



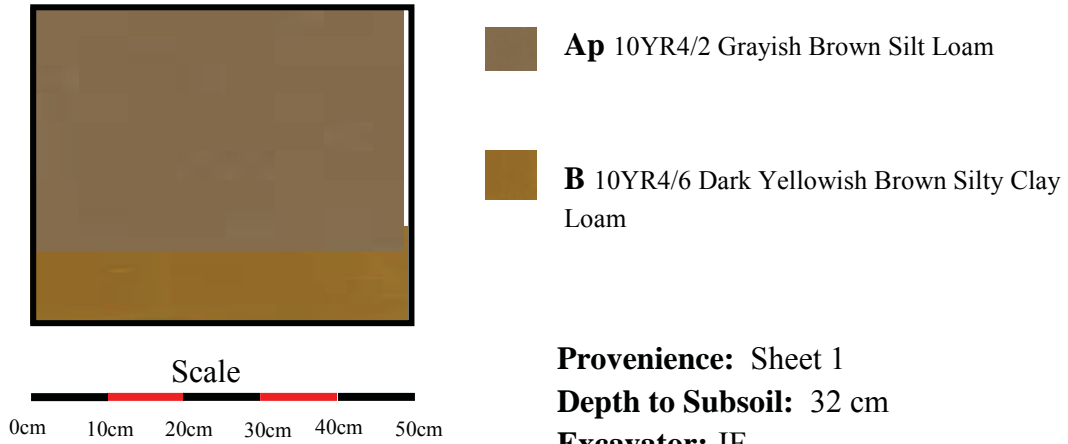
Figure 27. Deflated soils and exposed bedrock within a disturbed shovel probe excavated within the project.



Figure 28. Eroded soils common throughout the ridgetop situations in the project.

Schematic of a Test Unit Profile

Wyatt Silty Clay Loam (Wya3C2)



Provenience: Sheet 1

Depth to Subsoil: 32 cm

Excavator: JF



Figure 29. A typical shovel test unit excavated within the project.

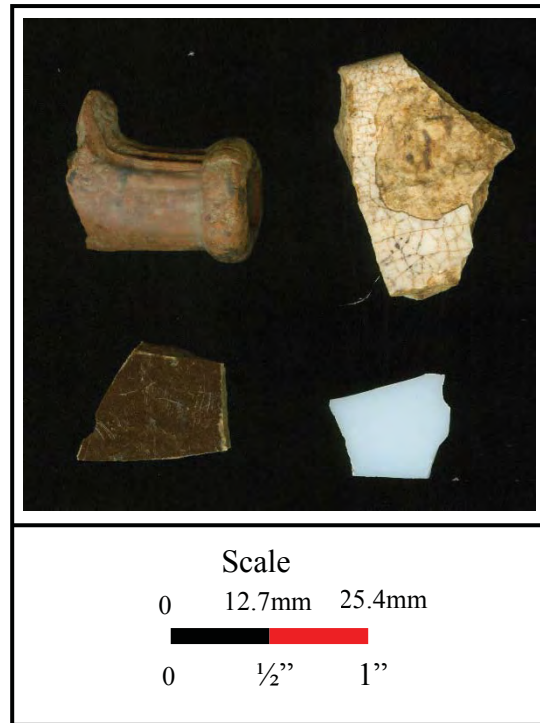


Figure 30. Some of the artifacts from Site JA0409.

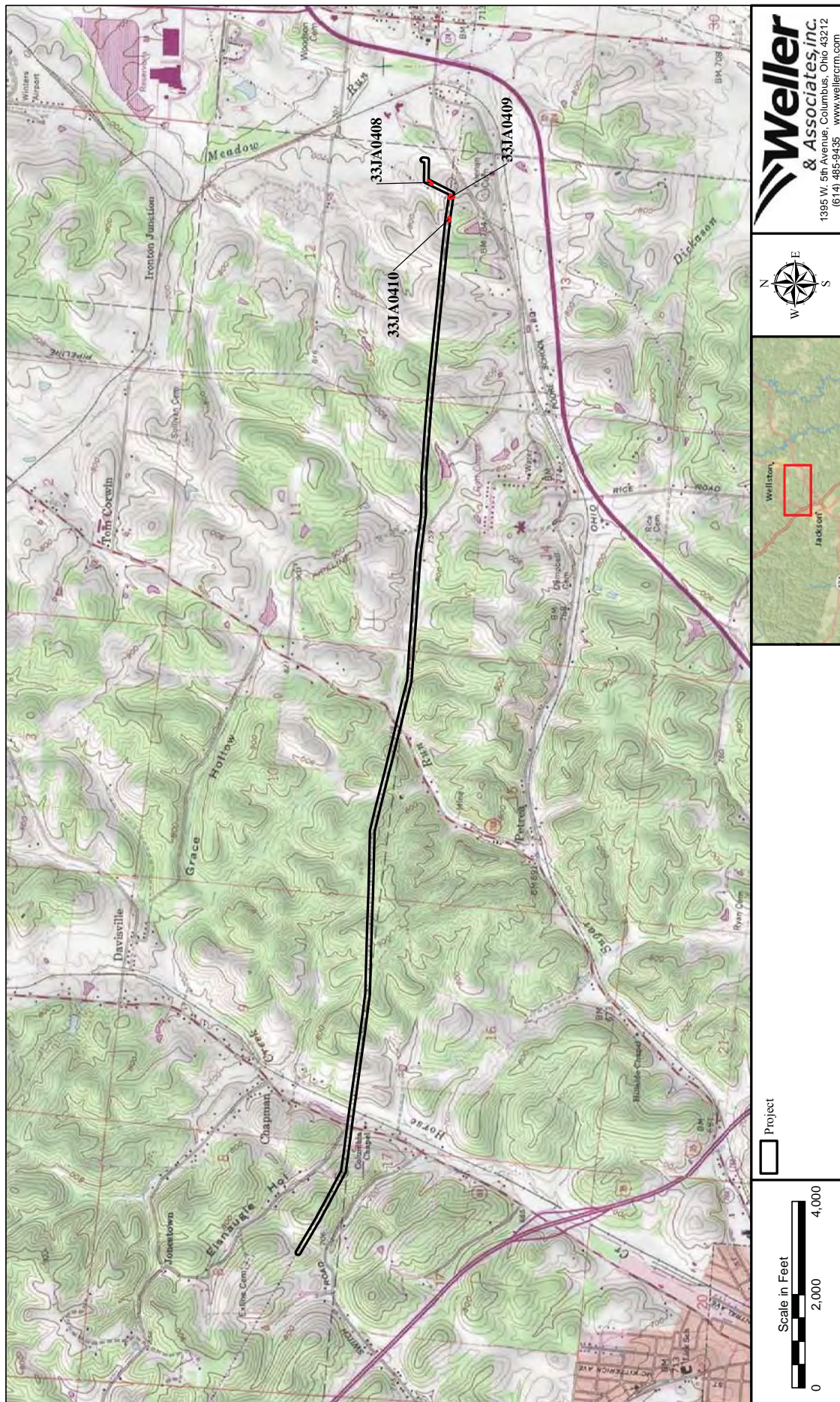


Figure 31. Portion of the USGS 1977 Wellston, Ohio 7.5 Minute Series (Topographic) map indicating the location of the project and 33JA0408-410.

LETTER OF NOTIFICATION FOR HEPPNER-RHODES 138 KV TRANSMISSION LINE PROJECT

Appendix C Architectural Investigations Report
November 14, 2017

Appendix C Architectural Investigations Report



**History/Architecture Investigations for the Proposed 6.4 km
(4.0 mi) Heppner-Rhodes 69kV/138kV Rebuild Project in Lick
and Coal Townships, Jackson County, Ohio.**

Jacquelyn Lehmann

September 14, 2017

1395 West Fifth Ave.
Columbus, OH 43212
Phone: 614.485.9435
Fax: 614.485.9439
Website: www.wellercrm.com

**History/Architecture Investigations for the Proposed 6.4 km
(4.0 mi) Heppner-Rhodes 69kV/138kV Rebuild Project in Lick
and Coal Townships, Jackson County, Ohio.**

By

Jacquelyn Lehmann

Submitted By:

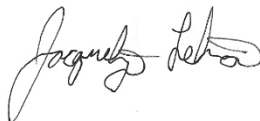
**Ryan Weller, P.I
Weller & Associates, Inc.
1395 West Fifth Ave.
Columbus, OH 43212
Phone: 614.485.9435 Fax: 614.485.9439**

Prepared For:

**American Electric Power
700 Morrison Road
Gahanna, OH 43230**

Lead Agency:

Ohio Power Siting Board



Jacquelyn Lehmann

September 14, 2017

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W-2279

Abstract

In August of 2017, Weller & Associates, Inc. conducted history/architecture investigations for the Proposed 6.4 km (4.0 mi) Heppner-Rhodes 69kV/138kV Rebuild Project in Lick and Coal Townships, Jackson County, Ohio. These investigations were completed for American Electric Power for submittal to the lead agency, the Ohio Power Siting Board. The project consists of rebuilding an existing 138kV electric line that extends from the proposed Pine Ridge Station to the Heppner Station. The existing right-of-way is the only route currently under consideration and the replacement structures will be constructed within the cleared right of way. The existing right-of-way for this project includes an approximate 100 ft. wide transmission line corridor. The lines will be rebuilt for continued operation at 69kV/138 kV.

The investigations, including a background literature review and intensive field survey, were conducted in accordance with the guidelines set forth by the Ohio State Historic Preservation Office and Ohio Administrative Code Chapter 4906-15-06(F), which concerns socioeconomic and land use impact analysis in applications for certificates for electric transmission facilities through the Ohio Power Siting Board.

The investigations were conducted in two parts: a history/architecture survey and an archaeological investigation. This report covers the results of the history/architecture survey of the entire area that may be affected by the proposed development of the project. The history/architecture investigations consisted of a systematic survey of all properties 50 years of age or older that are situated within 1,000 feet on either side of the proposed project site. The results of the archaeological investigations will be presented in a separate report.

In total, three individual properties of fifty years of age or older were identified within the survey APE, that may have a direct line-of-sight to the Heppner-Rhodes project. Photographs and structural data for each property were collected in the field. All three properties were determined not eligible for listing in the National Register of Historic Places due to alterations, additions, and a loss of historic integrity.

Upon analyzing the Application of Criteria of Effect, a finding of “no historic properties affected” is recommended.

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Introduction

In August of 2017, Weller & Associates, Inc. conducted history/architecture investigations for the Proposed 6.4 km (4.0 mi) Heppner-Rhodes 69kV/138kV Rebuild Project in Lick and Coal Townships, Jackson County, Ohio (Figures 1-3). The existing right-of-way is the only route currently under consideration and the replacement structures will be constructed within the cleared right of way. The project consists of rebuilding an existing 138kV electric line that extends from the proposed Pine Ridge Station to the Heppner Station. The existing right-of-way is the only route currently under consideration and the replacement structures will be constructed within the cleared right of way. The existing right-of-way for this project includes an approximate 100 ft. wide transmission line corridor. The lines will be rebuilt for continued operation at 69kV/138 kV.

The project is subject to Ohio Power Siting Board Application requirements under Chapter 4906 of the Ohio Revised Code. The investigations, including a background literature review and intensive field survey, were conducted in accordance with the guidelines set forth by the Ohio State Historic Preservation Office and Ohio Administrative Code Chapter 4906-15-06(F), which concerns socioeconomic and land use impact analysis in applications for certificates for electric transmission facilities through the Ohio Power Siting Board. The guidelines established in 36 CFR Part 800 are used to guide the assessment of effects (impacts) on cultural resources for the Project. These guidelines are well-established in their use for projects that fall under Section 106 of the National Historic Preservation Act of 1966. The project was therefore conducted in a manner suitable for a Section 106 survey. While OPSB projects do not fall under Section 106, the established guidelines provide an appropriate and consistent avenue to assess effects.

The investigations were conducted in two parts: a history/architecture survey and archaeological investigation. This report covers the results of the history/architecture survey of the entire area that may be affected by the proposed development of the project. The history/architecture investigations consisted of a systematic survey of all properties 50 years of age or older that are situated within 1,000 feet on either side of the proposed project site. The results of the archaeological investigations will be presented in a separate report.

The documentation of properties in the field, archival research, and report authoring were conducted by Jacquelyn Lehmann who served as Principal Investigator for the project. Mapping for the project was generated by Alex Thomas. The archival research was conducted on August 10, 2017 and the field survey was conducted on August 11, 2017.

Research Design

The purpose of the history/architecture portion of the project was to identify any historic properties in the area that may be affected by the proposed development of the project. These effects may be direct or indirect. Direct effects occur within the boundaries of the project, while indirect effects can occur for areas outside the direct boundaries and can include visual, audible, and atmospheric effects that are associated with the development of the project. Based on the nature of the project, the history/architecture investigations consisted of a systematic survey of

all properties 50 years of age or older that are situated within 1,000 feet of the centerline of the proposed project.

Methods

This survey was conducted following the guidelines established in *Archeology and Preservation: Secretary of the Interior's Standards and Guidelines* (National Park Service 1983) and *Guidelines for Local Surveys: A Basis for Preservation Planning*. *National Register Bulletin No. 24* (National Park Service 1997). When properties are identified, they are subjected to the guidelines outlined in *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation* (National Park Service 1996).

There are four criteria for eligibility to be listed in the National Register of Historic Places (NRHP). Only one of these criteria must be met to be considered eligible for listing; however, oftentimes more than one of the criteria is met. The criteria for significance include:

- A. Association with historic events or patterns of events;
- B. Association with persons important to our past;
- C. Exceptional or important architectural characteristics; and/or
- D. Data potential.

Architectural properties typically qualify under Criteria A, B, or C. Criterion D is typically reserved for archaeological sites.

In addition to meeting at least one of the established criteria, the appropriate integrity must also be retained by the resource. There must be integrity of location, design, workmanship, setting, materials, feeling, and association.

Prior to commencing fieldwork, a literature review was conducted to determine if any previously recorded architectural properties, NRHP properties, or Ohio Genealogical Society cemeteries were present within the APE. Historic maps were also reviewed to aid in guiding the fieldwork and detecting the possible presence of properties 50 years of age or older within the APE. Background research was also conducted in order to establish a historic context of the region. The context was compiled by utilizing materials from the Ohio State Historic Preservation Office (SHPO), archival materials at the respective county courthouses, local libraries, and several online resources. The establishment of the historic context helped to guide the interpretation of the field survey results.

The field survey included a systematic approach to identifying all properties that have potential significance for inclusion within the NRHP, within the survey area (1,000 feet to either side of project) of the proposed project. Some areas will be obscured from having a direct line-of-sight to the proposed project by topography and forested areas. The areas that did not have a direct line-of-sight to the project were visually verified in the field and the survey did not include all of these areas. An advantage for this project is the presence of an existing line to gauge the direct line-of-sight from properties through field verification during the survey. Each property identified within the survey area that will have a direct line-of-sight was photographed and

annotated on appropriate mapping and included in the report. Each property identified within the survey area was photographed and annotated on appropriate mapping and included in the report. The approach was to identify those properties with NRHP potential, followed by a more intensive documentation and evaluation of those potentially eligible aboveground resources. The comprehensive survey involved recording of each property with potential historic significance to a baseline level of documentation.

Weller focused on the ground plan, the height, and the roof configuration of each structure, noting all visible materials, appendages, extensions, or other alterations. Housing types and structural details within the report and utilized on OHI forms follow the terminology used by geographers Jakle, Bastian, and Meyer (1988), architectural historians McAlester and McAlester (2013), and Gordon (1992). Weller then supplemented the field survey data with an examination of available tax records, aerial photographs, and cartographic sources.

Definitions

Within this report, an *architectural resource* is defined as aboveground buildings or structures that are 50 years of age or older. A *historic property* is defined as a building, structure, object, or site that is listed in, or considered eligible for listing in, the NRHP. An *effect* is defined as an activity associated with the project that alters a characteristic of a historic property that qualified it for inclusion in the NRHP.

Historic Context

Jackson County History

The major draw to the area that would become Jackson County was undeniably the salt licks that outcropped in the area. The Shawnee Indians knew of them as did the moundbuilding cultures before them. Daniel Boone and Jonathan Alder visited the salt works with their Indian captors in the 1770s and 1780s. Europeans knew of the salt there as evidenced by their placement on a map as early as 1755 (Howe 1888; Jones and Jenkins 1953; Morrow 1956; Williams 1900; Willard 1916).

With the secession of the Indian claims on the Ohio Territory in 1795, the land was properly owned by the Federal Government. When Washington County was established in 1788, most of the area of modern Jackson County fell into what was then called Lick Township. During this period, squatters at the licks controlled the area as a rowdy bunch of saltmakers. With the influx of legal settlement around the licks, beginning in 1795, an attempt to dispel these troublemakers became an obvious necessity for progress. A new county, with local law was the conclusion of the local landowners. They petitioned the state through Senator Robert Lucas, who had lived and worked at the licks, and the petition became law in 1816 (Howe 1888; Jones and Jenkins 1953; Morrow 1956; Williams 1900; Willard 1916). The time between saw little progress because of the lawlessness of the squatters at the salt mines. With little organization, there was little care for the benefit of the whole. John Knight built a grist mill about 1799, but no other commercial business existed in the region save the salt business which was run by crude individuals. There were legal farmers and squatting saltminers. One group of the salt renderers

were well known counterfeiters as well, operating there until the time of county organization; then were forced out of Jackson, fleeing west (Willard 1916).

