APPLICATION FOR CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE WEST MANCHESTER-BLAZER-HODGIN 138 KV TRANSMISSION LINE PROJECT

PUCO CASE NO. 22-0627-EL-BTX

Submitted to:

The Ohio Power Siting Board

Pursuant to Ohio Administrative Code

Section 4906-5

Submitted by:

The Dayton Power and Light Company d/b/a AES Ohio

1065 Woodman Drive

Dayton, Ohio 45432

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4906 5 02 PROJECT SUMMARY AND APPLICANT INFORMATION

(A) PROJECT SUMMARY

The applicant shall provide a summary of the proposed project. The summary should be suitable as a reference for state and local governments and for the public. The summary shall include the following:

(1) A statement explaining the general purpose of the facility.
(2) A description of the general location, size, and operating characteristics of the proposed facility.
(3) A discussion of the suitability of the preferred and alternate routes for the proposed facility.
(4) An explanation of the project schedule (a Gantt chart is acceptable).

The Dayton Power and Light Company d/b/a AES Ohio ("AES Ohio") is proposing the West Manchester-Blazer-Hodgin 138 kilovolt ("kV") Transmission Line Project ("Project"), located in Jackson Township, Jefferson Township, and near the Village of West Manchester, Monroe Township, and Washington Township within Preble County, Ohio. During the public outreach and siting phase, the Project name "New Westville Area Improvements Project" was used in conjunction with the Public Utilities Commission of Ohio (PUCO) case name.

The Project's Preferred Route involves construction of an approximate 18.2-mile 138 kV single-circuit transmission line from the distribution West Manchester Substation (West Manchester Substation) to the Point of Interconnect (POI) on the Indiana/Ohio state line. This Project will significantly improve reliability and operational flexibility on the western part of the AES Ohio transmission system. The new 138 kV transmission line involves two circuits. The first will extend approximately 16.5 miles from the existing West Manchester Substation to the proposed distribution Blazer Substation (Blazer Substation). The first 5 miles of transmission line will upgrade/rebuild the existing Circuit 6656 West Manchester – Garage Rd 69 kV line between the West Manchester Substation and the Lewisburg Tap (Structure 493901) to 138 kV operation. The remaining 11.5 miles will be a new single-circuit 138 kV line from the Lewisburg Tap to the proposed Blazer Substation. The second circuit will extend approximately 2.5 miles from the proposed Blazer Substation to the POI at the Indiana/Ohio state line and continue in the State of Indiana to a proposed American Electric Power (AEP) substation. The proposed Blazer Substation will be located on AES Ohio property south of Interstate 70 (I-70) on New Westville Road. The existing AES Ohio West Manchester Substation will be expanded. Both distribution substations are not included in this application for a Certificate of Environmental Compatibility and Public Need from the Ohio Power Siting Board ("OPSB" or "Board").

Route Alternatives considered as part of the route selection process are displayed in Attachment 4-1. Map 2-1, Project Overview, provides a general overview of the entire Project area. Project construction will be phased and is anticipated to begin at the end of 2024 and be completed at the end of 2026.

(1) General Purpose of the Facility

A statement explaining the general purpose of the facility.

The general purpose of the Project is to improve electric service reliability for the customers in New Westville and the greater western part of the AES Ohio service territory.

This area is presently served by a single-circuit 33 kV transmission line primarily constructed in the 1930s. A single outage on the antiquated 3302 33 kV New Westville – Garage Road circuit results in a complete outage to all customers served from the New Westville Substation. Additionally, the existing New Westville Substation has a history of poor performance and is composed of non-standard equipment that allows for minimal operational flexibility.

This Project will retire and replace the existing 33 kV transmission circuit and the New Westville Substation with a 138 kV transmission line and proposed Blazer Substation. Additionally, this Project will construct a new 138 kV transmission line that will connect the proposed Blazer Substation to a proposed AEP substation located in Indiana, providing looped redundancy. This Project will improve reliability for the customers currently served by the existing New Westville Substation. The Project also addresses a baseline overload condition on the College Corner – Collinsville 138 kV transmission line located in Indiana.

Additional details can be found in this application's Review of Need and Schedule (Section 4906-5-03).

(2) General Location, Size, and Operating Characteristics of the Proposed Facility

A description of the general location, size, and operating characteristics of the proposed facility.

The Project is located in Jefferson, Jackson, Monroe, and Washington Townships in Preble County, Ohio near the border of Indiana, near Richmond, on the western end, and near Lewisburg, Ohio on the eastern end, with a portion of the Project extending north to West Manchester, Ohio. The area is mostly occupied by farmland and low-density residences with I-70 and the Historic National Road Byway/U.S. Route 40 bisecting the Project area.

The Project begins at the existing West Manchester Substation that is located on Holzmuller Road, northeast of the Village of West Manchester in Monroe Township. Approximately 5 miles of the existing 69 kV 6656 West Manchester – Garage Road circuit will be rebuilt and upgraded to 138 kV from the West Manchester Substation south to the Lewisburg Tap, located approximately 0.8 mile east of State Route 127 and just north of I-70. A new 138 kV transmission line will extend west from the Lewisburg Tap, turn south, cross over I-70, and continue generally west, crossing through Monroe and Washington Townships before connecting to the proposed Blazer Substation located on New Westville Road in Jackson Township. The route includes providing a feed to the proposed Darke Rural Electric Cooperative (Darke REC) distribution substation located on Orphans Road, east of the intersection of Orphans Road and Pence Shewman Road. A second 138 kV transmission line will extend south and west, connecting the proposed Blazer Substation to the POI on the Indiana/Ohio state line at Cox Road, approximately 1.3 miles south of I-70.

The Preferred Route is 18.2 miles, and the Alternate Route is 19.1 miles in length. The Project will require a 30-foot-wide right-of-way (ROW) when paralleling roads and a 75-foot ROW for cross-country portions of the routes. The typical height of the transmission structures will be approximately 80 and 110 feet. Map 2-1 (Project Overview) shows the Project endpoints and the Preferred and Alternate Routes identified by AES Ohio.

(3) Suitability of the Preferred Route and Alternate Route for the Proposed Facility

A discussion of the suitability of the preferred and alternate routes for the proposed facility.

AES Ohio and its Siting Team conducted a Route Selection Study ("RSS"), which is included in Attachment 4-1. During public outreach and RSS development, the Project name "New Westville Area Improvements Project" was used in conjunction with the PUCO case name. The RSS provides specific criteria and methodologies employed during the evaluation and selection of the Preferred and Alternate Routes proposed in this application. The objective of the RSS was to gain a comprehensive understanding of constraints and opportunities related to the Project and Study Area, with the goal of minimizing siting impacts to the extent practical while considering stakeholder and public input. Stakeholder and public input was gathered throughout the siting process during stakeholder meetings, two in-person public informational meetings (PIMs), and meetings with individual landowners. The detailed discussion of the selection process used in the RSS is discussed further in Section 4906-5-04.

Based on the results of the RSS and input from stakeholders and the public, AES Ohio identified a Preferred and Alternate Route (Map 2-1). The Preferred and Alternate Routes are both constructible and were selected by AES Ohio for consideration by the OPSB in this application. Per Ohio Administrative Code ("OAC") 4906-3-05, the Preferred and Alternate Route cannot be more than 20% in common to be considered as alternatives. The Preferred and Alternate Routes are approximately 19% in common.

The Preferred Route is approximately 18.2 miles in length, rebuilds an existing AES Ohio 69 kV transmission line for approximately 5.3 miles, and parallels highways and local roads for approximately 9.0 miles. The Alternate Route is approximately 19.1 miles in length, rebuilds an existing AES Ohio 33 kV transmission line for approximately 0.4 miles, and parallels highways and local roads for approximately 10.3 miles.

When compared to the Alternate Route, the Preferred Route is shorter in length, has fewer turn angles, requires less new ROW to be acquired, crosses less landowners and parcels, and is farther away from residences within all distances evaluated. Overall, both the Preferred and Alternate Routes have minimal impacts to natural and cultural resources and do not pose constructability concerns due to the mostly flat terrain and predominately agricultural land use of transmission ROWs. The Preferred Route also received more favorable input during stakeholder, public outreach efforts, and discussions with individual landowners. AES Ohio believes the Preferred Route is the route that best: (1) aligns with AES Ohio siting guidelines (see Section 1.3 of Attachment 4-1); (2) minimizes adverse impacts to the human and natural environment to the extent practical; (3) aligns with AES Ohio constraints and opportunities guidelines (see Section 2.2 of Attachment 4-1); and (4) permits the proposed transmission line to be constructed and operated in a timely, safe, and reliable manner.

(4) Project Schedule

An explanation of the project schedule (a Gantt chart is acceptable).

Construction of the Project is planned to begin at the end of 2024, and the anticipated in-service date is the end of 2026. A detailed Project schedule is provided in Section 4906-5-03(F).

(B) HISTORY, AFFILIATE RELATIONSHIPS, CURRENT OPERATIONS

The applicant shall provide a brief description of the applicant's history, affiliate relationships, and current operations, and a description of the company that will construct and operate the facility, if different from the applicant.

The Dayton Power and Light Company d/b/a AES Ohio is a public utility incorporated in 1911 under the laws of Ohio. Headquartered in Dayton, Ohio, AES Ohio provides transmission and distribution service to approximately 537,000 customers located in West Central Ohio. The company owns more than 1,600 miles of transmission lines and over 17,000 miles of distribution lines. AES Ohio is the primary subsidiary of DPL Inc, a wholly-owned subsidiary of The AES Corporation.

4906 5 03 REVIEW OF NEED AND PROJECT SCHEDULE

(A) JUSTIFICATION OF NEED

The applicant shall provide a statement explaining the need for the proposed facility, including a listing of the factors upon which it relied to reach that conclusion and references to the most recent long-term forecast report (if applicable).

AES Ohio is planning to retire the New Westville Substation and replace it with the proposed Blazer Substation as part of the overall effort to improve reliability in the western part of the AES Ohio transmission system. The New Westville Substation is radially fed from the 1930s vintage 33 kV transmission line, circuit 3302, from the existing Garage Road Substation. Circuit 3302 has experienced multiple permanent and momentary outages and will be retired as part of this Project.

The current arrangement on circuit 3302 33 kV leaves New Westville with a full outage whenever there is a fault or failure on the line. The proposed solution is to replace circuit 3302 with a new 138 kV single-circuit transmission line, extending approximately 2.5 miles, connecting the proposed Blazer Substation to the POI located on the Ohio/Indiana State line. This upgrade will provide a more reliable feed of electricity to New Westville, verifying that if the circuit does trip, it does not cause a complete outage. By constructing a loop feed and moving away from the current radial feed system, the new 138 kV circuit will provide the Blazer Substation with a backup power source in the event of an outage from the West Manchester source. This will greatly improve the reliability of the electricity supply for customers currently served by the New Westville Substation.

As part of this Project, AES will construct a new approximate 11.5-mile single-circuit 138 kV line from the proposed Blazer Substation to the Lewisburg Tap on the 69 kV circuit 6656 West Manchester – Garage Road and will also convert approximately 5 miles of the existing 69 kV circuit 6656 to 138 kV operation. This will allow AES Ohio to retire the 33 kV transmission circuit 3302 New Westville – Garage Road.

(1) Purpose of Proposed Facility

The applicant shall explain the purpose of the proposed facility.

The purpose of the Project is to improve electric service reliability for the customers in New Westville and the greater western part of the AES Ohio service territory by replacing a 1930s vintage 33 kV transmission line and providing a looped 138 kV feed into the New Westville area. The existing poor performing and outdated New Westville Substation will be retired and replaced with the proposed Blazer Substation. The Project also addresses a baseline overload condition on the College Corner – Collinsville 138 kV transmission line located in Indiana.

(2) System Conditions, Local Requirements, and Other Pertinent Factors

The applicant shall provide specific projections of system conditions, local requirements, or any other pertinent factors that impacted the applicant's opinion on the need for the proposed facility.

This project was originally initiated to address a combination of reliability concerns raised by Darke Rural Electric Cooperative; equipment condition on 3302, a non-standard 9.6 mile 33kV line built in the 1930s; creation of a new AES Ohio Distribution Delivery point; and a new delivery point for Darke Rural Electric. While we did not project additional load growth, there was a history of poor performance, and the non-

standard equipment presented a significant risk of prolonged outages on the radially fed New Westville substation. Additionally, after the project was presented at PJM, PJM identified the project had more significant regional impacts by solving a thermal overload on the College Corner – Collinsville 138 kV line that was identified in the 2022 RTEP analysis (Attachment 5-1).

(3) Load Flow Studies and Contingency Analyses

The applicant shall provide relevant load flow studies and contingency analyses, if appropriate, identifying the need for system improvement.

The project was initially evaluated for Dayton system using the 2026 Summer Case built during the 2021 RTEP model build cycle. No specific thermal overloads or voltage violations were identified, but the addition of a new 138kV source in the West Manchester area not only provided a significant improvement in the reliability to the New Westville area, but it improved the overall voltage performance in the area particularly under N-1 and N-1-1 conditions.

Additionally, the 2022 RTEP analysis identified a thermal overload using baseline contingency analysis and criteria on the College Corner – Collinsville 138kV line (Attachment 5-1).

(4) System Performance Transcription Diagrams

For electric power transmission facilities, the applicant shall present load flow data in the form of transcription diagrams depicting system performance with and without the proposed facility.

Figure 3-1. Load Flow without the Proposed Project

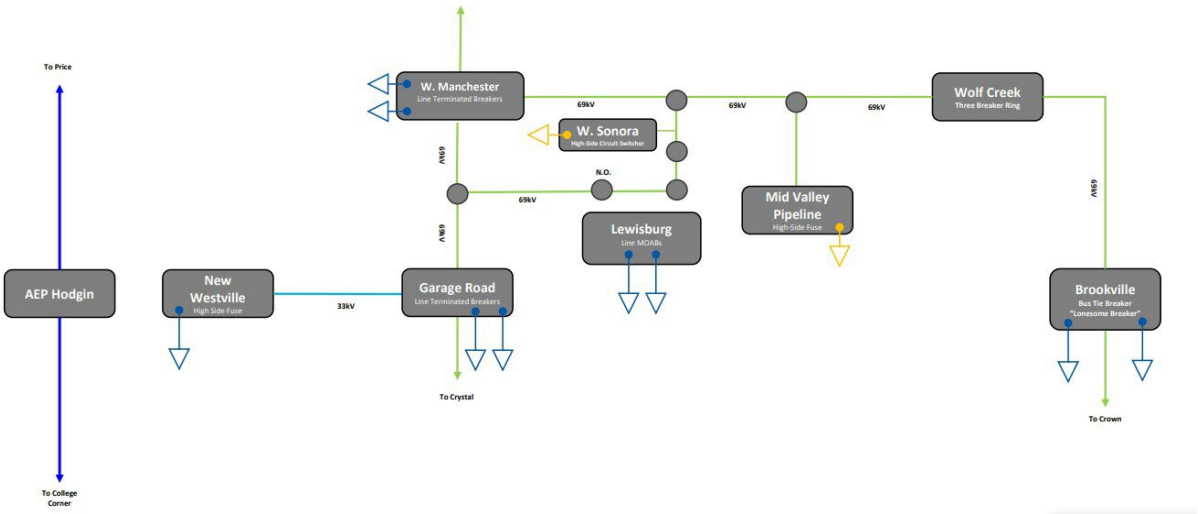
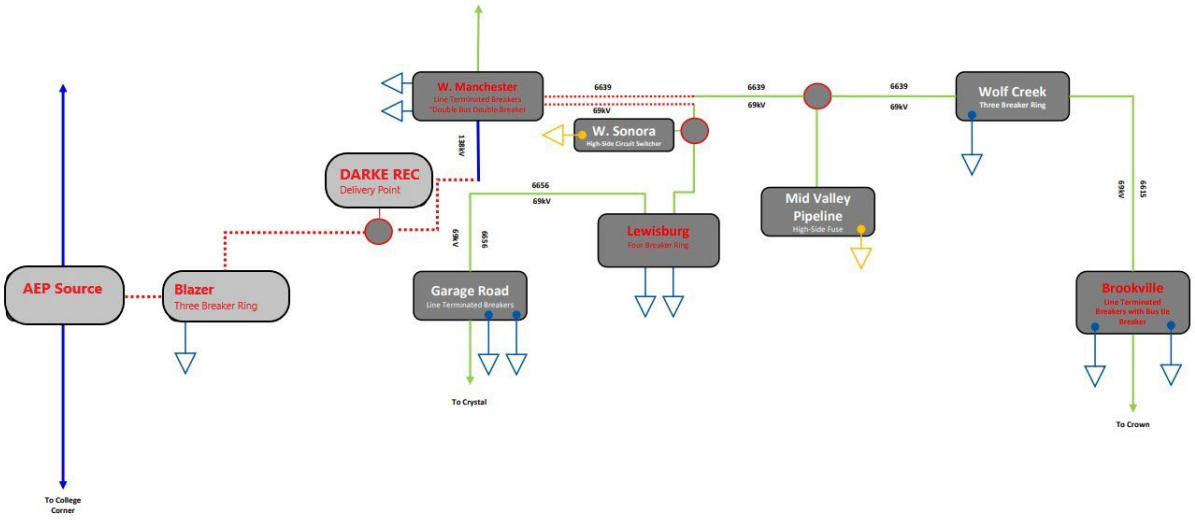


Figure 3-2. Load Flow After Completion of the Proposed Project



(B) REGIONAL EXPANSION PLANS

The applicant shall explain how the facility fits into regional expansion plans.

(1) Proposed Facility in Long-Term Forecast

For electric power transmission lines and associated facilities, the applicant shall provide a brief statement of how the proposed facility and site/route alternatives fit into the applicant's most recent long-term electric forecast report and the regional plans for expansion, including, but not limited to, the following:

(a) Reference to any description of the proposed facility and site/route alternatives in the most recent long-term electric forecast report of the applicant.

The Project is referenced on pages 87 and 88 of AES Ohio's 2023 Long-Term Forecast Report Table FE-T9 (Attachment 5-1).

(b) If no description was contained in the most recent long-term electric forecast report, an explanation as to why none was filed in the most recent long-term electric forecast report.

Not applicable, see Section 4906-5-3(B)(1)(a) directly above.

(c) Reference to regional expansion plans, when applicable (if the transmission project will not affect regional plans, the applicant shall so state).

The Project was submitted to PJM as a supplemental reliability improvement project, and the need was presented on December 18, 2020, February 17, 2021, and May 21, 2021, and the solution was presented on August 16, 2021, at the PJM Subregional RTEP Committee-Western meetings. The Project was

subsequently assigned PJM supplemental number s2585.2 and s2585.3. On December 6, 2022, PJM's Transmission Expansion Advisory Committee upgraded the Project, RTEP project numbers S2585.2 and s2585.3, to baseline reliability status to help address an overload condition on the College Corner – Collinsville 138 kV circuit using the 2027 RTEP Summer case model. The baseline project numbers are b3766.4 and b3766.5 (Attachment 5-1).

(C) SYSTEM ECONOMY AND RELIABILITY

For electric power transmission facilities, the applicant shall provide an analysis of the impact of the proposed facility on the electric power system economy and reliability. The impact of the proposed facility on all interconnected utility systems shall be evaluated, and all conclusions shall be supported by relevant load flow studies.

The Project will significantly improve reliability in the region by networking a radial line, eliminating a three terminal 69 kV line and bringing an additional source into the area. This new line will serve as a source for approximately 8 MVA of load in a rural area of western Ohio. Failure to improve the condition of the existing facilities may result in increased outages to customers served by the approximately 9.6 miles of 33 kV line and 20 miles of 69 kV line. The Project was not driven by circuit loading concerns, but the additional source significantly increases reliability and operational flexibility when unexpected or maintenance outages occur in the area. Load flow studies completed by PJM and AES Ohio planning found no adverse effects due to the Project.

(D) OPTIONS TO ELIMINATE THE NEED FOR THE PROPOSED PROJECT

For electric power transmission lines, the applicant shall provide an analysis and evaluation of the options considered which would eliminate the need for construction of an electric power transmission line, including electric power generation options and options involving changes to existing and planned electric power transmission substations.

The following electrical alternative was considered before proceeding with this Project. The proposed alternative was not selected to meet the Project need, as explained below:

Retiring the 33 kV line and replacing it with a distribution service is not feasible as the distribution extensions needed would be greater than 10 miles and it would negatively impact reliability to the area. Rebuilding the existing line to our standard 69 kV specifications and looping the service from the nearby AES Ohio 69 kV system would require more extensive line reinforcements and would provide diminishing returns on the reliability in the area.

(E) FACILITY SELECTION RATIONALE

The applicant shall describe why the proposed facility was selected to meet the projected need. The applicant shall also describe how the facility will serve the public interest, convenience, and necessity.

The proposed Project is needed to address the aging 33 kV infrastructure, the reliability in the New Westville area, and reliability on the three terminal 6656 69 kV line. The proposed solution will eliminate the deteriorated condition of the 33 kV line, reduce overall mileage exposure to 8 MVA of load in the Preble County area, improve the operational flexibility when outages occur, and install structures capable

of handling new telecom fiber required in the area for modern relays to operate. The solution not only addresses aging infrastructure and reliability for New Westville but also improves reliability and operational flexibility to the entire Preble County area.

(F) PROJECT SCHEDULE

The applicant shall provide a detailed project schedule.

A schedule Gantt chart of the Project is provided as Figure 3-3 and additional details on each milestone are described below.

(1) Schedule Gantt Chart

The applicant shall provide a proposed schedule in Gantt chart format covering all major activities and milestones, including:

(a) Preparation of the application.

The application was prepared during the fall and winter of 2023.

(b) Submittal of the application for certificate.

The application for certificate was submitted on December 18, 2023.

(c) Issuance of the certificate.

The Certificate of Environmental Compatibility and Public Need (CPCN) is anticipated in the fall of 2024.

(d) Receipt of grid interconnection studies and other critical path milestones for project construction.

AES Ohio will coordinate with AEP to complete the interconnection through a wires-to-wires agreement. All other milestones are identified in the project schedule.

(e) Acquisition of rights-of-way and land rights for the certified facility.

Preliminary ROW discussions began in the fall of 2022 and ROW acquisition is anticipated from the Summer of 2023 to the end of 2024. ROW agents will be in communication with impacted landowners throughout the project construction and restoration phases of the Project.

(f) Preparation of the final design.

Preliminary engineering and design began in the summer of 2023 and final engineering design is anticipated by the spring of 2024.

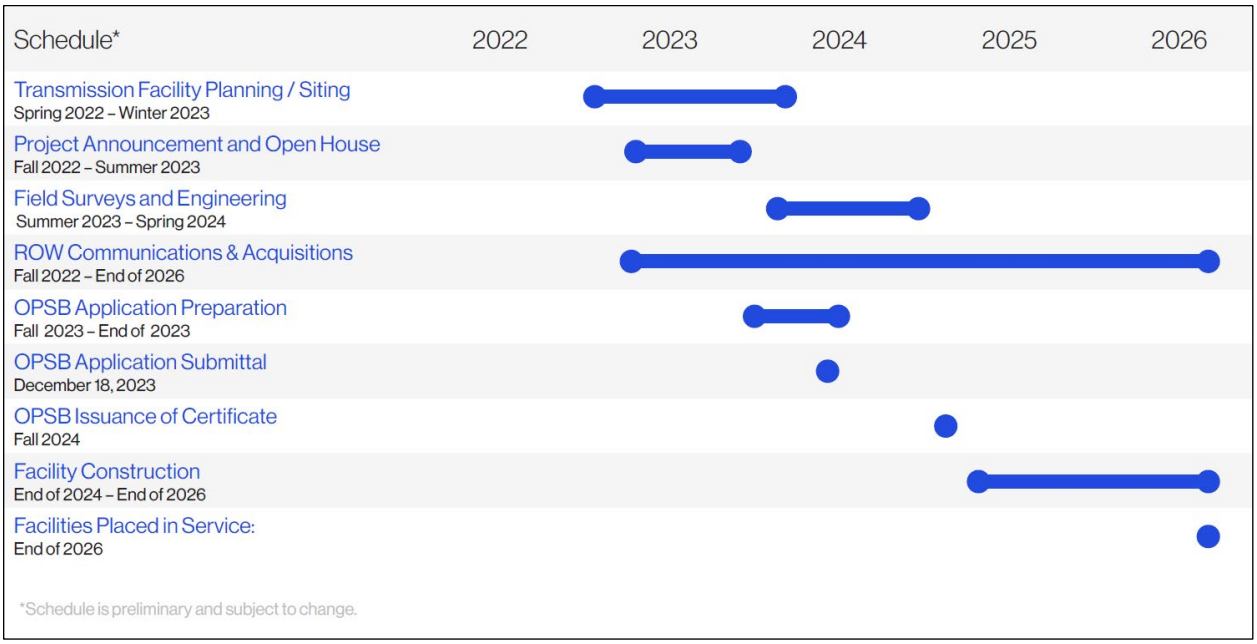
(g) Construction of the facility.

Facility construction will be phased and is anticipated to begin at the end of 2024 and be completed at the end of 2026.

(h) Placement of the facility in service.

The Project is anticipated to be placed in service at the end of 2026.

Figure 3-3. Detailed Project Schedule Gantt Chart



(2) <u>Impact of Critical Delays</u>

The applicant shall describe the potential impact of critical delays on the in-service date.

Failure to move forward on this project will likely result in PJM implementing operational controls in the Collegeville area which may include preemptive shedding of load from the area's transmission and distribution network to alleviate the thermal issues. Although load shedding is an approved PJM operational procedure to control thermal overloads, load shedding directly impacts both large commercial and residential customers in the area and is not a preferred option from the Company's perspective. Additionally, AES Ohio customers in the Preble County area will continue to experience reliability challenges as we continue to maintain the non-standard radial 33 kV line currently serving them.

4906 5 04 ROUTE ALTERNATIVES ANALYSIS

(A) ROUTE SELECTION STUDY

The applicant shall conduct a site and route selection study prior to submitting an application for an electric power transmission line or gas pipeline, and associated facilities. The study shall be designed to evaluate all practicable sites, routes, and route segments for the proposed facility within the study area.

A multi-disciplinary Siting Team, composed of AES Ohio employees, Arcadis U.S., Inc. (Arcadis) employees, and other consultants representing AES Ohio, conducted a comprehensive RSS to determine a Preferred and Alternate Route for the Project. The Siting Team gathered publicly available environmental, cultural, land use, socioeconomic, and technical constraints, and opportunity data in a geographic information system (GIS). Constraints and opportunity data were used to define a Study Area between Project start and end points. Using AES Ohio siting guidelines (see Section 1.3 of Attachment 4-1), the Siting Team developed Conceptual Routes within the Study Area that minimized siting impacts. Field reconnaissance was conducted from public roads and access points, where possible, to confirm aerial imagery and GIS data. Route networks were continually updated throughout the siting process as new information became available.

The Siting Team evaluated qualitative and quantitative research-based siting criteria; public and stakeholder input; calculation results from cultural, environmental, and engineering; and additional subject matter experts input on the Study Area and Route Network. Based on the review, unfavorable Route Segments were eliminated from further evaluation and consideration. The Siting Team evaluated the Route Segments in more detail, selecting Route Segments to present at the first public meeting for comment. The Siting Team reviewed and considered feedback received at the first public meeting, then presented a further refined Route Segment Network at a second public meeting for comment. Following the second public meeting, the Siting Team considered stakeholder and public input and utilized the results of the RSS to determine a Preferred and Alternate Route.

(1) Study Area Description and Rationale

The applicant shall provide a description of the study area, or the geographic boundaries of the area considered for development of the project, including the rationale for the selection.

The Study Area is the region that encompasses the Project start and end points, allowing for route components to be sited that meet the feasibility needs of the Project, while simultaneously minimizing impacts to the human and natural environment, as well as Project overall costs. The boundaries of the Study Area were defined by the geographic region of the existing West Manchester and New Westville Substations, and the proposed Blazer and Darke REC Substations, with an additional need to connect into a 138 kV transmission line operated by AEP at the POI located on the Indiana and Ohio state line boundary.

Given these considerations, the Siting Team identified a Study Area encompassing approximately 24,320 acres (38 square miles). The Study Area is located in Monroe, Washington, Jackson, and Jefferson Townships in Preble County, Ohio near West Manchester, Ohio on the northern end; near Lewisburg, Ohio on the eastern end; and near Richmond, Indiana, on the western end, as shown on Map 4-1. The Study Area is primarily occupied by agricultural land interspersed with rural residences, commercial and

industrial development, and woodlots. Existing development is primarily located along major travel corridors and includes the Ohio Welcome Center, National Trail Middle and High Schools, two Travel Centers, various commercial and business facilities, rural residences, and farmsteads. Major travel corridors include I-70 (which bisects the Study Area in an west-east direction), U.S. Route 40 (which bisects the northern portion of the Study Area in a southwest to northeast direction), U.S. Route 35 (which bisects the western part of the Study Area in a northwest to southeast direction), and U.S. Route 127 (which bisects the eastern portion of the Study Area in a north to south direction.

(2) Study Area Map

The applicant shall provide a map of suitable scale that depicts the boundary of the study area and all siting constraints and/or suitability analysis utilized for the study.

Map 4-1 illustrates the approximate Study Area boundary of the Project. Map series 7-1 depicts land use and siting constraints utilized for the RSS.

(3) Map of Study Area and Routes Evaluated

The applicant shall provide a map of suitable scale that depicts the boundary of the study area and the routes, route segments, and sites which were evaluated.

Map 4-2 illustrates the Study Area, Preferred Route, and Alternate Route, as well as Route Segments evaluated. Further detailed maps on the Route Segments can be found in the RSS (Attachment 4-1).

(4) Siting Criteria

The applicant shall provide a comprehensive list and description of all qualitative and quantitative siting criteria utilized by the applicant, including any weighting values assigned to each.

The Siting Team referenced quantitative and qualitative siting criteria as part of the Route Segment and Route Alternative analysis process. The Siting Team used the siting criteria, as well as the established routing guidelines listed and described in Section 1.3 of the RSS Report (Attachment 4-1). The quantitative siting criteria consisted of constraint and opportunity data, including, but not limited to, locations of individual residences, property boundaries, institutional land uses, cultural resources, forested lands, wetlands, perennial streams, existing ROW, roads, and other land use features.

The qualitative criteria considered by the Siting Team in the analysis of Route Segments and Alternative Routes included engineering and technical factors that affect constructability, cost, and utilizing existing AES Ohio-owned 33 kV and 69 kV linear transmission infrastructure by either rebuilding and upgrading circuits in place or paralleling to reduce impacts to undeveloped land. Feedback from property owners and stakeholders received during both open houses and early ROW discussions were also considered. Quantitative and quantitative criteria are listed below in Tables 4-1 and 4-2. Also, further evaluation of Route Segments can be found in Section 3 of the RSS Report (Attachment 4-1).

Table 4-1. Quantitative Siting Criteria

Siting Criteria	Source	Description
Built Environment		
Number of parcels and landowners crossed or bisected by the ROW	Preble County (2022)	Count of the number of parcels and landowners crossed or bisected by the ROW.
Number of outbuildings, barns, silos, (excluding abandoned features) Number of residential dwellings (single-family and multi-family), commercial/industrial buildings, and institutional buildings	Microsoft "US Building Footprints" downloaded 2022 and field-verified from points of public access.	Count of the number of features within the ROW, within 100 and 500 feet of routes. Features within 1,000 feet of Study Segments were field-verified.
Land use acreage and distance crossed by the ROW	National Land Cover Database (NLCD) (2016)	The NLCD 2016 compiled by the Multi-Resolution Land Characteristics Consortium includes 15 classes of land cover from Landsat satellite imagery.
Acres of conservation easements crossed	National Conservation Easement Database (NCED) (2022)	Private conservation easements crossed by the ROW from the NCED, which is comprised of voluntarily reported conservation easement information from land trusts and public agencies.
Acres of agricultural land crossed	NLCD (2022), U.S. Department of Agriculture (USDA) National Agricultural Statistics Service Cropland Data Layer (2022), and USDA Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) Soil Data Farmland of Statewide Importance (USDA 2022)	Acres of agricultural land crossed by the ROW.
Number of Cultural Resources (Archaeological, Historical, and Cemeteries)	Ohio History Connection (2022)	Previously identified archeological resources listed or eligible on the National Register of Historic Places (NRHP) and previously identified historical architectural resource sites and districts listed or eligible on the NRHP acquired through the database maintained by the Ohio History Connection, which serves as the State Historic Preservation Office. Cultural resources within the ROW, within 100 and 1,000 feet of the centerline, and features within 1 mile.
Institutional uses (schools, places of worship and cemeteries) within 1,000 feet of the route centerline	U.S. Geological Survey (USGS) Geographic Names Information System (GNIS) (2022)	This dataset includes the locations of cemeteries, place of worship, hospitals, parks, and schools. Features within 1,000 feet of Study Segments were field-verified.

Siting Criteria	Source	Description
Airfield and heliports within 1 mile of the route centerline	GNIS (2022) and the Federal Aviation Administration (FAA) database (2022)	Distance from airfields and heliports.
Natural Environment		
Forest clearing within the ROW	Forest clearing (digitized based on aerial imagery)	Acres of trees within the ROW.
Wetlands, Stream, and Waterbodies within the ROW	USGS National Hydrography Dataset (NHD) National Wetlands Inventory (NWI)	Waterbodies, ponds, palustrine forested (PFO) wetlands, palustrine scrub/shrub (PSS) wetlands, palustrine emergent (PEM) wetlands, rivers, and streams within the ROW. Additionally, river/stream/waterbody paralleled by the ROW and streams crossed by the centerline.
Acres of 100-year floodplain and regulatory floodway within the ROW	National Flood Hazard Layer (Federal Emergency Management Agency [FEMA]) (2022)	Acres of FEMA-designated 100-year floodplain (Zone A) and regulatory floodway (Zone AE) within the ROW.
Miles of public lands crossed by the route	The Protected Areas Database of the United States (2022)	Miles of federal, state, and local lands crossed by the ROW.
Count and total acreage of prime farmland soils and soils of statewide importance within the ROW	USDA-NRCS SSURGO Database (2022)	Count and total acreage of soil associations crossed by the ROW characterized as prime farmland or farmland of statewide importance.
Technical		
Route length	Measured in GIS	Length of route in miles.
Number and severity of angled structures	Developed in GIS	Anticipated number of angled structures 10 to 20 degrees and more than 20 degrees based on preliminary design.
Number of road crossings	Ohio Department of Transportation (ODOT) Transportation Information Mapping System (TIMS) (2022)	Count of federal, state, and local roadway crossings.
Number of railroad crossings	U.S. Department of Transportation Federal Railroad Administration (2022)	Count of railroad crossings.
Number of pipeline crossings	U.S. Department of Transportation National Pipeline Mapping System (NPMS) (2022)	Number of known pipelines crossed by the transmission ROW.
Number of transmission line crossings	AES Ohio (2022)	Number of 33 kV or greater transmission lines crossed by the ROW.
Length of slope crossed by centerline	USGS Digital Elevation Models (DEMs)	Anticipated feet of slope 10 to 20 degrees and more than 20 degrees that the centerline crosses based on preliminary design.

Siting Criteria	Source	Description
Length of transmission line parallel	AES Ohio (2022)	Miles of the route parallel to existing high voltage transmission lines.
Length of pipeline parallel	NPMS 2022	Miles of the route parallel to existing pipelines.
Length of road parallel	ODOT TIMS (2022)	Miles of the route parallel to existing roads.

Table 4-2. Qualitative Siting Criteria

Siting Criteria	Source	Description
Built Environment		
Aesthetic impacts	Siting Team	Anticipated visual impacts based on topography, structure type and height, tree clearing, land use, and presence of existing infrastructure.
Land use impacts	Siting Team, comprehensive plans, public open house	Anticipated or perceived impact on communities and their values, individual residences, commercial facilities, or institutional uses.
Public comments	Public open house	Comments received during the October 26, 2022 in-person open house meeting regarding route segment locations, general questions, general information about the natural and built environment, and September 20, 2023 in-person open house meeting regarding changes to transmission alignments or future constraints.
Engineering and construction feasibility	Siting Team	Anticipated engineering and construction challenges based on experience on similar projects.

(5) Siting Process for the Preferred Route and Alternate Route

The applicant shall provide a description of the process by which the applicant utilized the siting criteria to determine the preferred and alternate routes and sites.

The routing process is described in detail in Section 2 of the RSS Report (Attachment 4-1). Upon the identification of the Study Area, publicly available data sources (e.g., hydrography features, wetlands, floodplains, forests, protected species, parcels, building footprints, land cover, cultural resources, cemeteries, institutions, publicly owned and managed areas, utility locations, roadways, topography) and aerial imagery were collected, organized, and mapped utilizing a GIS program.

Constraints and opportunities data within the Study Area were reviewed by the Siting Team to help identify corridors that were advantageous for siting a transmission line. Within these corridors, the Siting Team developed an array of Conceptual Routes from end point to end point considering the established siting criteria and constraints and opportunities outlined in the RSS Report Section 1. Conceptual Routes

were developed at a high level, typically following linear corridors that utilize opportunities and avoid major constraints. The Siting Team conducted a detailed field reconnaissance of the Conceptual Routes on June 15, 2022, to verify constraints, opportunities, and accuracy of data compiled in the project GIS. Concurrently, the Siting Team was conducting local stakeholder outreach for input on planned or future developments, capital improvement projects, and identification of local sensitive resources in the Study Area. State and federal agencies were also consulted regarding environmental and cultural resources and threatened and endangered species. Following field reconnaissance and stakeholder outreach, Conceptual Routes were refined or eliminated based on feasibility to meet the Project need, impacts to resources, and recommendations of the Siting Team. The remaining Conceptual Routes served as the basis for Route Segment creation.

The Project Team used the siting guidelines defined in the RSS Report Section 1.3 and field reconnaissance observations to place Route Segments that minimize impacts to existing resources. Route Segments were then split where they shared a common point or intersection with another Route Segment. Route Segment development considered structure placement and offsets from existing features. The development of the Route Segment Network is a highly iterative process, refinement or elimination occur as new data or information is received by the Siting Team. A total of 140 Route Segments were identified through this process, consisting of a mixture or roadside or cross-country alignments. Before the first public information meeting, the Siting Team completed a detailed field reconnaissance of the Route Segment Network on July 27, 2022, to verify constraints and opportunities along the Route Segment Network. The Route Segment network was presented to the public at the first public informational meeting on October 26, 2022, at National Trail High School.

After the first public informational meeting was completed, a qualitative and quantitative review of the Route Segment Network occurred to eliminate or modify Route Segments that were not considered favorable for the Project. Public and stakeholder feedback from the first public informational meeting was also considered when making eliminations or modifications to the Route Segment Network. Route Segments were also eliminated due to parcel bisection, bisection of continuous land use, encroachment of residential dwellings, and impacts to existing resources. This process narrowed down the Route Segment Network, which enabled the Siting Team to focus on refining Route Segments that were preferable to establish Route Alternatives.

The Siting Team then presented a further refined Route Segment Network at a second public informational meeting to gain additional feedback. Following the second public informational meeting, the Siting Team reviewed all comments received from stakeholders and public outreach and completed a qualitative and quantitative review of the Route Alternatives to select a Preferred and Alternate Route. To help the Siting Team differentiate and comprehend impacts between Route Alternatives, the Project was split into four components: Hodgin to Blazer, Blazer to Darke REC, Darke REC to the Lewisburg Tap on Circuit 6656, and the Lewisburg Tap to West Manchester.

(6) Route Descriptions and Rationale for Selection

The applicant shall provide a description of the routes and sites selected for evaluation, and the factors and rationale used by the applicant for selecting the preferred and alternate routes and sites.

The Preferred Route is approximately 18.2 miles in length, upgrades an existing AES Ohio 69 kV transmission line for approximately 5.3 miles, and parallels highways and local roads for approximately

9.0 miles. The Alternate Route is approximately 19.1 miles in length, upgrades an existing AES Ohio 33 kV transmission line for approximately 0.4 mile, and parallels highways and local roads for approximately 10.3 miles. The Preferred and Alternate Routes are described by each RSS component below.

West Manchester Substation to Lewisburg Tap (Attachment 4-1 RSS Component 4)

Beginning at the AES Ohio West Manchester Substation, the Preferred Route rebuilds AES Ohio's existing Circuit 6656 69 kV centerline for approximately 5.3 miles to the existing Lewisburg Tap structure near I-70. The Preferred Route utilizes portions of AES Ohio's existing Circuit 6656 ROW, which will need to be expanded from approximately 50 feet to 75 feet when cross-country and expanded to 30 feet when paralleling local roads. The Preferred Route minimizes the amount of tree clearing and new ROW to be acquired when compared to the Alternate Route.

The Alternate Route follows a similar path as the Preferred Route but parallels AES Ohio's existing Circuit 6656 69 kV centerline approximately 25 feet offset to the west of the existing centerline. Due to the Alternate Route centerline being offset from the existing route, approximately 10.8 acres of additional new ROW and 0.7 acres of additional tree clearing would be required when compared to the Preferred Route. Both routes predominately cross large agricultural tracts with small pockets of low-density residential areas.

Lewisburg Tap to Proposed Darke REC Substation (Attachment 4-1 RSS Component 3)

Beginning at the Lewisburg Tap, both routes share the same common route for approximately 1.2 miles while paralleling Price Rd, crossing I-70, then paralleling US Highway 127 to Orphans Road. At the intersection of Orphans Road and US Highway 127, both routes turn west and parallel Orphans Road for approximately 3.6 miles to the proposed distribution Darke REC Substation. The local roads paralleled by both routes for this component mostly consist of large agricultural tracts with small pockets of low-density residential areas.

Along Orphans Road, the Preferred Route parallels the south side of Orphans Road for most of its length, except for one area west of the intersection of US Route 127 and Scheying Road. In this area, the Preferred Route shifts to the north side of Orphans Rd to minimize impacts to three residences in close proximity on the south side of Orphans Road.

From US Route 127 heading west to Monroe Central Road, the Alternate Route follows the path of the Preferred Route except for a 0.5-mile section where it parallels the north side of Orphans Road. At the crossing of Monroe Central Road and heading west to the proposed distribution Darke REC Substation, the Alternate Route parallels the North side of Orphans Road, except for two locations where the route shifts to the south side to maximize distance to two residences in close proximity of the north side of Orphans Road.

Within this component, the Preferred Route has fewer turn angles, requires less tree clearing, and received more favorable feedback during landowner discussions than the Alternate Route.

Proposed Darke REC Substation to proposed Blazer Substation (Attachment 4-1 RSS Component 2)

Beginning at the proposed distribution Darke REC Substation, the Preferred Route parallels agricultural parcel boundaries and Pence Shewman Road for 0.6 miles before turning west to parallel the south side of I-70 across mostly agricultural land for 4.5 miles. The route then turns south, paralleling US Highway 35 for 0.1 miles before turning west to cross US Highway 35. After crossing US Highway 35, the route crosses agricultural land for 0.4 miles before entering the proposed Blazer Substation.

Beginning at the proposed distribution Darke REC Substation, the Alternate Route parallels agricultural parcel boundaries and Pence Shewman Road for approximately 0.3 miles before turning west to parallel Orphans Road for 1.3 miles. The route then turns south to parallel the west side of Oxford Gettysburg Road for 1.8 miles. At the intersection of Oxford Gettysburg Road and Murray Road, the route turns west and parallels the north side of Murray Road for 2.0 miles. The route then crosses a 0.7-mile stretch of cross-country agricultural and wooded land before crossing US Highway 35. The route then parallels the south side of US Highway 35 and would involve upgrading 0.4 miles of an existing AES Ohio 33 kV single-circuit transmission line. At Wolverton Road, the route exits the existing 33 kV transmission line ROW, turns north, and parallels the west side of US Highway 35 for 0.5 miles before turning west to cross agricultural land for 0.5 miles and entering the proposed Blazer Substation. The local roads paralleled by the Alternate Route mostly consist of large agricultural tracts with small pockets of low-density residential areas.

When comparing the Preferred and Alternate Routes within this component, the Preferred route is shorter, crosses significantly less parcels and landowners, better maximizes distance from residences, minimizes parcel bisection and impacts to active agricultural operations by paralleling existing infrastructure, has significantly fewer turn angles, has less impacts to floodplains, and received favorable feedback when compared to the Alternate Route during discussions with landowners.

Proposed Blazer Substation to the POI at the State Line (Attachment 4-1 RSS Component 1)

Starting at the proposed Blazer Substation, the Preferred and Alternate Routes share the route as they exit the substation heading south paralleling parcel boundaries and crossing agricultural land for 0.6 miles. At this point, the Preferred Route turns west crossing agricultural land and paralleling parcel boundaries, woodlots, and Paint Road for a total of 1.4 miles, while the Alternate Route turns south then west crossing agricultural land and paralleling parcel boundaries and Paint Road for a total of 1.6 miles. At the intersection of Paint and Cox Roads, both routes are in common as head west along the south side of Cox Road across wooded and agricultural land before terminating at the POI along the Ohio/Indiana state line.

Due to the predominately agricultural nature of the Study Area and short overall length of the component, impacts to natural resources, non-agricultural land use, social and cultural resources, and engineering and technical factors were low and not significantly different between the Preferred and Alternate Routes. Given this, the Siting Team considered impacted landowner input to avoid continuous land ownership bisection and minimize impacts to agricultural operations a key driver in the rationale to select the Preferred Route over the Alternate Route.

Description of the Route Alternative Evaluation

Section 3 of the RSS Report (Attachment 4-1) provides a quantitative and qualitative analysis of potential impacts to the natural and built environment, as well as potential engineering and constructability challenges. The Route Alternatives were reviewed in detail and compared using a combination of information collected in the field, GIS data sources, public input, supporting documents, and the collective knowledge and experience of the Siting Team.

Based on the results of the RSS and input from stakeholders and the public, AES Ohio identified a Preferred and Alternate Route (Map 2-1). The Preferred and Alternate Routes are both constructible and were selected by AES Ohio for consideration by the OPSB in this application. Per Ohio Administrative Code ("OAC") 4906-3-05, the Preferred and Alternate Route cannot be more than 20% in common to be considered as alternatives. The Preferred and Alternate Routes are approximately 19% in common.

When compared to the Alternate Route, the Preferred Route is shorter in length, has fewer turn angles, requires less new ROW to be acquired, crosses fewer landowners and parcels, and is farther away from residences within all distances evaluated. Overall, both the Preferred and Alternate Routes have minimal impacts to natural and cultural resources and do not pose constructability concerns due to the mostly flat terrain and predominately agricultural land use of the study area. The Preferred Route also received more favorable input during stakeholder, public outreach efforts, and discussions with individual landowners. AES Ohio believes the Preferred Route is the route that best: (1) aligns with AES Ohio siting guidelines (see Section 1.3 of Attachment 4-1); (2) minimizes adverse impacts to the human and natural environment to the extent practical; (3) aligns with AES Ohio constraints and opportunities guidelines (see Section 2.2 of Attachment 4-1); and (4) permits the proposed transmission line to be constructed and operated in a timely, safe, and reliable manner.

(B) SUMMARY TABLE

The applicant shall provide a summary table comparing the routes, route segments, and sites, utilizing the technical, financial, environmental, socioeconomic, and other factors identified in the study. Design and equipment alternatives shall be included where the use of such alternatives influenced the siting decision.

Table 4-3 below, as well as Tables 2 through 5 of the RSS Report (Attachment 4-1), provide a comparison of the Route Alternatives.

Table 4-3. Summary of Route Selection Factors

Factor	Preferred Route	Alternate Route
Route Characteristics		
Route Length (Miles)	18.2	19.1
Turn angles 10-20 degrees (Count)	1	4
Turn Angles >20 degrees (Count)	29	44
ROW area (Acres)	147.33	141.58
New ROW required (Acres)	116.08	121.04
Natural Resources		
Emergent (PEM, PSS) wetlands within ROW (Acres)	0.01	0.03

Factor	Preferred Route	Alternate Route
Forested (PFO) wetlands within ROW (Acres)	0.00	0.01
Total streams crossed by centerline (Count)	9	10
Wildlife and Habitat		
Tree clearing required in the ROW (digitized based on aerial photography) (Acres)	9.07	7.85
Karst topography within ROW (Acres)	147.33	141.58
Land Use Resources		
Parcels crossed by ROW (Count)	127	154
Landowners crossed by ROW (Count)	90	112
Parcels bisected by centerline (Miles)	1.2	0.6
Barns, outbuildings, sheds, garages, or silos in the ROW (Count)	1	0
Residences/single family dwellings within 100 feet of centerline (Count)	12	12
Residences/single family dwellings within 500 feet of centerline (Count)	38	49
Residences/single-family dwellings within 1,000 feet if centerline (Count)	81	101
Business/Commercial Buildings within 500 feet of centerline (Count)	4	4
Business/Commercial buildings within 1,000 feet of centerline (Count)	5	5
Developed or residential land within ROW (NLCD) (Acres)	30.2	26.1
Pasture/hay within ROW (NLCD) (Acres)	0.3	0.7
Cultivated crops within ROW (NLCD) (Acres)	121.7	141.9
Agricultural district properties crossed (parcel count) (Count)	11	13
Community Facilities		
Designated places of worship within 1,000 feet of centerline (Count)	1	1
Cultural Resources		
Historical structures within 1,000 feet of the centerline (Not NRHP-listed/Eligible) (Count)	1	3
Archaeological sites within 100 feet of ROW (Not NRHP-listed/Eligible) (Count)	4	3
Cemeteries within 100 feet of ROW (Count)	1	1
Historical or scenic byway crossed (Count)	1	1
Constructability		
Interstate highways crossed (Count)	1	1
Interstate highways paralleled (Miles)	3.3	0.2
U.S. highways crossed (Count)	3	3
U.S. highways paralleled (Miles)	0.4	1.1
State routes/highways crossed (Count)	2	3

Factor	Preferred Route	Alternate Route
State routes/highways paralleled (Miles)	0.0	0.1
Local roads and streets crossed (Count)	16	20
Local roads and streets paralleled (Miles)	5.3	8.9
Railroads crossed (Count)	0	0
Railroads paralleled (Miles)	0.0	0.0
Oil/Gas Pipelines Crossed (Count)	1	1
Existing 33 kV transmission lines crossed (Count)	1	1
Existing 69 kV transmission lines rebuilt (Miles)	5.3	0.0
Existing 33 kV transmission rebuilt (Miles)	0.0	0.4
Existing distribution lines paralleled or underbuilt (Miles)	3.4	6.1
Communication towers within 1,000 feet of centerline (Count)	6	3
Slopes 10-20% crossed by centerline (Feet)	2,894	2,882
Slopes >20% crossed by centerline (Feet)	726	402
100-year Floodzone crossed by ROW (Acres)	2.5	3.3
FAA airport within 20,000 feet. Airport must have at least one runway >3,200 feet. (Count)	1	1

Note:
The following criteria were considered but not anticipated to be impacted: railroads, or rivers crossed by centerline; rivers, streams, waterbodies, or historical scenic byways paralleled by the ROW; federally listed or state listed threatened and endangered species and species of special concern within 1,000 feet of centerline; multi-family dwellings, schools, hospitals, or daycare facilities within 1,000 feet of centerline; NRHP or state-listed and eligible architectural resources, National Historic Landmarks, NRHP Historic Districts, or privately owned airports within 1mile of centerline; parks, recreational, and other natural areas within 1,000 feet of ROW; railroads, oil pipelines, or gas pipelines paralleled; springs or oil/gas wells within 250 feet of centerline; NRHP -listed and eligible archaeological sites within 100 feet of the ROW; forested wetlands, waterbodies, ponds, caves, sinkholes, barns, outbuildings, sheds, garages, residences, mines, quarries, agricultural easements, specialty agriculture, pasture/hay land (NLCD), federal-owned lands, state-owned lands, local or municipal owned lands, parks, recreational areas, natural areas, FEMA floodway within the ROW; and heliports within 5,000 feet or centerline.

(C) PUBLIC INVOLVEMENT

The applicant shall describe all public involvement that was undertaken in the site/route selection process. The applicant shall provide a description of how many and what types of comments were received.

AES Ohio's public information program informs affected property owners and tenants through a variety of methods complying with OAC 4906-3-03, including public communications, a public Project website, two in-person Public Informational Meetings (PIMs), and ROW discussions with potentially affected landowners to discuss the proposed route corridor, structure locations, and construction and restoration activities. During the public outreach and siting phase, the Project name "New Westville Area Improvements Project" was used in conjunction with the PUCO case name. Further details can be found in Section 2.8 of the RSS Report (Attachment 4-1).

In advance of the PIMs, AES Ohio developed a website (www.aes-ohio.com/westville) that provides information about the Project to the public. The website contains information related to engineering and design of the structures, the Project need, real estate and ROW issues, the siting process, Project schedule, and a Project map. The Project map and website are updated at regular intervals to reflect Project progress through the siting process. The website was developed to allow the public to easily interact with the Project Team via Project email, Project hotline, or the interactive Project web map.

Both PIMs included stations and information related to engineering and design, transmission line planning, real estate and ROW, environmental and vegetation management, and the siting process. In addition, an interactive GIS-based map, paper maps, and comment cards were provided to inform landowners of proposed route segment locations and capture landowner comments and feedback. Comments received at the PIMs were catalogued and categorized based on topic for consideration by the Siting Team. Several commenters provided general information from their knowledge base to aid the Siting Team in decision making and design elements, such as the location of potential wetlands and drainage tiles, terrain, historical nature of properties, and other conditions. Participants also asked general questions of the Siting Team to understand the overall project scope, requirements, and elements more clearly.

The first PIM was held on Wednesday, October 26, 2022, at the National Trail High School in New Paris, Ohio. Impacted and adjacent landowners located along proposed route segments were invited, and 60 landowners and community stakeholders attended the event. During the event, AES Ohio received 19 public comments, mostly related to parcel bisection and minor transmission structure shifts to improve access for agricultural equipment. In addition, 30 comments were received via email/phone/Project hotline/Project web application. Most comments received were related to landowner preference of chosen routes and preferences regarding placement of structures in proximity to their residences and impacts on farming operations. The types of comments included 17 general questions or comments, 12 comments providing general information to the Siting Team, and 20 comments related to the route location during the first PIM.

The second PIM was held on Wednesday, September 20, 2023, at the National Trail High School in New Paris, Ohio. Impacted and adjacent landowners located along proposed route segments were invited, and 56 landowners and community stakeholders attended the event. During the event, AES Ohio received 13 public comments and four additional comments were received via email/phone/Project hotline/Project web application. Most comments received were related to landowner preference of chosen routes and preferences regarding placement of structures in proximity to their residences and impacts on farming operations. The types of comments included eight general questions or comments, one comment providing general information to the Siting Team, and eight comments related to the route location during the second public informational meeting. Further details can be found in Section 2.8.4 of the RSS Report (Attachment 4-1).

4906 5 05 PROJECT DESCRIPTION

(A) PROJECT AREA DESCRIPTION

The applicant shall provide a description of the project area's geography, topography, population centers, major industries, and landmarks.

The following section provides a description of the Project area's geography, topography, populated areas, major industry, and landmarks.

(1) Project Area Map

The applicant shall provide a map of not less than at least 1:24,000 scale, including the area one thousand feet on each side of a transmission line or pipeline alignment, and the area within one thousand feet of a substation site or compressor station site, which shall include the following features:

a) **Proposed transmission line alignments**
b) **Proposed substation locations**
c) **Major highways and railroad routes**
d) **Publicly identified and owned institutions, parks, and recreational areas**
e) **Existing utility corridors, lakes, ponds, reservoirs, streams, canals, and rivers**
f) **Population centers and legal boundaries.**

Map series 5-1 show the Preferred and Alternate Routes for the Project at a 1:12,000 scale, including a 1,000-foot buffer on each side of the proposed transmission centerlines. These maps depict the proposed transmission line, proposed distribution substations, major highways and railroad routes, parks or other publicly owned recreational areas, existing utility corridors, waterways and waterbodies, and population centers and legal boundaries of cities, villages, townships, and counties. The information displayed on the maps were updated based on field reconnaissance completed in 2022 and 2023, most recently available aerial imagery, georeferenced photography, and property parcel data from the Preble County Auditor. The aerial imagery was derived from ESRI ArcGIS online and are georeferenced, orthocorrected color images. A description of mapped features is included below.

Major roadways in the Study Area include I-70, U.S. Route 40, U.S. Route 35, and U.S. Route 127. One existing Norfolk Southern railroad is located in the extreme southwest portion of the Study Area. There are no federally owned lands, state-owned lands, local municipal-owned lands, parks, or recreational lands within 1,000 feet of the Preferred and Alternate Routes. Existing linear infrastructure within the Study Area consists of an existing AES Ohio-owned 33 kV transmission line primarily constructed in the 1930s, 69 kV transmission lines east of State Highway 127, and one existing gas pipeline (Vectren Energy Delivery of Ohio). Mapped FEMA 100-year flood hazard areas are associated with Elkhorn Creek, Sevenmile Creek, Bantas Fork, Goose Creek, Lowry Run, and other unnamed waterways and tributaries interspersed throughout the Study Area. Legal boundaries within 1,000 feet of the Preferred and Alternate Routes include Monroe, Washington, Jackson, and Jefferson Townships; the village of West Manchester; and the unincorporated community of New Westville in Preble County, Ohio. Additionally, Wayne Township and the City of Richmond in Wayne County, Indiana are within 1,000 feet of the Preferred and Alternate Routes.

(2) Proposed Right-of-Way, Transmission Length, and Properties Crossed

The applicant shall provide the area, in acres, of the proposed right-of-way for the facility, the length of the transmission line or pipeline, in miles, and the number of properties crossed by the facility.

The Project will require a 75-foot-wide permanent ROW for new cross-country routes and routes paralleling I-70, but where parallel to roadways, only a 30-foot-wide permanent ROW will be required. Table 5-1 below provides information about the Preferred and Alternate Routes ROW acreage, length, and properties crossed based on the proposed centerline.

Table 5-1. Right-of-Way Area, Length, and Number of Properties Crossed

	Route Alternatives	
	Preferred	**Alternate**
Proposed ROW area (in acres)[1]	135.95	118.12
Length (in miles)	18.23	19.02
Number of Properties Crossed (by ROW)[2]	110	111

Notes:
[1] Excludes acreage of off-ROW access roads, which are temporary and only to be used during construction.
[2] This value represents the number of parcels crossed, not the number of landowners crossed, which may own one or more parcels.

(B) ROUTE OR SITE ALTERNATIVE FACILITY LAYOUT AND INSTALLATION

The applicant shall provide information on the facility layout for each route/site alternative, and a description of the installation methods as detailed in this rule.

The following section provides information on the facility layout for each route alternative and a description of the facility installation methods.

(1) Proposed Clearing, Construction Methods, and Reclamation Operations

The applicant shall describe the proposed site clearing, construction methods, and reclamation operations, including:

(a) Surveying and Soil Testing

The selected transmission line route will be civil surveyed to establish the centerline, ROW, and structure locations. The surveying will be completed using conventional and/or aerial methods (e.g., light detection and ranging). The location of significant topographic features and manmade structures along or near the centerline of the transmission line that may affect the design will be identified during the civil survey. Minimal clearing of small trees and brush may be required if the civil surveyor's line of sight is obstructed. Offsets will be used to survey around large trees and other large obstructions as allowable. Profile measurements of the topography will be obtained by conventional and/or aerial methods. Structure locations will be staked before final engineering and construction to aid in Project planning. The centerline and ROW will be staked before construction.

Soil testing will only be performed for the transmission line angle structure locations requiring foundations for the new steel pole structures. Ductile iron and galvanized steel (direct embed or concrete foundation) are planned for the entirety of the submitted routes. The types of structures used under various conditions of use and configuration are further described in Section 4905-05(C)(1)(b). Where necessary, soil tests will be performed using a drop hammer to drive a sampler tube for laboratory analysis of the soil. Soil capacity is determined by the number of blows required to drive the tube 12 inches into the ground. Soil samples taken with a split-spoon will be used to determine soil type. Typically, the testing will be performed to a depth of 20 to 50 feet. If rock is encountered, a carbide-tipped bit will be drilled 5 to 10 feet into the rock.

(b) Grading and Excavation

No significant grading is anticipated to construct the transmission line on either route. The existing terrain within the Preferred and Alternate Routes is fairly level, and any significant elevation changes will either be spanned, or additional structures will be utilized to gradually match the change.

Each ductile iron and/or steel pole (structure) installation requires a machine-excavated hole for placement of the structure. The excavation for these structures will average 3 feet in diameter and 9 to 12 feet deep. A portion of the excavated soil will be used for backfill, with the remaining backfill consisting of gravel or concrete. The excess material will be placed around the structure or hauled offsite. Steel poles on a concrete foundation will average 7 to 12 feet in diameter and 30 to 50 feet deep.

(c) Construction of Temporary and Permanent Access Roads and Trenches

Temporary access to the construction areas of the Preferred and Alternate Routes will occur from existing township, county, or state roads adjacent to or crossed by the transmission line ROW. Access roads will require the landowner's input and approval. Note that these access roads are preliminary and cannot be fully planned and identified until after a final route is approved and contacts with affected landowners for transmission line easements has been completed by AES Ohio. Where possible, existing access routes along existing ROWs used by crews during routine transmission line maintenance of existing transmission lines will be utilized to construct the proposed line along the Preferred or Alternate Route. If field conditions necessitate the modification of the finalized access road locations during construction, the concurrence of the property owner will be obtained, necessary environmental field studies will be completed, and necessary permits will be obtained. Proposed temporary access roads to be used during construction of the Preferred or Alternate Route are shown on Map series 5-2. There will be a need for trenching between the two motor-operated 138 kV transmission switches to install a 4-inch conduit. Upon completion of the final design, AES Ohio will provide final locations of trenches in the SWPPP. This conduit will house underground #2 copper for power and fiber optic cable for communications between motor operators.

(d) Stringing of Cable

Conductor installation for the proposed line will be accomplished using the tension stringing method. Lightweight guy cables or ropes will be fed through the stringing sheaves of the sections of line that require stringing. Conductors will then be pulled through under sufficient tension to keep the conductor "in the air". This protects the conductor from surface damage.

Temporary guard of clearance poles will be used as a safety precaution at locations where the conductors could create a hazard to either crew members or the public. The locations and heights of clearance poles will be such that the conductors are held clear of power and communication lines, vehicular traffic, and other structures. The stringing operation will always be under the observation of crew members. The observers will be in radio and/or visual contact with the operator of the stringing equipment.

(e) Installation of Electric Transmission Line Poles and Structures, Including Foundations

Installation of each pole will require a machine-drilled hole, and where applicable, a reinforced concrete foundation. A portion of the excavated soil may be used for backfill, which would be tamped around the pole in layers. Crushed rock backfill will be predominately used for all direct embedded poles. Topsoil at pole excavations will be stockpiled and protected from erosion. Topsoil will be redistributed over disturbed areas to foster re-vegetation following construction. Restoration, including temporary and permanent seeding, will be coordinated with the construction activities to provide re-vegetation and soil stabilization at the earliest reasonable time. Following construction, pole locations will be seeded with a suitable grass seed mixture, as specified in the Erosion and Sediment Control Plan.

(f) Post-Construction Reclamation

After construction, drainage, fencing, and erosion control aspects of the transmission line ROW will be restored to conditions as good as, or better than, those that existed before construction activities. This includes the restoration of drainage ditches, fencing, field drainage tiles, fertilizing, seeding, and mulching of disturbed non-cultivated areas, and the removal of temporary soil erosion and sedimentation control measures after vegetative cover has been established per the project-specific Stormwater Pollution Prevention Plan (“SWPPP”).

Disturbed areas adjacent to streams and wetlands will be revegetated using methods to minimize soil erosion and degradation of water quality. Where stream banks are disturbed, they will be restored by reseeding of low-growing species, where necessary, to reduce bank erosion. Lawn or garden areas, or paved areas damaged during the construction of the transmission line, will be restored to their original condition. Landscaping or landscape plantings damaged during construction will also be restored to their original condition or replaced as directed by the affected property owner as long as the vegetation does not pose a safety issue to the line or structures. After restoration is complete, AES Ohio will periodically inspect the ROW to identify areas of erosion, sediment accumulation, and inadequate re-vegetation conditions, if any. If such conditions are identified, corrective actions will be implemented.

(2) Facility Layout

The applicant shall provide the layout of facilities.

No new associated transmission substations are proposed for the Project. The new AES Ohio Blazer Substation will include associated 12 kV distribution circuits to serve existing customers. The existing AES Ohio West Manchester Substation will be expanded to accommodate the 138 kV feed.

(a) Provide a map of at least 1:12,000 scale of the transmission line or pipeline routes and associated facilities such as substations, compressor stations, and other stations, showing the following proposed features:

(i) Temporary and permanent access roads, staging areas, and laydown areas.
(ii) Proposed location of major structures, including transmission line poles and structures, and buildings.
(iii) Fenced-in or secured areas.

Map series 5-2 show maps at 1:12,000 scale of the Preferred and Alternate Routes. These maps illustrate the data required by OAC 4906-5-05(A)(1). Although the additional information required by OAC 4906-5-05(B)(2)(a) (e.g., pole structure locations) will not be finalized until a final route is approved by the OPSB and the final engineering design is complete, preliminary locations are provided for the Preferred and Alternate Routes. The data and information defined in OAC 4906-5-05(B)(2)(a) includes temporary access roads and proposed locations for transmission line poles. No buildings or fenced-in or secured areas are planned for the transmission line Project.

To date, no staging or laydown yards have been identified within the Project area. After sites are identified, AES Ohio will provide final locations that support this Project. No fenced-in, secured areas, or buildings are planned for the transmission line Project.

(b) Describe reasons for the proposed layout and any unusual features.

A detailed description of the reasons for the proposed layout (i.e., the Preferred and Alternate Routes) is presented in the RSS Report (Attachment 4-1). There are no unusual features within the Project area beyond the generally undeveloped land use.

(c) Describe plans for any future modifications in the proposed layout, including the nature and approximate timing of contemplated changes.

There are no other plans for future modifications that would impact the proposed layout of the Project. AES Ohio planning engineers generally forecast future transmission projects in a 5-year planning window. AES Ohio currently has no other plans for future modifications that would impact the proposed layout of the Project.

(C) TRANSMISSION EQUIPMENT

The applicant shall provide a description of the proposed transmission lines or pipelines, as well as switching, capacity, metering, safety, and other equipment pertinent to the operation of the proposed electric power transmission lines and gas pipelines and associated facilities. Include any provisions for future expansion.

(1) Electric Transmission Line Data

The applicant shall provide the following information for electric power transmission lines:

(a) Design Voltage

The transmission line will be designed and constructed to operate at 138 kV with a 12.47 kV underbuild for some portions of the line.

(b) Tower designs, pole structures, conductor size and number per phase, and insulator arrangement

Most of the Project will be installed on single ductile iron and/or steel poles dependent on span length, line angle, and/or configuration. Where new structures are installed, they will be designed to support one 138 kV transmission line, except for one double-circuit structure between AES Ohio's existing 6643 and the new 13827 line outside of the West Manchester Substation. Some structures will be designed to also support a 12.47 kV distribution underbuild. Where the route of the transmission line is located adjacent to road ROW, the transmission line poles may be designed to support distribution circuits, either on cross arms or on horizontal post insulators, depending on the voltage of the distribution circuit. Additionally, AES Ohio will coordinate with Darke Rural and local communication utility companies having existing communication cables on or near the planned transmission route for transfer of such cables to the new transmission line pole structures where practicable. A description of proposed structure types is listed below and shown on Figures 5-1 through 5-6.

