

Staff Report of Investigation

AEP Ohio Transmission Company
Glencoe-Speidel 138 kV Transmission Line Rebuild Project

Case No. 18-0279-EL-BTX

November 14, 2018



Power Siting
Board

John R. Kasich, Governor | Asim Z. Haque, Chairman

In the Matter of the Application of AEP Ohio)
Transmission Company, Inc. for a Certificate of)
Environmental Compatibility and Public Need for the) Case No. 18-0279-EL-BTX
Glencoe-Speidel 138 kV Transmission Line Rebuild)
Project.)

Staff Report of Investigation

Submitted to the
OHIO POWER SITING BOARD

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

In the Matter of the Application of AEP Ohio)
Transmission Company, Inc. for a Certificate of)
Environmental Compatibility and Public Need for the) **Case No. 18-0279-EL-BTX**
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Chairman, Public Utilities Commission	Director, Department of Natural Resources
Director, Department of Agriculture	Public Member
Director, Development Services Agency	Ohio House of Representatives
Director, Environmental Protection Agency	Ohio Senate
Director, Department of Health	

To the Honorable Power Siting Board:

In accordance with the Ohio Revised Code (R.C.) 4906.07(C) and rules of the Ohio Power Siting Board (Board), the staff of the Public Utilities Commission of Ohio (Staff) has completed its investigation in the above matter and submits its findings and recommendations in this Staff Report for consideration by the Board.

The findings and recommendations contained in this report are the result of Staff coordination with the following agencies that are members of the Board: Ohio Environmental Protection Agency, the Ohio Department of Health, the Ohio Development Services Agency, the Ohio Department of Natural Resources, and the Ohio Department of Agriculture. In addition, Staff coordinated with the Ohio Department of Transportation, the Ohio Historic Preservation Office, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the Federal Aviation Administration.

In accordance with R.C. 4906.07(C) and 4906.12, copies of this Staff Report have been filed with the Docketing Division of the Public Utilities Commission of Ohio and served upon the Applicant or its authorized representative, the parties of record, and pursuant to Ohio Administrative Code 4906-3-06, the main public libraries of the political subdivisions in the project area.

The Staff Report presents the results of Staff's investigation conducted in accordance with R.C. Chapter 4906 and the rules of the Board, and does not purport to reflect the views of the Board nor should any party to the instant proceeding consider the Board in any manner constrained by the findings and recommendations set forth herein.

Respectfully submitted,



Tamara S. Turkenton
Director, Rates and Analysis
Public Utilities Commission of Ohio

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I. POWERS AND DUTIES

OHIO POWER SITING BOARD

The authority of the Ohio Power Siting Board (Board) is prescribed by Ohio Revised Code (R.C.) Chapter 4906. R.C. 4906.03 authorizes the Board to issue certificates of environmental compatibility and public need for the construction, operation, and maintenance of major utility facilities defined in R.C. 4906.01. Included within this definition of major utility facilities are: electric generating plants and associated facilities designed for, or capable of, operation at 50 megawatts (MW) or more; electric transmission lines and associated facilities of a design capacity of 100 kilovolts (kV) or more; and gas pipelines greater than 500 feet in length and more than nine inches in outside diameter, and associated facilities, designed for transporting gas at a maximum allowable operating pressure in excess of 125 pounds per square inch. In addition, pursuant to R.C. 4906.20, the Board authority applies to economically significant wind farms, defined in R.C. 4906.13(A) as wind turbines and associated facilities with a single interconnection to the electrical grid and designed for, or capable of, operation at an aggregate capacity of 5 MW or greater but less than 50 MW.

Membership of the Board is specified in R.C. 4906.02(A). The voting members include: the Chairman of the Public Utilities Commission of Ohio (PUCO or Commission) who serves as Chairman of the Board; the directors of the Ohio Environmental Protection Agency (Ohio EPA), the Ohio Department of Health, the Ohio Development Services Agency (ODSA), the Ohio Department of Agriculture, and the Ohio Department of Natural Resources (ODNR); and a member of the public, specified as an engineer, appointed by the Governor from a list of three nominees provided by the Ohio Consumers' Counsel. Ex-officio Board members include two members (with alternates) from each house of the Ohio General Assembly.