Some progress did take place at the settlement known as Poplar Row. The area's first two roads had been newly built in 1804 and a post office established the same year. The post office was named Salt Lick until it was changed in 1817 to Jackson Court House. That year, the village of Jackson was platted. Sometime around 1806, George L. Crookham taught the only school in the area, and in 1819, the Baptists built the first church. Under the organization of the county, all lands at the salt licks were gathered from Federal control to that of Jackson, and the sale of which to be opened up. The proceeds were specifically to be used for the erection of county buildings and schools (Howe 1888; Morrow 1956; Willard 1916).

As mining salt was the industry of the county, it was inevitable that the other raw materials of Jackson would also be discovered with the increasing population of the 1820s and 1830s. There was a great migration of Welsh who arrived in the 1820s. Coal outcropped and was used personally since the earliest occupation of the county. George Riegel opened the first coal mine in 1823. Iron was discovered in the 1830s and Rogers, Hurd, & Co. built the first furnace in Jackson County in 1836, the Jackson Furnace. Jackson's Iron industry would last almost as long as her coal. These industries, of course, were catapulted to the forefront of county significance with the addition of railroad shipping, which began with the Scioto and Hocking Valley Railroad in 1853. Pit mining for coal originated here in 1861 (Morrow 1956; Willard 1916).

During the Civil War, Jackson was visited by Morgan's Raiders, but the skirmish was slight and little more than hoof prints were left to bear witness. One man was killed and a mill burnt, but as they passed through in the night, there was little resistance and then they were gone (Jones and Jenkins 1953; Willard 1916).

The towns of Wellston, Oak Hill, and Coalton were each established after the Civil War; Wellston in 1874, Oak Hill in 1880, and Coalton near that later date. Wellston became a city, but the other two remain villages. The rest of the county is rural (Howe 1888; Morrow 1956; Willard 1916).

By 1888, Jackson was the largest coal producing county in Ohio, but by 1907, the Wellston seam began to show exhaustion. As ever, mining continued, but in another way. Firebrick clay and cement manufacture gained in importance, subsidizing the recession of the county's coal industry. However, nothing could replace the coal industry, and the county slipped into decline. The population has changed very little over the past hundred years (Morrow 1956; Willard 1916).

Lick Township History

The history of Lick Township is so interwoven with the history of Jackson County and Jackson City that it would be redundant to rewrite it here. The township was formed in 1803 while a part of Ross County and at that time included all of present Coal, Jackson, Liberty, Lick, Scioto, and Washington Townships of Jackson County. It has been trimmed with the erection of

each of these other townships. It is in this township that the City of Jackson is located, and as such it has lost that portion of its land. The remaining township is almost entirely privately owned rural residential land (Williams 1900; Willard 1916).

Coal Township History (Jackson County)

Coal was not one of the original five townships of Jackson county, which consisted of the townships of Bloomfield, Franklin, Lick, Madison and Milton. Later boundary adjustments which affected the county lines, included the establishment of Coal township in 1881 (Howe 1888). Population centers which became prominent within Coal include Wellston and Coalton. Established in 1876, Wellston is ten miles northeast of Jackson and is partially contained within Coal township. Named after its founder Henry Wells, the community was initially laid out in 1873 on land purchased from H.S. Bundy (Howe 1888). Coalton, located centrally within the township, was formally incorporated in 1876. Significant population numbers were reached by 1887, with some estimates at five thousand (Howe 1888; Willard 1916).

As the namesake of the township suggests, coal mining was an important function of these communities. Coal mining and the addition of the steel industry of nearby Jackson turned the region into an important industrial center. The Wellston coal seam became a major producer as one of four within Jackson county. With the introduction of railroads, coal shipped from the county had grown to beyond 300,000 tons by 1880 (Howe 1888).

Coal township no longer enjoys the economic benefit of major resource extraction activities. Largely rural, with Coalton as a small unincorporated community with under five hundred residents, Coal Township no longer contains its former economic prestige.

Literature Review

The records review for this project did not indicate any Determination of Eligibility (DOE), National Register of Historic Places (NRHP), or Ohio Historic Inventory (OHI) properties to be located within the project or study area (Figures 2-3). A portion of the project was previously surveyed by Weller for the *Phase I Cultural Resource Management Investigations for the Proposed 3.5 ha (8.6 ac) Heppner Switch Project in Coal Township, Jackson County, Ohio* project, completed in August and September of 2017 at the west end of the project, the *History/Architecture Investigations for the Proposed 8.1 km (5.0 mi) Heppner-Lick 69kV/138kV Rebuild Project in Lick and Coal Townships, Jackson County, Ohio* project (Lehmann 2017b), that intersects the western portion of the Heppner-Rhodes project, and the *History/Architecture Investigations for the Proposed 1.96 ha (4.85 ac) Rhodes Station Project in Coal Township, Jackson County, Ohio* project (Lehmann 2017a) that intersects the eastern portion of the Heppner-Rhodes project (Figures 2, 3, and 6). No historic properties were identified in the intersecting portions of these surveys. Historical atlases were reviewed for this project. The USGS 1913 *Jackson, Ohio 15 Minute Series (Topographic)* map shows the project area to have been located in a rural setting similar to what is found today (Figure 4). The Detroit, Toledo, and Ironton Railroad is shown as intersecting the west part of the project, with the Baltimore and Ohio Southwestern Railroad located to the south of the project. Both railroads are

no longer extant, however the roadways have remained. The transmission line appears on the USGS 1961 Jackson, Ohio 15 Minute Series (Topographic) map.

Architectural Survey Results

Fieldwork confirmed that the project area consists of rural forested areas to the northeast of the city of Jackson. The buildings surveyed consisted of a large gambrel roof, timber-frame barn, that is no longer associated with a farmhouse, and has been largely overtaken by vegetation. The timber-frame barn appears to have at one time had a stucco exterior that has since deteriorated (Figures 7-8). The remaining resources include two 20th-century Colonial Revival and Vernacular style residential homes (Figures 9-10).

All three resources were found to be clearly not eligible for the NRHP under Criteria A, B, or C due to a lack of associative significance, a loss of integrity, or a lack of character defining features. A large portion of these resources have experienced multiple alterations that have compromised their historic integrity.

Table 1. Field Survey Results

Field #	County	Map #	Classification	Date	Stylistic Influence	Type	NRHP Status
S-1	Jackson	Figure 1	Building	Ca.1900	Vernacular	Gambrel	Not Eligible
S-2	Jackson	Figure 5	Building	1940	Dutch Colonial Revival	Side Gable House	Not Eligible
S-3	Jackson	Figure 5	Building	1945	Vernacular	Side Gable House	Not Eligible

Conclusions

Weller & Associates, Inc. conducted History/Architecture investigations for the Proposed 6.4 km (4.0 mi) Heppner-Rhodes 69kV/138kV Rebuild Project in Lick and Coal Townships, Jackson County, Ohio. The project is subject to Ohio Power Siting Board Application requirements under Chapter 4906 of the Ohio Revised Code.

The project APE included a rural forested environment, with some modern intrusions located within the survey APE. Several properties older than 50 years of age were identified within the survey area, however these resources were not found to be historic and no historic properties were identified in the project or survey area. Upon analyzing the Application of Criteria of Effect, a finding of “no historic properties affected” is considered appropriate.

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2017b *History/Architecture Investigations for the Proposed 8.1 km (5.0 mi) Heppner-Lick 69kV/138kV Rebuild Project in Lick and Coal Townships, Jackson County, Ohio*. Weller & Associates, Inc. Copy available for review from Ohio History Connection.

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Figures

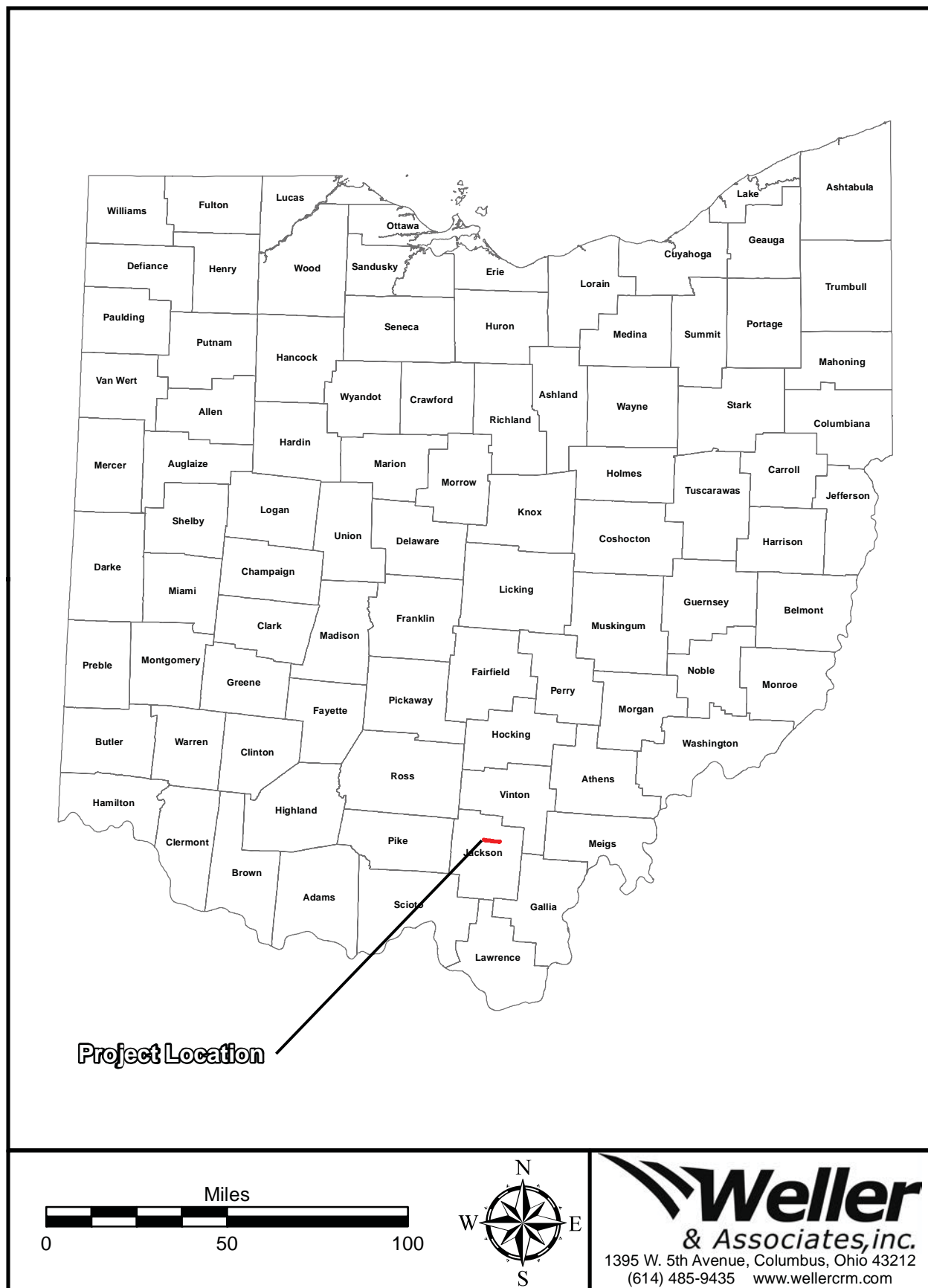
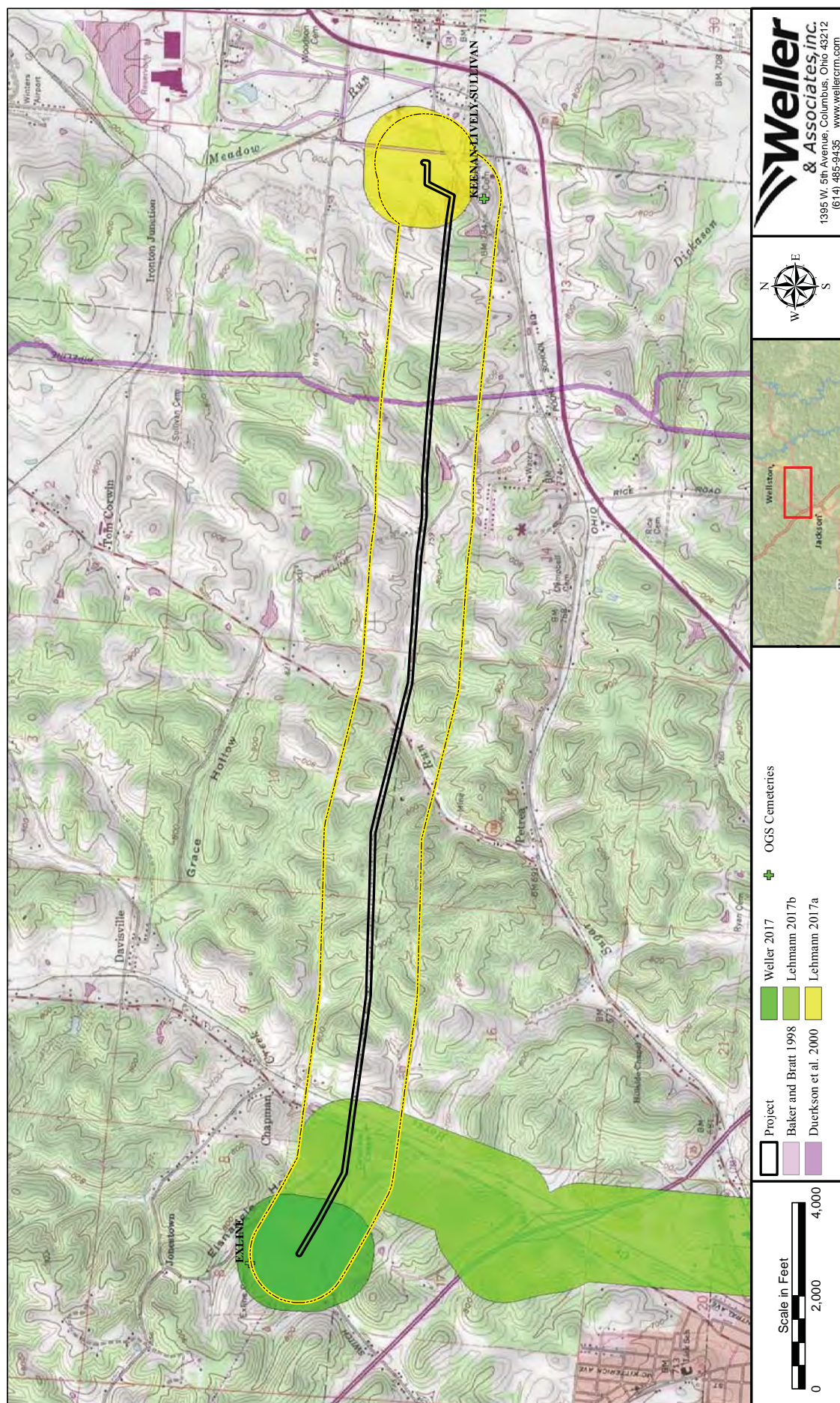


Figure 1. Political map of Ohio showing the approximate location of the project.