- For tangent configurations, single ductile or steel pole tangent suspension structures, shown conceptually on Figure 5-1, will be utilized. These typical tangent structures will consist of a single pole with three horizontal braced post insulators to support the transmission conductors on each side of the pole. For structures with a light angle configuration, shown conceptually on Figure 5-2, single ductile iron or steel pole light angle suspension structures, with braced posts or suspension insulators on one side of the structure, will be utilized. This structure will be direct-embed or on a concrete foundation.
- For structures with a heavy angle configuration, shown conceptually on Figure 5-3, single ductile iron or steel heavy angle suspension structure, with three strain/suspension insulators, installed in a pull-off configuration, will be utilized. This structure will be set on a concrete foundation.
- For tangent configurations with long span construction, a single pre-engineered steel pole structure will be utilized. This structure is shown conceptually on Figure 5-4. These typical tangent structures will consist of three braced post insulators to support the transmission conductors in a delta configuration on either side of the pole.
- For dead-end configurations and/or locations where a self-supporting structure is needed, a single pre-engineered steel pole suspension structure with a concrete foundation will be utilized. This structure is shown conceptually on Figure 5-5.
- For the dead-end state line structure, a self-supporting steel structure on concrete foundation will be utilized. This structure is shown conceptually on Figure 5-6

Figure 5-1. Typical 138 kV Tangent Braced Post Structure (Ductile or Steel)

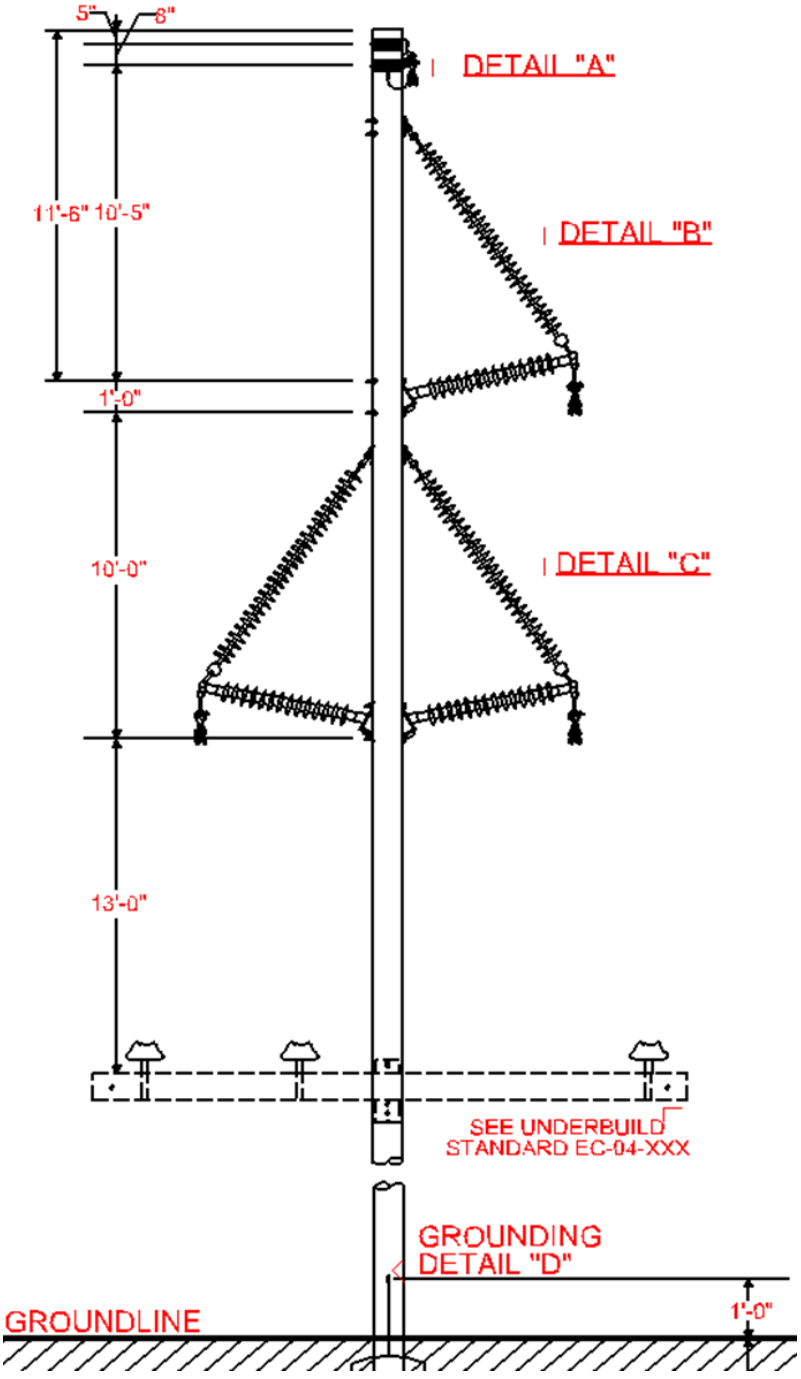


Figure 5-2. Typical 138 kV Light Angle or Roadside Structure (Ductile or Steel)

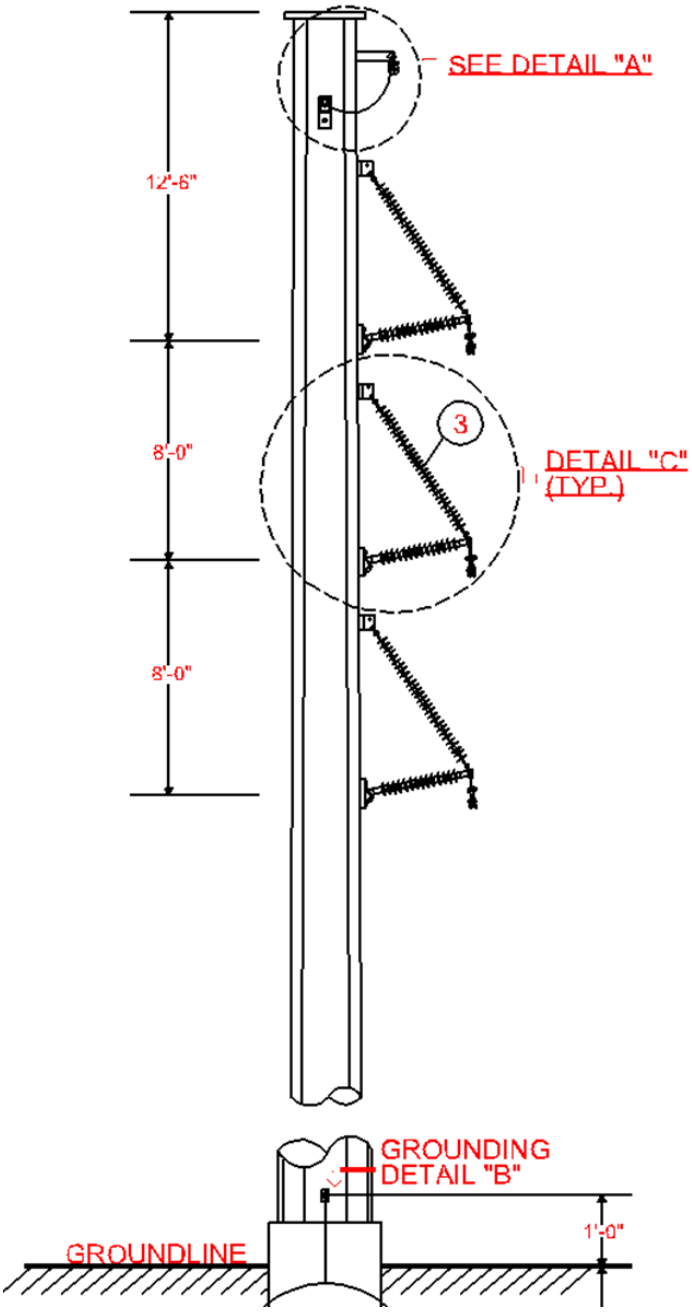


Figure 5-3. Typical 138 kV Self-Supporting Heavy Angle Structure (Steel)

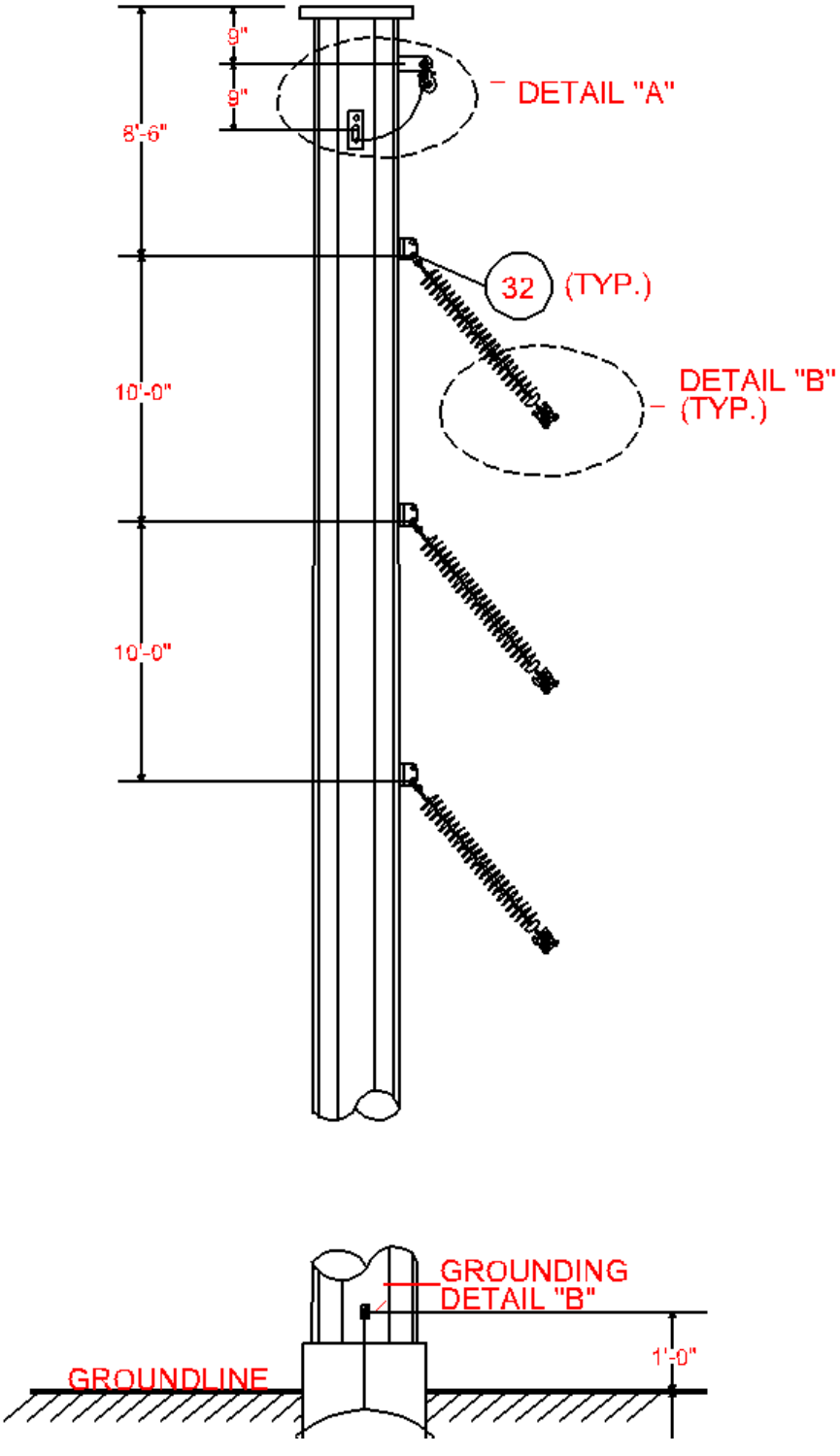


Figure 5-4. Typical 138 kV Long Span Tangent (Steel)

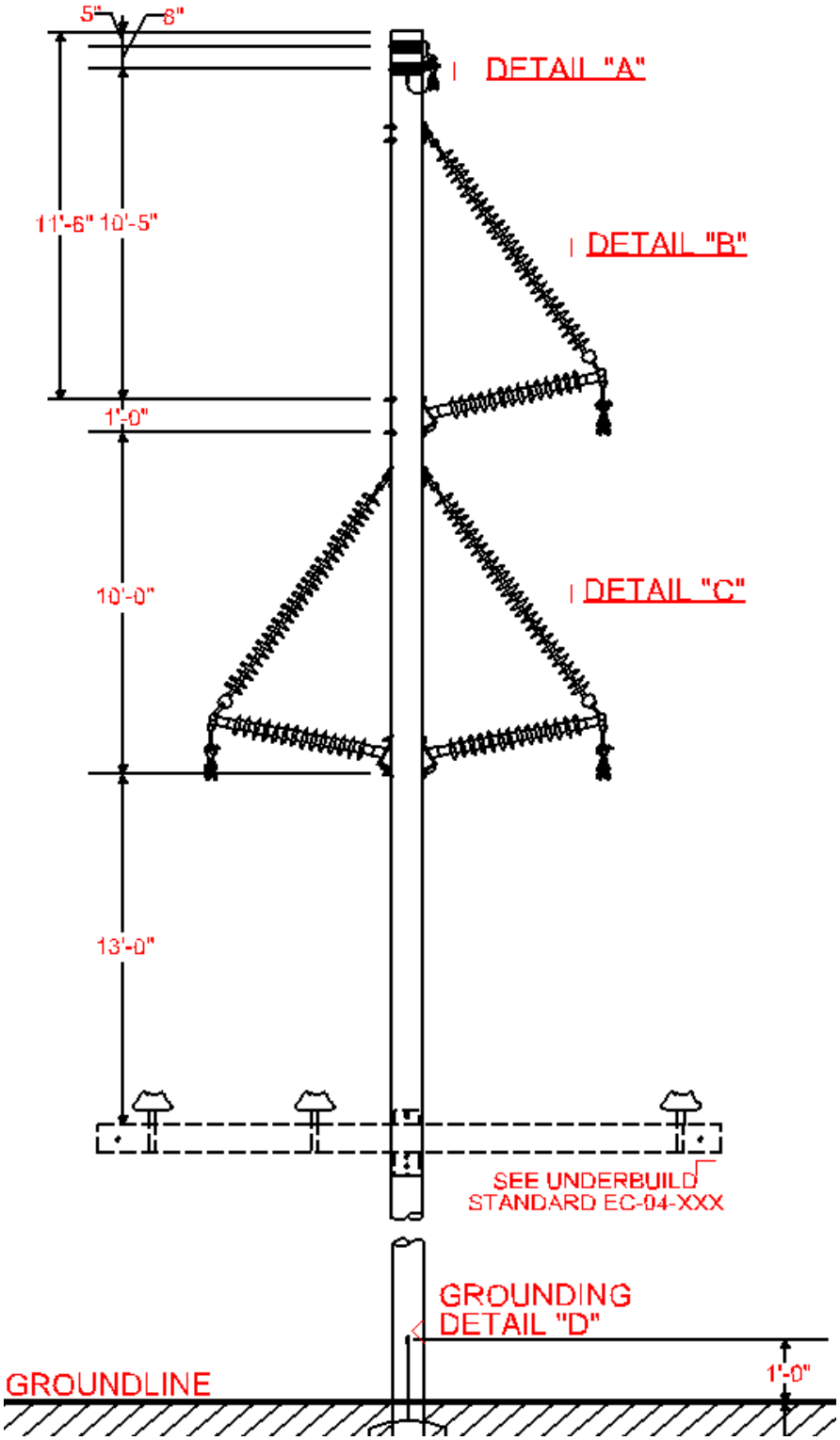


Figure 5-5. Typical 138 kV Self-Supporting Dead-End Structure (Steel)

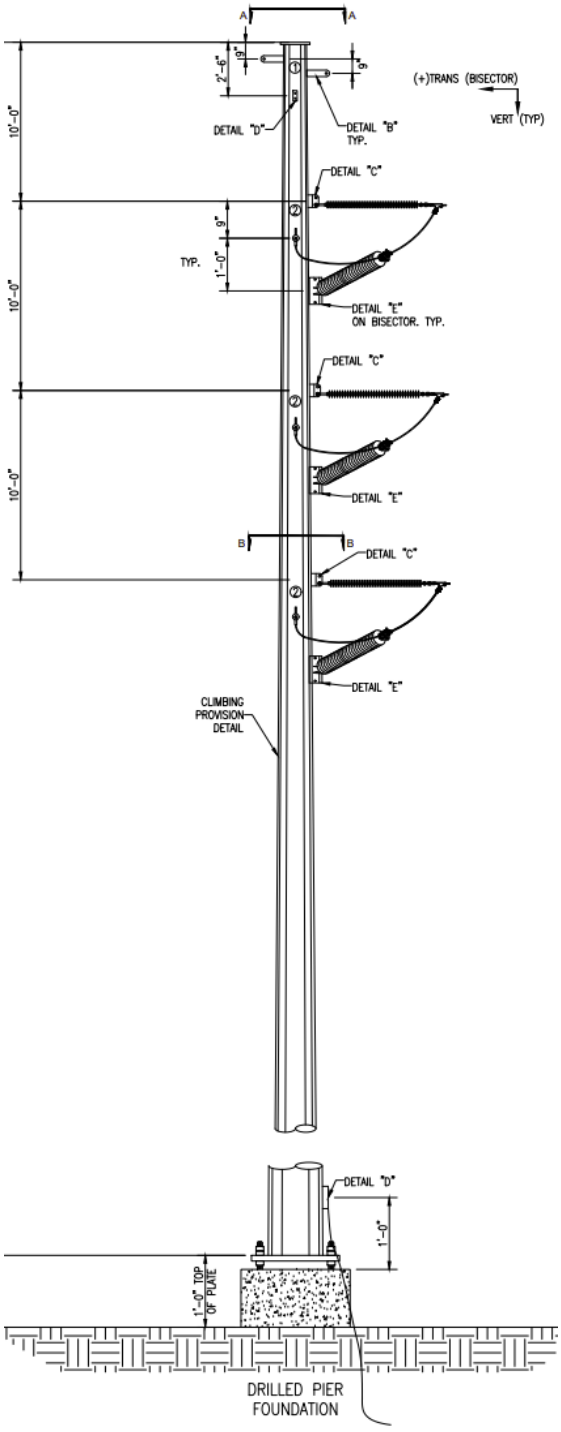
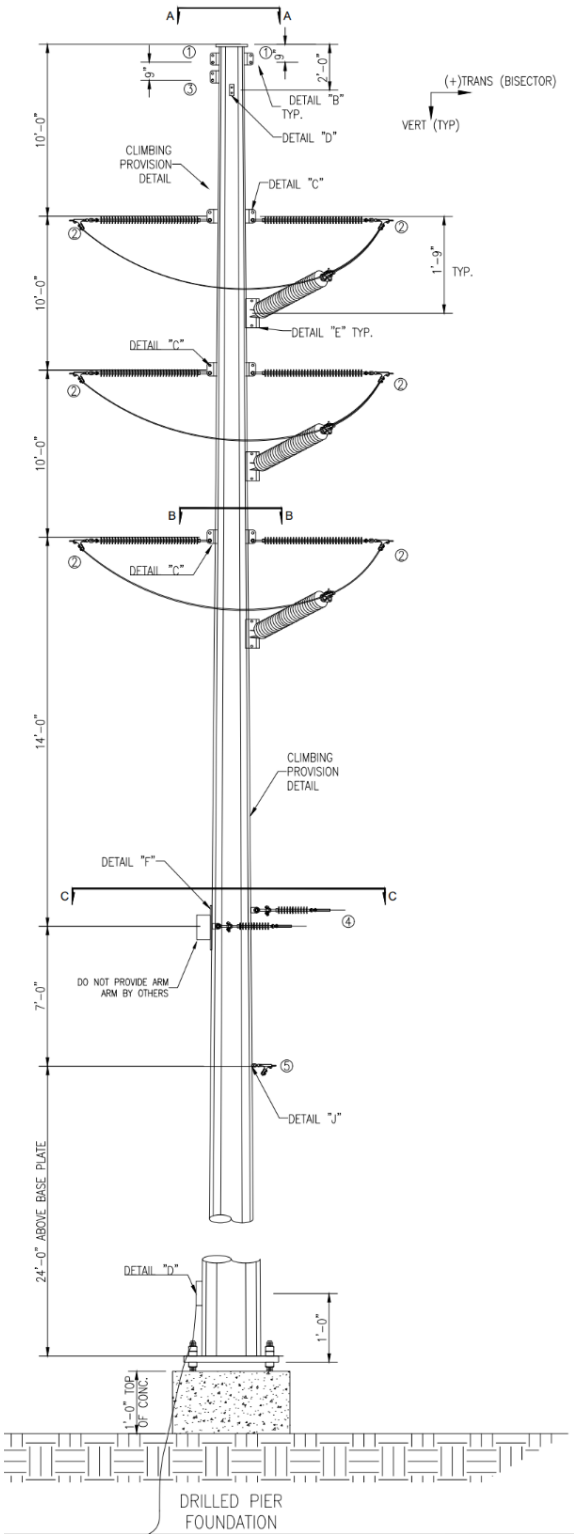


Figure 5-6. 138kV Self-Supporting Dead-End Interconnection Structure (Steel)



Although it is not anticipated, the design or ROW conditions may dictate that other types of structures need to be utilized. If these unanticipated conditions arise, they will be addressed on a case-by-case basis.

The conductor used will be designed and constructed for 138 kV operation and will be single 1351.5 thousand circular mils (kcmil) All Aluminum Conductor (AAC) per phase. This conductor has a maximum strength of approximately 23,400 pounds. The overhead ground wire to be installed will be 3/8-inch extra high strength steel, or equivalent optical ground wire. The conductor used for the 12.47 kV construction will be 477 kcmil aluminum conductor steel-reinforced cable (ACSR) per phase. This conductor has a maximum strength of approximately 11,800 pounds. The neutral wire to be installed will be 4/0 American Wire Gauge (AWG) ASCR with a maximum strength of approximately 8,350 pounds. The phase conductors for both the 138 kV and 12.47 kV, as well as the overhead ground wires and neutral, will be installed in accordance with the latest version of the National Electrical Safety Code. The conductors will be supported by aluminum clamps attached to the polymer-braced post and polymer strain/suspension insulators. Steel clamps will support the overhead ground wire. At dead-ends, bolted-type dead-end clamps will be used on the conductor and on the ground wire.

(c) Base and Foundation Design

Each ductile iron pole and/or engineered steel pole will be set in an approximately 3-foot-diameter hole, 10 to 20 feet deep. Crushed rock backfill will be used as backfill for all direct-embed structures. Custom steel poles will be supported on reinforced concrete foundations designed for the specific loading conditions of the structures.

(d) Underground Cable Type and Size

There are no underground cables associated with the proposed transmission line; therefore, this section does not apply.

(e) Other Major Equipment or Special Structures

Three 138 kV 2000 Amp Pascor Atlantic TTR-8V switches will be installed at the Darke REC Orphans Rd tap. The two switches will have auto-sectionalizing capability with motor operators and communication between the two line side switches. One switch will be manually operated with a swing handle for the switch to Orphans Substation.

(2) <u>Electric Transmission Station Data</u>

The applicant shall provide a single-line diagram of electric power transmission substations and a description of the proposed major equipment, such as:

- **(a) Breakers**
- **(b) Switch Gear**
- **(c) Bus Arrangements and Structures**
- **(d) Transformers**
- **(e) Control Buildings**
- **(f) Other Major Equipment.**

There are no Electric Transmission Stations included in this Project. This section is not applicable.

4906 5 06 ECONOMIC IMPACT AND PUBLIC INTERACTION

(A) OWNERSHIP OF PROPOSED FACILITY

The applicant shall state the current and proposed ownership status of the proposed facility, including leased and purchased land, rights-of-way, structures, and equipment.

AES Ohio will construct, own, operate, and maintain the proposed West Manchester-Blazer-Hodgin 138 kV Transmission Line Project. The Preferred Route is approximately 18.2 miles and includes approximately 12.9 miles of new corridor and 5.3 miles of existing ROW. The Alternate Route is approximately 19.1 miles and includes 13.4 miles of new corridor and 5.7 miles of existing ROW.

Where the transmission line would be co-located with an existing AES Ohio transmission line, existing easements would be negotiated with landowners for additional width where needed. AES Ohio would negotiate for easements for new ROW with landowners for the transmission line route that is selected.

The Preferred and Alternate Routes are aligned adjacent to the non-highway road ROW for approximately 5.7 miles and 10.3 miles, respectively, out of the total route length of approximately 19.1 miles. Where the proposed transmission line coincides with overhead electric distribution lines (AES Ohio and others) and communication cables, the electric distribution lines owned and operated by AES Ohio will be transferred onto the new pole structures being installed where appropriate. For distribution circuits and communication cables owned and operated by others, AES Ohio will negotiate with those entities concerning transfer of these utilities to the new transmission poles, where necessary, and/or feasible.

(B) ELECTRIC CAPITAL COST

The applicant shall submit estimates of applicable capital and intangible costs for the various components of electric power transmission facility alternatives. The data submitted shall be classified according to the federal energy regulatory commission uniform system of accounts prescribed by the public utilities commission of Ohio for the utility companies, unless the applicant is not an electric light company, a gas company or a natural gas company as defined in Chapter 4905. of the Revised Code (in which case, the applicant shall file the capital costs classified in the accounting format ordinarily used by the applicant in its normal course of business). The estimates shall include:

(1) Land and Land Rights
(2) Structures and Improvements
(3) Substation Equipment
(4) Poles and Fixtures
(5) Towers and Fixtures
(6) Overhead Conductors
(7) Underground Conductors and Insulation
(8) Underground-to-Overhead Conversion Equipment
(9) Right-of-Way Clearing and Roads, Trails, or Other Access.

The applicable capital and intangible costs for a variety of components of the Project are included below. Each of the enumerated components is included in Table 6-1. The table also includes estimates of applicable intangible and capital costs for both the Preferred and Alternate Routes of the Project. The items marked as not applicable (“NA”) are components that do not apply to this Project. Costs are based on a Class 5 estimate.

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

FERC Account Number	Description	Preferred Route	Alternate Route
350	(1) Land and Land Rights	$3,408,000	$3,563,164
352	(2) Structures and Improvements	NA	NA
353	(3) Substation Equipment	NA	NA
355	(4) Poles and Fixtures	$7,881,000	$8,239,817
354	(5) Towers and Fixtures	NA	NA
356	(6) Overhead Conductors and Devices	$5,964,000	$6,235,537
357	(7) Underground Conductors and Insulation	NA	NA
358	(8) Underground-to-Overhead Conversion Equipment	NA	NA
359	(9) ROW Clearing and Roads, Trails or Other Access	$4,047,000	$4,231,257
TOTAL		**$21,300,000**	**$22,269,775**

Note:
FERC = Federal Energy Regulatory Commission

(C) GAS CAPITAL COST

This application is for an electric transmission line; therefore, this section is not applicable.

(D) PUBLIC INTERACTION INFORMATION

The applicant shall provide information regarding public interaction and the economic impact for each of the site/route alternatives.

This section of the application provides information regarding public interaction and the economic impact for each of the route alternatives.

(1) Counties, Townships, Villages, and Cities within 1,000 Feet of the Preferred and Alternate Routes

The applicant shall provide a list of counties, townships, villages, and cities within one thousand feet on each side of the centerline or facility perimeter.

Jefferson, Jackson, Monroe, and Washington Townships within Preble County, Ohio are located within 1,000 feet of both the Preferred and Alternate Routes. The City of Richmond, Indiana is within 1,000 feet of both the Preferred and Alternate Routes. The Village of West Manchester is within 1,000 feet of both the Preferred and Alternate Routes.

(2) Public Officials Contacted

The applicant shall provide a list of the public officials contacted regarding the application, their office addresses, and office telephone numbers.

An AES Ohio representative contacted several local officials, including the County Land Use and Management-Building and Zoning; County Engineer; County Economic Development; County Commissioner; County Farm Bureau; and Jackson, Jefferson, Monroe, and Washington Township trustees, and state officials. Table 6-2 provides a list of the local public officials, including their office addresses and office telephone numbers, who have been contacted to date and who will be provided with a digital or hard copy of the application.

Pursuant to 4906-3-07(A)(1), a copy of the accepted, complete application will be served either electronically or by disk, on the chief executive office of each municipal corporation, county, township, and the head of each public agency charged with the duty of protecting the environment or of planning land use in the area in which the Project is located in lieu of all those identified in Table 6-2.

Table 6-2. Public Officials Contacted

Municipality/ County/Agency	Department	Title	Name	Telephone	Street address	City	State	Zip Code
Preble County	Land Use Management-Building & Zoning	Director of Land Use Management	Brad Kramer	937-456-8171	101 East Main Street	Eaton	OH	45320
Preble County	Auditor	Auditor	Lavon Wright	937-456-8148	101 East Main Street	Eaton	OH	45320
Preble County	Engineer's Office	County Engineer	Kyle Cross	(937) 456-4600	1000 Preble Drive	Eaton	OH	45320
Preble County	Economic Development	Director	Justin Sommer	937-456-2757	122 W. Decatur Street, Suite A	Eaton	OH	45320
Preble County	County Commission Office	Commissioner	David Haber	937-456-8143	101 East Main Street	Eaton	OH	45320
Preble County	County Commission Office	Commissioner	Rachael Vonderhaar	937-456-8143	101 East Main Street	Eaton	OH	45320
Preble County	County Commission Office	Commissioner	Adam Craft	937-456-8143	101 East Main Street	Eaton	OH	45320
Preble County	Farm Bureau	Organization Director	Christy Montoya	937-456-5400	117 East Walnut Street, Suite A	Farmersville	OH	45325
Jackson Township	Township Officials	Trustee	James Newton	937-456-5320	2930 W. Florence Campbellstown Road	Eaton	OH	45320
Jackson Township	Township Officials	Trustee	Joshua Ruebush	937-733-1434	2930 W. Florence Campbellstown Road	Eaton	OH	45320
Jackson Township	Township Officials	Trustee	Dean Petry	937-533-9610	2930 W. Florence Campbellstown Road	Eaton	OH	45320
Jefferson Township	Township Officials	Trustee	Duanee Pickett	(937) 437-0213	201 Cedar Springs Road	New Paris	OH	45347
Jefferson Township	Township Officials	Trustee	David McDermitt	(937) 437-0213	201 Cedar Springs Road	New Paris	OH	45347
Jefferson Township	Township Officials	Trustee	Paul Brehm Sr.	(937) 437-0213	201 Cedar Springs Road	New Paris	OH	45347
Monroe Township	Township Officials	Trustee	Lloyd Lee	(937) 273-2372	2159 Kimmel Road	Eldorado	OH	45321
Monroe Township	Township Officials	Trustee	Kevin Glander	937-733-8114	2159 Kimmel Road	Eldorado	OH	45321
Monroe Township	Township Officials	Trustee	Daoug Fark	937-533-1701	2159 Kimmel Road	Eldorado	OH	45321
Washington Township	Township Officials	Trustee	Rodger Clark	937-533-3353	1800 Eaton-Gettysburg Road	Eaton	OH	45320
Washington Township	Township Officials	Trustee	Keith Smith	937-456-5899	1800 Eaton-Gettysburg Road	Eaton	OH	45320
Washington Township	Township Officials	Trustee	James Ferriell	937-733-3024	1800 Eaton-Gettysburg Road	Eaton	OH	45320
Public Library	Brooke-Gould Memorial Library	Branch Manager	Sarah Tozier	937-456-4331	301 N. Barron Street	Eaton	OH	45320
Public Library	New Paris Library	Branch Manager	Lisa Stall	937-437-7242	115 N. Washington Street	New Paris	OH	45347
Public Library	West Manchester Library	Branch Manager	Anna Garey	937-678-8503	212 S. High Street	West Manchester	OH	45382

(3) Public Information Programs

The applicant shall provide a description of the public interaction planned for during the siting, construction, and operation of the proposed facility. This description shall include detailed information regarding the applicant's public information and complaint resolution programs as well as how the applicant will notify affected property owners and tenants about these programs at least seven days prior to the start of construction.

AES Ohio representatives mailed letters to affected landowners, affected tenants, and local stakeholders on October 3, 2022, and August 29, 2023, per OAC 4906-3-03(B)(2). A news release was published in the Eaton Register Herald on October 19, 2022, and September 9, 2023. Additionally, the news release was published in Dayton Daily News on September 10, 2023, per OAC 4906-3-03(B)(1).

The letter and news release contained the date and location of the PIM, a brief description of the Project, Project location, Project website, and OPSB contact information. The Project team also included the Project fact sheet with all letters to help the public better understand the Project need, location of the Project, and timeline of the Project.

During the siting, construction, and operation of the Project, AES Ohio will maintain Project updates on its website; retain ROW land agents to discuss Project timelines, construction, and restoration activities; and convey this information to affected owners and tenants.

Throughout the duration of the Project, the public is able to contact AES Ohio Project Outreach representatives at (937) 701-0674, or email aesohionewprojectoutreach@aes.com to ask questions or provide comments. To access the Project's website, please visit https://www.aes-ohio.com/new-westville-improvements. Additionally, during the PIM the public was provided the option to send in comment cards via mail. The Project Team provided each attendee with an envelope to send their written comments to AES Ohio, ATTN: New Westville Project Team, 1065 Woodman Drive, Dayton, Ohio 45432. AES Ohio documents all comments and information provided through its public interaction program.

For copies of the application, the public can do any of the following:

- Going to a local Library Branch (Brooke-Gould Memorial Library, New Paris Library, and West Manchester Library)
- Go to http://opsb.ohio.gov and search for this Project's case number (Case No. 22-0627-EL-BTX)
- Access the Project's website on https://www.aes-ohio.com/new-westville-improvements and follow the directions to obtain a copy.

At least 7 days before any construction activities, an AES Ohio ROW agent will notify the affected landowners or the tenant by mail, telephone, or in person, depending on landowner/tenant preference.

(4) Liability Compensation

The applicant shall describe any insurance or other corporate program for providing liability compensation for damages, if such should occur, to the public resulting from construction or operation of the proposed facility.

AES Ohio will maintain insurance against claims and liability for personal injury, death, and property damage arising from the operation of the transmission line and facilities. The insurance policy or policies will insure AES Ohio to the extent of their interests. AES Ohio maintains excess Commercial General Liability insurance covering indemnity to at least $5,000,000. This insurance is on a per occurrence basis and is established to include automobile and contractual liability.

(5) Tax Revenues

The applicant shall provide an estimate of the increase in tax revenues as a result of facility placement.

The Preferred and Alternate Routes are located within Monroe, Jackson, Jefferson, and Washington Townships. The proposed Project will have a significant positive impact on the local tax base, including local school districts and other taxing districts that service the area where the proposed transmission line will be located. AES Ohio will pay property taxes on utility facilities in each township.

Based on 2022 tax rates, the estimated property taxes to be distributed by township over the first year after the Project are shown below in Tables 6-3 and 6-4.

Table 6-3. Tax Revenue Estimates for the Preferred Route

Preferred Route	
Taxing District Name	**Estimated Tax Revenue**
Preble County	$153,791
National Trail Local School District	$436,961
Miami Valley Career Technical Center	$79,023
Jackson Township	$30,682
Preble County District Library	$21,248
Jefferson Township Except New Paris Corporation	$4,480
Jefferson Township	$995
Northwest Fire & Ambulance District	$19,619
North Central Ambulance District	$37,532
Monroe Township Except Eldorado & West Manchester	$16,089
Monroe Township	$45,069
Washington Township	$18,440
Washington Twp Except Eaton City	$3,447
TOTAL	**$867,377**

Table 6-4. Tax Revenue Estimates for the Alternate Route

Alternate Route	
Taxing District Name	**Estimated Tax Revenue**
Preble County	$160,793
National Trail Local School District	$456,856
Miami Valley Career Technical Center	$82,621
Jackson Township	$45,031
Preble County District Library	$22,215
Jefferson Township Except New Paris Corporation	$2,022
Jefferson Township	$449
Northwest Fire & Ambulance District	$8,856
North Central Ambulance District	$45,899
Monroe Township Except Eldorado & West Manchester	$19,675
Monroe Township	$55,116
Washington Township	$4,883
Washington Twp Except Eaton City	$913
TOTAL	**$905,330**

4906 5 07 HEALTH AND SAFETY, LAND USE, AND REGIONAL DEVELOPMENT

(A) HEALTH AND SAFETY INFORMATION FOR EACH ALTERNATE ROUTE

The applicant shall provide health and safety information for each site/route alternative.

The following section provides health and safety information for each route alternative.

(1) How the Facility Will Comply with State/Federal Regulations

The applicant shall provide a description of how the facility will be constructed, operated, and maintained to comply with the requirements of applicable state and federal statutes and regulations, including the national electrical safety code, applicable occupational safety and health administration regulations, U.S. department of transportation gas pipeline safety standards, and Chapter 4901:1-16 of the Administrative Code.

The construction and operation of the Project will comply with the requirements specified in the National Electrical Safety Code (NESC), NERC, the PUCO, and will meet all applicable safety standards established by the Occupational Health and Safety Administration.

Safety is the number one priority for AES, including AES Ohio, ensuring the safety of all employees, contractors, and the people in our communities. AES Ohio takes safety seriously and incorporates safety standards into all aspects of operations. Safety takes precedence over all other operations and is put first every minute of every day. At the core of AES Ohio is the AES Safety Management System (SMS) that states:

AES safety beliefs:

- *Safety comes first for our people, our contractors, and the individuals in our communities. All work activities worldwide must be conducted in a safe manner that promotes personal health, safety, and well-being.*
- *All occupational incidents can be prevented.*
- *Working safely is a condition of employment, and each person is responsible for their own safety as well as the safety of their teammates and the people in the communities in which we work.*
- *All AES - people and contractors have the right and obligation to stop work as soon as they identify a situation they believe to be unsafe.*

AES safety principles:

- *Local business leadership is responsible for local safety performance.*
- *Local business leadership is expected to provide the appropriate human and material resources necessary to ensure that all people working for AES have the means to work safely.*
- *Each business and its people are expected to comply with all applicable occupational health and safety requirements in the jurisdictions in which they operate.*
- *All AES people are expected to adhere to all occupational health and safety programs and requirements adopted by the business in which they work.*
- *All contractors engaged by a business are expected to adhere to the same occupational health and safety standards as AES people.*

- *All businesses are expected to continuously strive to improve their occupational health and safety performance.*

The AES SMS is built on the OHSAS 18001/ISOS 14001 International Standard. Further information about safety management is available on the AES website at: https://www.aes.com/sustainability/our-people/occupational-health-and-safety.

(2) Electric and Magnetic Fields

For electric power transmission facilities where the centerline of the facility is within one hundred feet of an occupied residence or institution, and for electric substations where the boundary of the footprint is within one hundred feet of an occupied residence or institution, the applicant shall discuss the production of electric and magnetic fields during operation of the preferred and alternate site/route. If more than one conductor configuration is to be used on the proposed facility, information shall be provided for each configuration that constitutes more than ten per cent of the total line length, or more than one mile of the total line length being certificated. Where an alternate structure design is submitted, information shall also be provided on the alternate structure. The discussion shall include:

(a) Calculated electric and magnetic field strength levels at one meter above ground, under the conductors and at the edge of the right-of-way for:

(i) Winter Normal Conductor Rating.
(ii) Emergency Line Loading.
(iii) Normal Maximum Loading. Provide corresponding current flows, conductor ground clearance for normal maximum loading and distance from the centerline to the edge of the right-of-way. Estimates shall be made for minimum conductor height. The applicant shall also provide typical cross-section profiles of the calculated electric and magnetic field strength levels at the normal maximum loading conditions.
(iv) Where there is only one occupied residence or institution within one hundred feet of the centerline, only one set of field strength values are to be provided. Where there are two or more occupied residences or institutions with one hundred feet of the centerline, field strength values shall be provided for each configuration that includes these occupied residences and institutions, and constitutes more than ten percent of the total line length, or more than one mile of the total line length being certificated.

Ohio Administrative Code requires that when filing certificate applications to Ohio Power Siting Board (OPSB) for proposed electric transmission facilities, electric and magnetic field (EMF) calculations shall be done in accordance with Rule 4906-5-07 Section (2).

The electric and magnetic fields generated by the four cross-sections depicted on Figures 5-1 through 5-8 were modeled using Bonneville Power Administration's (BPA) Corona and Field Effects Program (CAFEP) software. CAFEP uses the electrical and physical characteristics of the transmission line to calculate resulting electric and magnetic fields. For the analysis, electric and magnetic fields were analyzed at a minimum conductor height (near mid-span, at maximum sag), as this location will produce the worst-case results. Electric and magnetic fields are analyzed at a height of 1 meter (3.28 feet) above ground per IEEE Std 644-1994 (R2008).

Electric fields are driven by the maximum operating voltage of conductors. This voltage was determined by applying a 10% overvoltage to the 138 kV nominal operating voltage, resulting in a maximum operating voltage of 152 kV. The electric field strength is a measure of the force per unit

charge at a given point in space relative to a charged object. It is typically measured in volts or kilovolts per meter (kV/m).

Magnetic fields are driven by the line current loading, which varies over time. For this analysis, the magnetic field calculations were performed in four separate loading scenarios: normal maximum loading, winter normal conductor rating, summer emergency loading, and winter emergency loading. The magnetic field strength is the magnetic flux density at a given point in space. It is typically measured in gauss or milligauss (mG).

For additional reference, the International Commission on Non-Ionizing Radiation Protection (ICNIRP) publishes recommended, non-binding limits (called reference limits) for electric and magnetic fields based on a collaboration of international scientists. These values are expressed as reference exposure limits for both occupational and general public exposure. IEEE C95.6-2002 also specifies maximum permissible exposure levels for electric and magnetic fields, though these exposure levels are less stringent than ICNIRP limits.

The configuration of each line, including all design criteria and input data, is summarized in Table 7-1.

Table 7-1. EMF Analysis Input Data

INPUT	VALUE	VALUE
	LINE 13802	**LINE 13837**
CONDUCTOR TYPE - TRANSMISSION	1351 KCMIL AAC “COLUMBINE”	1351 KCMIL AAC “COLUMBINE”
PHASING ARRANGEMENT	A-B-C TOP TO BOTTOM	A-B-C TOP TO BOTTOM
SHIELD WIRE TYPE	DNO-12161 48 FIBER OPGW	DNO-12161 48 FIBER OPGW
MINIMUM CONDUCTOR HEIGHT	23.7 FT.	23.7 FT.
SPAN LENGTH	350 - 400 FT.	350 - 400 FT.
AVERAGE ELEVATION	1150 FT.	1150 FT.
RIGHT-OF-WAY WIDTH	75 FT.	75 FT.
MAXIMUM OPERATING VOLTAGE	152 KV (110% OF 138 KV)	152 KV (110% OF 138 KV)
NORMAL MAXIMUM LOADING (1)	98 MVA 410 AMPS	93 MVA 389 AMPS
WINTER NORMAL CONDUCTOR RATING (2)	325 MVA 1,360 AMPS	425 MVA 1,778 AMPS
EMERGENCY LOADING (3) SUMMER	360 MVA 1,506 AMPS	382 MVA 1,598 AMPS
EMERGENCY LOADING (3) WINTER	404 MVA 1,690 AMPS	476 MVA 1,991 AMPS
POWER FLOW DIRECTION	AEP → BLAZER	BLAZER → WEST MANCHESTER
CONDUCTOR TYPE - DISTRIBUTION	477 KCMIL ACSR “PELICAN”	477 KCMIL ACSR “PELICAN”
NEUTRAL WIRE TYPE - DISTRIBUTION	#4/0 AWG ACSR “PENGUIN”	#4/0 AWG ACSR “PENGUIN”

INPUT	VALUE	VALUE
PHASING ARRANGEMENT	B-A-C LEFT TO RIGHT ASSUMED ARRANGEMENT WHICH GENERATES MAXIMUM COMBINED MAGNETIC FIELDS WITH 138 KV CIRCUIT	B-A-C LEFT TO RIGHT ASSUMED ARRANGEMENT WHICH GENERATES MAXIMUM COMBINED MAGNETIC FIELDS WITH 138 KV CIRCUIT
MINIMUM CONDUCTOR HEIGHT	17 FT.	17 FT.
SPAN LENGTH	200 FT.	200 FT.
MAXIMUM OPERATING VOLTAGE	13.7 KV (110% OF 12.47 KV)	13.7 KV (110% OF 12.47 KV)

Notes:
(1) Per Ohio Administrative Code, Rule 4906-5-07, Section (A)(2)(a)(iii)
(2) Per Ohio Administrative Code, Rule 4906-5-07, Section (A)(2)(a)(i)
(3) Per Ohio Administrative Code, Rule 4906-5-07, Section (A)(2)(a)(ii)

A case log that lists all scenarios analyzed for EMF results is shown below in Table 7-2.

Table 7-2. EMF Analysis Case Log

LINE NUMBER	STRUCTURE TYPE	UNDERBUILD CIRCUIT	LOADING SCENARIO			
13802	TANGENT	YES	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY
13802	TANGENT	NO	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY
13802	DEADEND	YES	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY
13802	DEADEND	NO	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY
13837	TANGENT	YES	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY
13837	TANGENT	NO	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY

LINE NUMBER	STRUCTURE TYPE	UNDERBUILD CIRCUIT	LOADING SCENARIO			
13837	DEADEND	YES	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY
13837	DEADEND	NO	NORMAL MAXIMUM	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY	WINTER EMERGENCY

Results for electric field and magnetic field calculations are shown below in Table 7-3 and Table 7-4, respectively.

Table 7-3. Electric Field Strength Results

CONFIGURATION			ELECTRIC FIELD (KV/M)		
LINE NUMBER	STRUCTURE TYPE	UNDERBUILD CIRCUIT	LEFT EDGE OF ROW	MAXIMUM WITHIN ROW	RIGHT EDGE OF ROW
13802	TANGENT	YES	0.365	0.791	0.422
13802	TANGENT	NO	0.516	2.173	0.476
13802	DEADEND	YES	0.103	0.673	0.153
13802	DEADEND	NO	0.119	2.266	0.119
13837	TANGENT	YES	0.365	0.791	0.422
13837	TANGENT	NO	0.516	2.173	0.476
13837	DEADEND	YES	0.103	0.673	0.153
13837	DEADEND	NO	0.119	2.266	0.119

The International Commission on Non-Iodizing Radiation Protection (ICNIRP) reference limits for electric field strength are 8.33 kV/m for occupational exposure and 4.16 kV/m for general public exposure. The edge of ROW results are below the ICNIRP occupational exposure reference and public exposure reference limits for all configurations analyzed.

The Institute of Electrical and Electronics Engineers (IEEE) C95.6-2002 provides maximum permissible exposure (MPE) levels of 20 kV/m in a controlled environment, 5 kV/m for the general public (edge of ROW), and 10 kV/m within power line ROW under normal load conditions. All values are below the controlled environment level of 20 kV/m. The calculated values at the edge of the ROW are below the IEEE 5 kV/m MPE levels.

Table 7-4. Magnetic Field Strength Results

CONFIGURATION				MAGNETIC FIELD (MG)			
LINE NUMBER	STRUCTURE TYPE	UNDERBUILD CIRCUIT		NORMAL MAXIMUM LOADING	WINTER NORMAL CONDUCTOR RATING	SUMMER EMERGENCY LOADING	WINTER EMERGENCY LOADING
13802	TANGENT	YES	LEFT EDGE	17.8	42.0	46.2	51.4
			MAXIMUM	152.5	204.7	213.7	225.1
			RIGHT EDGE	33.0	70.4	76.2	83.5
13802	TANGENT	NO	LEFT EDGE	17.4	57.9	64.1	71.9
			MAXIMUM	62.4	207.0	229.2	257.2
			RIGHT EDGE	24.2	80.1	88.7	99.6
13802	DEADEND	YES	LEFT EDGE	11.3	46.9	53.1	60.9
			MAXIMUM	143.7	196.8	207.1	220.5
			RIGHT EDGE	32.7	72.6	78.9	86.7
13802	DEADEND	NO	LEFT EDGE	22.3	73.8	81.8	108.1
			MAXIMUM	63.0	209.1	231.5	259.8
			RIGHT EDGE	22.3	73.8	81.8	91.8
13837	TANGENT	YES	LEFT EDGE	17.4	53.9	48.8	60.1
			MAXIMUM	151.5	230.6	219.4	244.0
			RIGHT EDGE	32.2	87.0	79.8	95.4
13837	TANGENT	NO	LEFT EDGE	16.6	75.6	68.0	84.7
			MAXIMUM	59.2	270.6	243.2	303.0
			RIGHT EDGE	22.9	104.8	94.2	117.3
13837	DEADEND	YES	LEFT EDGE	11.0	64.6	57.0	73.7
			MAXIMUM	143.1	227.0	213.8	242.9
			RIGHT EDGE	31.8	90.5	82.8	99.6
13837	DEADEND	NO	LEFT EDGE	21.1	96.5	86.8	108.1
			MAXIMUM	59.8	273.3	245.6	306.0
			RIGHT EDGE	21.1	96.5	86.8	108.1

ICNIRP reference limits for magnetic fields are 10,000 mG for occupational exposure and 2,000 mG for general public exposure. All calculated values within the ROW are below both the occupational and the general public exposure reference limits.

IEEE C95.6-2002 provides maximum permissible exposure (MPE) magnetic field levels of 0.904 mT (9,040 mG) for the general public, and 2.71 mT (27,100 mG) in a controlled environment. All calculated values within the ROW are below both the general public and the controlled environment MPE levels.

(b) References to the current state of knowledge concerning possible health effects of exposure to electric and magnetic field strength levels.

Humans are all continually exposed to a wide variety of natural and manmade electric and magnetic fields. They are generated anywhere there is a flow of electricity, including appliances and power equipment. Electric fields are associated with the voltage of a source. Magnetic fields are associated with the flow of current in a wire. The strength of these fields decreases rapidly with distance from the source. Electricity is a beneficial part of our daily lives, but whenever electricity is generated, transmitted, or used, electric and magnetic fields are created. A large volume of research and analysis on the question of health effects related to EMF exposure has been generated over many decades.

In 1992, the U.S. Congress authorized the Electric and Magnetic Fields Research and Public Information Dissemination Program (“EMF-RAPID”) in the Energy Policy Act (PL 102-486). In the RAPID program, the National Institute of Environmental Health Sciences (“NIEHS”), National Institutes of Health, and the Department of Energy were designated to fund, direct, and manage research and analysis aimed at providing scientific evidence to clarify the potential for health risks from exposure to power-line EMF.

Solid and relevant EMF results were generally obtained under the research supported by the NIEHS (through the EMF-RAPID program). The NIEHS program supported research in the task of determining what, if any, aspects of EMF interactions with biological systems were:

(1) Real and reproducible
(2) Had the potential to increase the risk of cancer.

In 1999, the NIEHS submitted its report to the U.S. Congress: “NIEHS Report on Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields.” The report included the following excerpts:

“The NIEHS believes that the probability that ELF-EMF exposure is truly a health hazard is currently small. The weak epidemiological associations and lack of any laboratory support for these associations provide only marginal, scientific support that exposure to this agent is causing any degree of harm.

The scientific evidence suggesting that extremely low frequency EMF exposures pose any health risk is weak. The strongest evidence for health effects comes from associations observed in human populations with two forms of cancer: childhood leukemia and chronic lymphocytic leukemia in occupationally exposed adults. While the support from individual studies is weak, the epidemiological studies demonstrate, for some methods of measuring exposure, a fairly consistent pattern of a small, increased risk with increasing exposure that is somewhat weaker for chronic lymphocytic leukemia than for childhood leukemia. In contrast, the mechanistic studies and the animal toxicology literature fail to demonstrate any consistent pattern across studies, although sporadic findings of biological

effects (including increased cancers in animals) have been reported. No indication of increased leukemias in experimental animals has been observed."

In its June 2002 EMF Electric and Magnetic Fields Associated with the Use of Electric Power Questions & Answers booklet, NIEHS concluded that:

"Electricity is a beneficial part of our daily lives, but whenever electricity is generated, transmitted, or used, electric and magnetic fields are created. Over the past 25 years, research has addressed the question of whether exposure to power frequency EMF might adversely affect human health. For most health outcomes, there is no evidence that EMF exposures have adverse effects. There is some evidence from epidemiology studies that exposure to power-frequency EMF is associated with an increased risk for childhood leukemia. This association is difficult to interpret in the absence of reproducible laboratory evidence or a scientific explanation that links magnetic fields with childhood leukemia. EMF exposures are complex and come from multiple sources in the home and workplace in addition to power lines. Although scientists are still debating whether EMF is a hazard to health, the NIEHS recommends continued education on ways of reducing exposures. This booklet has identified some EMF sources and some simple steps you can take to limit your exposure. For your own safety, it is important that any steps you take to reduce your exposures do not increase other obvious hazards such as those from electrocution or fire. At the current time in the United States, there are no federal standards for occupational or residential exposure to 60-Hz EMF".

The following federal government agencies' websites provide additional information on EMF:

1. Centers for Disease Control and Prevention/National Institute of Occupational Safety and Health: http://www.cdc.gov/niosh/topics/emf https://www.cdc.gov/niosh/docs/96-129/default.html
2. National Institute of Environmental Health Sciences/National Institute of Health: http://www.niehs.nih.gov/health/topics/agents/emf/

Table 7-5. Examples of Magnetic Fields from Household Electrical Appliances and Devices

Appliance Type	Medium/Highest Magnetic Field (mG) for Different Distances from Source		
	6 inches	12 inches	24 inches
Hair Dryer	300/700	30/70	-/10
Can Opener	600/1500	150/300	20/30
Microwave	200/300	4/200	10/30
Electric Range	30/200	8/30	2/9
Washing Machine	20/100	7/30	1/6
Vacuum Cleaner	300/700	60/200	10/50

Note:
National Institute of Environmental Health Sciences (2002).

(c) Description of the company's consideration of electric and magnetic field strength levels, both as a general company policy and specifically in the design and siting of the transmission line project including alternate conductor configurations and phasing, tower height, corridor location, and right-of-way width.

AES Ohio designs its transmission line facilities according to NESC specifications, engineering parameters, and cost. AES Ohio proposes to install the 138 kV transmission line primarily on ductile iron tangent structures (steel structures at select locations) supported on horizontal braced post insulators. Reverse phasing of circuits is not an option for this Project because it consists of constructing a single-circuit.

(d) Description of the company's current procedures for addressing public inquiries regarding electric and magnetic field strength levels, including copies of informational materials and company procedures for customer electric and magnetic field strength level readings.

The public may make inquiries in several ways, including by phone, email, or mail. Information is available through AES Ohio's website: Contact us | AES Ohio (aes-ohio.com),

In addition, throughout the duration of the Project, the public is able to contact AES Ohio Project Outreach representatives at (937) 701-0674, or email aesohionewprojectoutreach@aes.com to ask questions or provide comments. To access the Project's website, please visit: https://www.aes-ohio.com/new-westville-improvements.

In the event that there is an EMF inquiry from the public, AES Ohio will direct calls to the Transmission Line Engineering group within the company and an employee will reach out to the individual requesting information. AES Ohio maintains instruments for conducting EMF readings and will meet with the individual making the inquiry to conduct readings and/or provide a copy of the report, *NIEHS 2002 EMF Electric and Magnetic Fields Associated with the Use of Electric Power*, if requested.

(3) Estimate of Radio, Television, and Communications Interference from Operation of Facility

For electric power transmission facilities, the applicant shall provide an estimate of the level of radio, television, and other communication system interference from operation of the proposed facility, identify the most severely impacted areas, if any, and discuss methods of mitigation.

Radio interference can be experienced in the AM broadcast band (535-1605 kilohertz) and FM band (88-108 megahertz [MHz]), caused by transmission line gap-type discharge (1-1000 MHz). Dielectric discharge due to air ionization, known as "corona", is not a concern with 138 kV transmission lines planned in this Project. Gap-type discharge, such as that emitted by loose or defective transmission hardware, typically is localized and can be readily detected and corrected, or additional mitigation measures can be applied to eliminate the interference source.

The transition to digital broadcasting began in 2009 and was fully implemented by 2021. This transition resulted in the official end of full-power analog broadcast in 2009. Before the transition, analog interfaces were prone to interference due to being broadcasted over radio transmission, AM for video and FM for audio. The radio transmission was broadcasted at frequencies above 50 MHz and were affected by gap discharge if received from air broadcast (by "rabbit ears"). With the introduction of digital television broadcasting, interference issues have been significantly reduced.

Digital television transmits data as bits (0,1) of information using cables, proving to be a more reliable and interference-resistant method compared to analog. AES Ohio does not have any formal policy for addressing radio and television interference. AES Ohio is committed to investigating any interference complaints to help maintain quality services to customers.

(4) Noise Generation from Construction, Operation, and Maintenance of the Transmission Line

The applicant shall provide an estimate of the effect of noise generation due to the construction, operation, and maintenance of the transmission line or pipeline and associated facilities. The applicant shall describe any equipment and procedures designed to mitigate noise emissions during site clearing, construction, operation, and maintenance of the facility to minimize noise impact, including limits on the time of day at which construction activities may occur. The applicant shall estimate the nature of any intermittent, recurring, or particularly annoying sounds from the following sources:

(a) Blasting activities
(b) Operation of earth-moving and excavating equipment
(c) Driving of piles, rock breaking or hammering, and horizontal directional
(d) Drilling
(e) Erection of structures
(f) Truck traffic
(g) Installation of equipment.

Construction, operation, and maintenance activities will typically be completed during daylight hours. Construction noise can be created from onsite and offsite sources. Onsite noise sources would principally consist of the operation of heavy-duty diesel and gasoline-powered construction equipment. Offsite noise sources would include vehicles commuting to and from the job site, as well as from trucks transporting material to the staging areas or construction ROW. The following site and ground-disturbing construction activities would be required to construct the new transmission line: 1) centerline surveyed and staked; 2) existing access roads improved only where necessary; 3) work areas cleared of vegetation and debris, as needed; 4) materials distributed along the centerline; 5) pole holes and/or foundations installed, and poles erected; 6) ground wire, conductors installed; and 7) the site would be cleaned up and reclaimed.

The operation of powerlines can generate a small amount of sound energy. The audible noise from line sources is composed of two components:

1. A broadband (random) component characterized as having high frequency content (different from more common environmental noises).
2. Pure tone (hum) components, most noticeably second and fourth harmonics of the power frequency are superimposed on the broadband noise.

No significant noise impacts are anticipated from the operation of the proposed transmission line. Noise impacts from maintenance operations will primarily be related to vegetation management within the ROW and infrequent repairs to the structures, insulators, and conductors. Vegetation management activities will be short in duration and typically occur on a 5-year cycle. Overall, noise impacts generated by operation and maintenance activities are not anticipated to be significant.

As the primary source of noise for the Project will be a result of construction activities, emphasis will be placed on maintaining construction equipment in proper working condition, with functioning

mufflers and performing construction activities during daylight hours. No additional mitigation is planned beyond what is described below.

(a) Blasting Activities

Dynamiting and blasting activities are not anticipated during construction of the Project.

(b) Operation of Earth-Moving and Excavating Equipment

Noise levels from the equipment at distances of 50 feet are shown in Table 7-6 below. The maximum intermittent land-based construction noise levels would range from approximately 80 to 90 decibels [dB(A)] at 50 feet for supporting structure assembly and tamping operations. Direct noise impacts would result from construction activities occurring adjacent to sensitive receptors, such as houses and place of worship. However, this noise would be short-term, occurring mostly during daylight hours. It should be noted that noise levels are calculated based on the assumption that noise from a localized source is reduced by approximately 6 dB(A) with each doubling of distance from the source of the noise. Noise impacts resulting from construction will be temporary. The anticipated duration of the entire Project is approximately 19 months, with noise-generating activities during construction limited to 1 to 2 weeks maximum at any location.

Table 7-6. Typical Construction Noise Sources

Construction Activity	Average Construction Activity Sound Level at 50 Feet from Source [dB(A)]
Compactors (Rollers)	74
Front Loaders	78
Backhoes	83
Tractors	86
Scrapers, Graders	87
Pavers	87
Trucks	88
Concrete Mixers	81
Concrete Pumps	82
Cranes (Moveable)	81
Cranes (Derrick)	87
Pumps	70
Generators	77
Compressors	81
Pneumatic Wrenches	86
Jack Hammers and Rock Drills	89
Pile Drivers (Peak)	100
Vibrators	75
Saws	77

Note:
U.S. Environmental Protection Agency (1971).

In comparison to these construction noise levels, the following are some typical levels for noise sources (standing adjacent to these sources) in a residential environment:

- Refrigerator: 40 to 43 dB(A)
- Microwave: 55 to 59 dB(A)
- Kitchen exhaust fan (High): 69 to 71 dB(A)
- Hairdryer: 80 to 95 dB(A)
- Washing machine: 65 to 70 dB(A)
- Lawnmower: 88 to 94 dB(A)
- Circular saw:100 to 104 dB(A).

(c) Driving of Piles, Rock Breaking or Hammering, and Horizontal Directional Drilling

Driving of piles is not anticipated during construction of the Project. If required, there will be a temporary increase in noise during construction only.

(d) Erection of Structures

Pole structures will be installed by vehicle-mounted cranes or equivalent equipment. Self-supporting steel poles will require delivery of concrete for foundation construction, including excavation work for the foundation. There will be a temporary increase in noise during construction only.

(e) Truck Traffic

An increase in truck traffic is anticipated during the construction of the Project for equipment access and material delivery. No other additional traffic is anticipated for the Project beyond periodic mowing or removal of dangerous trees from the ROW during maintenance activities.

(f) Installation of Equipment

The equipment will be installed using standard practices and equipment. There will be a temporary increase in noise during construction only.

(B) LAND USE

The applicant shall provide information on land use.

(1) Map of Land Use

The applicant shall provide, for each of the site/route alternatives, a map of at least 1:24,000 scale, including the area one thousand feet on each side of a transmission line or pipeline alignment, and the area within one thousand feet of a substation site, which map shall include the following features:

(a) Centerline and right-of-way for each transmission line or pipeline alternative being proposed.
(b) Proposed substation or compressor station locations.
(c) Land use, depicted as areas on the map. Land use, for the purposes of this rule, refers to the current economic use of each parcel. Categories should include residential, commercial, industrial, institutional, recreational, agricultural, and vacant, or as classified by the local land use authority.
(d) Road names.

(e) Structures, depicted as points on the map. Identified structures should include residences, commercial centers or buildings, industrial buildings and installations, schools, hospitals, place of worship, civic buildings, and other occupied places.
(f) Incorporated areas and population centers.

Land use maps at 1:8,000-scale, including the area 1,000 feet on either side of the centerline (also referred to as the 2,000-foot corridor), are presented as Map series 7-1. Land use categories were created using Preble County's 2023 parcel data and their land type code in their 2023 County Assessors data. This data was reviewed and adjusted accordingly where necessary. For instance, aerial imagery was reviewed, and woodlots were identified based on current publicly available aerial imagery. Aquatic resource land use category presented is a combination of NWI wetlands, NHD waterbodies and waterways, and aquatic resources delineated for the Project.

(2) Impact of Facility on Each Land Use

The applicant shall provide, for each of the site/route alternatives, a description of the impact of the proposed facility on each land use identified in paragraph (B)(1) of this rule. Include, for each land use type, the potential disturbance area during construction and the permanent impact area in acres, in total and for each project component (e.g., transmission line or pipeline right-of-way, substation site), and the explanation of how such estimate was calculated.

Comparisons of potential land use impacts for both routes are included in Tables 7-7 and 7-8. The acreage estimates (linear feet, acreage, and estimates of each land use type was determined using GIS software calculations. The potential disturbance area during construction activities (e.g., vegetation clearing, pole installations) consists of the 75-foot-wide construction ROW where the route is cross-country and where routes parallel I-70, but where routes parallel roadways, there will be a 30-foot-wide construction ROW, and off-ROW temporary access roads will have a 15-foot-wide construction ROW. Operational impacts will be the same as construction impacts, except for access road impacts, which are only for construction as they are temporary. The ROW will be restored through soil grading, seeding, and mulching; therefore, the permanent impact to the operational ROW is primarily limited to the removal of existing trees and other vegetation. Access roads will be restored similarly but would be allowed to fully revegetate. Property owners may continue to utilize most of the ROW area for general uses that will not affect the safe and reliable operation of the transmission line, such as lawn maintenance, agricultural crop production, pasture, or use as a hayfield.

Table 7-7. Length and Percent of Land Uses Crossed by the Proposed Centerline

Land Use	Preferred Route		Alternate Route	
	Linear Feet	Percent	Linear Feet	Percent
Agricultural	86,423	89.79%	91,556	91.16%
Cultivated Crop	84,450	87.74%	89,223	88.83%
Developed	1,318	1.37%	1,678	1.67%
Pasture	655	0.68%	655	0.65%
Aquatic Resources	666	0.69%	721	0.72%
Desktop Wetland	-	0.00%	-	0.00%
Delineated Stream	220	0.23%	193	0.19%

Land Use	Preferred Route		Alternate Route	
	Linear Feet	Percent	Linear Feet	Percent
Delineated Wetland	446	0.46%	528	0.53%
Commercial/Industrial	223	0.23%	223	0.22%
Institutional	274	0.28%	336	0.33%
Road ROW	2,745	2.85%	2,497	2.49%
Residential	714	0.74%	666	0.66%
Woodlot	5,207	5.41%	4,438	4.42%

Table 7-8. Land Use Impacts During Construction and Operation

Land Use	Preferred Route [1]		Alternate Route [1]	
	Construction (Acreage)	Permanent Impact (Acreage)	Construction (Acreage)	Permanent Impact (Acreage)
Agricultural	120.46	119.55	106.50	106.05
Cultivated Crop	118.04	117.13	103.99	103.54
Developed	1.96	1.96	2.04	2.04
Pasture	0.46	0.46	0.46	0.46
Aquatic Resources	1.61	1.61	0.93	0.93
Desktop Wetland	0.03	0.03	0.00	0.00
Delineated Stream	0.38	0.38	0.44	0.44
Delineated Wetland	1.20	1.20	0.49	0.49
Commercial/Industrial	0.15	0.15	0.15	0.15
Institutional[2]	0.55	0.49	0.60	0.55
Road ROW	3.90	3.82	3.36	3.35
Residential	1.20	1.20	0.49	0.49
Woodlot	9.13	9.13	6.62	6.60
Total	**137.00**	**135.95**	**118.65**	**118.12**

Notes:
[1] Permanent impact is the same as the final maintained ROW, which is planned to be 30 feet wide when paralleling roadways and 75 feet wide for cross-country and I-70 portions of the routes. The construction ROW includes temporary access roads to be used during construction only. The difference between construction and permanent impact acreages are due to off-ROW access roads, only to be used during construction and not operation.
[2] Institutional land use may include, but is not limited to, schools, hospitals, place of worship, and government facilities.

Table 7-9. Number of Sensitive Features within 1,000 Feet of the ROW for the Route Alternatives

Sensitive Features	Route Alternatives	
	Preferred	Alternate
Length (in miles)	18.2	19.0
Features within the ROW of Route Alternatives*		
Historic Structures (OHI)	0	0
National Register of Historic Places	0	0
Previously Identified Archaeological Sites	2	2
Residences	0	0
Commercial Buildings	0	0
Industrial Buildings	0	0
Schools and Hospitals	0	0
Places of Worship and Civic Buildings	0	0
State/Federal Forests and Recreational Lands	0	0
Airports	0	0
Features within 1,000 Feet of Route Alternatives (centerline)		
Historic Structures (OHI)	1	3
National Register of Historic Places	0	0
Previously Identified Archaeological Sites	10	4
Residences	74	95
Commercial Buildings	4	4
Industrial Buildings	1	1
Schools and Hospitals	0	0
Places of Worship and Civic Buildings	0	0
State/Federal Forests and Recreational Lands	0	0
Airports	0	0

A description of the impact of the proposed facility on each land use identified in paragraph 4906-5-07(B)(1)(c) is included below.

Residential

Preferred Route: As shown in Table 7-9, the Preferred Route is located within 1,000 feet of 74 residences, none of which are in the proposed permanent impact area. Residential land is less than 1% (0.7%) of land within the Preferred Route permanent impact area (1.2 acres), as shown in Tables 7-7 and 7-8, respectively

Alternate Route: As shown in Table 7-9, the Alternate Route is located within 1,000 feet of 95 residences, none of which are in the proposed permanent impact area. Residential land is less than

1% (0.7%) of the land within the Alternate Route permanent impact area (0.5 acre), as shown in Tables 7-7 and 7-8, respectively.

Commercial and Industrial

Preferred Route: As shown in Table 7-9, the Preferred Route is located within 1,000 feet of four commercial buildings and one industrial building, none of which are in the planned permanent impact area. Commercial and industrial land is less than 1% (0.2%) of land within the Preferred Route proposed permanent impact area (0.2 acre), as shown in Tables 7-7 and 7-8, respectively.

Alternate Route: As shown in Table 7-9, the Alternate Route is located within 1,000 feet of four commercial buildings and one industrial building, none of which are in the proposed permanent impact area. Commercial and industrial land is less than 1% (0.2%) of land within the Alternate Route proposed permanent impact area (0.2 acre), as shown in Tables 7-7 and 7-8, respectively.

Institutional (Cemeteries, Civic Buildings, Hospitals, Schools)

Preferred Route: As shown in Table 7-9, there are no institutional buildings within 1,000 feet of the Preferred Route. Institutional land is less than 1% (0.3%) of land within the Preferred Route proposed permanent impact area (0.5 acre), as shown in Tables 7-7 and 7-8, respectively.

Alternate Route: As shown in Table 7-9, there are no institutional buildings within 1,000 feet of the Preferred Route. Institutional land is less than 1% (0.3%) of land within the Alternate Route proposed permanent impact area (0.6 acre), as shown in Tables 7-7 and 7-8, respectively.

Places of Worship

As shown in Table 7-9, there are no places of worship located within 1,000 feet of the Preferred Route and Alternate Route. No impact on places of worship land is anticipated as a result of the proposed construction or permanent impact for the Project.

Recreational

As shown in Tables 7-7, 7-8, and 7-9, there are no recreational buildings or land located within 1,000 feet of the Preferred Route and Alternate Route. No impact on recreational land is anticipated as a result of the proposed construction or permanent impact for the Project.

Agricultural

Preferred Route: Agricultural land is 90% of land within the Preferred Route proposed permanent impact area (119.6 acres), as shown in Tables 7-7 and 7-8, respectively.

Alternate Route: Agricultural land is 91% of land within the Alternate Route proposed permanent impact area (106.1 acres), as shown in Tables 7-7 and 7-8, respectively.

The preferred route is located within 1,000 feet of agricultural buildings; however, agricultural buildings were categorized as outbuildings due to the rural nature of the Project. None of the agricultural buildings are within the proposed permanent impact area. Further discussion on Agricultural Districts and agricultural land is provided in Section 4906-5-07(C).

Vacant

There is no vacant land within 1,000 feet of the Preferred Route and Alternate Route. No impact on vacant land is anticipated as a result of the proposed construction and permanent impact for the Project.

(3) Impact on Identified Nearby Structures

The applicant shall provide, for the types of structures identified in paragraph (B)(1) of this rule, the following:

(a) For all structures within two-hundred feet of the proposed facility right-of-way, the distance between the nearest edge of the structure and the proposed facility right-of-way.

There are 63 and 81 structures (e.g., commercial, outbuilding, residential, utility) within 200 feet of the Preferred Route and Alternate Route, respectively. There are 22 and 34 single-family residences within 200 feet of the ROW of the Preferred and Alternate Routes, respectively. For the Preferred Route, six residences are within 50 feet of the ROW, 10 residences are between 51 to 100 feet of the ROW, four residences are within 101 to 150 feet of the ROW, and 16 residences are within 151 to 200 feet of the ROW. For the Alternate Route, three residences are within 50 feet of the ROW, 20 residences are between 51 to 100 feet of the ROW, 39 residences are within 101 to 150 feet of the ROW, and 36 residences are within 151 to 200 feet of the ROW.

There is one commercial building within 200 feet of the ROW of the Preferred and Alternate Routes. For the Preferred Route, one commercial building is within 101 to 150 feet of the ROW.

There are no industrial buildings and installations, schools, hospitals, place of worship, civic buildings, or other occupied places within 200 feet of the Preferred and Alternate Routes ROW.

Table 7-10. Structures within 200 Feet of Proposed Right-of-Way

Preferred Route		Alternate Route	
Structure Type	**Distance from ROW (feet)**	**Structure Type**	**Distance from ROW (feet)**
Commercial/Industrial	142	Commercial/Industrial	142
Outbuilding - Agricultural Barn	184	Outbuilding - Agricultural Barn	166
Outbuilding - Agricultural Barn	94	Outbuilding - Agricultural Barn	179
Outbuilding - Agricultural Barn	141	Outbuilding - Agricultural Barn	103
Outbuilding - Agricultural Barn	198	Outbuilding - Agricultural Barn	97
Outbuilding - Agricultural Barn	152	Outbuilding - Agricultural Barn	41
Outbuilding - Barn	5	Outbuilding - Barn	29
Outbuilding - Barn	46	Outbuilding - Barn	39
Outbuilding - Barn	190	Outbuilding - Barn	179

Preferred Route		Alternate Route	
Structure Type	**Distance from ROW (feet)**	**Structure Type**	**Distance from ROW (feet)**
Outbuilding - Barn/ Garage	94	Outbuilding - Barn	77
Outbuilding - Barn/ Garage	109	Outbuilding - Barn/ Garage	109
Outbuilding - Garage	0	Outbuilding - Barn/ Garage	94
Outbuilding - Garage	68	Outbuilding - Garage	174
Outbuilding - Garage	183	Outbuilding - Garage	15
Outbuilding - Garage	106	Outbuilding - Garage	83
Outbuilding - Garage	40	Outbuilding - Garage	140
Outbuilding - Garage	171	Outbuilding - Garage	175
Outbuilding - Garage	129	Outbuilding - Garage	199
Outbuilding - Garage	137	Outbuilding - Garage	106
Outbuilding - Garage	83	Outbuilding - Garage	68
Outbuilding - Garage	183	Outbuilding - Garage	171
Outbuilding - Garage	199	Outbuilding - Garage	183
Outbuilding - Garage	177	Outbuilding - Garage	137
Outbuilding - Garage	180	Outbuilding - Garage	155
Outbuilding - Garage	149	Outbuilding - Garage	73
Outbuilding - RV canopy	124	Outbuilding - RV canopy	100
Outbuilding - Shed	26	Outbuilding - Shed	66
Outbuilding - Shed	187	Outbuilding - Shed	136
Outbuilding - Shed	195	Outbuilding - Shed	147
Outbuilding - Shed	137	Outbuilding - Shed	142
Outbuilding - Shed	192	Outbuilding - Shed	154
Outbuilding - Shed	34	Outbuilding - Shed	12
Outbuilding - Shed	30	Outbuilding - Shed	34
Outbuilding - Shed	25	Outbuilding - Shed	192
Outbuilding - Shed	12	Outbuilding - Shed	26
Outbuilding - Shed	66	Outbuilding - Shed	25
Outbuilding - Shed	192	Outbuilding - Shed	30
Outbuilding - Shed	147	Outbuilding - Shed	85
Outbuilding - Shed	154	Outbuilding - Shed	75
Outbuilding - Shed	142	Outbuilding - Shed	161
Residence	45	Outbuilding - Shed	165

Preferred Route		Alternate Route	
Structure Type	**Distance from ROW (feet)**	**Structure Type**	**Distance from ROW (feet)**
Residence	68	Outbuilding - Shed	159
Residence	158	Outbuilding - Shed	26
Residence	122	Outbuilding - Shed	91
Residence	171	Outbuilding - Shed	51
Residence	43	Outbuilding - Shed	141
Residence	137	Residence	193
Residence	45	Residence	145
Residence	88	Residence	112
Residence	93	Residence	128
Residence	82	Residence	88
Residence	129	Residence	71
Residence	16	Residence	86
Residence	86	Residence	93
Residence	79	Residence	89
Residence	39	Residence	139
Residence	55	Residence	82
Residence	21	Residence	103
Residence	89	Residence	128
Residence	71	Residence	45
Residence	103	Residence	158
Residence	84	Residence	21
Utility	79	Residence	39
-	-	Residence	68
-	-	Residence	45
-	-	Residence	84
-	-	Residence	158
-	-	Residence	155
-	-	Residence	159
-	-	Residence	88
-	-	Residence	64
-	-	Residence	81
-	-	Residence	89
-	-	Residence	125
-	-	Residence	38
-	-	Residence	156
-	-	Residence	86

Preferred Route		Alternate Route	
Structure Type	**Distance from ROW (feet)**	**Structure Type**	**Distance from ROW (feet)**
-	-	Residence	47
-	-	Residence	81
-	-	Residence	119
-	-	Utility	99

(b) Any buildings that will be destroyed, acquired, or removed as the result of the planned facility and criteria for owner compensation.

The potential removal of structures within the proposed ROW was mitigated during the RSS of the Preferred and Alternate Routes by designing route options that avoid structure impacts to the extent feasible. During discussions with property owners, one abandoned garage will be removed along the proposed Preferred Route.

(c) A description of the mitigation procedures to be used during the construction, operation, and maintenance of the proposed facility to minimize impact to structures near the facility.

Mitigation for the prohibition of the future installation of structures within the ROW and vegetative clearing and maintenance activities for the transmission line will be determined as part of AES Ohio's acquisition of the ROW for this Project, as part of the negotiated settlement between AES Ohio and the property owner, or as determined in appropriation proceedings. If an existing septic system, or other structure, located in the transmission line ROW is impacted by construction, operation, or maintenance of the Project, the septic system will be repaired or replaced by AES Ohio, as necessary, to meet the appropriate installation requirements.

(C) AGRICULTURAL DISTRICTS AND IMPACTS TO AGRICULTURAL LAND

The applicant shall provide information regarding agricultural districts and potential impacts to agricultural lands.

The potential impacts of the Project on agricultural land use include damage to crops that may be present, disturbance of underground field drainage systems, compaction of soils, and the potential for temporary reduction of crop productivity.

Soil compaction resulting from construction activities is typically a temporary issue and is resolved within a few seasons of plowing and tilling. AES Ohio will work with the agricultural landowners to resolve conflicts with drainage tiles and irrigation systems that are affected by the Project, where necessary. Approximately 9.15 acres of agricultural land is in the Preferred Route ROW, while 9.42 acres is located within the Alternate Route ROW.

(1) Agricultural Land Use/Districts Map

The applicant shall provide, for each of the site/route alternatives, a map of at least 1:24,000 scale, including the potential disturbance area for the transmission or pipeline alignment, and the substation site, which map shall include the following features:

(a) Agricultural land use. Where visible and distinguishable, distinguish between agricultural uses such as cultivated land, permanent pasture land, managed woodlots, orchards, nurseries, livestock and poultry confinement areas, and agricultural-related structures.

(b) Agricultural district land existing at least sixty days prior to submission of the application located within each transmission line or pipeline right-of-way or within each site boundary.

The various categories of agricultural land and agricultural districts are depicted on Map series 7-2 for both the Preferred and Alternate Routes. The Preble County Director of Land Use Management and the County Auditor were contacted to obtain information on current Agricultural District Land records; current data was received on October 27, 2023.

(2) Impacts to Agricultural Lands and Agricultural Districts

The applicant shall provide, for all agricultural land, and separately for agricultural uses and agricultural districts identified under paragraph (C)(1) of this rule, the following:

(a) A quantification of the acreage impacted.

Table 7-11 below provides the acreage impacted for agricultural land uses and agricultural districts. The agricultural land use was based on aerial imagery. The Preferred Route crosses five parcels (for a total distance of 0.9 mile) designated as Agricultural Districts, and the Alternate Route crosses six parcels (for a total of 1.2 miles) designated as Agricultural Districts.

Table 7-11. Impacts to Agricultural Lands and Agricultural Districts

Agricultural Land Use	Preferred Route [1]		Alternate Route [1]	
	Construction (Acreage)	Permanent Impact (Acreage)	Construction (Acreage)	Permanent Impact (Acreage)
Cultivated Crop	118.04	117.13	103.99	103.54
Developed	1.96	1.96	2.04	2.04
Pasture	0.46	0.46	0.46	0.46
Total	**120.46**	**119.55**	**106.49**	**106.04**
Agricultural District	9.16	9.15	9.43	9.42

Note:
[1] Permanent impact is the same as the final maintained ROW, which is planned to be 30 feet when paralleling roadways and a 75-foot ROW for cross-country portions of the routes. The construction ROW includes temporary access roads to be used during construction only. The difference between construction and permanent impact acreages are due to off-ROW access roads, only to be used during construction and not operation.

(b) An evaluation of the impact of the construction, operation, and maintenance of the pro-posed facility on the land and the following agricultural facilities and practices within the project area:

(i) Field operations such as plowing, planting, cultivating, spraying, harvesting.

Field operations, such as plowing, planting, cultivating, spraying, and harvesting of cultivated crops will only be interrupted for a portion of the growing season or a portion of the dormant season during

construction. Potential impacts to agricultural use resulting from Project construction include temporary damage to crops (one season at most) during the growing season, minor and temporary disturbance of drainage patterns, disruption of plow/harvest patterns, and a reduction of tillable land at the pole structure locations. Property owners will be compensated for crop damage resulting from AES Ohio construction activities. No significant impacts to livestock operations or grazing areas are anticipated. Property owners may continue to utilize most of the ROW area for general use (e.g., lawn maintenance, crop cultivation, livestock) after construction but is contingent on the use having no adverse impact on the safe and reliable operation of the transmission line. Crop production would be allowed immediately adjacent to the pole structures and guys wires where applicable.

(ii) Irrigation

There are no known irrigation systems within the proposed ROW for either route. AES Ohio will identify the presence of any such systems through contact with landowners once the final route is approved. Any system that must be relocated will be coordinated with the landowner to avoid affecting the irrigation system's operation and avoid any cost incurred by the landowner.