NATURE OF INVESTIGATION

The Board has promulgated rules and regulations, found in Ohio Administrative Code (Ohio Adm.Code) 4906:1-01 et seq., which establish application procedures for major utility facilities and economically significant wind farms.

Application Procedures

Any person that wishes to construct a major utility facility or economically significant wind farm in this state must first submit to the Board an application for a certificate of environmental compatibility and public need.¹ The application must include a description of the facility and its location, a summary of environmental studies, a statement explaining the need for the facility and how it fits into the Applicant's energy forecasts (for transmission projects), and any other information the Applicant or Board may consider relevant.²

Within 60 days of receiving an application, the Chairman must determine whether the application is sufficiently complete to begin an investigation.³ If an application is considered complete, the Board or an administrative law judge will cause a public hearing to be held 60 to 90 days after the

1. R.C. 4906.04 and 4906.20.

2. R.C. 4906.06(A) and 4906.20(B)(1).

3. Ohio Adm.Code 4906-3-06(A).

official filing date of the completed application.⁴ At the public hearing, any person may provide written or oral testimony and may be examined by the parties.⁵

Staff Investigation and Report

The Chairman will also cause each application to be investigated and a report published by the Board's Staff not less than 15 days prior to the public hearing.⁶ The report sets forth the nature of the investigation and contains the findings and conditions recommended by Staff.⁷ The Board's Staff, which consists of career professionals drawn from the staff of the PUCO and other member agencies of the Board, coordinates its investigation among the agencies represented on the Board and with other interested agencies such as the Ohio Department of Transportation (ODOT), the Ohio History Connection, and the U.S. Fish and Wildlife Service (USFWS).

The technical investigations and evaluations are conducted pursuant to Ohio Adm.Code 4906-1-01 et seq. The recommended findings resulting from Staff's investigation are described in the Staff Report pursuant to R.C. 4906.07(C). The report does not represent the views or opinions of the Board and is only one piece of evidence that the Board may consider when making its decision. Once published, the report becomes a part of the record, is served upon all parties to the proceeding and is made available to any person upon request.⁸ A record of the public hearings and all evidence, including the Staff Report, may be examined by the public at anytime.⁹

Board Decision

The Board may approve, modify and approve, or deny an application for a certificate of environmental compatibility and public need.¹⁰ If the Board approves, or modifies and approves an application, it will issue a certificate subject to conditions. The certificate is also conditioned upon the facility being in compliance with applicable standards and rules adopted under the Ohio Revised Code.¹¹

Upon rendering its decision, the Board must issue an opinion stating its reasons for approving, modifying and approving, or denying an application for a certificate of environmental compatibility and public need.¹² A copy of the Board's decision and its opinion is memorialized upon the record and must be served upon all parties to the proceeding.¹³ Any party to the proceeding that believes its issues were not adequately addressed by the Board may submit within 30 days an application for rehearing.¹⁴ An entry on rehearing will be issued by the Board within 30 days and may be appealed within 60 days to the Supreme Court of Ohio.¹⁵

4. R.C. 4906.07(A) and Ohio Adm.Code 4906-3-08.

5. R.C. 4906.08(C).

6. R.C. 4906.07.

7. Ohio Adm.Code 4906-3-06(C).

8. R.C. 4906.07(C) and 4906.10.

9. R.C. 4906.09 and 4906.12.

10. R.C. 4906.10(A).

11. R.C. 4906.10.

12. R.C. 4906.11.

13. R.C. 4906.10(C).

14. R.C. 4903.10 and 4906.12.

15. R.C. 4903.11, 4903.12, and 4906.12.

CRITERIA

Staff developed the recommendations and conditions in this *Staff Report of Investigation* pursuant to the criteria set forth in R.C. 4906.10(A), which reads, in part:

The board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the board, unless it finds and determines all of the following:

