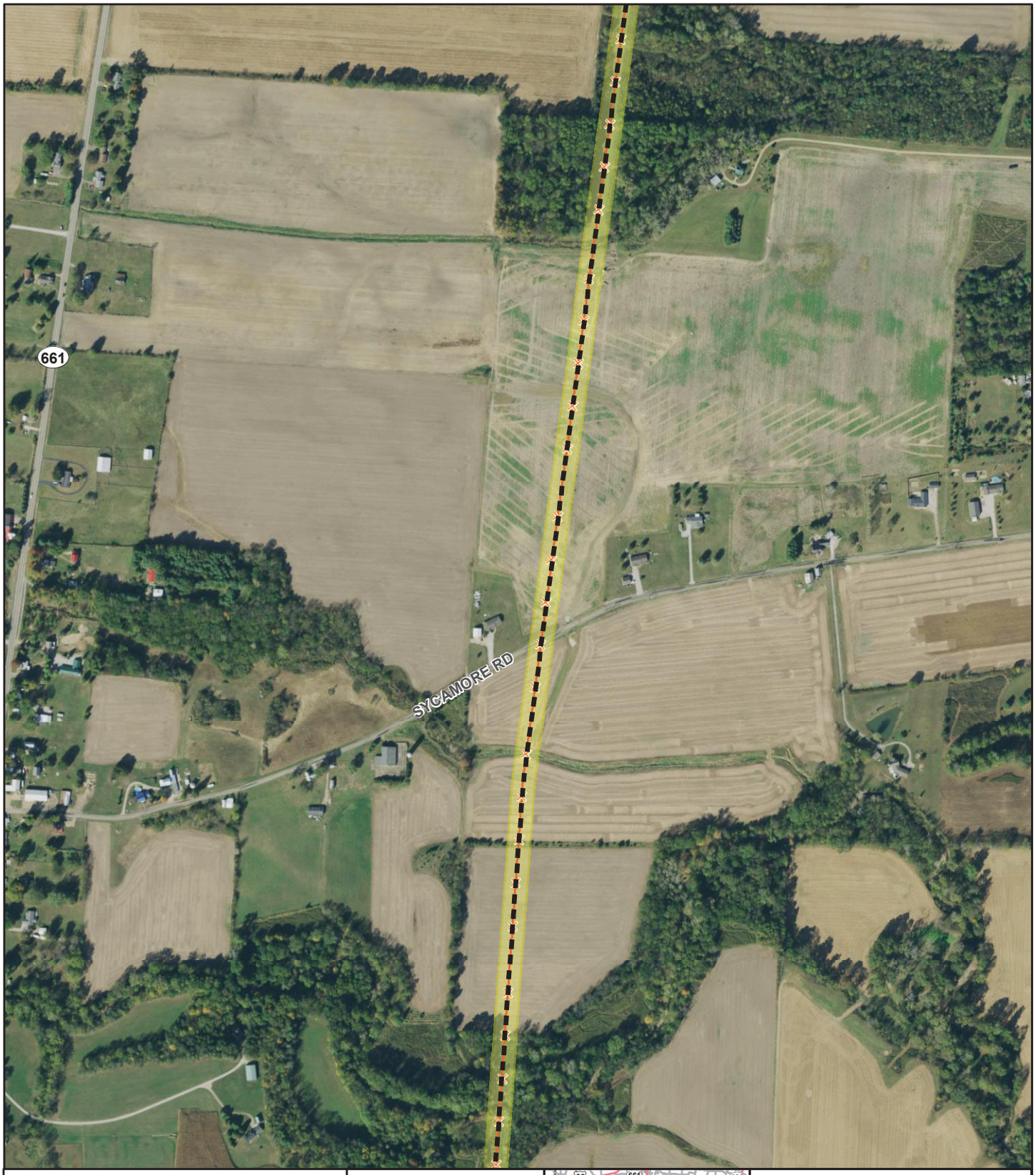


FIGURE 2W
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)



LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

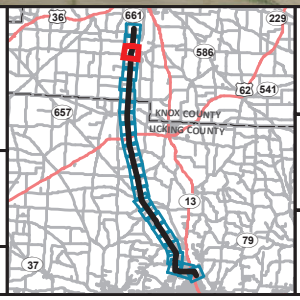


FIGURE 2X
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

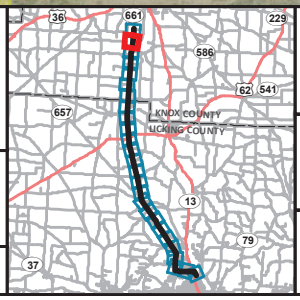


FIGURE 2Y
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

LEGEND:

- Existing Substation
- Proposed Route
- Proposed ROW
- Municipal Boundary
- Township Boundary
- Existing Transmission Line to be Removed or Rebuilt

Existing Transmission Line

- 69 kV or Lower
- 115 kV - 230 kV
- 345 kV

Data Sources or Notes:
AEP, USGS, OGRIP, NAIP

Coordinate System and Datum
NAD 83 State Plane Ohio North

April 23, 2021

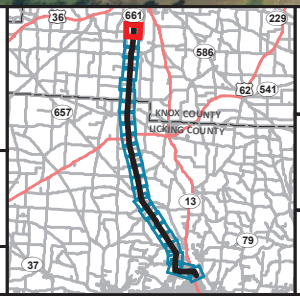


FIGURE 2Z
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

North Newark–Sharp Road
138 kV Transmission Line
Rebuild Project

0 500 1,000
Feet
1:7,200 (At original document size of 8.5x11)

APPENDIX B PJM Submittal and Long Term Forecast Report

AEP Transmission Zone M-3 Process
North Newark – Sharp Road 138kV Rebuild

Need Number: AEP-2019-OH043

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 04/10/2020

Previously Presented:

Needs Meeting 7/24/2020

Solutions Meeting 2/21/2020

Project Driver:

Equipment Material/Condition/Performance/Risk

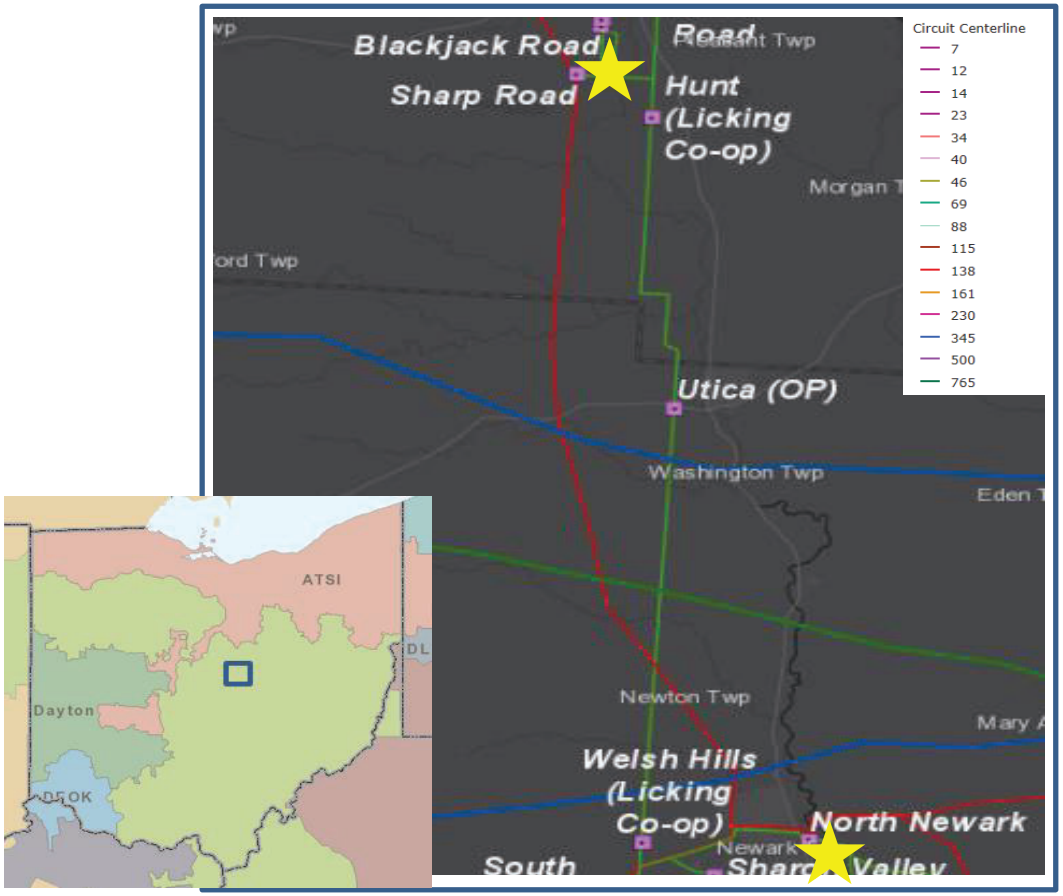
Specific Assumption Reference:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8)

Problem Statement:

North Newark – Sharp Road 138kV (vintage 1951)

- Length: 19.38 Miles
- Original Construction Type: Wood Pole
- Original Conductor Type: 477 KCM Hawk
- Number of open conditions: 68
  - Open conditions include: Burnt insulators, insect damage, pole rot, woodpecker damage



AEP Transmission Zone M-3 Process
North Newark – Sharp Road 138kV Rebuild

Need Number: AEP-2019-OH043

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 04/10/2020

Selected Solution:

- Rebuild the existing 138kV line with 19.4 miles of new 1033 ACSR. (**S2186**)

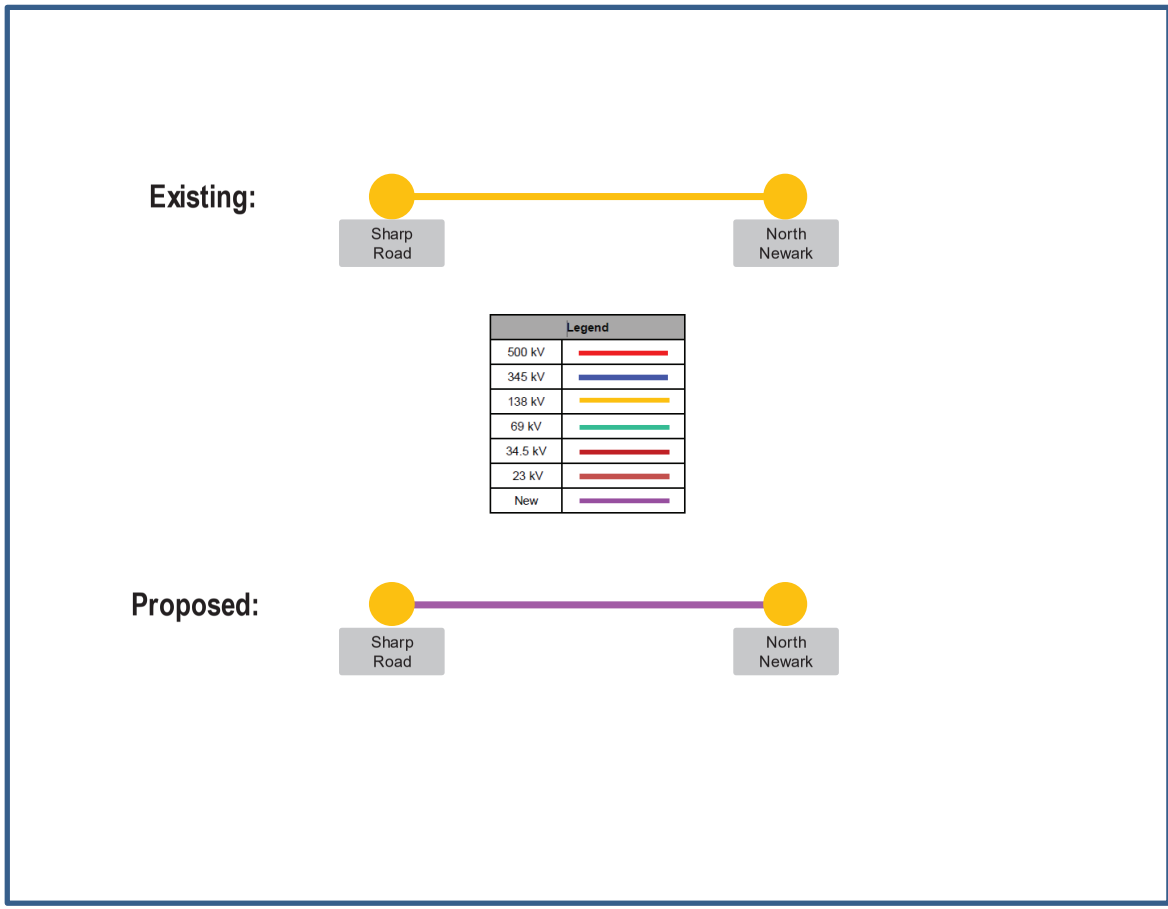
Estimated Cost: $42.2 M

Projected In-Service: 7/1/2023

Supplemental Project ID: S2186

Project Status: Scoping

Model: N/A



PUCO Form FE-T7:
AEP Ohio Transmission Company
Characteristics of Existing Transmission Lines