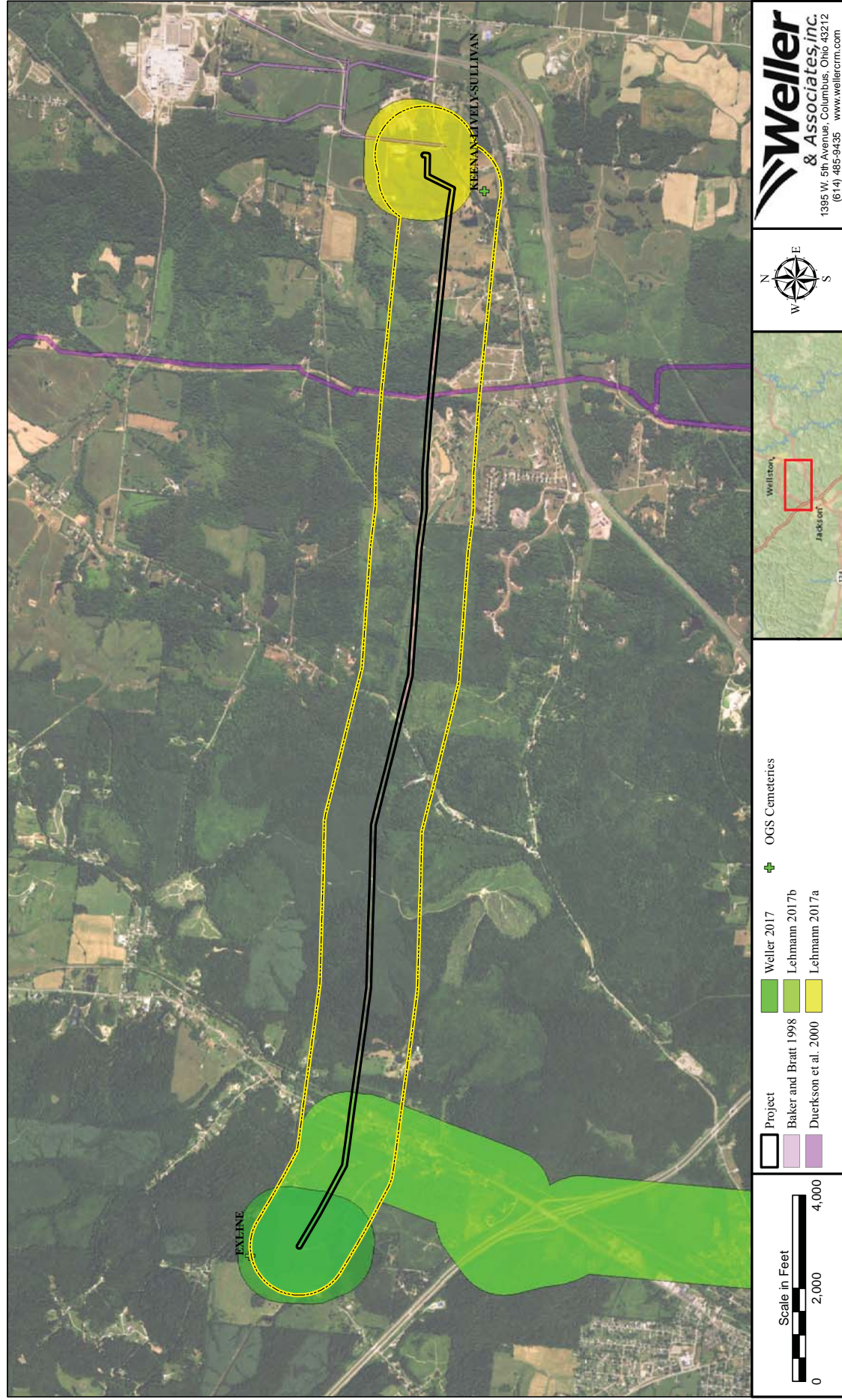


Figure 3. Aerial map indicating the location of the project and previously recorded resources in the study area.

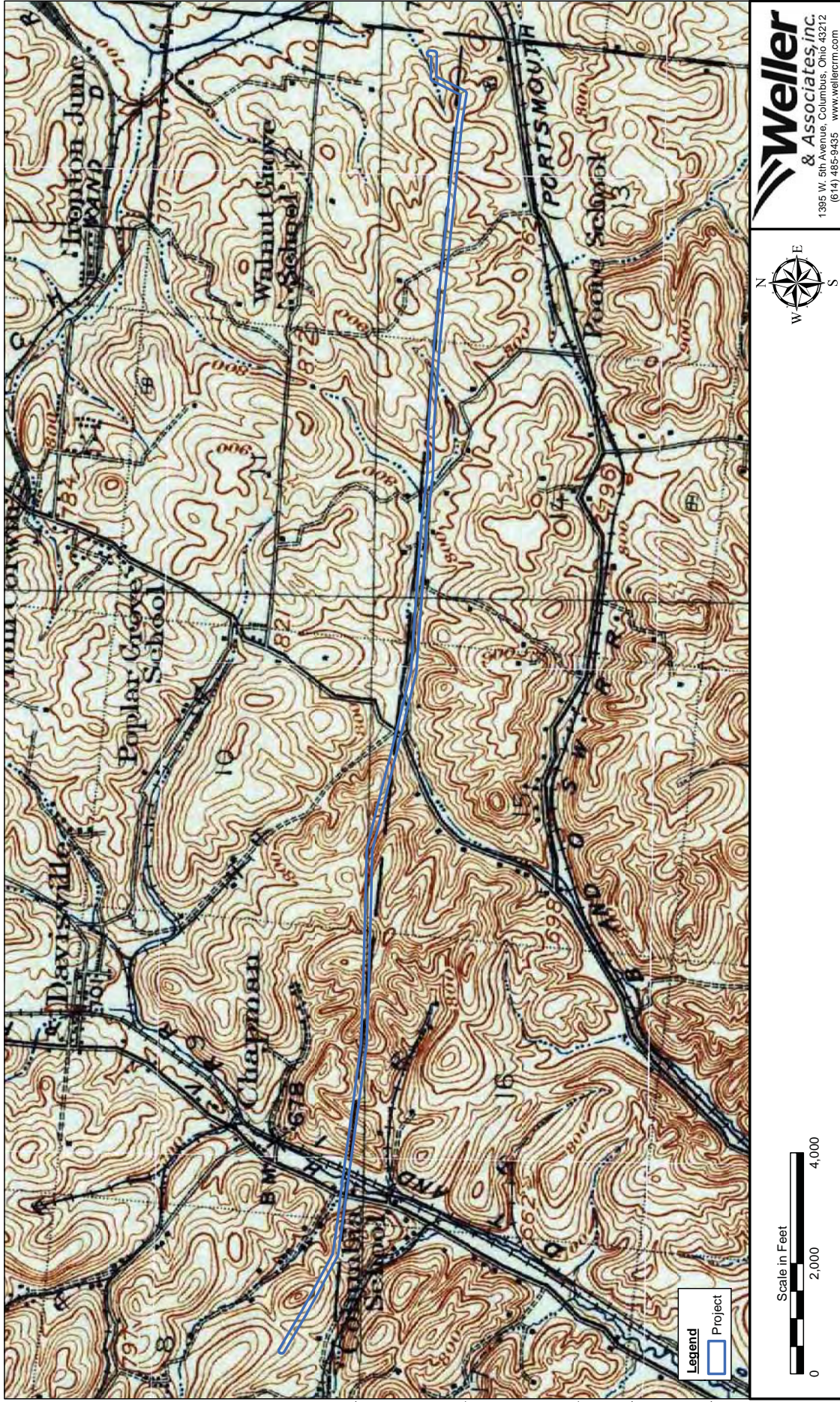


Figure 4. Portion of the USGS 1913 Jackson, Ohio 15 Minute Series (Topographic) map indicating the approximate location of the project.



Figure 5. Aerial map showing project area, study area, and structures identified within the study area.

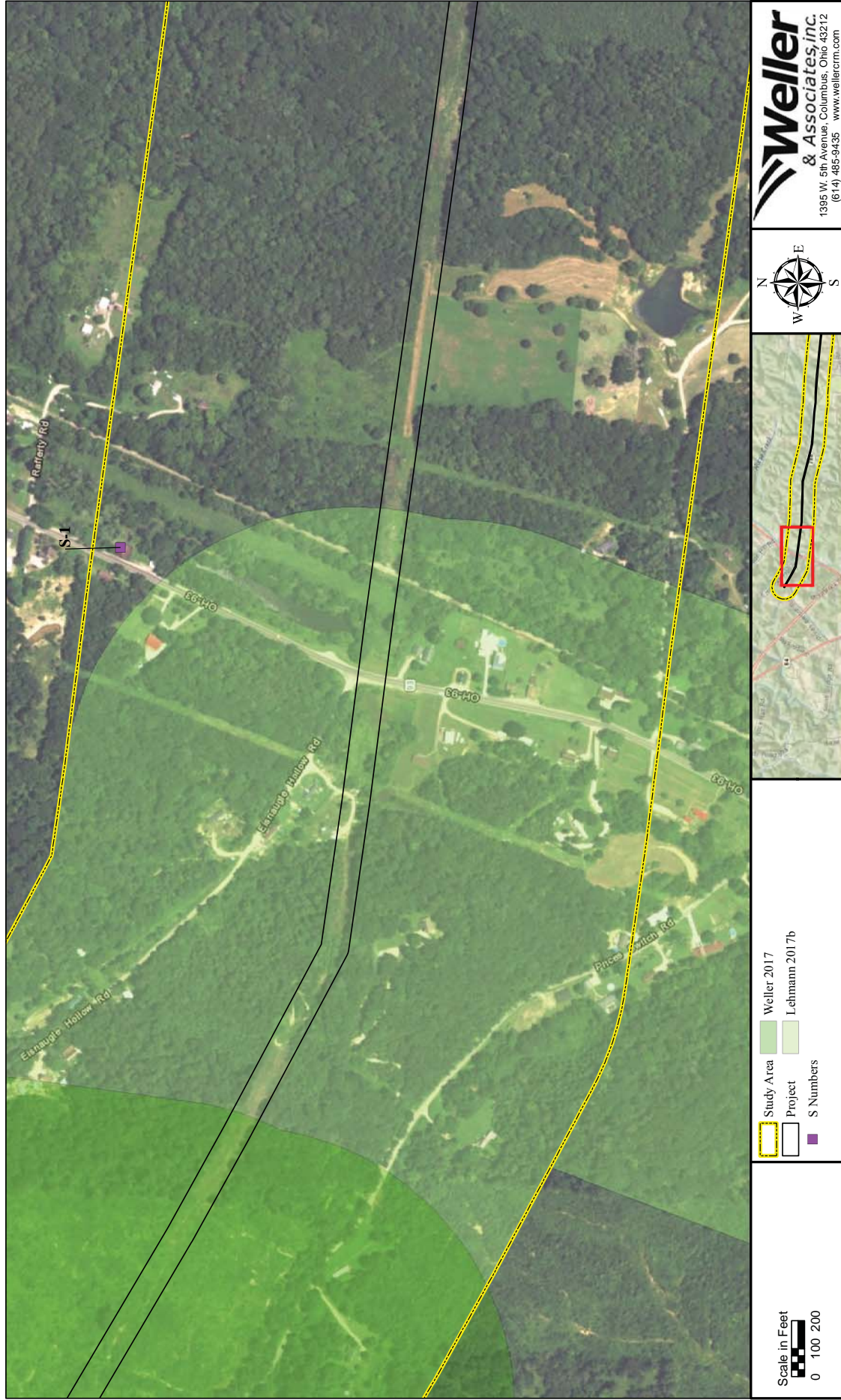


Figure 6. Aerial map showing project area, study area, and structures identified within the study area.



Figure 7. S-1 Barn State Route 93 facing north, Coal Township, Jackson County.



Figure 8. S-1 Barn State Route 93 facing east, Coal Township, Jackson County.



Figure 9. S-2 House County Club Road facing east, Lick Township, Jackson County.



Figure 10. S-3 House County Club Road facing north, Coal Township, Jackson County.

LETTER OF NOTIFICATION FOR HEPPNER-RHODES 138 KV TRANSMISSION LINE PROJECT

Appendix D Ecological Survey Report
November 14, 2017

Appendix D Ecological Survey Report

Ecological Survey Report

AEP Ohio Transmission Company
Heppner – Rhodes 138kV Line Rebuild Project
Jackson County, Ohio

GAI Project Number: C170352.06, Task 001

October 2017

Revised November 2017



BOUNDLESS ENERGYSM

Prepared by: GAI Consultants, Inc.
Canton Office
3720 Dressler Road Northwest
Canton, Ohio 15120-2700

Prepared for: American Electric Power Service Corporation
1 Riverside Place
22nd Floor
Columbus, Ohio 43215-2373

Ecological Survey Report

AEP Ohio Transmission Company
Heppner – Rhodes 138kV Line Rebuild Project
Jackson County, Ohio

GAI Project Number: C170352.06, Task 001

October 2017

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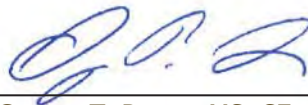
Prepared for:
American Electric Power Service Corporation
1 Riverside Place
22nd Floor
Columbus, Ohio 43215-2373

Prepared by:
GAI Consultants, Inc.
Canton Office
3720 Dressler Road Northwest
Canton, Ohio 15120-2700

Report Authors:



Allison R. Wheaton, WPIT
Senior Project Environmental Specialist



George T. Reese, MS, CE
Environmental Director

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1.0 Introduction

GAI Consultants, Inc. (GAI), on behalf of American Electric Power Ohio Transmission Company (AEP), completed an ecological survey for the Heppner – Rhodes 138kV Line Rebuild Project (Project) located in Jackson County, Ohio (OH). The Project involves rebuilding approximately 4.6-miles of the existing 69 kilovolt (kV) transmission line to a 138kV transmission line.

Ecological surveys were completed on May 30, 2017, June 7, 2017, and July 17-19, 2017. The study area consisted of an approximate 200-foot-wide corridor centered along the existing and proposed transmission lines, as shown on Figure 1.

The Project study area is located within the Horse Creek-Little Salt Creek (United States Geological Survey [USGS] Hydrologic Unit Code [HUC] #050600020803), Dickason Run (HUC #050901010402), and Headwaters Little Raccoon Creek (HUC #050901010401) watersheds.

This report details the results of the ecological surveys regarding the existence of aquatic resources within the Project area (Figure 2). The United States Army Corps of Engineers (USACE) Wetland Determination Data Forms are provided in Appendix B. Ohio Environmental Protection Agency (OEPA) Primary Headwater Habitat Evaluation (HHEI) Data Forms are provided in Appendix C and Ohio Rapid Assessment Method for Wetlands (ORAM) Data Forms are provided in Appendix D.

2.0 Methods

2.1 Wetlands

The 1987 USACE *Corps of Engineers Wetlands Delineation Manual* (Wetlands Delineation Manual) (USACE, 1987) and the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0* (Regional Supplement) (USACE, 2012) describe the methods used to identify and delineate wetlands that fall under the jurisdiction of the USACE. This approach recognizes the three parameters of wetland hydrology, hydrophytic vegetation, and hydric soils to identify and delineate wetland boundaries. In accordance with the Wetlands Delineation Manual and Regional Supplement, GAI completed preliminary data gathering and onsite inspections.

2.1.1 Preliminary Data Gathering

The preliminary data gathering was used to compile and review information that may be helpful in identifying wetlands and/or areas that warrant further inspection during the investigation. The preliminary data gathering included a review of the following:

- ▶ USGS 7.5-minute topographic mapping for Jackson (USGS, 1978) and Wellston (USGS, 1977), OH (Figure 1);
- ▶ United States Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) mapping (USFWS, 2015) (Figure 2);
- ▶ Federal Emergency Management Agency (FEMA), National Flood Hazard Layer (FEMA, 2015) (Figure 2); and
- ▶ United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS, 2015) soil mapping (Figure 2).

Topographic mapping was used to identify mapped streams and the overall shape of the landscape in the Project area to determine potential locations for wetlands, such as floodplains and depressions. NWI mapping was used to determine locations where probable wetlands are

located based on infrared photography. Soil mapping was reviewed to determine the location and extent of mapped hydric soils that have a high probability of containing wetlands.

2.1.2 Onsite Inspection

The methodology described in the Regional Supplement identifies areas meeting the definition of a wetland by evaluating three parameters: hydrology, vegetation, and soil. During the on-site inspection, GAI staff traversed the Project study area on foot to determine if any indicators of wetlands were present. When indicators of wetlands were observed, an observation point was established, and a Wetland Determination Data Form (Data Form) was completed to determine if all three wetland indicators were present.

The presence of wetland hydrology was determined by examining the observation point for primary and secondary indicators of wetland hydrology. The presence of any primary indicator signified the presence of wetland hydrology, or the presence of two or more secondary indicators signified the presence of wetland hydrology.

Vegetation was characterized by four different strata. This included trees (woody plants, excluding vines, three inches or more in diameter at breast height [DBH]), saplings/shrubs (woody plants, excluding vines, less than three inches DBH and greater than or equal to 3.28 feet tall), herbs (non-woody plants, regardless of size, and all other plants less than 3.28 feet tall), and woody vines (greater than 3.28 feet tall). In general, trees and woody vines were sampled within a thirty-foot (30') radius, saplings and shrubs were sampled within a fifteen-foot (15') radius, and herbs were sampled within a five-foot (5') radius.

When evaluating an area for the presence of hydrophytes, classification of the indicator status of vegetation was based on *The National Wetland Plant List: 2016 Update of Wetland Ratings* (Lichvar et al., 2016). The list of possible indicator statuses for plants is as follows:

- ▶ Obligate Wetland (OBL) - Obligate Wetland plants occur in standing water or in saturated soils;
- ▶ Facultative Wetland (FACW) - Facultative Wetland plants nearly always occur in areas of prolonged flooding or require standing water or saturated soils but may on rare occasions, occur in non-wetlands;
- ▶ Facultative (FAC) - Facultative plants occur in a variety of habitats, including wetland and mesic to xeric non-wetland habitats but often occur in standing water or saturated soils;
- ▶ Facultative Upland (FACU) - Facultative Upland plants typically occur in xeric or mesic non-wetland habitats but may frequently occur in standing water or saturated soils; and
- ▶ Obligate Upland (UPL) - Obligate Upland plants almost never occur in water or saturated soils.

Presence of hydrophytic vegetation was determined by using a Rapid Test, Dominance Test or Prevalence Index (USACE, 2010). The Rapid Test finds a vegetation community to be hydrophytic if all dominant species are OBL or FACW. Hydrophytic vegetation was considered present based on the Dominance Test if more than 50 percent of dominant species are OBL, FACW, or FAC. The Prevalence Index weighs the total percent of vegetation cover based on the indicator status of each plant. Hydrophytic vegetation was considered present when the Prevalence Index is less than or equal to 3.0.

To determine the presence of hydric soils, soil data was collected by digging a minimum 16-inch soil pit. The soil profile was studied and described, while possible hydric indicators

were examined. Soil indicators described in the Wetlands Delineation Manual and Regional Supplement were used to determine the presence of hydric soils. The presence of any of these indicators signified a hydric soil.