(iii) Field drainage systems

AES Ohio will restore any damaged systems to their pre-construction condition. AES Ohio will also work with the agricultural landowners to resolve conflicts with field drainage systems and other facilities that may be impacted by the Project, where necessary.

(iv) Structures used for agricultural operations

There are four agricultural barns within 200 feet of the ROW of the Preferred and Alternate Routes. The Preferred Route has one agricultural barn within 100 feet of the ROW, one agricultural barn within 101 to 150 feet of the ROW, and two agricultural barns within 151 to 200 feet of the ROW. The Alternate Route has two agricultural barns within 100 feet of the ROW, one agricultural barn within 101 to 150 feet of the ROW, and two agricultural barns within 151 to 200 feet of the ROW. Agricultural barns are not anticipated to be impacted by the Project.

(v) The viability as agricultural land of any land identified as an agricultural district.

Agricultural Districts are crossed by the Project, as identified and quantified previously, but the viability of the Agricultural Districts identified and crossed are not anticipated to be affected.

(c) A description of mitigation procedures to be utilized by the applicant during construction, operation, and maintenance to reduce impacts to agricultural land, structures, and practices. The description shall illustrate how avoidance and mitigation procedures will achieve the following:

(i) Avoidance or Minimization of Damage

AES Ohio will use existing public roads and farm roads, where available, to limit the amount of crop area disturbed during construction. AES Ohio will restore damaged field tile drainage systems in agricultural areas to their pre-construction condition. AES Ohio will also work with the agricultural landowners to resolve conflicts with field drainage systems that may be impacted by the Project, where necessary.

To minimize damage to agricultural land, AES Ohio, to the extent practical, will place poles beyond or at the edges of agricultural fields where the engineering design of the line and structure placement

allows. This mitigation effort should limit disruption of plow patterns and minimize the creation of areas where weeds and other non-crops can grow in relation to construction of the transmission line. In instances where there is damage in the ROW, compensation for this limited impact will be provided to the property owner.

(ii) Field Tile System Damage Repairs

Concerns over interference with irrigation systems will be addressed on a case-by-case basis with the individual property owner. In general, AES Ohio will provide mitigation for damage to underground drainage systems from construction, operation, and maintenance activities by repairing or replacing damaged sections of the drainage systems, as necessary. Payment to the property owner may also be provided for damages as part of the easement negotiations, or as determined in appropriation proceedings.

(iii) Segregation and Restoration of Topsoil

Excavated topsoil will be segregated and stockpiled, where necessary, to maintain long-term agricultural uses. Topsoil will also be de-compacted and restored to original conditions unless otherwise agreed to by the landowner.

(D) REGIONAL LAND USE PLANS AND DEVELOPMENT

The applicant shall provide information regarding land use plans and regional development.

(1) Impacts to Regional Development

The applicant shall provide a description of the impact of the facility on regional development, referring to pertinent formally adopted regional development plans.

This Project is expected to support regional development in Preble and Montgomery Counties through increased reliability and availability of electric power to residential, commercial, institutional, and industrial users throughout the region. No negative impacts on regional development are foreseen for this Project. A more detailed discussion of the need for this Project and how it will affect regional development is included in Section 4906-5-03.

(2) Compatibility or Proposed Facility with Current Regional Land Use Plans

The applicant shall provide an assessment of the compatibility of the proposed facility and the anticipated resultant regional development with current regional land use plans.

Preble County Director of Land Use Management and Preble County Development Partnership were consulted regarding known planned development near the Project in July 2022. Preble County has had studies for development of electric vehicle charging stations completed for the I-70/State Highway 127 and I-70/State Highway 503 areas. In addition, the I-70/State Highway 503 area hosts existing major industrial facilities that have experienced grid reliability issues during storm events and are looking for ways to improve electrical service from Shield Road. The I-70/State Highway 127 area holds interest for both the county and developers for future commercial and industrial development. Engineering estimates and preliminary work has occurred on approximately 200 acres of land, and preliminary work has begun on a smaller project at the southwestern corner of I-70/State Highway 127. Developers have reached out to the Preble County Development Partnership regarding interest in development along the state line/I-70/U.S. Route 40 corridor; however, this development is expected to take place well into the future due to the current lack of existing infrastructure.

The Project routes were developed with the existing land use configuration. In general, the Preferred and Alternate Routes adhere to the objectives, goals, and future needs for the Project area by aligning Project infrastructure with existing road infrastructure, existing utilities, parcel boundaries, and avoiding high density and environmentally sensitive areas.

(E) CULTURAL AND ARCHAEOLOGICAL RESOURCES

The applicant shall provide information on cultural and archaeological resources.

Cultural resource studies of the Project area were conducted on behalf of the AES Ohio. In addition to a background records check and literature review using the cultural data files from the Ohio State Historic Preservation Office (OHPO) for both the Preferred and Alternate Route, a detailed Phase I cultural resources survey was completed for the Preferred Route. Copies of the report detailing these efforts, including the OHPO consultation will be filed, as confidential, with the OPSB under separate cover due to the inclusion of sensitive and confidential archaeological site information.

(1) Cultural Resources Map

The applicant shall indicate on a map of at least 1:24,000 scale, within one-thousand feet of each of the site/route alternatives, any formally adopted recreational areas, recreational trails, scenic rivers, scenic routes or byways, and registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance. Landmarks to be considered for purposes of paragraph (E) of this rule are those districts, sites, buildings, structures, and objects that are recognized by, registered with, or identified as eligible for registration by the national registry of natural landmarks, the Ohio historical society, or the Ohio department of natural resources.

A recreational and cultural resources map is presented as Map series 7-3 and includes recreational areas and trails, scenic rivers, scenic routes or byways, and cultural resources within 1,000 feet of the Preferred and Alternate Routes. It is important to note that Map series 7-3 only depicts cultural resources already in the public domain (place of worship, cemeteries, and Ohio Historic Inventory [OHI] resources). All resources are listed in Table 7-12.

Based on the recreational and cultural resources desktop study, there is one scenic byway (U.S. 40) (as defined by the Ohio Department of Natural Resources [ODNR] and/or the ODOT) that crosses both proposed routes. There are no National Register of Historic Places- (NRHP-) listed or eligible properties within 1,000 feet of the proposed routes.

(2) Cultural Resources in Study Corridor

The applicant shall describe studies used to determine the location of cultural resources within the study corridor. Correspondence with the Ohio historical preservation office shall be included.

Archival research considered a 1,000-foot buffer around both the Preferred and Alternate Routes to locate previously identified cultural resources and to provide information on the probability of identifying new cultural resources within the Area of Potential Effects as part of this Project. This review included examination of the Ohio Archaeological Inventory (OAI), the OHI, Determination of Eligibility (DOE) files, NRHP-listed properties, cemeteries, historic-era bridges, National Historic Landmarks, and previous cultural resources surveys on-file with the OHPO. This archival research is summarized for the Preferred and Alternate Route below:

- Preferred Route: No NRHP properties/districts or DOE files are within 1,000 feet of the Preferred Route. A total of 10 OAI sites, one OHI resource, four cemeteries, and five prior cultural investigations were documented within 1,000 feet of the Preferred Route alignment. Two of the cemeteries (Dry Fork Baptist Cemetery and Crisler-Walker Cemetery) and four of the OAI archaeological sites (33PR0062, 33PR0087, 33PR0096, and 33PR0117) are located within the Preferred Route ROW. A Phase I cultural resources survey of the Preferred Route only relocated site 33PR0062. These survey results are being submitted under separate cover to the OPSB.
- Alternate Route: There are no NRHP properties/districts or DOE files within 1,000 feet of the Alternate Route. There are 10 OAI sites, two OHI resources, five cemeteries, and four prior cultural investigations within 1,000 feet of the Alternate Route alignment. Two of the cemeteries (Dry Fork Baptist Cemetery and Crisler-Walker Cemetery) and three of the OAI archaeological sites (33PR0087, 33PR0096, and 33PR0117) are located within the Alternate Route ROW.

Cultural resources already in the public domain (e.g., OHI-listed resources) within 1,000 feet of the Preferred Route and Alternate Route are identified on Map series 7-3. All known cultural resources within 1,000 feet are summarized in Table 7-12 below.

Table 7-12. Cultural Resources (Archaeological and Historical) within 1,000 Feet

Type of Cultural Resource	Preferred Route		Alternate Route	
	count	distance (Feet)	count	distance (Feet)
OGS Cemetery	4	975	4	N/A
		N/A		668
		50		18
		52		27
		720		794
Architectural and Historical Resource	1	N/A	3	249
		N/A		878
		939		911
Previous Cultural Resources Survey	5	208	4	N/A
		0		0
		0		0
		0		0
		0		0
Archaeology Site	10	82	5	82
		539		N/A
		0		5
		347		N/A
		0		2
		0		N/A

Type of Cultural Resource	Preferred Route		Alternate Route	
	count	distance (Feet)	count	distance (Feet)
		202		N/A
		0		0
		501		666
		271		N/A
Historic Scenic Byway	1	0	1	0

Per Ohio Revised Code, Sections 140.52-149.54, a Phase I cultural resources survey of the Preferred Route was completed and is being provided to the OPSB under separate cover. As a result of this survey, eight new archaeological sites were identified within the Preferred Route ROW and recommended as not eligible for listing in the NRHP. Site revisits were also conducted at 33PR0062, 33PR0087, 33PR0096, and 33PR0117. Only site 33PR0062 was relocated and is considered not eligible for NRHP listing. It was recommended that the Project would not affect historical properties, and no additional cultural resources work was needed. This report was submitted to the OHPO on December 15, 2023. OHPO correspondence and concurrence will be docketed on the case record once received.

(3) Construction, Operation, and Maintenance Impacts on Cultural Resources

The applicant shall provide an evaluation of the probable impact of the construction, operation, and maintenance of the proposed facility on the preservation and continued meaningfulness of cultural resources.

Based on the results of the cultural resources investigation to date, impacts to historical properties associated with the construction, operation, and maintenance of the proposed Project are not anticipated.

It should be noted that the Preferred and Alternate Routes are located within the Dry Fork Baptist Cemetery and Crisler-Walker Cemetery. The Dry Fork Baptist Cemetery has been well defined by (OGS) and is no longer an active cemetery. AES and Monroe Township have been in coordination regarding impacts to the cemetery and have agreed that no structures would be placed within the cemetery management area and that the Preferred Route would lessen the visual impacts to the cemetery. Depending on the proximity of ground disturbance to the cemetery, the OHPO may require a cemetery plan. The Crisler-Walker Cemetery is recorded by OGS as having been removed and will not be impacted by the proposed Project.

(4) Mitigation Procedures

The applicant shall describe the plans to avoid or mitigate any adverse impacts to cultural resources. Mitigation procedures to be used during the operation and maintenance of the proposed facility shall be developed in consultation with the Ohio historical society. The plans shall detail procedures for flagging and avoiding all landmarks in the project area. The plans shall also contain measures to be taken should previously-unidentified landmarks be discovered during construction of the project.

Based on the results of the desktop review, no impacts to historical properties are anticipated; therefore, no mitigation procedures are needed. Coordination with the OHPO is still being conducted, and the OHPO may require a cemetery plan for the Dry Fork Baptist Cemetery. If required, those procedures will be outlined in this section.

(5) Aesthetic Impact

The applicant shall evaluate the aesthetic impact of the proposed facility, including the following:

(a) Visibility of the Project

The visibility of the proposed facility from such sensitive vantage points as residential areas, lookout points, scenic highways, waterways, and landmarks identified in paragraph (E)(1) of this rule.

The viewshed along both the Preferred Route and Alternate Route from the residences and potentially sensitive vantage points may be altered by the presence of the transmission line. The Project area is characterized by relatively flat terrain, urban residential properties, industrial lots, agricultural areas, woodlots, wetlands, and floodplains. Several major overhead transmission lines and railroads extend through or adjacent to the Preferred and Alternate Routes. Due to both the intervening developed land uses and existing infrastructure crossed, the Project is unlikely to have a significant impact on the overall visual landscape. At select locations, where tree clearing may be required or upgrading structures to double circuit, visual impacts may be greater.

(b) Facility Effect on Site and Surrounding Area

How the proposed facility will likely affect the aesthetic quality of the site and surrounding area.

Construction of the Project would affect the existing visual aesthetics of the area, which the transmission line passes, primarily from the removal of trees for any areas within the ROW or upgrading to large structures to accommodate a double-circuit configuration. However, the degree of visual impact of the man-made element will vary with the setting and structure type; the impact can be evaluated by comparing the amount of contrast resulting from the construction of the structure and the existing landscape. For example, if the transmission line were screened from view from sensitive receptors, then the aesthetic impact would be minimal, and if the transmission line were placed in an existing open area, it would have a comparatively higher aesthetic impact. The Preferred Route involves upgrading/rebuilding approximately 5.3 miles of existing 69 kV transmission line and building approximately 12.9 miles of new 138 kV transmission line, which predominately parallels local roads and Interstate 70. The Alternate Route involves paralleling approximately 5.3 miles of existing 69 kV transmission line, rebuilding/upgrading 0.4 miles of an existing 33 kV transmission line from single to double circuit 138/33kV, and building approximately 13.4 miles of new 138 kV transmission line, which predominately parallels local roads.

(c) Visual Impact Minimization

Measures that will be taken to minimize any visual impacts created by the proposed facility, including, but not limited to, facility location, lighting, structure design, visual screening, and facility coloration. In no event shall these measures conflict with relevant safety requirements.

The ability to minimize the visual impacts of the proposed line is constrained by engineering requirements, existing land use, and the Project length. AES Ohio has limited the potential aesthetic impacts of the transmission line to the extent possible through the route selection process, and where practical, paralleling existing infrastructure or rebuilding existing electric transmission lines.

4906 5 08 ECOLOGICAL INFORMATION AND COMPLIANCE WITH PERMITTING REQUIREMENTS

This section summarizes the results of a desktop assessment and onsite investigations of ecological resources within the study area of the proposed Project. A map and literature search was conducted for a corridor 1,000 feet on either side of the Preferred and Alternate Routes centerlines. A field study was conducted for an approximately 300-foot corridor for the Preferred and Alternate Routes. The sections below provide ecological information for the Preferred and Alternate Routes.

(A) ECOLOGICAL MAP

The applicant shall provide for each of the site/route alternatives a map of at least 1:24,000 scale, including the area one thousand feet on each side of the transmission line or pipeline alignment and the area within one thousand feet of a substation site or compressor station site. The map shall include the following:

(1) Proposed transmission line or pipeline alignments.
(2) Proposed substation or compressor station locations.
(3) All undeveloped or abandoned land, including:

(a) Streams and drainage channels.
(b) Lakes, ponds, and reservoirs.
(c) Wetlands, including the entire area of the wetland if it extends outside of the study corridor.
(d) Woody and herbaceous vegetation land.

(4) Highly erodible soils and slopes of twelve per cent or greater.
(5) Wildlife areas, nature preserves, and publicly identified conservation areas that are managed by a public body or a recognized nonprofit organization.

A map at a scale of 1:8,000 (1-inch = 1,000 feet), including the corridor 1,000 feet on either side of the proposed centerline (referred to as the 2,000-foot corridor) of the Preferred and Alternate Routes is presented as Map series 8-1. These maps depict the Preferred and Alternate Routes, streams, lakes, ponds, and reservoirs, NWI wetlands, undeveloped land, woody/herbaceous land, and highly erodible soils. Data presented on Map series 8-1 were compiled from publicly available published GIS data. On July 1, 2022, the ODNR Division of Wildlife (DOW) replied to an email request for ODNR NHD records of wildlife areas, nature preserves, and conservation areas (Attachment 8-1). The ODNR response indicated that no managed areas are within a 1-mile radius of the Project. A detailed description of waterbodies and wetlands found within the Environmental Survey Area (“ESA”) is located in sections below.

(B) FIELD SURVEY REPORT FOR VEGETATION AND SURFACE WATERS

The applicant shall provide for each of the site/route alternatives the results of a field survey of the vegetation and surface waters within one hundred feet of the potential disturbance area of the facility.

On June 12 to 16, June 26 to 30, and October 17 and 18, 2023, Arcadis ecologists, at the request of AES Ohio, conducted an ecological field study to quantify the occurrence and quality of wetlands and streams

and document vegetation and wildlife within the approximately 300-foot ESA corridor for the Preferred Route. Additionally, Arcadis ecologists performed ecological field studies within the approximately 300-foot review corridor of the Alternate Route from June 2023 through October 2023.

Due to safety concerns, on November 14, 2023, AES Ohio was granted a waiver by the OPSB for an approximately 4.9-mile survey corridor that parallels I-70 within the ODOT ROW. For this survey corridor, Arcadis utilized aerial imagery, NWI, NHD, and NRCS publicly available GIS data, as well as visual inspections from outside of the ODOT ROW, to assess the presence of wetlands, waterbodies, and plant species. Results and findings from the field study are described in greater detail in Sections 4906-05-08(B) (1-4).

(1) Vegetative Communities, Wetlands, and Streams in Study Area

The applicant shall provide a description of the vegetative communities present within the study area, and delineations of wetlands and streams.

A description of vegetative communities and delineations of wetlands and streams within the study area are provided below.

Vegetative Communities

Vegetative communities and land use types within the ESA include agricultural row crop and pasture fields, old fields, early or second growth successional forests, riparian areas, palustrine emergent (PEM) wetlands, palustrine scrub-shrub (PSS) wetlands, palustrine forested (PFO) wetlands, and residential lawns, in addition to the identified waterbodies. Details on the anticipated impacts from construction of the Project are provided in Section 4906-05-08(B)(3)(a) and in Table 8-5.

- **Agricultural and Pasture Fields**
  Portions of both the Preferred and Alternate Routes cross agricultural pasture and row crop fields. Corn (*Zea mays*) and soybeans (*Glycine max)* were observed in most of the crop fields. Livestock pastures dominated by a variety of grazed grass species were also observed. The two dominant grasses observed were rough fescue (*Festuca arundinacea*) and Japanese bristlegrass (*Setaria faberi*).

- **Old Field**
  Herbaceous cover exists in successional old-field communities. Old-field plant communities are at the earliest stages of recolonization following disturbance. This community type is typically short-lived (less than 10 years), progressively giving way to shrub and forest communities unless periodically redisturbed, in which case, they remain as fallow fields. Old-field areas are located within much of the Preferred and Alternate Routes, especially in inactive pastures, clear cut areas, and within occasionally maintained portions of the existing transmission line ROW.

  Dominant plant species in the old-field communities included:

  - Common thistle (*Cirsium vulgare)*
  - Canadian goldenrod (*Solidago canadensis*)
  - Broom sedge bluestem (*Andropogon virginicus*)
  - Fuller's teasel (*Dipsacus fullonum*)

- Japanese bristlegrass (*Setaria faberi*)
- White clover (*Trifolium repens*)
- Red clover (*Trifolium pratense)*
- Rough fescue (*Festuca arundinacea*)
- Common dandelion (*Taraxacum officinale*)
- Annual ragweed (*Ambrosia artemisiifolia*)
- Hemp dogbane (*Apocynum cannabinum*).

- **Successional Forests**
  Upland, early successional or second growth forests are present across portions of the ESA within the Preferred and Alternate Routes. Dominant canopy species within these forested areas include the following:

  - Black Walnut (*Juglans nigra*)
  - Osage Orange (*Maclura pomifera)*
  - Red maple (*Acer rubrum*)
  - Shagbark hickory (*Carya ovata*)
  - American elm (*Ulmus americana*)
  - Black cherry (*Prunus serotina)*
  - Red oak (*Quercus rubra*)
  - Multiflora rose (*Rosa multiflora*)
  - Poison ivy (*Toxicodendron radicans*)
  - Amur honeysuckle (*Lonicera maackii*)
  - Japanese honeysuckle (*Lonicera japonica*).

  The understory of the various forest communities within the Project area range from open to moderately dense.

- **Wetland Vegetation**
  Wetlands were observed and delineated within the proposed Preferred and Alternate Route ESAs. Dominant plant species observed within PEM wetlands include the following:

  - Narrowleaf cattail (*Typha angustifolia*)
  - Reed canary grass (*Phalaris arundinacea*)
  - Sedge species (*Carex* spp.)
  - Black willow (*Salix nigra*)
  - Rush species (*Scirpus* spp.)
  - Creeping jenny (*Lysimachia nummularia*)
  - Poison ivy (*Toxicodendron radicans).*

  Dominant plant species observed within PSS wetlands include the following:

  - Black willow (*Salix nigra*)
  - Panicled aster (*Symphyotrichum lanceolatum)*
  - Green ash (*Fraxinus pennsylvanica*)

- Narrowleaf cattail (*Typha angustifolia*)
- Rice-cut grass (*Leersia oryzoides*)
- Rush species (*Scirpus* spp.)
- Sedge species (*Carex* spp.).

Dominant plant species observed within PFO wetlands include the following:

- American elm (*Ulmus americana*)
- Silver maple (*Acer saccharinum*)
- Red maple (*Acer rubrum)*
- Green ash (*Fraxinus pennsylvanica*)
- Eastern cottonwood (*Populus deltoides*).

- **Residential and Commercial**
  Residential and/or commercial areas exist within the Preferred and Alternate Route ESAs. Vegetation identified on residential and commercial properties include a variety of herbaceous grasses and forbs typically found in new-field communities. The two dominant grasses observed were rough fescue and Japanese bristlegrass. The dominant forb species include common dandelion, white clover, red clover, common thistle, and English plantain. The vegetation on the residential and commercial properties are, for the most part, regularly maintained through mowing.

- **Utility ROW**
  Some linear ROWs are within or adjacent to the proposed Preferred and Alternate Routes, some of which occur adjacent to roads. These ROWs exist for AES Ohio's existing transmission lines and local electric distribution lines. Vegetation with tall growth habits can pose a risk to the operation and maintenance of overhead electric transmission lines and are, therefore, typically removed periodically from the ROW. Vegetation within existing ROWs is maintained through mowing, mechanical shrub removal, and/or chemical application. Vegetation within upland portions of the maintained ROW consists of herbaceous and scrub-shrub species typically found in old- and/or new-field communities. The dominant grass species include rough fescue and Japanese bristlegrass. The dominant forb species include Canadian goldenrod, Fuller's teasel, annual ragweed, and hemp dogbane. Dominant shrub-scrub species include multiflora rose, as well as amur and Japanese honeysuckle.

Wetland Survey Methodology

According to the U.S. Army Corps of Engineers (USACE), a wetland is defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytic) typically adapted for life in saturated (hydric) soil conditions.

Arcadis used the onsite methodology described in the 1987 Technical Report Y-87-1, USACE Wetlands Delineation Manual (USACE 1987) and subsequent guidance documents including the Regional Supplement to the USACE Wetland Delineation Manual: Midwest Region (USACE 2012). Additionally, each identified wetland was evaluated in accordance with the Ohio Rapid Assessment Method (ORAM) developed by the Ohio Environmental Protection Agency (Mack 2001). Wetland categorizations were

conducted in accordance with the latest quantitative score calibration procedure (OEPA 2001). To identify whether potential wetlands exist along the Preferred and Alternate Routes, a desktop study of available resources was performed before the field wetland delineations. Additionally, the U.S. Fish and Wildlife Service (USFWS) NWI maps and the NRCS soil survey (USDA NRCS 2023) and hydric soil list for Preble County, Ohio and Wayne County, Indiana were reviewed for areas within 1,000 feet of the Preferred and Alternate Routes.

For areas included in the OPSB wavier approval, Arcadis utilized aerial imagery, NWI/NHD/NRCS publicly available GIS data, and visual inspections from outside of ODOT ROW to assess the presence of waterbodies and plant species.

Summary of National Wetland Inventory Data

USFWS NWI data, including freshwater wetlands and riverine areas, were mapped within 1,000 feet of the Preferred and Alternate Routes and reviewed to guide the field ecological survey as one factor in identifying potential wetland locations (USFWS 2023). The NWI-mapped areas are shown on Map series 8-1 for the Preferred and Alternate Routes, respectively. Table 8-1 below summarizes the NWI data by wetland classification and habitat type. The actual extent and type of field-delineated wetlands along the routes are discussed in the next section.

Table 8-1. NWI Wetlands within 1,000 Feet of the Preferred and Alternate Routes

Wetland Type	NWI Code	NWI Habitat Type	Total Number of Each Habitat Type (Preferred/Alternate)
Freshwater Emergent Wetland	PEM1A	Palustrine Emergent Persistent Temporarily Flooded	18 - Preferred 18 - Alternate
	PEM1B	Palustrine Emergent Persistent Seasonally Saturated	0 - Preferred 1 - Alternate
	PEM1F	Palustrine Emergent Persistent Semi-permanently Flooded	1 - Preferred 0 - Alternate
Freshwater Forested/Shrub Wetland	PFO1A	Palustrine Forested Broad-Leaved Deciduous Temporarily Flooded	5 - Preferred 4 - Alternate
	PFO1C	Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded	1 - Preferred 4 - Alternate
Freshwater Pond	PUBGh	Palustrine Unconsolidated Bottom Intermittently Exposed Diked/Impounded	1 - Preferred 1 - Alternate
	PUBGx	Palustrine Unconsolidated Bottom Intermittently Exposed Excavated	2 - Preferred 3 - Alternate
Riverine	R4SBC	Riverine Intermittent Streambed Seasonally Flooded	14 - Preferred 16 - Alternate

Wetland Type	NWI Code	NWI Habitat Type	Total Number of Each Habitat Type (Preferred/Alternate)
	R5UBH	Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded	5 - Preferred 6 - Alternate
Total Number of Preferred Route NWI Wetlands			**47**
Total Number of Alternate Route NWI Wetlands			**53**

Notes:
Total number of PEM = 38, PSS = 0, PFO = 14, Pond = 7, Riverine = 41
* USFWS 2023

Field Delineated Wetlands

Arcadis identified 25 wetlands totaling 6.49 acres in the combined Project ESA. Six wetlands are within the ESA of both the Preferred Route and Alternate Route; therefore, there is an approximate 0.75 acre overlap of the total acreages listed below.

Twenty-one wetlands totaling 5.74 acres were identified within the approximate 300-foot-wide survey corridor along the Preferred Route, and 1.23 acres within the proposed 30- and 75-foot-wide ROW. Eight wetlands are crossed by the Preferred Route centerline, for a total length of 446 linear feet.

Eleven wetlands totaling 2.37 acres were identified within the approximate 300-foot-wide survey corridor along the Alternate Route, and 0.19 acre within the proposed 30- and 75-foot-wide ROW. Four wetlands are crossed by the Alternate Route centerline, for a total length of 276 linear feet.

Representative photographs of wetlands identified during the field reconnaissance and completed USACE and ORAM forms are included in Attachment 8-1. Field-delineated wetlands within the environmental survey area are mapped on Map series 8-2 and are summarized below in Tables 8-2.

Table 8-2. Delineated Wetlands Crossed or within the Preferred and Alternate Route Environmental Field Survey Area and ROW

Wetland Name	Route	Map	Wetland Type	ORAM Score	ORAM Category	Acreage within Field Survey Area	Acreage within Potential Disturbance Area/ROW	Length Crossed by Centerline (feet)
Preferred Route Wetlands								
WAG-001*	Preferred	8-2 (Sheet 7)	PFO	29.5	1	0.39	0.00	0
WAG-002*	Preferred	8-2 (Sheet 4)	PEM	32	2 gray zone	0.10	0.01	20
WAG-003*	Preferred	8-2 (Sheet 3)	PFO	26.5	1	0.12	0.07	0
WAG-005	Preferred	8-2 (Sheet 20)	PEM	28	1	0.39	0.22	0
WAG-006	Preferred	8-2 (Sheet 22)	PEM	15.5	1	0.05	0.00	0
WAG-007	Preferred	8-2 (Sheet 23)	PEM	15.5	1	0.26	0.04	12
WAG-008	Preferred	8-2 (Sheet 22)	PEM	37	2	0.25	0.05	32
WDD-001**	Preferred	8-2 (Sheet 23), 8-2 (Sheet 29)	PEM	N/A	N/A	0.00	0.00	0
WSJ-001*	Preferred	8-2 (Sheet 2)	PEM	24	1	0.13	0.13	0
WSJ-002*	Preferred	8-2 (Sheet 3)	PEM	33	2 gray zone	0.44	0.12	69
WSJ-003	Preferred	8-2 (Sheet 15), 8-2 (Sheet 16)	PEM	26	1	0.03	0.00	0
WSJ-004	Preferred	8-2 (Sheet 16)	PSS	41	2	0.40	0.03	0
WSJ-005	Preferred	8-2 (Sheet 16)	PEM	17	1	0.04	0.04	0
WSJ-006	Preferred	8-2 (Sheet 17), 8-2 (Sheet 19)	PEM	52.5	2	0.10	0.00	0
WSJ-006	Preferred	8-2 (Sheet 17), 8-2 (Sheet 19)	PFO			0.66	0.14	83
WSJ-007	Preferred	8-2 (Sheet 17), 8-2 (Sheet 19)	PFO	52.5	2	0.26	0.15	100
WSJ-009*	Preferred	8-2 (Sheet 9), 8-2 (Sheet 10)	PEM	24	1	0.46	0.08	35
WSJ-011	Preferred	8-2 (Sheet 23), 8-2 (Sheet 29)	PEM	24	1	1.21	0.03	15
WSJ-011**	Preferred	8-2 (Sheet 23), 8-2 (Sheet 29)	PEM			0.00	0.00	0

Wetland Name	Route	Map	Wetland Type	ORAM Score	ORAM Category	Acreage within Field Survey Area	Acreage within Potential Disturbance Area/ROW	Length Crossed by Centerline (feet)
WSJ-018	Preferred	8-2 (Sheet 30), 8-2 (Sheet 33)	PEM	33	2 gray zone	0.12	0.00	0
WSJ-019	Preferred	8-2 (Sheet 30), 8-2 (Sheet 32), 8-2 (Sheet 33)	PEM	11	1	0.10	0.04	22
WSJ-020	Preferred	8-2 (Sheet 23)	PEM	20	1	0.25	0.08	58
					Total:	**5.74**	**1.23**	**446**
Alternate Route Wetlands								
WAG-001*	Both	8-2 (Sheet 7)	PFO	29.5	1	0.39	0.00	0
WAG-002*	Both	8-2 (Sheet 4)	PEM	32	2 gray zone	0.10	0.01	20
WAG-003*	Both	8-2 (Sheet 3)	PFO	26.5	1	0.12	0.12	131
WSJ-001*	Both	8-2 (Sheet 2)	PEM	24	1	0.13	0.00	0
WSJ-002*	Both	8-2 (Sheet 3)	PEM	33	2 gray zone	0.44	0.08	66
WSJ-008	Alternate	8-2 (Sheet 25)	PFO	36	2	0.48	0.00	0
WSJ-009*	Both	8-2 (Sheet 9), 8-2 (Sheet 10)	PEM	24	1	0.46	0.08	35
WSJ-010	Alternate	8-2 (Sheet 32)	PEM	32	2 gray zone	0.07	0.02	16
WSJ-012	Alternate	8-2 (Sheet 31)	PEM	27	1	0.04	0.04	39
WSJ-017	Alternate	8-2 (Sheet 32)	PEM	16	1	0.10	0.08	61
WSJ-021	Alternate	8-2 (Sheet 28)	PEM	24	1	0.07	0.05	160
					Total:	**2.37**	**0.49**	**528**

Notes:
*Indicates the delineated wetland was determined to be along both the Preferred and Alternate Routes.
** Indicates a portion of the wetland extending into the ODOT ROW was delineated via GIS data and field observations.
N/A indicates wetland WDD-001 is located in the waiver area and was not assessed for ORAM scoring.
a Wetland Type: PEM = palustrine emergent, PSS = palustrine scrub/shrub, PFO = palustrine forested.
b The width of the ESA was approximately 300 feet on both the Preferred and Alternate Routes.
c The width of the potential disturbance area and the final maintained cross-country ROW is planned to be 75 feet and 30 feet ROW where paralleling roads.
d Total may vary slightly from the sum of their parts due to rounding.

Field-Delineated Streams

Streams and drainage channels were delineated and assessed during the ecological survey of the Preferred and Alternate Routes. Streams with drainage areas greater than 1 square mile or maximum pool depths greater than 40 centimeters were assessed using the OEPA Qualitative Habitat Evaluation Index (QHEI). The QHEI is one measure that is used by the OEPA, in association with biotic sampling, to determine a stream's aquatic life use designation in accordance with the Ohio water quality standards (OEPA 2020). The QHEI method classifies streams based on their drainage area. Streams that drain greater than or equal to 20 square miles are classified as "larger streams," while those that drain less than 20 square miles are classified as "headwaters."

No waterbodies within the Project area are designated as outstanding state waters, outstanding national resource waters, or superior high-quality waters (OEPA 2020).

Although not a regulatory requirement, the OEPA's Headwater Habitat Evaluation Index (HHEI) can be used to evaluate streams with a drainage area less than or equal to 1 square mile, and maximum pool depths less than or equal to 40 centimeters (OEPA 2006). The HHEI is generally used to assess Primary Headwater Habitat (PHWH) streams that typically fall under the classification of first- or second-order streams. The HHEI rates a stream based on its physical habitat and uses that information to determine the biological potential of the stream. The physical habitats scored for the HHEI are substrate type, pool depth, and bank full width. Scores for Class I PHWH streams range from 0 to 29.9, scores for Class II PHWH streams range from 30 to 69.9, and scores for Class III PHWH streams range from 70 to 100. A "modified" qualifier may be added as a prefix to any of these classes if evidence of anthropogenic alterations, such as channelization and bank stabilization, are observed. A higher PHWH class corresponds with a more continuous flow regime. The flow regime determines the physical habitat of the stream and is, therefore, indicative of the biological communities it can support. Streams with scores between 30 and 69 may be classified as potential rheocrene habitat, depending on substrate type, watershed size, and stream flow.

Nineteen streams identified during the ecological survey on the Preferred and Alternate Routes are shown on Map series 8-2, respectively. The 19 streams identified are hydrologically connected to the Great Miami River, a traditional navigable waterway and are, therefore, considered jurisdictional by the USACE. Detailed information on each delineated stream is included in Table 8-3 below. Construction impacts on these features are included in Table 8-3 and further discussed in Section 4906-05-08(B)(3).

Table 8-3 Streams within the Preferred and Alternate Route Environmental Field Survey Area and Potential Disturbance Area/ROW

Stream ID Waterbody Name	Map	Flow Regime	Top of Bank Width (feet)	Form	Score	OEPA Aquatic Life Use Designation	PHWP Class (HHEI)/Narrative Rating (QHEI)	Crossed by Centerline	Length (linear feet) within Field Survey Area	Length (linear feet) within Potential Disturbance Area/ROW
Preferred Route										
SAG-001	8-2 (Sheet 8), 8-2 (Sheet 9)	Perennial	7	HHEI	61	-	Class III	Y	202	30
SAG-002*	8-2 (Sheet 8)	Perennial	10	-	-	WWH	-	Y	471	75
SAG-003*	8-2 (Sheet 6), 8-2 (Sheet 7)	Perennial	35	-	-	WWH	-	Y	394	83
SAG-004*	8-2 (Sheet 3)	Perennial	30	-	-	WWH	-	Y	436	97
SAG-005	8-2 (Sheet 3)	Intermittent	4	HHEI	58	-	Class II	N	55	55
SAG-005*	8-2 (Sheet 3)	Perennial	8					Y	296	250
SAG-005*	8-2 (Sheet 3)	Perennial	10					Y	1,669	311
SAG-007*	8-2 (Sheet 14)	Perennial	30	-	-	EWH	-	Y	357	30
SAG-008	8-2 (Sheet 14)	Perennial	9	HHEI	59	-	Class II	Y	1,123	52

Stream ID Waterbody Name	Map	Flow Regime	Top of Bank Width (feet)	Form	Score	OEPA Aquatic Life Use Designation	PHWP Class (HHEI)/Narrative Rating (QHEI)	Crossed by Centerline	Length (linear feet) within Field Survey Area	Length (linear feet) within Potential Disturbance Area/ROW
SAG-009*	8-2 (Sheet 17), 8-2 (Sheet 18), 8-2 (Sheet 19)	Perennial	25	-	-	WWH	-	Y	376	80
SAG-009**	8-2 (Sheet 17), 8-2 (Sheet 19)	Perennial	-					N	44	0
SAG-010	8-2 (Sheet 19), 8-2 (Sheet 20)	Perennial	7	HHEI	63	-	Class II	N	3,562	885
SAG-011	8-2 (Sheet 21)	Intermittent	3	HHEI	33	-	Class II	Y	399	75
SAG-012	8-2 (Sheet 22)	Intermittent	10	HHEI	33	-	Class II	Y	652	89
SAG-013	8-2 (Sheet 30)	Ephemeral	8	HHEI	41	-	Class I	N	167	12
SSJ-001*	8-2 (Sheet 4)	Intermittent	9.33	HHEI	54	-	Class II	N	101	0
SSJ-002*	8-2 (Sheet 3)	Perennial	12	HHEI	57		Class II	Y	392	99

Stream ID Waterbody Name	Map	Flow Regime	Top of Bank Width (feet)	Form	Score	OEPA Aquatic Life Use Designation	PHWP Class (HHEI)/Narrative Rating (QHEI)	Crossed by Centerline	Length (linear feet) within Field Survey Area	Length (linear feet) within Potential Disturbance Area/ROW
SSJ-004*	8-2 (Sheet 33)	Ephemeral	4	HHEI	25	-	Class I	Y	1,163	76
SSJ-005*	8-2 (Sheet 33)	Intermittent	30	HHEI	66	-	Class II	Y	354	30
SSJ-005	8-2 (Sheet 33)	Ephemeral	20					N	175	0
SSJ-005	8-2 (Sheet 33)	Ephemeral	16					N	720	0
SSJ-005	8-2 (Sheet 33)	Ephemeral	10					N	845	0
								Total:	**13,953**	**2,329**
Alternate Route										
SAG-001	8-2 (Sheet 8), 8-2 (Sheet 9)	Perennial	7	HHEI	61	-	Class III	Y	202	30
SAG-002*	8-2 (Sheet 8)	Perennial	10	-	-	WWH	-	Y	471	75
SAG-003*	8-2 (Sheet 6), 8-2 (Sheet 7)	Perennial	35	-	-	WWH	-	Y	394	77
SAG-004*	8-2 (Sheet 3)	Perennial	30	-	-	WWH	-	Y	436	96
SAG-005*	8-2 (Sheet 3)	Perennial	8	HHEI	58	-	Class II	Y	296	218

Stream ID Waterbody Name	Map	Flow Regime	Top of Bank Width (feet)	Form	Score	OEPA Aquatic Life Use Designation	PHWP Class (HHEI)/Narrative Rating (QHEI)	Crossed by Centerline	Length (linear feet) within Field Survey Area	Length (linear feet) within Potential Disturbance Area/ROW
SAG-005*	8-2 (Sheet 3)	Perennial	10					Y	1,669	1,544
SAG-005*	8-2 (Sheet 3)	Intermittent	4					N	55	55
SAG-007*	8-2 (Sheet 14)	Perennial	30	-	-	EWH	-	Y	357	30
SAG-009*	8-2 (Sheet 17), 8-2 (Sheet 18), 8-2 (Sheet 19)	Perennial	25	-	-	WWH	-	Y	368	40
SAG-009**	8-2 (Sheet 17), 8-2 (Sheet 18), 8-2 (Sheet 19)	Perennial	-					N	44	0
SSJ-001*	8-2 (Sheet 4)	Intermittent	9.33	HHEI	54	-	Class II	N	101	0
SSJ-002*	8-2 (Sheet 3)	Perennial	12	HHEI	57	-	Class II	Y	392	99
SSJ-004*	8-2 (Sheet 33)	Ephemeral	4	HHEI	25	-	Class I	Y	1,163	93
SSJ-005*	8-2 (Sheet 33)	Intermittent	30	HHEI	66	-	Class II	Y	354	30

Stream ID Waterbody Name	Map	Flow Regime	Top of Bank Width (feet)	Form	Score	OEPA Aquatic Life Use Designation	PHWP Class (HHEI)/Narrative Rating (QHEI)	Crossed by Centerline	Length (linear feet) within Field Survey Area	Length (linear feet) within Potential Disturbance Area/ROW
SSJ-006	8-2 (Sheet 26)	Ephemeral	12	HHEI	24	-	Class I	N	129	0
SSJ-007	8-2 (Sheet 26), 8-2 (Sheet 27)	Perennial	20					Y	472	38
SSJ-007	8-2 (Sheet 27)	Perennial	30	-	-	WWH	-	Y	381	98
SSJ-019	8-2 (Sheet 31)	Ephemeral	10	HHEI	23	-	Class I	N	155	0
								Total:	**7,439**	**2,523**

Notes:
*Indicates the delineated wetland was determined to be along both the Preferred and Alternate Routes.
** Indicates a portion of the stream extending into the ODOT ROW were delineated via GIS data and field observations.

[a] The width of the ESA was approximately 300 feet on both the Preferred and Alternate Routes.

[b] The width of the potential disturbance area and the final maintained cross-country ROW is planned to be 75 feet and 30 feet ROW where paralleling roads
EWH = Exceptional Warmwater Habitat
UNT = Unnamed Tributary
WWH = Warmwater Habitat

Lakes, Ponds, and Reservoirs

No major lakes, ponds, or reservoirs were observed within the proposed Preferred Routes' survey corridors. Two ponds totaling 0.15 acre were identified during the field evaluation along the Alternate Route ESA. Ponds within the ESA are shown on Map series 8-2 and are summarized in Table 8-4 below.

Table 8-4. Delineated Ponds within the Preferred Route and Alternate Route Environmental Survey Area

Feature Name	Route	Map	Acreage within Environmental Survey Area	Acreage within ROW	Linear Feet Crossed by Centerline
Preferred Route Ponds					
N/A	-	-	-	-	-
		Total:	-	-	-
Alternate Route Ponds					
Pond PAG-001	Alternate	8-2 (Sheet 18)	0.10	0	0
Pond PSJ-002	Alternate	8-2 (Sheet 32)	0.05	0	0
		Total:	**0.15**	**0**	**0**

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

(2) Delineation Resources Mapping

The applicant shall provide a map of at least 1:12,000 scale showing the facility, the right-of-way, and all delineated resources.

Detailed maps at 1:6,000 scale depicting the delineated water features, ESA, and proposed ROW for the Preferred and Alternate Routes are provided as Map series 8-2.

(3) Construction Impacts on Vegetation and Surface Waters

The applicant shall provide a description of the probable impact of the construction of the proposed facility on vegetation and surface waters. This shall include the impacts from route/site clearing and grading, and disposal of vegetation. Include the linear feet and acreage impacted, and the proposed crossing methodology of each stream and wetland that would be crossed by any part of the facility or construction equipment. Specify the extent of vegetation clearing and describe how such clearing work will be done so as to minimize removal of woody vegetation.

The construction impacts on woody and herbaceous vegetation along both the Preferred and Alternate Routes will be limited to the initial clearing of vegetation within the 75-foot-wide ROW where routes are cross-country and routes paralleling I-70, and within the 30-foot-wide ROW where routes are roadside for the proposed transmission line. Preliminary locations for off-ROW temporary access roads were identified. No permanent access roads are proposed. Trees and woody vegetation will be removed from the ROW, and subsequent grading is anticipated to be minimal due to the nearly level terrain.

Table 8-5. Approximate Vegetation Impacts Along Transmission Line ROW Construction[1]

Land Use Type	Length of Route (feet)	Length of Route (miles)	Acreage within ROW
Preferred Route			
Agricultural	86423	16.37	119.55
Cultivated Crop	84450.12	15.99	117.13
Developed	1318	0.25	1.96
Pasture	655	0.12	0.46
Aquatic Resources	666	0.13	1.61
Desktop Wetland	0.00	0.00	0.03
Delineated Stream	220	0.04	0.38
Delineated Wetland	446	0.08	1.20
Commercial/Industrial	223	0.04	0.15
Institutional	274	0.05	0.49
Road ROW	2745	0.52	3.82
Residential	714	0.14	1.20
Woodlot	5207	0.99	9.13
Alternate Route			
Agricultural	91556	17.34	106.05
Cultivated Crop	89223	16.90	103.54
Developed	1678	0.32	2.04
Pasture	655	0.12	0.46
Aquatic Resources	721	0.14	0.93
Desktop Wetland	0	0.00	0.00
Delineated Stream	193	0.04	0.44
Delineated Wetland	528	0.10	0.49
Commercial/Industrial	223	0.04	0.15
Institutional	336	0.06	0.55
Road ROW	2497	0.47	3.35
Residential	666	0.13	0.49
Woodlot	4438	0.84	6.60

Notes:
[1] Vegetation impacts associated with off-ROW access roads are not included.
[2] Because wetland, open water, and streams make up a minor component of the land use, a combination of NHD waterbodies and waterways, NWI wetlands, and field delineated aquatic resources were used to define these values.
[3] Institutional may include, but is not limited to, schools, hospitals, place of worship, and government facilities.

(4) Operation and Maintenance Impacts on Vegetation and Surface Water

The applicant shall provide a description of the probable impact of the operation and maintenance of the proposed facility on vegetation and surface waters. This shall include the permanent impacts from route clearing.

During the operation of the transmission line along either of the Preferred or Alternate Routes, the impacts on vegetation are anticipated to be minor. Undeveloped non-forested land not significantly disturbed by construction should retain its current vegetation composition. Periodic cutting along the proposed ROW, 75-foot-wide ROW where routes are cross-country and routes paralleling I-70, and within the 30-foot-wide ROW where routes are roadside for the proposed transmission line, is not expected to result in a significant environmental impact to vegetation in these areas. The potential impacts on woody and herbaceous vegetation along either of the Preferred or Alternate Routes will be limited to maintenance activities along the proposed transmission line ROW and access roads for safe and reliable operation of the transmission line. Once the transmission line is in operation, no significant impacts to streams or drainage channels are anticipated. Only periodic selective removal of vegetation that interferes with the transmission line's operation will be required.

(5) Mitigation Procedures

The applicant shall provide a description of the mitigation procedures to be used during construction, operation, and maintenance of the proposed facility to minimize the impact on vegetation and surface waters.

Mitigation procedures to minimize the impact on vegetation and surface waters are described below.

(a) Plans for post-construction site restoration and stabilization of disturbed soils, especially in riparian areas and near wetlands. Restoration plans should include details on the removal and disposal of materials used for temporary access roads and construction staging areas, including gravel.

An SWPPP will be developed specifically for the Project and specified best management practices (BMPs) will be implemented during construction to control erosion and sedimentation. The SWPPP will be made available onsite during Project construction. Construction matting will be utilized where feasible in wetland areas to minimize disturbance. Areas where soil was disturbed will be seeded and mulched to prevent soil erosion and sedimentation. Experience shows that seeding in non-wetland and non-agricultural areas is advantageous to control erosion on areas disturbed by construction activities. In lightly disturbed wetland areas, existing seed banks are quite often capable of quickly re-establishing vegetation that is compatible with the surrounding wetland. If any unanticipated significant disturbance occurs in wetlands, topsoil will be segregated and replaced so that the existing seed banks will be allowed to revegetate the areas initially. Additional seeding will only take place if the existing seed bank does not repopulate an area. These measures should preserve the aesthetic qualities along the ROW, prevent erosion, and promote habitat diversity.

Materials used during construction, such as gravel and geotextile fabric necessary for construction entrances and temporary access roads, will be removed entirely upon project completion and be restored to pre-existing conditions.

(b) A detailed frac out contingency plan for stream and wetland crossings that are expected to be completed via horizontal directional drilling.

The Project does not include a stream or wetland crossing by horizontal direction drill. Therefore, a detailed frac out contingency plan will not be required for the Project.

(c) Methods to demarcate surface waters and wetlands and to protect them from entry of construction equipment and material storage or disposal.

Wetlands, streams, and any other ESAs will be clearly staked, flagged, or fenced before the commencement of any clearing to minimize incidental impacts. BMPs, such as utilization of sediment barriers and construction matting, will be implemented as required during construction.

(d) Procedures for inspection and repair of erosion control measures, especially after rainfall events.

Procedures for inspection and repair of erosion control measures will be outlined in the SWPPP. Future maintenance activities will be implemented in accordance with all applicable regulations.

(e) Measures to divert storm water runoff away from fill slopes and other exposed surfaces.

BMPs, including utilization of sediment barriers, such as silt fences or filter socks, will be used as appropriate during construction to minimize runoff, erosion potential, and sedimentation of streams and wetlands. Measures to divert stormwater runoff away from fill slopes and other exposed surfaces will be outlined in the SWPPP.

(f) Methods to protect vegetation in proximity to any project facilities from damage, particularly mature trees, wetland vegetation, and woody vegetation in riparian areas.

Vegetation that occurs within forested and shrub-scrub wetland areas may require periodic cutting. Maintenance trimming of woody vegetation in wetland areas would be hand-cut by saws or other non-mechanized techniques to minimize disturbance. Cutting of woody vegetation in wetlands and near stream bank riparian zones will be limited to removal of only the cut back required to safely perform construction and continue operation of the transmission line. AES Ohio will adhere to regulatory permit requirements and conditions that will be obtained or authorized for the Project, including specifying that no mechanized clearing of vegetation be performed within a wetland or near riparian areas of a waterbody.

(g) Options for disposing of downed trees, brush, and other vegetation during initial clearing for the project, and clearing methods that minimize the movement of heavy equipment and other vehicles within the project area that would otherwise be required for removing all trees and other woody debris off site.

The construction impacts on woody and herbaceous vegetation along the Preferred and Alternate Routes will be minimal and limited to clearing within the 30-foot ROW paralleling roads and 75-foot cross-country ROW for the proposed transmission line, and potentially along temporary access roads. Specific locations for the access roads will be identified at the time of AES Ohio's transmission line easement acquisition process. However, where required, trees adjacent to the proposed transmission line ROW that are dead, dying, diseased, leaning, significantly encroaching, or prone to failure may require clearing to allow for

safe operation of the transmission line. Vegetation wastes (such as tree limbs and trunks) generated during the construction phase will be windrowed or chipped and disposed of appropriately depending on individual landowner requests.

(h) A description of any expected use of herbicides for maintenance.

The use of herbicides on the Project will be avoided or minimized to the extent practicable.

If herbicide is used on the Project, it will be used in accordance with applicable state and federal regulations and will be applied in accordance with manufacturer instructions, which include requirements related to the suitability of a particular herbicide for use near surface water. Only appropriate mixtures and selective methods of application, including low-volume foliar and cut stump treatment, will be used to support the construction of the Project. The application of a stump herbicide treatment consists of applying herbicide to the cambium layer of the stump and associated root flares. A low-volume foliar application method targets specific incompatible vegetation by applying the herbicide directly on the foliage of the target vegetation, while minimizing potential overspray.

The herbicides used during construction of the Project work on enzymes found only within plants, not people or animals. These compounds enter through leaves, stems, and stumps and control plant growth from the inside of the plant. The products used have undergone years of testing and will be used only as approved by appropriate government agencies. The U.S. Environmental Protection Agency approves such products for use only after determining that they will not adversely affect human health or the environment when properly applied. The crews that apply herbicides will follow strict usage guidelines in accordance with the labeling and application requirements. Workers who apply herbicides must hold a pesticide applicator license from the State of Ohio or work under the direct supervision of a certified applicator.

(C) LITERATURE SURVEY OF THE PLANT AND ANIMAL LIFE POTENTIALLY AFFECTED BY THE FACILITY

The applicant shall provide for each of the site/route alternatives the results of a literature survey of the plant and animal life that may be affected by the facility. The literature survey shall include aquatic and terrestrial plant and animal species of commercial or recreational value, or species designated as endangered or threatened. The applicant shall provide the results of field surveys of the plant and animal species identified in the literature survey.

The Project area is primarily situated in a rural setting with a few residences located on typically larger lots. The developed areas are dominated by residences, pastures, agricultural fields, and existing utility ROWs, with some areas of herbaceous wetlands. The remaining areas are mostly composed of upland and wetland forest. Both the Preferred and Alternate Routes have potential habitat for wildlife species. Lists of protected species are based off of agency coordination and desktop consultation tools. A summary of federal and state-listed plant and animal species potentially found near the Project area can be found in Table 8-6 below. Lists of commercial and recreational species were created utilizing professional experience, wildlife sightings, and the ODNR-DOW 2023-2024 Hunting and Trapping Regulations (ODNR-DOW 2023). Agency coordination with the USFWS and the ODNR was completed for the Project and is included in Attachment 8-1. Details regarding protected species specific to the Project vicinity can be found below. Details on the expected impacts of construction, operation,

maintenance, and mitigation procedures can be found following the threatened and endangered (T&E), commercial, and recreational species descriptions as follows.

(1) List of Species Identified within the Project Vicinity

The applicant shall provide a list of the species identified in the surveys, including their federal and state protection status.

Coordination with the USFWS and the ODNR was initiated during preliminary planning of the Project. Arcadis consulted the USFWS Information for Planning and Consultation (IPaC) tool to determine the likelihood for T&E species or T&E species habitat to occur within the Project ESA. The Project was entered into the IPaC system on November 8, 2023, and assigned the project code 2024-0014533. Results from this inquiry indicate that the federally endangered northern long eared bat (*Myotis septentrionalis*; NLEB) and Indiana Bat (*Myotis sodalis*), proposed endangered tricolored bat (*Perimyotis subflavus*), federally threatened eastern massasauga rattlesnake (*Sistrurus catenatus)*, non-essential experimental population of whooping crane (*Grus americana*), and the candidate monarch butterfly (*Danaus plexippus*) may be located near the Project. On November 21, 2023, Arcadis submitted a consultation review request to the USFWS requesting concurrence that the project was not likely to adversely affect the NLEB, Indiana Bat, tricolored bat, or monarch butterfly. Comments regarding the eastern massasauga rattlesnake were also requested. A response was received on December 1, 2023, in which the USFWS recommended adherence to seasonal time of year restrictions for clearing of any trees at least 3 inches diameter at breast height (dbh) only between October 1 and March 31 to minimize impacts to the Indiana Bat and NLEB. Due to the project type, size, and location, the USFWS stated that adverse effects to other federally endangered, threatened, or proposed species are not anticipated.

An environmental review request was submitted to the ODNR Office of Real Estate regarding the potential occurrence of and impacts to state-listed species within the Project area and ODNR NHD records on June 8, 2022. A response was received from the ODNR on July 1, 2022, which indicated that, according to the NHD, three state species of concern are located at or within 1 mile of the Project. These species records include the western creek chubsucker (*Erimyzon claviformis*), least darter (*Etheostoma microperca*), and kidneyshell (*Ptychobranchus fasciolaris*). The ODNR-DOW advised that portions of the Project are within the vicinity of records for the federally and state endangered Indiana Bat, as well as a known Indiana Bat hibernaculum. The Project is also within the range of the federally and state endangered NLEB, state endangered little brown bat (*Myotis lucifugus*), state endangered tricolored bat, state threatened Kirtland's snake (*Clonophis kirtlandii*), federally threatened and state endangered eastern massasauga rattlesnake, and state endangered northern harrier (*Circus cyaneus*).

Correspondence letters from the USFWS and ODNR are included as Attachment 8-1. Table 8-6 below identifies state and federally rare, threatened, or endangered species that may occur, or are known to occur, within the Project area.

Table 8-6. USFWS and ODNR Rare, Threatened, and Endangered Species Near the Project

Common Name (*Species Name*)	Federal Status	State Status	General Habitat Notes	Recorded Location within Project Vicinity	Potential Habitat in Project Area?
Vertebrate Animals					
NLEB (*Myotis septentrionalis*)	Endangered	Endangered	Hibernates in caves and mines, swarming in surrounding wooded areas in autumn. During late spring and summer, roosts and forages in upland forests and woods.	Identified from IPaC and ODNR indicated Project in species range	Yes
Indiana bat (*Myotis sodalis*)	Endangered	Endangered	Hibernates in caves and mines. Maternity and foraging habitat includes upland forests and small stream corridors with well-developed riparian woods.	Identified from IPaC and ODNR indicated records of species and hibernaculum	Yes
Tricolored bat (*Perimyotis subflavus*)	Proposed Endangered	Endangered	Hibernates in caves and mines. Summer roosting habitat includes live and dead leaf clusters of live or recently dead deciduous hardwood trees. May also roost in barns, beneath porch roofs, and under bridges.	Identified from IPaC and ODNR indicated Project in species range	Yes
Little brown bat (*Mytois lucifugus*)	N/A (Under Review)	Endangered	Hibernates in caves and mines. Summer roosting habitat includes trees, artificial structures, and under rocks and in wood piles.	ODNR indicated Project in species range	Yes
Eastern massasauga rattlesnake (*Sistrurus catenatus)*	Threatened	Endangered	Utilize shallow wetlands and surrounding upland areas.	Identified from IPaC and ODNR indicated Project in species range	Yes
Kirtland's snake	N/A	Threatened	Prefers wet fields and meadows.	ODNR indicated Project in species range	Yes

Common Name (*Species Name*)	Federal Status	State Status	General Habitat Notes	Recorded Location within Project Vicinity	Potential Habitat in Project Area?
Northern harrier (*Circus cyaneus*)	N/A	Endangered	Common migrant and winter species in Ohio. Nesters are much rarer but occasionally breed in large marshes and grasslands.	ODNR indicated Project in species range	No
Invertebrate Animals					
Monarch butterfly (*Danaus plexippus*)	Candidate	N/A	Utilize fields, roadside areas, and open areas with milkweed and flowering plants.	Identified from IPaC only	Yes
Western creek chubsucker (*Erimyzon claviformis*)	N/A	Species of Concern	Inhabit small, clear streams of moderate to high gradients. They migrate downstream into larger creeks after spawning in the early summer.	Identified from ODNR coordination	Yes
Least darter (*Etheostoma microperca*)	N/A	Species of Concern	Inhabit crystal clear, low-velocity streams or lakes with dense submerged aquatic vegetation.	Identified from ODNR coordination	Yes
Kidneyshell (*Ptychobranchus fasciolaris*)	N/A	Species of Concern	High water quality creeks, rivers, and lakes with swift currents and a sand or gravel substrate.	Identified from ODNR coordination	Yes

Commercial species that may be found within the Project vicinity consist of those hunted or trapped for fur or other byproducts, including the following:

- Coyote (*Canis latrans*): Coyotes prefer open territory but have adapted to various habitat types in Ohio. This species is expected to inhabit the proposed routes, and evidence of this species' presence was observed during the field survey.
- Gray fox (*Urocyon cinereoargenteus*): Gray foxes prefer woody areas with some partially open brush land with little human presence. This species is expected to inhabit the proposed routes, and evidence of this species' presence was observed during the field surveys.
- Long-tailed weasel (*Mustela frenota*): The long-tailed weasel is found throughout Ohio in areas adjacent to rivers, lakes, streams, or marshes where they prey on small mammals. This species is expected to inhabit the proposed routes.
- Mink (*Mustela vison*): The mink is almost invariably found near water, both running water of streams and rivers and the standing waters of marshes and lakes. This animal is drawn to areas

of cluttered vegetation or wooded banks that offer protection and is expected to inhabit the proposed routes.

- Muskrat (*Ondatra zibethicus)*: The muskrat is abundant throughout Ohio and prefers areas near intermittent streams, drainage courses, and farm ponds. It is the most extensively trapped furbearer in Ohio. This species is likely to inhabit aquatic habitats within the proposed routes.
- Red fox (*Vulpes vulpes*): The red fox occurs throughout Ohio and is most prevalent in areas of maximum interspersion of woodland, cropland, brush, pastures, and edges of open areas that provide suitable hunting ground. It is likely that the species inhabits the proposed routes.
- Raccoon (*Procyon lotor*): Raccoons are abundant and widespread in Ohio, even in many suburban areas. Raccoons are found principally around aquatic and woodland habitats, with occasional foraging into croplands. This species is expected to inhabit the proposed routes near wooded and residential areas.
- Striped skunk (*Mephitis mephitis*): The stripped skunk prefers a semi-open habitat of mixed woods, brush, farmland, open grassland, and small caves in proximity to water. This mammal is common statewide. This species is expected to inhabit the proposed routes.
- Virginia opossum (*Didelphis virginiana*): The Virginia opossum's preferred habitat is an area interspersed with woods, wetlands, and farmland. This species is expected to inhabit the proposed routes.

Recreational species include terrestrial and avian species that may be hunted as game and aquatic species that may be fished as game. They include the following:

- Eastern cottontail rabbit (*Sylvilagus floridanus*): Eastern cottontail rabbits are abundant in both rural and urban areas and prefer field borders, brushy areas, and thickets that occur along the proposed routes. This species is expected to inhabit the proposed routes, and evidence of this species' presence was observed during the field survey.
- Gray, red, and fox squirrels (*Sciurus carolinensis, Tamiasciurus hudsonicus*, and *Sciurus niger*, respectively): These tree squirrel species occur throughout Ohio. The fox squirrel is primarily an inhabitant of small, typically isolated woodlots. Indications of this species were observed along the proposed routes. The gray squirrel and red squirrel prefer more extensive woodland areas. Gray squirrels were observed during field surveys.
- White-tailed deer (*Odocoileus virginianus*): White-tailed deer occur throughout Ohio. Deer are a very adaptable animal that can be found in almost all habitats in the region. Evidence of this species' presence was observed during field surveys.
- Woodchuck (*Marmota monax*): The woodchuck or groundhog is a common rodent found throughout Ohio. It prefers sloped areas at the fringe of wooded and open areas.
- Wild turkey (*Meleagris gallopavo*): Wild turkeys are very adaptable animals. Although they prefer mature forests with substantial cover and suitable food sources, they can live successfully in areas with as little as 15% forest cover. This species is expected to inhabit the proposed routes.
- Wood duck (*Aix sponsa*): The Wood duck prefers mature riparian corridors along streams, quiet backwaters of lakes and ponds bordered by large trees and secluded wooded swamps as ample areas to raise young. They feed on acorns, berries, and grapes on the forest floor. This species was not observed, but the quality of the riparian corridor along streams or nearby ponds could support Wood ducks.
- American woodcock (*Scolopax minor*): American woodcock are native Ohio shorebirds that prefer a combination of wet, early successional understory and drier uplands. They prefer to nest in

northeast and northwest Ohio along Lake Erie, or wherever habitat is suitable. Typical nests in Ohio are found in reverting brushy fields or in young, second growth woods.

- Bluegill sunfish (*Lepomis macrochirus*): Bluegill sunfish are found throughout the state in nearly every stream and waterbody. Their preferred habitat is clear, warm lakes with some rooted vegetation. This species is likely to occur in perennial streams and ponds along the routes.
- Green sunfish (*Lepomis cyanellus*): Green sunfish are present in most lakes, reservoirs, and streams. They are tolerant of turbid water, unlike most other sunfish species. They appear to prefer a particular bottom type but are usually associated with some type of structure, such as brush, vegetation, or rocks. This species is likely to occur in perennial streams and ponds along the routes.
- Longear sunfish (*Lepomis megalotis*): Longear sunfish favor sluggish, clear streams of moderate size with beds of aquatic vegetation to seek shelter in. This species is likely to occur in perennial streams and ponds along the routes.
- Smallmouth bass (*Micropterus dolomieu*): Smallmouth bass are native to Ohio and are found in every county of the state. Smallmouth bass thrive in streams with gravel or rock bottoms with a visible current. This species is likely to occur in larger perennial streams and possibly ponds along routes.

(2) Construction Impact

The applicant shall provide a description of the probable impact of the construction of the proposed facility on the identified species and their habitat. This would include the impacts from route clearing and any impact to natural nesting areas.

A description of the probable impact of construction of the proposed facility on the identified species and their habitat is provided below.

Rare, Threatened, and Endangered Species

Based on the nature of the Project activities and habitat characteristics of the surrounding vicinity, construction impacts to protected species are not anticipated.

To avoid direct impacts to the Indiana Bat, NLEB, little brown bat, and tricolored bat roosting and foraging habitat, the ODNR-DOW and USFWS recommends that tree clearing (trees greater than or equal to 3 inches dbh) be performed between October 1 and March 31. Additionally, the portion of the Project east of County Highway 9 (Monroe Central Road) is near a known Indiana Bat hibernaculum. The ODNR recommends that any tree clearing in this area take place between November 15 and March 15. AES Ohio proposes to limit tree removal activities to the recommended time periods.

Beyond the aforementioned bat species, the USFWS comment response letter, dated December 1, 2023, stated that due to the project type, size, and location, the USFWS does not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat.

According to the ODNR in their response letter dated July 1, 2022, the Kirtland’s snake and eastern massasauga rattlesnake are not likely to be impacted by the Project due to the Project location, type of habitat within the Project area, and the type of work proposed.

The ODNR commented that construction should be avoided in suitable northern harrier habitat during the species' nesting period of April 15 through July 31. Suitable habitat was not identified within the Project for the northern harrier; therefore, the Project is not likely to impact this species, per the July 1, 2022 ODNR response letter.

The ODNR-DOW recommends no in-water work be performed in perennial streams between March 15 and June 30 to reduce impacts to indigenous aquatic species and their habitats, including mussel species. Furthermore, per the 2023 USFWS and ODNR Ohio Mussel Survey Protocol, all Group 2, 3, and 4 streams require a mussel survey. Group 1 streams and unlisted streams with a watershed greater than 5 square miles above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels to determine if mussels are present. Sevenmile Creek, which is within the Project area and has an estimated drainage area of 6.25 miles, is listed as a Group 1 stream in the Ohio Mussel Survey Protocol (2023). However, no in-water work is proposed for the Project; therefore, aquatic and mussel species are not anticipated to be adversely affected. Additionally, AES Ohio has proposed to minimize impacts to wetlands and other water resources through avoidance, where possible, and the utilization of BMPs to minimize erosion and sedimentation.

Monarch butterfly habitat was observed within the Project area and the surrounding areas; temporary vegetation clearing in suitable monarch butterfly habitat will be kept to the minimum necessary to complete the work to avoid impacts to monarch butterflies. Additionally, the creation of the new transmission line is anticipated to convert forested areas to herbaceous areas; therefore, creating additional habitat for this species after construction and restoration.

Commercial Species

The construction impact on commercial species is expected to be minor due to avoidance of impacts during Project planning, the utilization of BMPs during Project construction, and the mobility of the listed commercial species. Therefore, impacts to commercial species are not anticipated during Project construction activities.

Recreational Species

The construction impact on recreational species is expected to be minor due to avoidance of impacts during Project planning, the utilization of BMPs during Project construction, and the mobility of the listed recreational species. Therefore, impacts to recreational species are not anticipated during Project construction activities.

(3) Operation and Maintenance Impact

The applicant shall provide a description of the probable impact of the operation and maintenance of the proposed facility on the species described above. This would include the permanent impact from route clearing and any impact to natural nesting areas.

A description of the probable impact of construction of the proposed facility on the species described in this rule is provided below.

Rare, Threatened, and Endangered Species

Impacts to rare, threatened, and endangered species are not anticipated during operation and maintenance of the Project. Routine maintenance activities that involve tree limb removal or clearing will only be conducted between October 1 and March 31 or November 15 and March 15, as advised, to avoid impacts to roosting or foraging Indiana Bat, NLEB, little brown bat, or tricolored bat. In-water work during operation and maintenance is also not anticipated; therefore, impacts to aquatic species are not anticipated. The creation of the new transmission line is anticipated to convert forested areas to herbaceous areas; therefore, creating additional habitat for the monarch butterfly after construction and restoration.

Commercial Species

Impacts to commercial species are not anticipated during Project operation and maintenance activities.

Recreational Species

Impacts to recreational species are not anticipated during Project operation and maintenance activities.

(4) Mitigation Procedures

The applicant shall provide a description of the mitigation procedures to be used during construction, operation, and maintenance of the proposed facility to minimize the impact on species described in this rule.

A description of the mitigation procedures to be used during construction, operation, and maintenance of the proposed facility to minimize the impact on species described in rule is provided below.

Rare, Threatened, and Endangered Species

By virtue of only completing tree clearing for construction, operation, and maintenance activities between November 15 and March 15 or October 1 to March 31, as advised, impacts to roosting or foraging Indiana Bat, NLEB, little brown bat, and tricolored bat will be mitigated. Similarly, no in-water work during construction, operation, or maintenance also mitigates impacts to rare and T&E species. The creation of the new transmission line is anticipated to convert forested areas to herbaceous areas; therefore, creating additional habitat for the monarch butterfly after construction and restoration.

Commercial Species

Mitigation procedures to commercial species during Project construction, operation, or maintenance activities are not necessary as impacts are not anticipated.

Recreational Species

Mitigation procedures to recreational species during Project construction, operation, or maintenance activities are not necessary as impacts are not anticipated.

(D) SITE GEOLOGY

The applicant shall provide for each of the site/route alternatives a description of the site geology, suitability of the soils for foundation construction, and areas with slopes that exceed twelve per cent and/or highly erodible soils (according to the natural resource conservation service and county soil surveys) that may be affected by the proposed facility. The applicant shall describe the probable impact to these areas. The applicant shall include any plans for test borings, including a timeline for providing the test boring logs and the following information to the board:

(1) Subsurface soil properties
(2) Static water level
(3) Rock quality description
(4) Percent recovery
(5) Depth and description of bedrock contact.

A description of site geology, soil suitability, areas of slope or highly erodible soils, plans for test borings, and probable impacts to these areas for the Project is provided below.

Site Geology

The Project area is located within the Southern Ohio Loamy Till Plain Region of the Central Lowland Physiographic Province. This region is characterized by end and recessional moraines located between relatively flat-lying ground moraines. Streams have incised into the moraines, resulting in steep-sided drainages that are often filled with outwash. Buried valleys are common in the region. Surficial deposits are generally loamy, high-lime Wisconsinan-age till, outwash, and loess. Regional relief is moderate, with elevations ranging from 530 to 1,150 feet above mean sea level (Brockman 1998).

Most of the Preferred and Alternate Route centerlines are underlain by the Silurian-age Lockport Dolomite bedrock. Where the Lockport Dolomite was removed by erosion, both routes are underlain by undifferentiated, interbedded Silurian and Ordovician-aged dolomite, limestone, and shale (ODNR 2023a).

Slopes and Soil Foundation Suitability

The Soil Survey of Preble County (USDA NRCS 2006) and the NRCS Web Soil Survey (USDA NRCS 2023) were reviewed to assess soil properties within the Project area. Soils within the Project area are primarily silt loams and silty clay loams, with minor amounts of clay loams and loams. The parent materials of these soils are primarily loess and glacial outwash of varying thickness and the underlying loamy till. Gravelly and sandy substrate is present along the Preferred and Alternative Routes where they cross the Elkhorn Creek drainage.

During the route selection process, USGS topographic maps and DEMs were reviewed to avoid areas of steep slopes where possible. Map series 8-1 shows areas of slopes greater than 12% as determined by analysis of the DEM of the Project area. NRCS ratings of soil erosion limitations indicate that the risk of soil erosion is slight to moderate within the Project area. Increasing slope corresponds to increasing interpreted erosion hazards within the Project area. Soil map unit descriptions indicate that representative slopes within the Project area are generally less than 6%. Small areas (less than 6 acres) of slopes greater than 12% are expected within Miami loam and Miamian silt loam (NRCS soil map units MdD2,

MeE2, MnE3) along both Preferred and Alternate Routes. Small areas of slopes greater than 12% may be present locally elsewhere along both routes.

Some soil map units with dominant components of Miami, Miamian, and Celina series soils indicate past erosion has occurred and that erosion potential is locally higher in those areas. These soil map units comprise approximately 20% of the Preferred and Alternate Routes but are slightly more common along the Alternate Route. Soil map units with representative slopes greater than 12% and soil map units with evidence of significant past erosion are shown on Map series 8-1.

During construction, AES Ohio will implement an SWPPP and associated BMPs as necessary to control erosion and sedimentation in areas with slopes exceeding 12%. Once construction is complete, soils will be revegetated and stabilized. As a result, no erosional impacts resulting from slopes exceeding 12% are expected.

Static Water Levels

Shallow water table conditions are present along the Preferred and Alternate Routes. Soil survey data indicate that average water table depths are less than 36 inches (USDA NRCS 2023).

Unconsolidated and bedrock aquifers are used along both routes as groundwater sources. ODNR well logs along the Preferred and Alternate Routes were reviewed to assess depth to groundwater in both aquifers (ODNR 2023b). Wells completed in bedrock aquifers are more common along the eastern and northern portions of the route. Static water levels among bedrock wells are generally less than 50 feet below the ground surface and are shallower than the depth to bedrock, indicating confined aquifer conditions. Static water levels within the unconsolidated aquifer are more variable due to multiple water-bearing zones. Additionally, the western portion of both routes is more topographically variable. Static water levels within the unconsolidated aquifer range from less than 10 to over 100 feet below ground surface.

Geotechnical Evaluation

To obtain further site-specific details on the suitability of the soils for foundation construction, AES Ohio will conduct detailed engineering design and geotechnical soil borings. Engineering design and geotechnical test drilling will likely be completed soon after the Project is certificated by the OPSB, and engineering plans and boring logs will be provided to OPSB staff shortly thereafter.

At a minimum, geotechnical borings will provide the following information to be utilized for structure placement and foundation design engineering as needed:

- Subsurface soil properties
- Static water level
- Rock quality description
- Percent recovery
- Depth and description of bedrock contact.

AES Ohio anticipates that foundations will only be required at some angle structures that will be ultimately determined during the engineering design. When required, foundations will be engineered based on the

results of geotechnical soil borings to verify they are in locations considered suitable based on soil and rock properties and surface slope.

Geohazard Considerations

The Lockport Dolomite is susceptible to karst formation in southwestern Ohio (ODSG 2016). Karst hazards generally increase with decreasing overburden thickness. Along most of the Preferred and Alternate Routes, overburden (till, outwash, and loess) thickness is expected to range from 70 to more than 200 feet thick. Between approximately Lewisburg Western Road and I-70, east of U.S. Highway 127, thinner till deposits are present (30 feet or less) and potential for encountering karst features is greater (ODNR 2023c). The nearest field-verified karst features are approximately 15 miles south of the proposed Blazer substation location and 15 miles northeast of the existing West Manchester substation (ODNR 2023d).

(E) ENVIRONMENTAL AND AVIATION COMPLIANCE INFORMATION

The applicant shall provide information regarding compliance with environmental and aviation regulations.

(1) List and Discussion of Permits Required

The applicant shall provide a list and brief discussion of all licenses, permits, and authorizations that will be required for construction of the facility.

AES Ohio anticipates submitting a Notice of Intent for coverage under the OEPA General National Pollutant Discharge Elimination System (NPDES) permit. Coverage under USACE's Nationwide Permit 57 for wetland and waterbody impacts associated with electric utility line activities may be required but will be determined once the construction plan is finalized and impacts to waters are known. Due to the location of mapped FEMA flood hazards areas within the Project, it is expected that county or local floodplain permitting will be necessary. It is also anticipated that multiple road crossing permits will be required.