Transmission Name & Line No.[a]	Point of (Origin - Terminus)	Summer Capability		Winter Capability		Operating Voltage (kV)	Design Voltage (kV)	Right-of-Way		Type of Supporting Structure	Number of Circuits		Substations on the Line
List Each Transmission Line of 125 kV or More	Indicate Location of Line's Beginning and Terminus	Normal Rating	Emergency Rating	Normal Rating	Emergency Rating	Indicate Design Voltage and Operating Voltage For Each Line		Length (Miles)	Width Max./Min. (feet)	Steel Towers, Wood Poles or Underground, etc. and Number of Miles of the Line of Each Structure	Design	Installed	Substation Name
20538	North Crown City - North Proctorville	167	167	210	210	138	138	16.74	100/100	Wood - 3 pole	1	1	
24279	North Delphos - Sterling	167	167	210	210	138	138	15.93	100/100	Wood - 1 pole with push brace	1	1	EAST SIDE (OP)
4962	North Fairfield - West Millersport	200	200	253	253	138	138	0.2	100/100	Wood - 1 pole	1	1	
2003	North Intertie (City of Dover) - South Canton	296	296	375	375	138	138	15.27	100/100	Wood - 1 pole	1	1	BOLIVAR
5161	North Intertie (City of Dover) - West New Philadelphia	285	296	363	375	138	138	4.38	100/100	Steel - Lattice	1	1	
4081	North Newark - Ohio Central	202	202	214	214	138	138	21.73	100/100	Steel - 1 pole	1	1	FRAZEYSBURG, REFORM ROAD
20257	North Newark - Sharp Road	158	183	200	218	138	138	19.38	100/100	Steel - Lattice	1	1	
21537	North Portsmouth - South Lucasville	185	185	234	234	138	138	5.17	100/100	Wood - H-frame	1	1	
23657	North Proctorville - South Point	240	251	317	317	138	138	10.86	100/100	Steel - 1 pole	1	1	
21282	North Zanesville - Powelson	205	284	258	320	138	138	2.99	100/100	Wood - 3 pole	1	1	
21281	North Zanesville - Zanesville	205	284	258	320	138	138	4.63	100/100	1 pole	1	1	
31557	Northeast Canton - Wagenhals 138 kV	205	284	258	320	138	138	2.6	100/100	1 pole	1	1	
22537	Ohio Central - Philo #2	136	173	179	206	138	138	18.16	100/100	Steel - 3 pole	1	1	
21280	Ohio Central - Powelson	205	284	258	320	138	138	4.54	100/100	Wood - 3 pole	1	1	
736	Ohio Central - South Coshocton	185	240	234	285	138	138	16.35	100/100	Wood - 1 pole	1	1	
12478	Ohio Central - West Millersburg	150	185	189	234	138	138	38.2	100/100	Wood - 1 pole	1	1	SOUTH MILLERSBURG, WEST COSHOCTON
28998	Ordnance Junction Switch - Shawnee Road	335	388	424	429	138	138	1.66	100/100	Wood - 1 pole	1	1	
740	Ordnance Junction Switch - Sterling	329	361	424	429	138	138	1.78	100/100	Wood - 1 pole	1	1	
2231	Philo - Zanesville	136	173	179	206	138	138	12.27	100/100	Wood - 1 pole	1	1	WEST PHILO
742	Philo Switch - South Canton	145	145	183	183	138	138	75.19	100/100	Wood - H-frame	1	1	WEST DOVER, STRASBURG, NORTH STRASBURG, BRIDGEVILLE, SUGARCREEK TERMINAL
14217	Polaris - Westar	223	233	281	289	138	138	3.59	100/100	Wood - 1 pole	1	1	
11597	Riverview - Williams Creek (APS)	240	282	286	286	138	138	0.5	100/100	Steel - Lattice	1	1	
2102	Roberts - Wilson	196	247	248	286	138	138	4.97	100/100	Steel - Lattice	1	1	
743	Rockhill - West Lima	167	240	210	271	138	138	9.94	100/100	Wood - 1 pole	1	1	EASTOWN ROAD
4306	Rutland - Sporn	334	392	421	466	138	138	13.9	100/100	Steel - Lattice	1	1	
28218	Sand Hill - Tidd 2	187	205	247	258	138	138	0.45	100/100	Steel - Lattice	1	1	None in Ohio
670	Scioto Trail - Scippo	150	191	197	227	138	138	0.78	100/100	Wood - 1 pole	1	1	
20258	Sharp Road - West Mount Vernon	158	183	200	218	138	138	2.38	100/100	Steel - H-frame	1	1	
28997	Shawnee Road - Southwest Lima	335	388	424	429	138	138	2.2	100/100	Wood - 1 pole	1	1	
18819	South Baltimore - West Lancaster	167	167	210	210	138	138	9.9	100/100	Wood - H-frame	1	1	
18818	South Baltimore - West Millersport	167	167	210	210	138	138	4.4	100/100	Wood - H-frame	1	1	
24357	South Caldwell - South Cumberland	158	183	200	214	138	138	10.82	100/100	Wood - 1 pole	1	1	
24359	South Caldwell - Steamtown	205	284	258	320	138	138	12.36	100/100	Wood - 1 pole	1	1	
744	South Canton - Southeast Canton 138kV	296	296	375	375	138	138	7.21	100/100	Steel - Lattice	1	1	FAIRCREST STREET
14857	South Canton - Southeast Canton 345kV	1409	1409	1781	1781	345	345	5.83	150/150	Steel - Lattice	1	1	
746	South Canton - Timken - Richville Switch	285	302	363	393	138	138	3.47	100/100	Wood - 1 pole	1	1	
747	South Canton - Torrey	366	429	429	429	138	138	2.87	100/100	Wood - 1 pole	1	1	
21137	South Canton - West Canton #1	219	255	277	303	138	138	10.65	100/100	Steel - 1 pole	1	1	

APPENDIX C Property Parcel Number Table

Property Parcel Number	Easement Agreement/Option Obtained* (Yes/No)
Licking County	
058-295158-03.000	No (AEP property)
054-270678-00.000	Yes
054-270678-00.005	Yes
054-270678-00.004	Yes
054-270678-00.001	No
054-270678-00.003	Yes
Mt Vernon Road	
054-269886-00.000	Yes
054-269934-00.005	No
054-269934-00.161	Yes
054-269934-00.152	Yes
054-269934-00.000	Yes
054-269934-04.000	Yes
054-269934-04.002	Yes
N 21st Street	
054-286452-12.001	No
054-286452-12.002	Yes
054-286452-12.000	Yes
054-286452-10.000	Yes
054-286452-12.003	Yes
054-293448-00.000	Yes
054-293442-00.000	No
054-293436-00.000	Yes
054-293460-00.000	No
054-294126-00.000	No
054-294102-00.000	Yes
054-294084-00.000	Yes
054-290070-00.000	No
054-294114-00.000	Yes
054-294108-00.000	No
054-293430-00.000	No
054-293454-00.000	No
054-294120-00.000	No
054-294132-00.000	Yes
054-286314-47.000	Yes
054-286314-48.000	Yes
054-286314-49.000	Yes
054-286314-50.000	Yes
054-286314-51.000	Yes
054-286314-52.000	No
054-286314-53.000	Yes
054-286314-56.000	No
054-281264-00.000	Yes
054-286315-01.000	No
054-286315-02.000	No
054-286315-03.000	Yes
054-286315-04.000	Yes
054-286315-05.000	Yes
054-286314-79.000	No
Churchill Downs Road	
054-286314-65.000	Yes
(Blank)**	No
054-286314-64.000	Yes

Property Parcel Number	Easement Agreement/Option Obtained* (Yes/No)
054-286316-00.000	No
054-286314-00.000	Yes
054-286316-01.000	Yes
054-286314-00.001	Yes
054-286314-61.000	Yes
054-291072-00.000	Yes
054-290940-00.000	Yes
Derby Downs Road	
054-290874-00.000	No
054-291252-00.000	No
054-290844-54.000	No
054-290844-53.000	Yes
Essex Downs Road	
054-290844-47.000	No
054-290844-48.000	No
054-290844-32.000	No
054-290844-31.000	Yes
Price Road	
058-286650-01.001	Yes
054-286674-00.228	No
054-286674-00.229	No
054-286674-00.230	Yes
054-286674-00.231	No
054-286674-00.232	No
054-286674-00.233	No
054-286674-00.234	No
054-286674-00.235	No
054-286674-00.236	No
054-286674-00.237	No
054-286674-00.000	No
054-286674-00.238	No
054-286674-00.230	No
054-286674-00.240	Yes
054-286674-00.241	Yes
058-286650-00.001	Yes
9628657800000	No
058-286608-00.000	No
058-288240-00.000	Yes
058-288246-00.000	No
058-293586-00.000	No
058-287850-00.000	No
058-289002-00.000	Yes
058-291936-00.000	No
058-291942-00.000	No
Walhalla Road NE	
062-305664-00.000	No
081-305664-00.004	Yes
081-305664-00.002	Yes
059-301776-00.000	Yes
059-300114-00.000	No
059-299046-00.000	Yes
Lincoln Drive	
059-298212-00.000	Yes
059-301620-00.000	No

Property Parcel Number	Easement Agreement/Option Obtained* (Yes/No)
059-300420-00.000	No
059-301614-00.000	No
059-298320-00.000	Yes
059-298308-00.000	Yes
Sunset Drive	
059-301416-00.000	Yes
059-298302-00.000	Yes
(Blank)**	No
059-297918-00.000	Yes
059-297912-00.000	Yes
059-297924-00.000	Yes
059-301470-00.000	Yes
059-297546-00.000	Yes
059-297546-01.000	No (AEP property)
059-297546-00.001	Yes
059-296088-00.008	No
059-296088-00.001	No
059-296088-00.006	No
059-296088-00.005	No
059-297552-00.000	No
059-296256-00.022	No
059-296256-00.026	No
059-297396-00.000	No
059-297396-00.001	No
059-296268-00.000	No
059-296478-00.000	No
059-296478-00.000	No
059-296154-00.000	No
059-296136-00.000	No
059-296370-00.000	No
059-297276-01.000	No
059-296142-00.000	No
059-296148-00.000	No
046-155682-00.000	No
046-154464-00.000	No
046-156312-00.000	No
046-155430-01.000	Yes
046-154464-02.000	Yes
046-154464-02.000	Yes
046-154464-02.000	Yes
046-156318-00.001	No
046-154506-00.001	No
046-156318-00.001	No
046-154308-00.000	Yes
046-154506-00.004	No
046-154506-00.000	No
046-154506-00.007	Yes
046-154506-00.006	Yes
046-154506-00.003	Yes
046-154506-00.002	Yes
046-155778-00.000	Yes
046-155082-00.000	Yes
046-154224-00.000	Yes
046-154800-00.000	Yes

Property Parcel Number	Easement Agreement/Option Obtained* (Yes/No)
006-010452-00.000	Yes
006-009864-00.000	Yes
006-010608-00.000	Yes
006-010332-00.000	No
006-010824-00.000	Yes
006-010014-00.000	Yes
006-011604-00.000	Yes
006-009096-00.000	Yes
Bruce Road	
006-009090-00.000	Yes
006-009054-00.000	Yes
006-009072-00.000	Yes
006-008916-01.000	Yes
006-010212-00.000	Yes
006-008922-00.000	Yes
006-009576-00.000	Yes
006-009102-00.000	Yes
006-009462-02.000	Yes
006-009462-01.000	Yes
006-009462-00.000	Yes
006-010668-01.000	Yes
006-010668-00.001	Yes
006-010668-00.000	Yes
006-010662-00.000	Yes
006-009432-00.000	Yes
006-009432-00.002	Yes
006-009432-00.001	Yes
Knox County	
Vance Road	
046-00028.000	Yes
046-00245.000	Yes
046-00008.002	Yes
046-00010.000	Yes
046-00218.000	Yes
046-00066.000	Yes
046-00067.000	Yes
046-00069.000	Yes
046-00027.000	Yes
046-00071.000	Yes
046-00239.000	Yes
044-00184.000	Yes
044-00353.001	No
044-00353.000	Yes
044-00126.007	No
044-00126.015	Yes
044-00126.000	No
044-00126.014	Yes
044-00039.000	Yes
044-00448.000	Yes
044-00448.003	Yes
044-00448.002	Yes
044-00448.001	No
044-00053.004	Yes
044-00053.001	Yes

Property Parcel Number	Easement Agreement/Option Obtained* (Yes/No)
044-00053.003	Yes
044-00005.000	Yes
044-00005.006	No
044-00005.002	Yes
1202601000	No (AEP property)

*The Company may supplement its existing rights under all blanket and defined easements identified above.
**Property parcel did not contain a parcel ID.

APPENDIX D Agency Correspondence

In reply, refer to
2021-KNO-51214

May 11, 2021

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

RE: North Newark-Sharp Road 138kV Rebuild Project, Licking and Knox Counties, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on April 21, 2021 regarding the proposed North Newark-Sharp Road 138kV Rebuild Project, Licking and Knox Counties, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the Approximately 30.6 km (19 mi) North Newark-Sharp Road 138kV Rebuild Project in Licking and Knox Counties, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2021).

A literature review, visual inspection, surface collection, shovel probe and shovel test unit excavations were completed as part of the investigations. One (1) previously identified archaeological site, Ohio Archaeological Inventory (OAI) #33LI0090, is located within the project area. The site was not re-identified during survey. Forty (40) new archaeological sites were identified during survey, OAI#33KN0563-33KN0576 and 33LI2682-33LI2707. None of the sites are recommended eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no additional archaeological survey is required.

The following comments pertain to the *History/Architecture Investigations for the Approximately 30.6 km (19 mi) North Newark-Sharp Road 138kV Rebuild Project in Licking and Knox Counties, Ohio* by Scott McIntosh (Weller & Associates, Inc., 2021).

Identified within the Area of Potential Effects (APE) for the project are 166 history/architecture resources, 50 years and older. One (1) previously identified history/architecture resource is located within the APE; the Newark Water Treatment Plant ("Waterworks") at 164 Waterworks Road is documented on the Ohio Historic Inventory (OHI Ref. LIC076516). The report recommends that the Waterworks is not eligible for listing in the NRHP. The SHPO disagrees with this recommendation and considers the Waterworks potentially eligible for the NRHP under Criterion A and C. However, the SHPO agrees that the proposed project will have No Effect on the Waterworks. The remaining 165 historic/architecture resources in the APE are recommended as not eligible for listing in the NRHP.