If all three parameters including wetland hydrology, a dominance of hydrophytic vegetation, and hydric soils were identified at a single observation point, the area was determined to be a wetland. Once a wetland was identified, the boundary was delineated.

Wetland boundaries were determined by looking for locations in which one of the three wetland indicators would transition into an upland characteristic. When the transition was identified, a Data Form was completed in the Upland Area. Wetland boundaries were then marked in the field using pink flagging labeled "WETLAND DELINEATION." The locations of the flags were recorded using a Global Positioning System (GPS) unit. Each wetland was codified with a unique identifier indicating the feature type and number (e.g., W001).

Wetlands were then classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979) as modified for NWI Mapping Convention. This system classifies wetlands based on topographic position and vegetation type. Palustrine system wetlands found within the study area are classified as Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS), Palustrine Forested (PFO), or Palustrine Unconsolidated Bottom (PUB) based on aerial coverage of the vegetative community across the extent of the wetland boundary (Cowardin et al., 1979).

2.2 Waterbodies

As with wetlands, Section 404 of the Clean Water Act (CWA) and state regulations protect waterbodies in OH. Generally, waterbodies are defined as environmental features that have defined beds and banks, ordinary high water mark (OHWM), and contain flowing or standing water for at least a portion of the year.

2.2.1 Preliminary Data Gathering

During the preliminary data gathering, the USGS 7.5-minute topographic mapping was examined for the presence of mapped waterbodies including perennial and intermittent streams. In addition, the topographic mapping was used to identify areas likely to contain unmapped waterbodies including ephemeral streams (USGS, 1977 and 1978) (Figure 1).

The OEPA Stream Eligibility Web Map was used to determine eligibility coverage under the 401 Water Quality Certification (WQC) for the 2017 Nationwide Permits (NWPs). Furthermore, the map was used to identify any ineligible areas that may require a CWA Section 401 individual permit from the OEPA should stream impacts occur within the Project area (OEPA, 2017) (Figure 3).

2.2.2 Onsite Inspection

During the onsite inspection, GAI staff traversed the study area, concurrently with the wetland inspection, and waterbodies were identified. Waterbodies were identified based on the morphological and hydrologic characteristics of the channel and the presence of aquatic macroinvertebrates.

When a waterbody was identified, field measurements were collected. The measurements included top of bank width, top of bank depth, pool depth, water depth, OHWM width, and OHWM depth. A detailed description of substrate composition was also recorded. Waterbodies were then delineated using white flagging marked with the GAI stream code (e.g., S001). The tops-of-bank for streams wider than 10 feet were delineated and the centerline of smaller

streams were delineated. The locations of the flags were recorded using a sub-meter capable hand-held GPS unit.

2.3 Rare, Threatened, and Endangered Species

GAI conducted a literature review of potential Rare, Threatened, and Endangered (RTE) species in the vicinity of the Project study area. Potential habitat for RTE species as a result of the literature review was noted during the ecological survey.

2.3.1 Preliminary Data Gathering

A request for review of the Ohio Natural Heritage Database (ONHD) was submitted to the Ohio Department of Natural Resources (ODNR) to determine if any state-listed threatened or endangered species occur within a one-mile radius of the Project area. A request was also submitted to the USFWS Ohio Ecological Services Field Office to determine if any federally-listed threatened or endangered species occur within the vicinity of the Project area.

2.3.2 Onsite Inspection

During the onsite inspection, GAI staff traversed the study area in conjunction with the wetland and waterbody inspections to determine if suitable habitat for state- and/or federally-listed RTE species are present within the study area.

3.0 Results

3.1 Wetlands

3.1.1 Preliminary Data Gathering

Desktop review of available USFWS NWI digital data for the Project revealed two NWI mapped wetlands located within the Project study area. One NWI wetland is classified as Palustrine Scrub-Shrub, Broad-Leaved Deciduous/Emergent, Persistent, Seasonally Flooded (PSS1/EM1C) and corresponds with W004 and W005. The other NWI wetland is classified as Palustrine Unconsolidated Bottom, Intermittently Exposed, Excavated (PUBGx) and corresponds with W001 (USFWS, 2015).

According to the USDA-NRCS soil mapping, a total of 15 soil map units are located within the Project study area (Figure 2). One of the soil map units is classified as hydric (Piopolis silt loam [Pio1AF]) and one is known to contain hydric inclusions (Orrville silt loam [Or]).

3.1.2 Onsite Inspection

Eleven wetlands were identified and delineated within the Project study area, including nine PEM wetlands and two PUB wetlands. In order to document site conditions, USACE Data Forms were completed for each wetland and upland reference. Information on the delineated wetlands can be found in Table 1 and photographs of the wetlands are included in Appendix A.

3.1.3 Regulatory Discussion

The USACE guidance divides waterbodies into three groups: Traditionally Navigable Waters (TNWs), non-navigable Relatively Permanent Waters (RPWs), and non-navigable Non-RPWs. TNWs are waterbodies which have been, are, or may be susceptible to use in interstate commerce, including recreational use of the waterbody. RPWs are waterbodies that flow year round, or at a minimum seasonally, by exhibiting continuous flow for at least three consecutive months, but are not TNWs (USACE, 2007). Non-RPWs are waterbodies that do not flow continuously for at least three consecutive months, are not TNWs or RPWs, but typically exhibit characteristic beds, banks, and OHWM (USACE, 2007).

The status of wetlands is determined partly based on the classification of the waterbody that the wetland is associated with, and the degree of that association. Wetlands that abut or are adjacent to TNWs are jurisdictional. Wetlands that abut RPWs are jurisdictional. Wetlands that are adjacent to RPWs and wetlands that abut or are adjacent to Non-RPWs must be subjected to the Significant Nexus Test (SNT) to determine their jurisdictional status. Generally, the USACE considers wetlands that are isolated, meaning that they are not associated with any other surface water feature, as non-jurisdictional; and wetlands that abut or are adjacent to Non-RPWs as needing further examination by the USACE to determine and verify whether they exhibit a significant nexus to waters of the United States. If these wetlands exhibit a significant nexus, they are jurisdictional; if not, they are not subject to USACE jurisdiction.

Wetlands that do not exhibit an association with any surface water are categorized as “isolated” under present USACE guidance and policy. These wetlands are regulated by the OEPA Division of Surface Water, and may require an Isolated Wetland Permit.

As regulated by Ohio Administrative Code (OAC) rules 3745-1-50 through 3745-1-54, wetlands were also evaluated using the ORAM to determine the appropriate wetland category. Any wetland score that fell within a gray zone between categories was scored one of two ways. Either the wetland was assigned to the higher of the two categories or it was assessed using a non-rapid method to determine its quality (Mack, 2001). The category assigned to a particular wetland determines the requirement, if any, for additional levels of protection administered by the OEPA.

All wetlands within the study area were identified as jurisdictional. Jurisdictional status is the opinion of GAI and must be confirmed by USACE and state agencies through the Jurisdictional Determination (JD) process.

3.2 Waterbodies

3.2.1 Preliminary Data Gathering

Desktop review of the available USGS topographic mapping revealed four previously mapped stream segments located within the Project study area (Figure 1). Desktop review of OEPA's Stream Eligibility Web Map revealed the Project is located within eligible and possibly eligible areas for automatic 401 WQC coverage (Figure 3).

3.2.2 Onsite Inspection

Sixteen stream segments were identified and delineated within the Project study area. Six stream segments were classified as having a perennial flow regime, four were classified as intermittent, and six were classified as ephemeral. Information on the delineated waterbodies and their classifications can be found in Table 2, and photographs of the identified streams are included in Appendix A.

3.2.3 Regulatory Discussion

As with wetlands, present USACE guidance and policy determines the jurisdictional status of waterbodies identified during the Project. TNWs and RPWs are jurisdictional. Non-RPWs must be subjected to the SNT by USACE to determine their jurisdictional status. If Non-RPWs exhibit a Significant Nexus, as defined in USACE guidance documents, they are jurisdictional. If not, they do not fall under the jurisdiction of the USACE.

Streams are generally defined as environmental features that have defined beds and banks, an OHWM as defined in Regulatory Guidance Letter No. 05-05 (USACE, 2005), and contain flowing or standing waters for at least a portion of the year. Streams were classified as perennial, intermittent, or ephemeral based upon presence of flow, estimated duration of flow, stream bed characteristics, and presence of aquatic biota. The USACE *Jurisdictional Determination Form Instructional Guidebook* (USACE, 2007) was used to determine stream classification and flow status.

As regulated by OAC Chapter 3745-1-13 and Section 401 WQC, streams were also assessed according to OEPA guidance using either the HHEI for watersheds less than one square mile in size, or the Qualitative Habitat Evaluation Index (QHEI) for watersheds between one and 20 square miles in size.

One stream segment (S002) located within the Project study area was identified as Horse Creek, which is designated as a Warmwater Habitat (WWH) stream by OAC Chapter 3745-1-09. Two stream segments (S008 and S013) were identified as Sugar Run, which is designated as a WWH stream by OAC Chapter 3745-1-09. All other stream segments located within the Project study area were identified as Unnamed Tributaries (UNTs) to Horse Creek, Sugar Run, Dickason Run, and Meadow Run.

Fifteen stream segments (S001 thru S014 and S016) are located within a possibly eligible area for coverage under the 401 WQC for NWP. One stream segment (S015) is located within an eligible area for coverage.

3.3 Rare, Threatened, and Endangered Species

3.3.1 Preliminary Data Gathering

Desktop review of ODNR, Division of Wildlife's Ohio's Listed Species revealed 321 Endangered, Threatened, Species of Concern, and Species of Interest located in OH (ODNR, 2016). Seventeen of the state-listed species are considered federally Endangered, and four are federally Threatened.

A review of the USFWS *County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species for Ohio* as well as the USFWS Information for Planning and Consultation (IPaC) website revealed three federally endangered or threatened species that may occur within the Project study area (USFWS, 2017). The list of species includes the following:

- ▶ Indiana bat (*Myotis sodalis*) - Endangered;
- ▶ Northern long-eared bat (*Myotis septentrionalis*) - Threatened; and
- ▶ Running buffalo clover (*Trifolium stoloniferum*) - Endangered.

In addition to the species listed above, there are nine species of migratory birds that may occur within the Project study area.

3.3.2 Onsite Inspection

Potential habitat for RTE species was evaluated within the Project study area. In general, the habitat encountered within the study area consisted of cleared transmission line right-of-way, PEM and PUB wetlands, successional mixed deciduous forest, agricultural fields (fallow, pasture), and residential properties. Six perennial, four intermittent, and six ephemeral streams were also identified within the Project study area. Representative photographs of the identified habitat types are included in Appendix A.

3.3.3 Regulatory Discussion

State-listed RTE species fall under the jurisdiction of the ODNR, Division of Wildlife, while federally-listed species are covered under Section 7 of the Endangered Species Act. The Bald and Golden Eagle Protection Act and Migratory Bird Act aim to extend protection to certain bird species that fall under the jurisdiction of the USFWS. Based on the desktop review and on-site inspection, informal consultation with the ODNR and USFWS has been initiated to determine if any activities associated with the proposed Project may affect state- and/or federally-listed RTE species. The ODNR and USFWS consultation letters were submitted on May 12, 2017, and are provided in Appendix E. A response from the USFWS was received on June 2, 2017, and the ODNR response was received on October 20, 2017. Both response letters are also provided in Appendix E.

4.0 Conclusions

Ecological surveys were conducted within the Project study area on May 30, 2017, June 7, 2017, and July 17-19, 2017. Nine PEM wetlands and two PUB wetlands were identified within the Project study area. Sixteen stream segments (six perennial, four intermittent, and six ephemeral) were also identified within the Project study area. Summaries of the delineated aquatic features are provided in Tables 1 and 2, and a map of their locations is depicted on Figure 2. Photographs of the wetland and stream features are included in Appendix A. Wetland Determination Data Forms documenting the investigation are provided in Appendix B, with HHEI and ORAM Data Forms provided in Appendix C and D, respectively.

The jurisdictional status of these features are considered preliminary and should be confirmed with the USACE and state agencies through the JD process.

5.0 References

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United States Geological Survey. 1978. Jackson, Ohio 7.5-Minute Topographic Quadrangle (1:24,000).

TABLES

Table 1
Wetlands Identified Within the Project Study Area

Wetland I.D. ¹	Latitude ²	Longitude ²	Proximal Waterbody	USACE Classification ³	Cowardin Classification ⁴	Size ⁵ (acres)	ORAM v. 5.0 Score ⁶	ORAM Category ⁷	Figure 2 (sheet)
W001-PEM-CATMOD2	39.084131	-82.623131	UNT to Horse Creek	Jurisdictional; Adjacent	PEM	0.077	35.5	Modified 2	2
W002-PEM-CATMOD2	39.084342	-82.622316	UNT to Horse Creek	Jurisdictional; Abutting	PEM	1.152	40.5	Modified 2	2
W003-PEM-CAT2	39.084013	-82.621145	UNT to Horse Creek	Jurisdictional; Abutting	PEM	0.027	30	2	2
W004-PUB-CAT2	39.084462	-82.620935	Horse Creek	Jurisdictional; Adjacent	PUB	0.045	50	2	2
W005-PEM-CAT2	39.084304	-82.621049	Horse Creek	Jurisdictional; Abutting	PEM	0.030	34.5	2	2
W006-PEM-CATMOD2	39.084129	-82.620396	Horse Creek	Jurisdictional; Abutting	PEM	0.141	40.5	Modified 2	2
W007-PUB-CAT2	39.080756	-82.584114	UNT to Sugar Run	Jurisdictional; Adjacent	PUB	0.071	34	2	5
W008-PEM-CAT1	39.081021	-82.584057	UNT to Sugar Run	Jurisdictional; Abutting	PEM	0.102	21	1	5
W009-PEM-CATMOD2	39.080018	-82.564669	UNT to Dickason Run	Jurisdictional; Adjacent	PEM	0.011	37.5	Modified 2	7
W010-PEM-CATMOD2	39.080620	-82.550611	UNT to Meadow Run	Jurisdictional; Adjacent	PEM	0.202	41	Modified 2	9
W011-PEM-CAT1	39.080882	-82.548226	UNT to Meadow Run	Jurisdictional; Adjacent	PEM	0.025	18	1	9

Notes:

- ¹ GAI map designation.
- ² North American Datum, 1983.
- ³ Jurisdictional status is the opinion of GAI and must be confirmed by USACE and state agencies through the JD process.
- ⁴ PEM - Palustrine Emergent; PUB - Palustrine Unconsolidated Bottom.
- ⁵ Total acreage of wetland located within the Project study area.

- 6 Interim scoring breakpoints for wetland regulatory categories for ORAM v 5.0 Score: Category 1 score 0 - 29.9; Category 1 or 2 gray zone ORAM score 30 - 34.9; Category modified 2 ORAM score 35 - 44.9; Category 2 ORAM score 45 - 59.9; Category 2 or 3 ORAM score 60 - 64.9; Category 3 ORAM score 65 - 100. OEPA Ecology Unit Division of Surface Water. *ORAM v. 5.0 Qualitative Score Calibration*. Dated August 15, 2000. http://www.epa.ohio.gov/portals/35/401/oram50sc_s.pdf.
- 7 OAC Rule 3745-1-54(C)(2) defines Category 1 wetlands as wetlands which "...support minimal wildlife habitat, and minimal hydrological and recreation functions," and as wetlands which have "...hydrologic isolation, low species diversity, a predominance of non-native species, no significant habitat or wildlife use, and limited potential to achieve beneficial wetland functions." Category 2 wetlands are defined as wetlands which "...support moderate wildlife habitat, or hydrological or recreational functions," and as wetlands which are "...dominated by native species but generally without the presence of, or habitat for, rare, threatened or endangered species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." Degraded but Restorable Category 2 Wetlands are according to OAC Rule 3745-1-54(C) states that wetlands that are assigned to Category 2 constitute the broad middle category that "...support moderate wildlife habitat, or hydrological or recreational functions," but also include "...wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." OAC Rule 3745-1-54(C)(2) defines Category 3 wetlands as wetlands which "...support superior habitat, or hydrological or recreational functions," and as wetlands which have "...high levels of diversity, a high proportion of native species, or high functional values."