(2) Description, Qualification, Characterization, Removal, and Disposal of Construction Debris

The applicant shall provide a description, quantification and characterization of debris that will result from construction of the facility, and the plans for disposal of the debris.

As construction work progresses, the Project area will be kept clean of rubbish and debris resulting from the work. Debris associated with construction of the proposed transmission line will likely include conductor scrap, construction material packaging, including cartons, insulator crates, conductor reels and wrapping, and used stormwater erosion control materials. Clearance poles, conductor reels, and other materials with salvage value will be removed from the construction area for reuse or salvage. Construction debris will be disposed of in accordance with state and federal requirements in an OEPA-approved landfill or other appropriately licensed and operated facility. Where vegetation must be cleared, the resulting brush will be removed or windrowed along the edge of the ROW or as requested by individual property owners. Marketable timber will generally be cut into appropriate lengths for sale or disposition by the landowner.

(3) Storm Water and Erosion Controls during Construction and Restoration of Soils, Wetlands, and Streams Disturbed as a Result of Construction of the Facility

The applicant shall provide a discussion of the process that will be used to control storm water and minimize erosion during construction and restoration of soils, wetlands, and streams disturbed as a result of construction of the facility.

An SWPPP document will be prepared and incorporated into the Construction Plans. BMP specifications will be made available onsite during construction of the Project. The SWPPP will include the following General Conditions at a minimum.

Erosion and Sedimentation Controls

Implementation of erosion and sedimentation control practices will conform to the ODNR Rainwater and Land Development Manual, the OEPA NPDES Permit Program for the discharge of stormwater from construction sites, and any erosion and sediment control practices and standards required by the Preble County Soil and Water Conservation District Office.

Wetlands, streams, and other ESAs will be clearly flagged before commencement of clearing or construction. No construction or access will be permitted in these areas unless clearly specified in the construction plans and specifications and authorized by permits from applicable regulatory agencies. When wetlands are temporarily impacted, the area will be stabilized immediately upon completion of the construction task. Minor vegetation grubbing activities within the ROW are anticipated, where necessary. Where applicable (e.g., steep slopes), perimeter sediment barriers will be implemented for grubbing activities and will continue to function until disturbed areas are permanently stabilized.

Specific Silt Fence or Filter Sock Inspection Requirements

Silt fencing and/or other appropriate BMPs for erosion and sediment control will be constructed before upslope land disturbance begins. All silt fences, filter socks, etc. will be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions that may carry concentrated flows to the silt fence are dissipated along its length. Where practicable, vegetation will be preserved for 5 feet upslope from the silt fence.

Silt fence will be placed so that 8 inches of cloth are below the ground surface. Excess material will lay at the bottom of the 6-inch-deep trench, and the trench will be backfilled and compacted. Silt fence will allow runoff to pass only as diffuse flow through the geotextile fabric. If runoff overtops the silt fence, flows under, or around the ends, one of the following will be performed, as appropriate: 1) the layout of the silt fence will be changed, 2) accumulated sediment will be removed, or 3) other practices will be installed.

Soil Stabilization

As specified in the SWPPP, disturbed areas that remain unworked for more than 14 days will be stabilized with mulch or other acceptable means no later than 7 days after the last construction in that area. Permanent soil stabilization methods and timeframes are similar and will include seeding and mulching of disturbed areas upon project completion.

Maintenance/Inspection

All erosion and sediment control practices will be inspected at least once every 7 days and within 24 hours after any storm event greater than 0.5 inch of rain per 24-hour period.

All erosion and sedimentation control structures will be maintained in good working order. Straw wattles, straw bales, and sediment barriers will be inspected for excess sediment accumulation, tears in fabric, and to confirm proper functionality. Inspections will continue until the site is at least 70% stabilized with newly sown grasses, as appropriate. If a repair is necessary, it will be initiated within 48 hours of the report. Records of the maintenance and inspection must be maintained throughout the construction period. Records will include, at a minimum, the name of the inspector, major observations, date of inspection, certification of compliance, and corrective measures taken.

Materials Management

All materials stored onsite will be kept in an orderly manner in their appropriate containers and, if possible, under a roof or other enclosure. Products will be kept in their original containers with the original manufacturer's label. Manufacturer's recommendations for proper use and disposal will be followed. Material Safety Data Sheets will be retained and available onsite at all times during construction.

(4) Plans for Disposition of Contaminated Soil and Hazardous Materials Generated or Encountered during Construction

The applicant shall provide a discussion of plans for disposition of contaminated soil and hazardous materials generated from clearing of land, excavation or any other action that would adversely affect the natural environment of the project site during construction. Responsibility for removal of contaminated soil shall be limited solely to soil and material from clearing of land, excavation or any other action that would adversely affect the natural environment of the project site for the project and shall not include additional remediation of measures beyond the scope of the project.

The following spill prevention methods and procedures are proposed:

- All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled.
- Secondary containment will be provided for all onsite fuel storage tanks required during construction.
- All sanitary waste will be collected in portable units and emptied regularly by a licensed sanitary waste management contractor, as required by local regulations.
- All spills will be cleaned up immediately after discovery. Manufacturer's recommended methods for spill cleanup will be followed. Materials and equipment necessary for spill cleanup will be kept in a designated storage area onsite.
- Spills will be reported to the appropriate government agency as required.
- Suspected hazardous materials encountered during construction will be reported to the regional environmental coordinator by the transmission construction representative. In addition, the Project Manager will be notified.

(5) Maximum Height of Aboveground Structures

The applicant shall provide the height of tallest anticipated above ground structures. For construction activities within five miles of public use airports or landing strips, the applicant shall provide the maximum possible height of construction equipment, as well as all installed above ground structures, and include a list of air transportation facilities, existing or proposed, and copies of any coordination with the federal aviation administration and the Ohio office of aviation.

The height of the tallest anticipated aboveground structure and construction equipment is designed to be approximately 80 to 110 feet. The nearest airport, Richmond Municipal Airport, located in Richmond Indiana, is approximately 3.6 miles southwest of the state line POI.

The FAA Form 7460-1, "Notice of Proposed Construction or Alteration," is used for FAA notification. This can be filed electronically or by standard U.S. mail. A 7.5-minute quadrangle topographic map showing the proposed construction must be attached to the completed Form 7460-1. Form 7460-1 must be submitted 45 days before the proposed start of construction.

Additionally, a permit from the ODOT, Office of Aviation, must be obtained before the start of any construction on or near airports in Ohio that are open to the public. A duplicate of the federal filing fulfills the state permit application requirements as set forth in OAC 5501:1-10-06.

The height of construction equipment associated with the Project is expected to be less than that of the transmission line poles, except for the use of a crane where steel poles are required. The exact structure locations have not been determined, only preliminary locations have been determined; however, all transmission structure locations will be input to the FAA's Notice Criteria Tool website.

Filing Criteria

FAA Form 7460-1 must be filed for any construction or alteration of more than 200 feet in height. Additionally, any construction or alteration extending outward and upward in excess of specific slope angles in reference to aircraft take-off or landings on airport runways may require filing with the FAA:

Upon completion of the final design, the AES Ohio will review the need for any permitting with the FAA and will follow recommendations made by the FAA.

(6) Construction during Excessively Dusty or Excessively Muddy Soil Conditions

The applicant shall provide a description of the plans for construction during excessively dusty or excessively muddy soil conditions.

A description of the plans for construction during excessively dusty or excessively muddy soil conditions is provided below.

Dust Control

The site and surrounding areas will be kept free from dust nuisance resulting from site activities. During excessively dry periods of active construction, dust suppression will be implemented, where necessary, through irrigation, mulching, or application of tackifier resins.

Excessive Muddy Soil Conditions

Construction entrances will be established and maintained to a condition that will prevent tracking or flowing of sediment onto public ROWs. Accumulated sediment spilled, dropped, washed, or tracked onto public ROWs will be removed as soon as practical.

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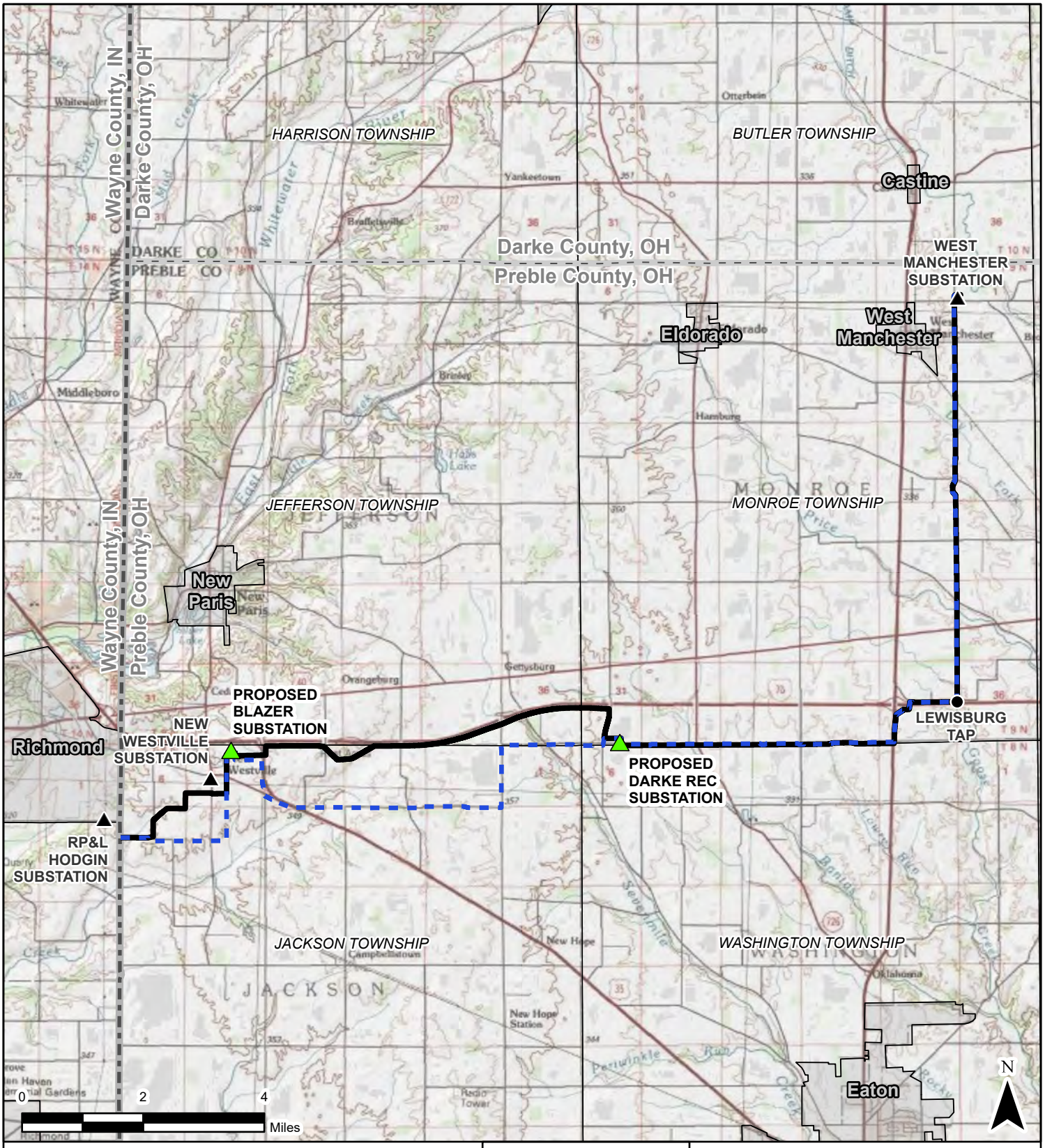
Maps



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. ESRI, 2022. AES, 2022.

Project Location

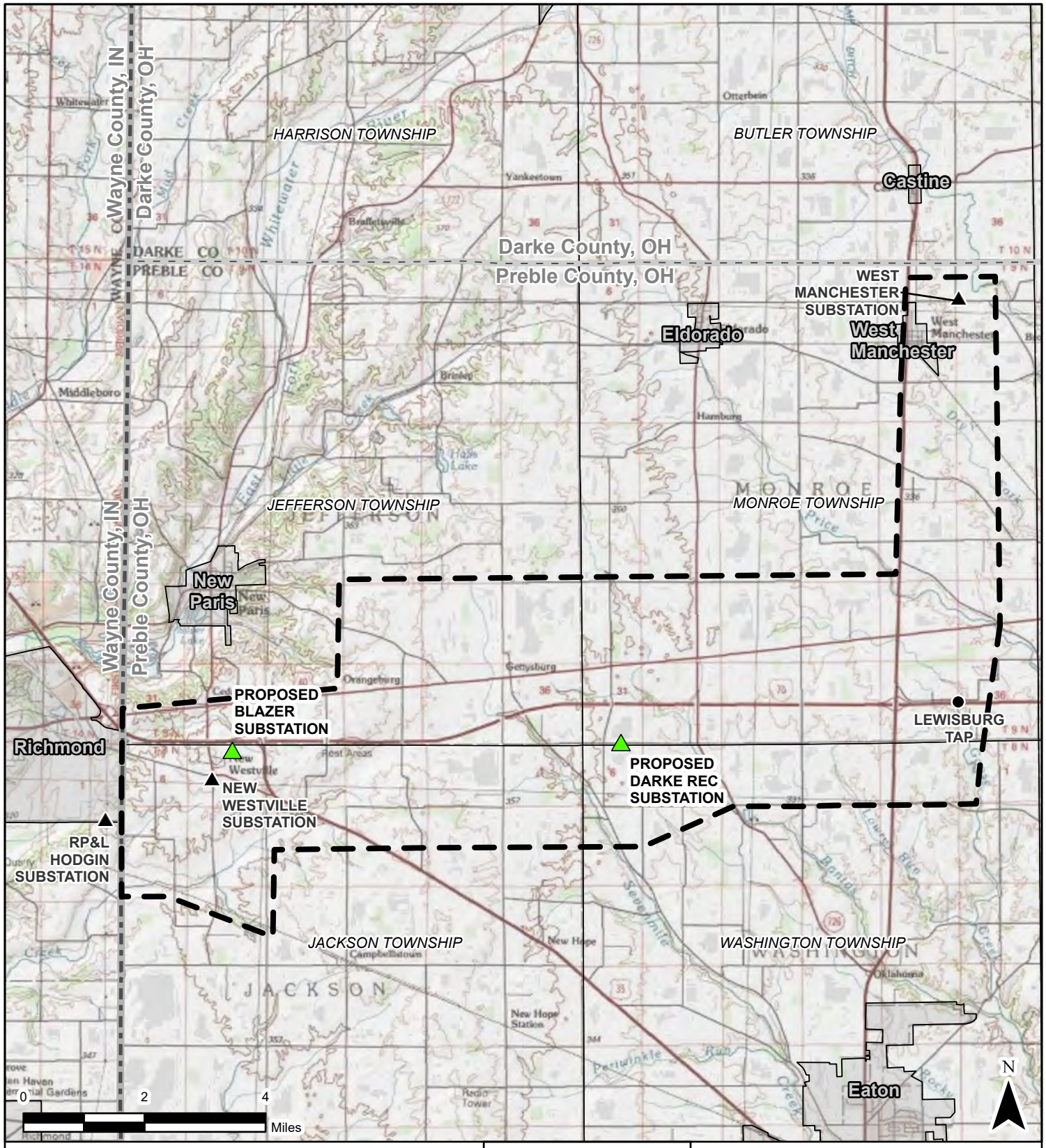
Preble County, Ohio

West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT OVERVIEW

aes Ohio ARCADIS

MAP 2-1



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Study Area
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. ESRI, 2022. AES, 2022.

Project Location

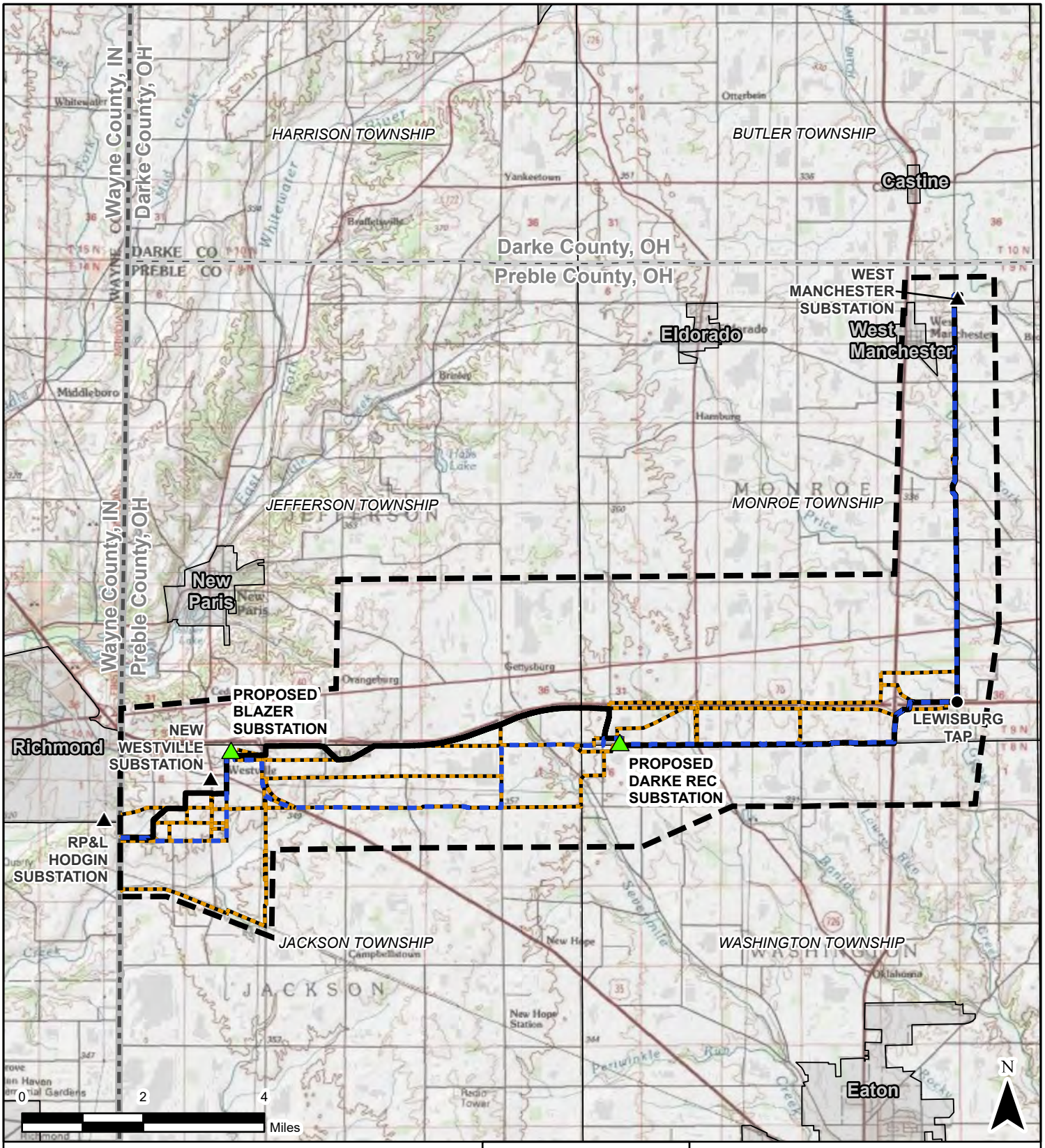
Preble County, Ohio

West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT STUDY AREA

aes Ohio ARCADIS

MAP 4-1



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Studied Route Alternative
- Study Area
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. ESRI, 2022. AES, 2022.

Project Location

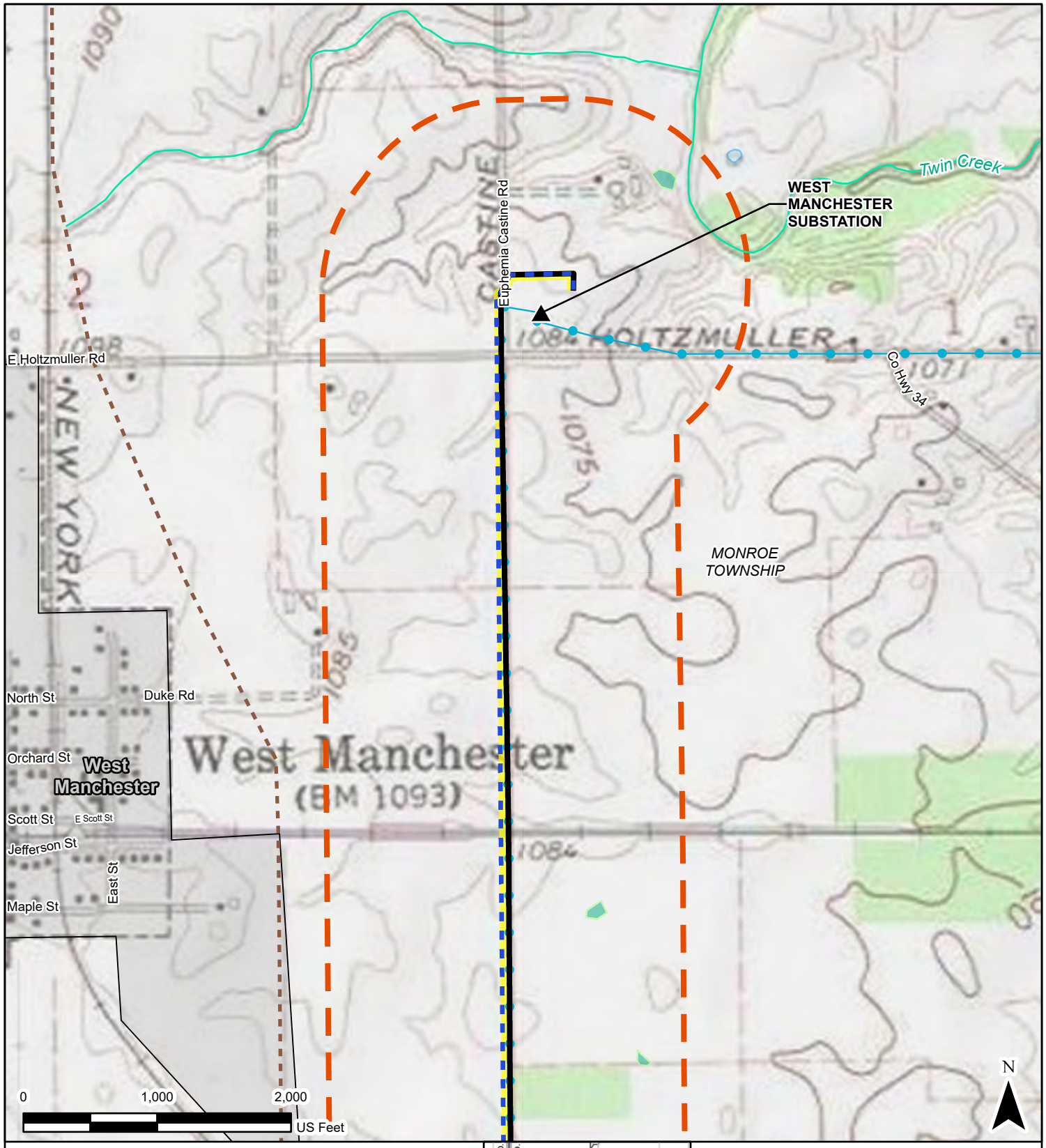
Preble County, Ohio

West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

STUDY AREA AND ROUTES

aes Ohio ARCADIS

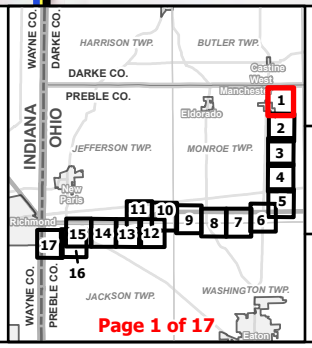
MAP 4-2



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.

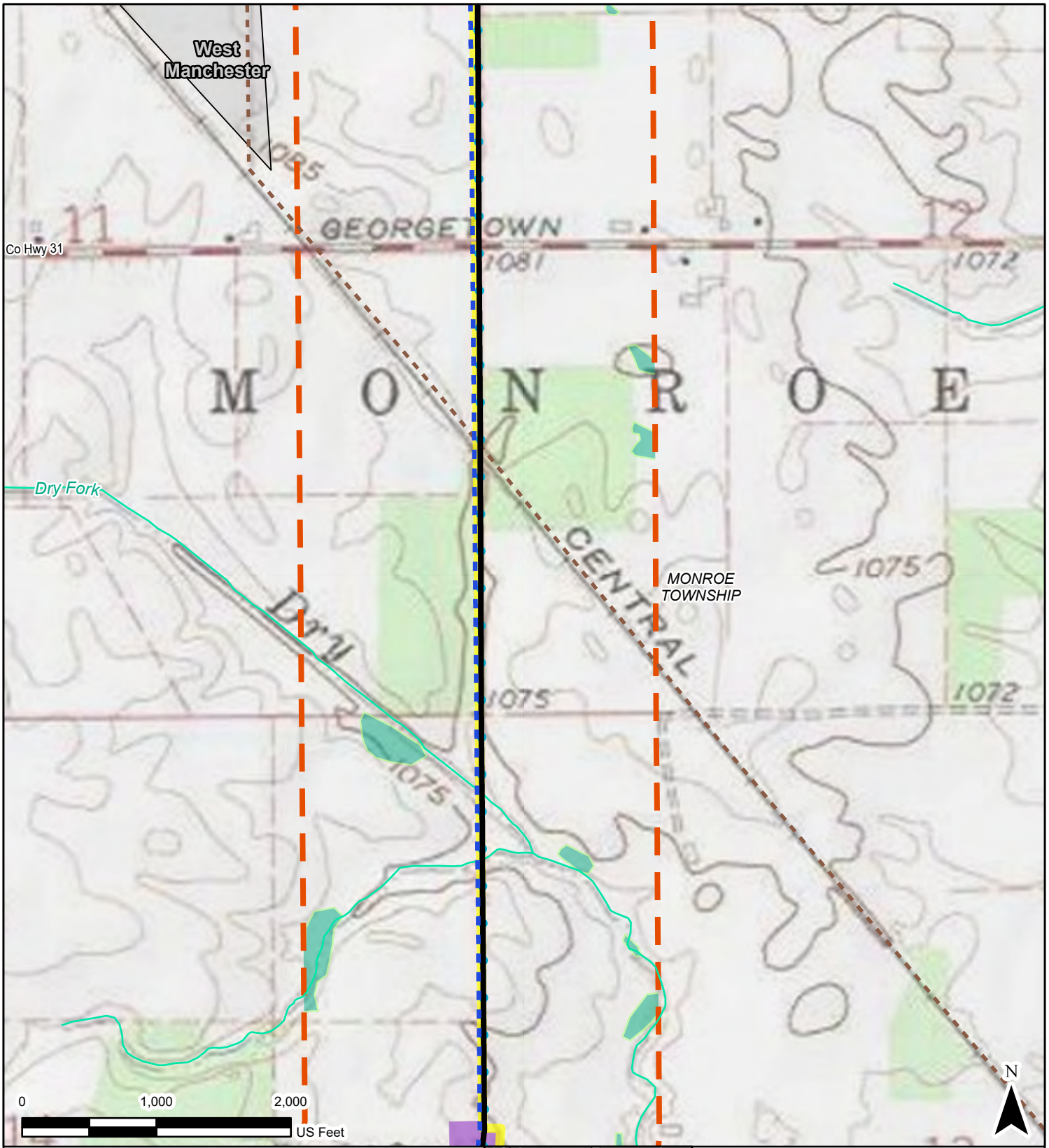


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

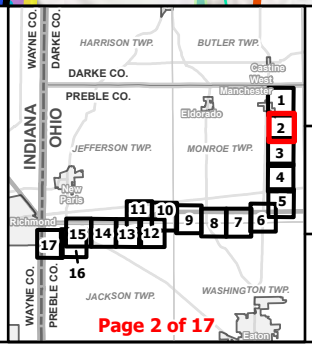
MAP 5-1.1



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.

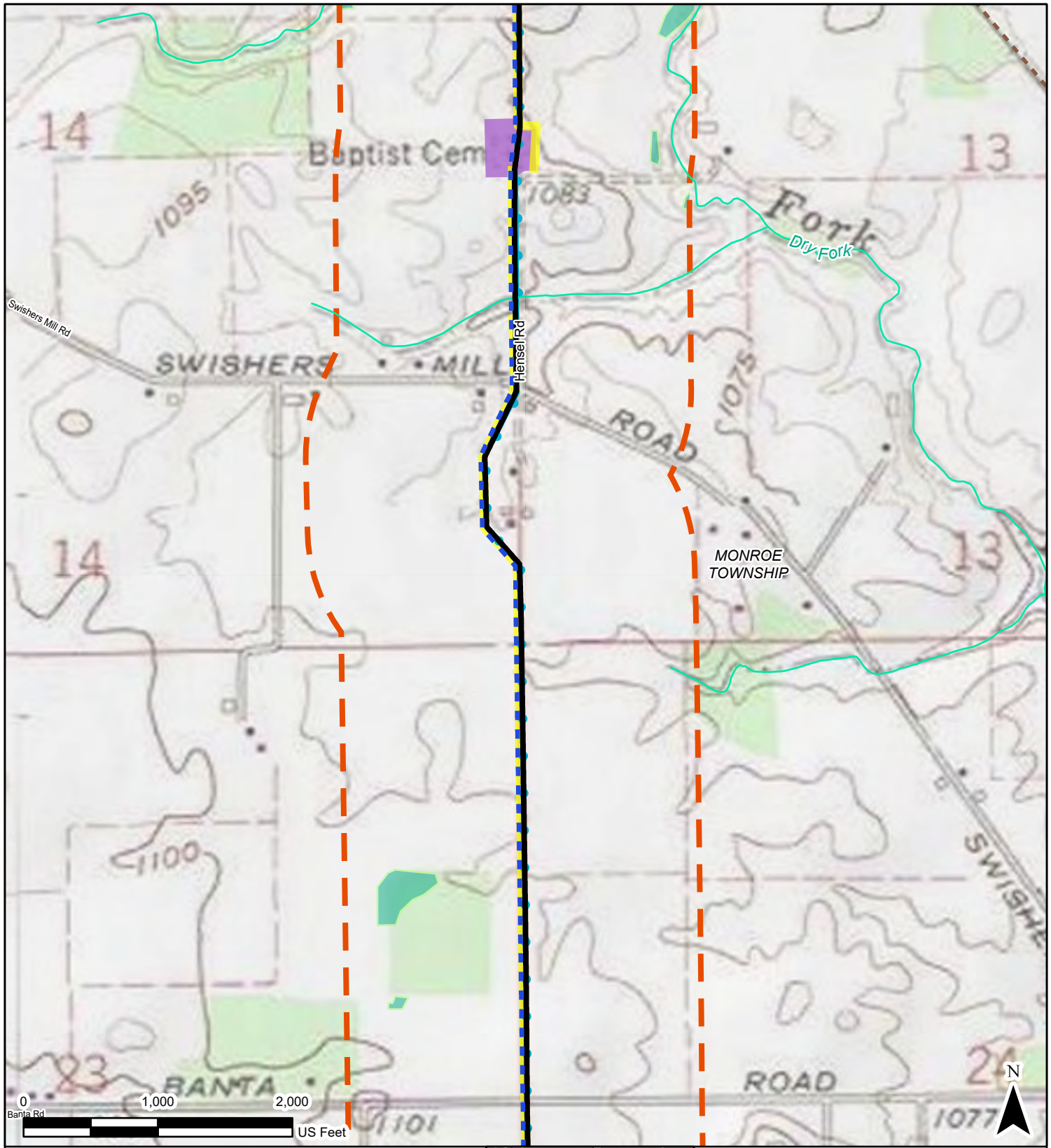


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

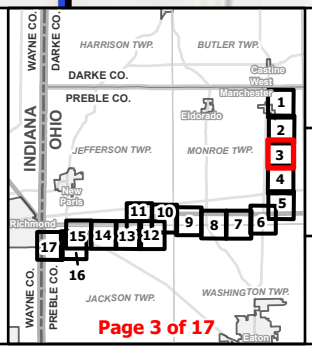
MAP 5-1.2



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.

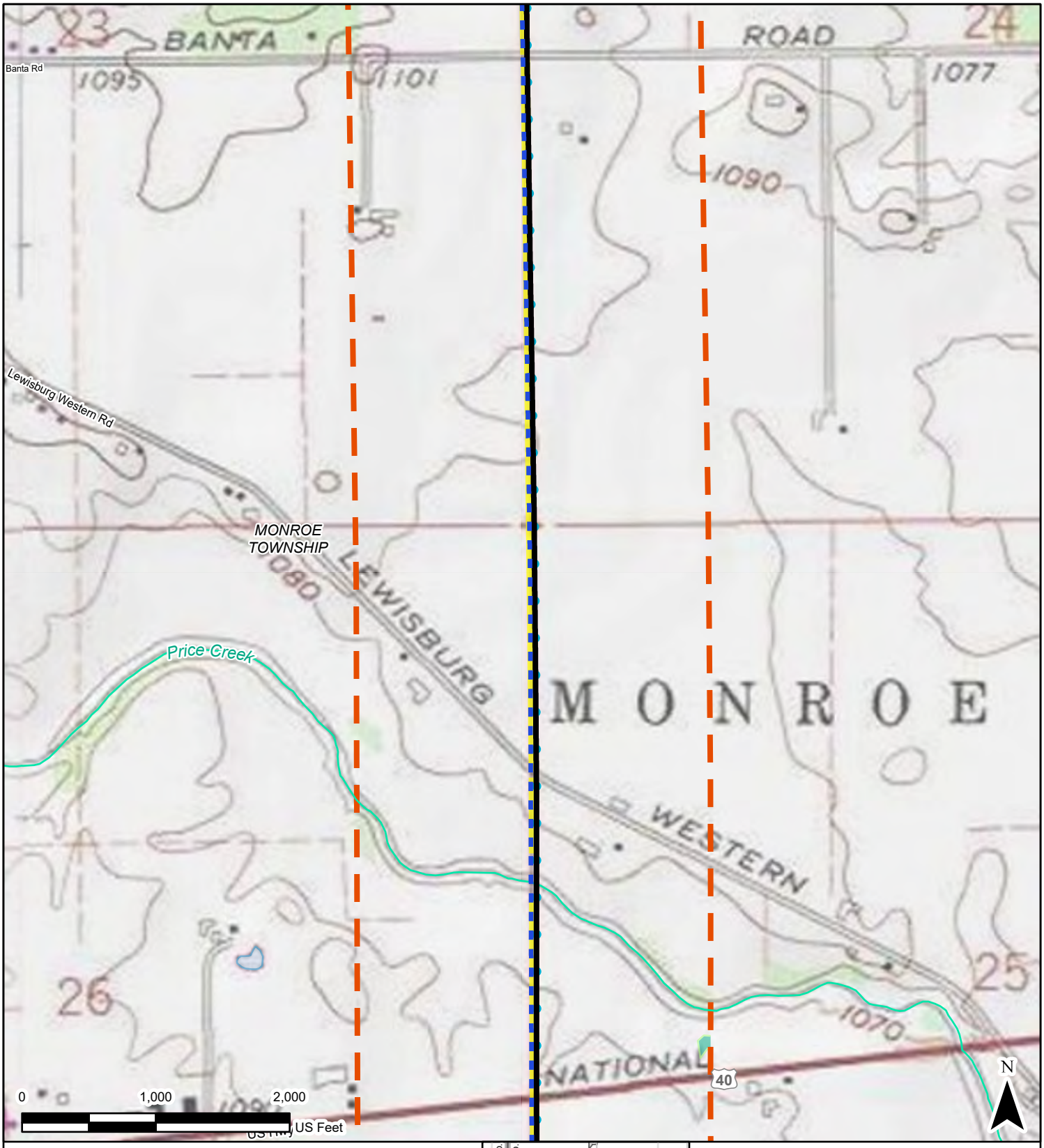


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP
5-1.3



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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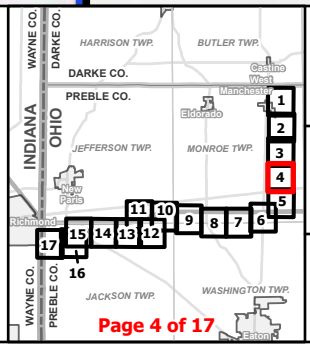
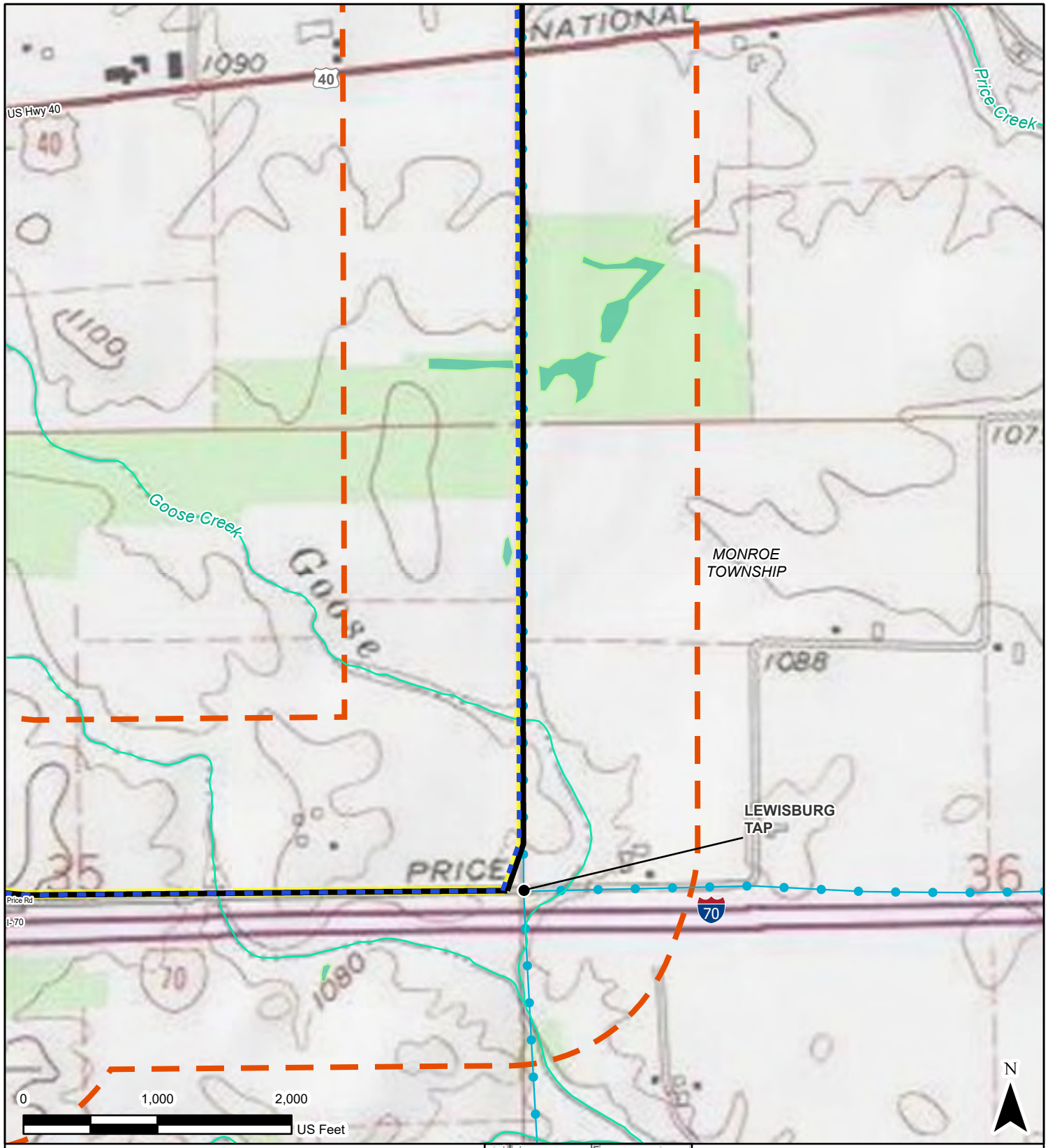


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP 5-1.4



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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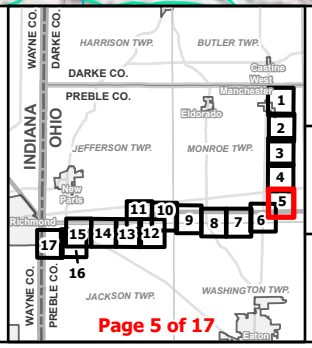
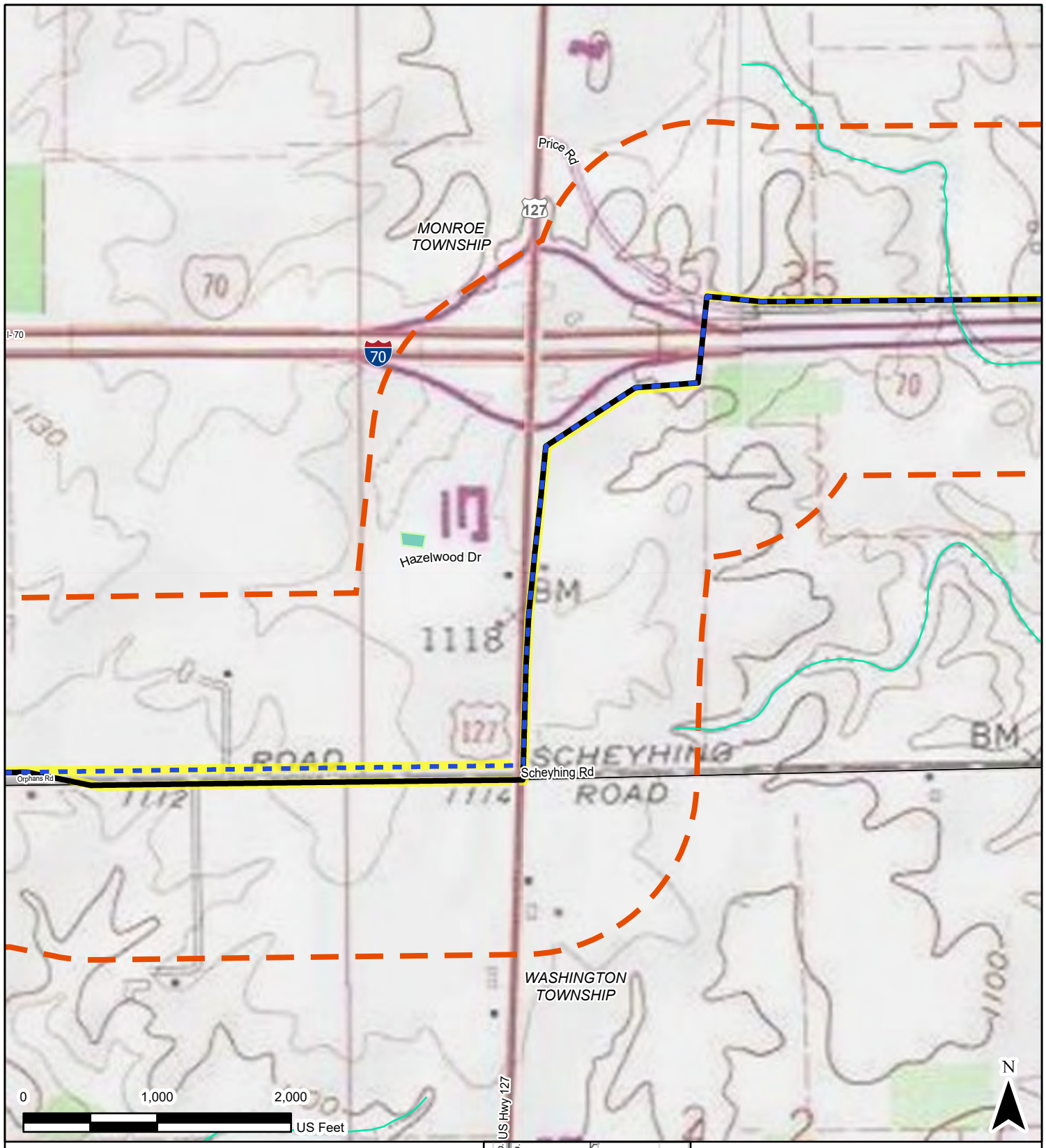


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP
5-1.5



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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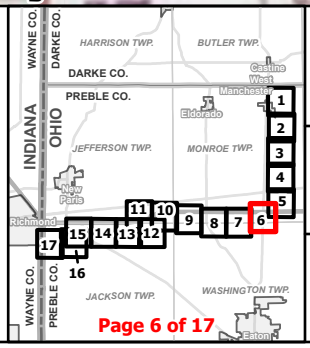
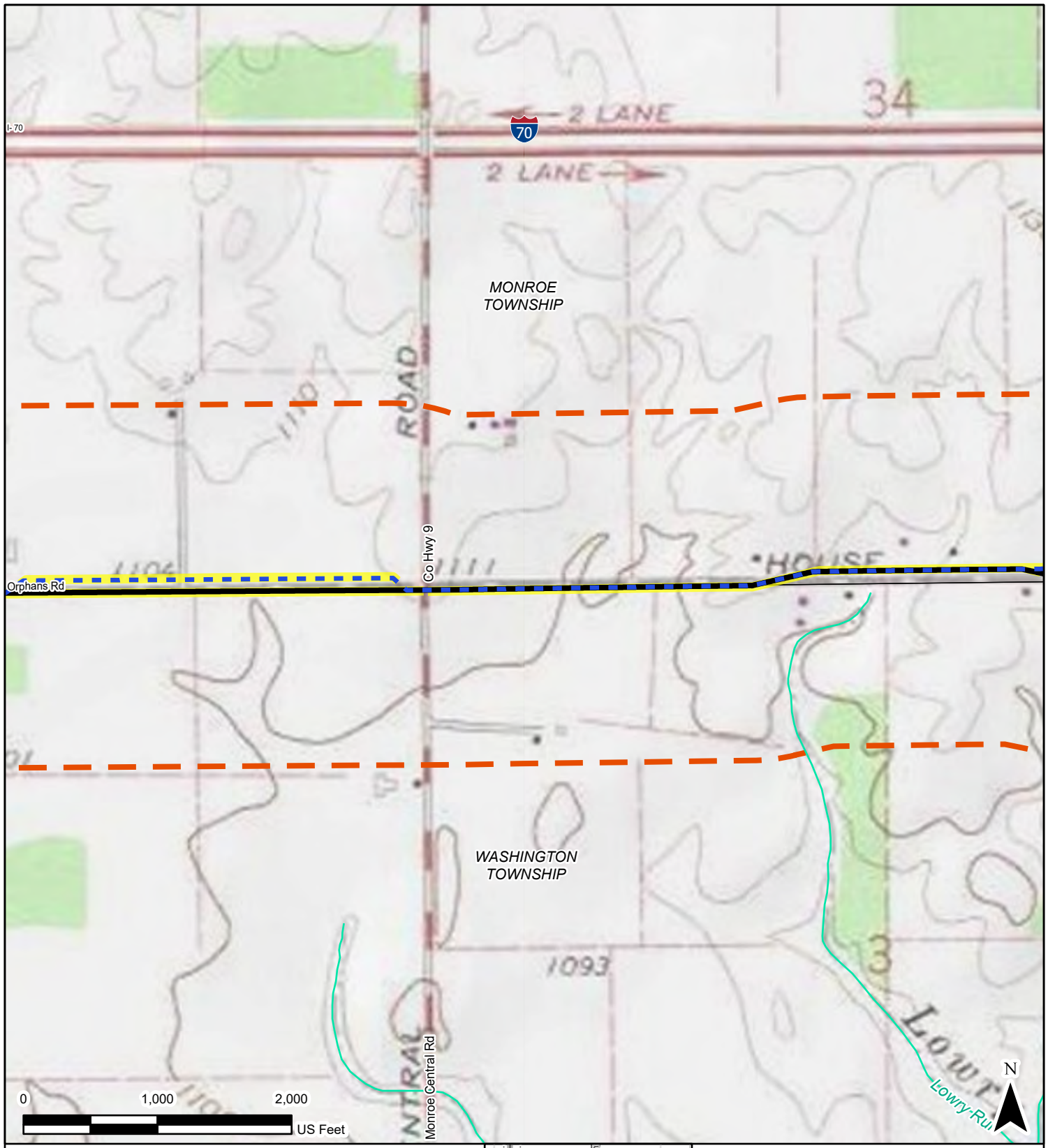


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP 5-1.6



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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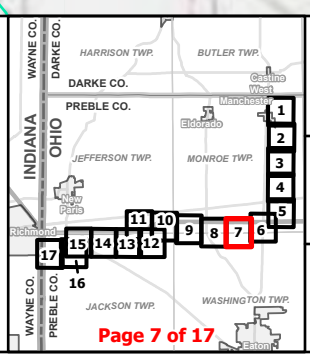
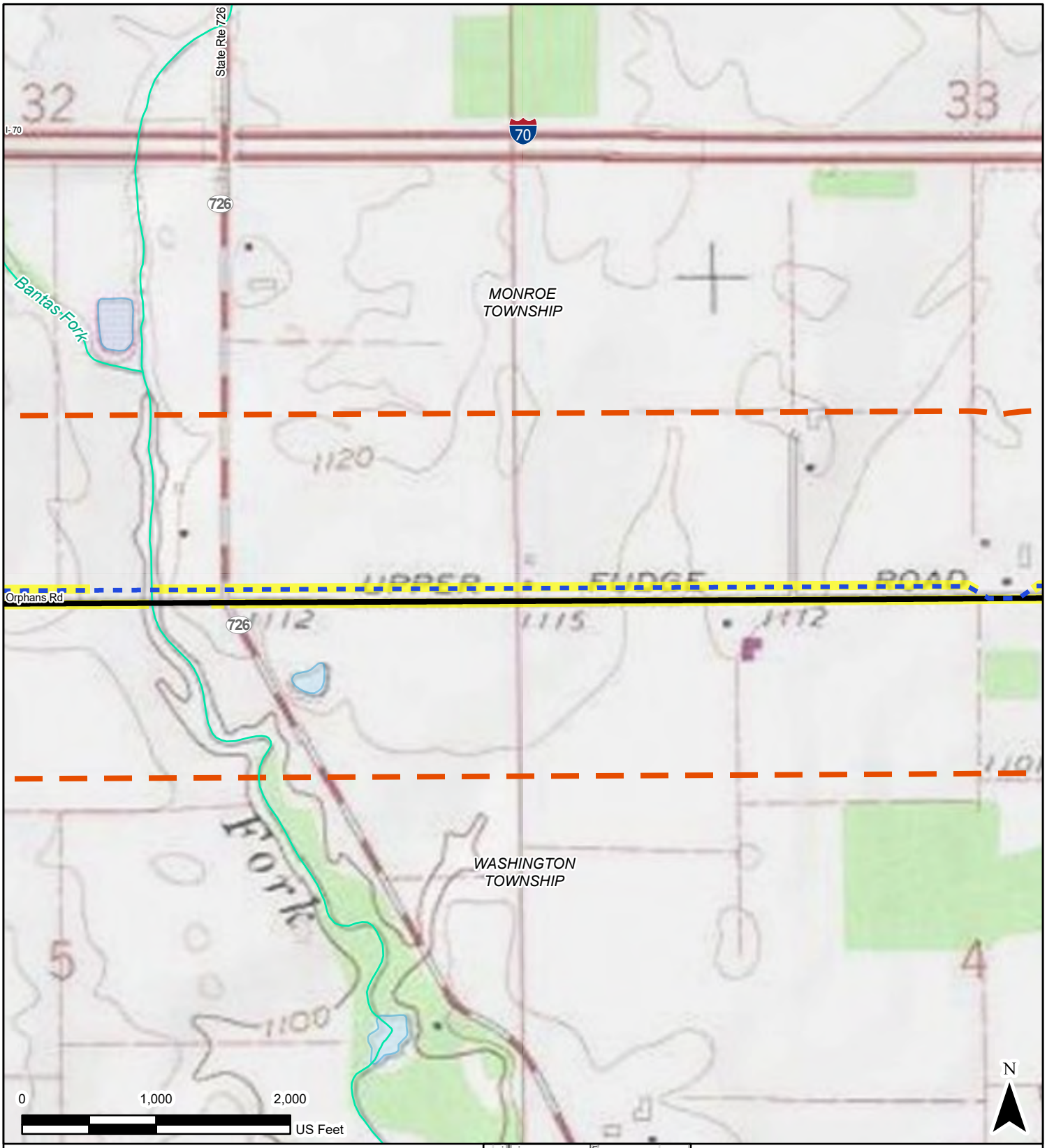


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP
5-1.7



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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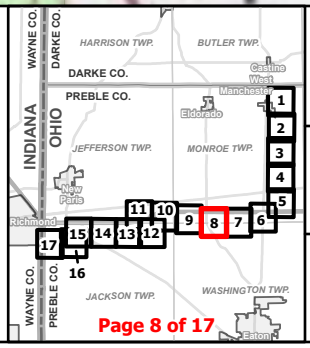
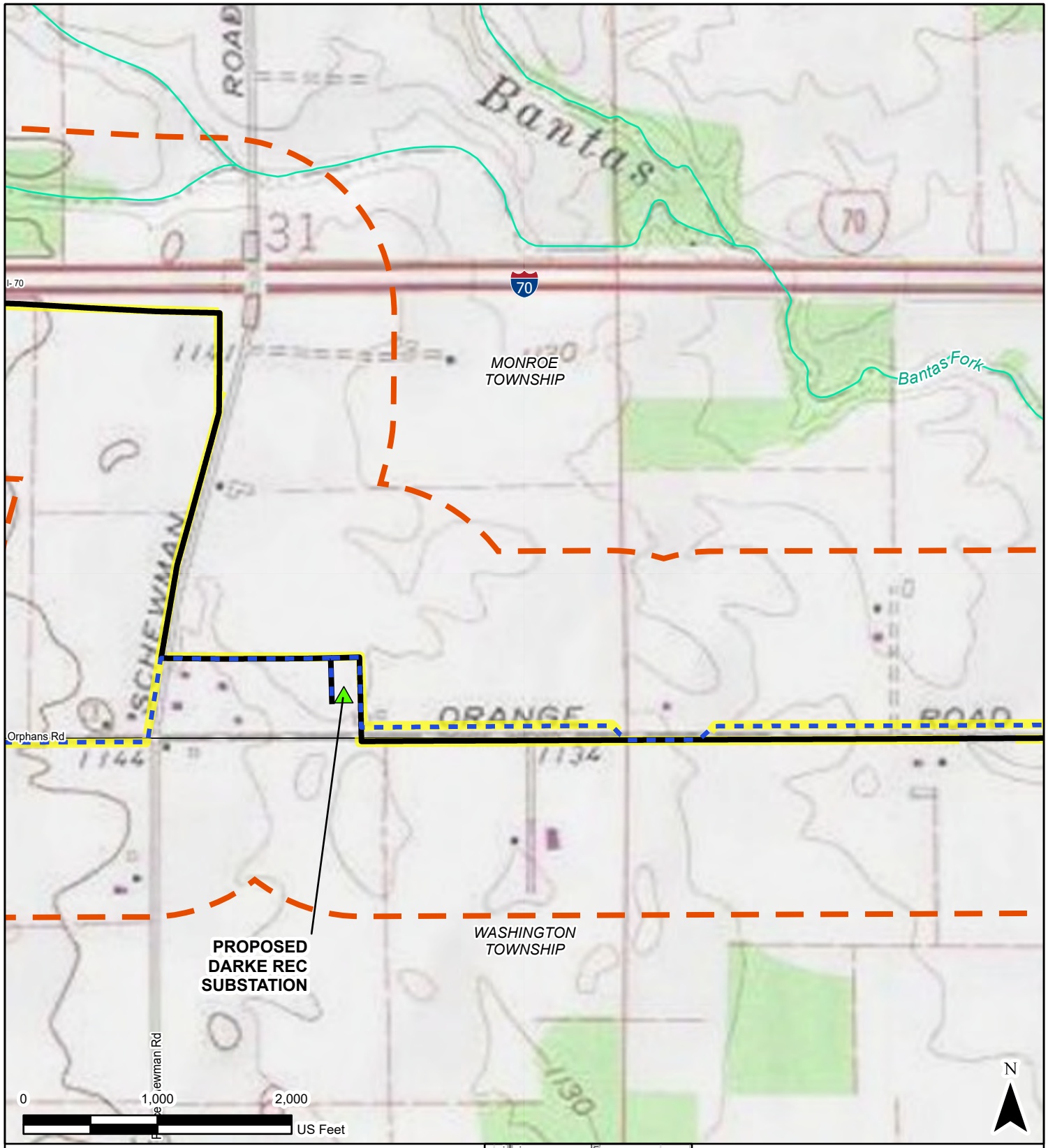


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP 5-1.8



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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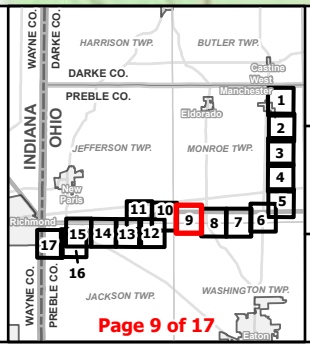
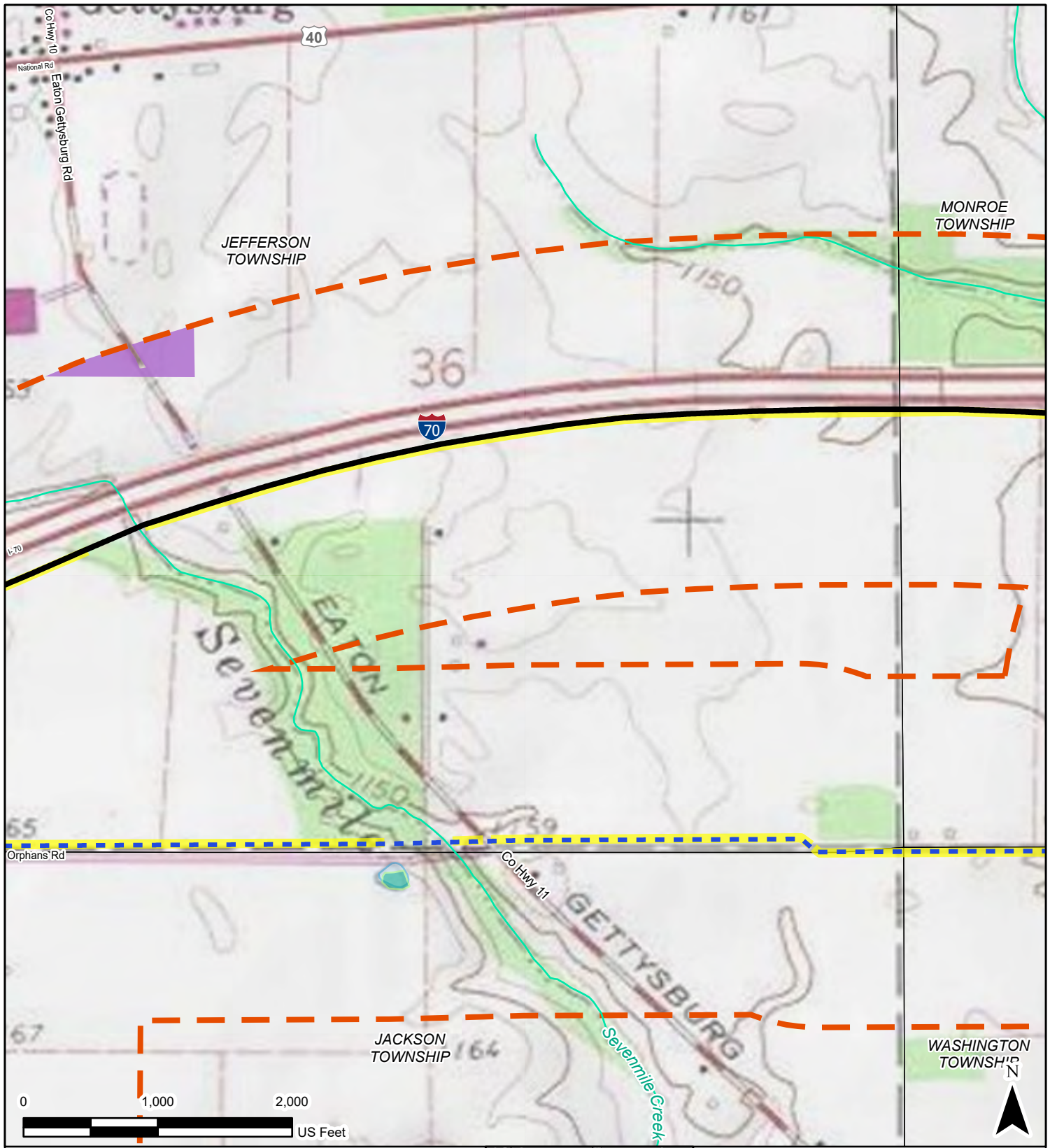


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP
5-1.9



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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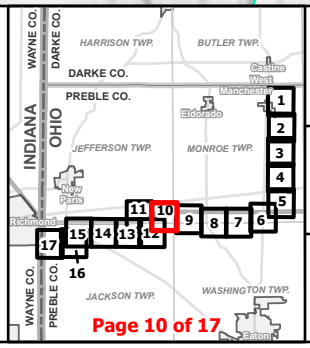
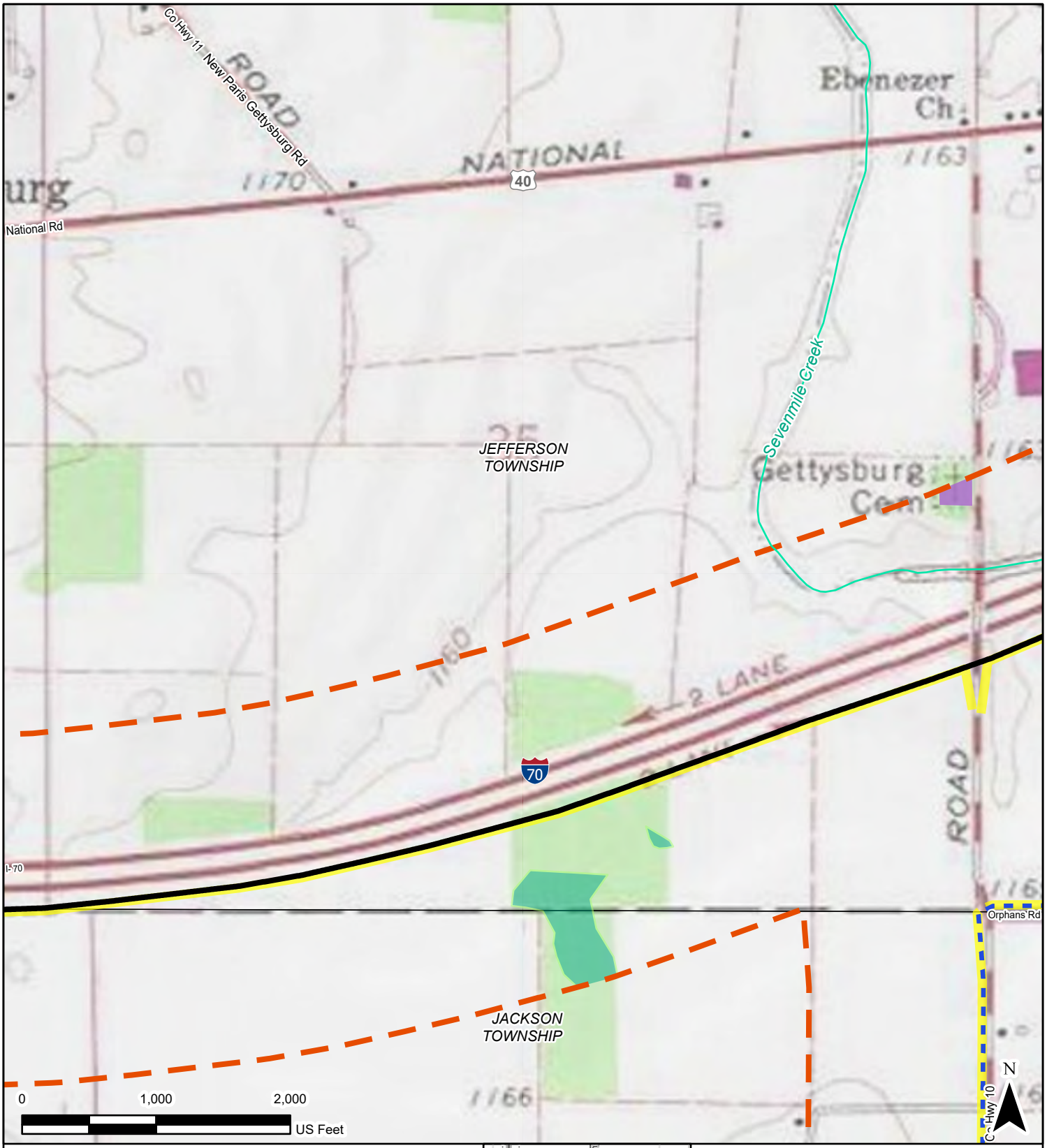


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP 5-1.10



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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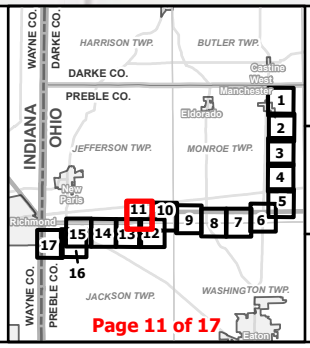
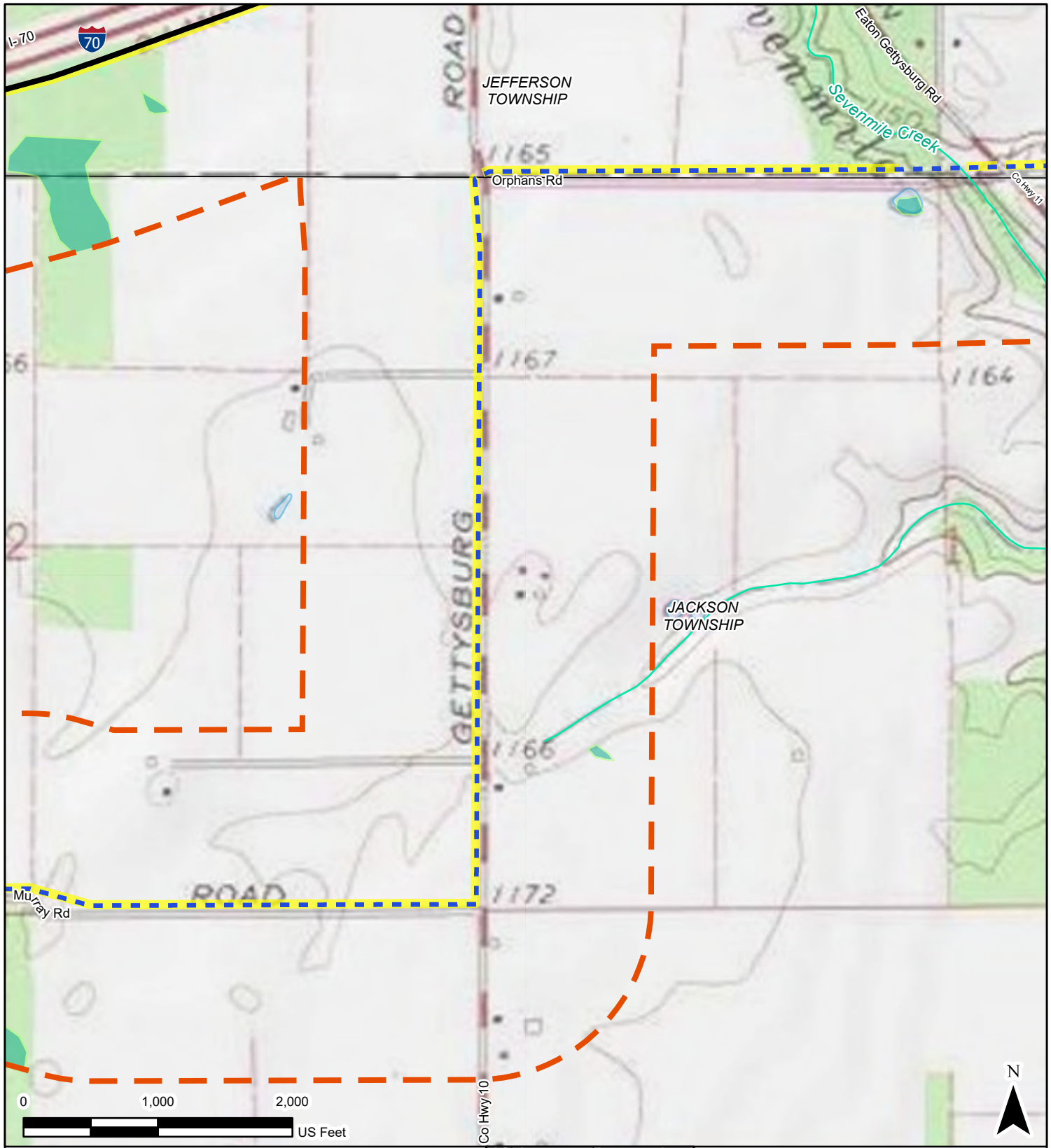


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

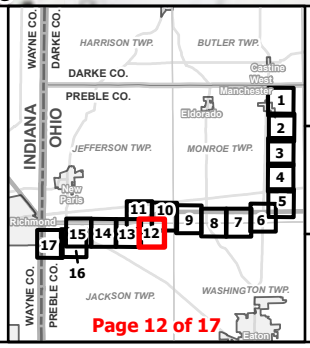
MAP 5-1.11



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.

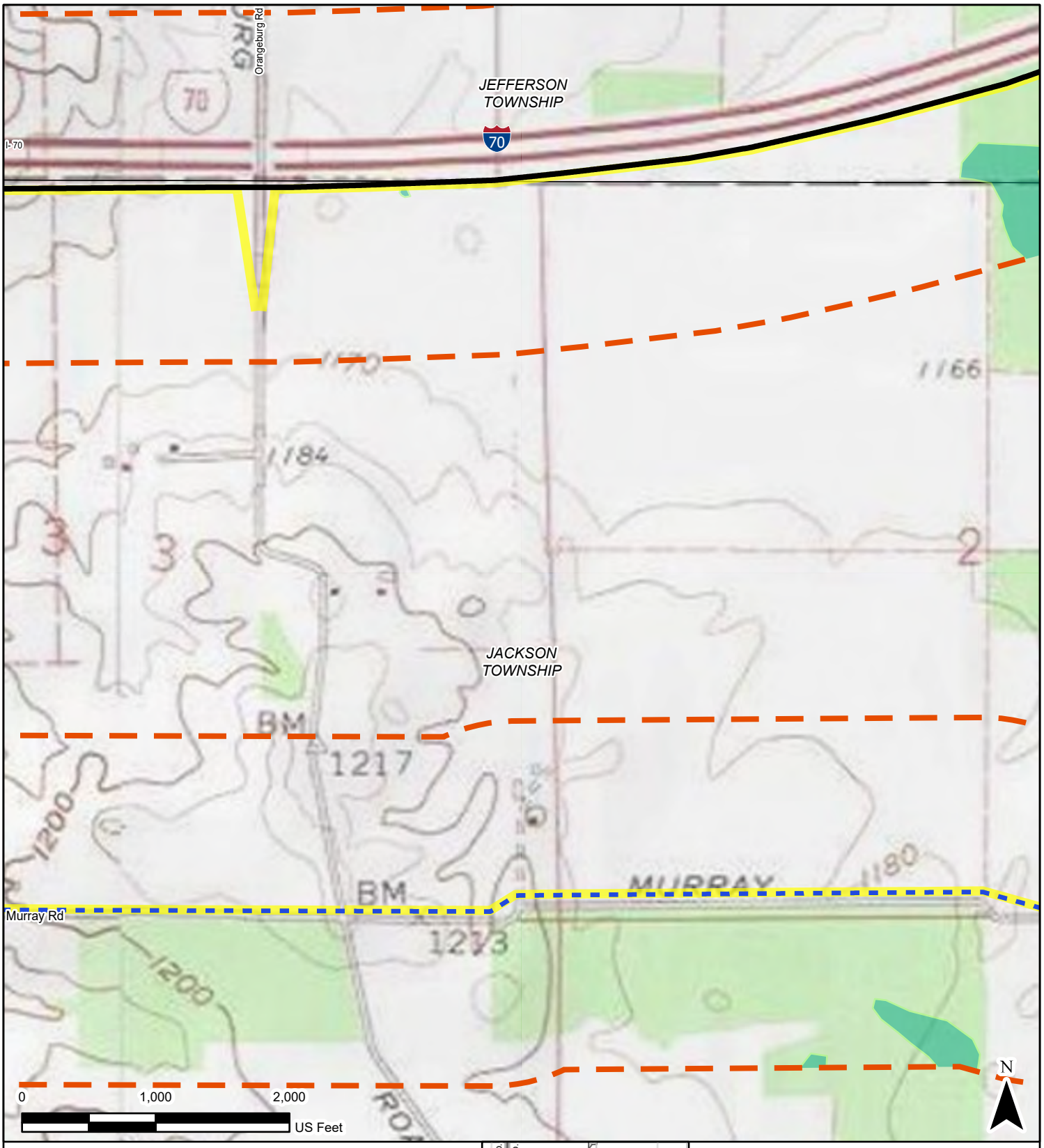


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

MAP 5-1.12



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
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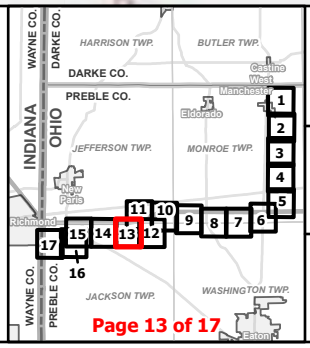
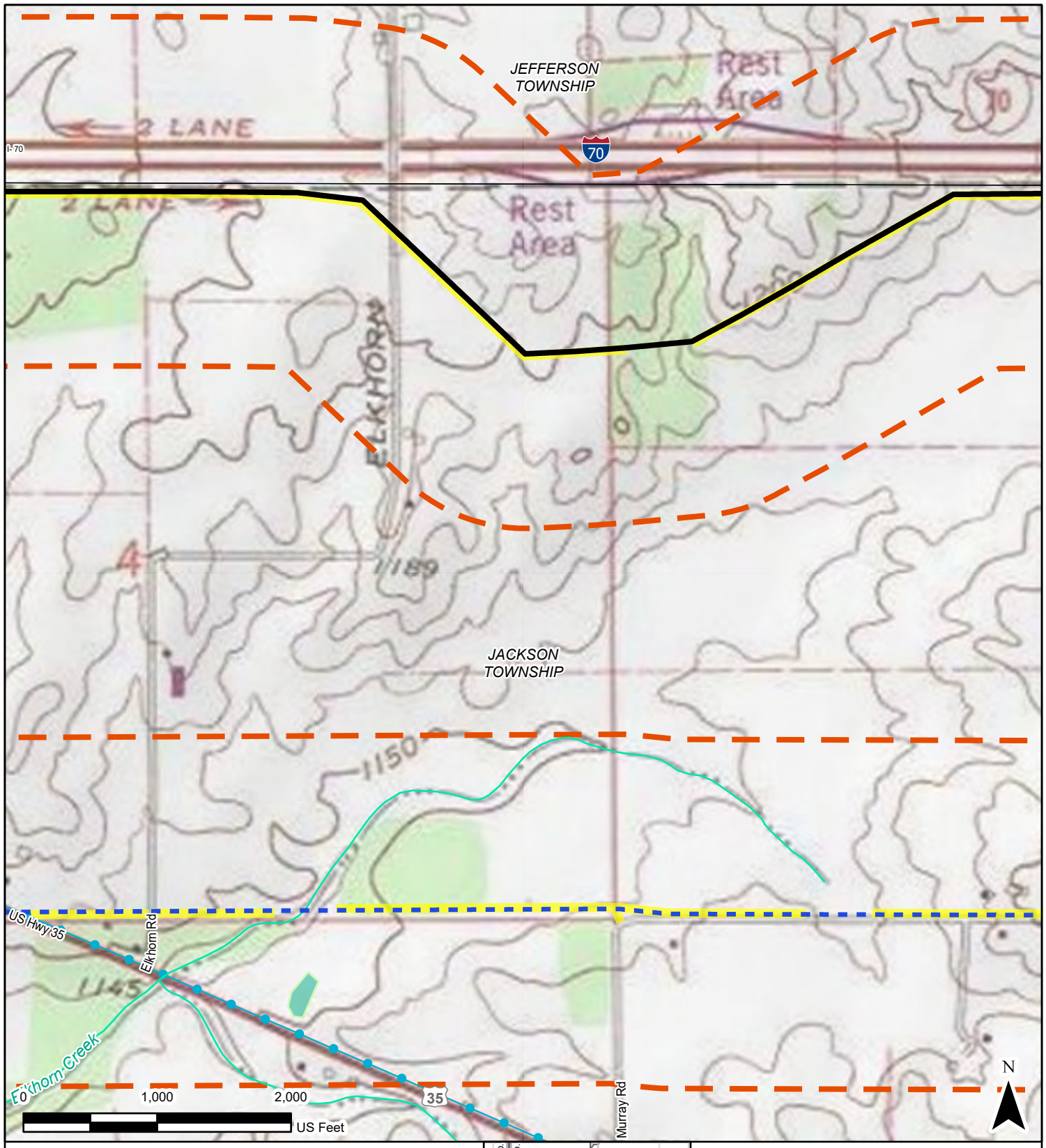


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

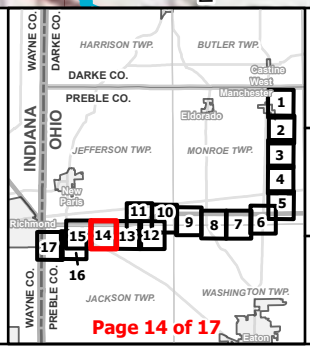
MAP
5-1.13



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.