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

Sincerely,

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1088304-1088305

Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR | MARY MERTZ, DIRECTOR

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

March 6, 2020

Dan Godec
Stantec
1500 Lake Shore Drive Suite 100
Columbus OH 43204-3800

Re: 20-049; North Newark-Sharp Road 138 kV Transmission Line Rebuild Project

Project: The project involves the rebuilding of approximately 19.4 miles of existing 138 kV electric transmission line between North Newark Station and the Sharp Road Station.

Location: The proposed project is located between the Cities of Mt. Vernon and Newark, Knox and Licking Counties, Ohio.

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

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

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

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

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

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

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

The project is within the range of the northern riffleshell (*Epioblasma torulosa rangiana*), a state endangered, and federally endangered mussel, the rabbitsfoot (*Quadrula cylindrica cylindrica*), a state endangered, and federally threatened mussel, the long solid (*Fusconaia maculata maculata*), a state endangered mussel, the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel, and the black sandshell (*Ligumia recta*), a state threatened mussel. This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2018), 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 10 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. This is further explained within the Ohio Mussel Survey Protocol. 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, as a last resort, 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. The Ohio Mussel Survey Protocol (2018) can be found at:

http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Survey%20Protocol.pdf

The project is within the range of the lake chubsucker (*Erimyzon sucetta*) a state threatened fish, the spotted darter *(Etheostoma maculatum),* a state endangered fish, the mountain brook lamprey

(*Ichthyomyzon greeleyi*), a state endangered fish, the speckled chub (*Macrhybopsis aestivalis*), a state endangered fish, and the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, this project is not likely to impact this species.

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

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

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

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

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

Mike Pettegrew
Environmental Services Administrator (Acting)

Godec, Daniel

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Friday, January 10, 2020 2:41 PM
To: Godec, Daniel
Cc: nathan.reardon@dnr.state.oh.us; kate.parsons@dnr.state.oh.us
Subject: AEP OHIO North Newark to Sharp Road 138 kV Line Rebuild, Licking & Knox Co.

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

TAILS# 03E15000-2019-TA-0577

Dear Mr. Godec,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered **Indiana bat** (Myotis sodalis) and the federally threatened **northern long-eared bat** (Myotis septentrionalis). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves and abandoned mines.

The proposed project is in the vicinity of one or more confirmed records of Indiana bats. Therefore, we recommend that trees ≥3 inches dbh be saved wherever possible. Because the project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to these species. Since Indiana bat presence in the vicinity of the project has been confirmed, clearing of trees ≥3 inches dbh during the summer roosting season may result in direct take of individuals. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are

warranted. If no caves or abandoned mines are present and tree removal is unavoidable, we recommend that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable.

If implementation of this seasonal tree cutting recommendation is not possible, a summer survey may be conducted to document the presence or probable absence of Indiana bats within the project area during the summer because the proposed project is ≥ 2.5 miles from the Indiana capture location(s). If a summer survey documents probable absence of Indiana bats at the project location, tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to Indiana bats. Negative Indiana bat summer surveys are valid for five years. Summer surveys must be conducted by an approved surveyor (list attached) and be designed and conducted in coordination with the Endangered Species Coordinator for this office. In Ohio, summer mist net surveys must be conducted between June 1 and August 15. We recommend that any Indiana bats captured, especially reproductively active females, be monitored through radio-tracking to determine roost locations.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat, northern long-eared bat, and running buffalo clover, for our review and concurrence.

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

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 ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

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

Sincerely,

Patrice M. Ashfield
Field Office Supervisor

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

APPENDIX E Ecological Resources Inventory Report

North Newark–Sharp Road 138 kV Transmission Line Rebuild Project, Knox and Licking Counties, Ohio

Ecological Resources Inventory Report

Prepared for:

AEP Ohio Transmission Company, Inc.
8600 Smith's Mill Road
New Albany, OH 43054

Prepared by:

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

April 23, 2021

Sign-off Sheet

This document entitled North Newark–Sharp Road 138 kV Transmission Line Rebuild Project Ecological Resources Inventory Report was prepared by Stantec Consulting Private Limited ("Stantec") for the account of AEP Ohio Transmission Company, Inc. Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by Kate Bomar
(signature)

Kate Bomar

Reviewed by Daniel J. Godec
(signature)

Dan Godec

Table of Contents

1.0 INTRODUCTION 1

2.0 METHODS 2
2.1 WETLAND DELINEATION 2
2.2 STREAM DELINEATION 2
2.3 RARE SPECIES 2

3.0 RESULTS 3
3.1 TERRESTRIAL HABITAT 3
3.2 WETLANDS 6
3.3 WATERBODIES 11
3.4 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT 20

4.0 CONCLUSIONS AND RECOMMENDATIONS 25

5.0 REFERENCES 28

LIST OF TABLES

Table 1. Vegetation Communities and Land Cover Found within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio 3
Table 2. Summary of NWI Disposition within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio 7
Table 3. Summary of Wetland Resources Found within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio 10
Table 4. Summary of Stream Resources Found within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio 13
Table 5. Summary of Potential Federally Listed and Ohio State-Listed Species within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio 20

LIST OF APPENDICES

APPENDIX A FIGURES A.1
Figure 1 – Project Location Map A.1
Figure 2 – Wetland and Waterbody Delineation Map A.2
Figure 3 – Habitat Assessment Map A.3

APPENDIX B AGENCY CORRESPONDENCE B.1

APPENDIX C REPRESENTATIVE PHOTOGRAPHS C.1
Wetland and Waterbody Photographs C.1
Habitat Photographs C.2

APPENDIX D DATA FORMS D.1
Wetland Determination Data Forms D.1
ORAM Data Forms D.2
HHEI and QHEI Data Forms D.3

1.0 INTRODUCTION

AEP Ohio Transmission Company, Inc. (AEP) is proposing to rebuild approximately 19.4 miles of existing 138 kilovolt (kV) transmission line between North Newark Station and Sharp Road Station in Knox and Licking Counties, Ohio (Figure 1, Appendix A). The North Newark–Sharp Road 138 kV Transmission Line Rebuild Project (the Project) will include rebuilding the existing 138 kV transmission line within existing AEP right-of-way (ROW) as well as temporary construction of access roads and work pads to complete the Project construction activities. The Project area, including the existing transmission line ROW, proposed access roads, and other Project-related workspaces, was surveyed for wetlands, waterbodies, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) scientists on December 11-13, 2019, December 30-31, 2019, January 2-3, 2020, January 8, 2020, January 13, 2021, March 3-4, 2021, April 1, 2021, and April 15, 2021. The approximate locations of features located up to 50 feet outside of the Project area were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the Project area. These features are shown on the Figure 2 maps in Appendix A as "approximate" wetlands, waterways (streams), open waters, and upland drainage features.

2.0 METHODS

2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic mapping, National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0) (USACE 2010). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05) (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the Federal Register/Vol. 67, No. 10 (USACE 2002) and determined as potential Waters of the U.S. (WOTUS) per "The Navigable Waters Protection Rule" published in the Federal Register/Vol. 85, No. 77 (USACE and USEPA 2020). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI; OEPA 2018) and/or Qualitative Habitat Evaluation Index (QHEI; OEPA 2006). The centerline and/or the OHWM locations of each waterway were identified and surveyed using a handheld sub-meter accuracy Global Positioning System (GPS) unit and mapped with Geographic Information System (GIS) software. Additionally, the locations of upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

2.3 RARE SPECIES

Prior to conducting the field surveys, Stantec contacted the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix B – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the proposed Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by federally listed or state-listed species that have the potential to occur within Knox and Licking Counties.

3.0 RESULTS

3.1 TERRESTRIAL HABITAT

Stantec completed habitat assessment field surveys within the Project area on December 11-13, 2019, December 30-31, 2019, January 2-3, 2020, January 8, 2020, January 13, 2021, March 3-4, 2021, April 1, 2021, and April 15, 2021, for threatened and endangered species habitats. Figure 3 (Appendix A) shows the land cover types, vegetation communities, and locations of any identified rare, threatened, or endangered species habitat observed within the Project area during the rare, threatened, and endangered species habitat assessment surveys. Representative photographs of the vegetation communities/habitats and land cover types identified within the Project area are included in Appendix C of this report (photo locations are shown on Figures 3, Appendix A). Information regarding the vegetation communities/habitats/land cover types identified within the Project area is provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Agricultural Field	Extreme Disturbance/Ruderal Community (dominated by planted non-native row crop species, opportunistic invaders, and/or native highly tolerant taxa).	No	121.0
Old Field	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders). Common plant species included black raspberry (*Rubus occidentalis*), eastern bottlebrush grass (*Elymus hystrix*), Canada goldenrod (*Solidago canadensis*), wingstem (*Verbesina alternifolia*), wild bergamot (*Monarda fistulosa*), New England aster (*Symphyotrichum novae-angliae)*, poison hemlock (*Conium maculatum*), giant ironweed (*Vernonia gigantea*), Ohio buckeye (*Aesculus glabra*). Fuller's teasel (*Dipsacus fullonum*), Virginia wildrye (*Elymus virginicus*), annual fleabane (*Erigeron annuus*), and smooth brome (*Bromus inermis*).	No	37.7

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Pasture	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa). Common plant species included poverty rush (*Juncus tenuis*), tall fescue (*Schedonorus arundinaceus*), Kentucky bluegrass (*Poa pratensis*), multiflora rose (*Rosa multiflora*), aster (*Symphyotrichum* spp.), red clover (*Trifolium pratense*), and narrowleaf plantain (*Plantago lanceolata*).	No	33.1
Maintained Lawn	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa). Common plant species included tall fescue, Kentucky bluegrass, common plantain (*Plantago major*), white clover (*Trifolium repens*), pin oak (*Quercus palustris*), and sugar maple (*Acer saccharum*).	No	26.5
Hayfield	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa). Common plant species included Kentucky bluegrass, tall fescue, and Canada thistle (*Cirsium arvense*)	No	12.5
Early Successional Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders). Common plant species included black walnut (*Juglans nigra*), black raspberry, Allegheny blackberry (*Rubus allegheniensis*), black cherry (*Prunus serotina*), sweet crab apple (*Malus coronaria*), Japanese bristlegrass (*Setaria faberi*), multiflora rose, eastern poison ivy (*Toxicodendron radicans*), lesser burdock (*Arctium minus*), Canada goldenrod, and Amur honeysuckle (*Lonicera mackii*).	No	6.5

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Mixed Early Successional/Second Growth Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders). Common plant species included white oak (*Quercus alba*), American Beech (*Fagus grandifolia*), eastern poison ivy, black raspberry, northern red oak (*Quercus rubra*), cat greenbrier (*Smilax glauca*), shellbark hickory (*Carya laciniosa*), and northern spicebush (*Lindera benzoin*).	No	3.2
Existing Roadway	Extreme Disturbance/existing gravel or paved road.	No	6.5
Existing Railroad	Extreme Disturbance/existing railroad.	No	0.1
Existing Paved Surface	Extreme Disturbance/existing paved surface.	No	0.5
Industrial Land	Extreme Disturbance/Ruderal Community (graveled areas free of vegetation or dominated by opportunistic invaders, planted non-native species, and/or native highly tolerant taxa).	No	7.1
Palustrine Emergent Wetland	Moderate Disturbance/Natural Community (dominated by native herbaceous species and/or opportunistic invaders). Common plant species included narrowleaf cattail (*Typha angustifolia*), purpleleaf willowherb (*Epilobium coloratum*), American bur-reed (*Sparganium americanum*), Pennsylvania smartweed (*Persicaria pensylvanica*), arrowleaf tearthumb (*Polygonum sagittatum*), Frank's sedge (*Carex frankii*), harvestlice (*Agrimonia parviflora*), shallow sedge (*Carex lurida*), giant goldenrod (*Solidago gigantea*), deertongue (*Dichanthelium clandestinum*), swamp verbena (*Verbena hastata*), green bulrush	No	3.9

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
	(*Scirpus atrovirens*), and common rush (*Juncus effusus*).		
Palustrine Scrub-Shrub Wetland	Moderate Disturbance/Natural Community (dominated by native shrub and herbaceous species and/or opportunistic invaders). Common plant species included common buttonbush (*Cephalanthus occidentalis*), boxelder (*Acer negundo*), green ash (*Fraxinus pennsylvanica*), reed canarygrass (*Phalaris arundinacea*), woolgrass (*Scirpus cyperinus*), Gray's sedge (*Carex grayii*), silky dogwood (*Cornus amomum*), and black willow (*Salix nigra)*.	No	2.1
Palustrine Unconsolidated Bottom Wetland	Moderate Disturbance/Natural Community (dominated by native species and/or opportunistic invaders). Common plant species included rice cutgrass (*Leersia oryzoides)*.	No	0.1
		Total	**260.8**

3.2 WETLANDS

Stantec completed field surveys for wetlands within the Project area on December 11-13, 2019, December 30-31, 2019, January 2-3, 2020, January 8, 2020, January 13, 2021, March 3-4, 2021, April 1, 2021, and April 15, 2021. As a result of the field surveys, Stantec identified 26 wetlands within the Project area. Figure 2 (Appendix A) shows the wetlands identified by Stantec within the Project area. Representative photographs of the wetlands identified within the Project area are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). Completed wetland determination data forms and ORAM data forms are included in Appendix D. The disposition of the NWI-mapped wetlands within the Project area are provided in Table 2. Information regarding the Cowardin classification and ORAM categories of wetlands identified within the Project area are provided in Table 3.