Table 2
Waterbodies Identified Within the Project Study Area

Stream I.D. ¹	Waterbody Name	OEPA WO Designation ²	OEPA Stream Eligibility ³	Stream Type	USACE Classification ⁴	HHEI Score ⁵	PHWH Class ⁶	QHEI Score ⁶	Bank Width ⁷ (feet)	OHWM Width (feet)	OHWM Depth (inches)	Stream Length ⁸ (feet)	Latitude ⁹	Longitude ⁹	Figure 2 (sheet)
S001	UNT to Horse Creek	-	Possibly Eligible	Perennial	RPW	35	Class II	-	2	1.5	6	674	39.084471	-82.622058	2
S002	Horse Creek	WVH	Possibly Eligible	Perennial	RPW	-	-	-	15	10	24	233	39.084222	-82.620882	2
S003	UNT to Horse Creek	-	Possibly Eligible	Ephemeral	NRPW	25	Class I	-	3	1.5	6	246	39.083316	-82.604563	3
S004	UNT to Sugar Run	-	Possibly Eligible	Intermittent	RPW	53	Class II	-	6	4.5	12	389	39.083311	-82.600450	4
S005	UNT to Sugar Run	-	Possibly Eligible	Intermittent	RPW	36	Class II	-	4	1	6	137	39.083355	-82.600390	4
S006	UNT to Sugar Run	-	Possibly Eligible	Ephemeral	NRPW	32	Class II	-	4	2	6	54	39.082946	-82.598937	4
S007	UNT to Sugar Run	-	Possibly Eligible	Perennial	RPW	62	Class II	-	5	4	12	295	39.081770	-82.591587	5
S008	Sugar Run	WVH	Possibly Eligible	Perennial	RPW	-	-	-	9	7	12	593	39.081693	-82.590576	5
S009	UNT to Sugar Run	-	Possibly Eligible	Ephemeral	NRPW	20	Class I	-	2	1	3	36	39.081609	-82.588623	5
S010	UNT to Sugar Run	-	Possibly Eligible	Perennial	RPW	52	Class II	-	5	3	12	258	39.081184	-82.586919	5
S011	UNT to Sugar Run	-	Possibly Eligible	Intermittent	RPW	34	Class II	-	2	1.5	6	252	39.081039	-82.584161	5
S012	UNT to Sugar Run	-	Possibly Eligible	Intermittent	RPW	39	Class II	-	2	1	4	188	39.080883	-82.581156	6
S013	Sugar Run	WVH	Possibly Eligible	Perennial	RPW	-	-	-	9	7	6	1,869	39.080808	-82.579107	6
S014	UNT to Sugar Run	-	Possibly Eligible	Ephemeral	NRPW	16	Class I	-	2	2	4	306	39.080390	-82.568980	7
S015	UNT to Dickason Run	-	Eligible	Ephemeral	NRPW	22	Class I	-	3	1	6	218	39.080041	-82.562660	7,8
S016	UNT to Meadow Run	-	Possibly Eligible	Ephemeral	NRPW	24	Class I	-	2	1	4	911	39.081751	-82.549501	9

Notes:

- GAT map designation.
- As defined by OAC Chapter 3745-1 Water Quality Standards, Water use designations and statewide criteria (OAC 3745-1-09). http://www.epa.ohio.gov/dsw/rules/3745_1.aspx.
- As defined by the 401 WQC conditions for stream eligibility coverage under the 2017 NWP program. Streams located in Possibly Eligible areas are eligible for coverage if the pH is <6.5 or stream flow is ephemeral. Streams located in Possibly Eligible areas are also eligible for coverage if the HHEI score is <50, or if the HHEI score is between 50-69 and substrate composition is ≤10% coarse types (includes cumulative percentage of bedrock, boulders, and cobble).
- Jurisdictional status is the opinion of GAT and must be confirmed by USACE and state agencies through the 3D process. RPW - Relatively Permanent Waters.
- Scoring for OEPA Headwater Habitat Evaluation Index (HHEI) Primary Headwater Habitats (PHWH). Class I = 0 - 29.9 and include "normally dry channels with little or no aquatic life present"; Class II = 30 - 69.9 and are equivalent to "warm water habitat"; Class III = 70 - 100 and typically have perennial flow with cool-cold water adapted native fauna.
- Narrative rating for headwater streams using the OEPA Qualitative Habitat Evaluation Index (QHEI). Excellent = ≥70; Good = 55 - 60; Fair = 43 - 54; Poor = 30 - 42; Very Poor = <30.
- Width in feet from tops of stream bank.
- Total stream length (in feet) located within the Project study area.
- North American Datum, 1983.

Table 3
ODNR and USFWS RTE Species and Critical Habitat Review Results

Common Name	Scientific Name	Habitat Type	Listing Status ²	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
<i>Amphibians</i>						
Midland mud salamander ¹	<i>Pseudotriton montanus diastictus</i>	Springs, seeps and creeks under large, flat stones	T	No	No; Known habitat types are not present within the Project area	-
<i>Bats</i>						
Indiana bat ^{1,2}	<i>Myotis sodalis</i>	Trees >3" dbh	E, FE	Yes	No; Avoided with winter tree clearing	April 1 to September 30
Northern long-eared bat ²	<i>Myotis septentrionalis</i>	Roost in cavities or in crevices of both live trees and snags; Hibernates in caves and mines with constant temperatures, high humidity, and no air currents	FT	Yes	No; Avoided with winter tree clearing	April 1 to September 30
<i>Fish</i>						
Ohio lamprey ¹	<i>Ichthyomyzon bdellium</i>	The Ohio River and the lower portion of its tributaries.	E	No	No; Known habitat types are not present within the Project area	April 15 to June 30
Lake chubsucker ¹	<i>Erimyzon sucetta</i>	Natural lakes and very sluggish streams or marshes with dense aquatic vegetation and clear waters	T	No	No; Known habitat types are not present within the Project area	April 15 to June 30
<i>Insects</i>						
Regal fritillary	<i>Speyeria idalia</i>	Tall-grass and mixed-grass prairies	E	No	No; Known habitat types are not present within the Project area	-
<i>Mammals</i>						
Black bear ¹	<i>Ursus americanus</i>	Large forested areas	E	Yes	No; Impacts are unlikely due to the migratory nature of this species	-
Allegheny woodrat	<i>Neotoma magister</i>	Rocky areas associated with mountain ridges such as cliffs, caves, and rocky fissures	E	No	No; Known habitat types are not present within the Project area	-

Common Name	Scientific Name	Habitat Type	Listing Status ²	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
Mammals (Cont.)						
Bobcat	<i>Lynx rufus</i>	Varies; Generally solitary, territorial, and elusive	T	No	No; Impacts are not anticipated due to the Project location	-
Mussels						
Elephant-ear	<i>Elliptio crassidens crassidens</i>	Large rivers in mud, sand, or fine gravel	E	No	No; Known habitat types are not present within the Project area	-
Sharp-ridged pocketbook	<i>Lampsilis ovata</i>	Large rivers in coarse sand or gravel	E	No	No; Known habitat types are not present within the Project area	-
Little spectaclecase ¹	<i>Villosa lienosa</i>	Small to medium streams in sand or gravel	E	Yes	No; In-stream work is not proposed	-
Black sandshell	<i>Ligumia recta</i>	Medium to large rivers in riffles or raceways in gravel or firm sand	T	No	No; Known habitat types are not present within the Project area	-
Fawnsfoot	<i>Truncilla donaciformis</i>	Large rivers or the lower reaches of medium-sized streams in sand or gravel	T	No	No; Known habitat types are not present within the Project area	-
Pondhorn	<i>Unio merus tetralasmus</i>	Ponds, small creeks, and the headwaters of larger streams in mud or sand	T	No	No; Known habitat types are not present within the Project area	-
Plants						
Small white snakeroot	<i>Ageratina aromatica</i>	A variety of well-drained open areas on acidic soils	E	No	No; Known habitat types are not present within the Project area	-
Louisiana sedge	<i>Carex louisianica</i>	Swamp woods and shaded alluvial situations	E	No	No; Known habitat types are not present within the Project area	-
Willdenow's croton	<i>Croton willdenowii</i>	Barren stony or sandy clearings	E	No	No; Known habitat types are not present within the Project area	-
Sessile dodder	<i>Cuscuta compacta</i>	Low woods and thickets	E	No	No; Known habitat types are not present within the Project area	-

Common Name	Scientific Name	Habitat Type	Listing Status ²	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
<i>Plants (Cont.)</i>						
Many-flowered umbrella sedge	<i>Cyperus lancastricensis</i>	A variety of open, dry situations, usually in sandy soils; Fields, barrens, clearings, and open woods	E	No	No; Known habitat types are not present within the Project area	-
Rough umbrella-sedge	<i>Cyperus retrofractus</i>	A variety of open, dry situations, usually in sandy soil; Fields, open woods, clearings, and barrens	E	No	No; Known habitat types are not present within the Project area	-
Velvet panic grass	<i>Dichanthelium scoparium</i>	Seepage meadows	E	No	No; Known habitat types are not present within the Project area	-
Engelmann's spike rush	<i>Eleocharis engelmannii</i>	Mudflats along margins of ponds and lakes	E	No	No; Known habitat types are not present within the Project area	-
Wolf's spike-rush	<i>Eleocharis wolfii</i>	Moist, open areas; Pond margins; Fields	E	No	No; Known habitat types are not present within the Project area	-
Hyssop thoroughwort	<i>Eupatorium hyssopifolium</i>	A variety of well-drained, open areas on acidic soils	E	No	No; Known habitat types are not present within the Project area	-
Sampson's snakeroot	<i>Gentiana villosa</i>	Mesic woodlands, pinelands, dry ravines, and roadsides	E	No	No; Known habitat types are not present within the Project area	-
Coppery St. John's-wort	<i>Hypericum denticulatum</i>	Usually wet, shaded to open situations; Low woods, bogs, and marshes	E	No	No; Known habitat types are not present within the Project area	-
Appalachian quillwort	<i>Isoetes engelmannii</i>	Open sun in shallow bodies of water; Pond margins and ditches	E	No	No; Known habitat types are not present within the Project area	-
Woodland rush	<i>Juncus subcaudatus</i>	Marshes, edges of streams, and peaty acidic and basic wetlands including fens; Wide variety of wet habitats	E	No	No; Known habitat types are not present within the Project area	-
One-coned club-moss	<i>Lycopodium lagopus</i>	Openings in woodlands and fields	E	No	No; Known habitat types are not present within the Project area	-
Bigleaf magnolia	<i>Magnolia macrophylla</i>	Mesic wooded ravines and near the tops of these ravines in oak woods	E	No	No; Known habitat types are not present within the Project area	-

Common Name	Scientific Name	Habitat Type	Listing Status ²	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
<i>Plants (Cont.)</i>						
Curtiss' milkwort	<i>Polygala curtissii</i>	Open to semi-open situations in dry to moist, rocky to sandy soil; Wood borders, old fields, and thickets	E	No	No; Known habitat types are not present within the Project area	-
Spotted pondweed	<i>Potamogeton pulcher</i>	Peaty or muddy, acid waters or shores	E	No	No; Known habitat types are not present within the Project area	-
Flame azalea	<i>Rhododendron calendulaceum</i>	Open woods and cleared areas on well-drained, acidic soils	E	No	No; Known habitat types are not present within the Project area	-
Narrow-leaved bluecurls	<i>Trichostema dichotomum</i> var. <i>lineare</i>	Dry upland or sandy woods; Old fields	E	No	No; Known habitat types are not present within the Project area	-
Running buffalo clover	<i>Trifolium stoloniferum</i>	Mesic habitats with partial sunlight including woodlands and mowed lawns	E, FE	No	No; Known habitat types are not present within the Project area	-
Primrose-leaved violet	<i>Viola primulifolia</i>	Moist, open situations, usually in sandy soil; Meadows, edges of ponds, streams, marshes, and swamps	E	No	No; Known habitat types are not present within the Project area	-
Bluehearts	<i>Buchnera americana</i>	Full sun in well-drained, often rocky, openings and woodlands; prairies, pastures, roadbanks; at times on severely eroded slopes	T	No	No; Known habitat types are not present within the Project area	-
Bartley's Reed Grass	<i>Calamagrostis porteri</i> ssp. <i>insperata</i>	Dry upland areas in sun or partial shade; Jackson County population is under a powerline	T	Yes	Unknown	-
Bush's sedge	<i>Carex bushii</i>	Moist prairies, fields, and meadows in full sun	T	No	No; Known habitat types are not present within the Project area	-
Flattened sedge	<i>Carex companata</i>	Dry, open woods with neutral to acidic soils	T	No	No; Known habitat types are not present within the Project area	-
Short-fringed sedge	<i>Carex crinita</i> var. <i>brevicrinis</i>	Swamp woods, seeps in woods, and along streams	T	No	No; Known habitat types are not present within the Project area	-

Common Name	Scientific Name	Habitat Type	Listing Status ²	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
<i>Plants (Cont.)</i>						
Reznicek's sedge	<i>Carex reznicekii</i>	Dry woods on sandy soils	T	No	No; Known habitat types are not present within the Project area	-
Lindheimer's panic grass	<i>Dichanthelium lindheimeri</i>	Open, moist, gravelly, often calcareous shores	T	No	No; Known habitat types are not present within the Project area	-
Slender spike-rush	<i>Eleocharis tenuis</i>	Moist soils in xeric limestone prairies; Wet meadows, shores of ponds, ditches, and disturbed, moist habitats	T	No	No; Known habitat types are not present within the Project area	-
White thoroughwort	<i>Eupatorium album</i>	A variety of well-drained, open areas on acidic soils	T	No	No; Known habitat types are not present within the Project area	-
Round-fruited hedge-hyssop	<i>Gratiola virginiana</i>	Wet places: stream margins, pools, ditches, swamps; generally in shade or semi shade	T	No	No; Known habitat types are not present within the Project area	-
Ashy sunflower	<i>Helianthus mollis</i>	A variety of well-drained, sunny openings; Dry prairies, railroad embankments, roadsides, wood borders, and clearings; Usually in neutral substrates	T	No	No; Known habitat types are not present within the Project area	-
Inland rush	<i>Juncus interior</i>	Moist to dry, open to semi-open situations; Often in sandy soil; Roadsides, prairies, meadows, fallow fields, clearings, and upland woods	T	No	No; Known habitat types are not present within the Project area	-
Potato-dandelion	<i>Krigia dandelion</i>	Open oak woods and prairies, usually in moist sandy soils	T	No	No; Known habitat types are not present within the Project area	-
Thyme-leaved pinweed	<i>Lechea minor</i>	Usually in full sun in dry, sandy woods, clearings, and roadside banks	T	No	No; Known habitat types are not present within the Project area	-
Downy white beard-tongue	<i>Penstemon pallidus</i>	Fields, roadsides, and open woods	T	No	No; Known habitat types are not present within the Project area	-

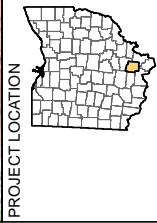
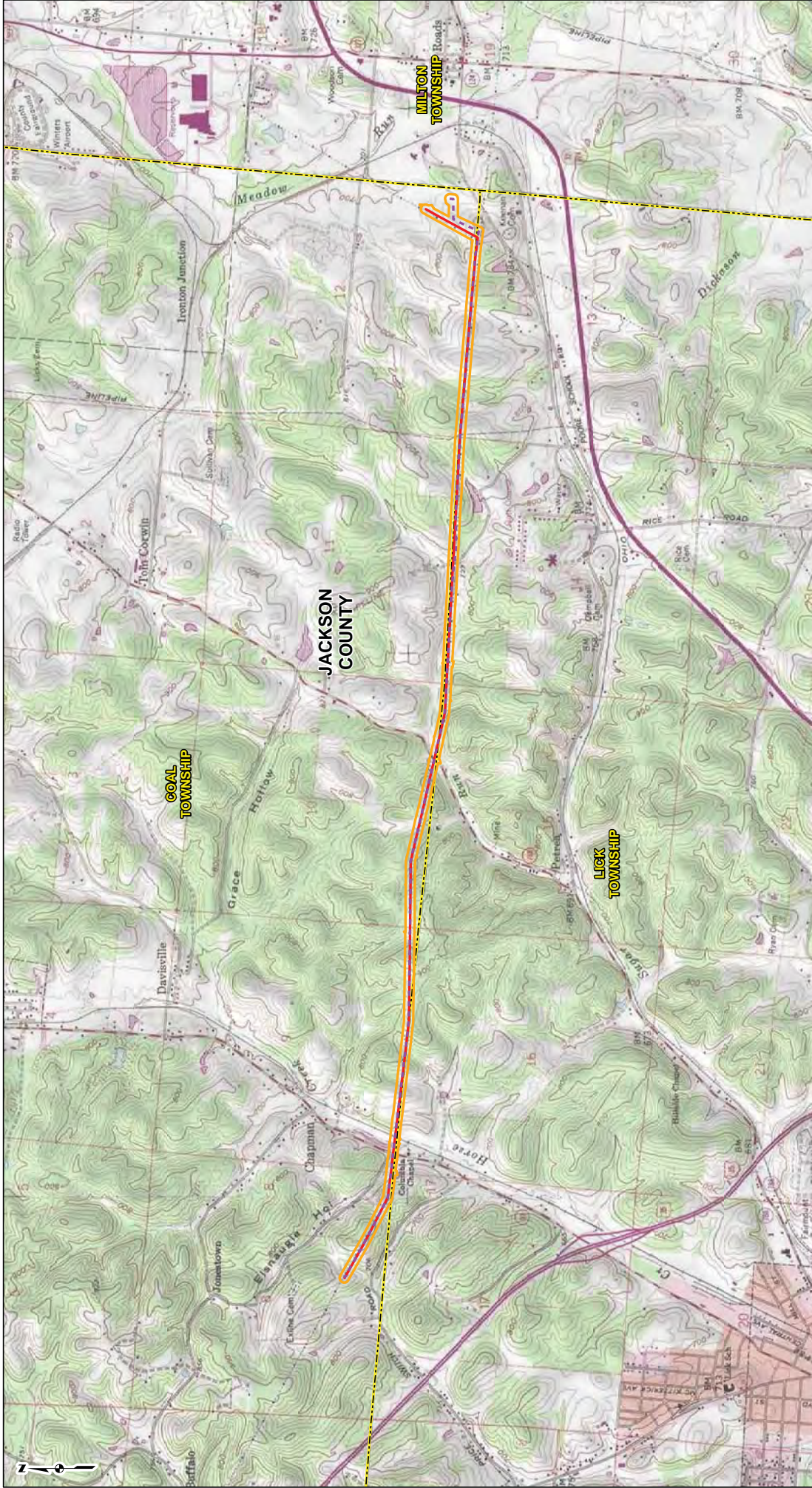
Common Name	Scientific Name	Habitat Type	Listing Status ²	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
<i>Plants (Cont.)</i>						
Carolina leaf-flower	<i>Phyllanthus carolinensis</i>	A variety of moist, open to semi-open situations, usually in sandy soil; Low woods, meadows, fields, and gravelly banks	T	No	No; Known habitat types are not present within the Project area	-
Pink milkwort	<i>Polygala incarnata</i>	Open to semi-open situations in dry, often sandy soil; Open upland woods, wood borders, prairies, and old fields	T	No	No; Known habitat types are not present within the Project area	-
Tennessee pondweed	<i>Potamogeton tennesseensis</i>	Still or flowing water	T	No	No; Known habitat types are not present within the Project area	-
Spanish oak	<i>Quercus falcata</i>	Usually in dry upland woods, less frequently in alluvial woods	T	No	No; Known habitat types are not present within the Project area	-
Chalky ramalina	<i>Ramalina pollinaria</i>	Rock and bark in sheltered areas; Recent Ohio collections have all been from sandstone, either cliff face or boulders below a cliff; Prefers light shade	T	No	No; Known habitat types are not present within the Project area	-
Low spearwort	<i>Ranunculus pusillus</i>	Low wet ground, swamps, and shallow pools	T	No	No; Known habitat types are not present within the Project area	-
Great rhododendron	<i>Rhododendron maximum</i>	Moist, cool, acidic, well-drained soils; Partial shade	T	No	No; Known habitat types are not present within the Project area	-
Narrow-leaved aster	<i>Sericocarpus linifolius</i>	Dry, open to semi-open situations; Upland woods, thickets, and clearings	T	No	No; Known habitat types are not present within the Project area	-
Sweet goldenrod	<i>Solidago odora</i>	Dry woods and roadsides	T	No	No; Known habitat types are not present within the Project area	-
Prairie wedge grass	<i>Sphenopholis obtusata var. obtusata</i>	Very generalized; Moist to dry soil of open woods, prairies, old fields, and fen meadows	T	No	No; Known habitat types are not present within the Project area	-
Large marsh St. John's-wort	<i>Triadenum tubulosum</i>	Swamp woods, buttonbush swamps, thickets, and streambanks	T	No	No; Known habitat types are not present within the Project area	-