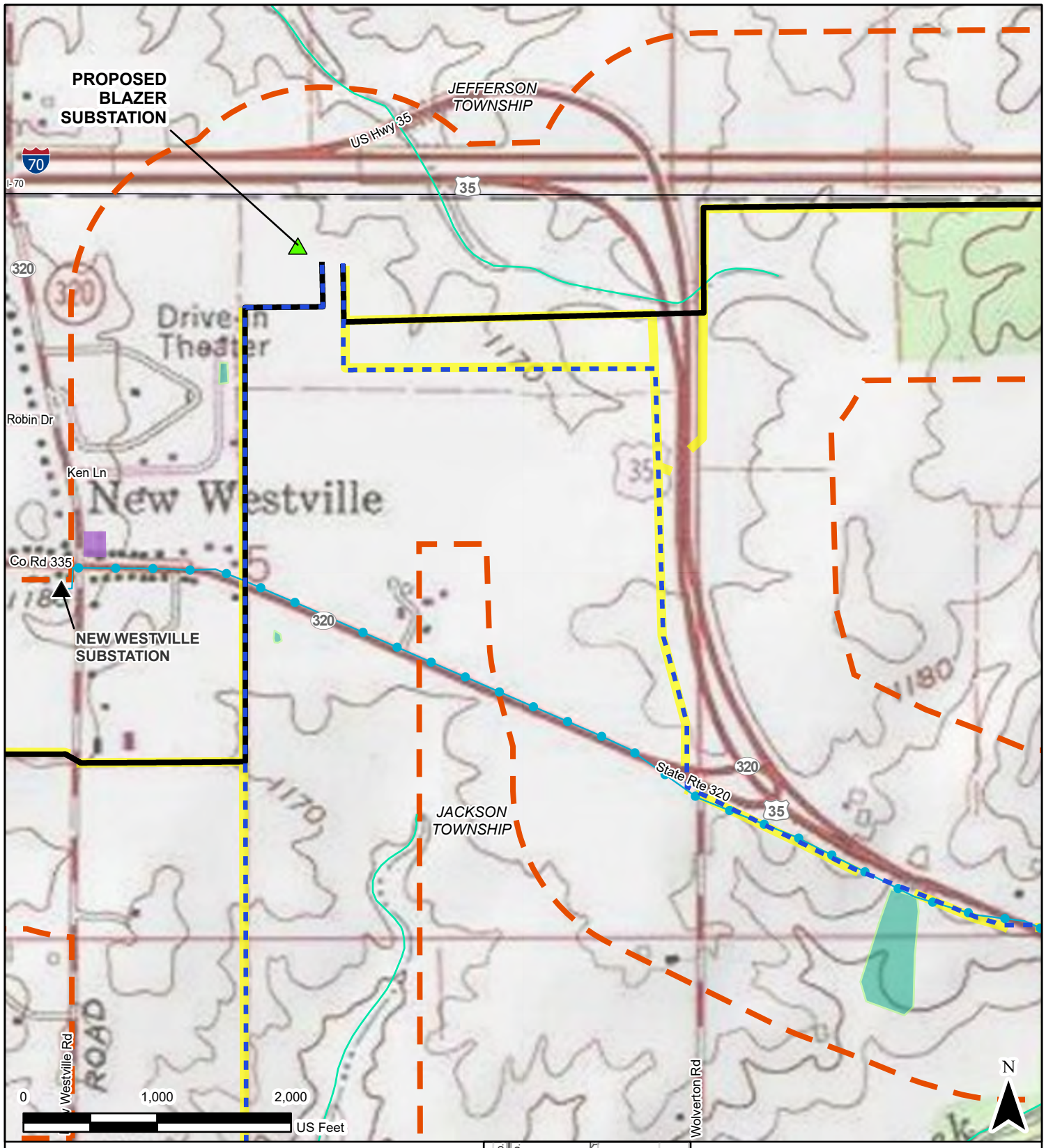


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

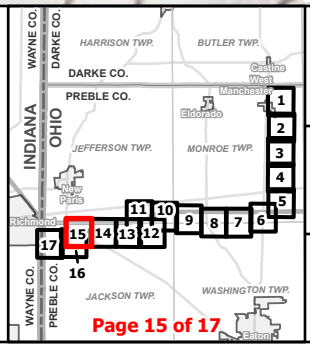
MAP
5-1.14



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.

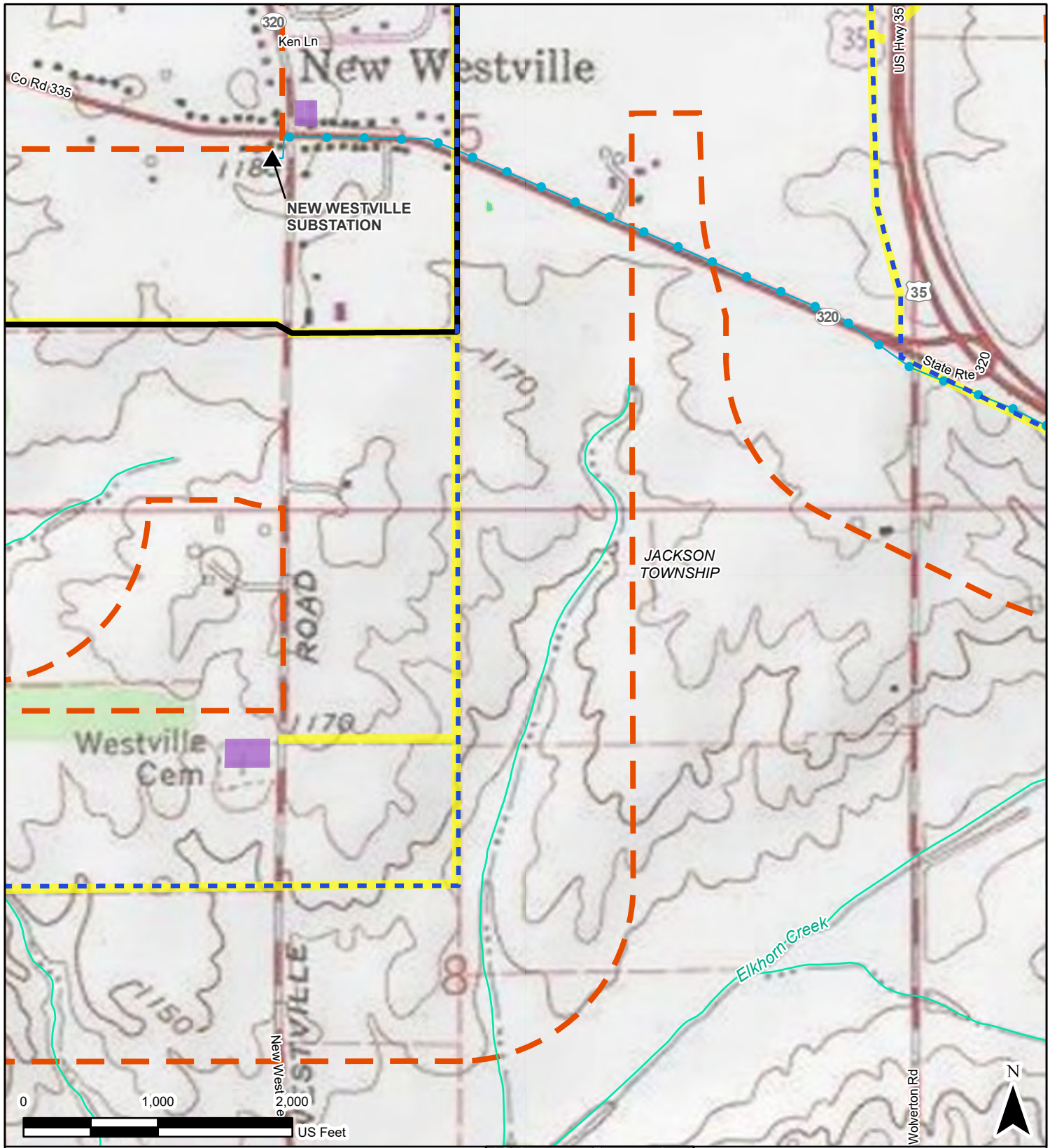


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

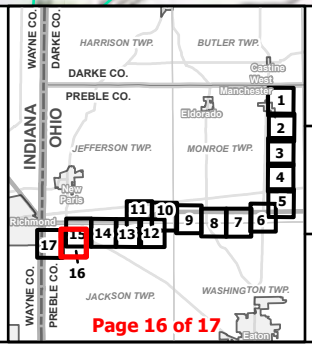
MAP 5-1.15



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.

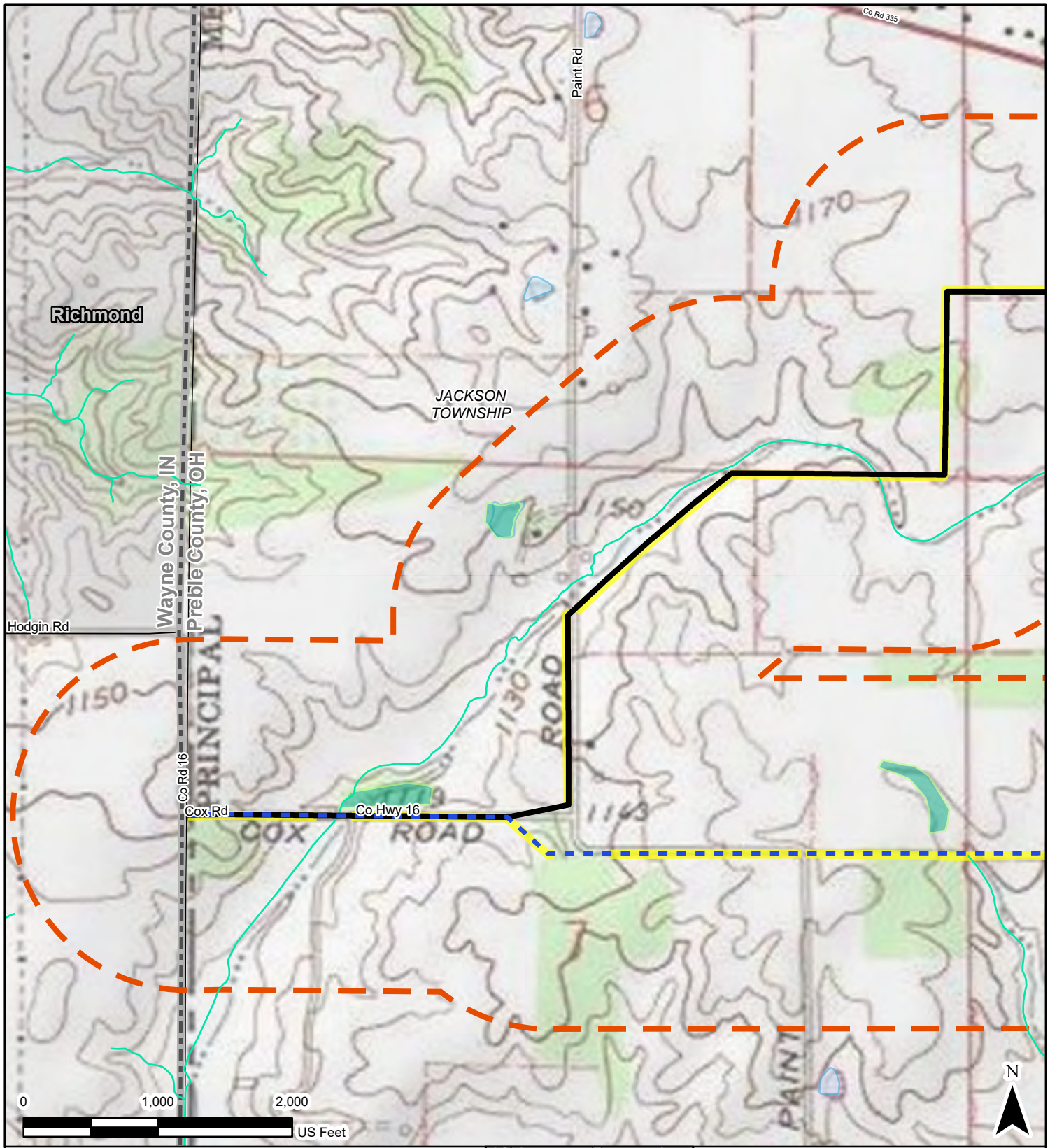


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

aes Ohio ARCADIS

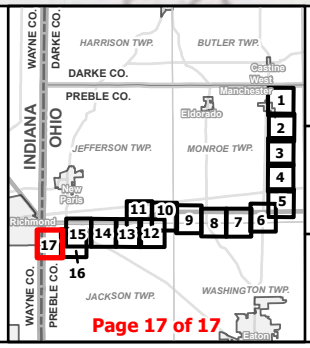
MAP 5-1.16



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Existing AES Transmission Line
- Existing Gas Pipeline
- Stream (NHD)
- Railroad
- Wetland (NWI)
- Lake/Pond (NHD)
- Institutional
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. NHD, 2020. NWI, 2020. NPMS, 2023. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

PROJECT DESCRIPTION

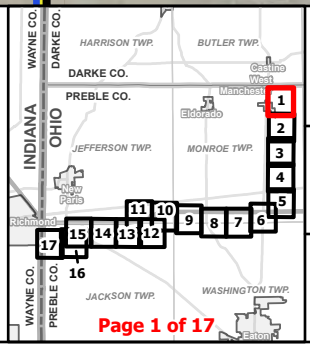
aes Ohio ARCADIS

MAP
5-1.17

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

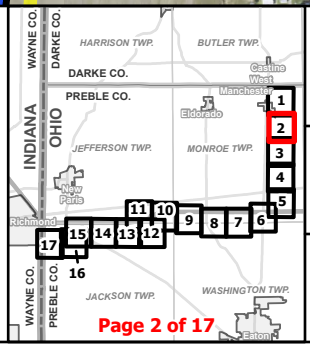
aes Ohio ARCADIS

MAP
5-2.1

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

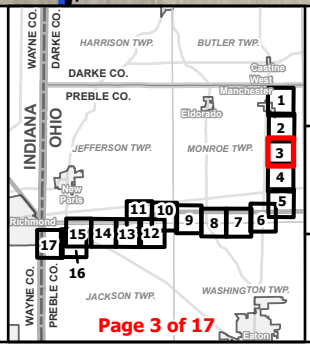
aes Ohio ARCADIS

MAP
5-2.2

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

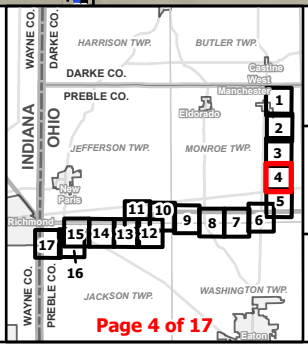
aes Ohio ARCADIS

MAP
5-2.3

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

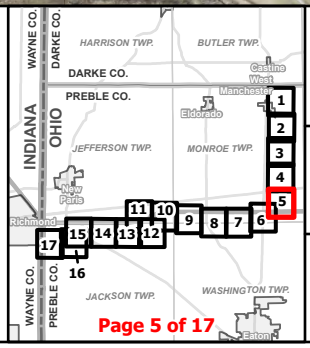
aes Ohio ARCADIS

MAP 5-2.4

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

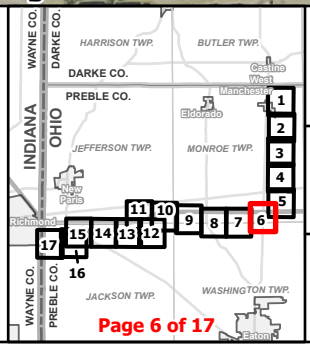
aes Ohio ARCADIS

MAP 5-2.5

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.

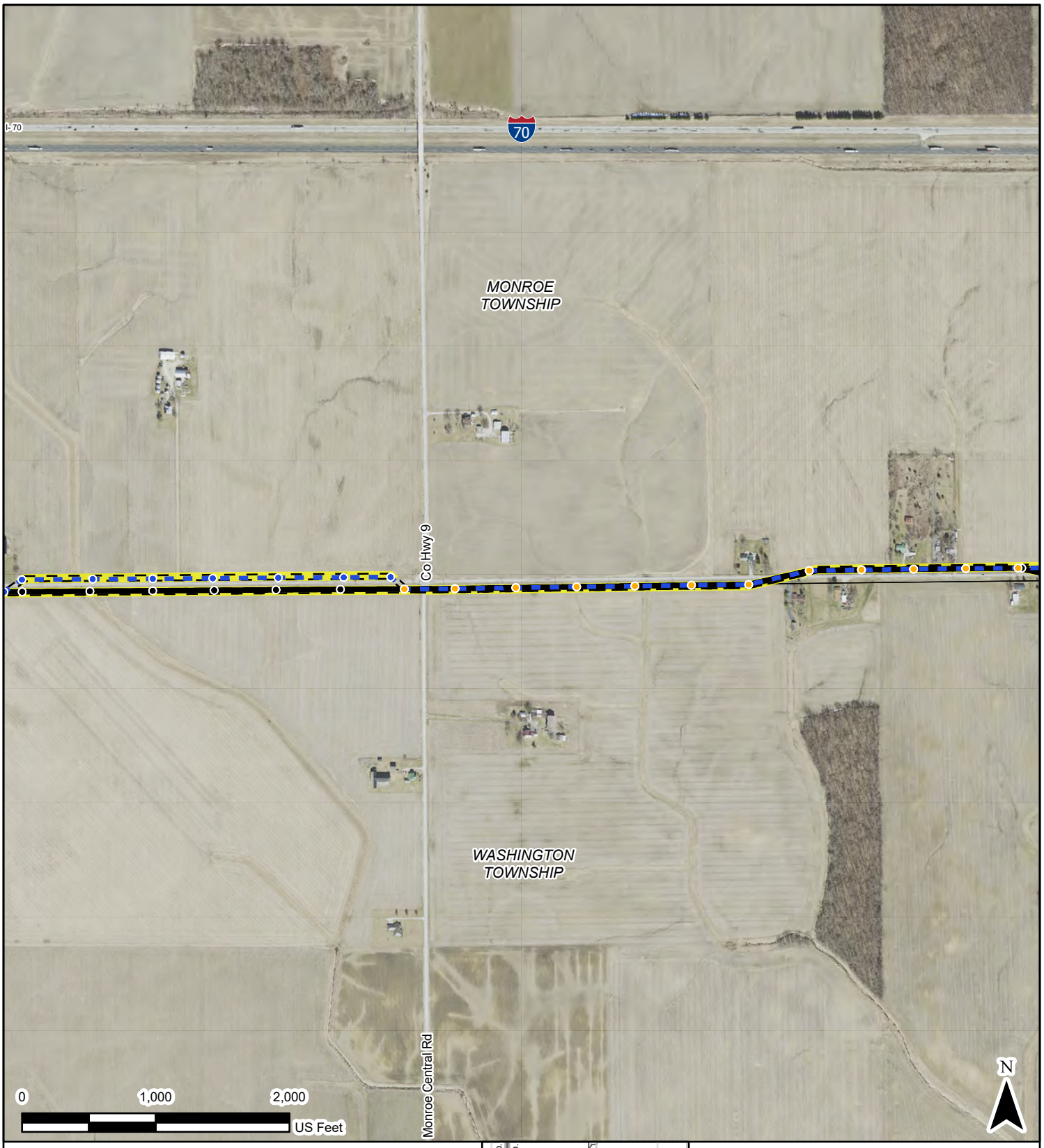


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

aes Ohio ARCADIS

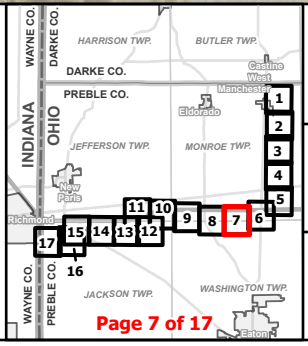
MAP
5-2.6



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

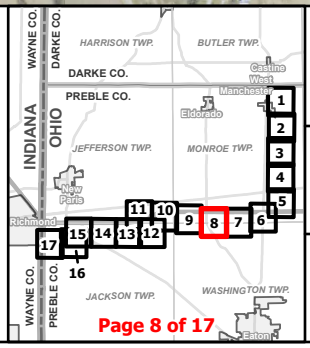
aes Ohio ARCADIS

MAP 5-2.7

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.

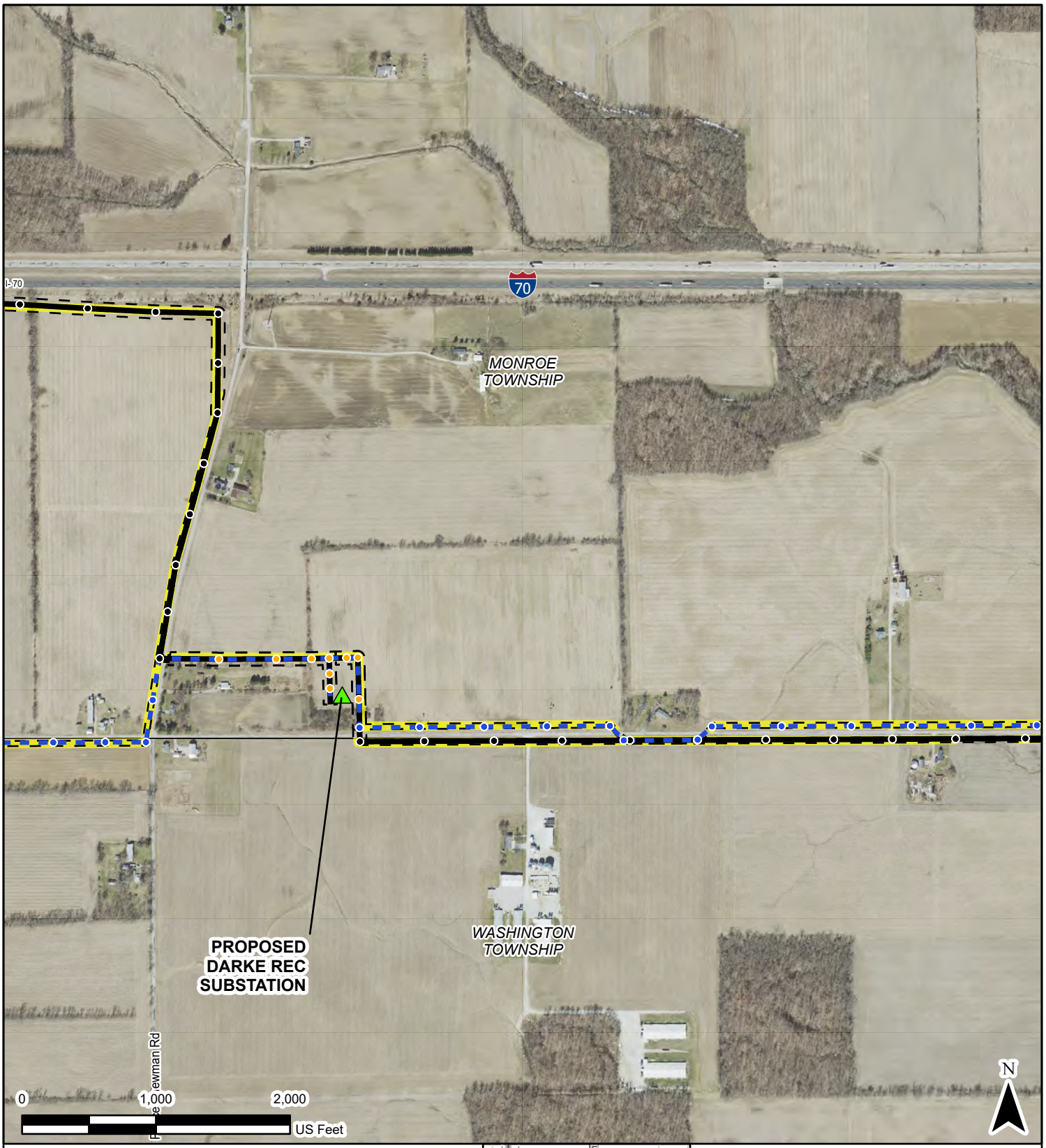


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

aes Ohio ARCADIS

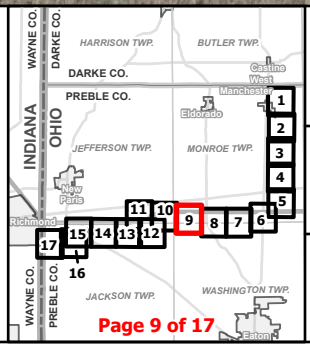
MAP 5-2.8



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

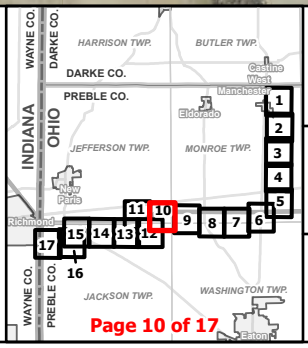
aes Ohio ARCADIS

MAP 5-2.9

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

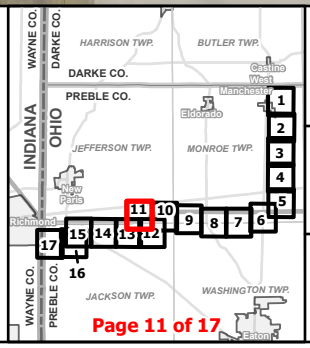
aes Ohio ARCADIS

MAP 5-2.10

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.

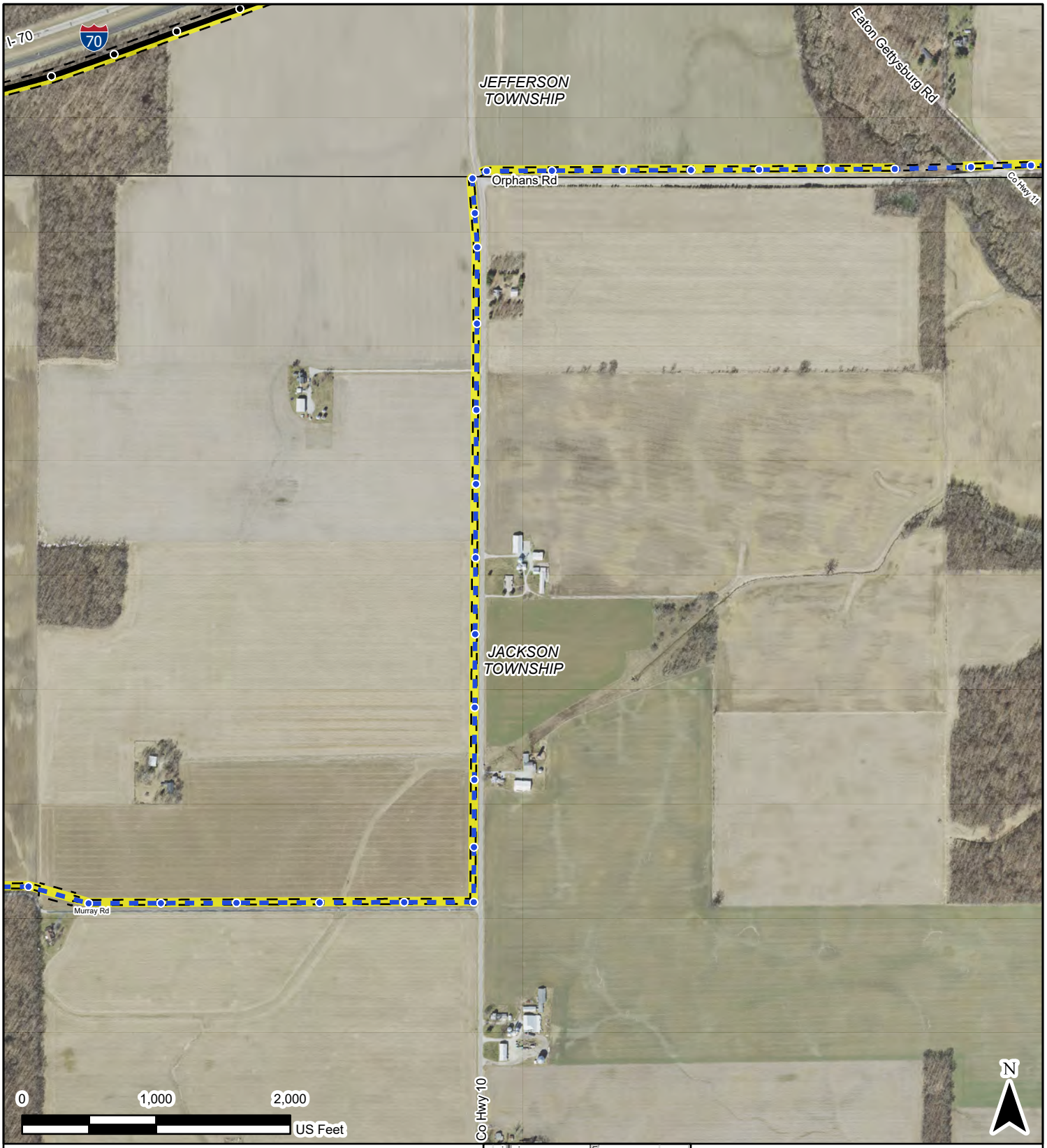


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

aes Ohio ARCADIS

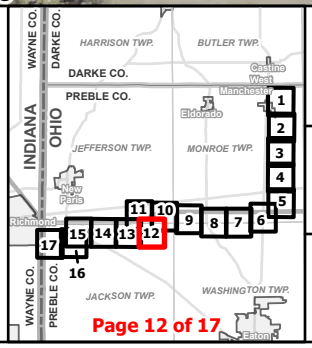
MAP
5-2.11



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

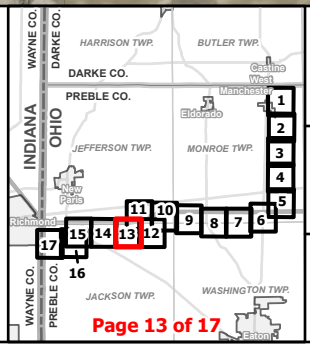
aes Ohio ARCADIS

MAP
5-2.12

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

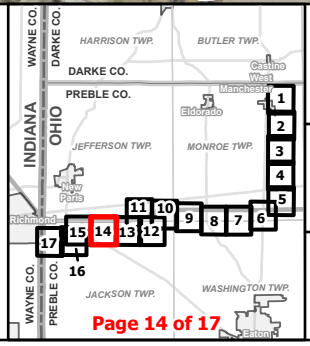
aes Ohio ARCADIS

MAP 5-2.13

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

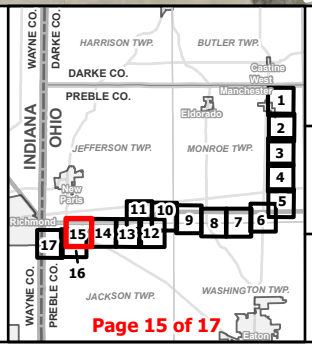
aes Ohio ARCADIS

MAP 5-2.14

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

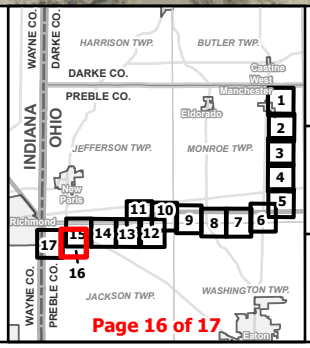
aes Ohio ARCADIS

MAP 5-2.15

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

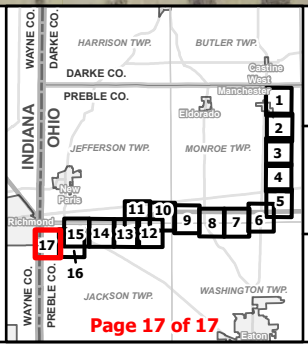
aes Ohio ARCADIS

MAP 5-2.16

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Proposed Structure Preferred Route
- Proposed Structure Alternate Route
- Proposed Structure Common Route
- Preferred Route
- Alternate Route
- Proposed Temporary Access
- Right-of-Way
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. AES, 2022. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023.

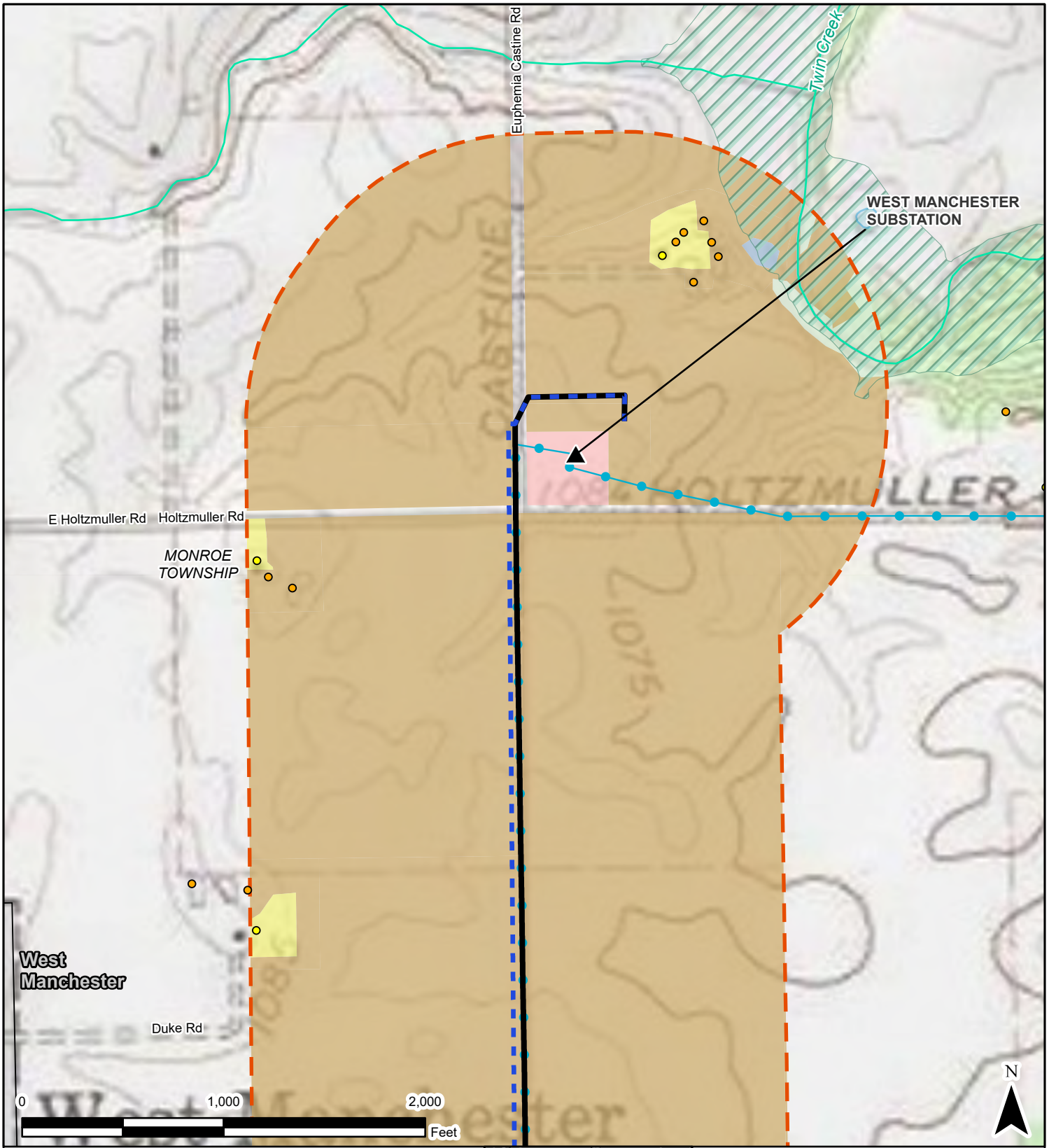


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

FACILITIES LAYOUT

aes Ohio ARCADIS

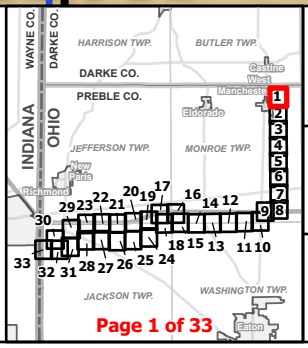
MAP
5-2.17



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
- Aquatic Resource
- Commerical/ Industrial
- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
- City Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. NHD, 2020. NWI, 2020. GNIS, 2020. OHPO, 2022. Indiana Map, 2021. Microsoft, 2022. ODOT, 2022. Preble County, 2023. FEMA, 2019.

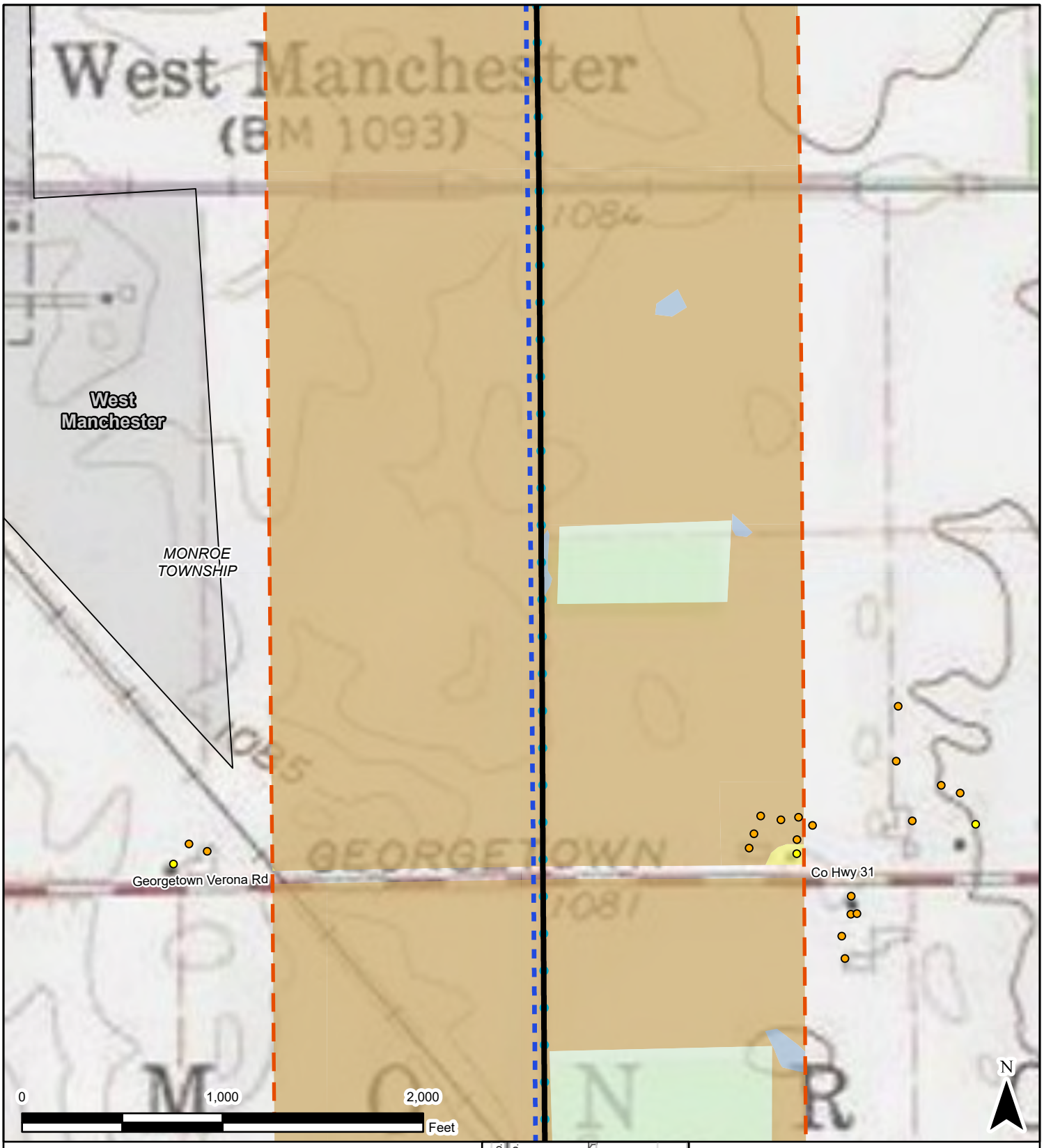


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.1



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
- Aquatic Resource
- Commerical/ Industrial
- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
- City Boundary

NOTE:
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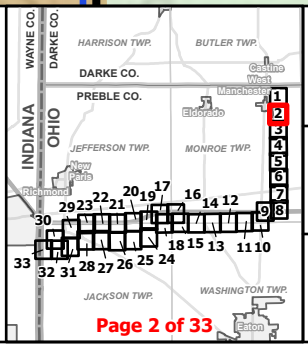
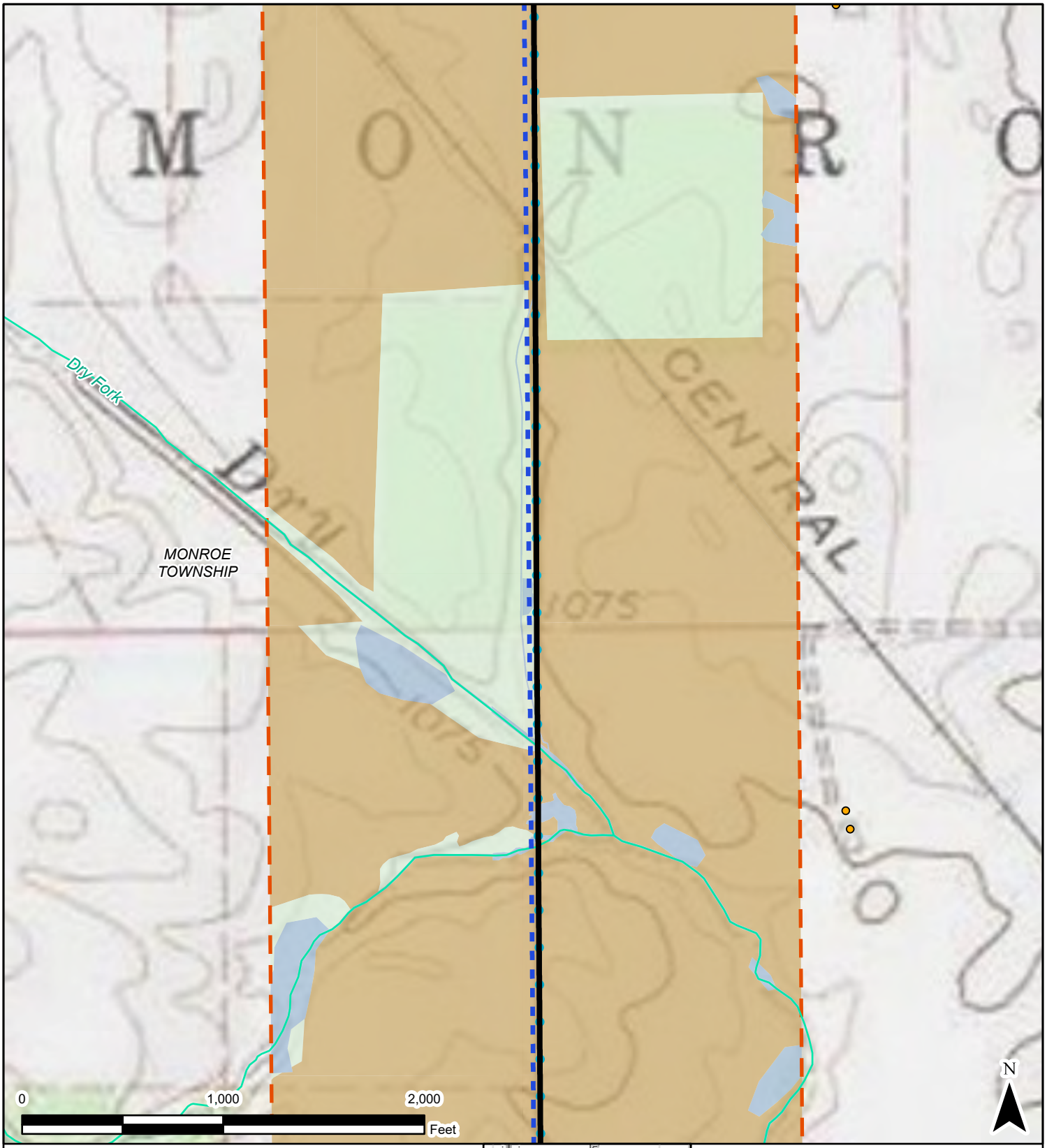


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.2



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
- Aquatic Resource
- Commerical/ Industrial
- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
- City Boundary

NOTE:
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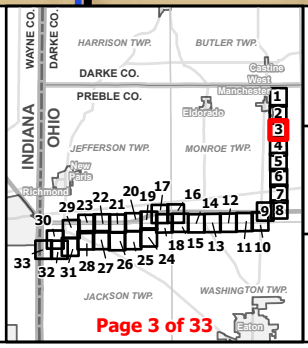
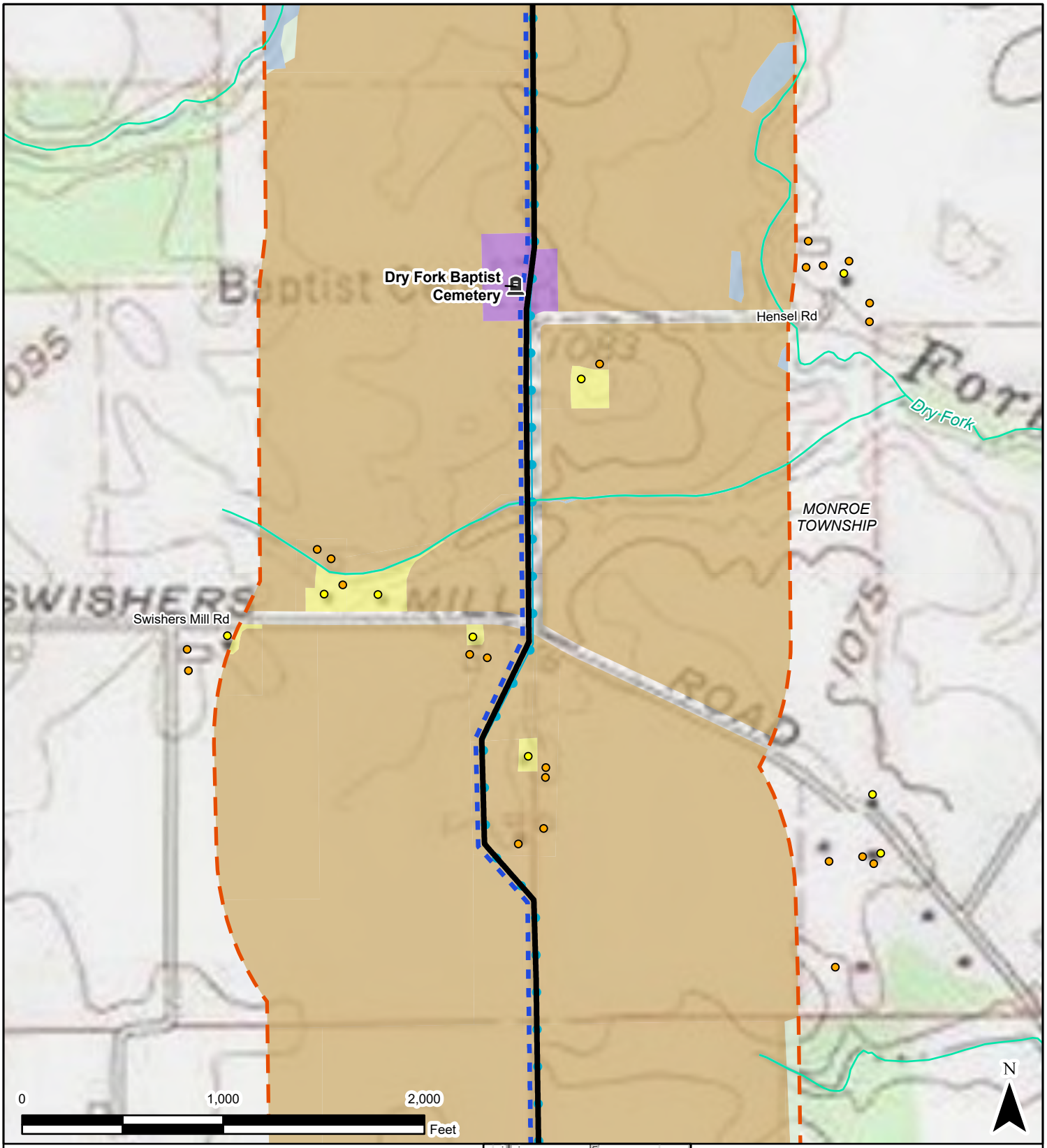


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP
7-1.3



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
- Aquatic Resource
- Commerical/ Industrial
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- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
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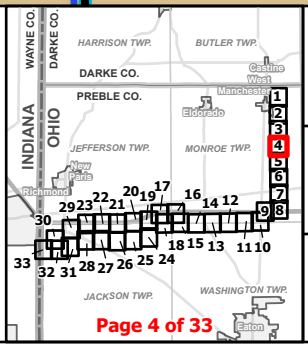
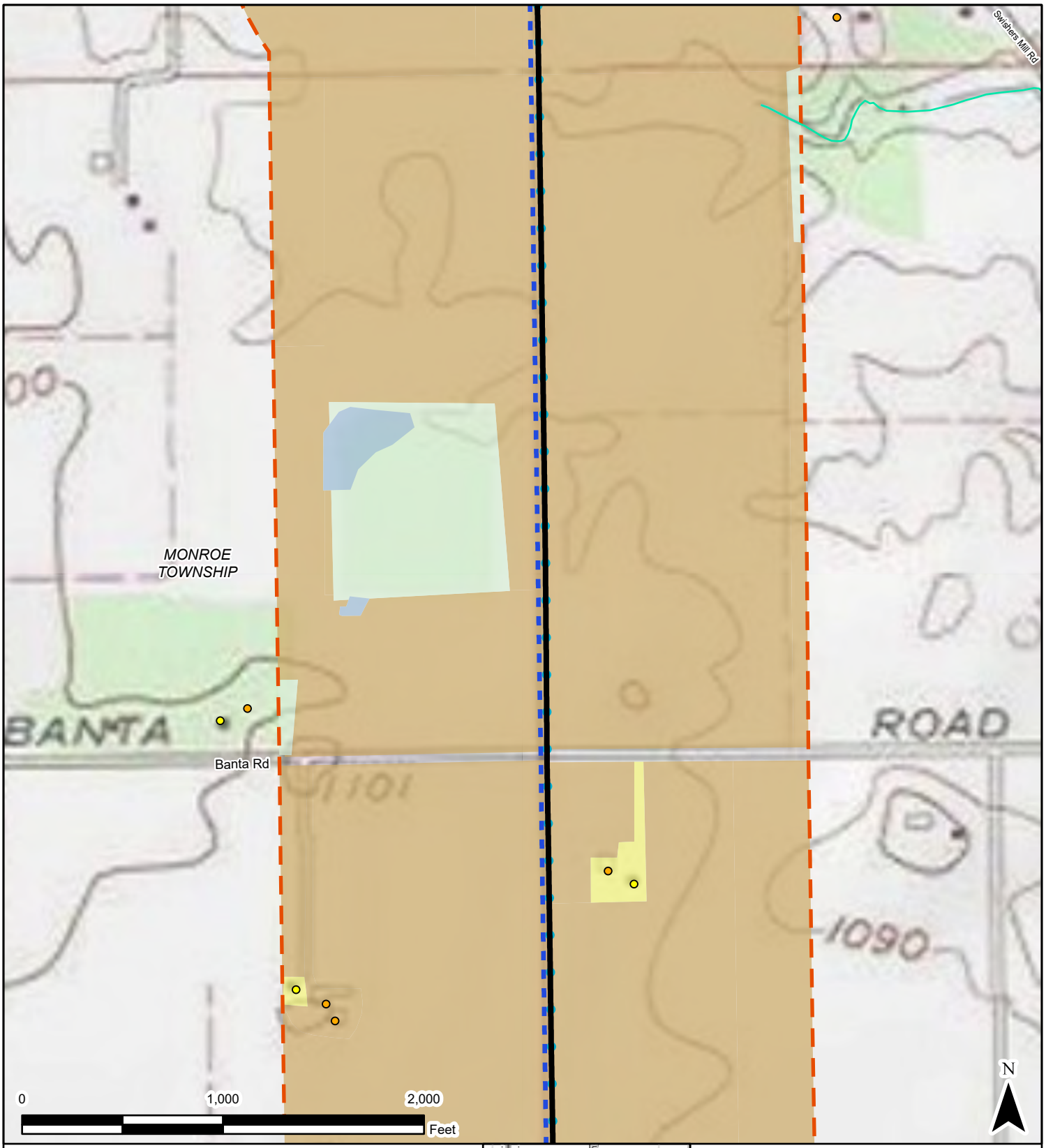


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

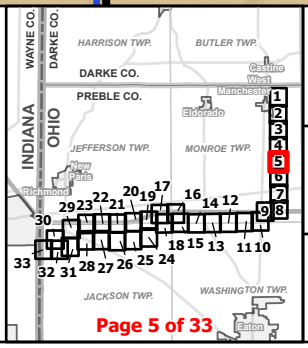
MAP 7-1.4



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
- Aquatic Resource
- Commerical/ Industrial
- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
- City Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. NHD, 2020. NWI, 2020. GNIS, 2020. OHPO, 2022. Indiana Map, 2021. Microsoft, 2022. ODOT, 2022. Preble County, 2023. FEMA, 2019.

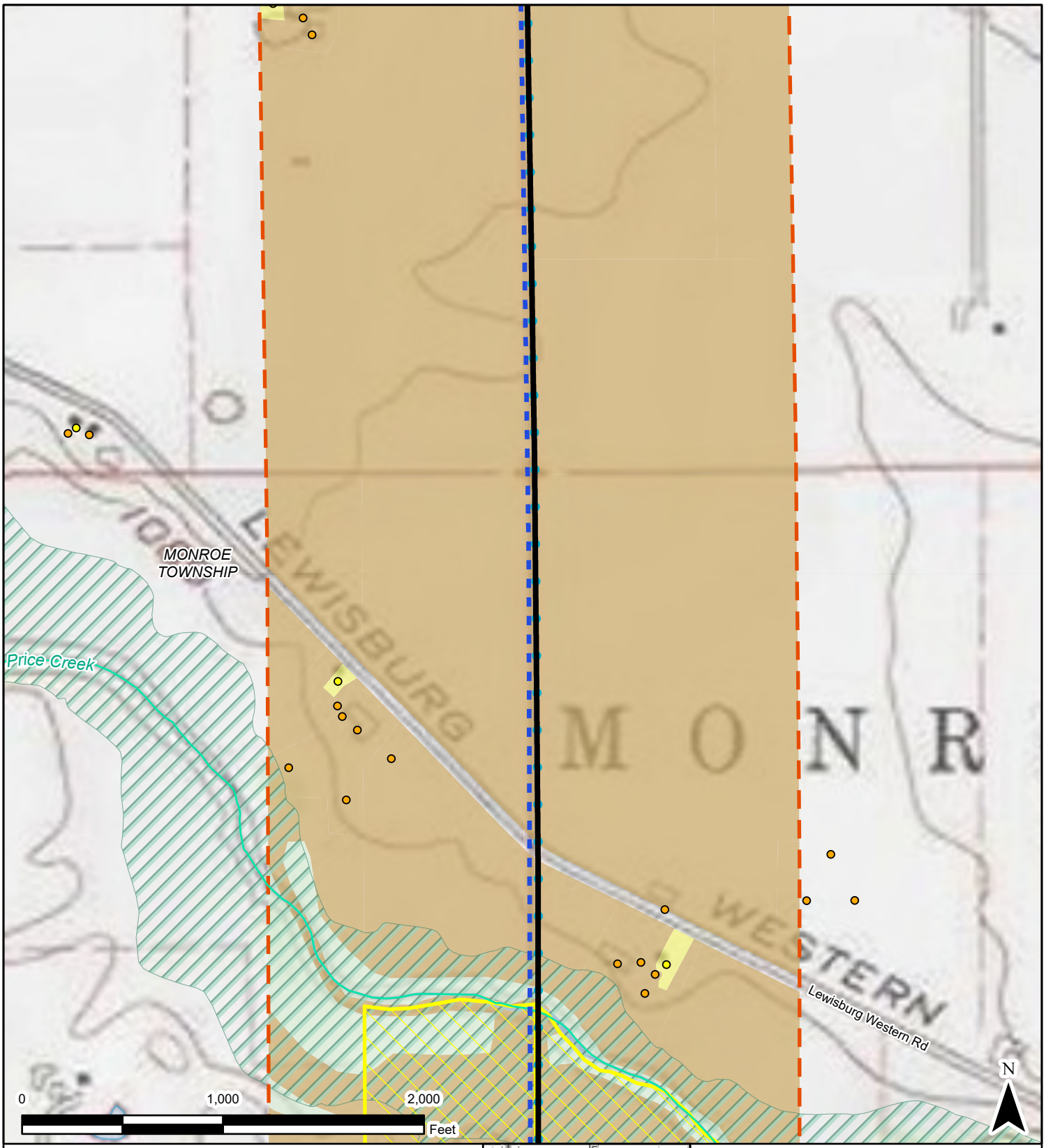


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.5



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
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- Commerical/ Industrial
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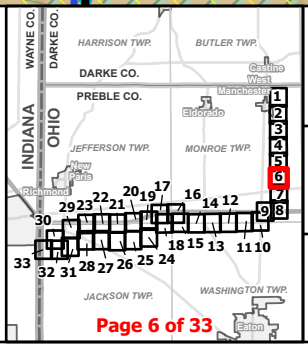
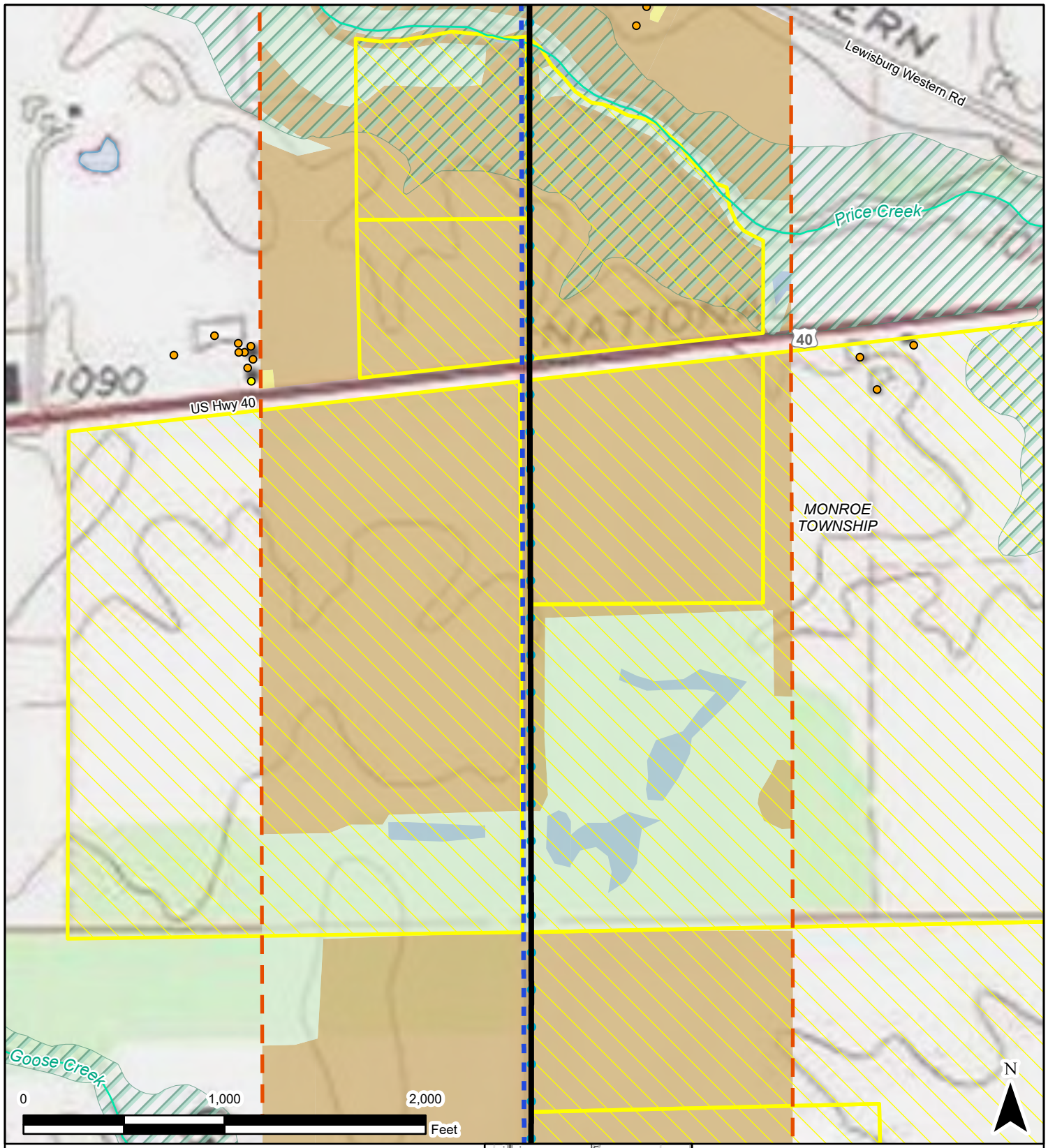


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.6



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
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- Aquatic Resource
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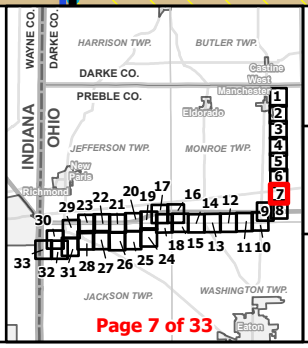
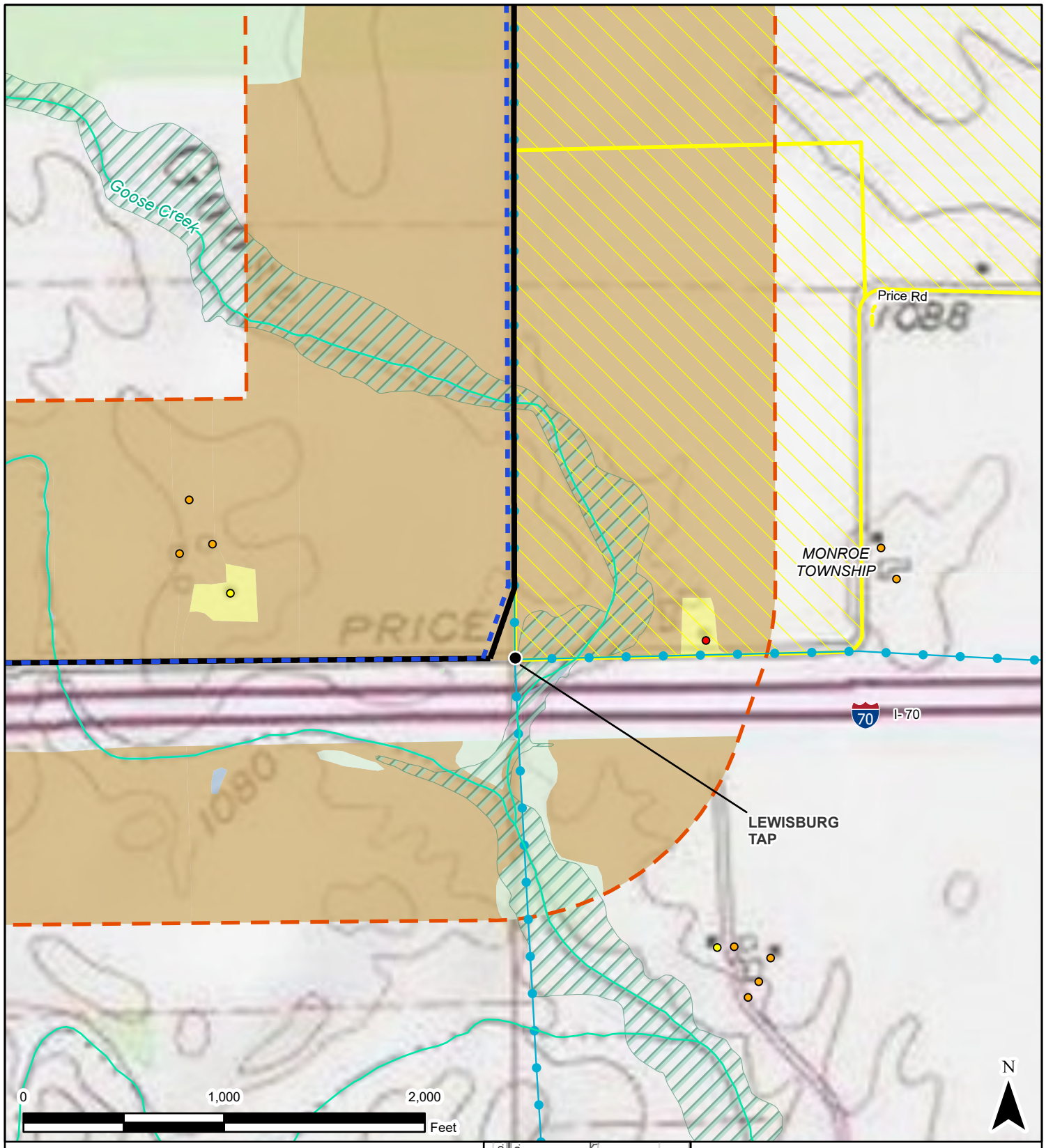


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.7



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
- Aquatic Resource
- Commerical/ Industrial
- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
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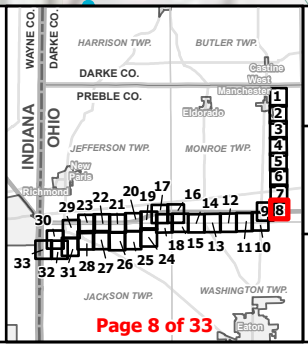
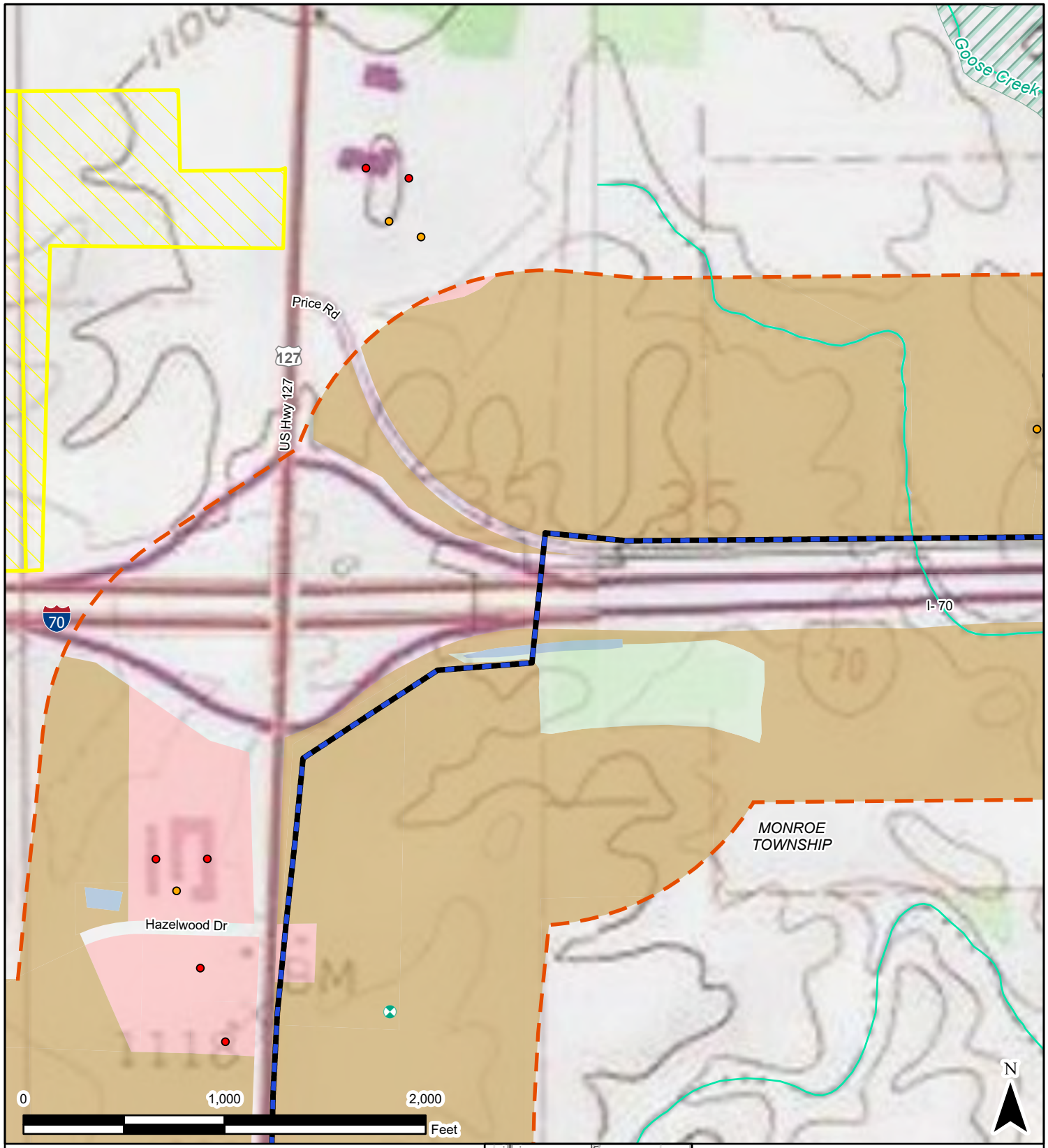