Table 2. Summary of NWI Disposition within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio

NWI Code	NWI Description	Figure 2 Page Number	Related Field Inventoried Resource(s)	Comments
PUBGx	Palustrine unconsolidated bottom, intermittently exposed, excavated	2	Open Water 1	Open Water 1 is a manmade pond.
PEM1C	Palustrine emergent, persistent, seasonally flooded	7	Wetland 3	Wetland 3 is a mixed palustrine emergent/palustrine scrub-shrub (PEM/PSS) wetland that continues outside the Project area.
PUBF	Palustrine unconsolidated bottom, semipermanently flooded	7	Wetland 3, SP 6	Wetland 3 is a mixed PEM/PSS wetland that continues outside the Project area.
PFO1C	Palustrine forested, broad-leaved deciduous, seasonally flooded	7	Wetland 3, SP 7	Wetland 3 is a mixed PEM/PSS wetland that continues outside the Project area.
R3USA	Riverine, upper perennial, unconsolidated shore, temporarily flooded	8	SP 9, SP 61	Two wetland determination sample points (SP 9, SP 61) were evaluated just south of Stream 3 (Dry Creek) within old field habitat. The sample points were evaluated within the mapped NWI wetland but were not found to contain the hydrology indicators or hydric soil indicators needed to be considered a wetland.
R3UBH	Riverine, upper perennial, unconsolidated bottom, permanently flooded	8	Stream 3 (Dry Creek)	Stream 3 (Dry Creek), a perennial stream, was delineated within the mapped NWI area.
PUBF	Palustrine unconsolidated bottom, semipermanently flooded	8	Stream 3 (Dry Creek)	Stream 3 (Dry Creek), a perennial stream, was delineated within the mapped NWI area.
PEM1C	Palustrine emergent, persistent, seasonally flooded	13	SP 62	One wetland determination sample point (SP 62) was evaluated within the mapped NWI feature (maintained lawn habitat). The sample point was evaluated within the mapped NWI wetland but was not found to contain the hydrology indicators or hydric soil

NWI Code	NWI Description	Figure 2 Page Number	Related Field Inventoried Resource(s)	Comments
				indicators needed to be considered a wetland.
PUBGh	Palustrine unconsolidated bottom, intermittently exposed, diked/impounded	17	Open Water 2	Open Water 2 is a manmade pond.
R3UBH	Riverine, upper perennial, unconsolidated bottom, permanently flooded	19	Stream 7 (Clear Fork Licking River)	Stream 7 (Clear Fork Licking River), a perennial stream, was delineated within the mapped NWI area.
PEM1C	Palustrine emergent, persistent, seasonally flooded	29	Wetland 7	Wetland 7 is a mixed PEM/PSS wetland that extends outside the Project area.
R2UBH	Riverine, lower perennial, unconsolidated bottom, permanently flooded	32	Stream 16 (Lake Fork Licking River)	Stream 7 (Lake Fork Licking River), a perennial stream, was delineated within the mapped NWI area.
PEM1C	Palustrine emergent, persistent, seasonally flooded	32	Wetland 11, SP 26	Wetland 11 is a PEM wetland delineated within the mapped NWI area.
PEM1A	Palustrine emergent, persistent, temporarily flooded	33, 34	SP 28	One wetland determination sample point (SP 28) was evaluated within the mapped NWI wetland but was not found to contain the hydrology indicators, hydric soil indicators, or dominant hydrophytic vegetation needed to be considered a wetland.
PSS1/PEM1C	Palustrine scrub-shrub, broad-leaved deciduous/emergent, persistent, seasonally flooded	35	Wetland 12, SP 29	Wetland 12 is a mixed PEM/PSS wetland that continues outside the Project area. Wetland 12 was delineated within the mapped NWI area.
R2UBH	Riverine, lower perennial, unconsolidated bottom, permanently flooded	37	Stream 20 (North Fork Licking River)	Stream 20 (North Fork Licking River), a perennial stream, was delineated within the mapped NWI area.
PSS1C	Palustrine scrub-shrub, broad-leaved deciduous, seasonally flooded	42	Wetland 17, SP 40	Wetland 17 is a PSS wetland delineated within the mapped NWI area.

NWI Code	NWI Description	Figure 2 Page Number	Related Field Inventoried Resource(s)	Comments
PUBGx	Palustrine unconsolidated bottom, intermittently exposed, excavated	43	Wetland 18, SP 42	Wetland 18 is a PEM wetland delineated within the mapped NWI area.

Table 3. Summary of Wetland Resources Found within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio

Wetland Name	Location		Isolated?	Habitat Type[1]	Delineated Area (acres)	ORAM Details		Nearest Proposed Structure Number (Existing/ Proposed)	Existing Structure Number in Wetland	Proposed Structure Number in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acres)	Permanent Impact Area (acres)
Wetland 1	40.089873	-82.41628	No	PEM[2]	0.05	6	1	1/1	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 2	40.091519	-82.41723	No	PEM[2]	0.23	15	1	2/2	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 3	40.104203	-82.442928	No	PEM[2]	0.28	42	Modified 2	16/16	None	None	TBD[4]	TBD[4]	TBD[4]
	40.104068	-82.442889	No	PSS[3]	0.55			16/16	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 4	40.154143	-82.47801	No	PEM[2]	0.27	23.5	1	40/40	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 5	40.171865	-82.48921	No	PEM[2]	0.08	21	1	51/51	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 6	40.203049	-82.49769	No	PEM[2]	0.12	31	2	67/67	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 7	40.213135	-82.501020	No	PEM[2]	0.22	34	2	72/72	None	None	TBD[4]	TBD[4]	TBD[4]
	40.213010	-82.500827	No	PSS[3]	0.12			72/72	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 8	40.211164	-82.50024	No	PEM[2]	0.23	16	1	72/72	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 9	40.210465	-82.50013	No	PEM[2]	0.08	14	1	71/71	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 10	40.229028	-82.505365	No	PEM[2]	0.08	23	1	82/82	None	None	TBD[4]	TBD[4]	TBD[4]
	40.229651	-82.505387	No	PSS[3]	0.24			82/82	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 11	40.227824	-82.50528	No	PEM[2]	0.04	10	1	81/81	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 12	40.242028	-82.506608	No	PEM[2]	1.00	27	1	88/88	88	None	TBD[4]	TBD[4]	TBD[4]
	40.242935	-82.506764	No	PSS[3]	0.55			88/88	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 13	40.246307	-82.5071	No	PEM[2]	0.05	25	1	90/90	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 14	40.254146	-82.5069	No	PEM[2]	0.20	32	2	93/93	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 15	40.264284	-82.5061	No	PSS[3]	0.23	36	Modified 2	98/98	98	None	TBD[4]	TBD[4]	TBD[4]
Wetland 16	40.272811	-82.50522	No	PEM[2]	0.07	15.5	1	102/102	None	None	TBD[4]	TBD[4]	TBD[4]

Results
April 23, 2021

Wetland Name	Location		Isolated?	Habitat Type[1]	Delineated Area (acres)	ORAM Details		Nearest Proposed Structure Number (Existing/ Proposed)	Existing Structure Number in Wetland	Proposed Structure Number in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acres)	Permanent Impact Area (acres)
Wetland 17	40.275886	-82.50492	No	PSS[3]	0.33	46.5	2	104/104	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 18	40.282638	-82.50436	No	PEM[2]	0.12	31.5	2	107/107	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 19	40.313007	-82.50145	No	PEM[2]	0.05	23	1	123/123	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 20	40.319105	-82.5004	No	PEM[2]	0.06	30	2	126/126	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 21	40.321559	-82.49993	No	PEM[2]	0.12	33.5	2	127/127	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 22	40.335408	-82.49866	No	PEM[2]	0.36	32	2	134/134	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 23	40.137549	-82.46367	No	PEM[2]	0.03	8	1	32/32	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 24	40.134771	-82.46148	No	PEM[2]	0.11	26	1	30/30	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 25	40.128463	-82.45639	No	PEM[2]	0.09	21	1	27/27	None	None	TBD[4]	TBD[4]	TBD[4]
Wetland 26	40.124694	-82.453368	No	PEM[2]	0.09	26.5	1	25/25	None	None	TBD[4]	TBD[4]	TBD[4]
	40.124623	-82.453173	No	PSS[3]	0.09			25/25	None	None	TBD[4]	TBD[4]	TBD[4]
				Total	**6.14**							TBD[4]	TBD[4]

[1]Wetland classification is based on Cowardin et al. (1979).
[2]PEM = Palustrine Emergent Wetland
[3]PSS = Palustrine Scrub-Shrub Wetland
[4]TBD – To be determined. Impact information and/or structure installation method is unknown at this time.

3.3 STREAMS

Stantec completed field surveys for streams within the Project area on December 11-13, 2019, December 30-31, 2019, January 2-3, 2020, January 8, 2020, January 13, 2021, March 3-4, 2021, April 1, 2021, and April 15, 2021. Figure 2 (Appendix A) shows the locations of streams (waterways) identified by Stantec within the Project area. Representative photographs of the streams are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). Completed HHEI and QHEI data forms for the streams found within the Project area are included in Appendix D. Information regarding the identified streams is provided in Table 4.

Table 4. Summary of Stream Resources Found within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio

Stream ID	Location		Stream Type	Stream Name[2]	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score	Category/ Rating/ OAC Designation[3]			Fill Type	Length (feet)
Stream 1	40.093535	-82.441417	Intermittent	UNT to Log Pond Run	247	6.2	3.5	HHEI	40	Modified Small Drainage Warmwater Stream	Eligible	No	TBD[1]	TBD[1]
Stream 2	40.093611	-82.442265	Perennial	Log Pond Run	361	25	9.2	Chapter 3745-1	N/A	Warmwater Habitat	Eligible	No	TBD[1]	TBD[1]
Stream 3	40.112092	-82.442984	Perennial	Dry Creek	100	40	28.0	Chapter 3745-1	N/A	Exceptional Warmwater Habitat	Eligible	No	TBD[1]	TBD[1]
Stream 4	40.154266	-82.478106	Intermittent	UNT to Clear Fork Licking River	107	6.5	4.5	HHEI	52	Small Drainage Warmwater Stream	Ineligible	No	TBD[1]	TBD[1]
Stream 5	40.152308	-82.476217	Intermittent	UNT to Clear Fork Licking River	87	3.6	2.5	HHEI	43	Modified Small Drainage Warmwater Stream	Ineligible	No	TBD[1]	TBD[1]
Stream 6	40.159519	-82.482767	Intermittent	UNT to Clear Fork Licking River	51	4.6	2.0	HHEI	56	Small Drainage Warmwater Stream	Ineligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 7	40.162033	-82.485183	Perennial	Clear Fork Licking River	139	16.0	22.0	Chapter 3745-1	N/A	Warmwater Habitat	Ineligible	No	TBD[1]	TBD[1]
Stream 8	40.173203	-82.48947	Intermittent	UNT to Clear Fork Licking River	126	4.6	4.8	HHEI	49	Modified Small Drainage	Ineligible	No	TBD[1]	TBD[1]

Stream ID	Location		Stream Type	Stream Name[2]	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score	Category/ Rating/ OAC Designation[3]			Fill Type	Length (feet)
										Warmwater Stream				
Stream 9	40.171474	-82.489172	Ephemeral	UNT to Wetland 5	166	4.0	1.0	HHEI	27	Ephemeral Stream	Ineligible	No	TBD[1]	TBD[1]
Stream 10	40.194201	-82.495223	Ephemeral	UNT to Lake Fork Licking River	68	2.5	1.5	HHEI	30	Modified Ephemeral Stream	Eligible	No	TBD[1]	TBD[1]
Stream 11	40.204026	-82.498126	Intermittent	UNT to Lake Fork Licking River	114	7.0	4.0	HHEI	61	Modified Small Drainage Warmwater Stream	Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 12	40.201822	-82.497431	Intermittent	UNT to Lake Fork Licking River	125	4.0	2.8	HHEI	50	Small Drainage Warmwater Stream	Eligible	No	TBD[1]	TBD[1]
Stream 13	40.208903	-82.499585	Intermittent	UNT to Lake Fork Licking River	126	4.5	3.0	HHEI	49	Modified Small Drainage Warmwater Stream	Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 14	40.210917	-82.500212	Intermittent	UNT to Lake Fork Licking River	101	10.0	5.0	HHEI	66	Modified Small Drainage Warmwater Stream	Eligible	No	TBD[1]	TBD[1]
Stream 15	40.229098	-82.505283	Perennial	UNT to Lake Fork Licking River	176	8.2	4.5	HHEI	58	Modified Small Drainage Warmwater Stream	Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]

Stream ID	Location		Stream Type	Stream Name[2]	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score	Category/ Rating/ OAC Designation[3]			Fill Type	Length (feet)
Stream 16	40.225743	-82.50491	Perennial	Lake Fork Licking River	120	52.0	34.0	Chapter 3745-1	N/A	Warmwater Habitat	Eligible	No	TBD[1]	TBD[1]
Stream 17	40.250126	-82.507316	Intermittent	UNT to North Fork Licking River	116	3.9	4.5	HHEI	37	Modified Small Drainage Warmwater Stream	Ineligible	No	TBD[1]	TBD[1]
Stream 18	40.24869	-82.507318	Ephemeral	UNT to North Fork Licking River	122	2.5	1.0	HHEI	33	Modified Small Drainage Warmwater Stream	Ineligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 19	40.24636	-82.507062	Ephemeral	UNT to North Fork Licking River	115	3.0	1.0	HHEI	33	Modified Small Drainage Warmwater Stream	Ineligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 20	40.253937	-82.506957	Perennial	North Fork Licking River	107	55.0	45.0	Chapter 3745-1	N/A	Warmwater Habitat	Ineligible	No	TBD[1]	TBD[1]
Stream 21	40.260057	-82.506409	Ephemeral	UNT to North Fork Licking River	167	4.5	1.5	HHEI	23	Modified Ephemeral Stream	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 22	40.266118	-82.505832	Perennial	Vance Creek	103	15.0	12.0	Chapter 3745-1	N/A	Warmwater Habitat	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 23	40.272747	-82.505226	Perennial	Chambers Creek	117	19.1	9.2	Chapter 3745-1	N/A	Warmwater Habitat	Possibly Eligible	No	TBD[1]	TBD[1]
	40.273297	-82.505991	Perennial	Chambers Creek	31	24	15	Chapter 3745-1	N/A	Warmwater Habitat	Possibly Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]