Common Name	Scientific Name	Habitat Type	Listing Status ²	Habitat Type Present Within the Project Area?	Impacts to Habitat/Species Anticipated?	Restricted Construction Dates
Plants (Cont.)						
Walter's St. John's-wort	<i>Triadenum walteri</i>	Swamp woods, buttonbush swamps, thickets, and streambanks	T	No	No; Known habitat types are not present within the Project area	-
Reptiles						
Timber rattlesnake ¹	<i>Crotalus horridus</i>	Wooded areas	E, SC	Yes	No; Per the ODNR response, this Project is not likely to impact this species	-
Kirtland's snake ¹	<i>Clonophis kirtlandii</i>	Wet meadows or fields	T	Yes	No; Per the ODNR response, this Project is not likely to impact this species	-

Notes:

- ¹ ODNR, Division of Wildlife (DOW) comments included in the ODNR response, dated October 20, 2017.
- ² Federally listed species, migratory bird, or species of concern comments included in the USFWS response, dated June 2, 2017.
- ³ E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; FE = federal threatened; FSC = federal species of concern; FC = federal candidate.

FIGURES



PROJECT LOCATION
 REFERENCE: USGS 7.5 TOPOGRAPHIC
 QUADRANGLES: JACKSON (1978) AND
 ELLSWORTH (1978) THROUGH
 ESSLER (1978) TOPOGRAPHIC
 TOPO AND USGS, ACCESSED 11/2017.

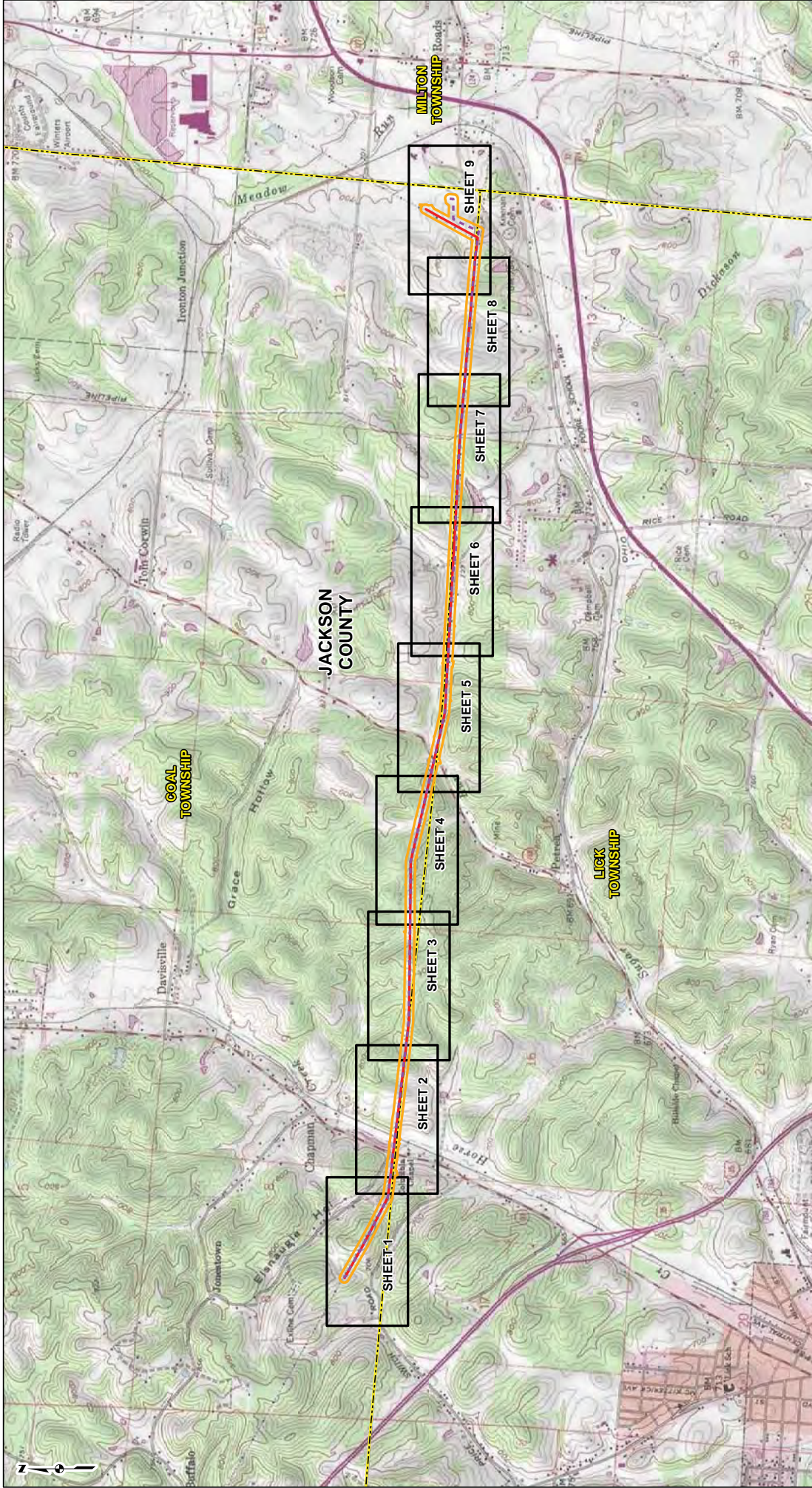
- LEGEND**
- PROPOSED 138kV TRANSMISSION LINE
 - EXISTING 69kV TRANSMISSION LINE
 - STUDY AREA
 - COUNTY BOUNDARY
 - TOWNSHIP BOUNDARY



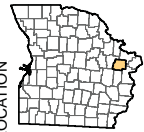
FIGURE 1 PROJECT LOCATION MAP

HEPPNER - RHODES
 138kV LINE REBUILD PROJECT
 AMERICAN ELECTRIC POWER

DRAWN BY: EFJ
 CHECKED: TDB
 DATE: 11/14/2017
 APPROVED: ARW



PROJECT LOCATION



REFERENCE: USGS 7.5 TOPOGRAPHIC QUADRANGLES: JACKSON (1978) AND ELLSWORTH (1978) REPRODUCED THROUGH ESRI'S TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 11/2017.

LEGEND

- PROPOSED 138KV TRANSMISSION LINE
- EXISTING 68KV TRANSMISSION LINE
- STUDY AREA
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY

JACKSON COUNTY, OHIO

FIGURE 2

RESOURCE LOCATION MAP SHEET INDEX



HEPPNER - RHODES
138KV LINE REBUILD PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: EFJ
CHECKED: TDB

DATE: 11/14/2017
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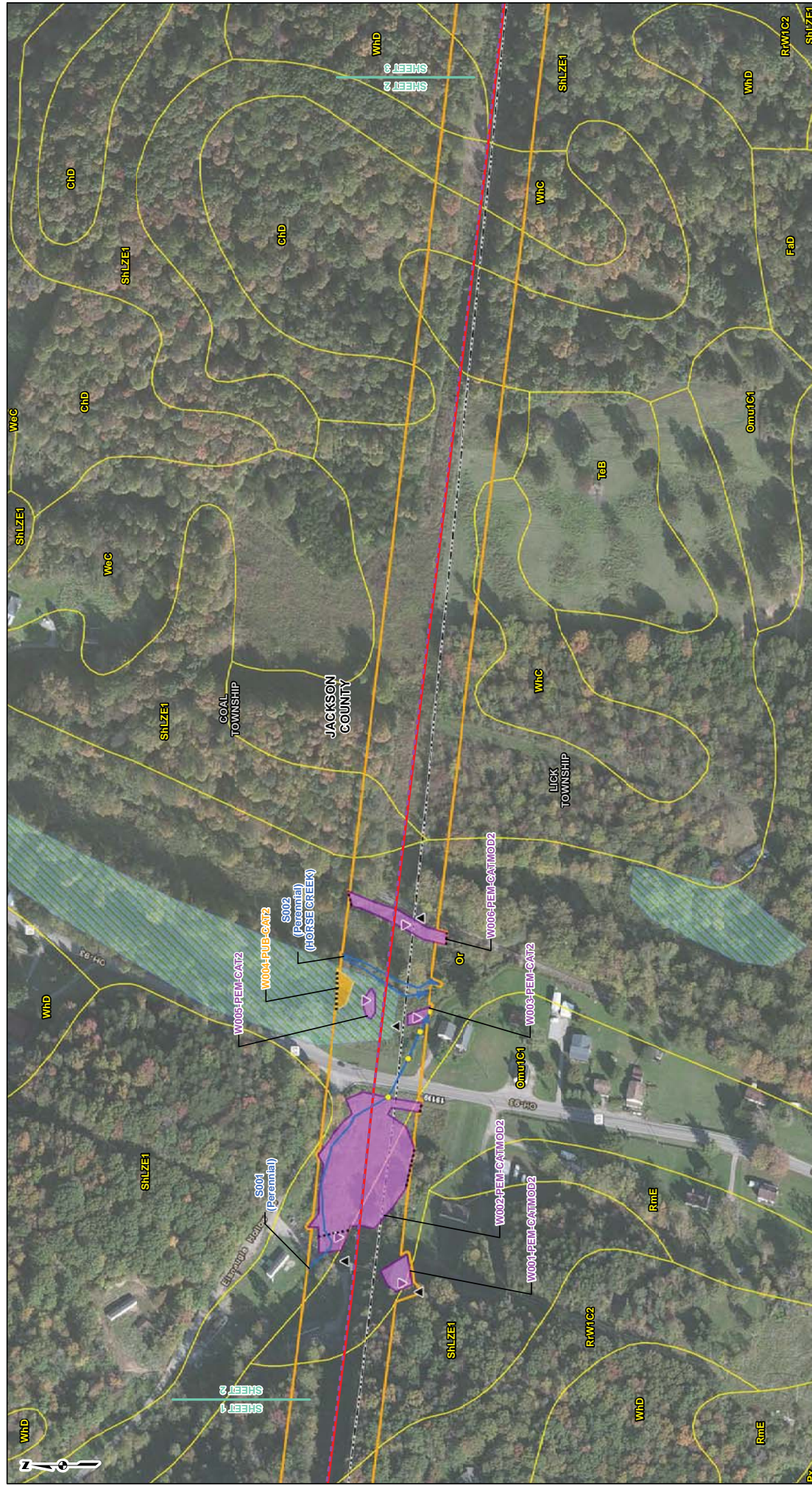


FIGURE 2
RESOURCE LOCATION MAP
SHEET 2 OF 9



HEPPNER - RHODES
138kV LINE REBUILD PROJECT
AMERICAN ELECTRIC POWER


DRAWN BY: EFJ
CHECKED: TDB
DATE: 11/14/2017
APPROVED: ARW

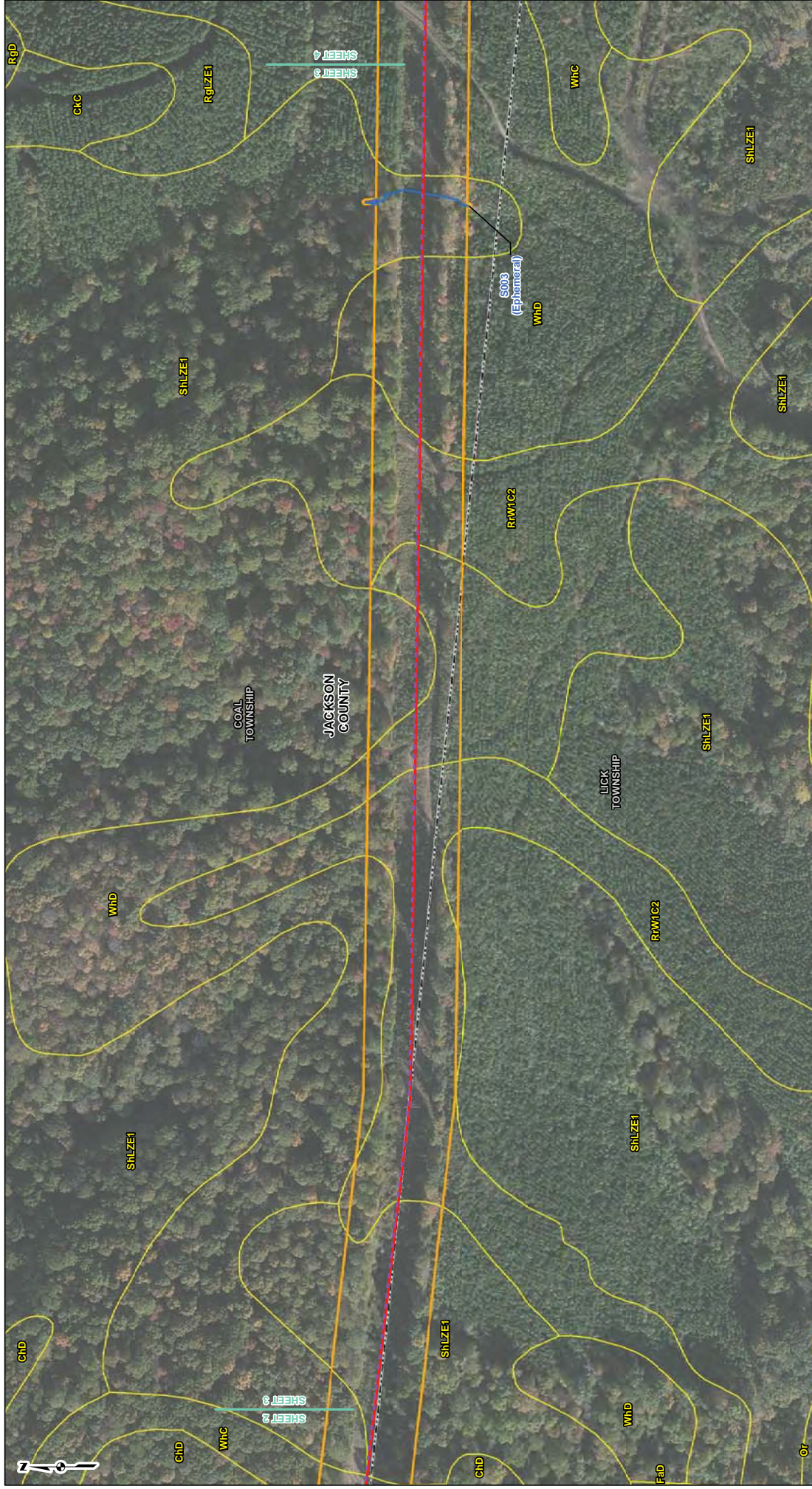
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REFERENCES: ESRI WORLD AGENCY MICROSOFT, UC.G.
 WWW.ESRI.COM/WWW/INFORMATION/ESRI,
 DELRIE, HEE, MAPMYINDIA, TOMTOM, @
 OPENSTREETMAP CONTRIBUTORS AND THE GIS USER
 COMMUNITY, 2017. NATIONAL FLOOD HAZARD
 DATA BASE FOR JACKSON COUNTY, OHIO, USDA/NRCS, 2015,
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 DATABASE FOR JACKSON COUNTY, OHIO, USDA/NRCS, 2015,
 LAND, 2014.