- (1) The basis of the need for the facility if the facility is an electric transmission line or gas pipeline;
- (2) The nature of the probable environmental impact;
- (3) That the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations;
- (4) In the case of an electric transmission line or generating facility, that the facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems and that the facility will serve the interests of electric system economy and reliability;
- (5) That the facility will comply with Chapters 3704, 3734, and 6111 of the Revised Code and all rules and standards adopted under those chapters and under sections 1501.33, 1501.34, and 4561.32 of the Revised Code. In determining whether the facility will comply with all rules and standards adopted under section 4561.32 of the Revised Code, the board shall consult with the office of aviation of the division of multi-modal planning and programs of the department of transportation under section 4561.341 of the Revised Code;
- (6) That the facility will serve the public interest, convenience, and necessity;
- (7) In addition to the provisions contained in divisions (A)(1) to (6) of this section and rules adopted under those divisions, what its impact will be on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code that is located within the site and alternative site of the proposed major utility facility. Rules adopted to evaluate impact under division (A)(7) of this section shall not require the compilation, creation, submission, or production of any information, document, or other data pertaining to land not located within the site and alternative site; and
- (8) That the facility incorporates maximum feasible water conservation practices as determined by the board, considering available technology and the nature and economics of the various alternatives.

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II. APPLICATION

APPLICANT

AEP Ohio Transmission Company, Inc. (AEP Ohio Transco or Applicant) is a transmission-only company approved as a public utility in Ohio in 2010 (Case No. 10-245-EL-UNC). AEP Ohio Transco is an affiliate of AEP Ohio/Ohio Power Company, based in Gahanna, Ohio, and is one of many utility units of AEP.

HISTORY OF THE APPLICATION

Prior to formally submitting its application, the Applicant consulted with the Staff regarding application procedures.

On March 15, 2018, the Applicant held a public informational meeting regarding the proposed electric transmission line rebuild project in Belmont, Ohio.

On June 13, 2018, the Applicant filed the Glencoe-Speidel 138 kV Transmission Line Rebuild application.

On June 15, 2018, and July 20, 2018, the Applicant filed supplemental information to the Glencoe-Speidel application.

On August 13, 2018, the Director of Rates and Analysis, Public Utilities Commission of Ohio (PUCO), issued a letter of compliance regarding the application to the Applicant.

A local public hearing has been scheduled for November 29, 2018 at 6:00 p.m., at the Ohio University Eastern Campus, Shannon Hall, Room 219, 45425 National Road West, St. Clairsville, Ohio 43950. The evidentiary hearing will commence on December 12, 2018, at 10:00 a.m., in Hearing Room 11-C, at the offices of the PUCO, 180 East Broad Street, Columbus, Ohio, 43215.

This summary of the history of the application does not include every filing in case number 18-0279-EL-BTX. The docketing record for this case, which lists all documents filed to date, can be found online at <http://dis.puc.state.oh.us>.

PROJECT DESCRIPTION

The Applicant proposes to rebuild the Glencoe-Speidel 138 kV transmission line in Belmont County.¹⁶ The Applicant would own, operate, and maintain the rebuilt transmission line.

The proposed project involves the installation of a new 138 kV overhead electric transmission line between the Glencoe Substation and the Speidel Substation. A 100-foot right-of-way is proposed by the Applicant for the transmission line, which would incorporate steel poles for support. Near the Village of Bethesda, where residential structures have been built near the 69 kV line over the years, the Applicant is proposing a 50-foot right-of-way adjacent to those residences.

Staff has reviewed the Applicant's proposal to utilize a 50-foot right-of-way in certain areas where the transmission line rebuild is located in close proximity to residential structures. The Applicant

16. "Application to the Ohio Power Siting Board for a Certificate of Environmental Compatibility and Public Need" (Application), American Electric Power Ohio Transmission Company, Inc., June 13, 2018.

has committed to design the facility to meet the requirements of the National Electric Safety Code. Also, the Applicant will submit the plans to OPSB staff prior to the preconstruction conference for review.