Stream ID	Location		Stream Type	Stream Name[2]	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score	Category/ Rating/ OAC Designation[3]			Fill Type	Length (feet)
Stream 24	40.282531	-82.504161	Intermittent	UNT to Vance Creek	32	5.0	3.0	HHEI	27	Modified Ephemeral Stream	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 25	40.295264	-82.503115	Intermittent	UNT to Sycamore Creek	162	5.0	3.0	HHEI	54	Small Drainage Warmwater Stream	Ineligible	No	TBD[1]	TBD[1]
Stream 26	40.308712	-82.501865	Perennial	Sycamore Creek	106	25.0	21.0	Chapter 3745-1	N/A	Warmwater Habitat	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 27	40.308042	-82.501958	Intermittent	UNT to Sycamore Creek	480	4.5	3.0	HHEI	46	Modified Small Drainage Warmwater Stream	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 28	40.319078	-82.500402	Intermittent	Delano Run	165	5.0	2.5	HHEI	57	Modified Small Drainage Warmwater Stream/ Warmwater Habitat	Possibly Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 29	40.32278	-82.499745	Intermittent	UNT to Delano Run	135	13.5	5.3	HHEI	64	Small Drainage Warmwater Stream	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 30	40.334087	-82.498729	Intermittent	UNT to Delano Run	118	3.6	3.3	HHEI	60	Small Drainage Warmwater Stream	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 31	40.33133	-82.49893	Intermittent	UNT to Delano Run	139	10.0	8.7	HHEI	63	Small Drainage Warmwater Stream	Possibly Eligible	No	TBD[1]	TBD[1]

Stream ID	Location		Stream Type	Stream Name[2]	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score	Category/ Rating/ OAC Designation[3]			Fill Type	Length (feet)
Stream 32	40.337845	-82.498474	Intermittent	UNT to Delano Run	118	7.0	5.2	HHEI	64	Modified Small Drainage Warmwater Stream	Possibly Eligible	No	TBD[1]	TBD[1]
Stream 33	40.13799	-82.464152	Perennial	UNT to North Fork Licking River	267	7.5	5.0	HHEI	54	Small Drainage Warmwater Stream	Eligible	No	TBD[1]	TBD[1]
Stream 34	40.134894	-82.461559	Perennial	UNT to North Fork Licking River	140	3.9	2.5	HHEI	60	Small Drainage Warmwater Stream	Eligible	No	TBD[1]	TBD[1]
Stream 35	40.128287	-82.45621	Intermittent	UNT to North Fork Licking River	104	1.0	3.0	HHEI	49	Modified Small Drainage Warmwater Stream	Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 36	40.124701	-82.453259	Intermittent	UNT to North Fork Licking River	137	3.0	0.8	HHEI	29	Ephemeral Stream	Eligible	No	TBD[1]	TBD[1]
Stream 37	40.124589	-82.453222	Intermittent	UNT to North Fork Licking River	110	3.0	1.0	HHEI	27	Ephemeral Stream	Eligible	No	TBD[1]	TBD[1]
Stream 38	40.120845	-82.450275	Intermittent	UNT to North Fork Licking River	92	3.5	1.5	HHEI	49	Small Drainage Warmwater Stream	Eligible	No	TBD[1]	TBD[1]
Stream 39	40.134040	-82.461525	Perennial	UNT to North Fork Licking River	15	6.6	4	HHEI	65	Spring Water	Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]

Stream ID	Location		Stream Type	Stream Name[2]	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			OEPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score	Category/ Rating/ OAC Designation[3]			Fill Type	Length (feet)
Stream 40	40.133912	-82.461547	Intermittent	UNT to North Fork Licking River	53	8.9	2.5	HHEI	43	Modified Small Drainage Warmwater Stream	Eligible	Yes (Air Bridge)	TBD[1]	TBD[1]
Stream 41	40.174095	-82.490427	Intermittent	UNT to Clear Fork Licking River	32	4.1	2.5	HHEI	60	Modified Small Drainage Warmwater Stream	Ineligible	No	TBD[1]	TBD[1]
Total					**5,497**								TBD[1]	TBD[1]

[1] TBD – To be determined. Impact information and/or crossing method is unknown at this time.
[2] UNT = Unnamed Tributary
[3] If no OAC Use Designation, this was based on the designated use evaluation presented in the Field Methods for Evaluating Primary Headwater Habitat Streams in Ohio, Version 4.0 (OEPA 2018).

3.4 OPEN WATERS

Three open waters (ponds) were delineated within the Project area during the field surveys completed on December 11-13, 2019, December 30-31, 2019, January 2-3, 2020, January 8, 2020, January 13, 2021, March 3-4, 2021, April 1, 2021, and April 15, 2021. Representative photographs of the open water features are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A).

3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 5. Summary of Potential Federally Listed and Ohio State-Listed Species within the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project Area, Knox and Licking Counties, Ohio

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comment (Appendix B)	Potential Impacts and Avoidance Dates
Mussels						
Black Sandshell/*Ligumia recta*	T	N/A	Typically found in medium to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more (NatureServe 2021).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the black sandshell. This project must not have an impact on freshwater native mussels at the project site. If in-water work is planned in any stream that meets the Ohio Mussel Survey Protocol criteria, ODNR recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, ODNR recommends a professional malacologist conduct a mussel survey in the Project area. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Longsolid/*Fusconaia subrotundra*	E	N/A	This species is found in medium to large rivers in gravel with a strong current, often in sand and gravel (NatureServe 2021).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the longsolid. This project must not have an impact on freshwater native mussels at the project site. If in-water work is planned in any stream that meets the Ohio Mussel Survey Protocol criteria, ODNR recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, ODNR recommends a professional malacologist conduct a mussel survey in the Project area. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Rabbitsfoot/*Quadrula cylindrica cylindrica*	E	T	Typical habitat for this species is small to medium rivers with moderate to swift currents, and in smaller streams it inhabits bars or gravel and cobble close to the fast current. Rabbitsfoot are also found in medium to large rivers in sand and gravel (NatureServe 2021).	Potentially suitable habitat was observed within the Project area (Log Pond Run, Clear Fork Licking River, Lake Fork Licking River, North Fork Licking River, Vance Creek, and Sycamore Creek).	ODNR – The Project is within the range of the rabbitsfoot. This project must not have an impact on freshwater native mussels at the project site. If in-water work is planned in any stream that meets the Ohio Mussel Survey Protocol criteria, ODNR recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, ODNR recommends a professional malacologist conduct a mussel survey in the Project area. USFWS – No comments received.	Potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comment (Appendix B)	Potential Impacts and Avoidance Dates
Fawnsfoot/*Trucilla donaciformis*	T	N/A	This species occurs in both large and medium rivers at normal depths varying from less than three feet up to 15 to 18 feet in big rivers such as the Tennessee. A substrate of either sand or mud is suitable and although it is typically found in moderate current, it can adapt to a lake or embayment environment lacking current (NatureServe 2021).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the fawnsfoot. This project must not have an impact on freshwater native mussels at the project site. If in-water work is planned in any stream that meets the Ohio Mussel Survey Protocol criteria, ODNR recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, ODNR recommends a professional malacologist conduct a mussel survey in the Project area. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Northern Riffleshelll/*Epioblasma toruloa rangiana*	E	E	This species inhabits riffles in small to large streams with swift current and a substrate of firmly packed fine gravel and sand (NatureServe 2021).	Potentially suitable habitat was observed within the Project area (Log Pond Run, Clear Fork Licking River, Lake Fork Licking River, North Fork Licking River, Vance Creek, and Sycamore Creek).	ODNR – The Project is within the range of the northern riffleshelll. This project must not have an impact on freshwater native mussels at the project site. If in-water work is planned in any stream that meets the Ohio Mussel Survey Protocol criteria, ODNR recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, ODNR recommends a professional malacologist conduct a mussel survey in the Project area. USFWS – No comments received.	Potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Fishes						
Spotted Darter/*Etheostoma maculatum*	E	N/A	Spotted darters are found in medium sized rivers and streams. They are typically found in areas of swift current at the top or bottom end of a riffle where there are many very large boulders or flat slabs of rock. They spend most of their time hiding under the upstream edge of these large rocks. In Ohio, the spotted darter was historically found in parts of the Mahoning, Muskingum, and Scioto River drainages. Today they are still found in very limited portions of Big Darby Creek, Paint Creek, and Little Walnut Creek of the Scioto River drainage. They are also found in limited areas of the Kokosing and Walhonding Rivers of the Muskingum River drainage. No spotted darters have been found in the Mahoning River drainage since the 1850's. This species is an indicator of very high-quality streams. They eat insect larvae, crustaceans, and a variety of other aquatic invertebrates (ODNR 2021b).	Potentially suitable habitat was observed within the Project area (Log Pond Run, Clear Fork Licking River, Lake Fork Licking River, North Fork Licking River, Vance Creek, and Sycamore Creek).	ODNR – The Project is within the range of the spotted darter. ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	Potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Mountain Brook Lamprey/ *Ichthyomyzon greeleyi*	E	N/A	Habitat includes clean, clear, gentle-gradient or high-gradient creeks (1-23 meters wide, 30-60 centimeters deep) with substrates generally comprised of sand, pebbles, and small rocks. Adults occur in riffles or runs, under overhanging banks, or occasionally they attach to stones in the current; larvae burrow into beds of mixed sand, mud, and organic debris in pools and backwaters (NatureServe 2021).	Potentially suitable habitat was observed within the Project area (Log Pond Run, Clear Fork Licking River, Lake Fork Licking River, North Fork Licking River, Vance Creek, and Sycamore Creek).	ODNR – The Project is within the range of the mountain brook lamprey. ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial	Potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comment (Appendix B)	Potential Impacts and Avoidance Dates
					stream, this Project is not likely to impact this species. USFWS – No comments received.	
Lake Chubsucker/ *Erimyzon sucetta*	T	N/A	Habitat includes ponds, lakes, oxbows, sloughs, swamps, impoundments, quiet pools of creeks and small rivers, and similar waters of little or no flow that are clear and have bottoms of sand or silt mixed with organic debris; aquatic vegetation usually is present (NatureServe 2021).	Suitable habitat was observed within the Project area (Open Water 1, Open Water 2, Open Water 3).	ODNR – The Project is within the range of the lake chubsucker. ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	Suitable habitat was observed within the Project area. However, no in-water work in perennial streams or open waters is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Tippecanoe Darter/ *Etheostoma tippecanoe*	T	N/A	This species is found in medium to large streams and rivers in the Ohio River drainage. They occur in riffles of moderate current with a substrate of gravel and small cobble-sized rocks. Tippecanoe darters historically occupied the Walhonding River and the lower Muskingum River within the Muskingum drainage, and the Olentangy River, Big Walnut Creek, Big Darby Creek, and Deer Creek within the Scioto River drainage. Since the early 1980s this species has made an impressive expansion in the Scioto River drainage. They can now be found in nearly every major tributary of the Scioto River, and the main stem of the Scioto River from Columbus to the Ohio River (ODNR 2021a).	Potentially suitable habitat was observed within the Project area (Log Pond Run, Clear Fork Licking River, Lake Fork Licking River, North Fork Licking River, Vance Creek, and Sycamore Creek).	ODNR – The Project is within the range of the Tippecanoe darter. ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	Potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Speckled chub/ *Macrhybopsis aestivalis*	E	N/A	Shallow channels of large, permanently flowing, sandy streams; prefers currents over a substrate of clean, fine sand; avoids calm water and silted stream bottoms (NatureServe 2021).	Potentially suitable habitat was observed within the Project area (Log Pond Run, Clear Fork Licking River, Lake Fork Licking River, North Fork Licking River, Vance Creek, and Sycamore Creek).	ODNR – The Project is within the range of the speckled chub. ODNR recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	Potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Mammals						
Indiana Bat/*Myotis sodalis*	E	E	The Indiana bat is likely distributed over the entire state of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007; USFWS 2020). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes.	Potentially suitable summer roosting and foraging habitat was observed within early successional deciduous forest and mixed early successional/second growth deciduous forest habitats within the Project area (Figure 3, Appendix A). No potential winter hibernacula were observed within the Project area.	ODNR – If suitable habitat occurs within the Project area, the ODNR recommends trees be conserved. If suitable habitat occurs within the Project area and trees must be cut, the ODNR recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the ODNR recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate four net nights per kilometer for linear projects. If	No potential hibernacula were observed. However, potentially suitable summer roosting habitat (early successional deciduous forest; mixed early successional/second growth deciduous forest) and summer foraging habitat were observed within the Project area. It is anticipated that AEP will conduct any necessary tree clearing between October 1 and March 31. Therefore, no impacts to this species are anticipated. If any summer tree clearing is determined necessary, AEP will proceed in accordance with agency requirements.