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.8



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
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- Commerical/ Industrial
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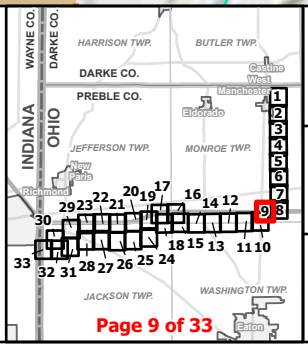
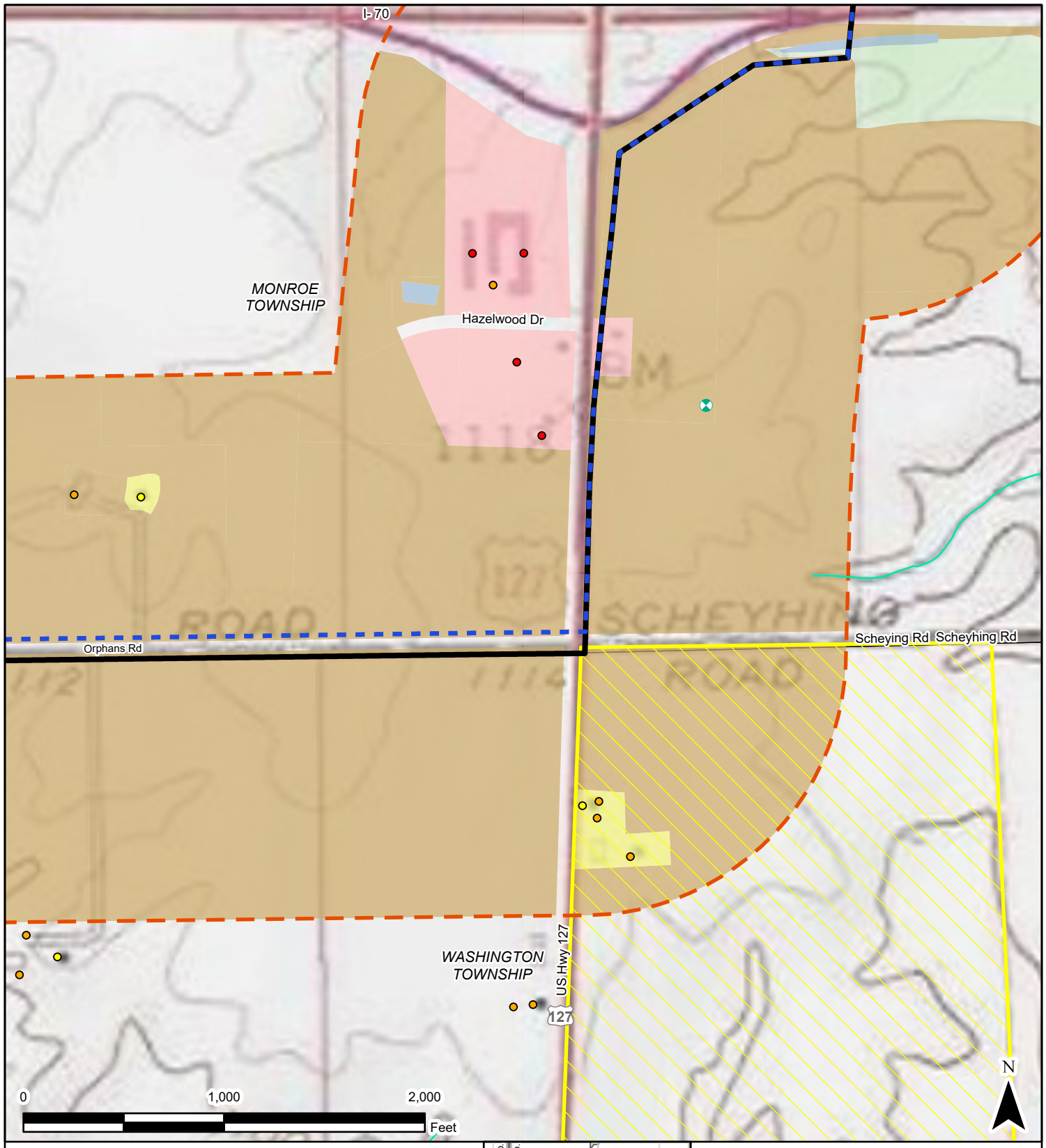


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP
7-1.9



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
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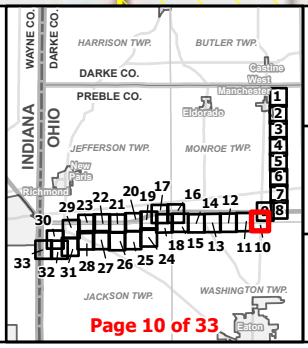
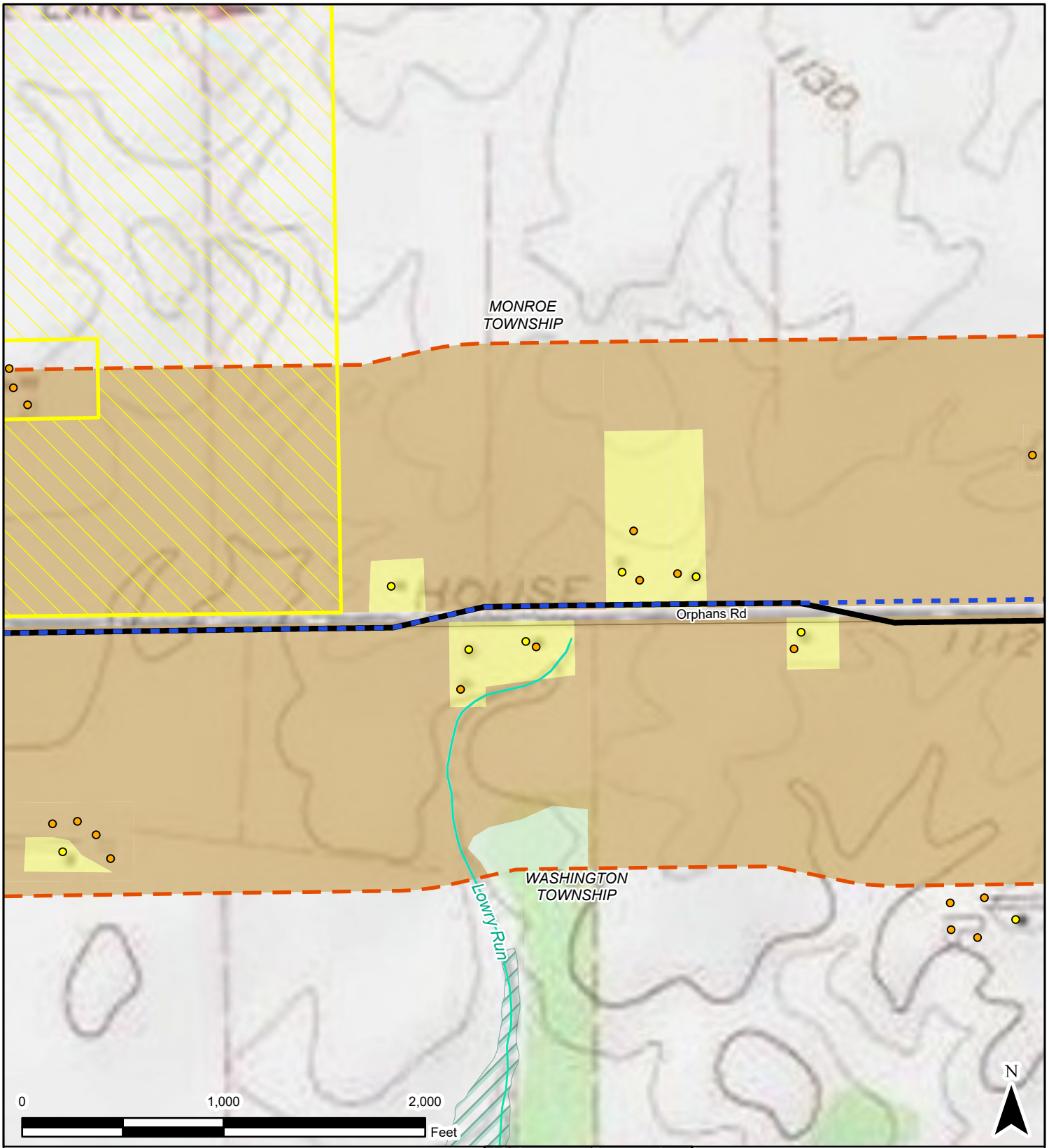


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.10



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
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- Floodplain (FEMA)
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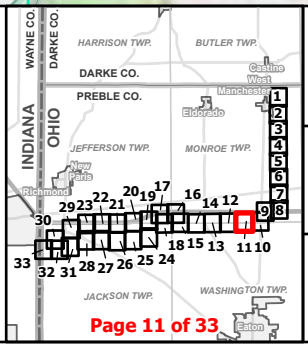
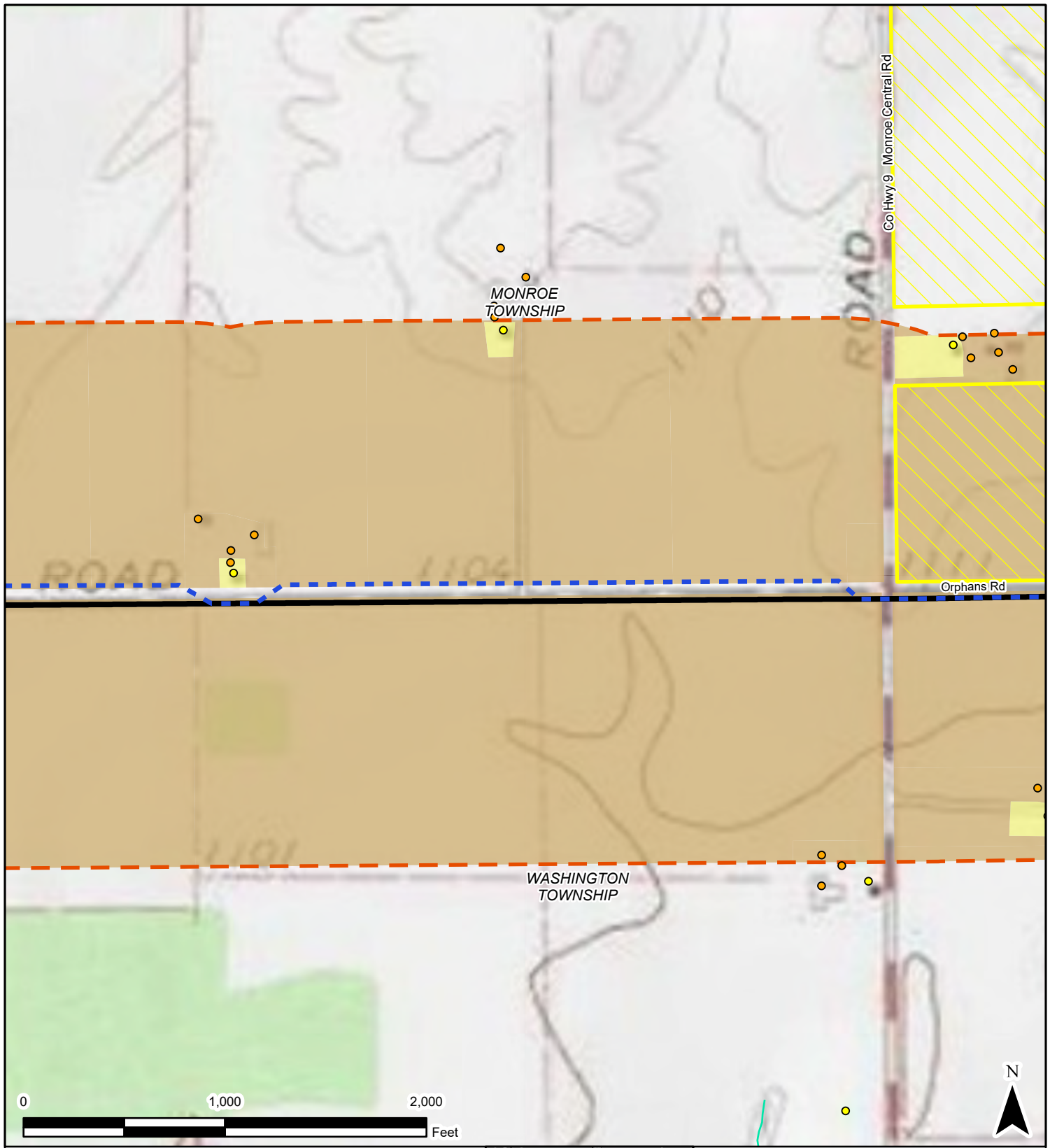


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.11



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
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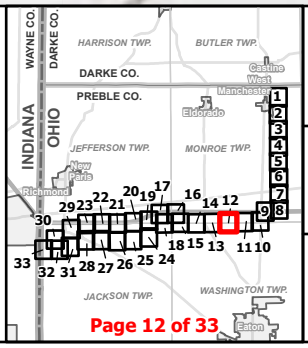
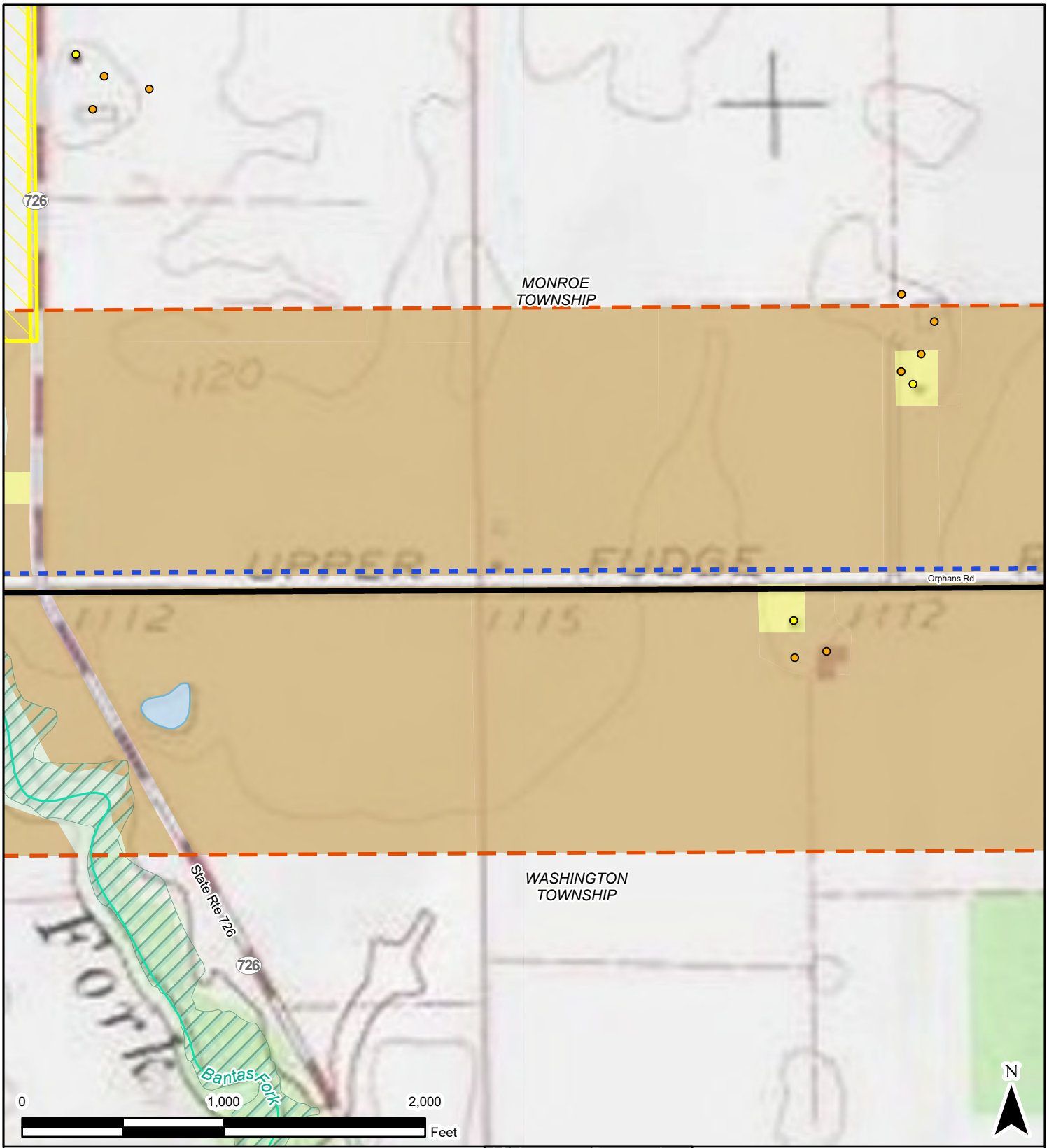


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.12



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
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- Agricultural
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- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
- City Boundary

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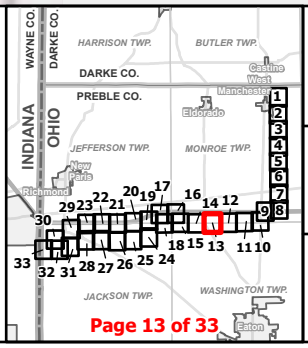
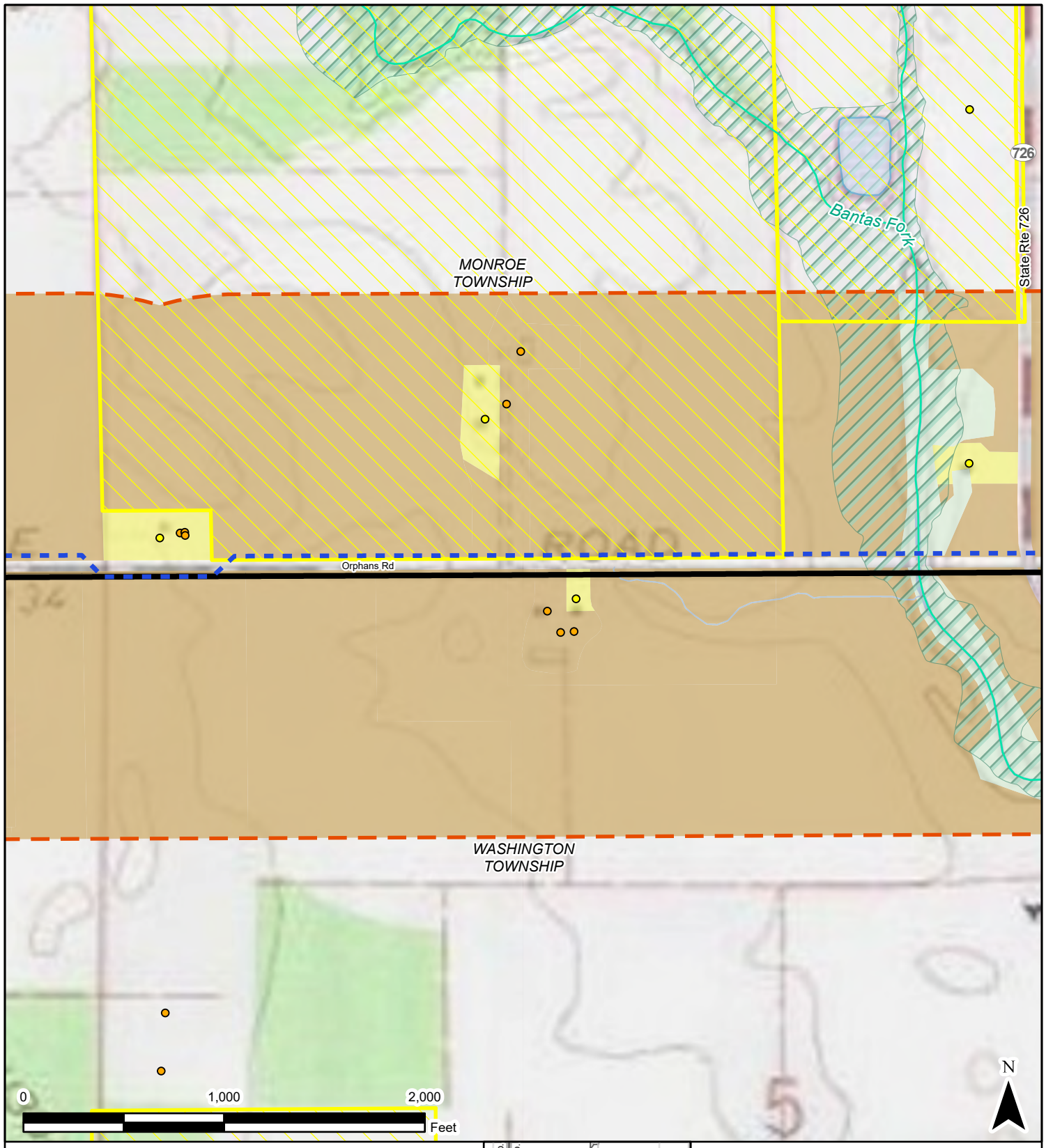


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.13



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
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- Agricultural
- Aquatic Resource
- Commerical/ Industrial
- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
- City Boundary

NOTE:
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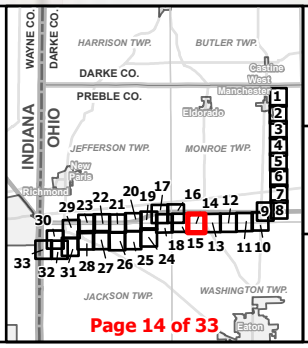
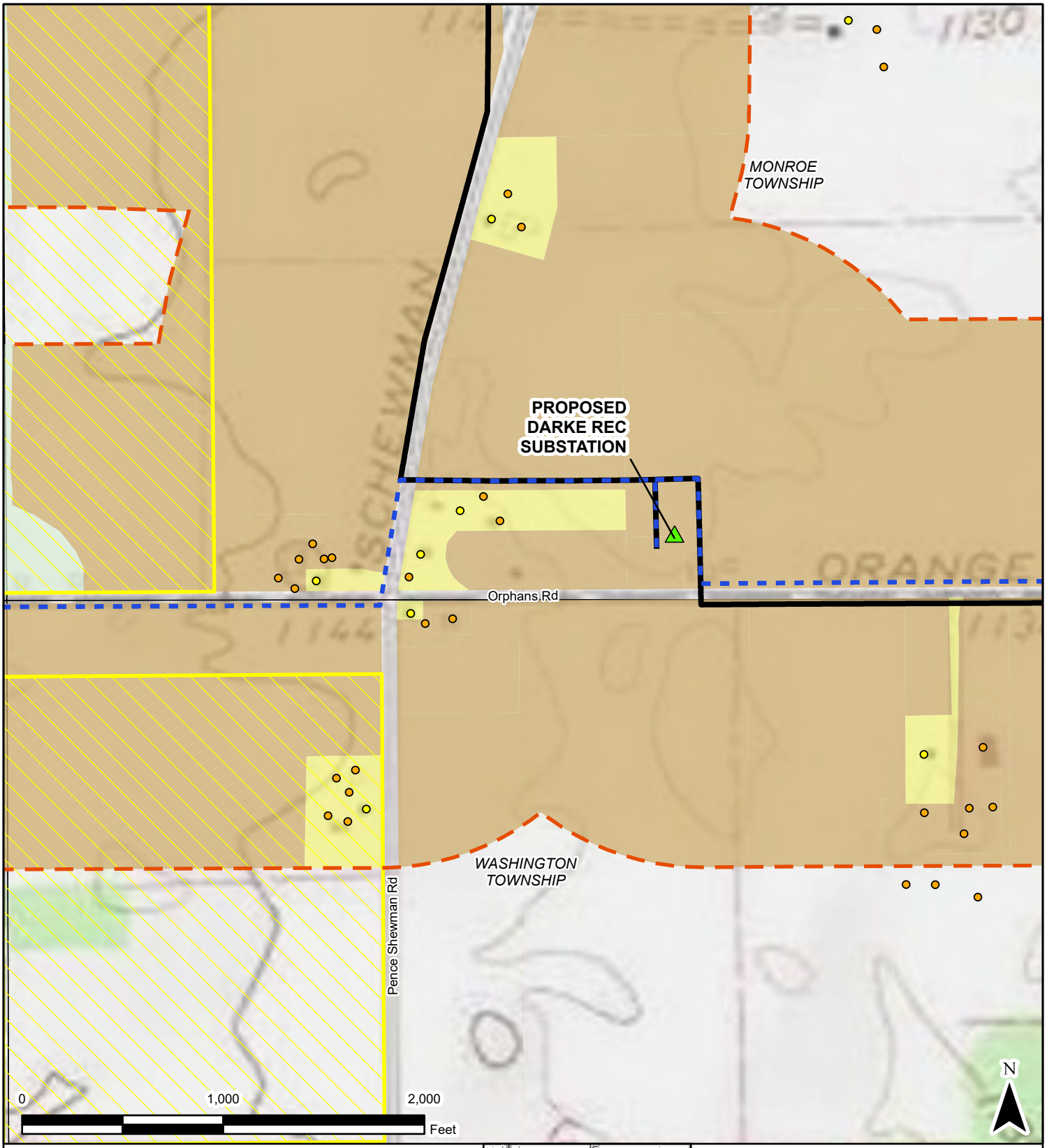


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.14



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
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- Commerical/ Industrial
- Institutional
- Residential
- Woodlot
- 2000-Foot Corridor
- Township Boundary
- City Boundary

NOTE:
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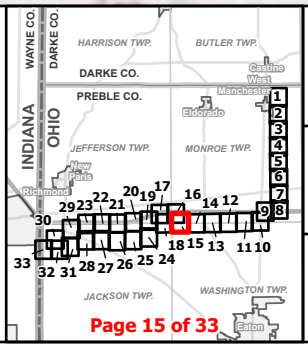
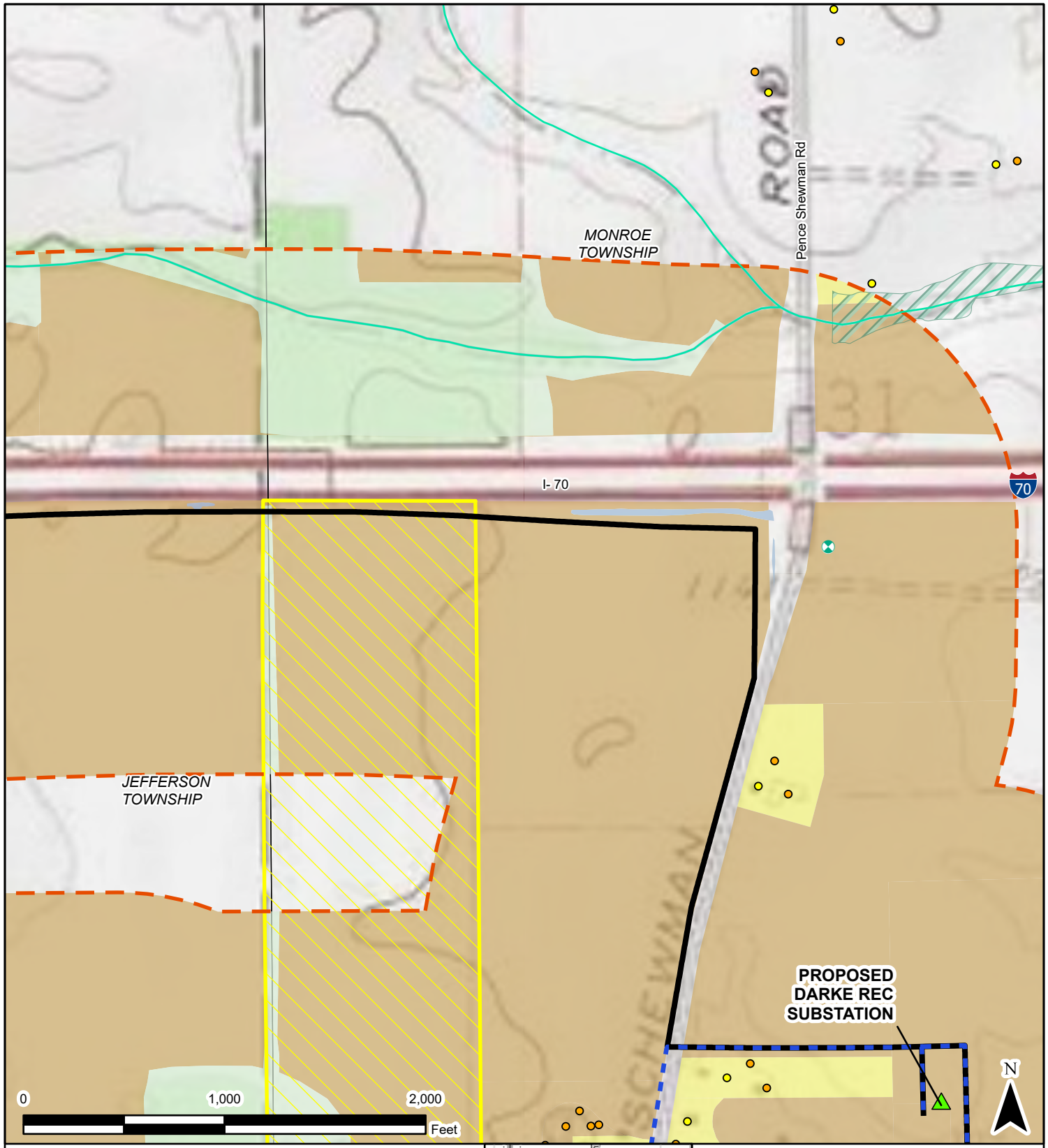


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.15



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
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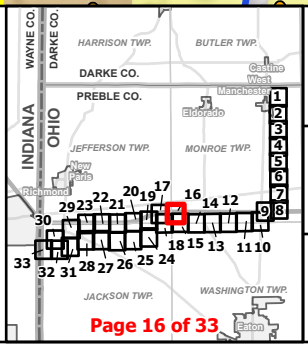
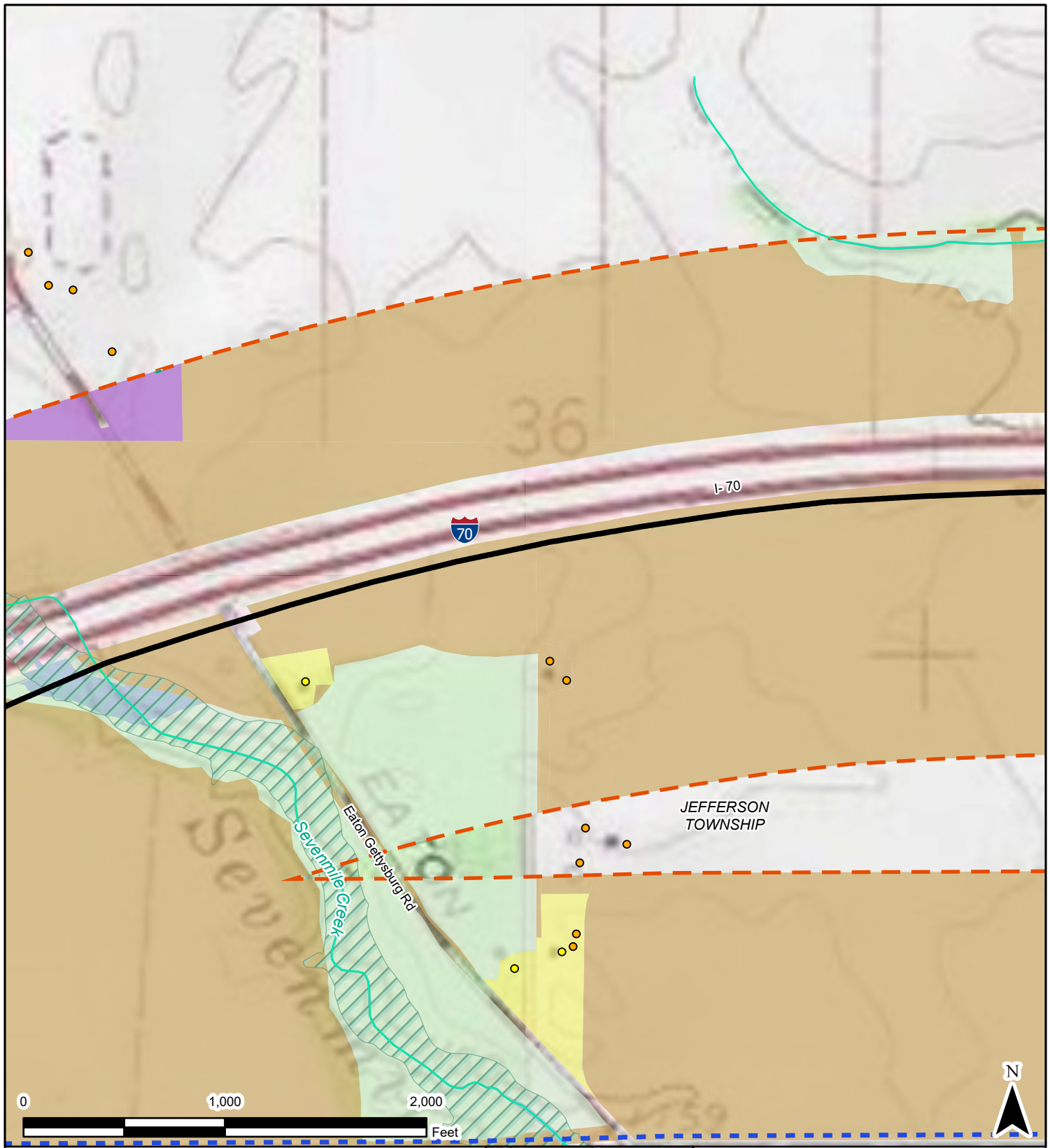


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.16



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
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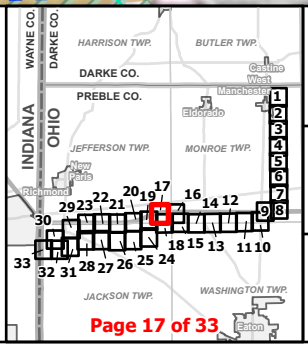
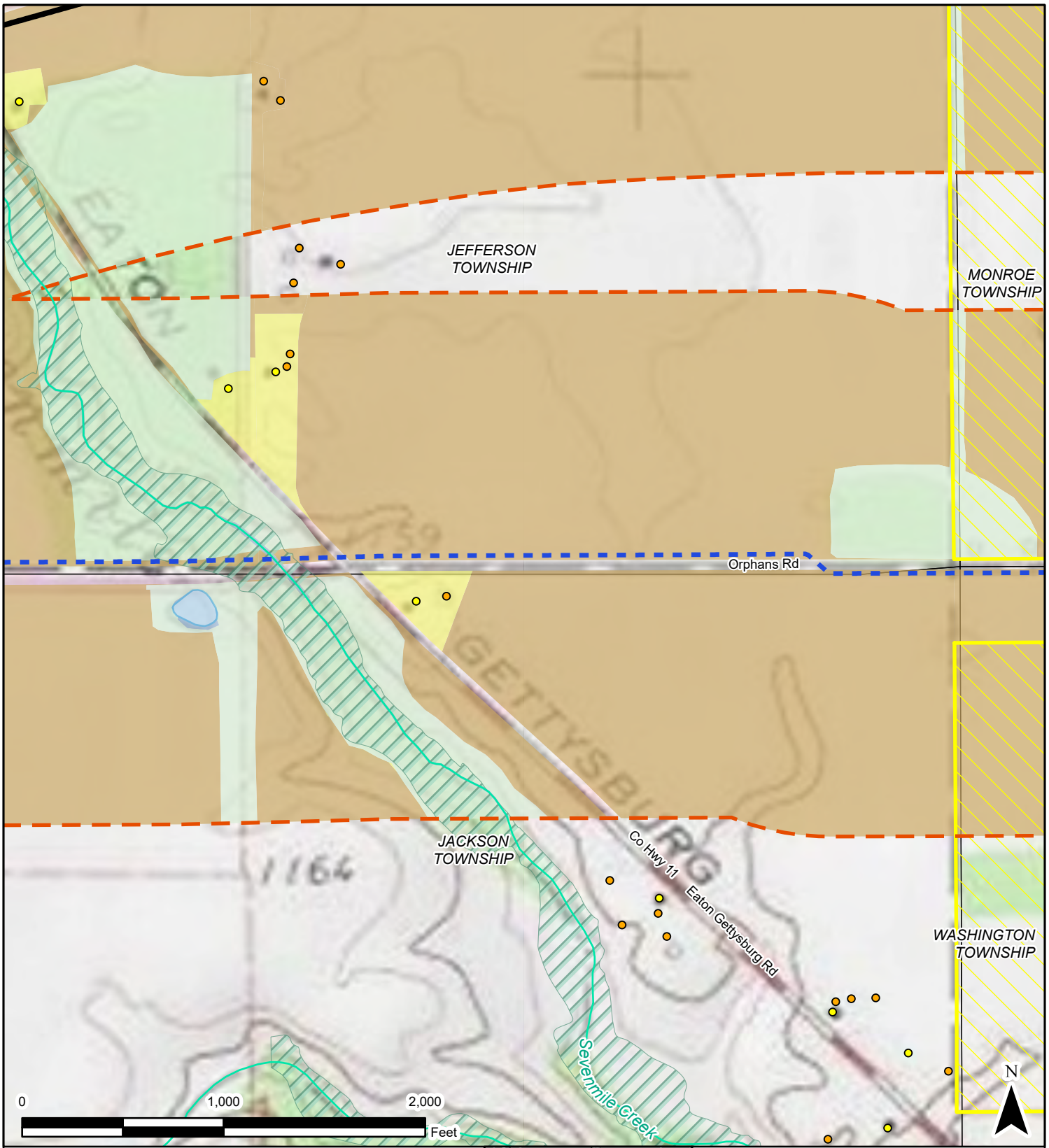


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.17



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
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NOTE:
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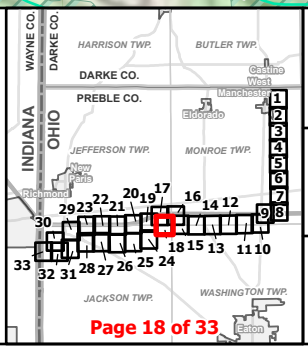
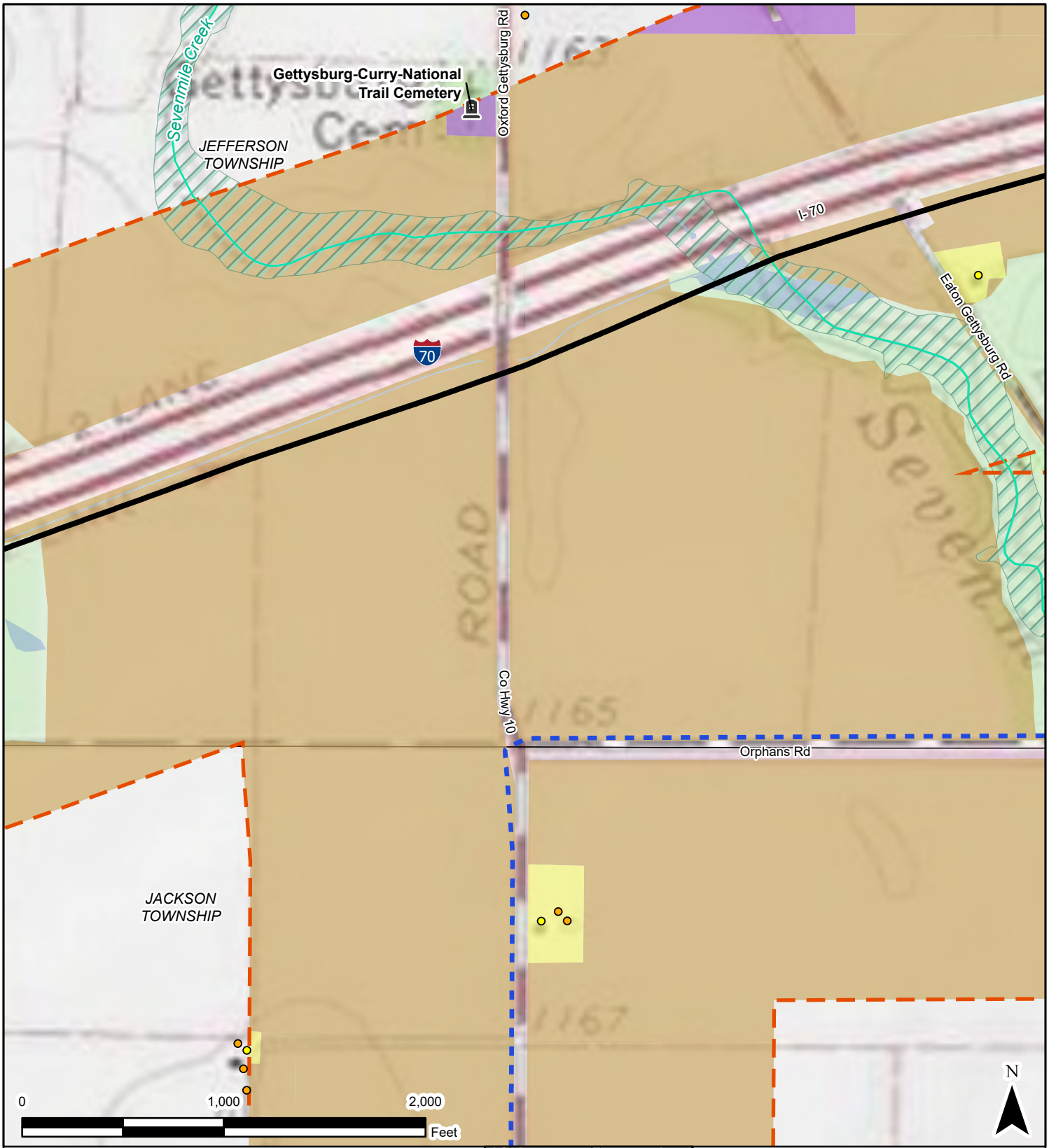


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.18



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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- Stream (NHD)
- Existing AES Transmission Line
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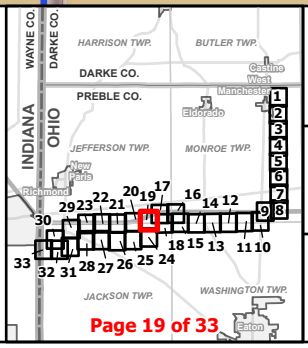
- City Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. NHD, 2020. NWI, 2020. GNIS, 2020. OHPO, 2022. Indiana Map, 2021. Microsoft, 2022. ODOT, 2022. Preble County, 2023. FEMA, 2019.

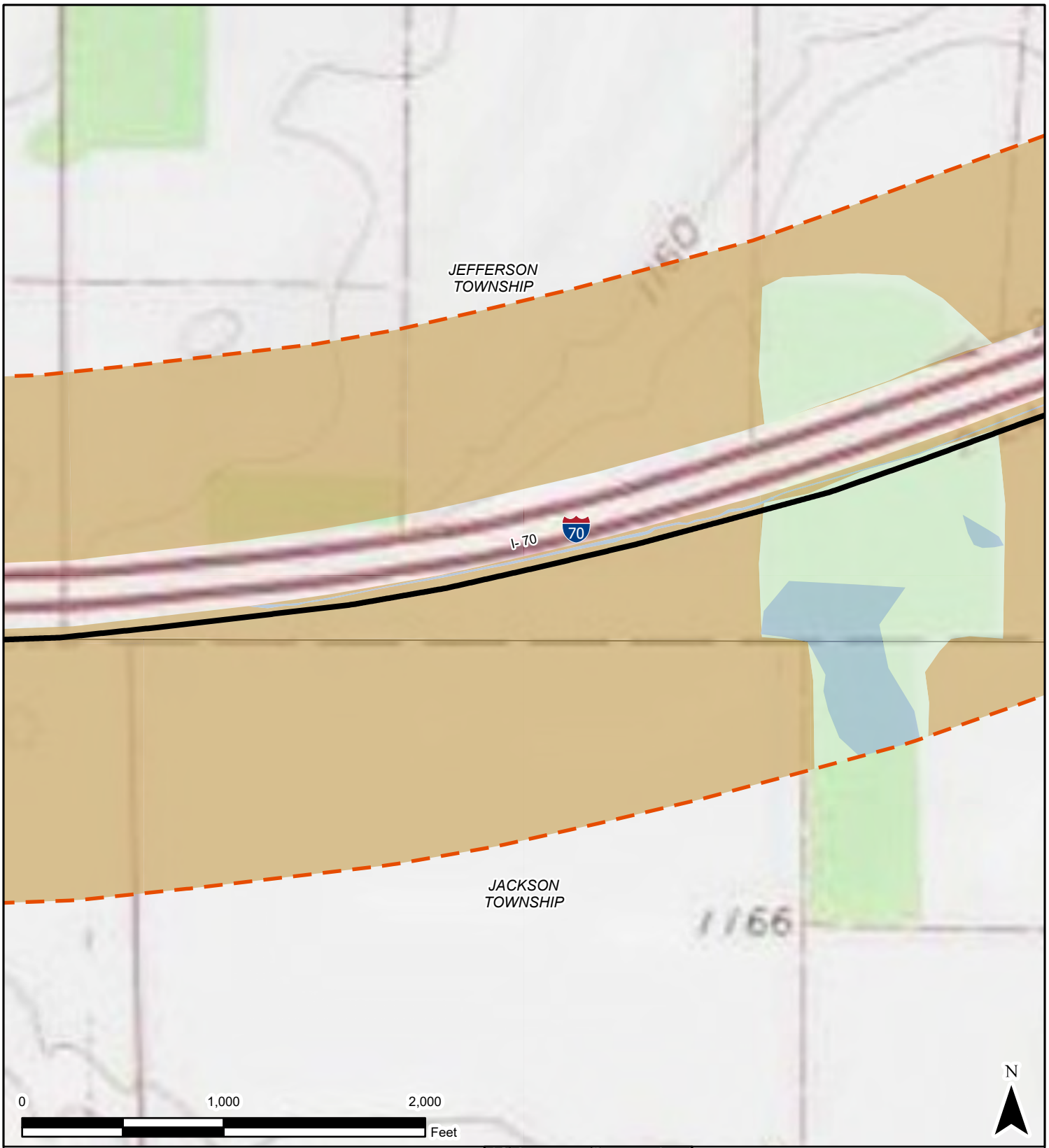


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.19



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
- Alternate Route
- Stream (NHD)
- Existing AES Transmission Line
- Lake/Pond (NHD)
- Floodplain (FEMA)
- Agricultural District
- Agricultural
- Aquatic Resource
- Commerical/ Industrial
- Institutional
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- Woodlot
- 2000-Foot Corridor
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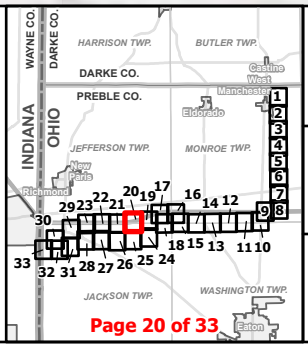
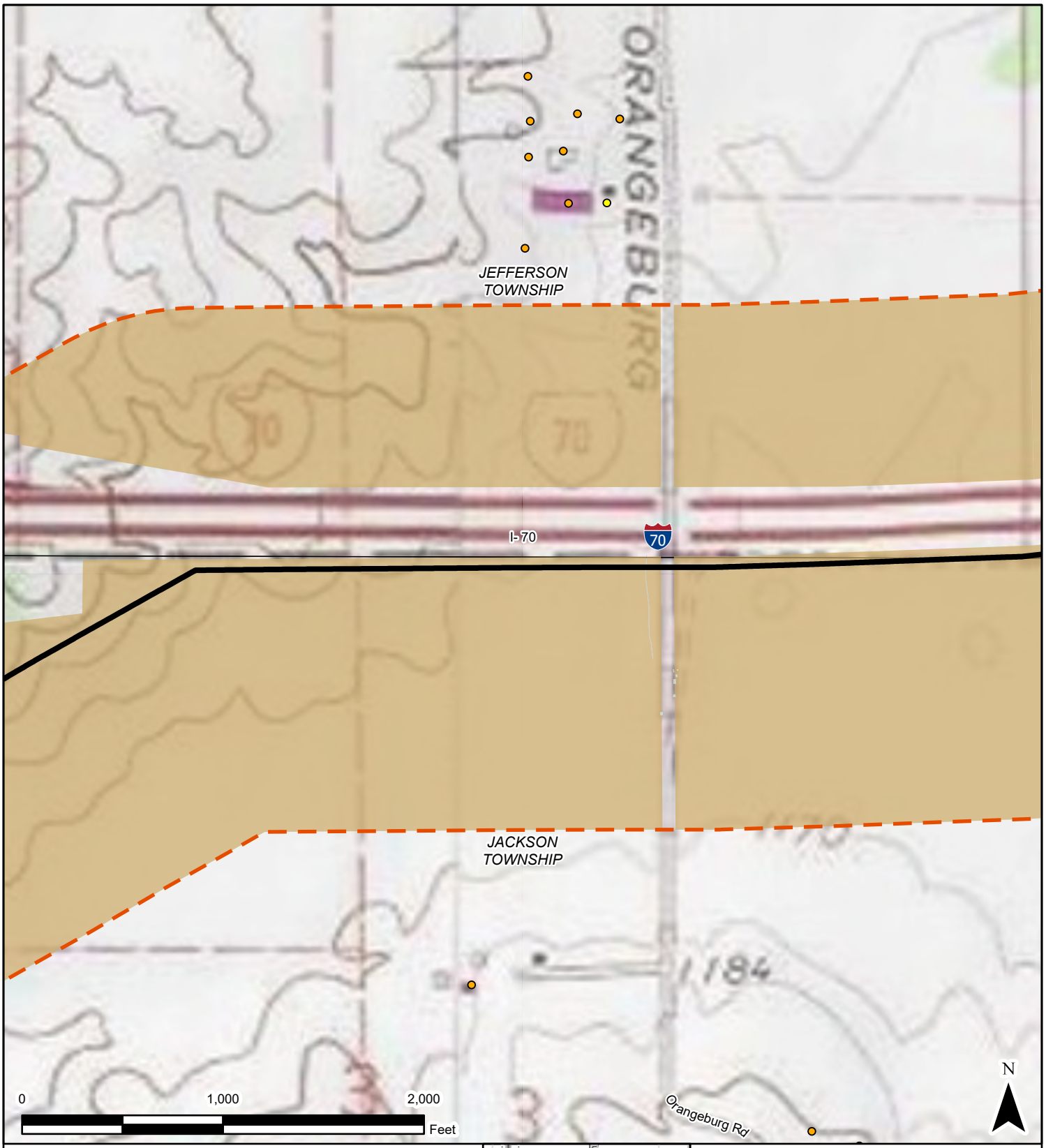


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.20



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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- Stream (NHD)
- Existing AES Transmission Line
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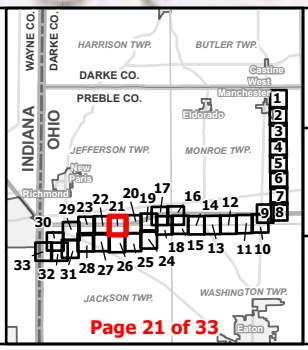
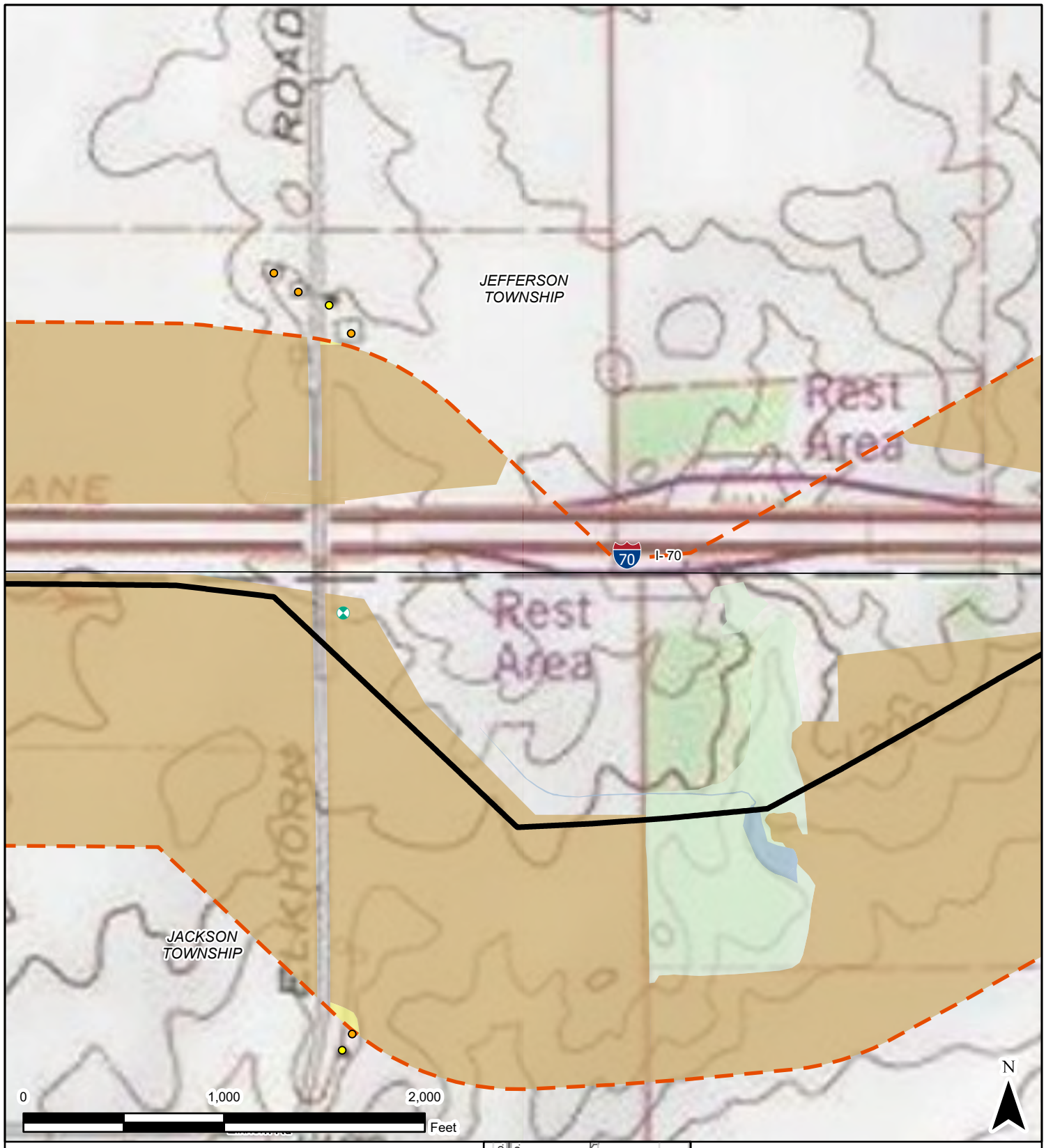


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.21



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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- Stream (NHD)
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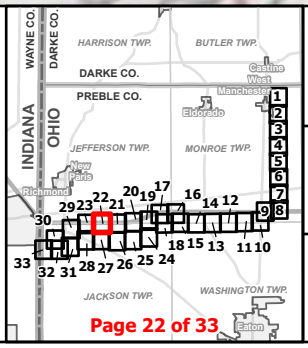
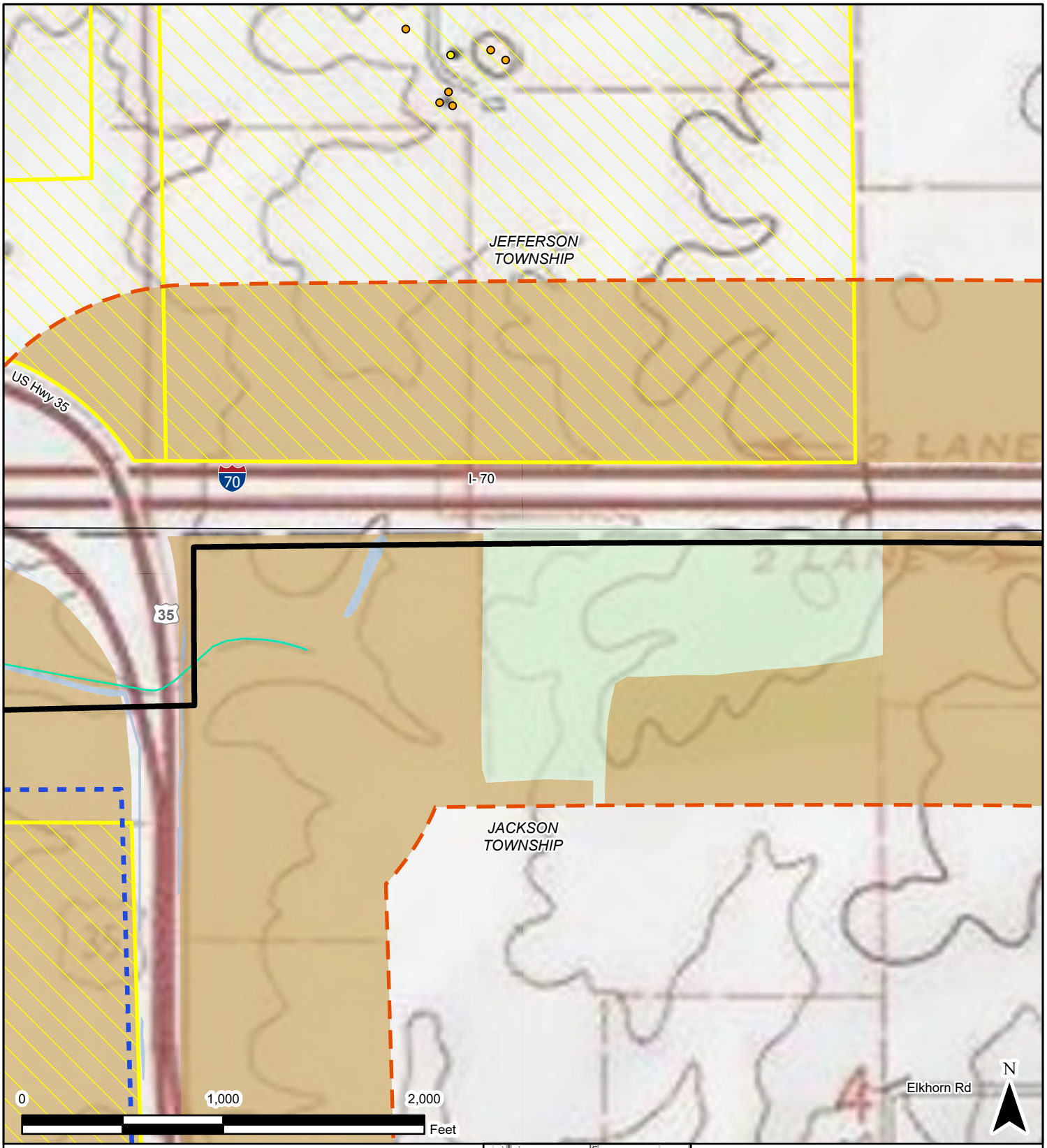


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.22



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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- Existing AES Transmission Line
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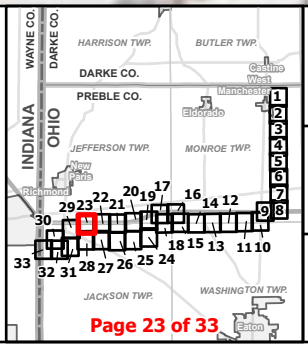
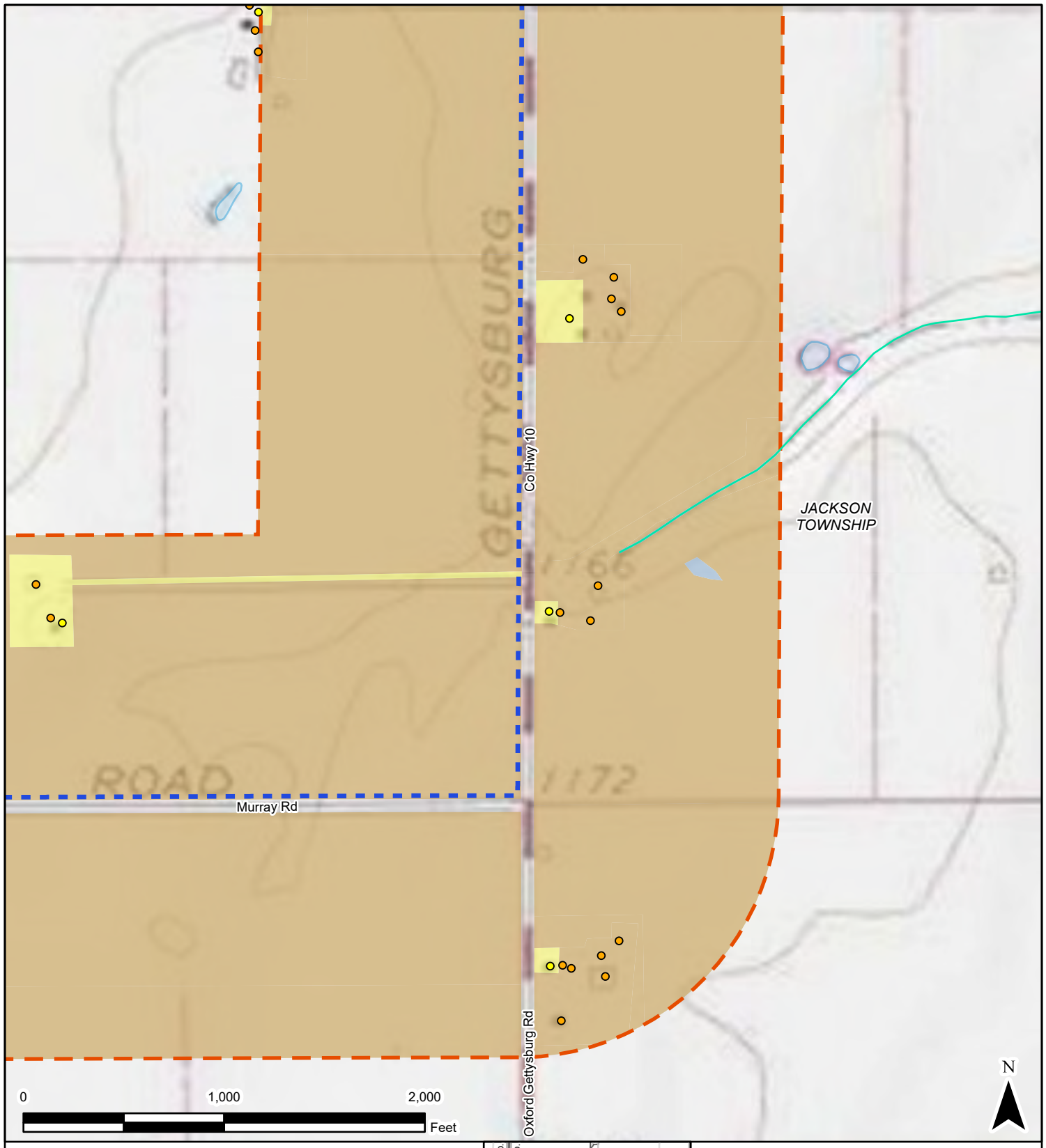


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.23



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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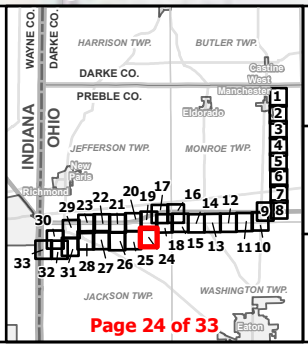
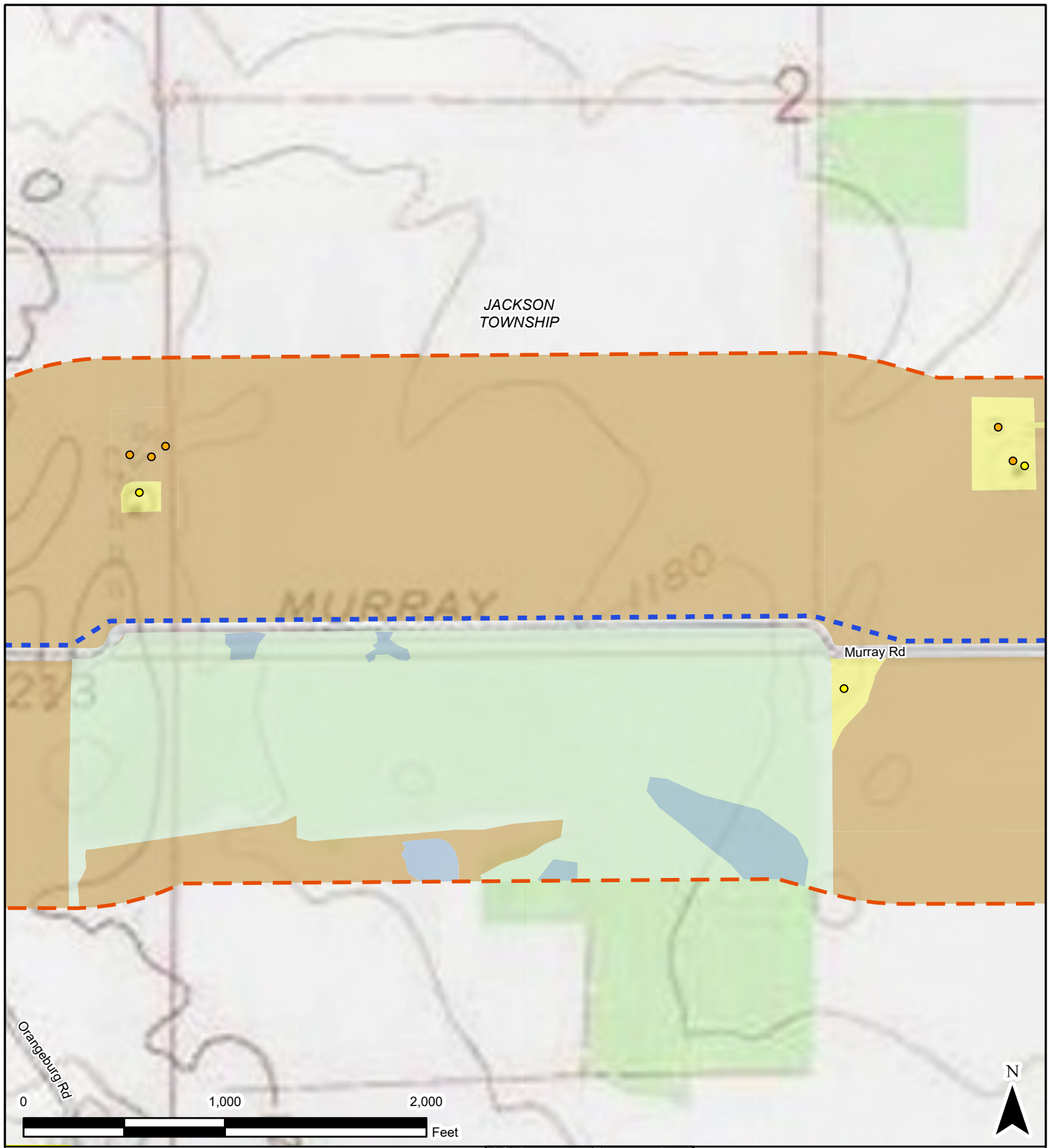


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.24



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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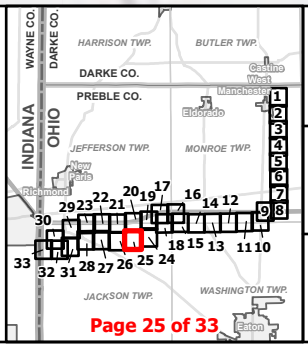
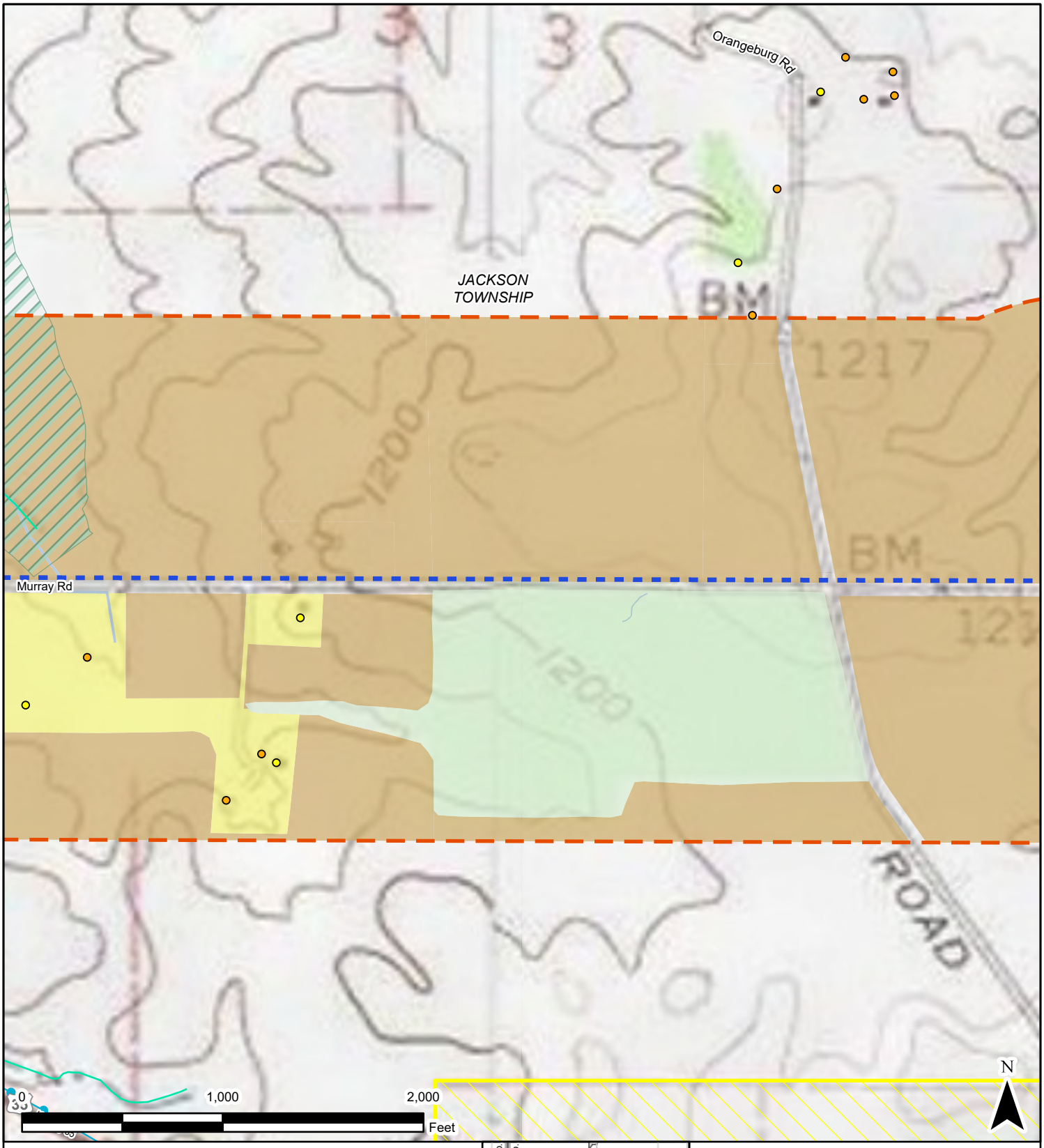


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP
7-1.25



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
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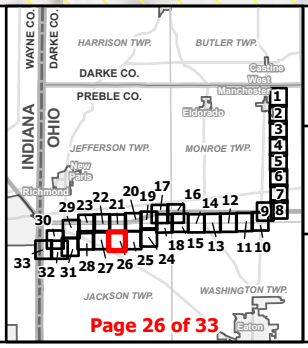
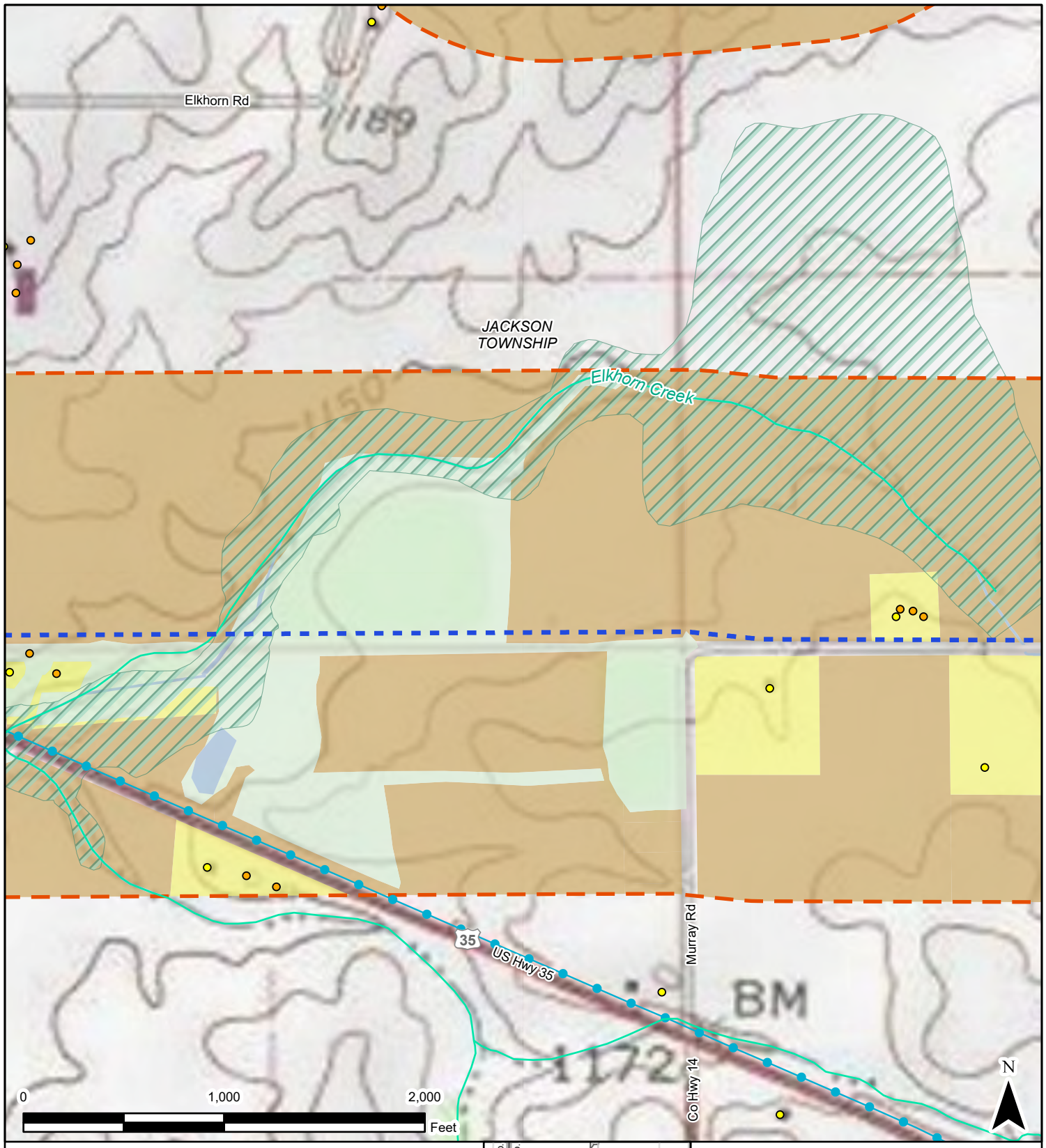