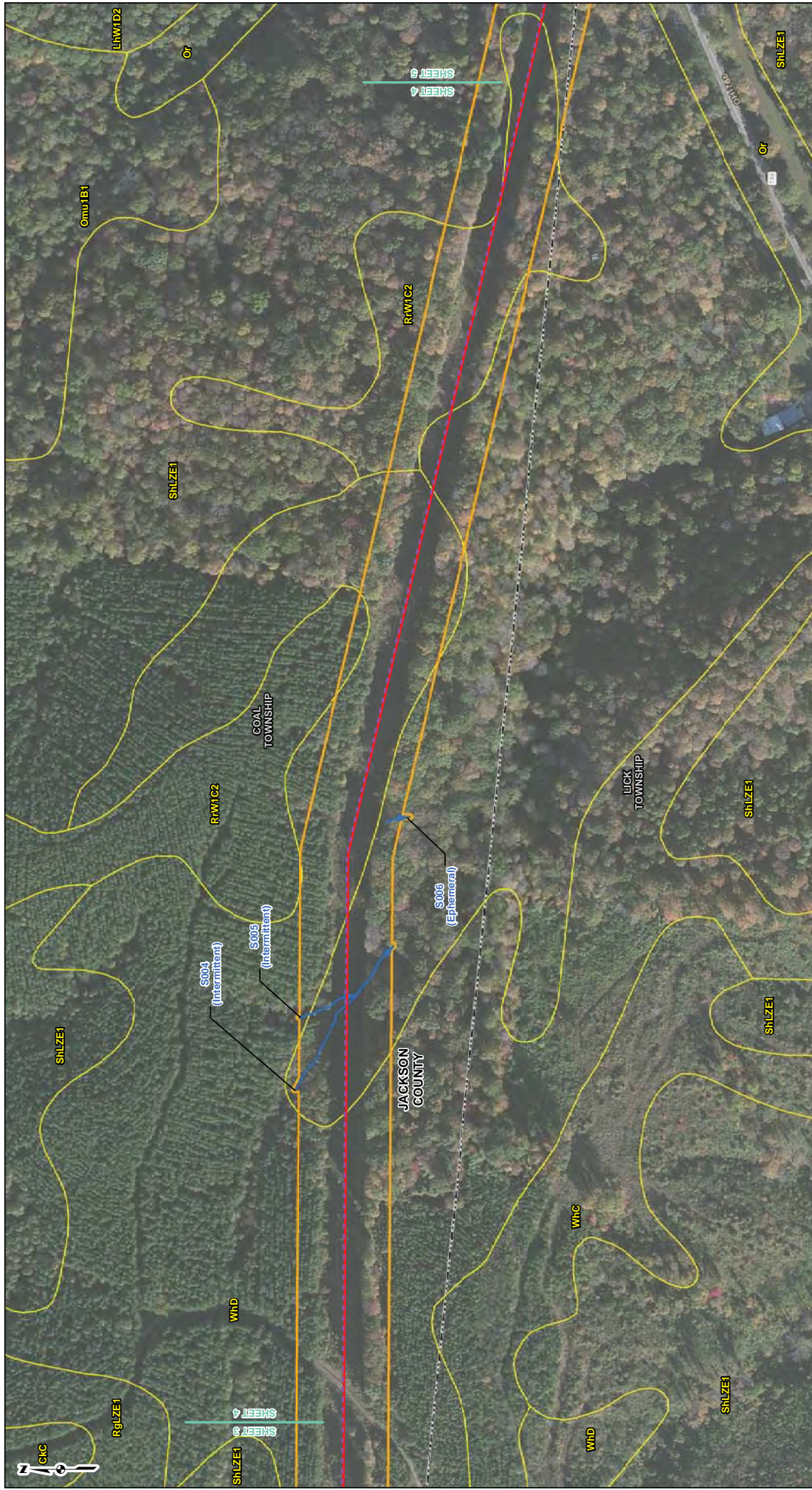
PROJECT LOCATION



JACKSON COUNTY, OHIO



<p>PROJECT LOCATION</p>  <p>JACKSON COUNTY, OHIO</p>	<p>REFERENCES: ESRI WORLD IMAGERY, MICROSOFT, UC-G, OPENSTREETMAP, CONTOUR, ESRI, DELORME HERE, MAPYNDIA, TOMTOM ©, OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY OBTAINED THROUGH ESRI ARGIS ONLINE, NATIONAL FLOOD HAZARD DATA (NFHD), NATIONAL FLOOD INSURANCE PROGRAM (NFIP), NATIONAL FLOOD INSURANCE PROGRAM (NFIP) WETLANDS, USFWS, 2017, NATIONAL FLOOD HAZARD LAYER, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), 2015, SOIL SURVEY GEOPHYSICAL INFORMATION (SSURGI), NATIONAL FLOOD INSURANCE PROGRAM (NFIP), 2015, ODNR (OHIO DEPARTMENT OF NATURAL RESOURCES) LAND, 2014.</p>	<p>LEGEND</p> <div> <p>▲ UPLAND DATA POINT</p> <p>● WETLAND DATA POINT</p> <p>● CULVERT</p> <p>--- PROPOSED 138KV TRANSMISSION LINE</p> <p>--- EXISTING 69KV TRANSMISSION LINE</p> <p>→ STREAM</p> <p>.... OPEN/ENDEED BOUNDARY</p> <p>WETLAND TYPE:</p> <p>PEM</p> <p>PUB</p> <p>STUDY AREA</p> <p>SOIL TYPE BOUNDARY</p> <p>ODNR LAND</p> <p>NWI WETLAND</p> <p>100-YEAR FLOODPLAIN</p> <p>TOWNSHIP BOUNDARY</p> <p>COUNTY BOUNDARY</p> </div>	<p>FIGURE 2</p> <p>RESOURCE LOCATION MAP</p> <p>SHEET 3 OF 9</p> <p>HEPPNER - RHODES</p> <p>138KV LINE REBUILD PROJECT</p> <p>AMERICAN ELECTRIC POWER</p> <p></p> <p>DRAWN BY: EFJ</p> <p>CHECKED: TDB</p> <p>DATE: 11/14/2017</p> <p>APPROVED: ARW</p> <p>Z:\Energy\2017\17C107352.00 - AEP Ohio Projects\GIS\MapXD\Heppner_Rhodes\WDS\IR\Resource_Location_Map_2017_11_14.mxd</p>
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PROJECT LOCATION



JACKSON COUNTY, OHIO

REFERENCES: ESRI WORLD IMAGERY, MICROSOFT, U.C-G, 2011, ACCESSED 11/20/17, WORLD TRANSPORTATION, ESRI, DELORME, HERE, MAPMYINDIA, TOMTOM, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, OBTAINED THROUGH ESRI/ARCGIS ONLINE, ACCESSED 11/20/17, NATIONAL WETLAND INVENTORY (NWI) (FEMA), OHIO, 2015, SOIL SURVEY GEOGRAPHY (SSURGO) DATABASE FOR JACKSON COUNTY, OHIO, USDA/NRCS, 2015/15/2015/2015, OHIO DEPARTMENT OF NATURAL RESOURCES) (DNR, 2014).

LEGEND

- ▲ UPLAND DATA POINT
▼ WETLAND DATA POINT
● CULVERT
- - - PROPOSED 138KV TRANSMISSION LINE
- - - EXISTING 69KV TRANSMISSION LINE

- STREAM
OPEN-EN
WETLAND TYPE:

- BOUNDARY

- STUDY AREA
SOIL TYPE BOUNDARY
ODNR LAND
NWI WETLAND
100-YEAR FLOODPLAIN

-  TOWNSHIP BOUNDARY
- COUNTY BOUNDARY

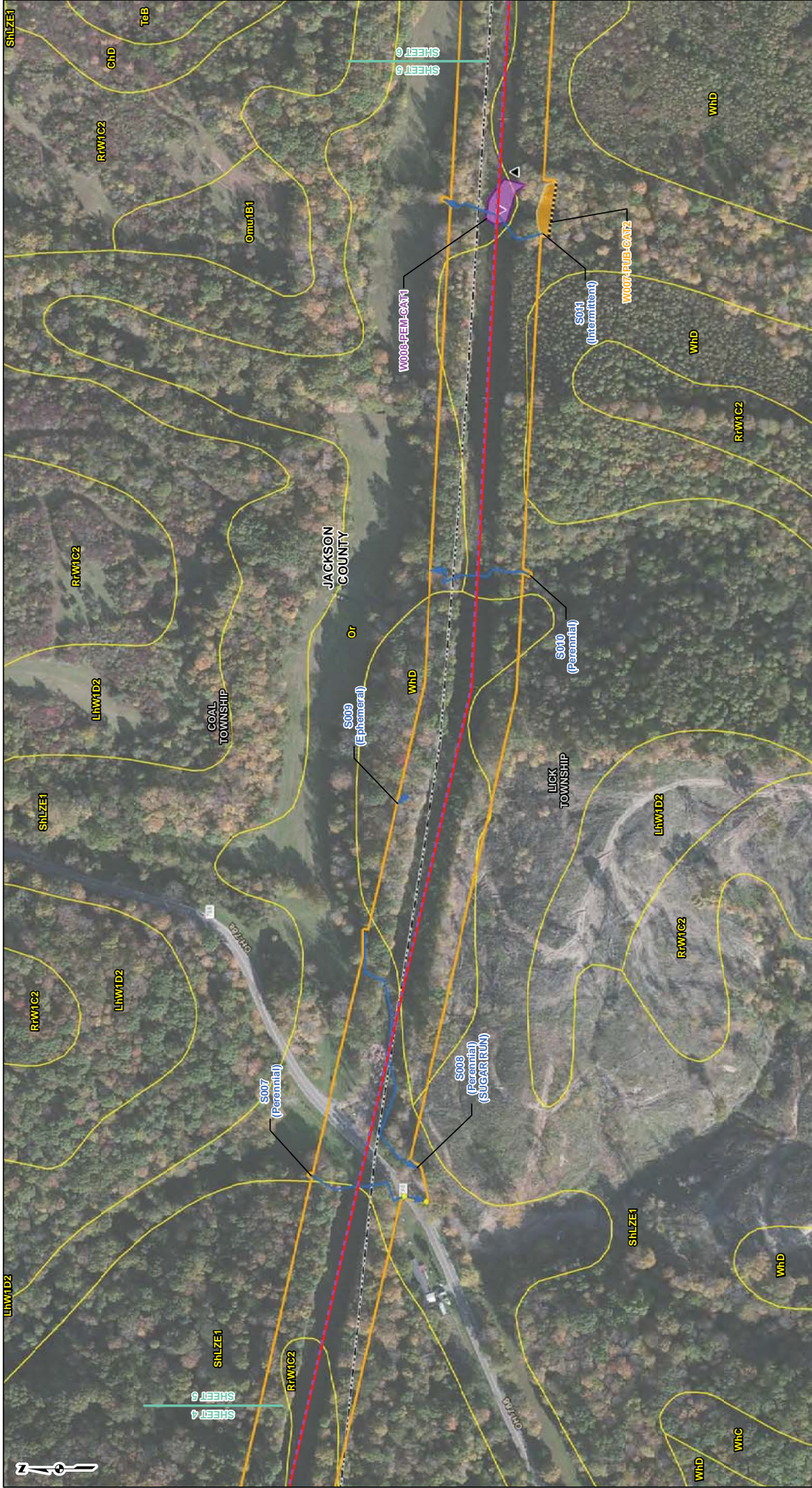
FIGURE 2
RESOURCE LOCATION MAP
SHEET 4 OF 9

HEPPNER - RHODES
138kV LINE REBUILD PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: EFJ
CHECKED: TDB

DATE: 11/14/2017
APPROVED: ARW

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PROJECT LOCATION

JACKSON COUNTY, OHIO

LEGEND

- UPLAND DATA POINT
- WETLAND DATA POINT
- CULVERT
- PROPOSED 138kV TRANSMISSION LINE
- EXISTING 69kV TRANSMISSION LINE
- STREAM
- OPEN-ENDED BOUNDARY
- STUDY AREA
- SOIL TYPE BOUNDARY
- ODNR LAND
- NWI WETLAND
- 100-YEAR FLOODPLAIN
- TOWNSHIP BOUNDARY
- COUNTY BOUNDARY

WETLAND TYPE:

- PEM
- PUB

WETLAND TYPE:

- S007 (Perennial)
- S008 (Perennial)
- S010 (Perennial)
- S011 (Intermittent)

WETLAND TYPE:

- RAW1C2
- LNW1D2
- SHLZE1
- WHD
- WHC
- TdB
- GHD
- Omu1B1

FIGURE 2

RESOURCE LOCATION MAP

SHEET 5 OF 9

HEPPNER - RHODES

138kV LINE REBUILD PROJECT

AMERICAN ELECTRIC POWER

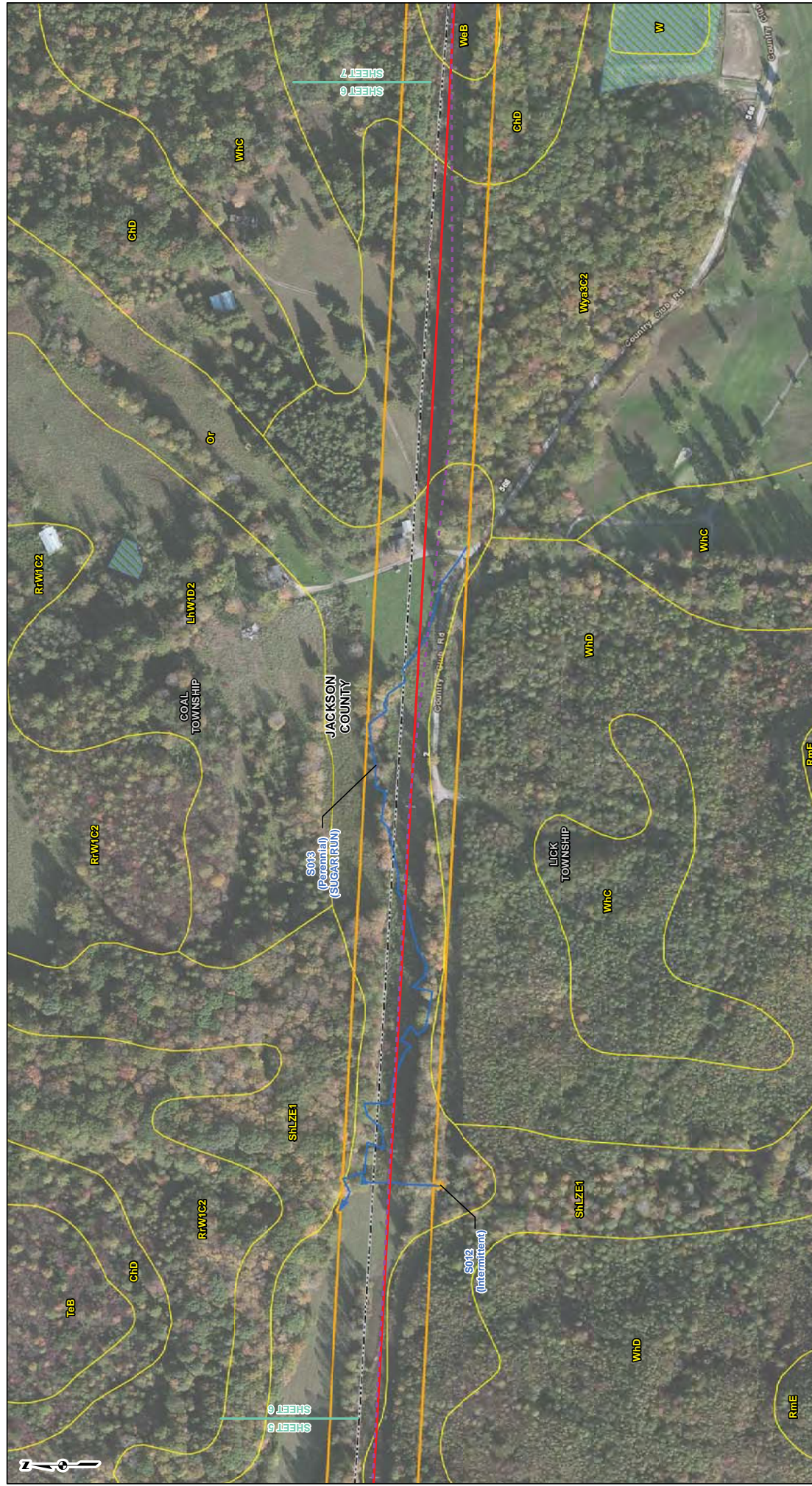
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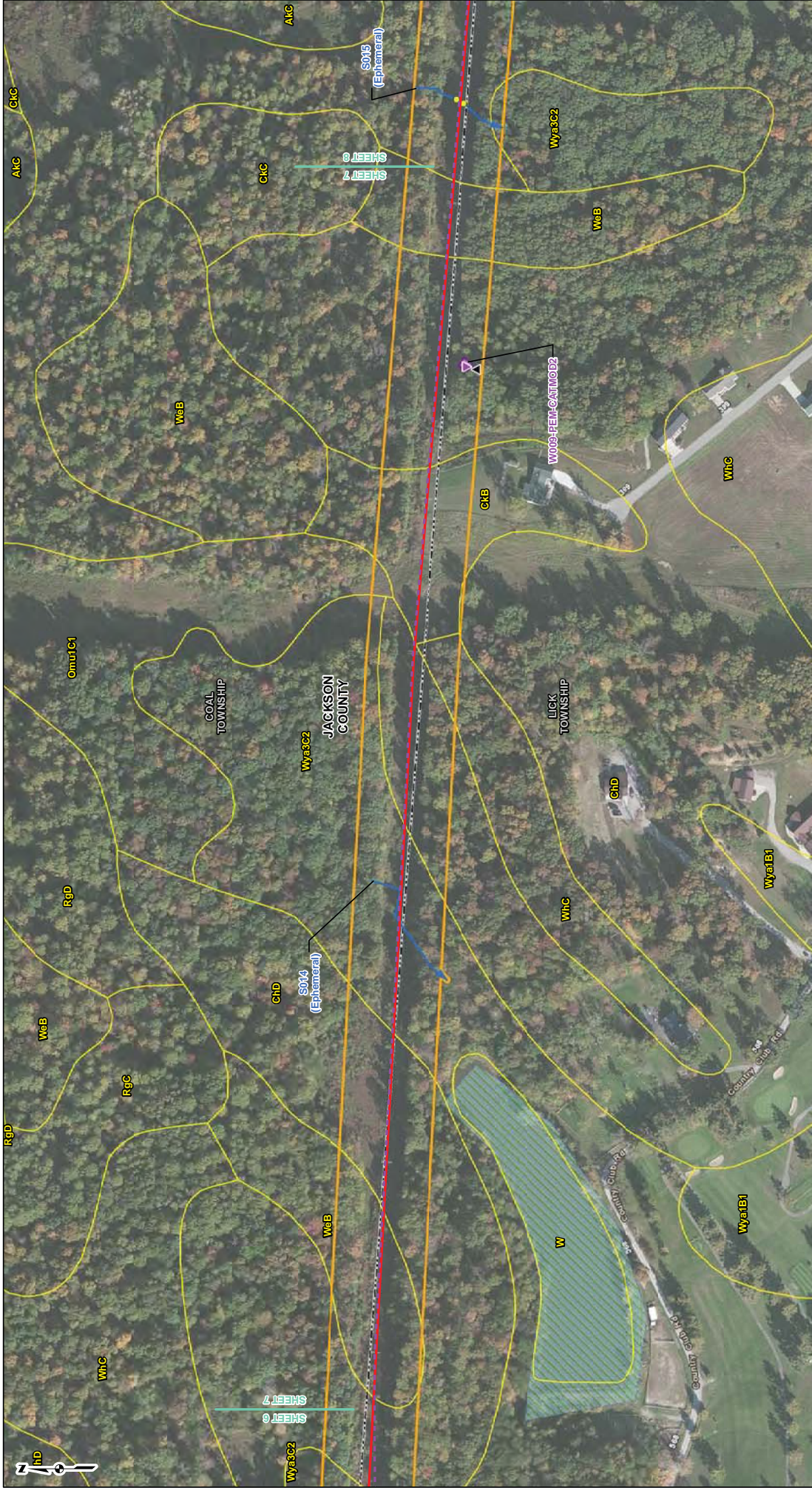
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PROJECT LOCATION