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comment (Appendix B)	Potential Impacts and Avoidance Dates
			Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).		no tree removal is proposed, this project is not likely to impact this species. USFWS - All projects in the State of Ohio lie within range of the federally endangered Indiana bat, and the Project is in the vicinity of one or more confirmed records of Indiana bats. Should the Project site contain trees ≥3 inches diameter at breast height (dbh), the USFWS recommends trees be saved whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, the USFWS recommends that removal of trees ≥3 inches dbh only occur between October 1 and March 31 in order to avoid adverse effects to these species. If implementation of seasonal tree clearing is not possible, the USFWS recommends summer presence/probable absence surveys be conducted between June 1 and August 15.	
Northern Long-eared Bat/ *Myotis septentrionalis*	E	T	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2016). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	Potentially suitable summer roosting and foraging habitat was observed within early successional deciduous forest and mixed early successional/second growth deciduous forest habitats within the Project area (Figure 3, Appendix A). No potential winter hibernacula were observed within the Project area.	ODNR – No comments received. USFWS - All projects in the State of Ohio lie within range of the federally threatened northern long-eared bat. Should the Project site contain trees ≥3 inches dbh, the USFWS recommends trees be saved whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, the USFWS recommends that removal of trees ≥3 inches dbh only occur between October 1 and March 31 in order to avoid adverse effects to this species. Following this seasonal tree clearing recommendation should ensure that any effects to northern long-eared bats are insignificant or discountable.	No potential hibernacula were observed. However, potentially suitable summer roosting habitat (early successional deciduous forest; mixed early successional/second growth deciduous forest) and summer foraging habitat were observed within the Project area. It is anticipated that AEP will conduct any necessary tree clearing between October 1 and March 31. Therefore, no impacts to this species are anticipated. If any summer tree clearing is determined necessary, AEP will proceed in accordance with agency requirements.
Little Brown Bat/*Myotis lucifugus*	E	N/A	The little brown bat is found throughout Ohio. This species seems to prefer to forage over water but also forages among trees in rather open areas (Harvey et al. 1999). During summer, it typically inhabits buildings, attics, church belfries, barns and outbuildings,	Potentially suitable summer roosting and foraging habitat was observed within early successional deciduous forest	ODNR – No comments received. USFWS – No comments received.	No potential hibernacula were observed. However, potentially suitable summer roosting habitat (early successional deciduous forest; mixed early successional/second growth

Common Name/Scientific Name	State Listed Status[1,2]	Federally Listed Status[1,3]	Typical Habitat	Habitat Observed	Agency Comment (Appendix B)	Potential Impacts and Avoidance Dates
			and occasionally more natural habitats such as sloughing bark of a dead tree. During summer, two types of roosts are utilized: day roosts and night roosts. Day roosts are the maternity colony roost, while little brown bats often roost in other areas where they rest and congregate to digest their food in between foraging bouts. In Ohio, this species typically utilizes caves and mines as hibernacula, although at least one hibernaculum was found to be located in an attic of an old building (Brack et al. 2010).	and mixed early successional/second growth deciduous forest habitats within the Project area (Figure 3, Appendix A). No potential winter hibernacula were observed within the Project area.		deciduous forest) and summer foraging habitat were observed within the Project area. It is anticipated that AEP will conduct any necessary tree clearing between October 1 and March 31. Therefore, no impacts to this species are anticipated. If any summer tree clearing is determined necessary, AEP will proceed in accordance with agency requirements.
Tri-colored Bat/*Perimyotis subflavus*	E	N/A	The tricolored bat is found throughout Ohio. This species has been found to forage above and within a variety of habitats, including woodlands, agricultural fields, grassy areas, and over streamside vegetation (Sparks et al. 2011). Maternity colonies have often been found within clusters of dead leaves, hanging in trees. Maternity colonies have also been found in or on buildings. Little is known of male tri-colored bats in summer, but it is thought that they are probably solitary and spend their days in similar situations, as well as crevices, caves and mines (Brack et al. 2010). In Ohio, this species typically utilizes caves and mines as hibernacula, utilizing a variety of situations, including very cold areas near cave entrances to deeper passages that seem to be too warm for other species of bats (Brack et al. 2010).	Potentially suitable summer roosting and foraging habitat was observed within early successional deciduous forest and mixed early successional/second growth deciduous forest habitats within the Project area (Figure 3, Appendix A). No potential winter hibernacula were observed within the Project area.	ODNR – No comments received. USFWS – No comments received.	No potential hibernacula were observed. However, potentially suitable summer roosting habitat (early successional deciduous forest; mixed early successional/second growth deciduous forest) and summer foraging habitat were observed within the Project area. It is anticipated that AEP will conduct any necessary tree clearing between October 1 and March 31. Therefore, no impacts to this species are anticipated. If any summer tree clearing is determined necessary, AEP will proceed in accordance with agency requirements.
Amphibians						
Eastern Hellbender/ *Cryptobranchus alleganiensis alleganiensis*	E	SOC	Found mostly in unglaciated (south and east) Ohio, eastern hellbenders prefer large, swift flowing streams where they hide during the day under large rocks (ODNR 2021b).	Potentially suitable habitat was observed within the Project area (Log Pond Run, Clear Fork Licking River, Lake Fork Licking River, North Fork Licking River, Vance Creek, and Sycamore Creek).	ODNR – The Project is within the range of the eastern hellbender. Due to the location, this Project is not likely to impact this species. USFWS – No comments received.	Potentially suitable habitat was observed within the Project area. However, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.

[1]E=Endangered; T=Threatened; SOC = Species of Concern
[2]According to ODNR State Listed Wildlife and Plant Species by County (2021a).
[3]According to USFWS (2018).

4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted wetland and waterbody delineation field surveys and a preliminary habitat assessment for threatened and endangered species or their habitats within the Project area on December 11-13, 2019, December 30-31, 2019, January 2-3, 2020, January 8, 2020, January 13, 2021, March 3-4, 2021, April 1, 2021, and April 15, 2021. During the field surveys, 19 palustrine emergent (PEM) wetlands totaling approximately 2.36 acres, two palustrine scrub-shrub (PSS) wetlands totaling approximately 0.56 acres, and five mixed PEM/PSS wetlands totaling approximately 3.22 acres were identified within the Project area. See Table 3 for more information regarding the wetland classifications and ORAM categories for wetlands identified within the Project area. Five ephemeral streams totaling approximately 638 linear feet in length, 24 intermittent streams totaling approximately 3,077 linear feet in length, and 12 perennial streams totaling approximately 1,782 linear feet in length were delineated within the Project area. See Table 4 for more information regarding the streams identified within the Project area.

The information provided by Stantec regarding wetland and stream boundaries is based on an analysis of the wetland and upland conditions present within the Project area at the time of the fieldwork. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

Table 5 above provides summary information for state-listed and federally listed species known to occur within Knox and Licking Counties and/or listed in the ODNR and USFWS response letters as potentially occurring within the Project area. An environmental review request letter was sent to ODNR Office of Real Estate on December 18, 2019. The ODNR Office of Real Estate response letter dated March 6, 2020 (Appendix B) states that the Project area is located within range of the following state-listed endangered and/or threatened species: Indiana bat, northern riffleshell, rabbitsfoot, long solid, fawnsfoot, black sandshell, lake chubsucker, spotted darter, mountain brook lamprey, speckled chub, Tippecanoe darter, and eastern hellbender.

The ODNR response letter further states that If suitable Indiana bat roost habitat occurs within the Project area, trees should be conserved. If suitable habitat occurs in the Project area and trees must be cut, the ODNR recommends cutting occur between October 1 and March 31. If suitable trees must be cut during summer months, the ODNR recommends a presence/probable absence bat mist net survey be conducted between June 1 and August 15, prior to any cutting. If no tree removal is proposed, this project is not likely to impact this species.

According to the ODNR, the state-listed endangered little brown bat, northern long-eared bat, and tri-colored bat occur statewide in Ohio. The Project area contains potentially suitable roosting and foraging habitat for these species and the Indiana bat (early successional deciduous forest and mixed early successional/second growth deciduous forest), but no potentially suitable hibernacula for these species were observed within the Project area. AEP intends to conduct any required tree clearing between October 1 and March 31. Therefore, no impacts to these species

are anticipated. AEP will determine if any summer tree clearing is necessary in areas containing potentially suitable roost habitat for these species and will proceed accordingly in accordance with agency requirements.

According to the response received from ODNR, this Project must not have an impact on freshwater native mussels at the project site. If in-water work is planned in any streams that meet the criteria outlined in the Ohio Mussel Survey Protocol (ODNR and USFWS 2020), the ODNR recommends mussel surveys or mussel reconnaissance surveys be conducted and the ODNR recommends that the applicant provide information to indicate no mussel impacts will occur. No work on the Project is proposed in perennial streams. Therefore, no impacts to state-listed threatened, state-listed endangered, or other mussel species are anticipated.

ODNR advises that due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact the lake chubsucker, spotted darter, mountain brook lamprey, speckled chub, or Tippecanoe darter. According to the ODNR, due to the location this project is also not likely to impact the eastern hellbender.

The ODNR also stated that they are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the Project area.

A technical assistance request letter was also submitted to the USFWS. In their response letter, the USFWS recommends that impacts to wetlands and other water resources be avoided or minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation (Appendix B).

According to the USFWS, the proposed Project is in the vicinity of one or more confirmed records of Indiana bats. USFWS recommends that trees greater than or equal to 3 inches dbh be saved wherever possible. Because the Project will result in a small amount of forest clearing relative to the available habitat in the immediately surrounding area, habitat removal is unlikely to result in significant impacts to the Indiana bat or northern long-eared bat. Because Indiana bat presence in the vicinity of the Project has been confirmed, clearing of trees greater than or equal to 3 inches dbh during the summer roosting season may result in direct take of individuals. If any caves or abandoned mines may be disturbed, further coordination with USFWS is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and tree removal is unavoidable, we recommend that removal of any trees greater than or equal to 3 inches dbh only occur between October 1 and March 31. Following this seasonal tree clearing recommendation should ensure that any effects to Indiana bats and northern long-eared bats are insignificant or discountable. If implementation of this seasonal tree clearing recommendation is not possible, a summer survey may be conducted to document the presence or probable absence of Indiana bats.

As stated, the Project area contains potentially suitable foraging and summer roost habitat for the Indiana bat and northern long-eared bat. No suitable winter hibernacula for these species were observed in the Project area. AEP intends to avoid areas with summer roost habitat to the extent possible and intends to conduct any required tree clearing within the Project area between March 31 and October 1. Therefore, impacts to the northern long eared bat or Indiana bat are not anticipated. AEP will determine if any summer tree clearing is necessary in areas containing potentially suitable roost habitat for these species and will proceed accordingly in accordance with USFWS recommendations.

If there is a federal nexus for this Project, the USFWS stated that no tree clearing should occur on any portion of the Project area until consultation under Section 7 of the Endangered Species Act (ESA) between the USFWS and the federal action agency is completed.

Due to the project type, size, and location, the USFWS does not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species.

5.0 REFERENCES

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

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

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

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

NatureServe. 2021. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, VA. U.S.A. Available at http://explorer.natureserve.org. Accessed January 2021.

Ohio Department of Natural Resources (ODNR) Division of Wildlife and U.S. Fish and Wildlife Service (USFWS). 2020. Ohio Mussel Survey Protocol. Available at https://ohiodnr.gov/static/documents/wildlife/permits/dow-protocol-ohio-mussel-survey.pdf. Accessed January 2021.

Ohio Department of Natural Resources (ODNR) Division of Wildlife. 2021a. State Listed Wildlife and Plant Species by County. https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-odnr/wildlife/documents-publications/wildlife-plants-county. Accessed January 2021.

ODNR Division of Wildlife. 2021b. Ohio Wildlife Field Guides and Backyard Wildlife. Available at https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/wildlife/documents-publications/backyard-wildlife-documents. Accessed January 2021.

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

OEPA. 2018. Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams, Version 4.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 117 pp.

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

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

USACE. 2002. Issuance of Nationwide Permits; Notice, 67 Fed. Reg. 10. January 15, 2002. Federal Register: The Daily Journal of the United States. Available at https://www.gpo.gov/fdsys/pkg/FR-2002-01-15/pdf/02-539.pdf. Accessed January 2021.

USACE. 2005. *Guidance on Ordinary High Water Mark Identification* (Regulatory Guidance Letter, No. 05-05). Available online at http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-05.pdf. Accessed January 2021.

USACE. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0),* ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USACE and U.S. Environmental Protection Agency (USEPA). 2020. The Navigable Waters Protection Rule: Definition of Waters of the United States. 85 FR 22250. Department of the Army, Corps of Engineers, Department of Defense; and Environmental Protection Agency. 93 pp. Available online at https://www.federalregister.gov/documents/2020/04/21/2020-02500/the-navigable-waters-protection-rule-definition-of-waters-of-the-united-states. Accessed January 2021.

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

USFWS. 2016. Environmental Conservation Online System (ECOS): Species Profile for Northern Long-eared Bat (*Myotis septentrionalis*). Available online at https://ecos.fws.gov/tess_public/profile/speciesProfile?spcode=A0JE. Accessed January 2021.

USFWS. 2018. Federally Listed Species by Ohio Counties. Available at https://www.fws.gov/midwest/endangered/lists/pdf/OhioCtyList29Jan2018.pdf. Accessed January 2021.

USFWS. 2020. 2020 Range-wide Indiana Bat Survey Guidelines, March 2020. Available at https://www.fws.gov/midwest/endangered/mammals/inba/surveys/pdf/FINAL%20Range-wide%20IBat%20Survey%20Guidelines%203.23.20.pdf. Accessed January 2021.