AEP Ohio Transco utilized field survey data to further identify route alternatives and to ultimately select its Preferred and Alternate routes. Once completed, the new transmission line would replace approximately 12.7 miles of the existing Glencoe-Speidel 69 kV Transmission Line, which has been in service since the early 1940s and serves areas within Warren, Goshen, and Smith Townships of Belmont County. With installation of the new 138 kV transmission line, the 69 kV transmission line would be taken out of service. The new transmission line would operate at 138 kV service.

Preferred Transmission Line Route

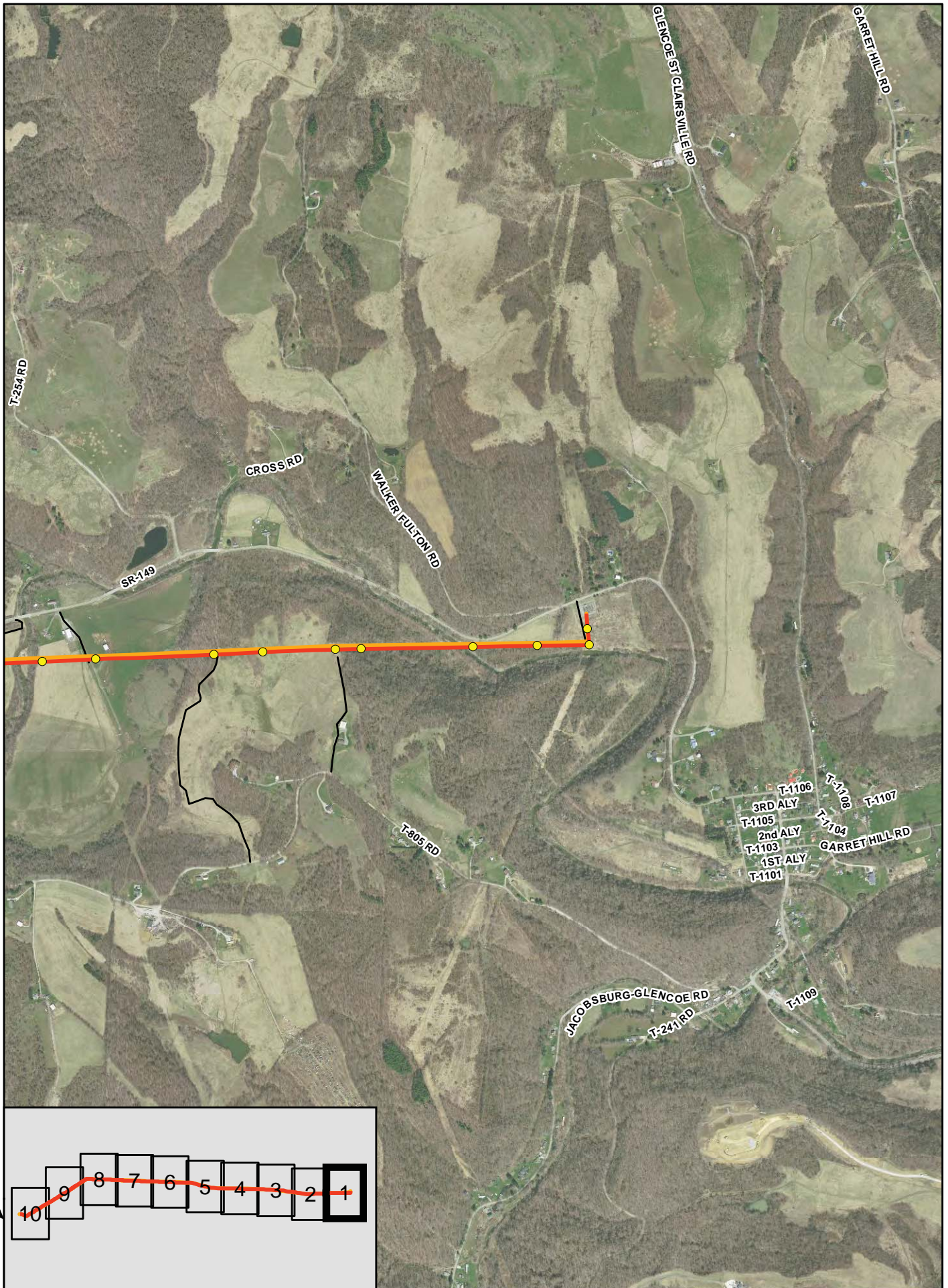
The Applicant's Preferred Route is approximately 12.7 miles long, and predominately parallels either the northern or southern edge of the existing Glencoe-Speidel 69 kV Transmission Line right-of-way. The Preferred Route would predominately be offset by approximately 35-50 feet from the centerline of the existing 69 kV line in order to allow the existing line to remain in service during construction. The Glencoe Station project, where the proposed transmission line originates, was approved in November 2017 by the Ohio Power Siting Board (OPSB) in Case No. 17-1211-EL-BNR and is presently under construction.