JACKSON COUNTY, OHIO

LEGEND

- UPLAND DATA POINT
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- SOIL TYPE BOUNDARY
- ODNR LAND
- W1 WETLAND
- 100-YEAR FLOODPLAIN
- TOWNSHIP BOUNDARY
- COUNTY BOUNDARY

FIGURE 2

RESOURCE LOCATION MAP

SHEET 7 OF 9

HEPPNER - RHODES

138KV LINE REBUILD PROJECT

AMERICAN ELECTRIC POWER

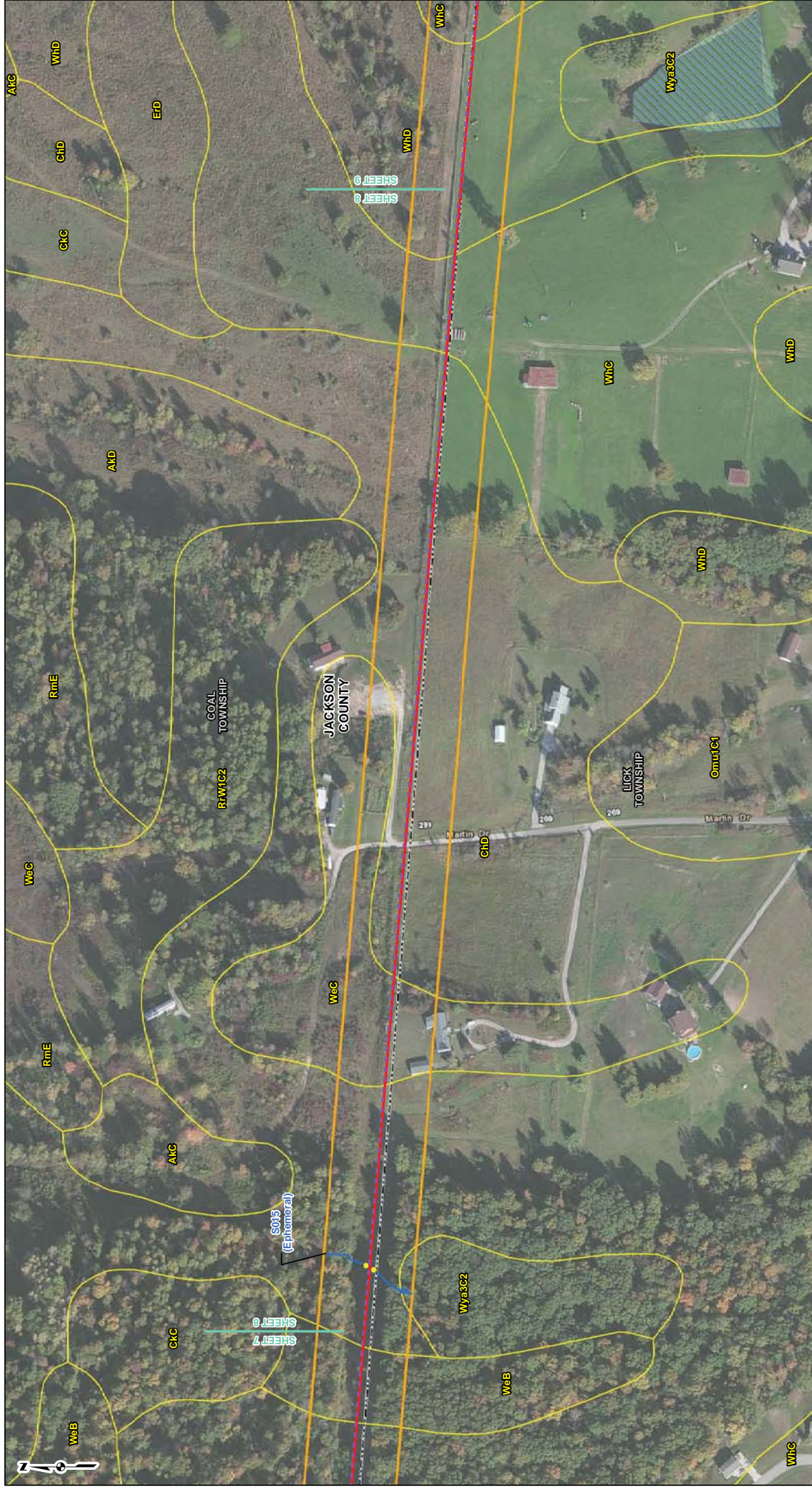
DATE: 11/14/2017

APPROVED/ARW

DRAWN BY: EFJ

CHECKED: TDB

WDSIR/Heppner_Resource_Location_Map_2017_11_14.mxd



PROJECT LOCATION



JACKSON COUNTY, OHIO

REFERENCES: ESRI WORLD MAP, MICROSOFT, U.C-G, 2011, ACCESSED 11/20/17, WORLD TRANSPORTATION, ESRI, DELORME, HERE, MAPMYINDIA, TOMTOM, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, OBTAINED THROUGH ESRI/ARCGIS ONLINE, ACCESSED 11/20/17, NATIONAL WETLAND INVENTORY (NWI) MAP, ESRI, 2017, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), OHIO, 2015, SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR JACKSON COUNTY, OHIO, USDA/NRCS, 2015/15/2015, ODNR (OHIO DEPARTMENT OF NATURAL RESOURCES) LAND, 2014.

LEGEND

- LEGEND**
- | | | | |
|-----|----------------------------------|----------------------|---------------------|
| ▲ | UPLAND DATA POINT | → | STREAM |
| ▼ | WETLAND DATA POINT | | OPEN-ENDED BOUNDARY |
| ● | CULVERT | WETLAND TYPE: | |
| --- | PROPOSED 138KV TRANSMISSION LINE | PEM | |
| --- | EXISTING 68KV TRANSMISSION LINE | PUB | |

- STUDY AREA
SOIL TYPE BOUNDARY
ODNR LAND
NWI WETLAND
100-YEAR FLOODPLAIN



-  TOWNSHIP BOUNDARY
-  COUNTY BOUNDARY

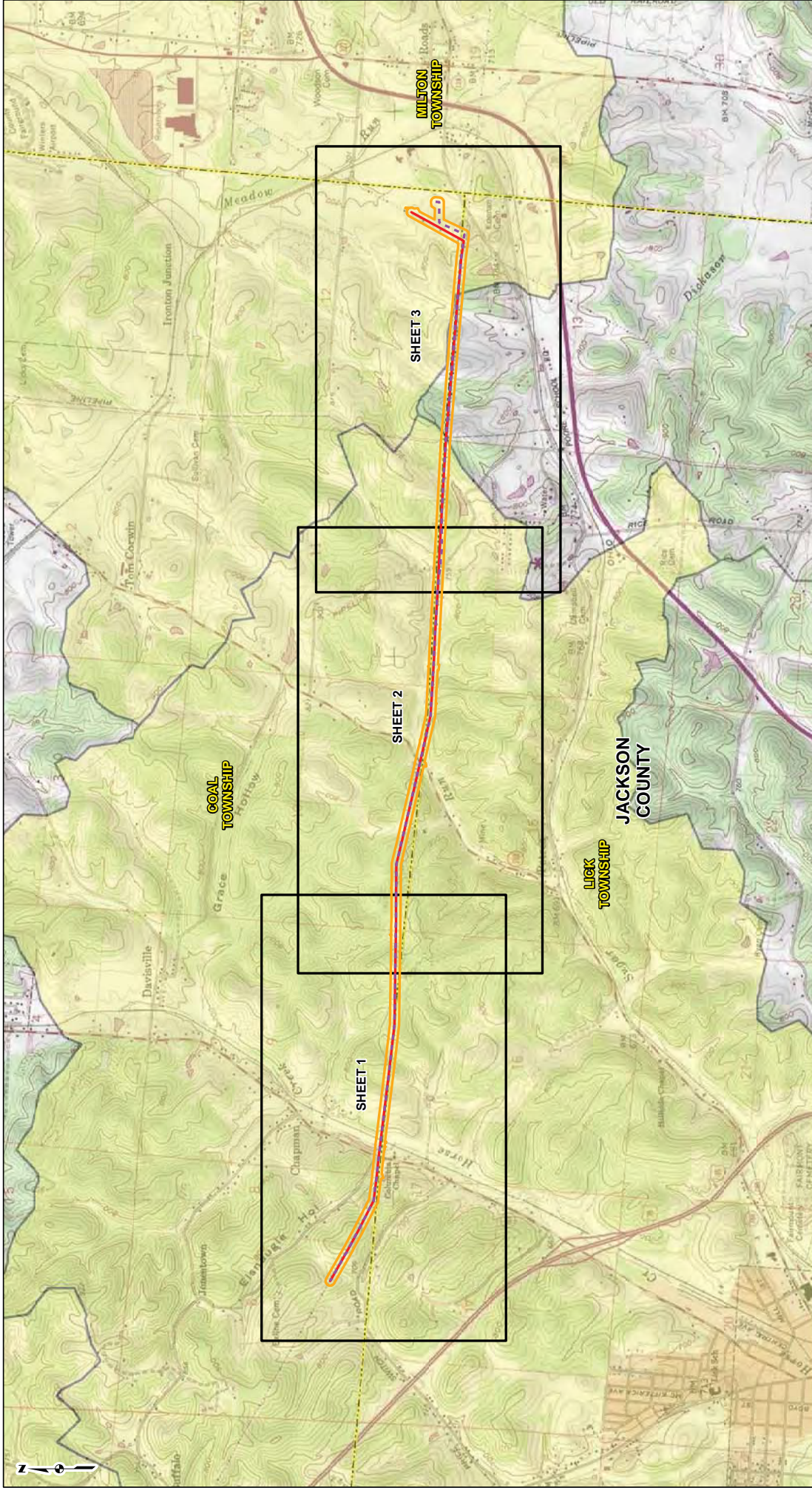
FIGURE 2
RESOURCE LOCATIONS
SHEET 8 OF 8


HEPPNER - RHODES
138kV LINE REBUILD PROJ.
AMERICAN ELECTRIC POW

DRAWN BY: EFJ
CHECKED: TDB

DATE: 11/14/2017
APPROVED: ARW

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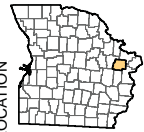


<p>PROJECT LOCATION</p>  <p>JACKSON COUNTY, OHIO</p>	<p>REFERENCE: USGS 7.5 TOPOGRAPHIC QUADRANGLES: JACKSON (1978) AND MILL CREEK (1978) AND BROWN CREEK (1978) AND NATIONAL TOPOGRAPHIC ESRI TOPO MAPS, NATIONAL TOPOGRAPHIC TOPO AND USGS, ACCESSED 11/2017. STREAM ELIGIBILITY: OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA), 2017.</p>	<p>LEGEND</p> <ul style="list-style-type: none"> PROPOSED 138KV TRANSMISSION LINE EXISTING 69KV TRANSMISSION LINE STUDY AREA COUNTY BOUNDARY TOWNSHIP BOUNDARY 	<p>OHIO EPA STREAM ELIGIBILITY</p> <ul style="list-style-type: none"> INELIGIBLE POSSIBLY ELIGIBLE ELIGIBLE 	<p>FIGURE 3</p> <p>STREAM ELIGIBILITY MAP</p> <p>SHEET INDEX</p> <p>HEPPNER - RHODES 138KV LINE REBUILD PROJECT AMERICAN ELECTRIC POWER</p>	<p>DRAWN BY: EFJ CHECKED: TDB DATE: 11/14/2017 APPROVED: ARW</p>
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PROJECT LOCATION



JACKSON COUNTY, OHIO

REFERENCES: ESR WORLD IMAGERY, MAR 2015
 DELORME HERE MAPMYINDIA, TOMTOM, ©
 OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER
 ACCESSSED 11/2017. STREAM ELIGIBILITY, OHIO
 ENVIRONMENTAL PROTECTION AGENCY (EPA), 2017. NHD
 (NATIONAL HYDROGRAPHIC DATA SET), (NHD),
 USGS, 2015. WQS STREAMS (OHIO WATER QUALITY
 STANDARDS (OH WQS), 2010.

LEGEND

- PROPOSED 138kV TRANSMISSION LINE
- EXISTING 69kV TRANSMISSION LINE
- STREAM
- NHD STREAM
- OH WQS STREAM
- STUDY AREA
- OHIO EPA STREAM ELIGIBILITY
- INELIGIBLE
- POSSIBLY ELIGIBLE
- ELIGIBLE



FIGURE 3 STREAM ELIGIBILITY MAP SHEET 2 OF 3

HEPPNER - RHODES
 138kV LINE REBUILD PROJECT
 AMERICAN ELECTRIC POWER

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APPENDIX A

Photographs



Photograph 1. Wetland W001-PEM-CATMOD2, Facing East



Photograph 2. Wetland W001-PEM-CATMOD2, Facing West



Photograph 3. Wetland W002-PEM-CATMOD2, Facing South



Photograph 4. Wetland W002-PEM-CATMOD2, Facing East



Photograph 5. Wetland W003-PEM-CAT2, Facing South



Photograph 6. Wetland W003-PEM-CAT2, Facing North



Photograph 7. Wetland W004-PUB-CAT2, Facing North



Photograph 8. Wetland W004-PUB-CAT2, Facing South

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

11/14/2017 2:59:02 PM

in

Case No(s). 17-0807-EL-BLN

Summary: Letter of Notification , 2 of 5 electronically filed by Ms. Christen M. Blend on behalf of AEP Ohio Transmission Power Company, Inc.