Appendix A FIGURES

A.1 FIGURE 1 – PROJECT LOCATION MAP

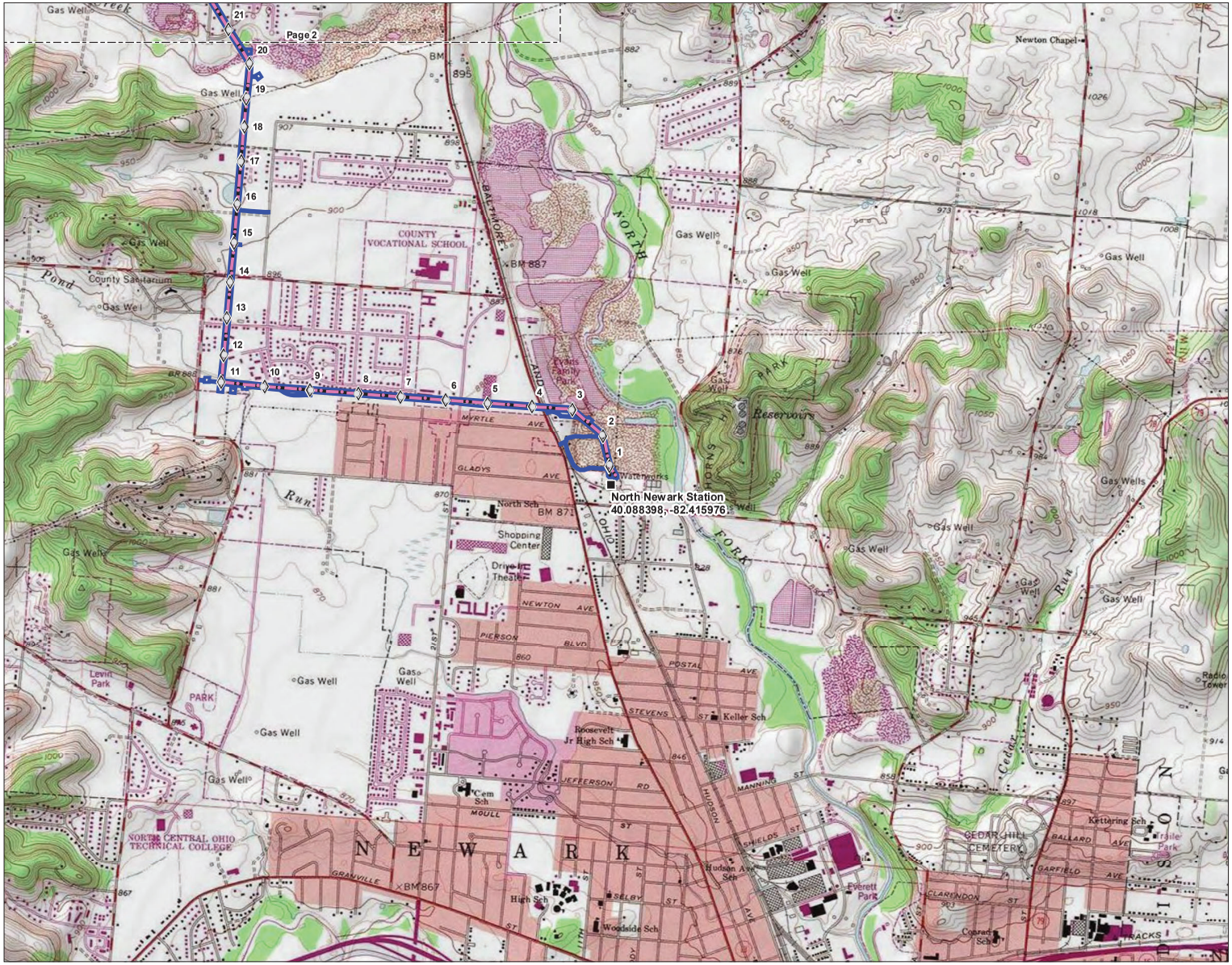


Figure No.
1

Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
North Newark-Sharp Road 138 kV
Transmission Line Rebuild Project

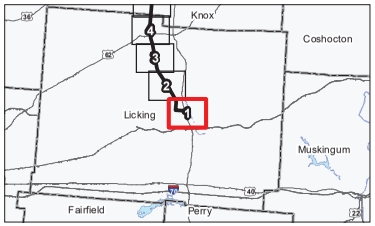
Project Location
Knox and Licking Counties, Ohio

193707328
Prepared by JLH on 2021-04-13
Technical Review by AJK on 2021-04-22
Independent Review by DJG on 2021-04-22

0 1,000 2,000 Feet
1:24,000 (At original document size of 11x17)

N

Legend
- AEP Substation
- Existing Structure to be Replaced
- Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area



Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Data Sources Include: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Homer, OH (1975), Hunt, OH (1975), Fredonia, OH (1975), Utica, OH (1962), Newark, OH (1983)

Stantec

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

V:\1937\Active\193707328\05-design\06-cad\cad\maps\Knox_Licking\Map_Knox_Licking_193707328.mxd Revised: 2021-04-23 By: jhickerson

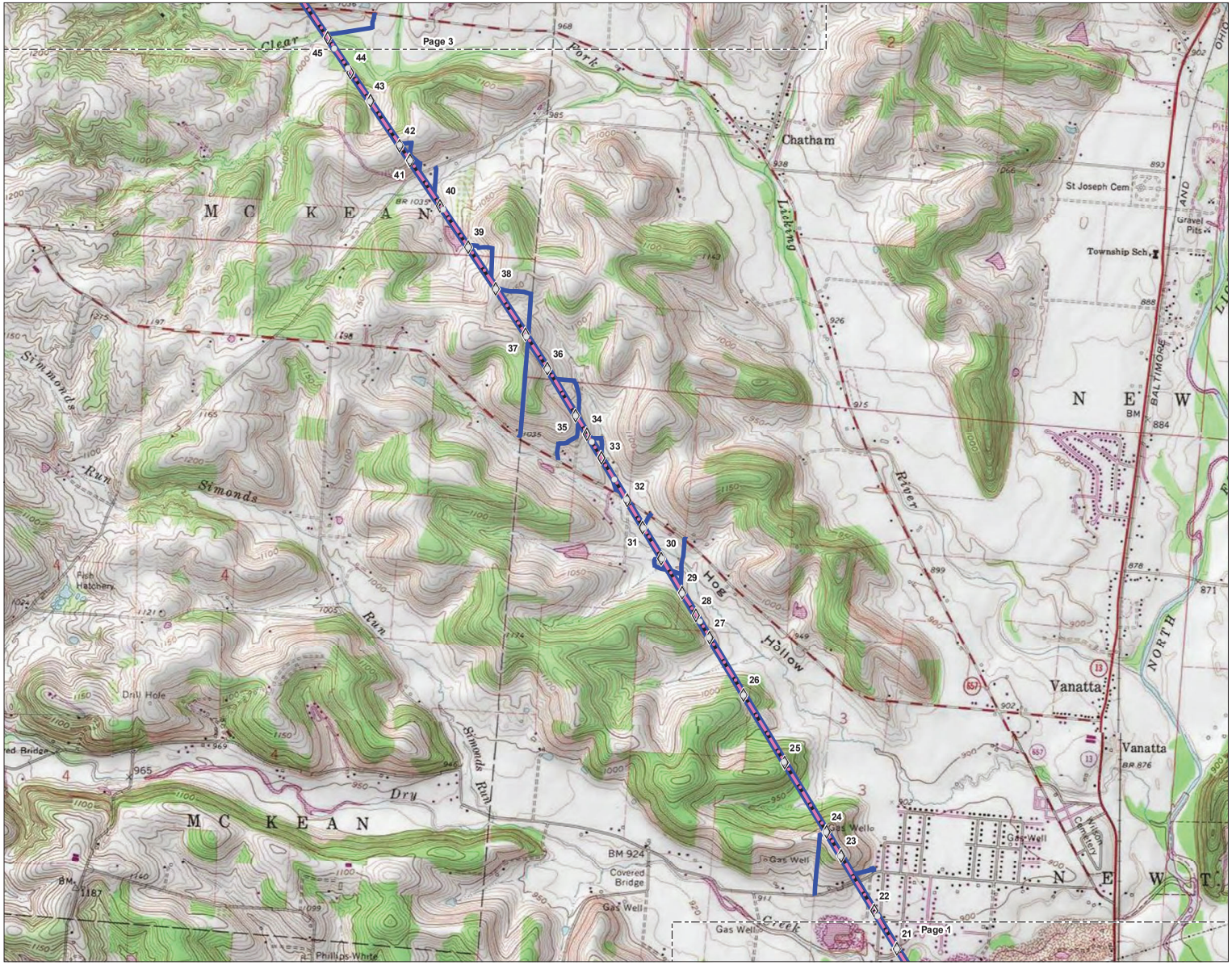


Figure No.
1

Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
North Newark-Sharp Road 138 kV
Transmission Line Rebuild Project

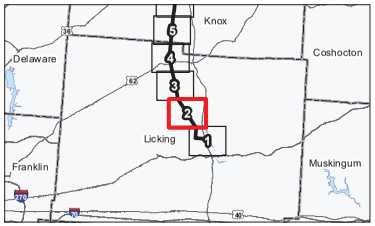
Project Location
Knox and Licking Counties, Ohio

193707328
Prepared by JLH on 2021-04-13
Technical Review by AJK on 2021-04-22
Independent Review by DJG on 2021-04-22

0 1,000 2,000 Feet
1:24,000 (At original document size of 11x17)

N

Legend
- AEP Substation
- Existing Structure to be Replaced
- Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area



Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Data Sources Include: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Homer, OH (1975), Hunt, OH (1975), Fredonia, OH (1975), Utica, OH (1962), Newark, OH (1983)

Stantec

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

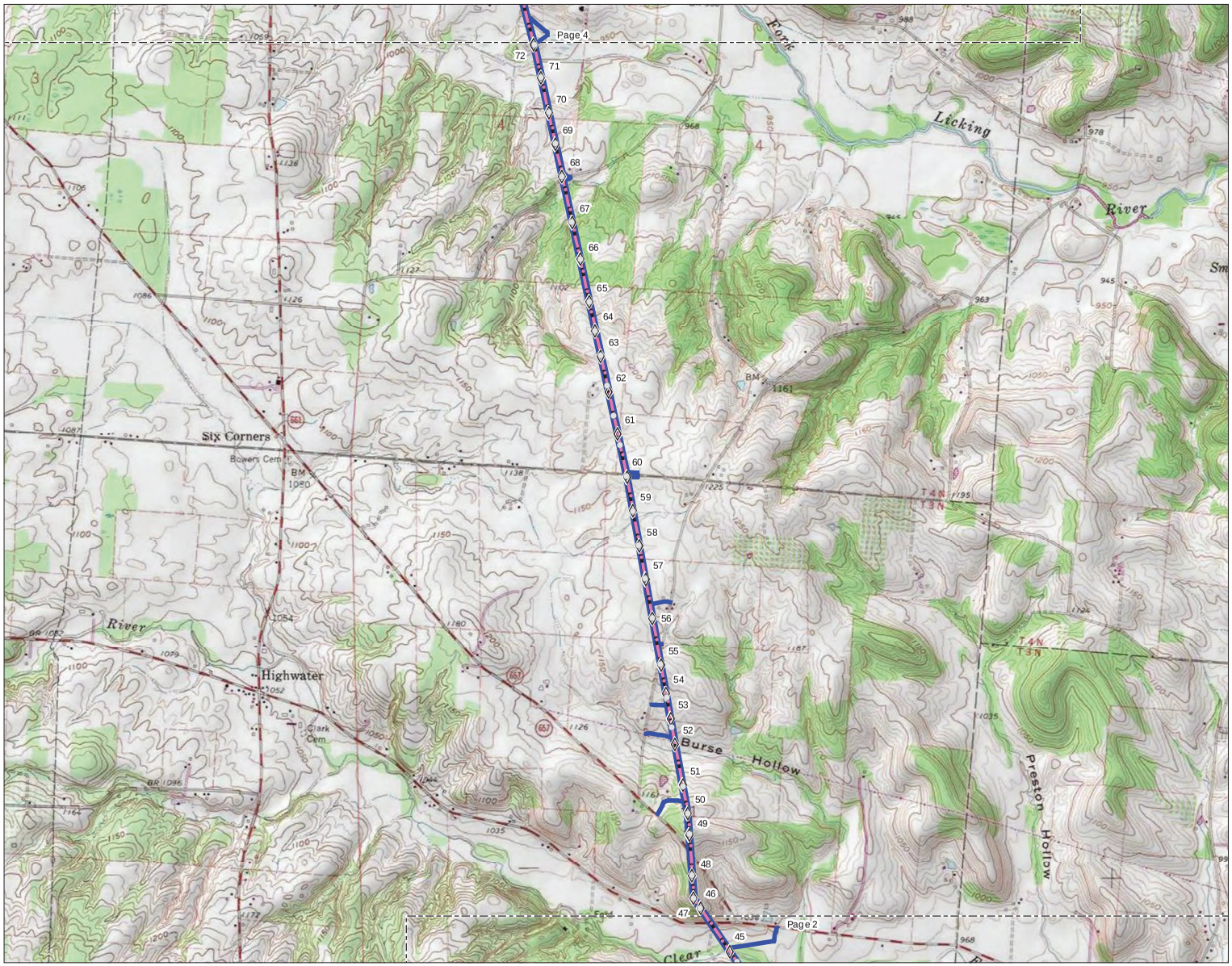


Figure No.
1

Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
North Newark-Sharp Road 138 kV
Transmission Line Rebuild Project

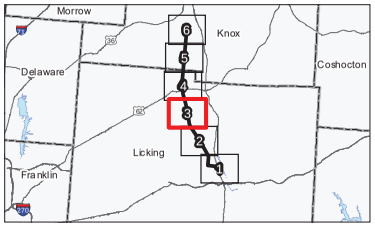
Project Location
Knox and Licking Counties, Ohio

193707328
Prepared by JLH on 2021-04-13
Technical Review by AJK on 2021-04-22
Independent Review by DJG on 2021-04-22

0 1,000 2,000 Feet
1:24,000 (At original document size of 11x17)

N

Legend
- AEP Substation
- Existing Structure to be Replaced
- Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area



Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Data Sources Include: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Homer, OH (1975), Hunt, OH (1975), Fredonia, OH (1975), Utica, OH (1962), Newark, OH (1983)