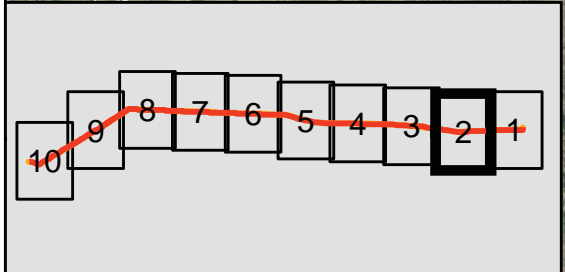
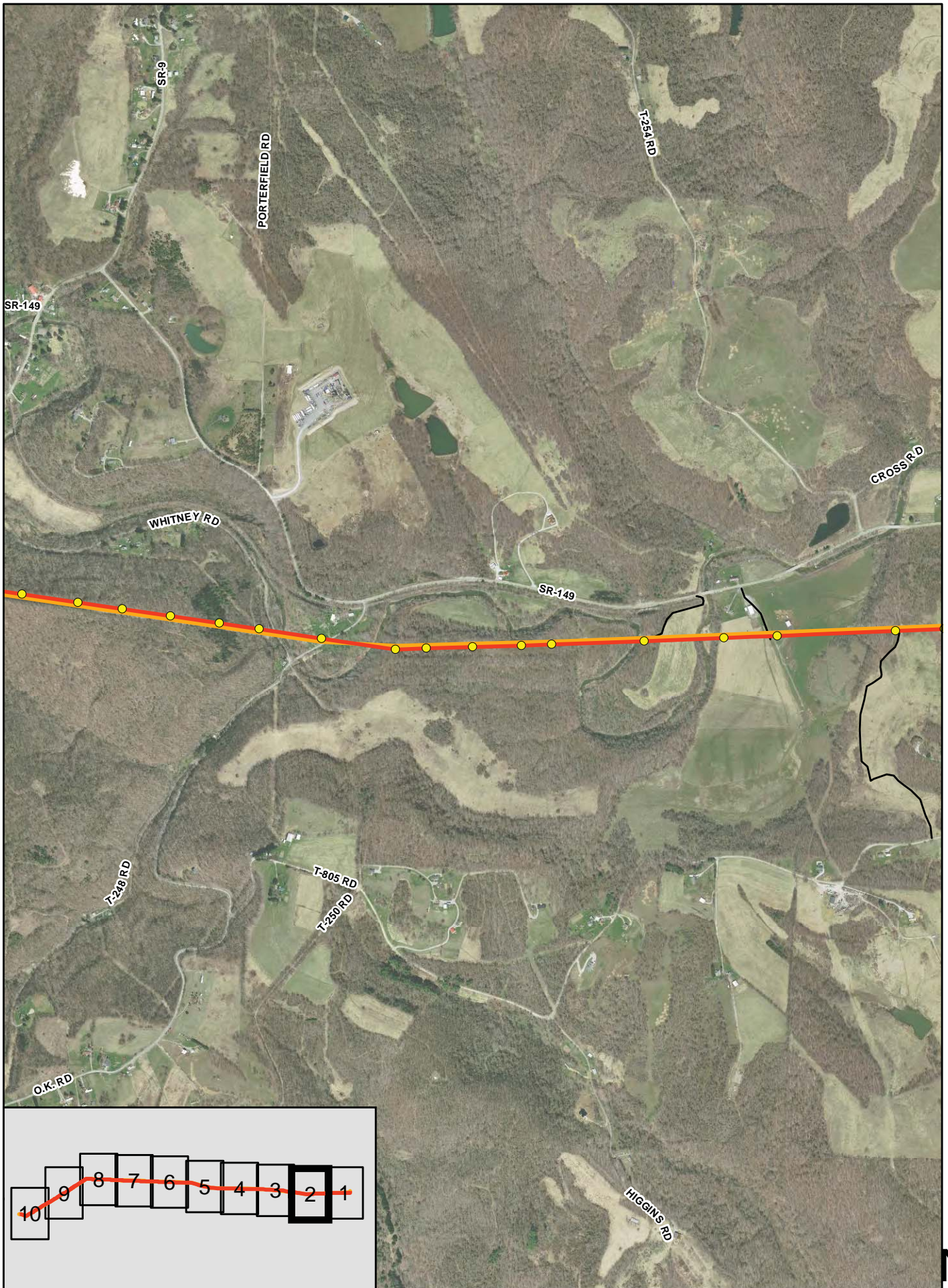
The Preferred Route exits the Glencoe Substation to the south and follows the southern edge of the existing right-of-way for 1.7 miles to the west. The route then crosses to the northern edge of right-of-way for 1.1 miles before crossing back to the southern edge of the right-of-way for 4.5 miles, crossing Centerville Warnock Road and Chapel Hill Road to a point just east of Watertower Road. Due to multiple residences in close proximity, the Preferred Route utilizes the existing centerline for 0.1 mile to avoid encroachments as it crosses Watertower Road before resuming an offset position to the southern edge of the existing right-of-way just west of Watertower Road. The route continues on the south edge of the existing right-of-way for 1.1 mile crossing Hunter Belmont Road. A small substation is avoided by crossing to the northern edge of the existing right-of-way for 0.1 mile. The route returns to the southern edge of the right-of-way for 0.4 mile before utilizing the existing centerline for 0.9 mile through the Village of Bethesda to avoid encroachments. The route continues on the northern edge of the existing right-of-way for 0.6 mile, then utilizes the existing centerline for 0.2 mile before returning to the northern edge of the right-of-way for 1.8 miles. The final 0.1 mile of the route is on the existing centerline into Speidel Station.