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.26



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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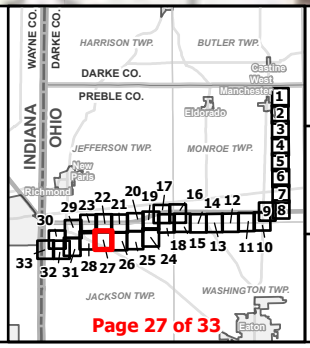
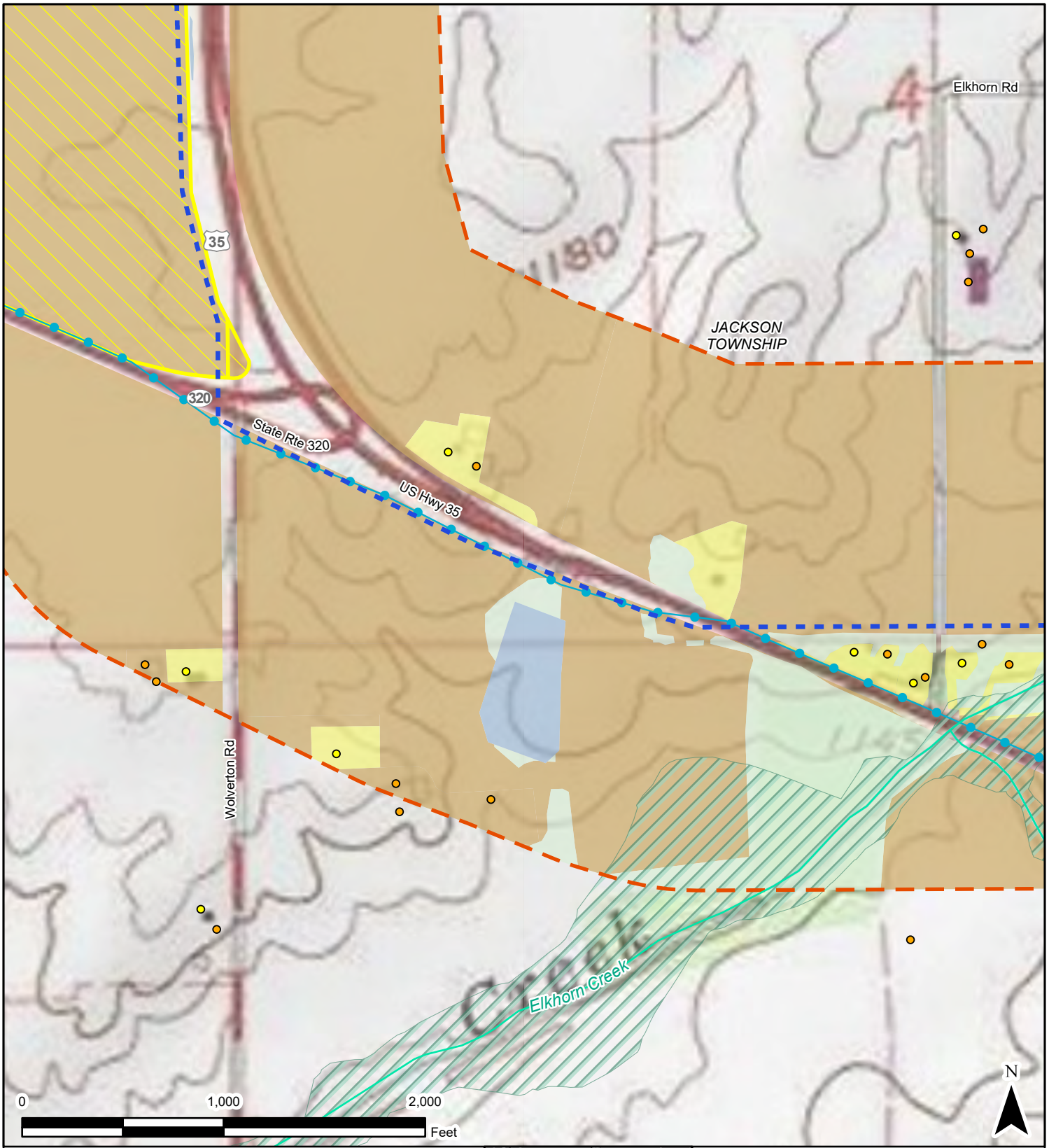


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP
7-1.27



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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- City Boundary

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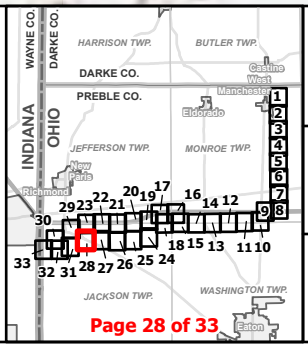
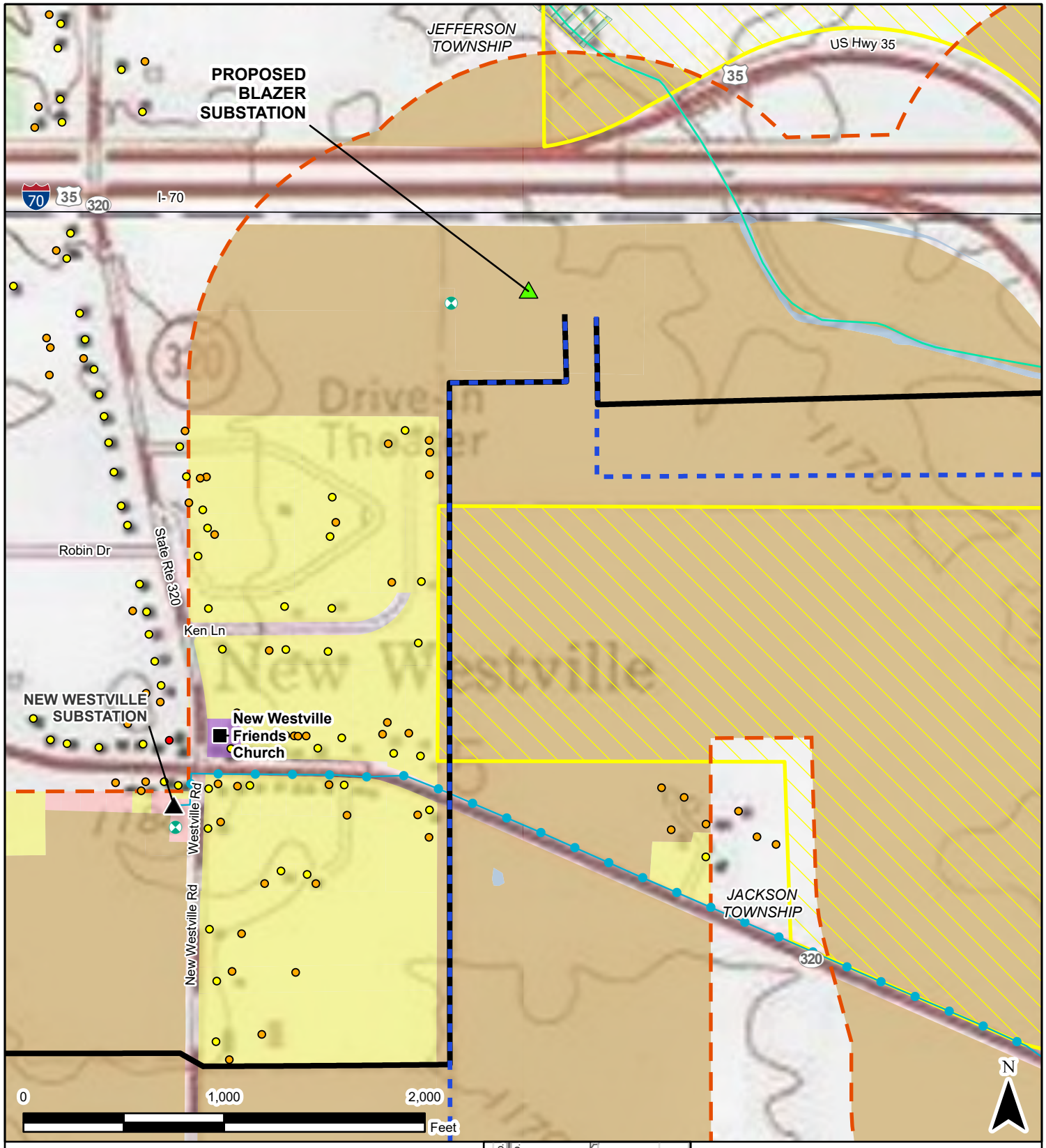


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP
7-1.28



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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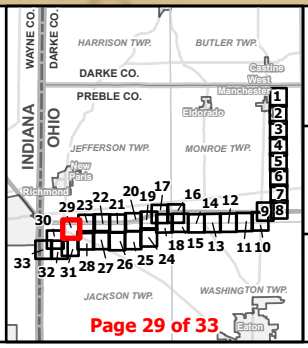
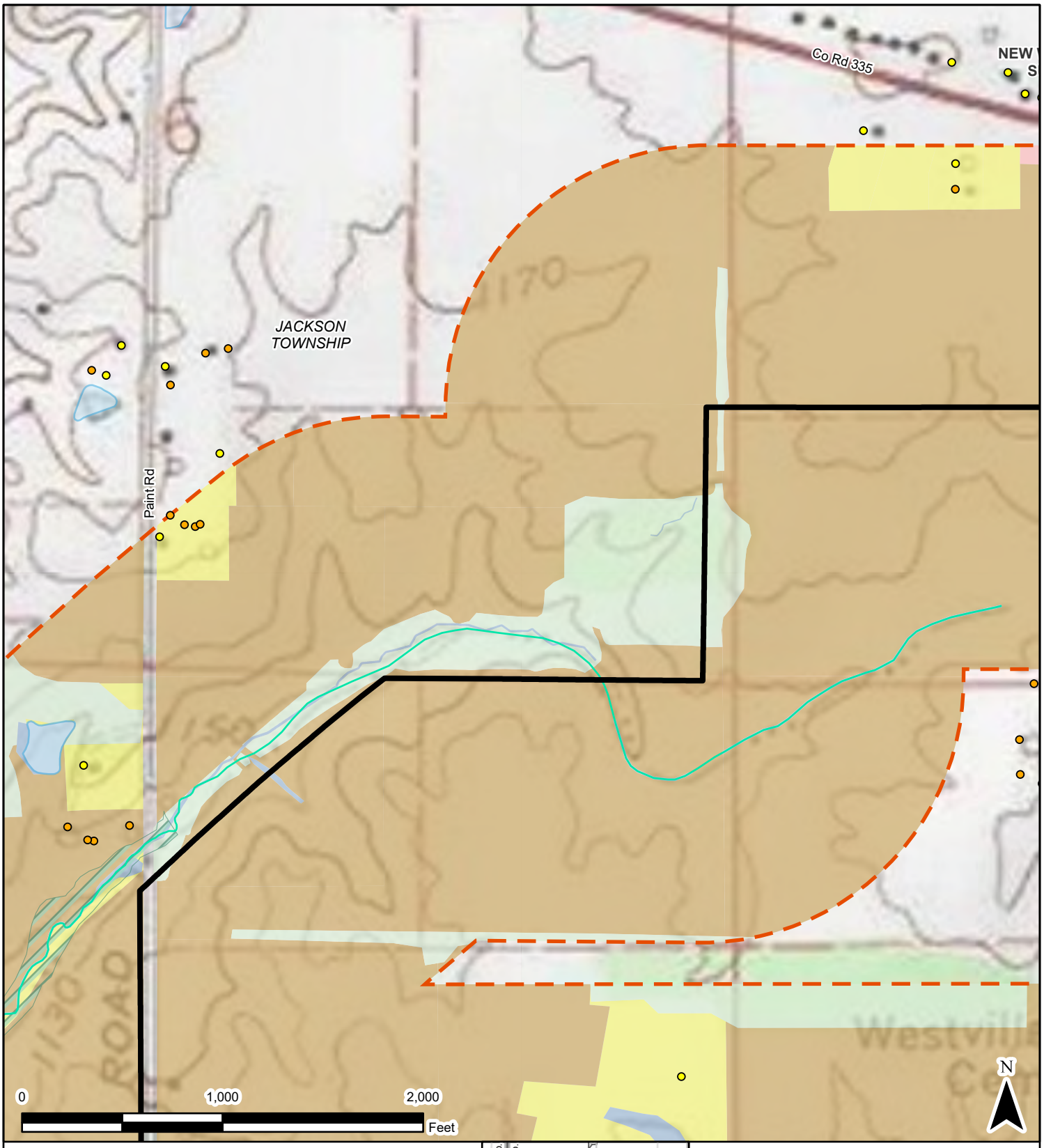


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.29



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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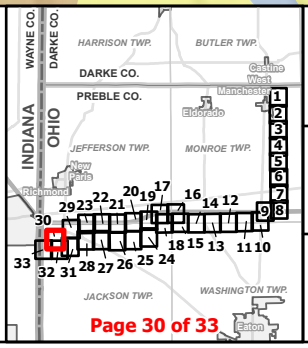
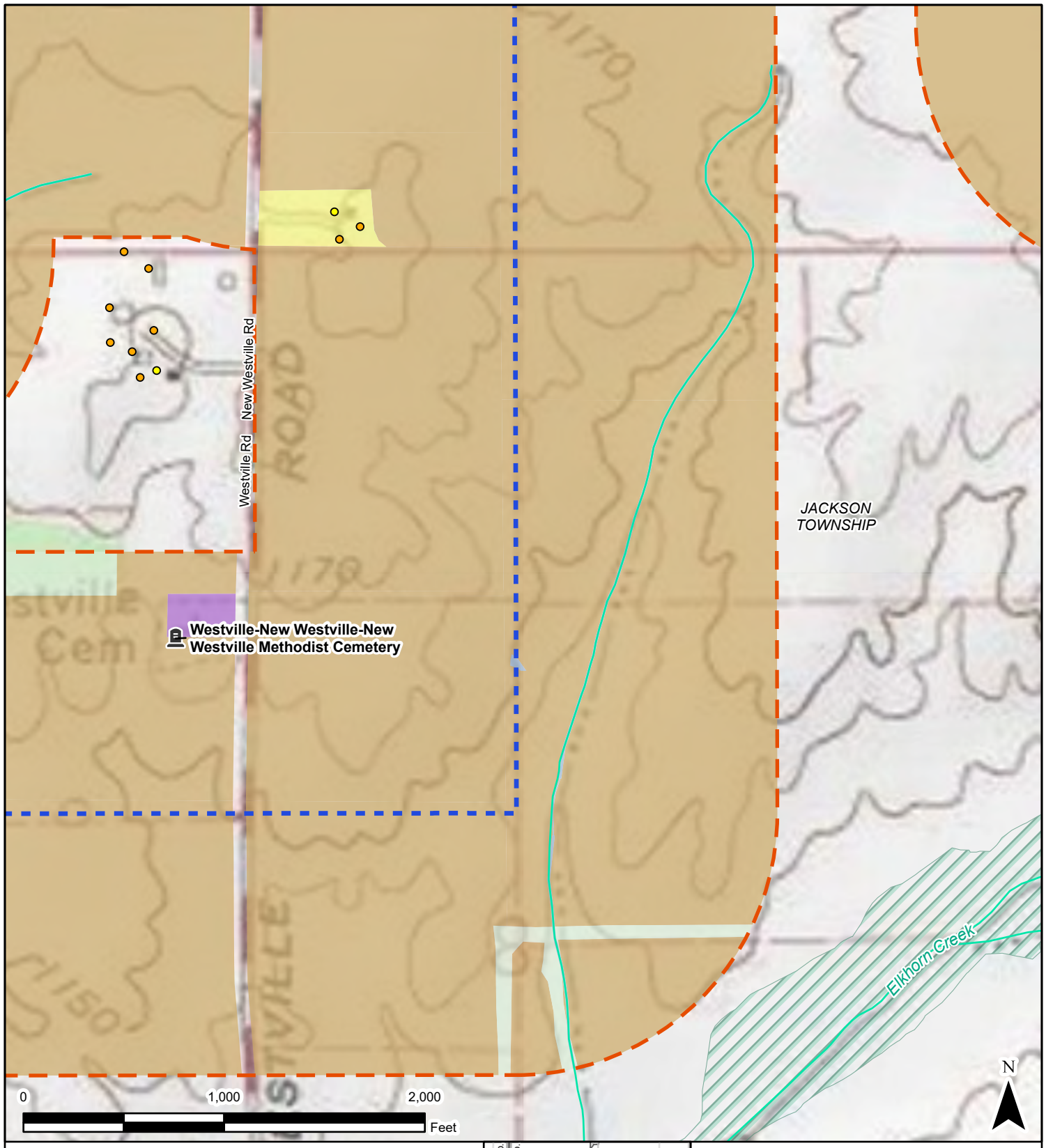


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.30



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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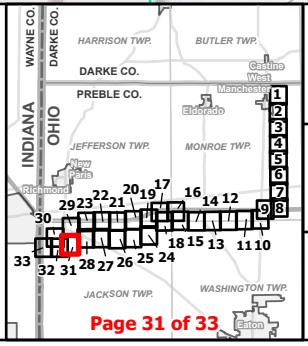
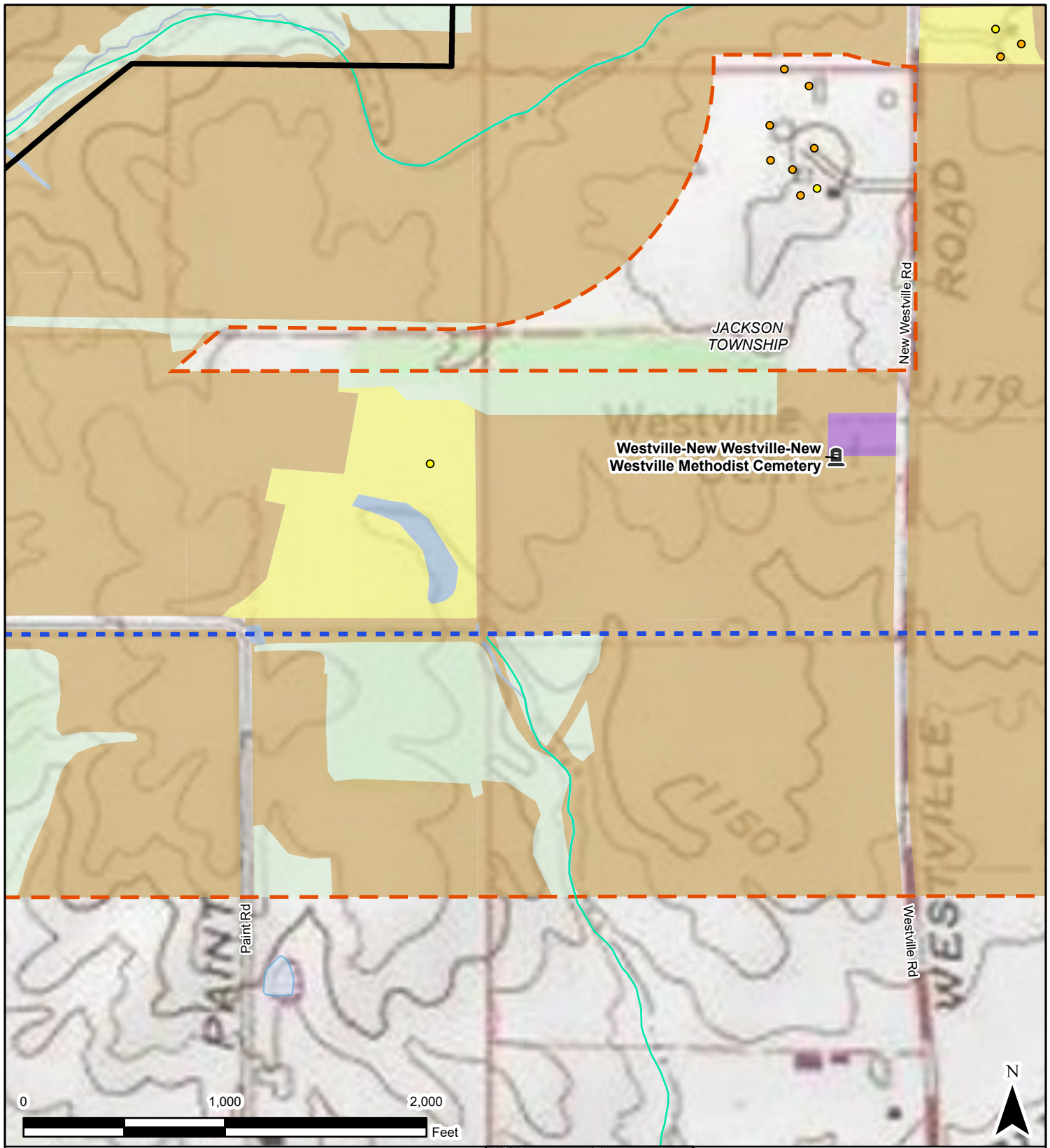


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.31



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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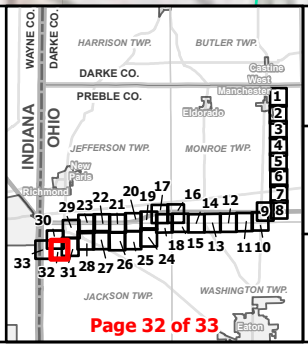
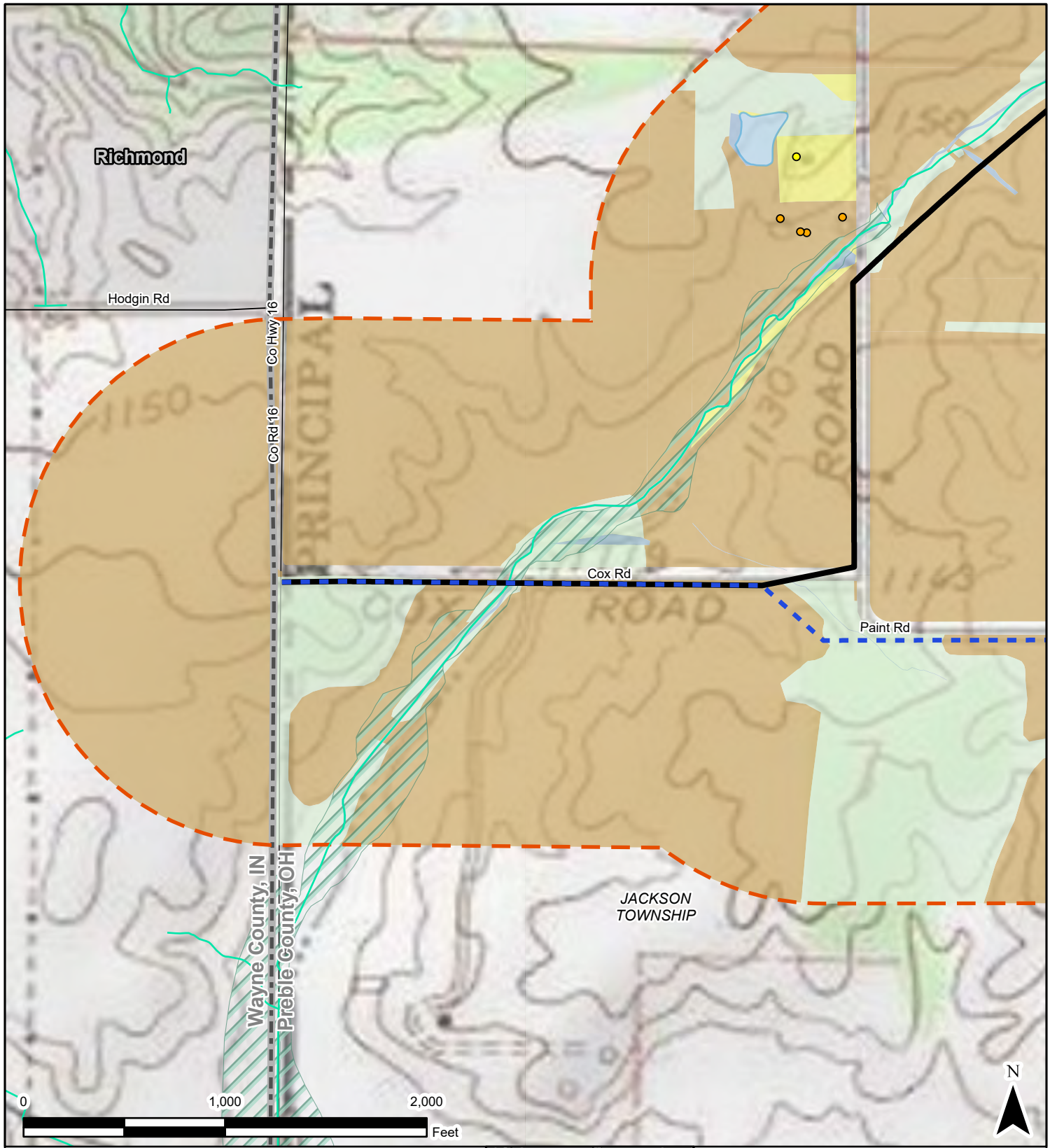


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

MAP 7-1.32



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Cemetery
- Place of Worship
- Residence
- Commercial/ Industrial
- Outbuilding
- Communication Tower
- Preferred Route
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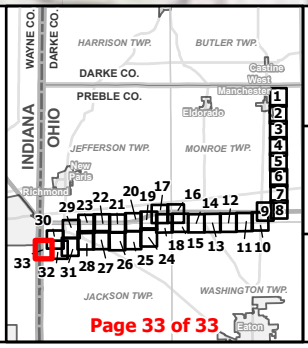
NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. AES, 2022. NHD, 2020. NWI, 2020. GNIS, 2020. OHPO, 2022. Indiana Map, 2021. Microsoft, 2022. ODOT, 2022. Preble County, 2023. FEMA, 2019.

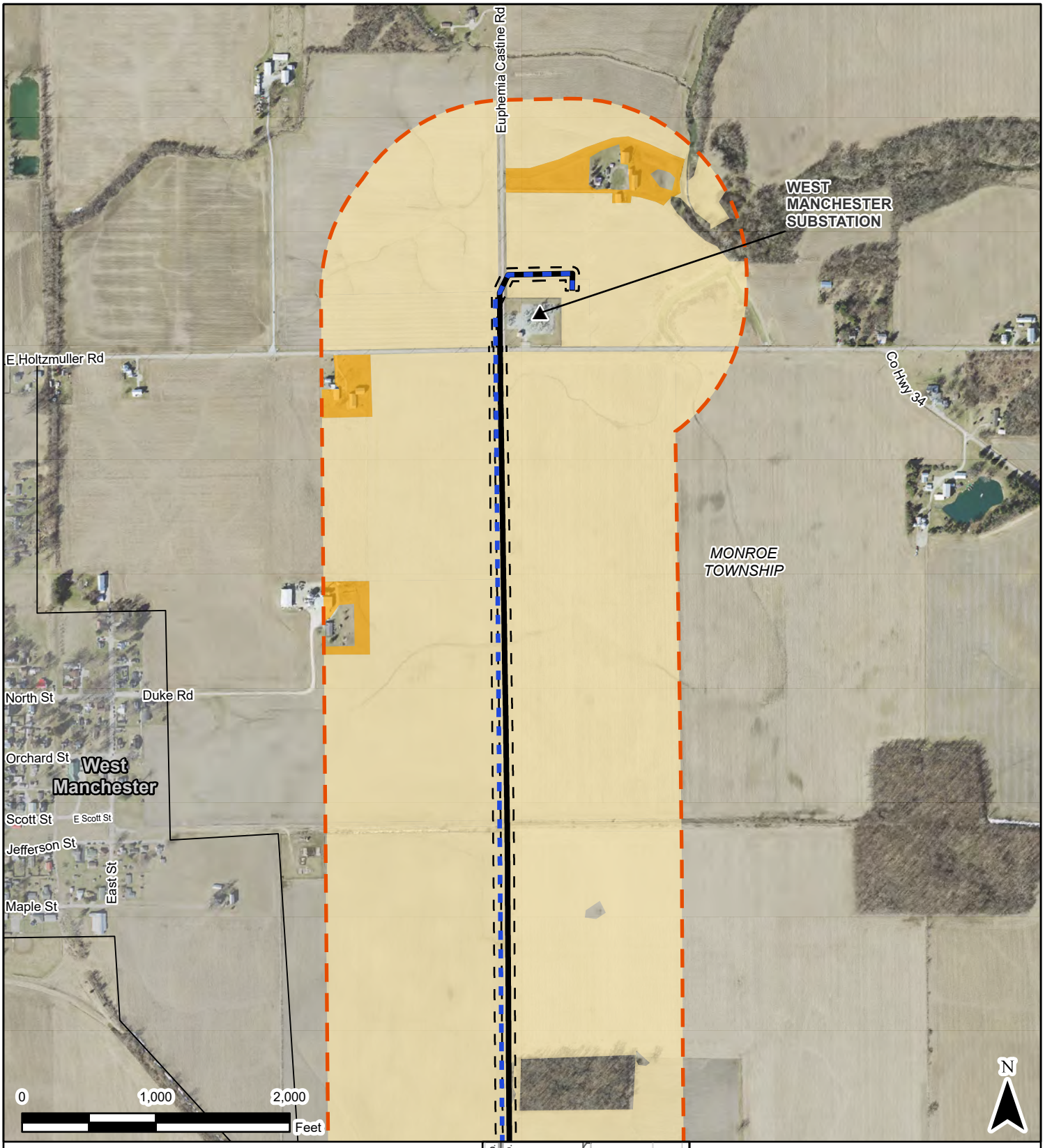


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

LAND USE AND CONSTRAINTS

aes Ohio ARCADIS

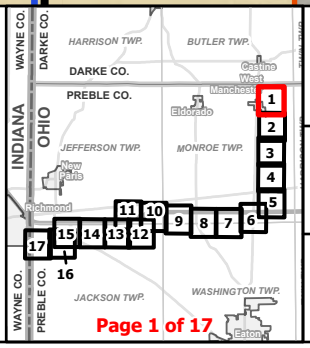
MAP 7-1.33



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

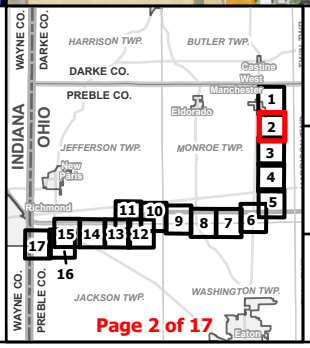
aes Ohio ARCADIS

MAP 7-2.1

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

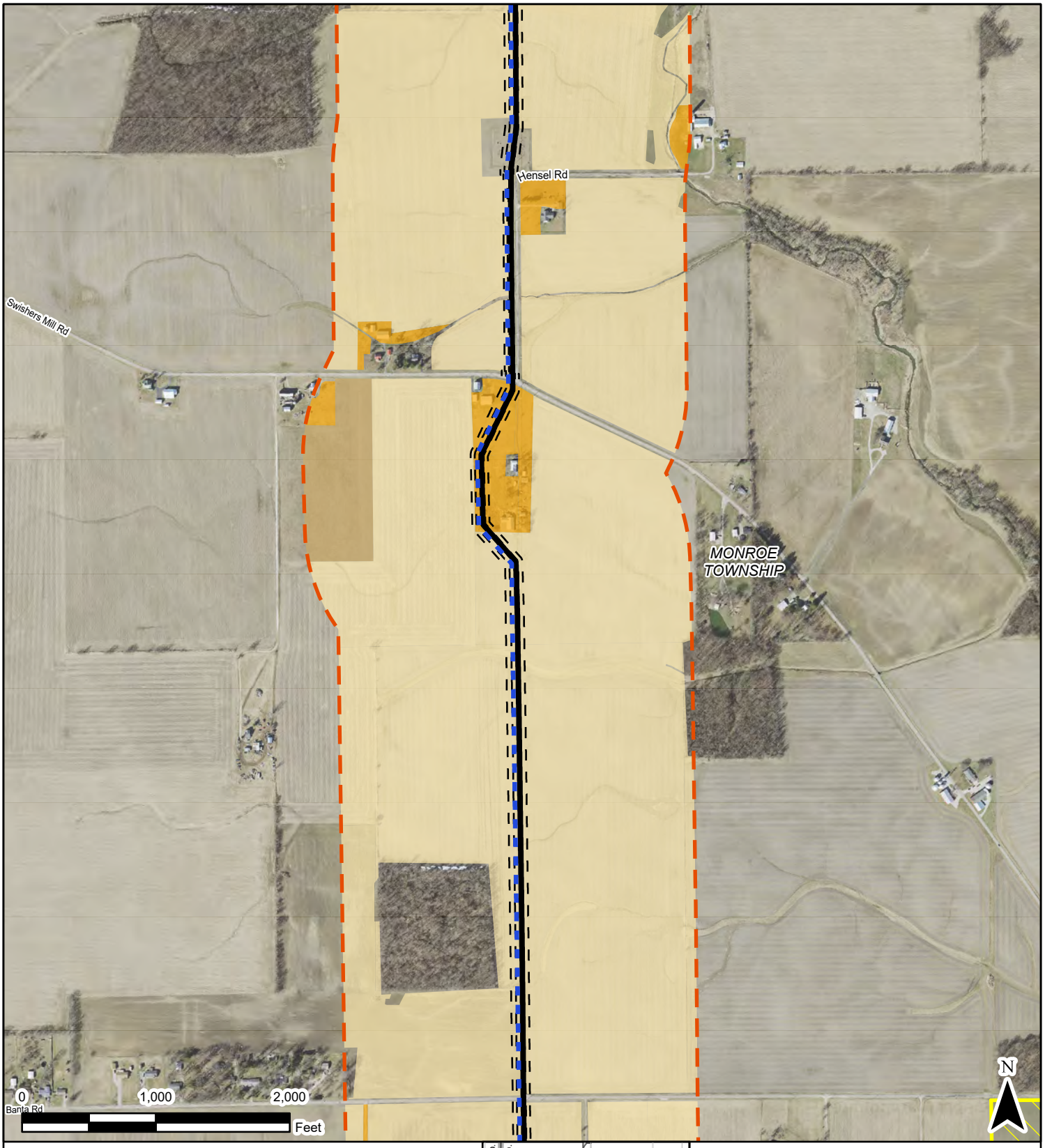


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

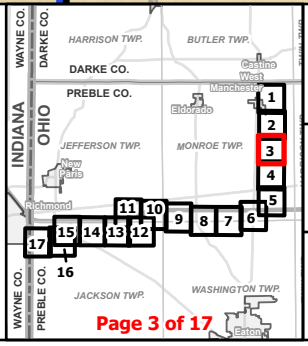
MAP
7-2.2



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

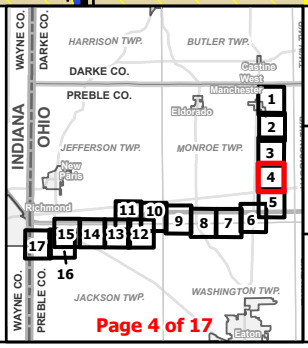
aes Ohio ARCADIS

MAP 7-2.3

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

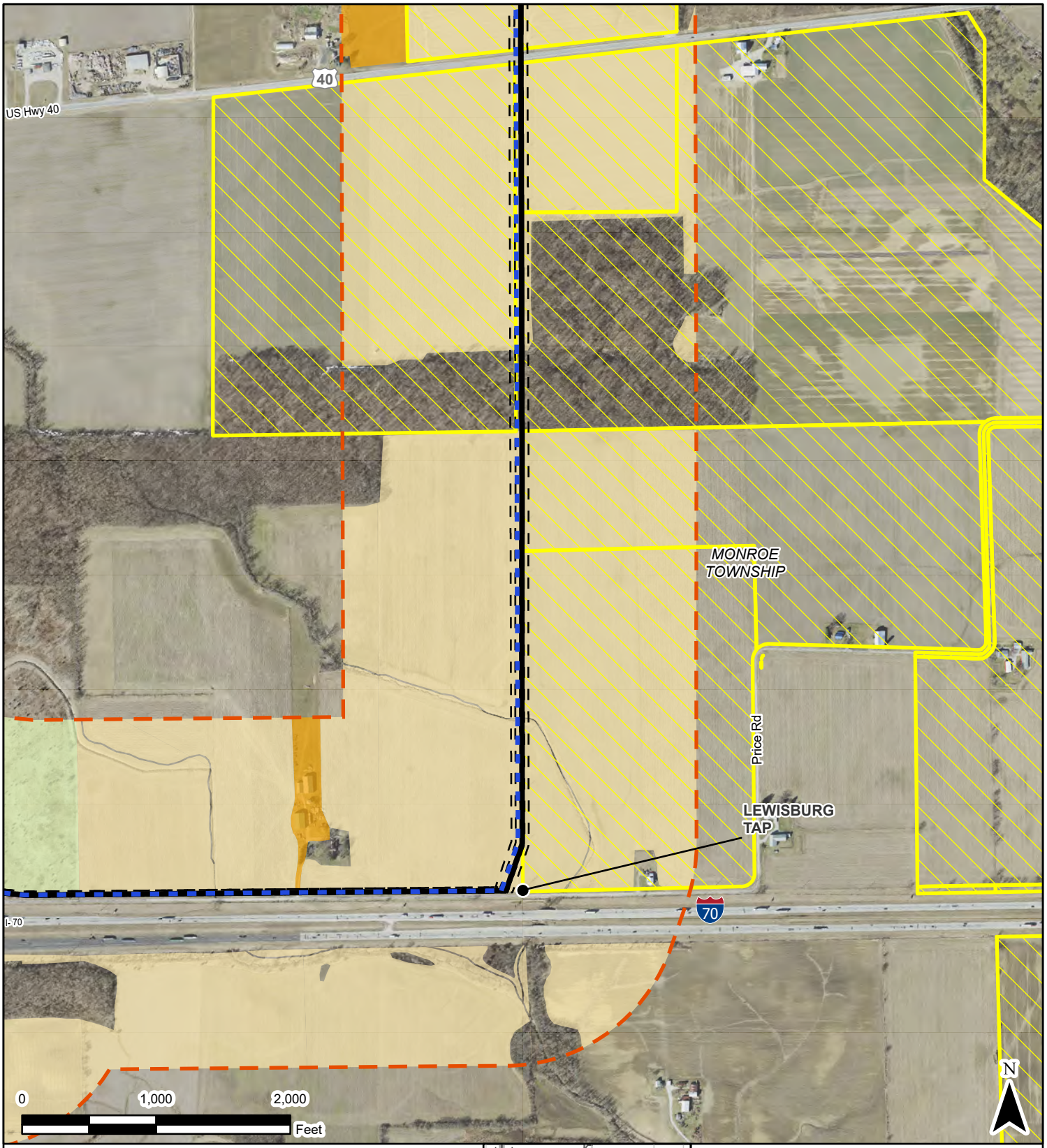


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

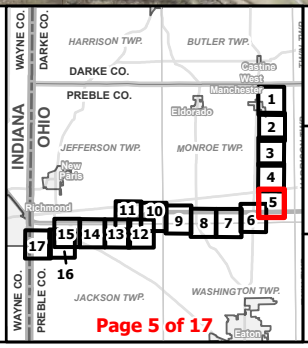
MAP 7-2.4



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

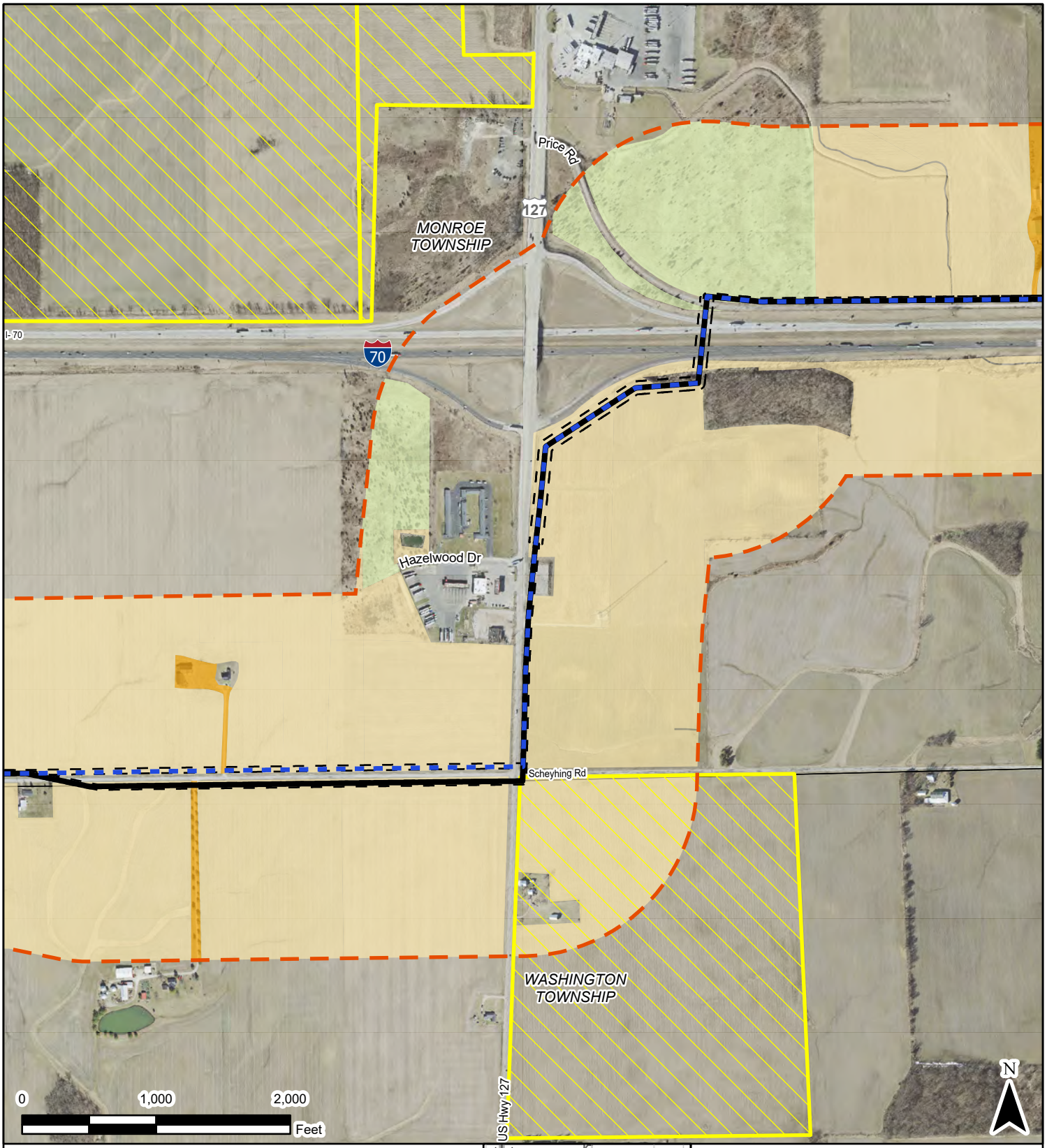


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

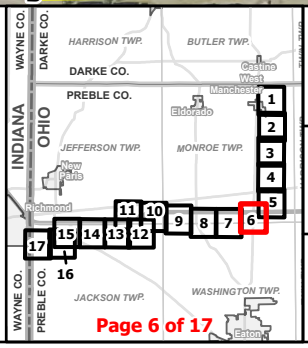
MAP
7-2.5



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

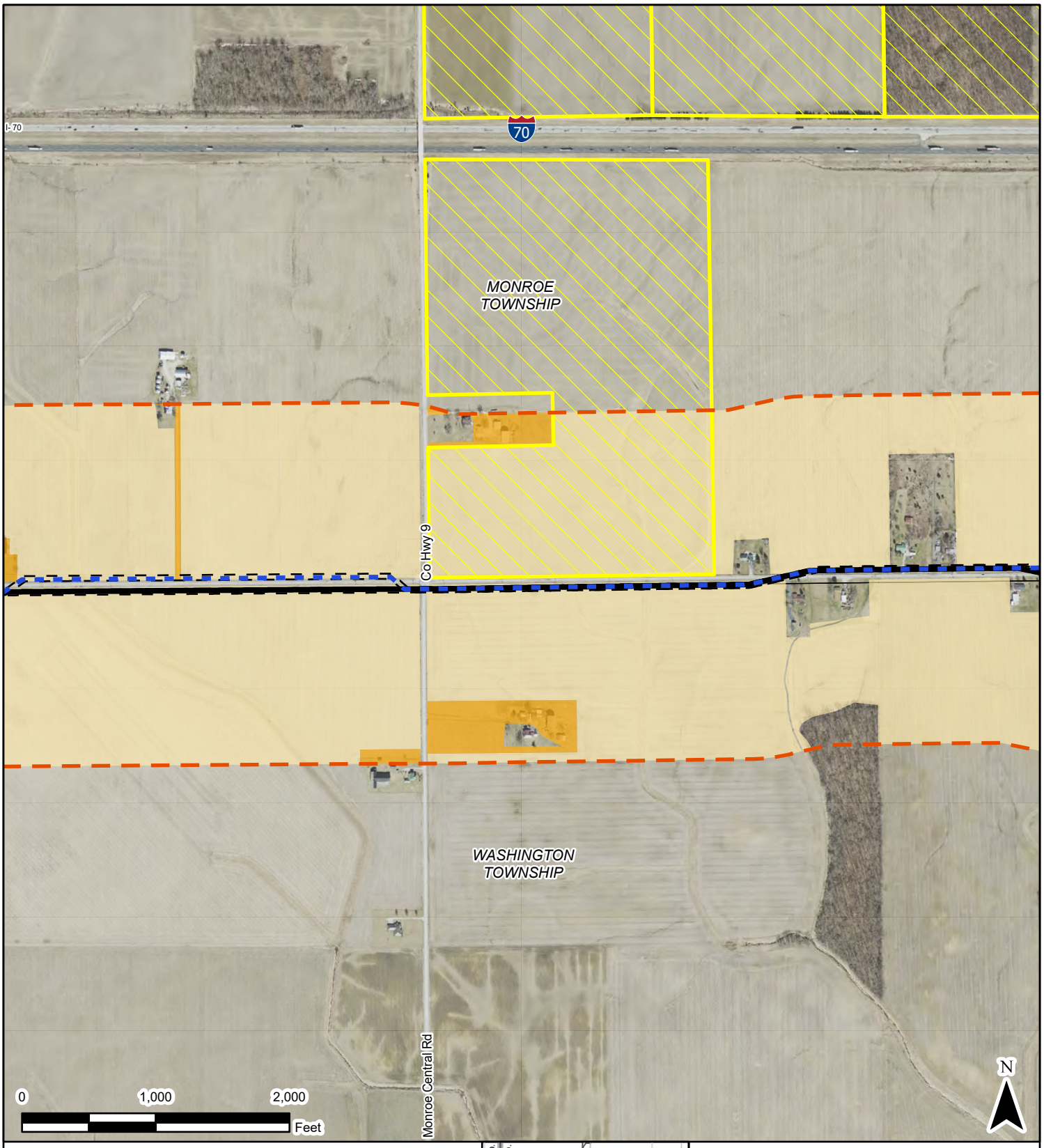


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

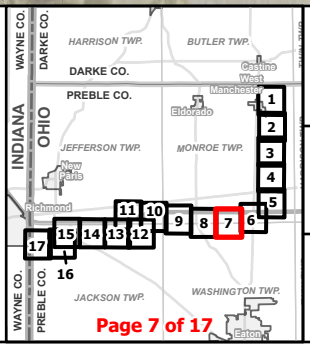
MAP
7-2.6



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

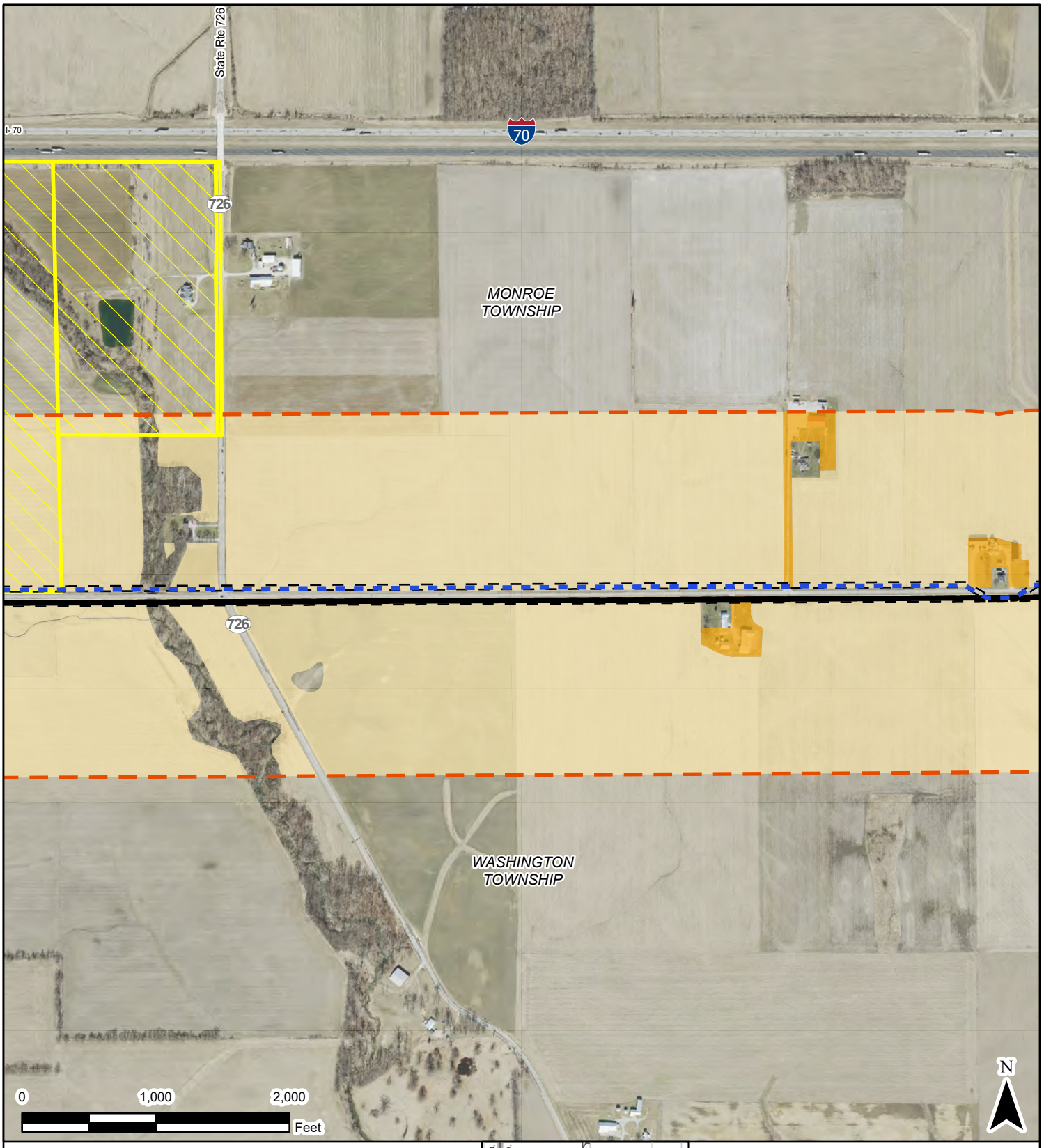


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

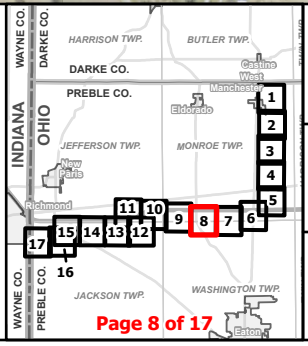
MAP
7-2.7



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

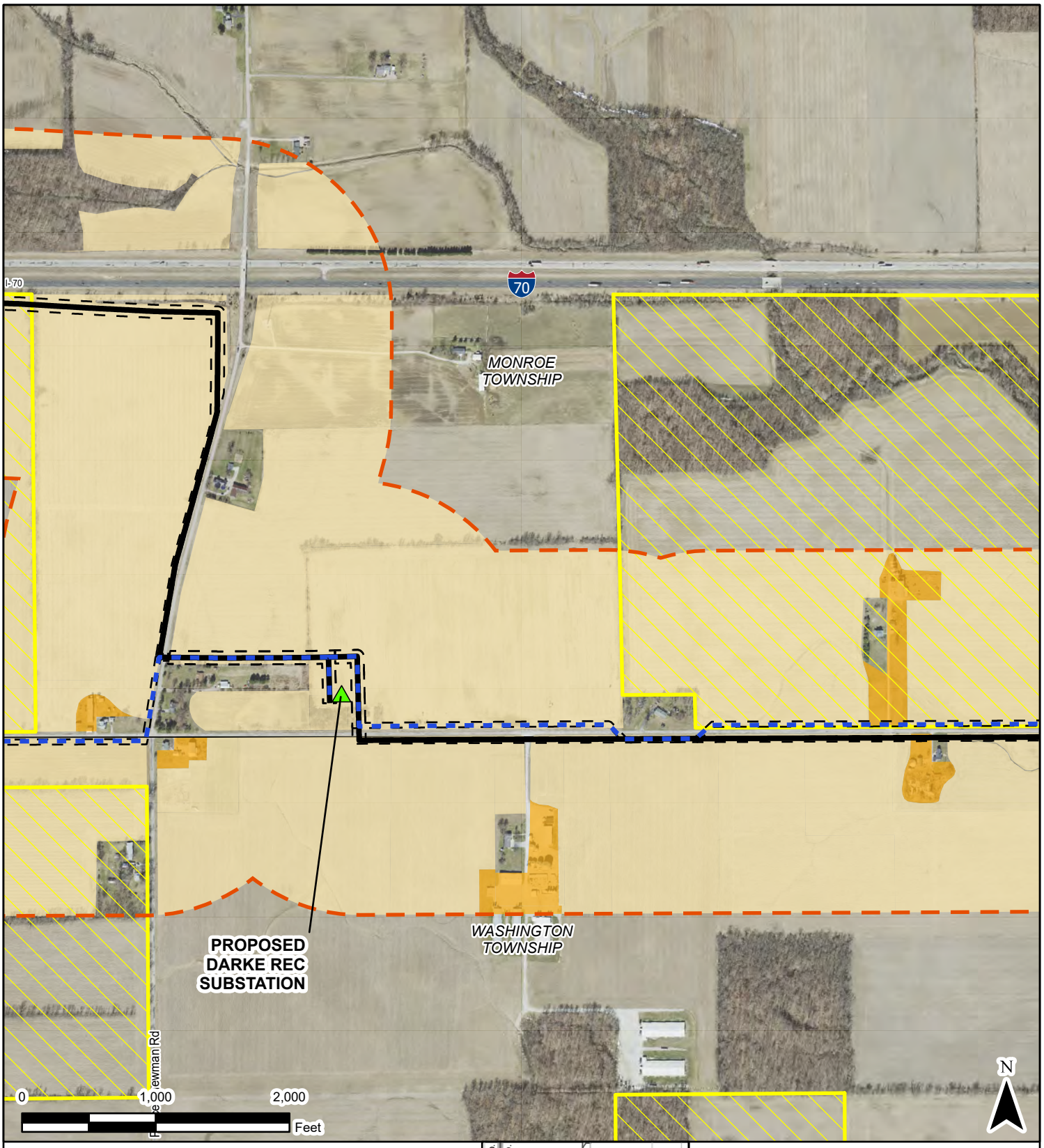


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

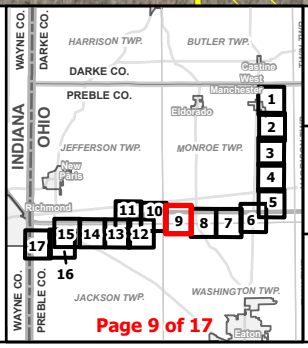
MAP
7-2.8



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

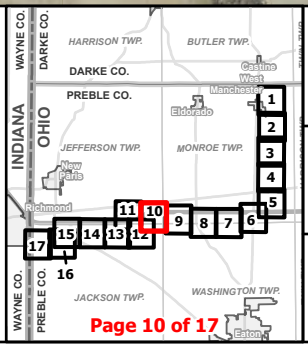
aes Ohio ARCADIS

MAP 7-2.9

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

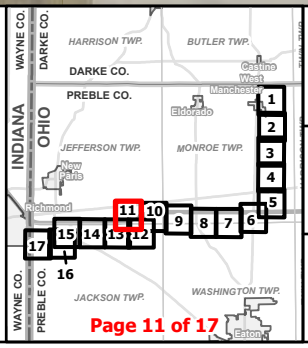
aes Ohio ARCADIS

MAP
7-2.10

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

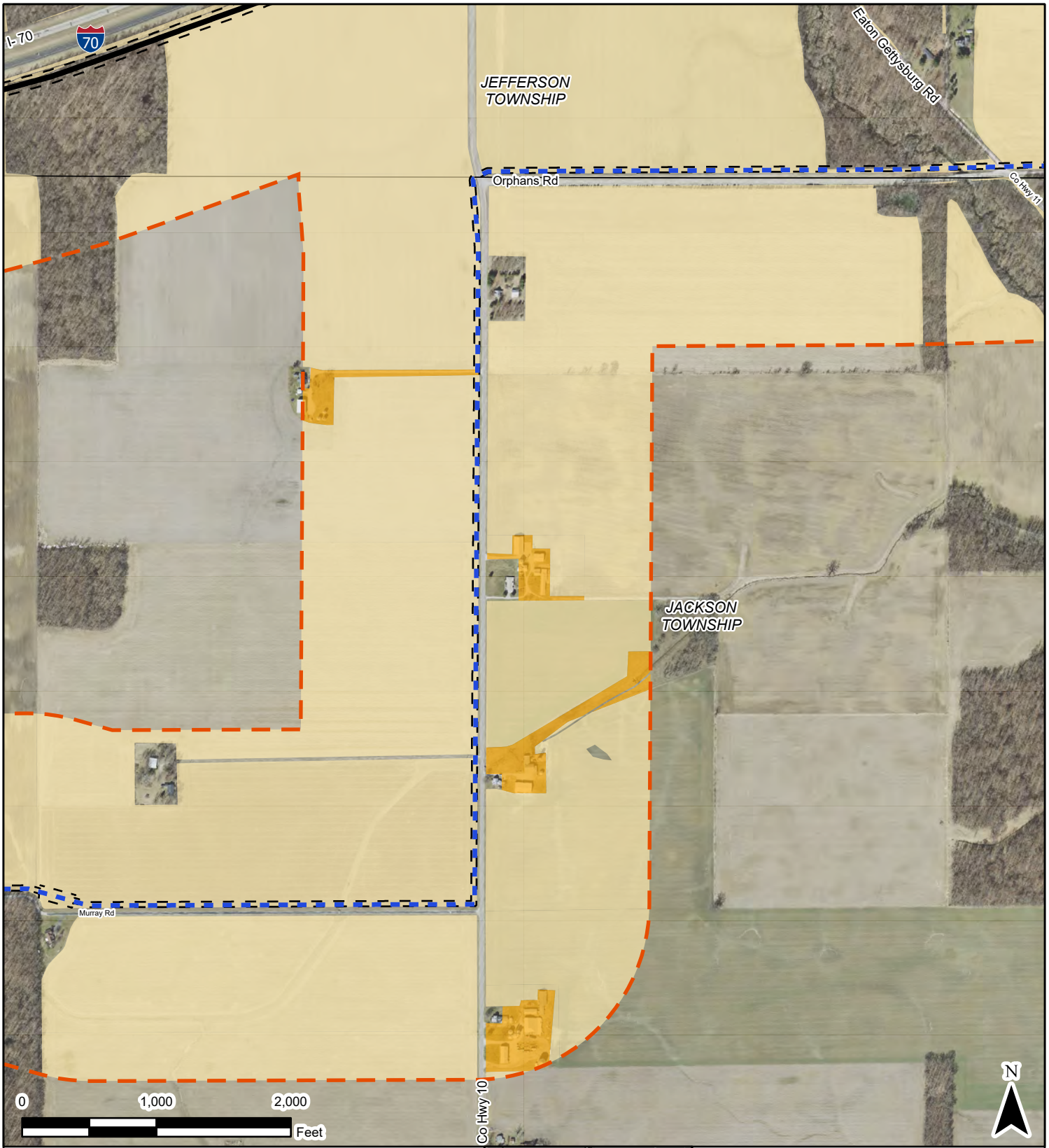


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

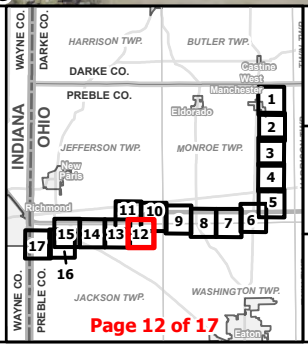
MAP 7-2.11



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

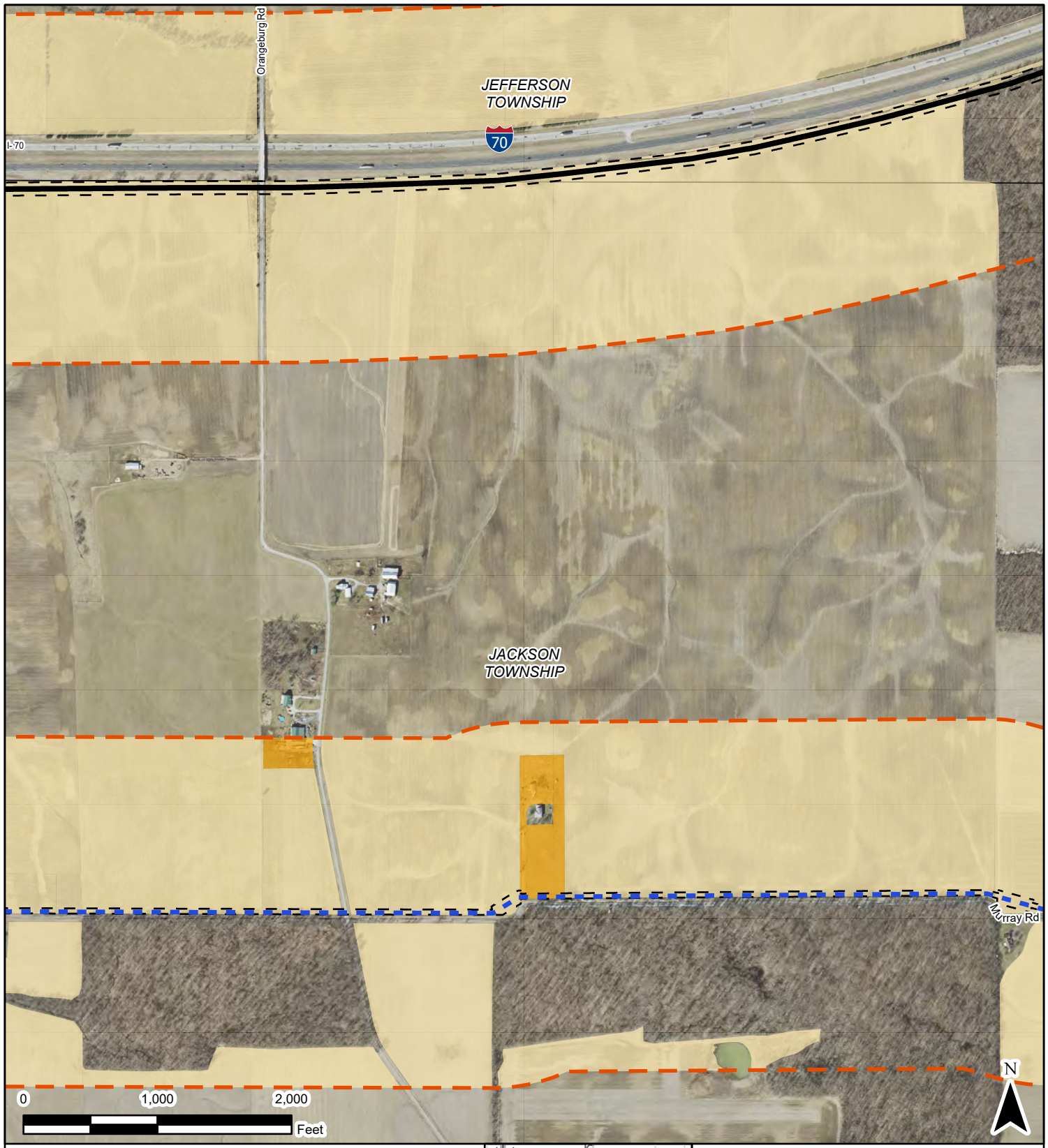


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

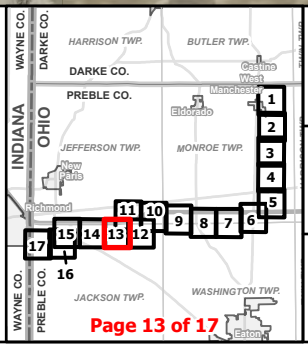
MAP
7-2.12



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

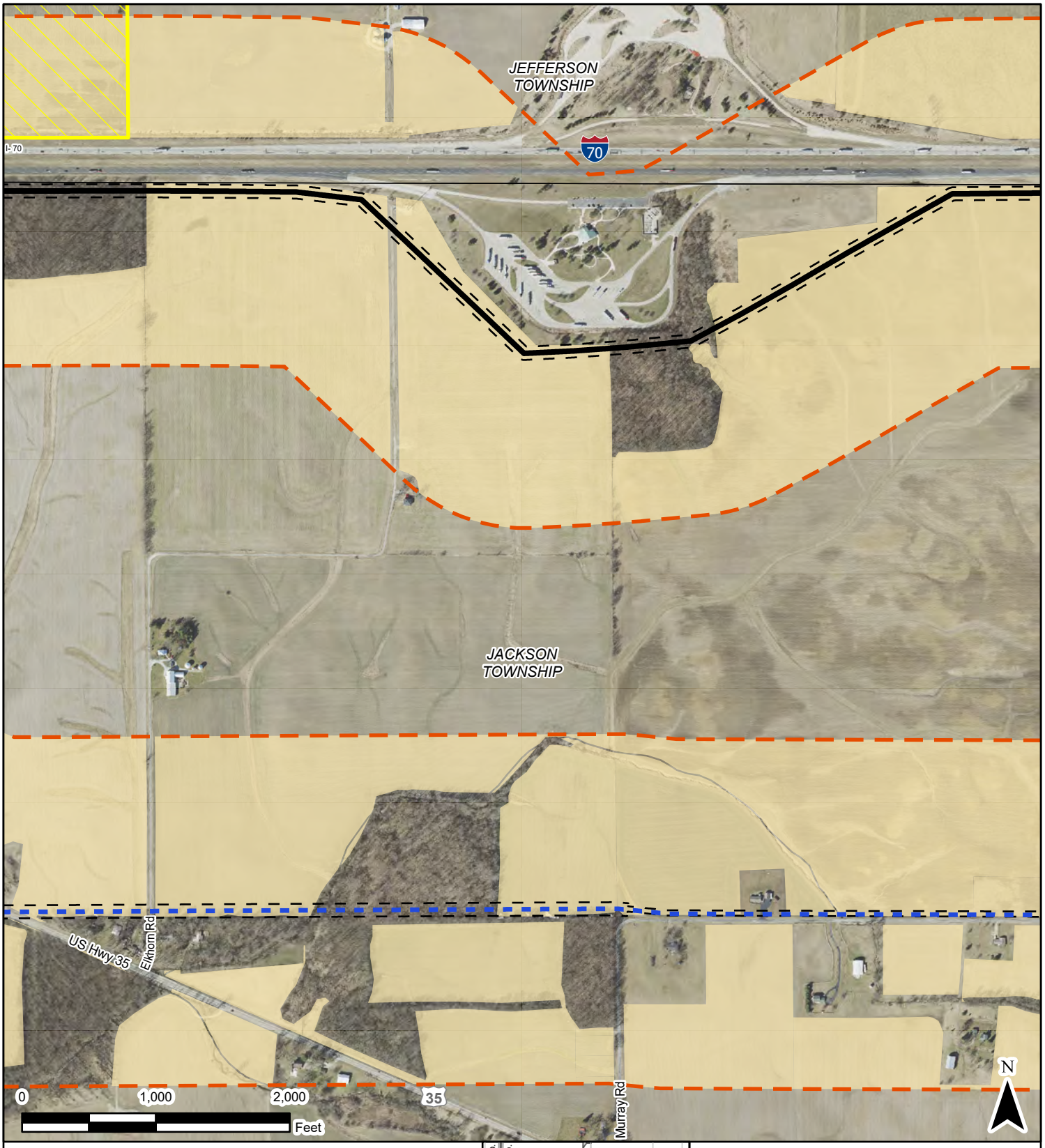


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

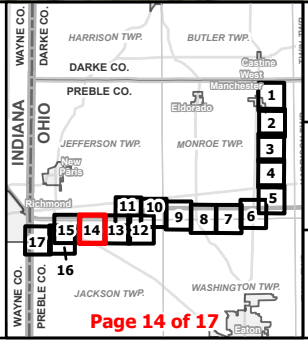
MAP 7-2.13



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

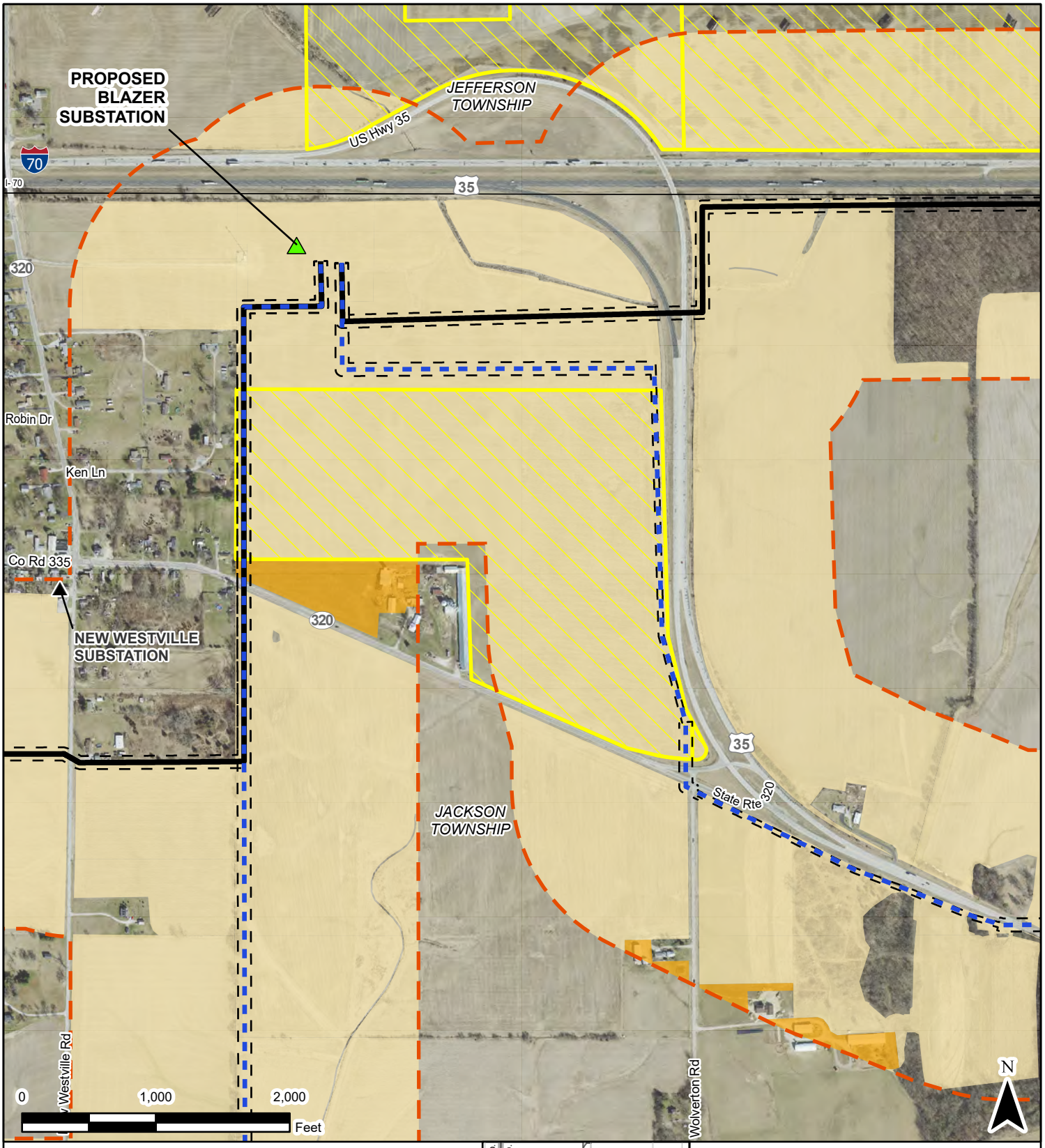


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

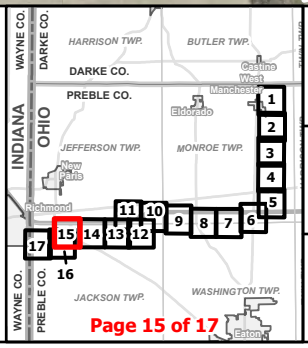
MAP
7-2.14



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.



West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

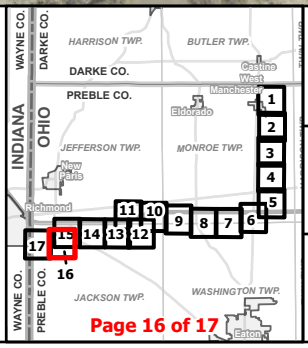
aes Ohio ARCADIS

MAP
7-2.15

Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

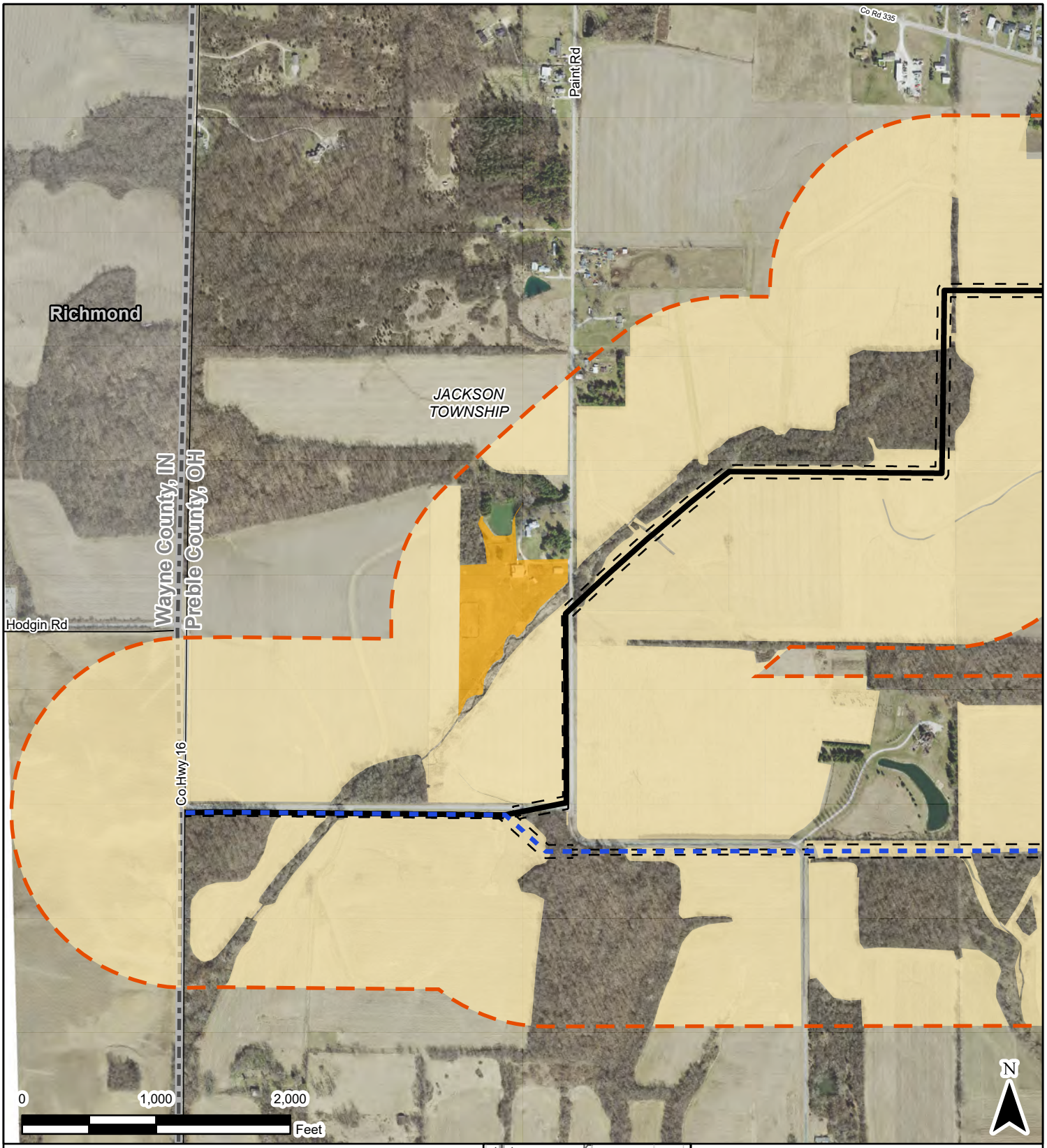


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

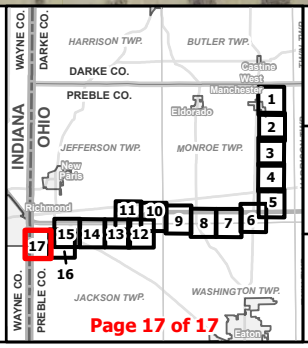
MAP 7-2.16



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Preferred Route
- Alternate Route
- Agricultural District
- Agricultural Facilities
- Cultivated Crop
- Hay/Fallow
- Pasture
- Right-of-Way
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
Imagery obtained from Preble County, 2021. ODOT, 2022. Indiana Map, 2021. ESRI, 2022. Preble County, 2023. AES, 2022. Preble County, 2023.