Stantec

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

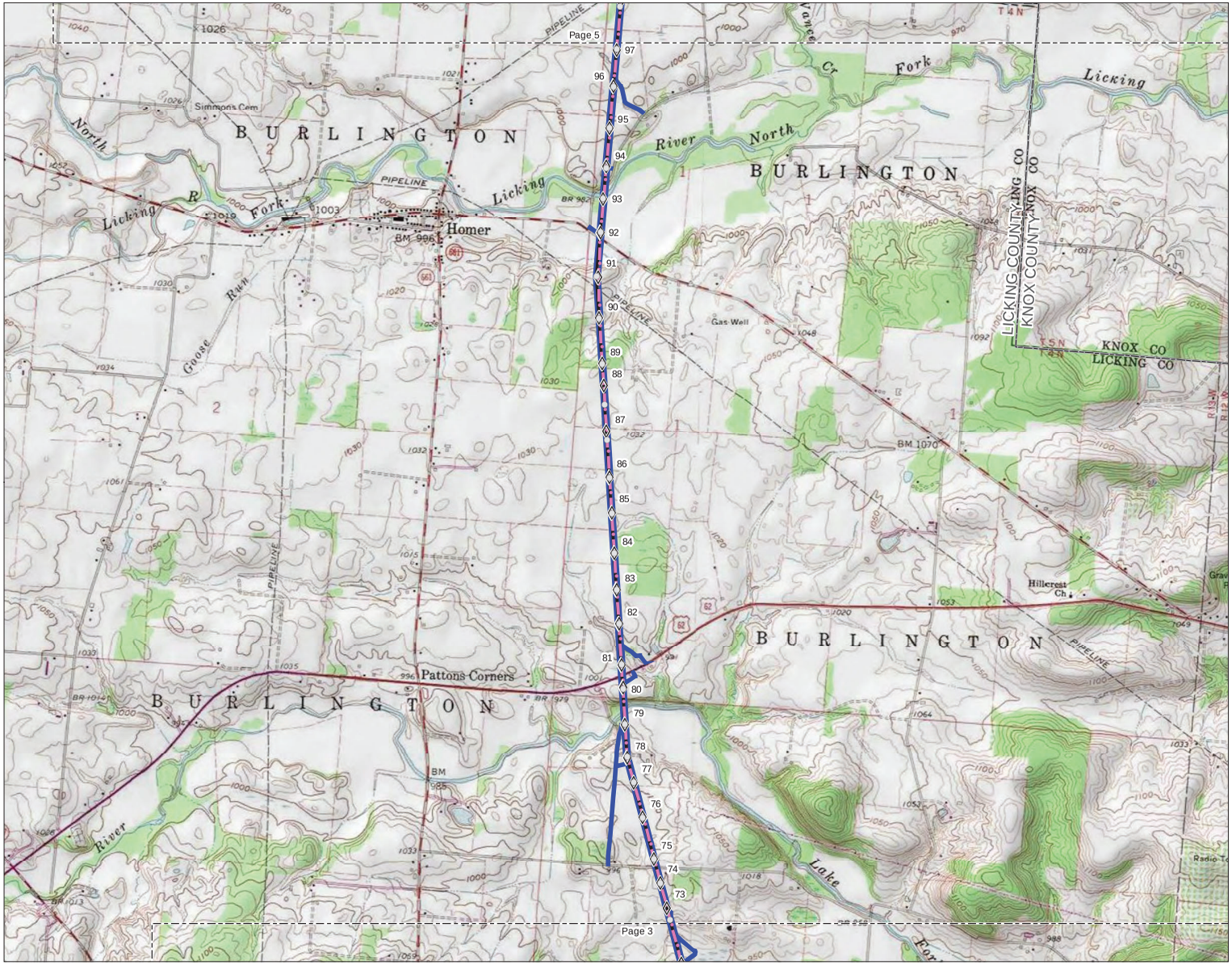


Figure No.
1

Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
North Newark-Sharp Road 138 kV
Transmission Line Rebuild Project

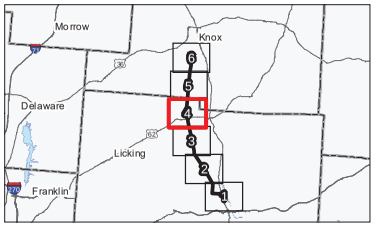
Project Location
Knox and Licking Counties, Ohio

193707328
Prepared by JLH on 2021-04-13
Technical Review by AJK on 2021-04-22
Independent Review by DJG on 2021-04-22

0 1,000 2,000 Feet
1:24,000 (At original document size of 11x17)

N

Legend
- AEP Substation
- Existing Structure to be Replaced
- Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area



Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Data Sources Include: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Homer, OH (1975), Hunt, OH (1975), Fredonia, OH (1975), Utica, OH (1962), Newark, OH (1983)

Stantec

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

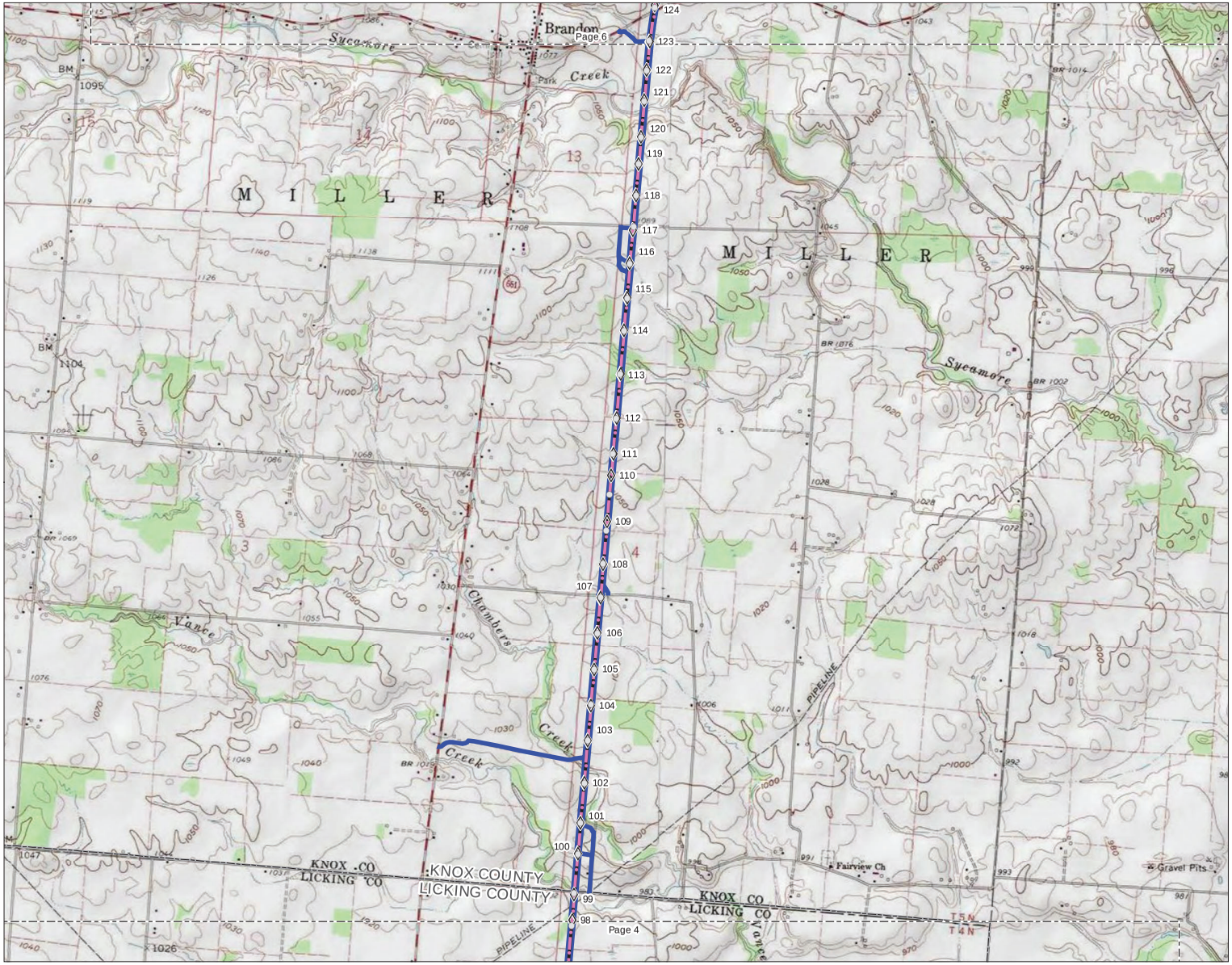


Figure No.
1

Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
North Newark-Sharp Road 138 kV
Transmission Line Rebuild Project

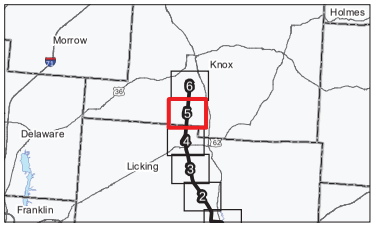
Project Location
Knox and Licking Counties, Ohio

193707328
Prepared by JLH on 2021-04-13
Technical Review by AJK on 2021-04-22
Independent Review by DJG on 2021-04-22

0 1,000 2,000 Feet
1:24,000 (At original document size of 11x17)

N

Legend
- AEP Substation
- Existing Structure to be Replaced
- Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area



Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Data Sources Include: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Homer, OH (1975), Hunt, OH (1975), Fredonia, OH (1975), Utica, OH (1962), Newark, OH (1983)

Stantec

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

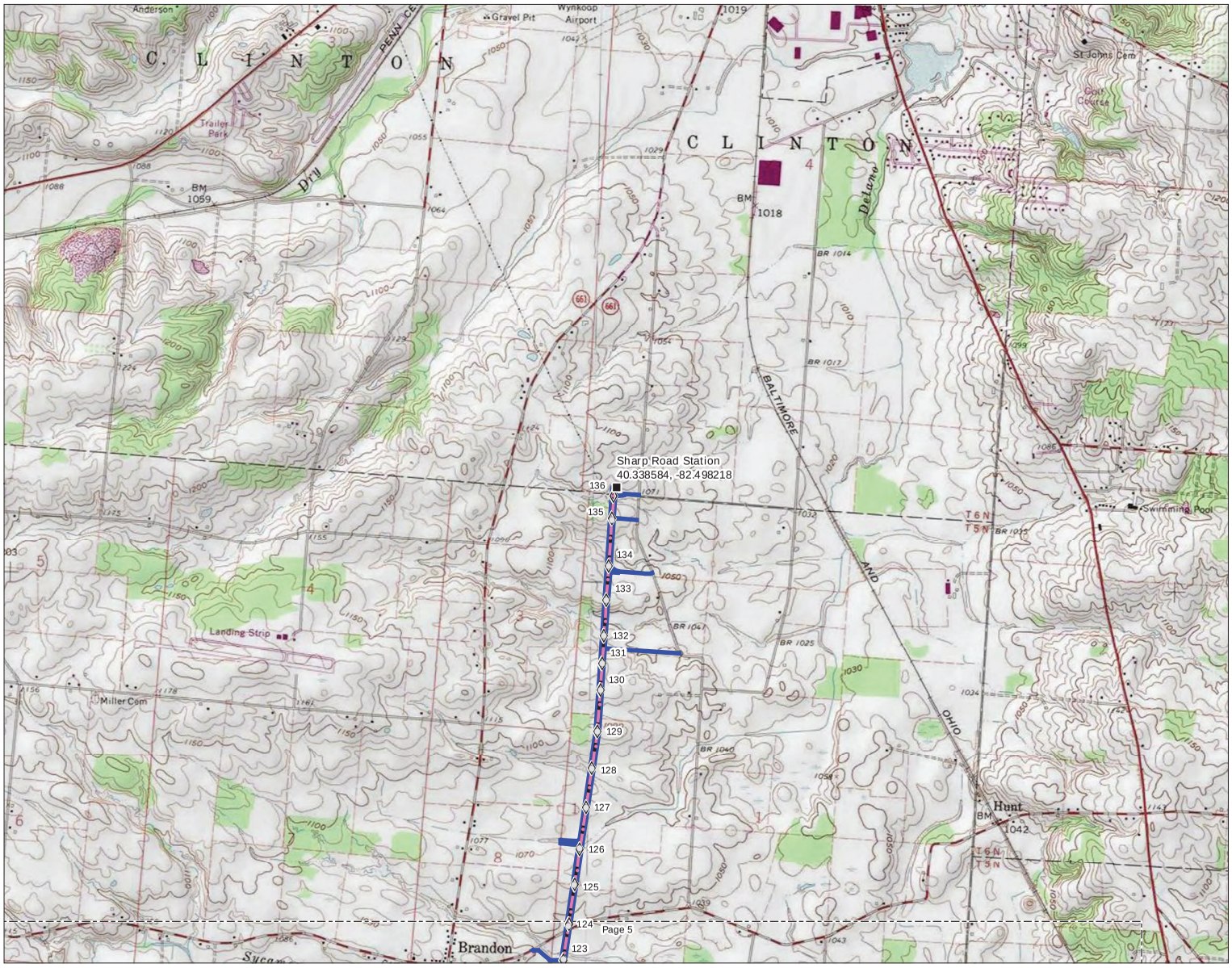


Figure No.
1

Title
Project Location Map

Client/Project
AEP Ohio Transmission Company, Inc.
North Newark-Sharp Road 138 kV
Transmission Line Rebuild Project

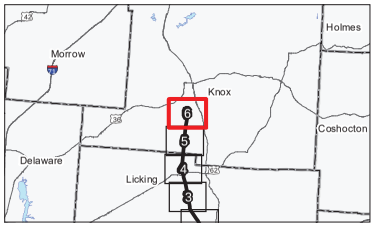
Project Location
Knox and Licking Counties, Ohio

193707328
Prepared by JLH on 2021-04-13
Technical Review by AJK on 2021-04-22
Independent Review by DJG on 2021-04-22

0 1,000 2,000 Feet
1:24,000 (At original document size of 11x17)

N

Legend
- AEP Substation
- Existing Structure to be Replaced
- Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area



Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Data Sources Include: Stantec, AEP, USGS, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Homer, OH (1975), Hunt, OH (1975), Fredonia, OH (1975), Utica, OH (1962), Newark, OH (1983)

Stantec

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

5/14/2021 3:25:00 PM

in

Case No(s). 21-0525-EL-BLN

Summary: Notice Letter of Notification Application for the North Newark-Sharp Road 138 kV Transmission Line Rebuild Project 1-100 electronically filed by Tanner Wolffram on behalf of AEP Ohio Transmission Company, Inc.