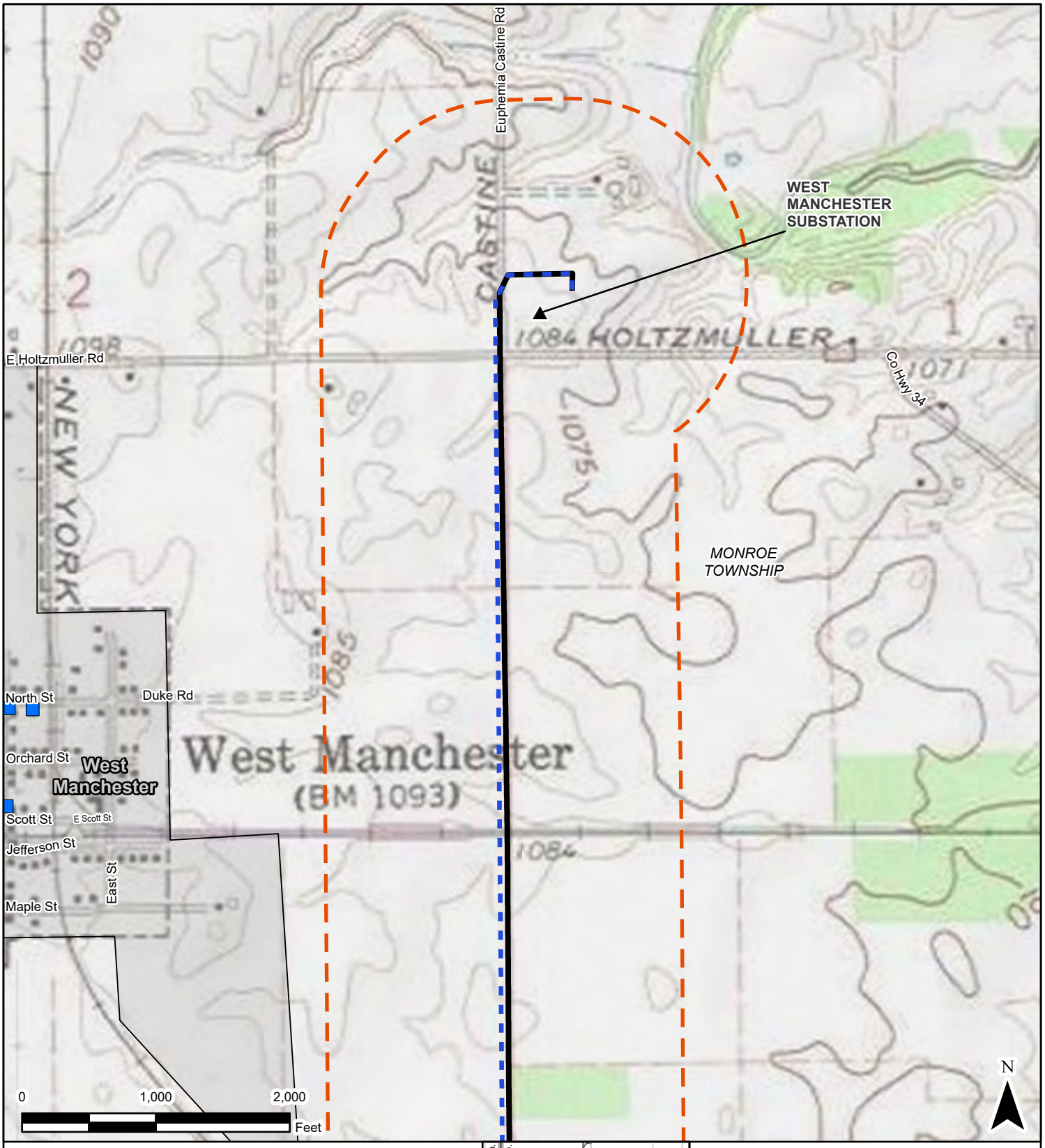


West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

AGRICULTURAL LANDS

aes Ohio ARCADIS

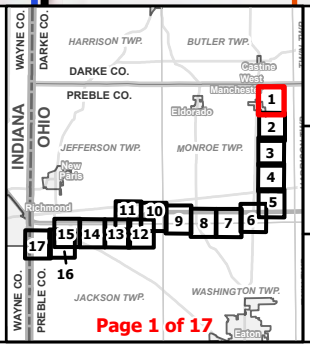
MAP
7-2.17



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
- Preferred Route
- Alternate Route
- Historic National Road
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. NPS, 2022. OHPO, 2022. ODOT, 2023.

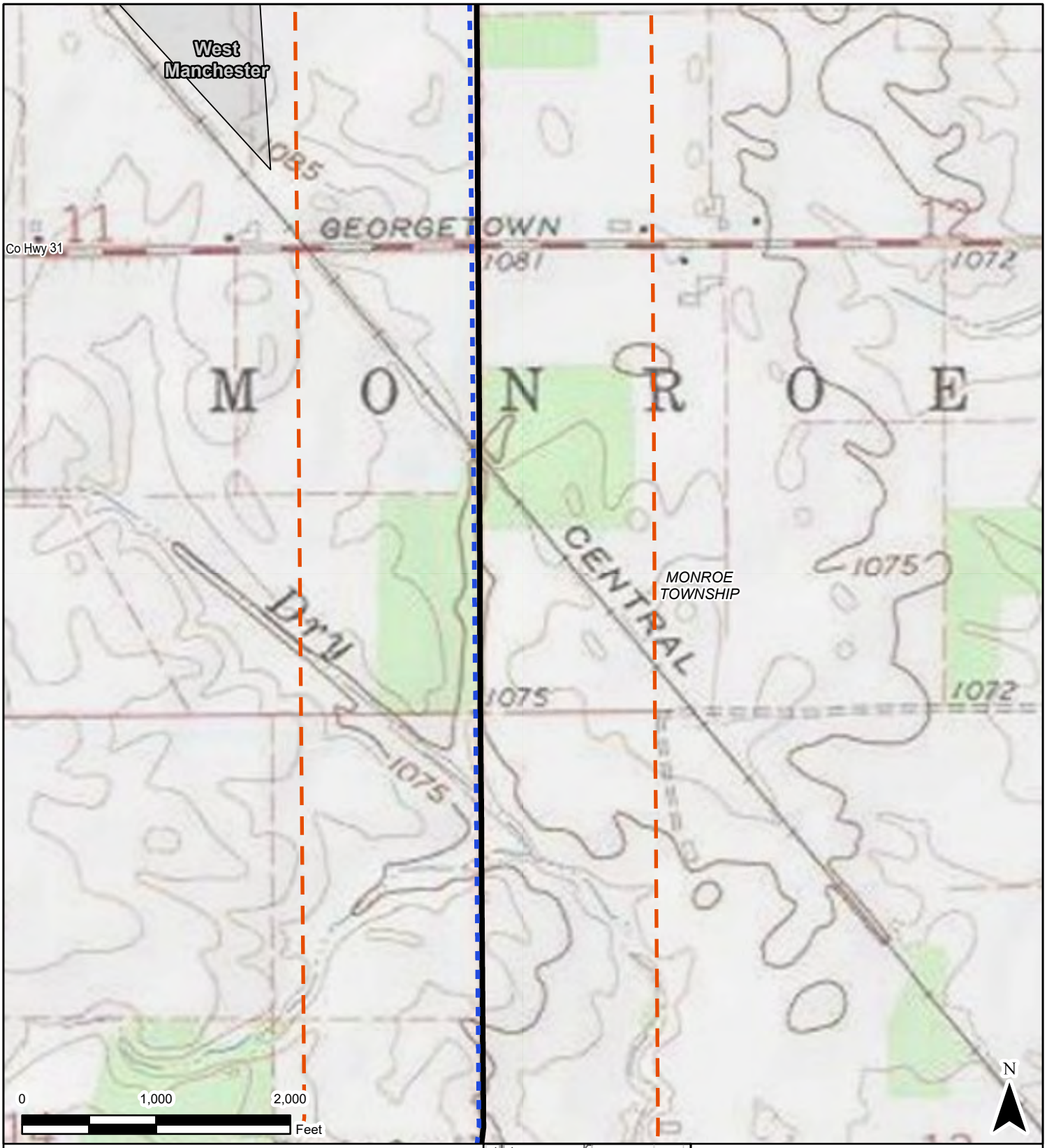


West Manchester-Blazer-Hodgin 138kV Transmission Line Project 22-0627-EL-BTX

RECREATIONAL AND CULTURAL RESOURCES

aes Ohio ARCADIS

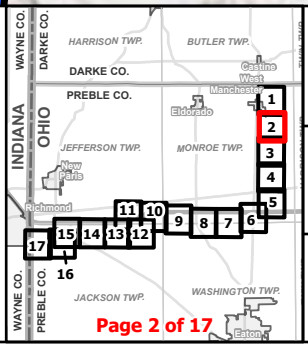
MAP 7-3.1



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
- Preferred Route
- Alternate Route
- Historic National Road
- 2000-Foot Corridor
- City Boundary
- Township Boundary

NOTE:
USGS Topographic Quadrangle For Arcanum, Eaton North, Lewisburg, New Madison and New Paris, Ohio, and Whitewater, Indiana, obtained through ArcGIS Online Streaming Service. NPS, 2022. OHPO, 2022. ODOT, 2023.



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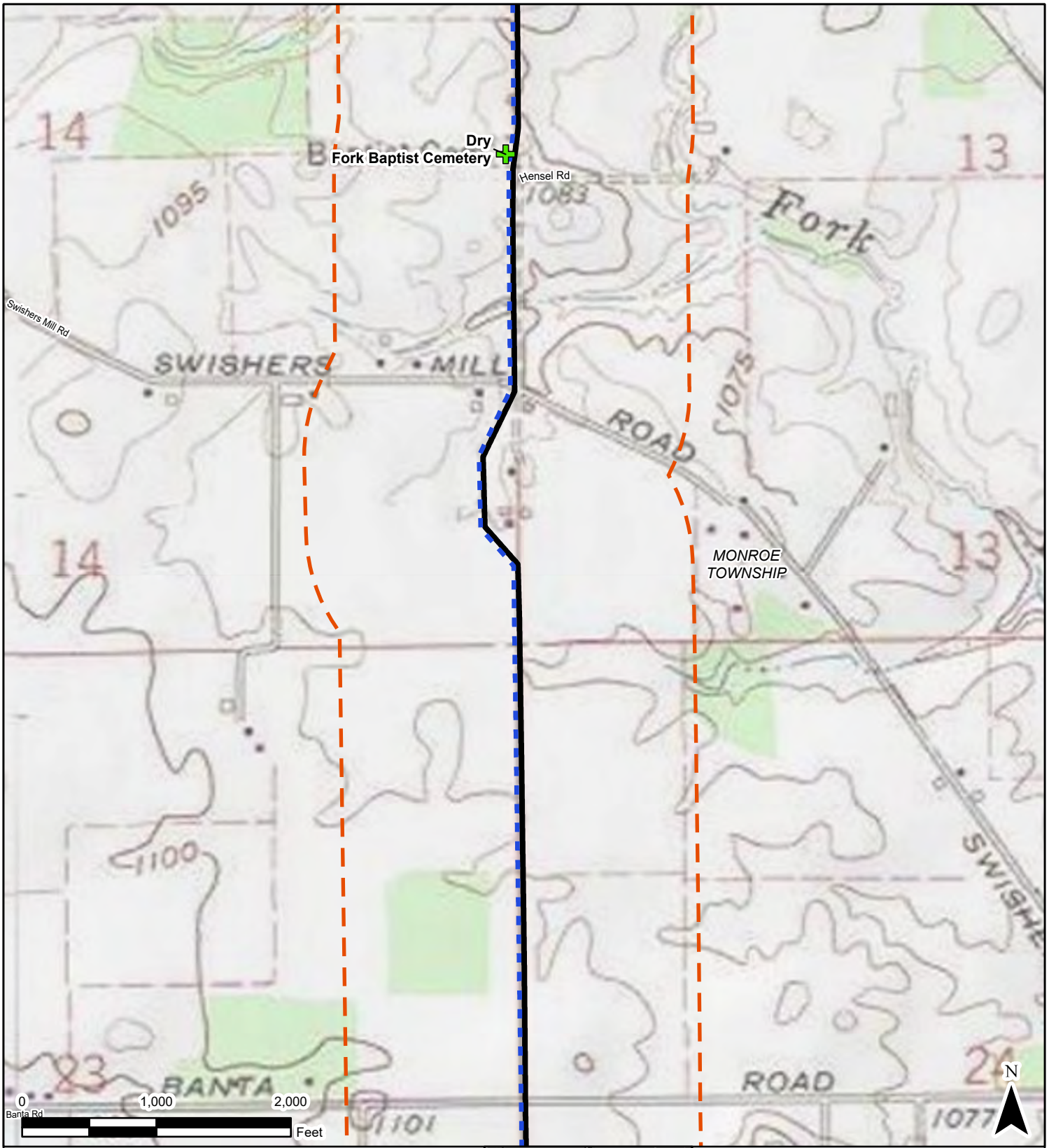
MAP 7-3.2



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
- Preferred Route
- Alternate Route
- Historic National Road
- 2000-Foot Corridor
- City Boundary
- Township Boundary

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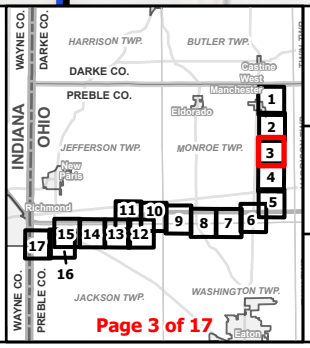

West Manchester-Blazer-Hodgin 138kV
Transmission Line Project 22-0627-EL-BTX

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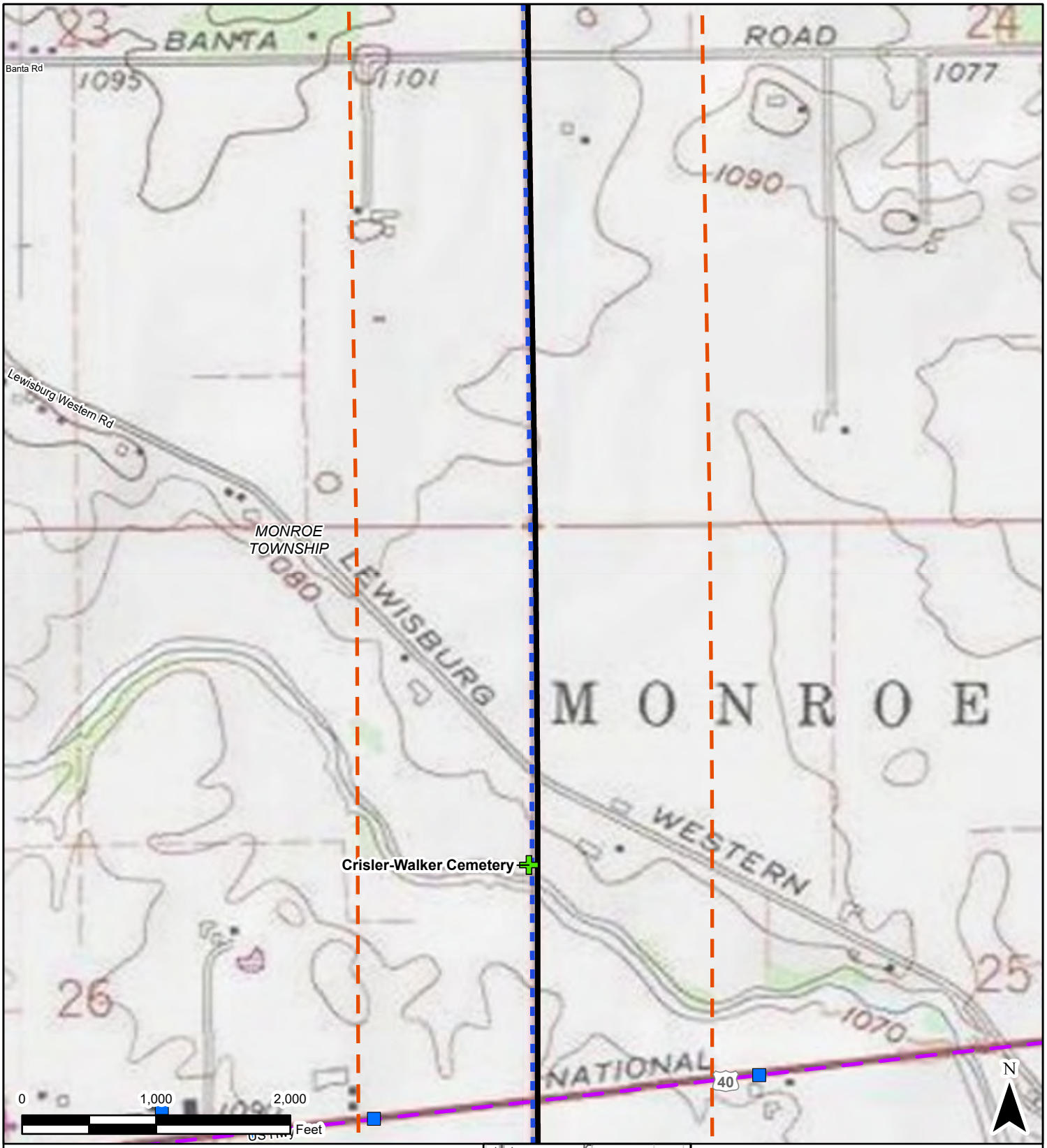
MAP
7-3.3



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
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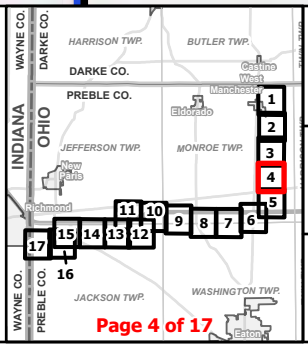

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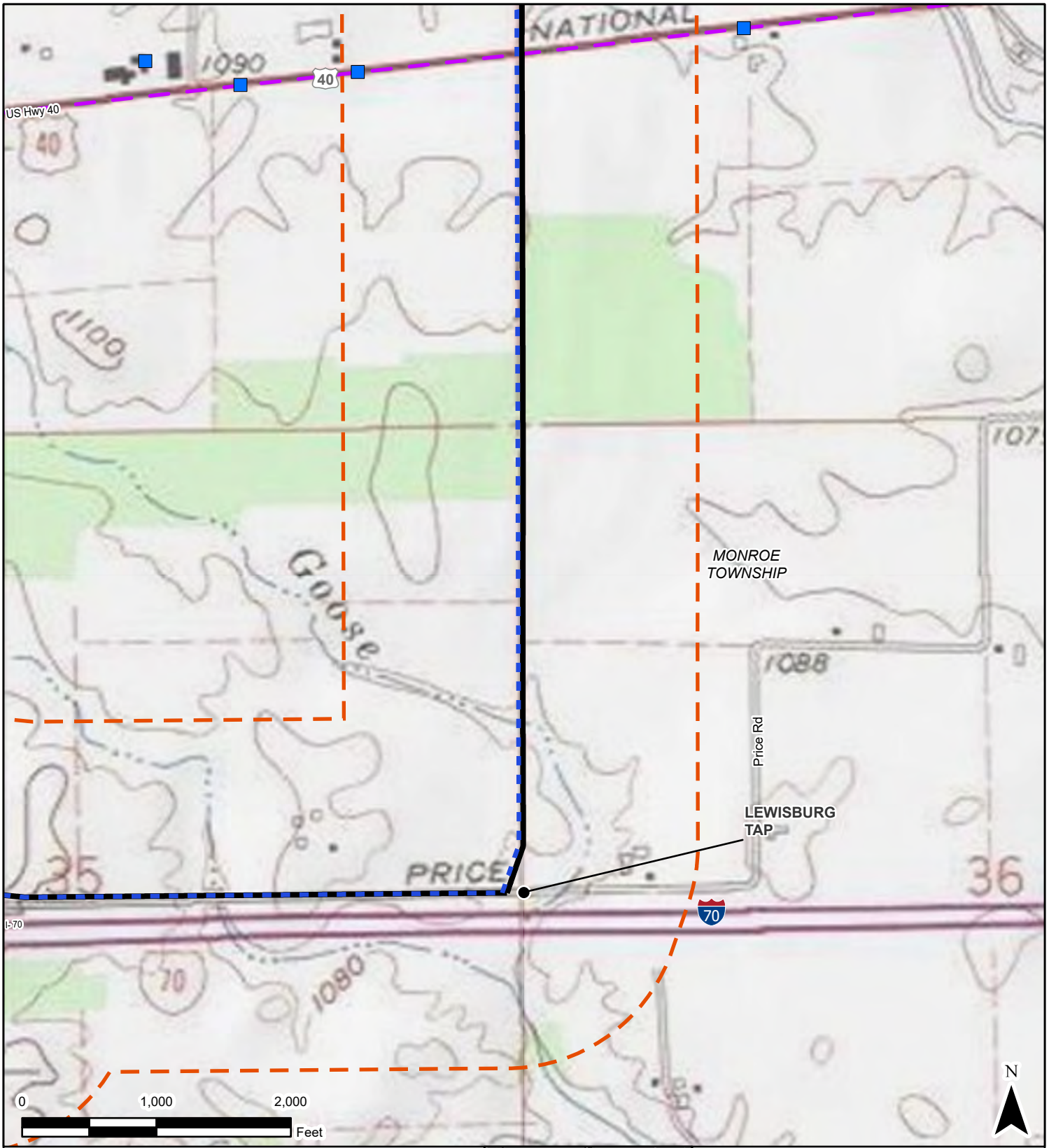
MAP 7-3.4



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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- 2000-Foot Corridor
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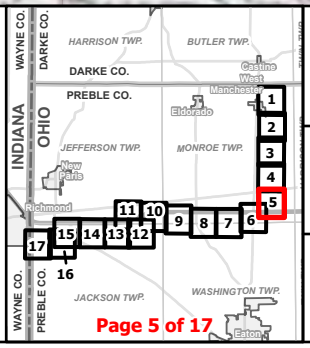

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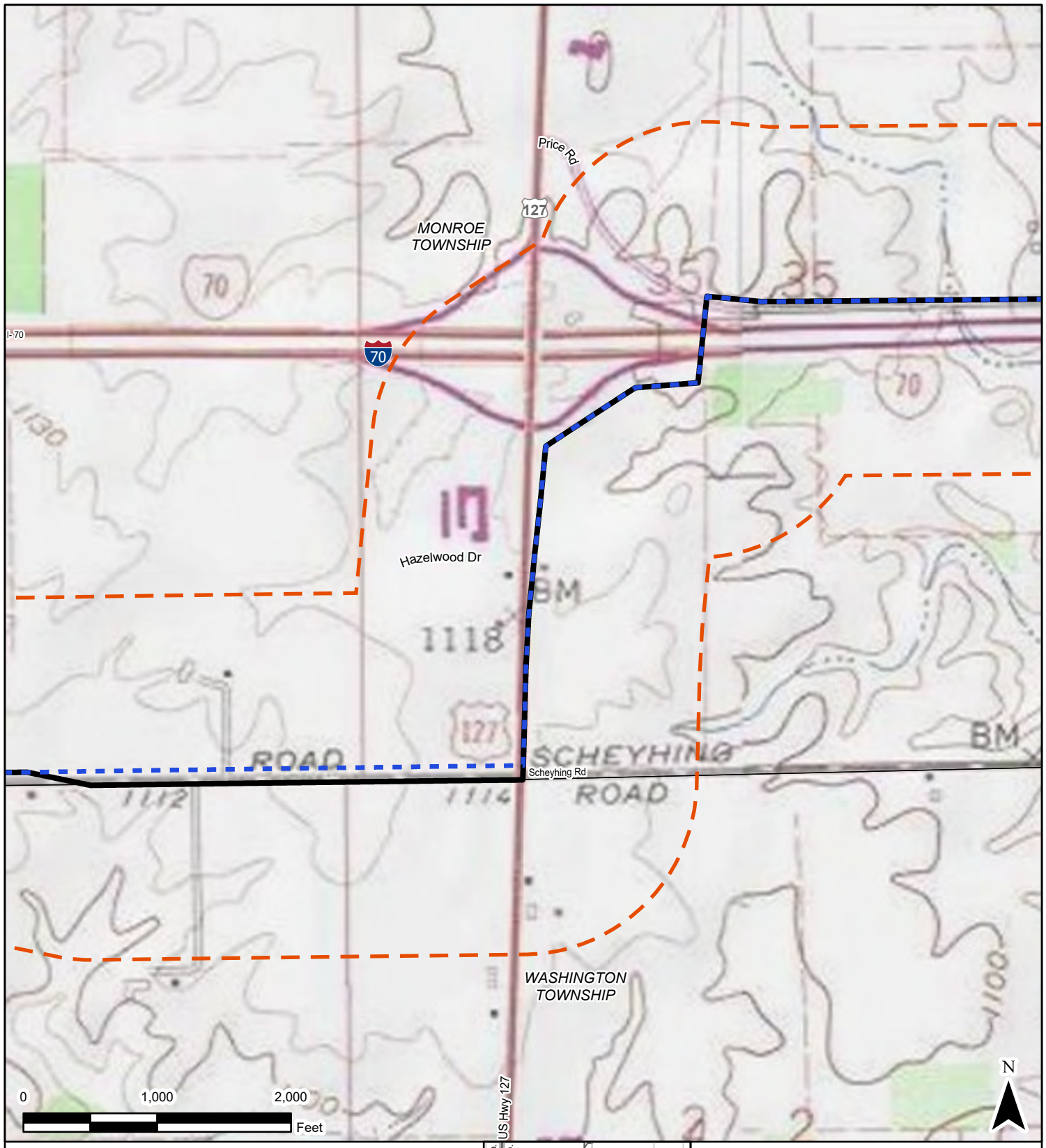
MAP 7-3.5



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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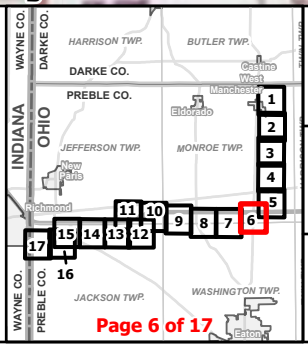

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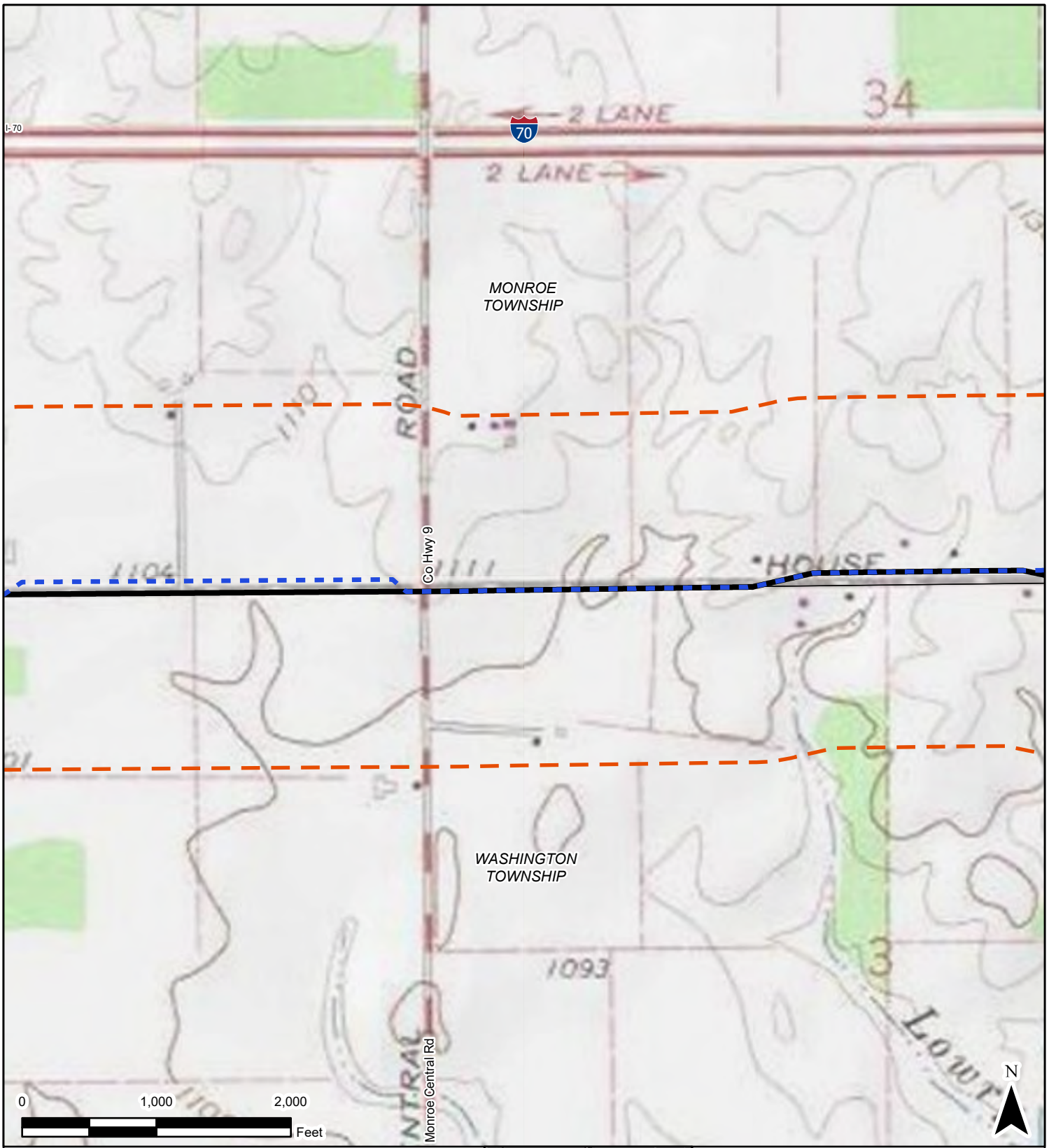
MAP
7-3.6



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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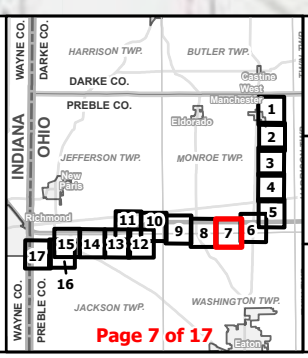

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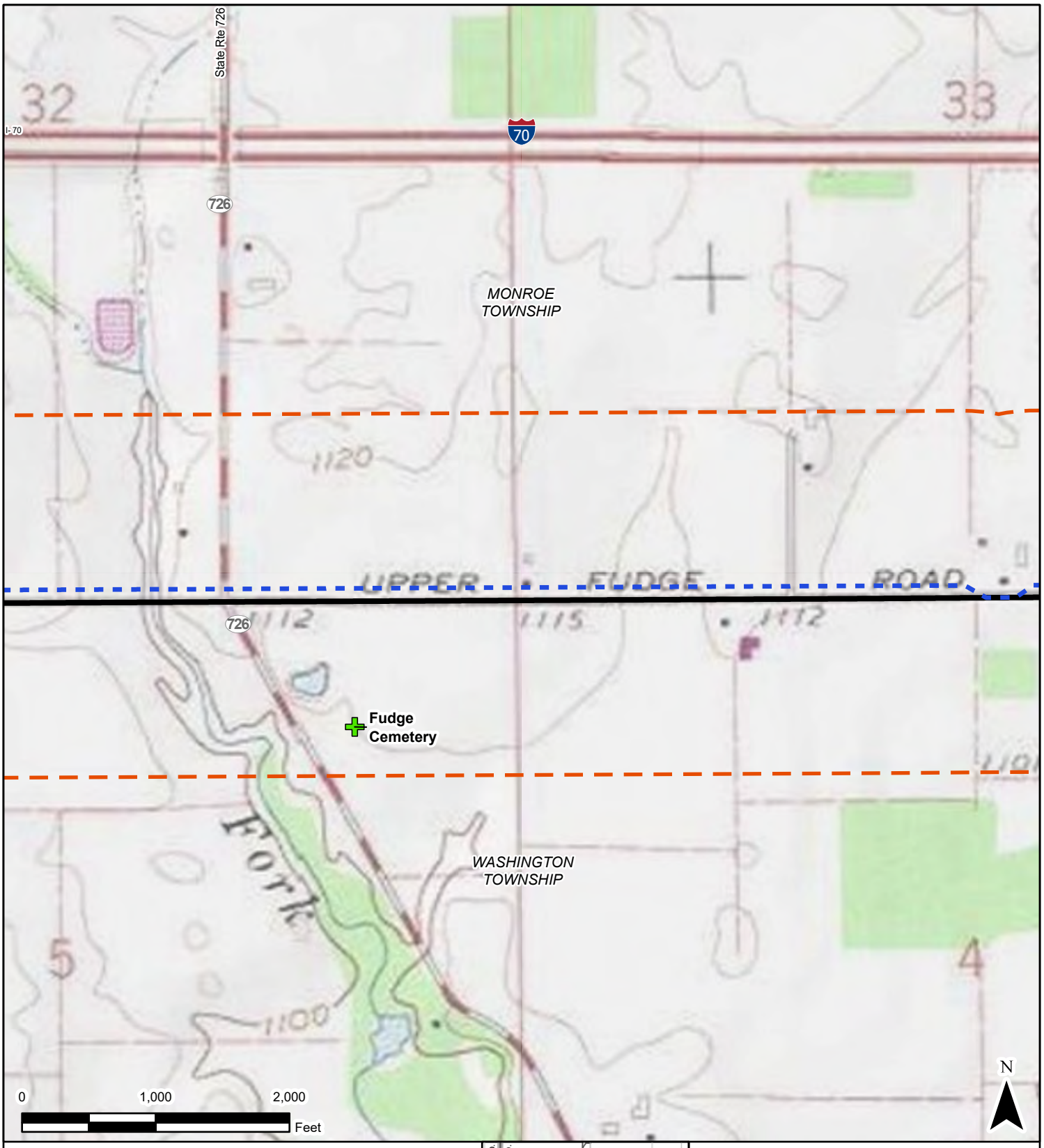
MAP
7-3.7



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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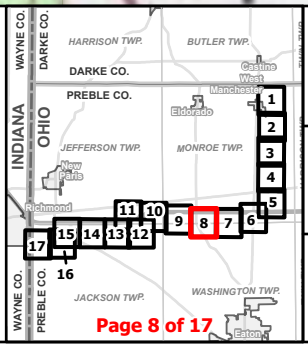

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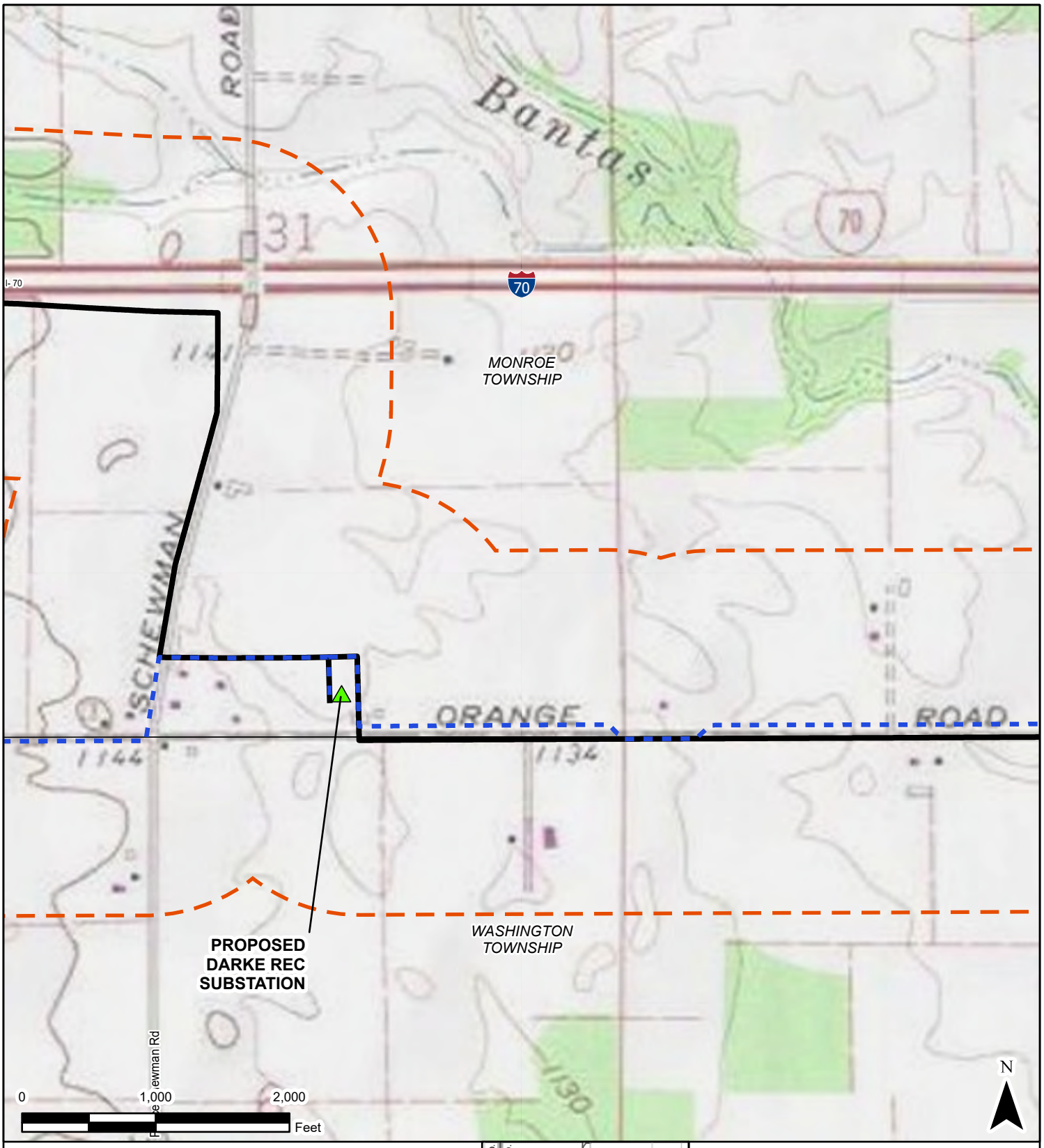
MAP 7-3.8



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
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- OGS Cemetery
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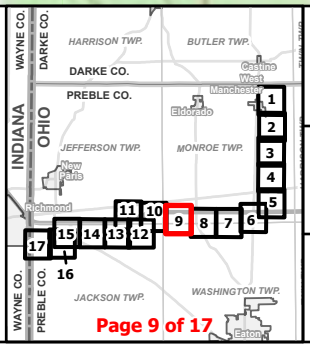

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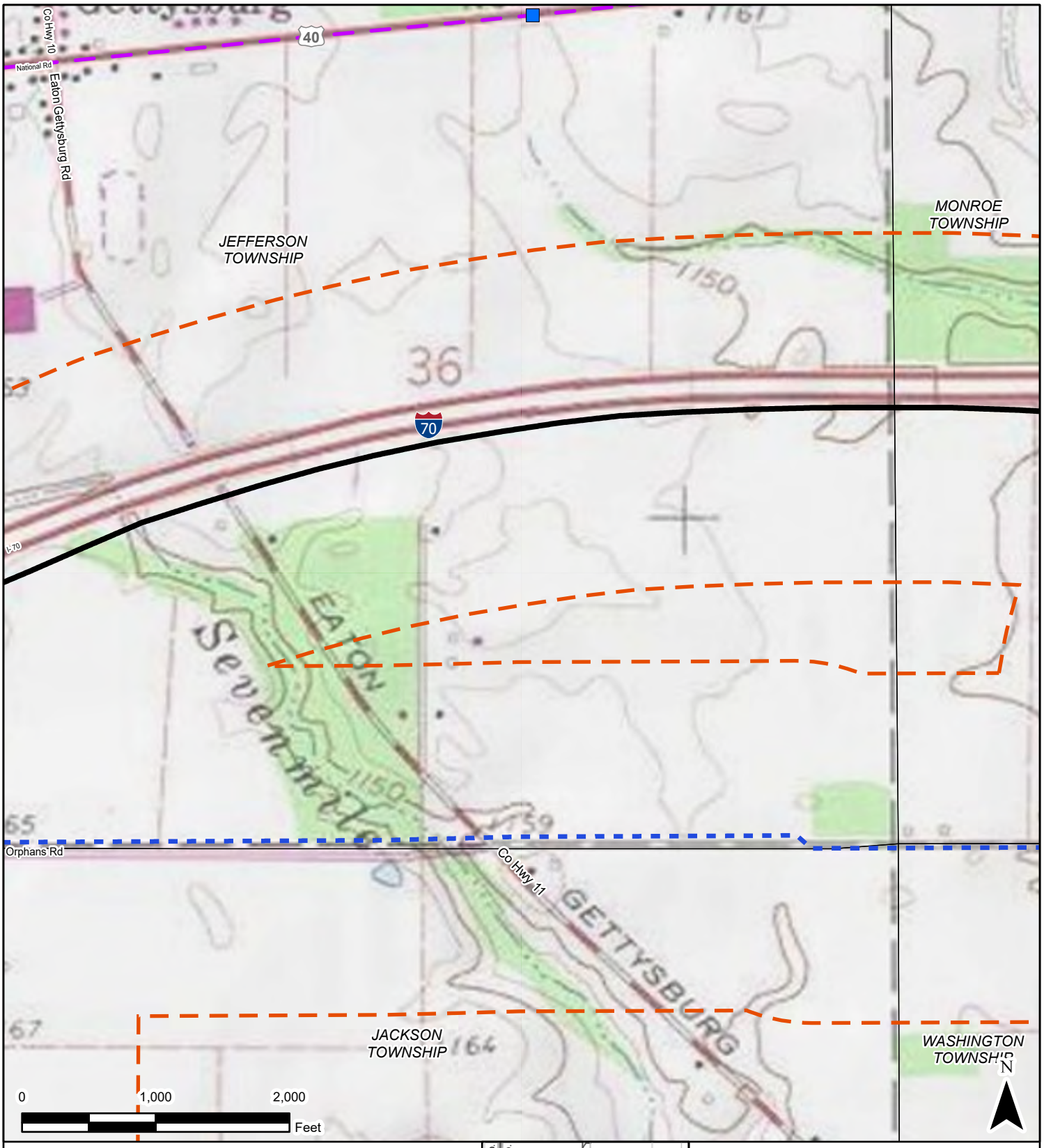
MAP 7-3.9



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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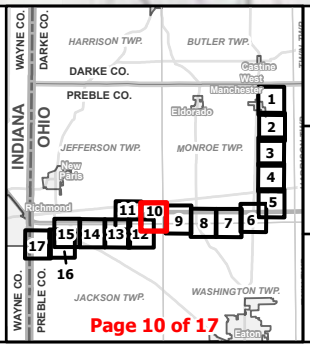

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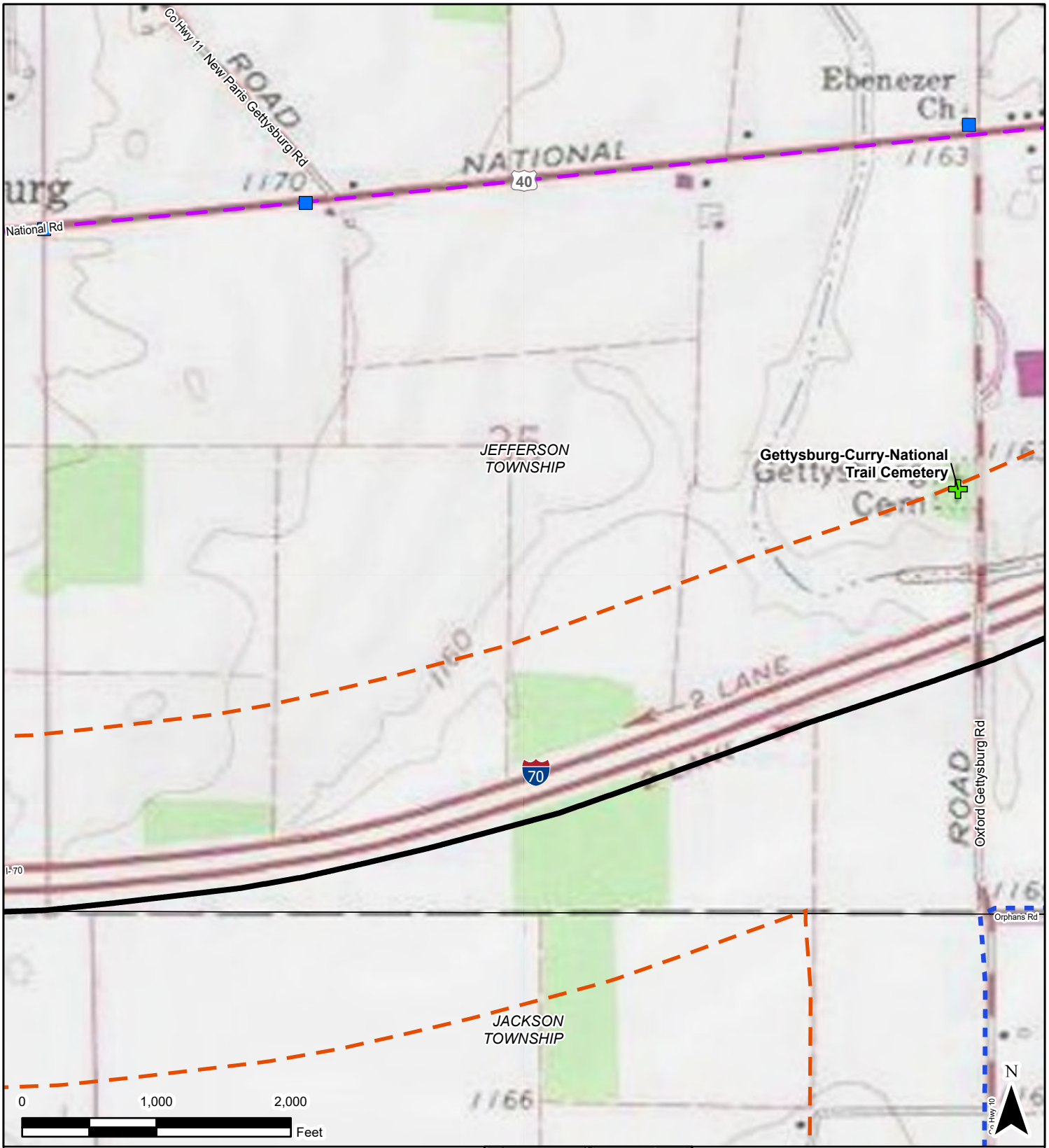
MAP 7-3.10



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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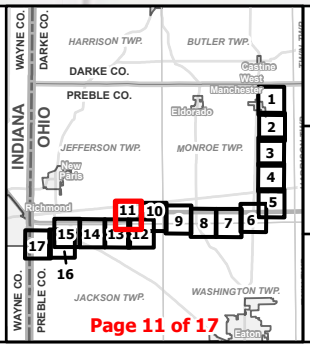

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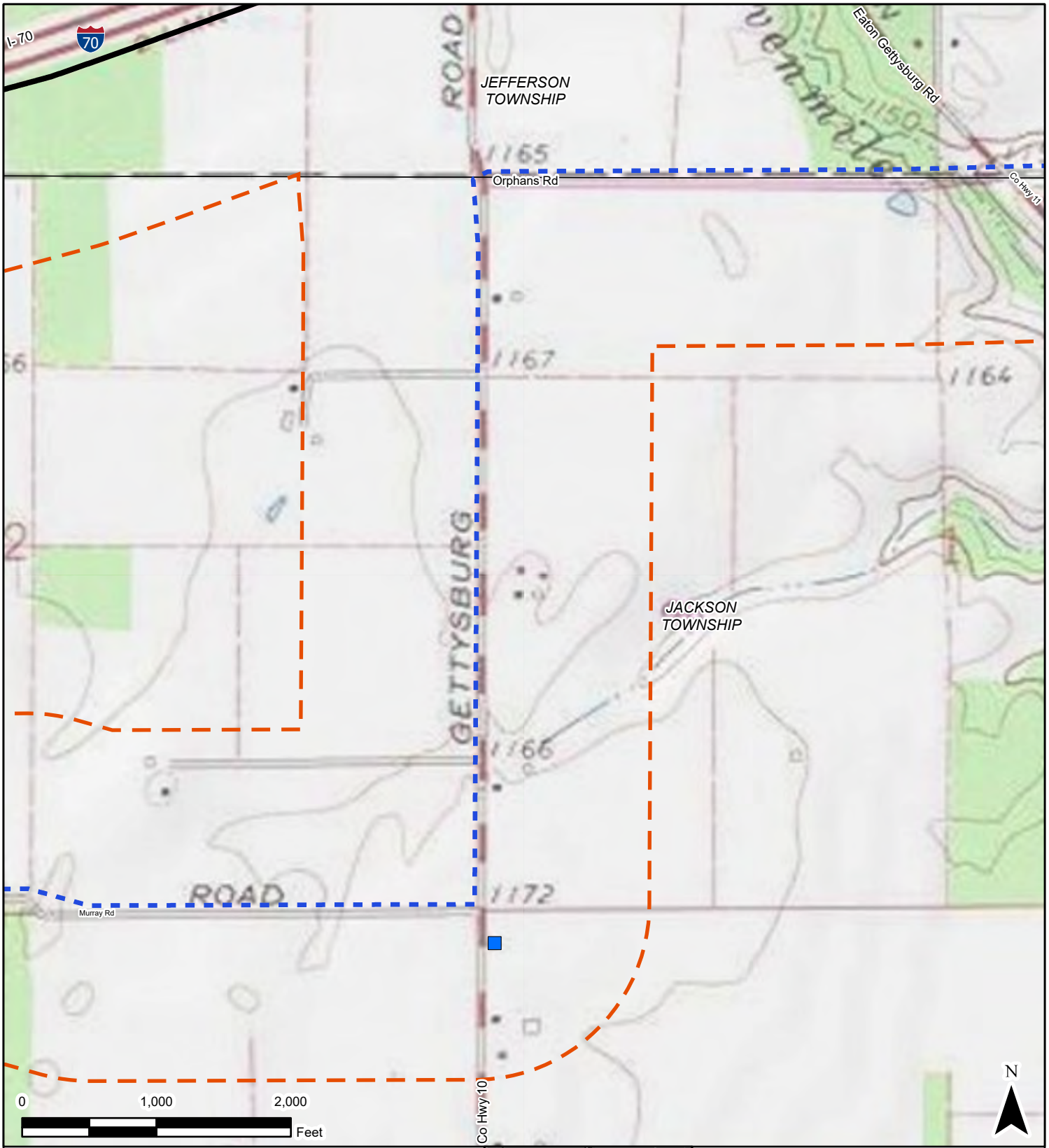
MAP
7-3.11



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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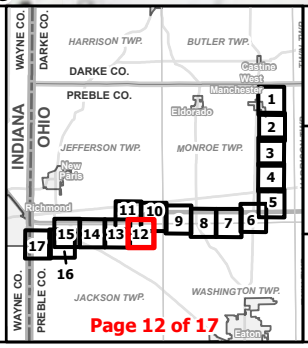

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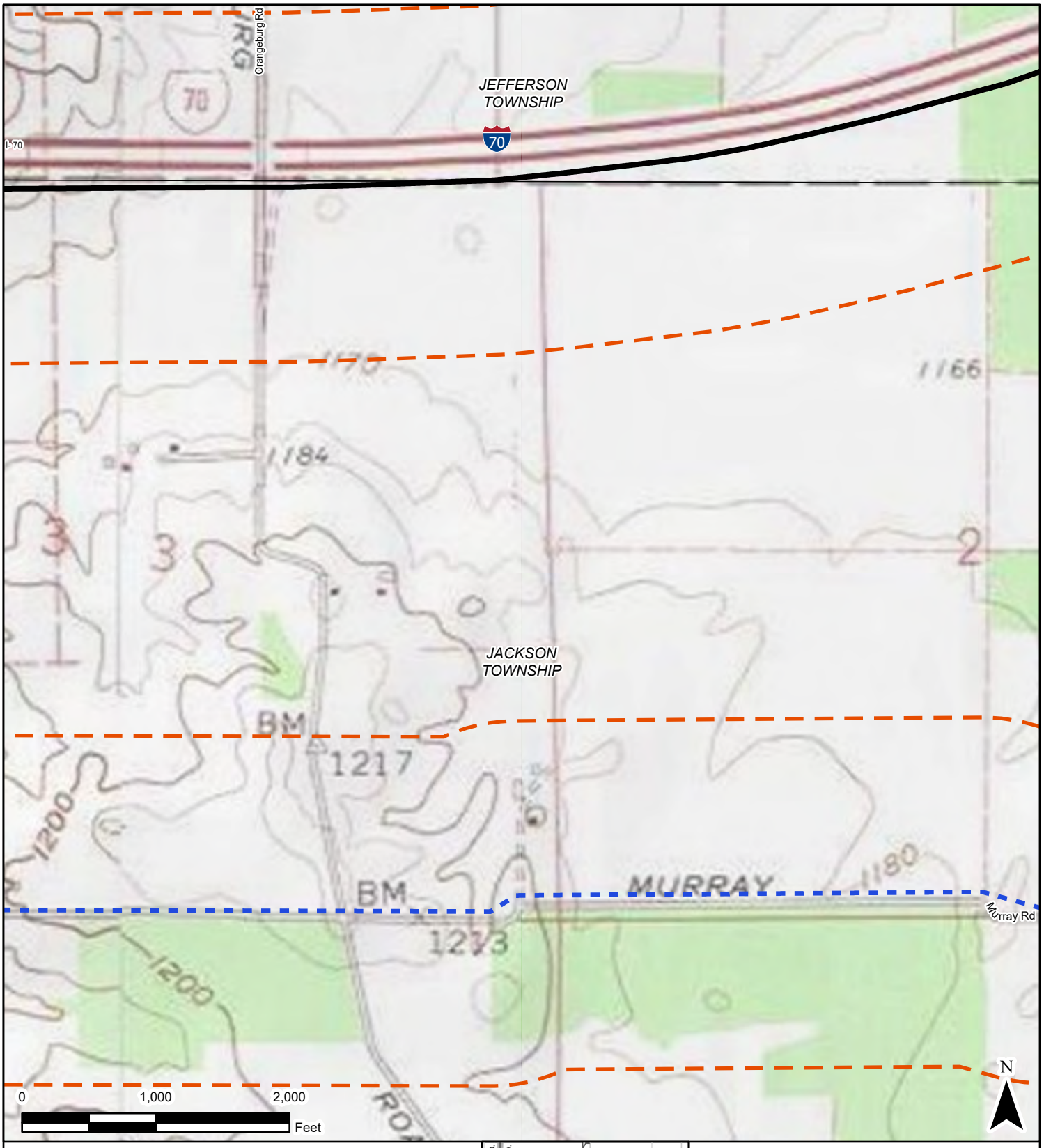
MAP 7-3.12



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
- Architectural and Historical Resource
- OGS Cemetery
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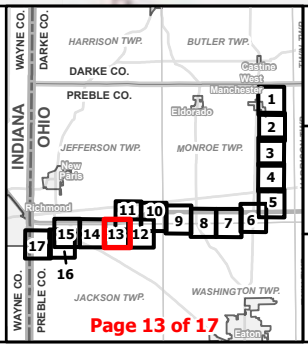

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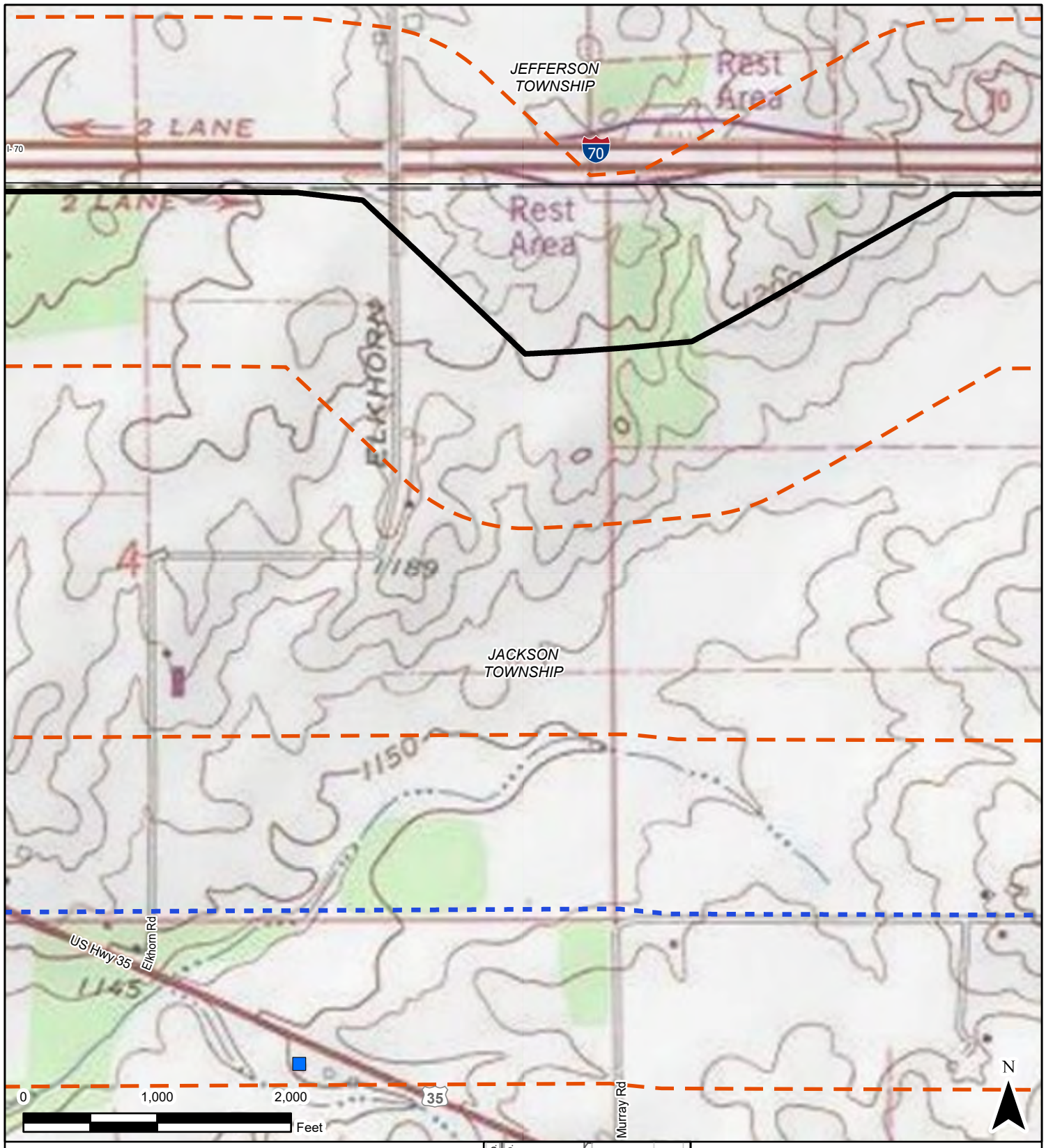
MAP 7-3.13



Legend

- Existing Substation
- Existing Tap
- Proposed Substation
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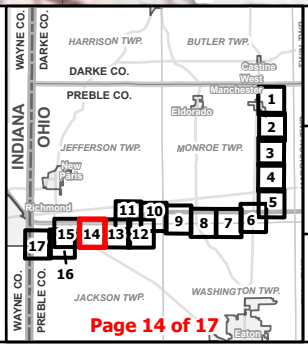

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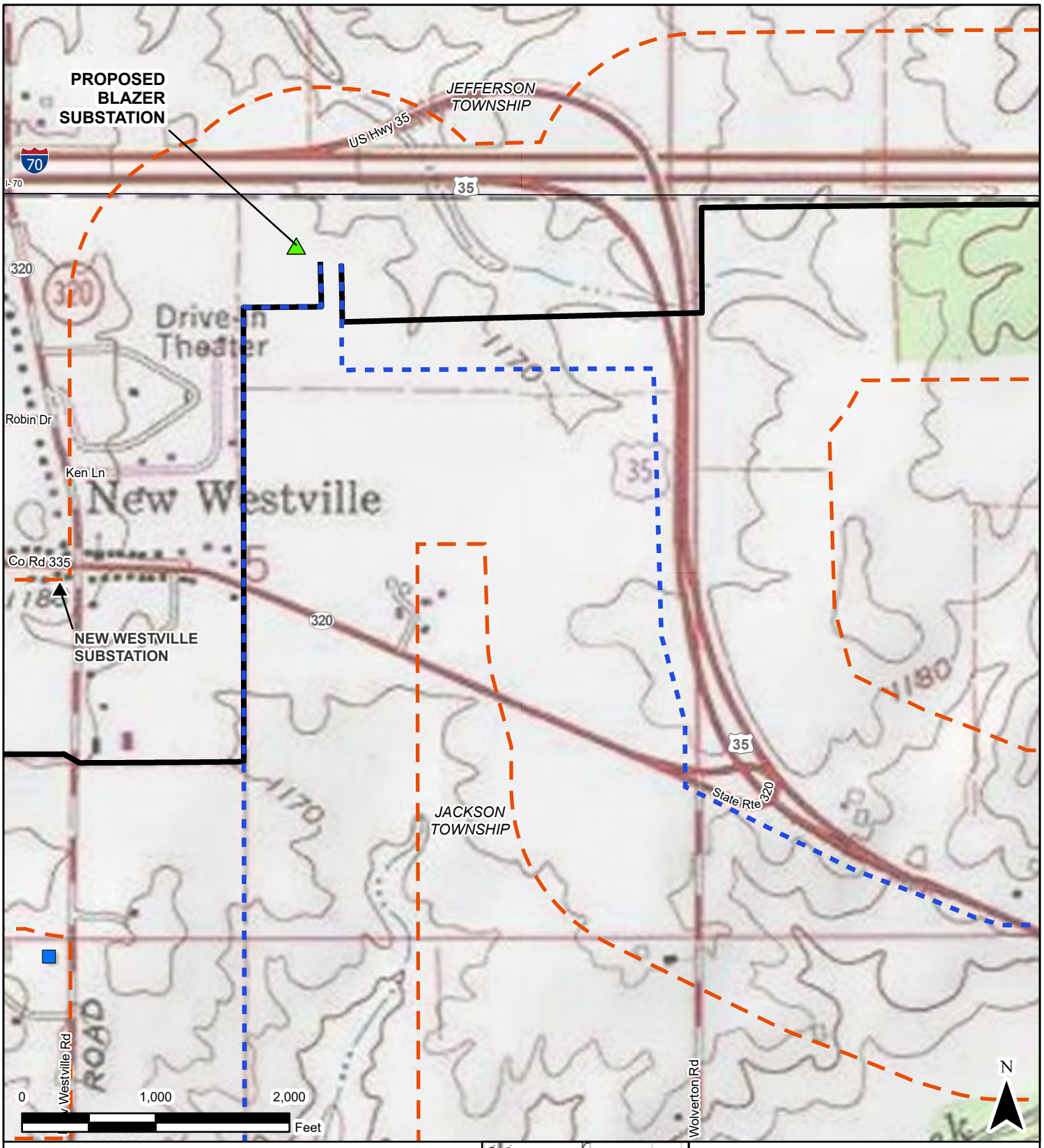
MAP 7-3.14



Legend

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- Existing Tap
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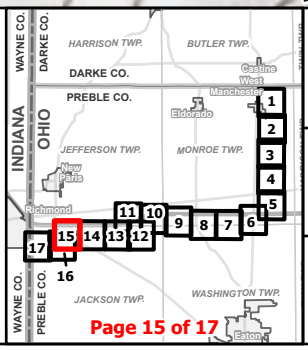

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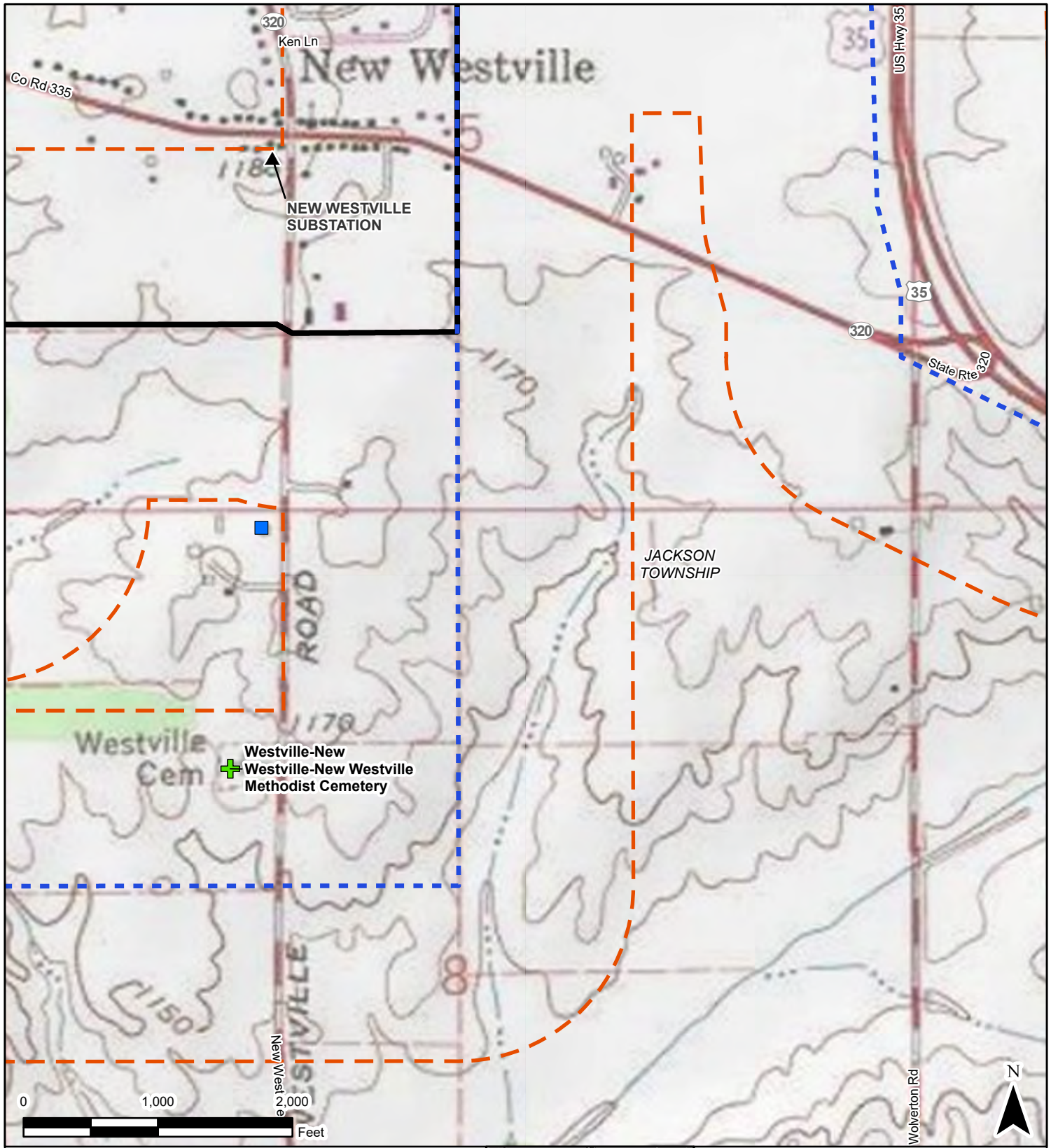
MAP 7-3.15



Legend

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- Existing Tap
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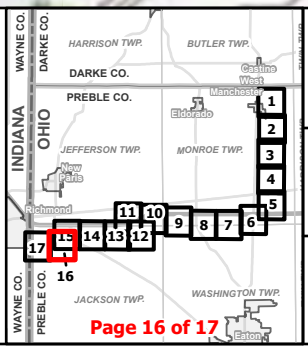

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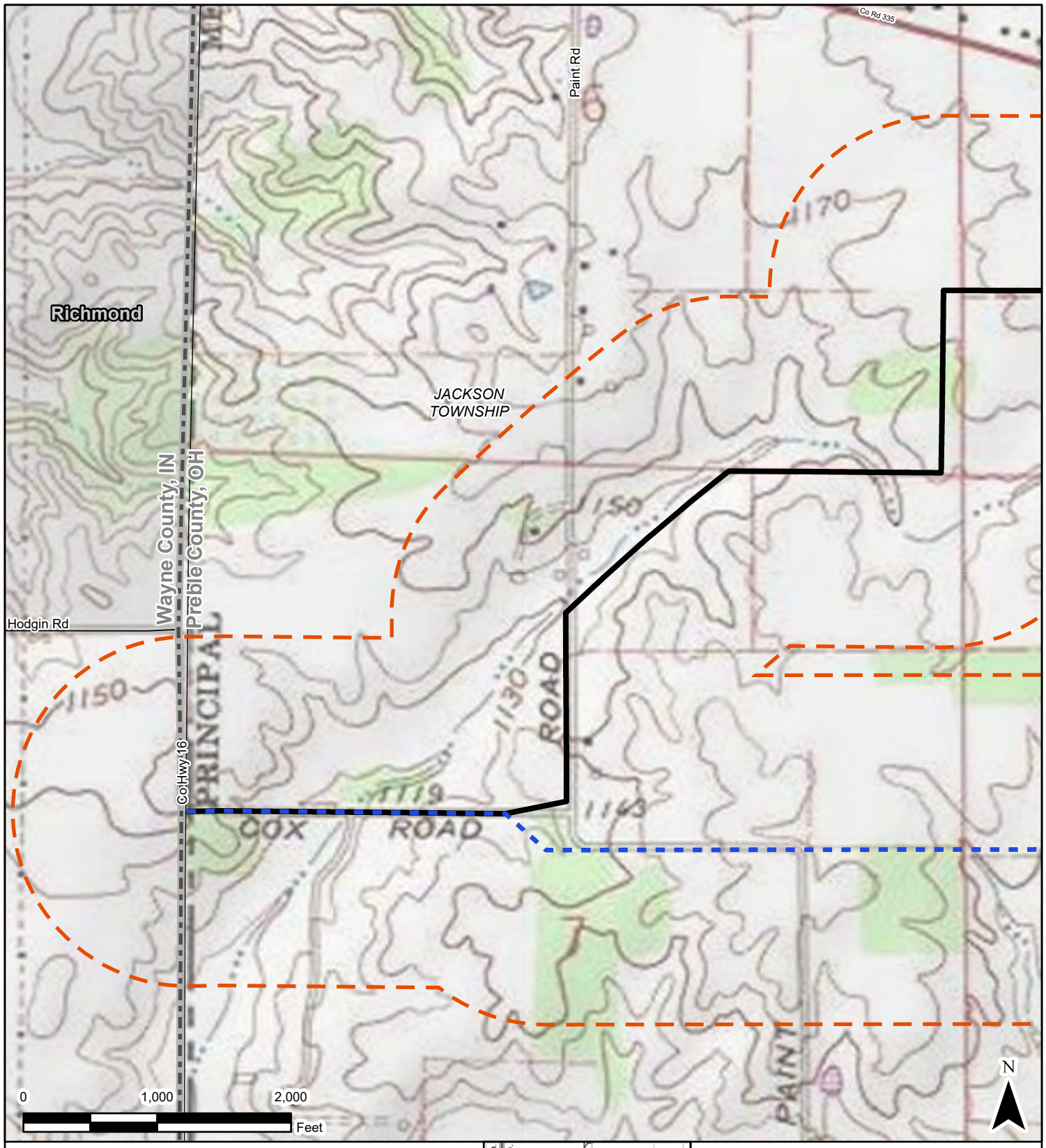
MAP 7-3.16



Legend

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- Existing Tap
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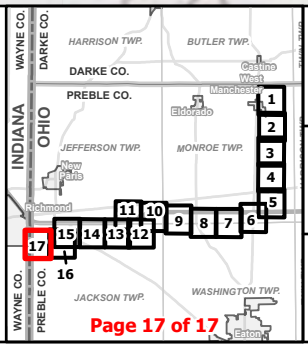

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MAP 7-3.17

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Commission of Ohio Docketing Information System on

12/18/2023 3:39:15 PM

in

Case No(s). 22-0627-EL-BTX

Summary: Application Application for a Certificate of Compatibility and Public Need for the West Manchester–Blazer–Hodgin 138kV Transmission Line Project (Part 2) electronically filed by Mr. Christopher C. Hollon on behalf of The Dayton Power and Light Company d/b/a AES Ohio.