Alternate Transmission Line Route

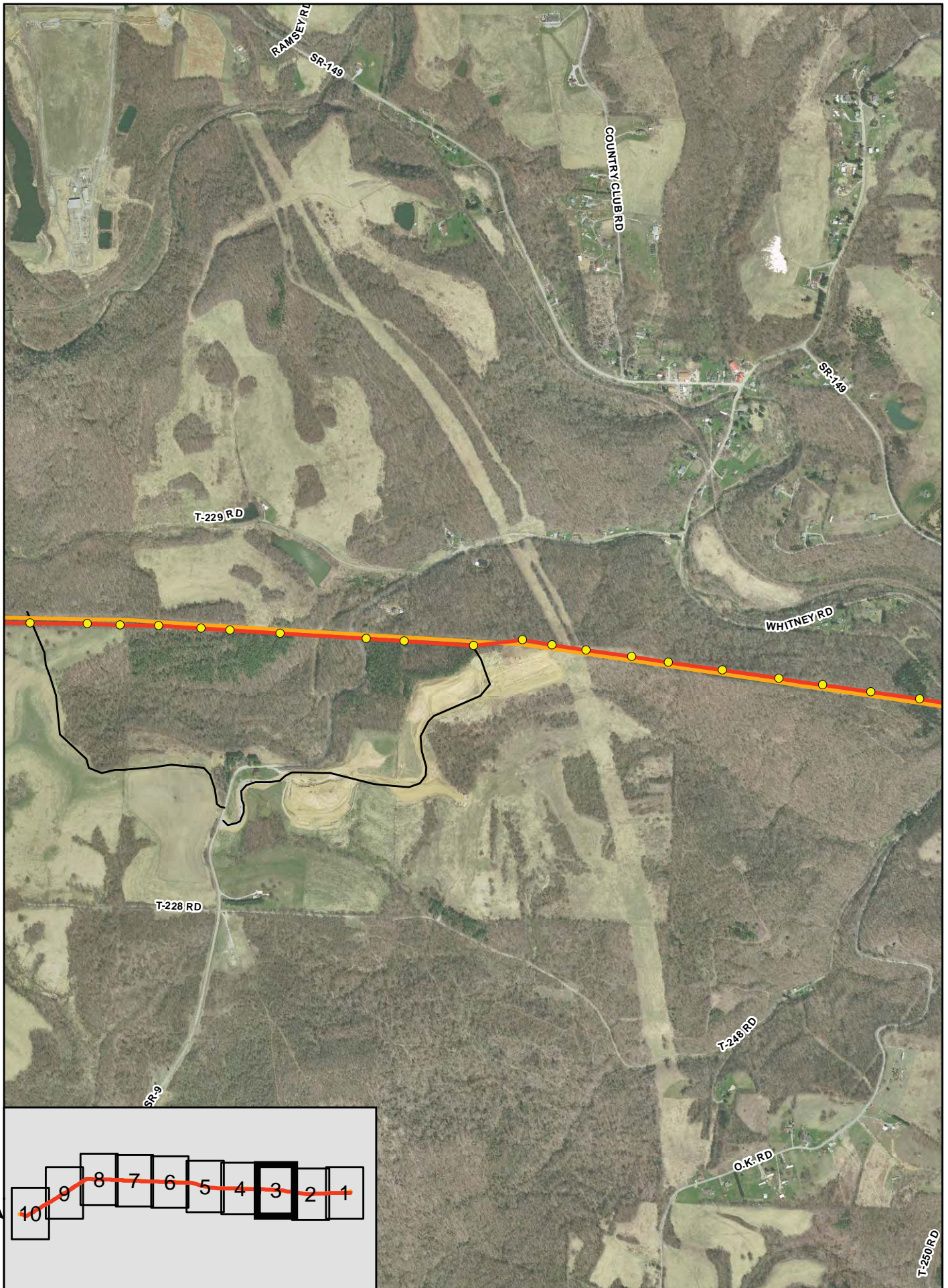
The Applicant's Alternate Route is also approximately 12.7 miles long, and exclusively follows along the centerline of the existing Glencoe-Speidel 69 kV Transmission Line. The Alternate Route exits the Glencoe Substation to the west and follows the existing 69 kV line to the existing Speidel Station, exclusively following the centerline with no offset. Construction of the Alternate Route would require that the existing 69 kV line be taken out of service during construction of the new transmission line.

The Preferred and Alternate routes are shown on the maps in this report.





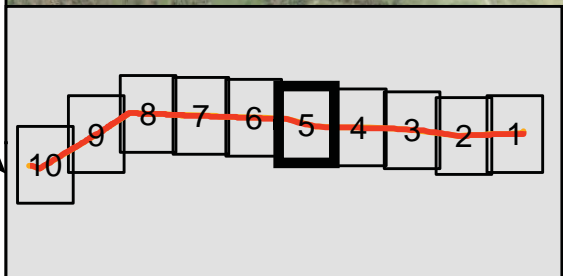
1 inch = 1,250 feet

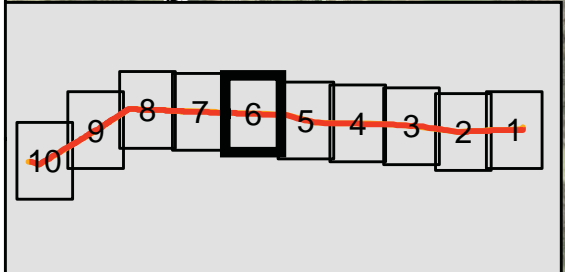
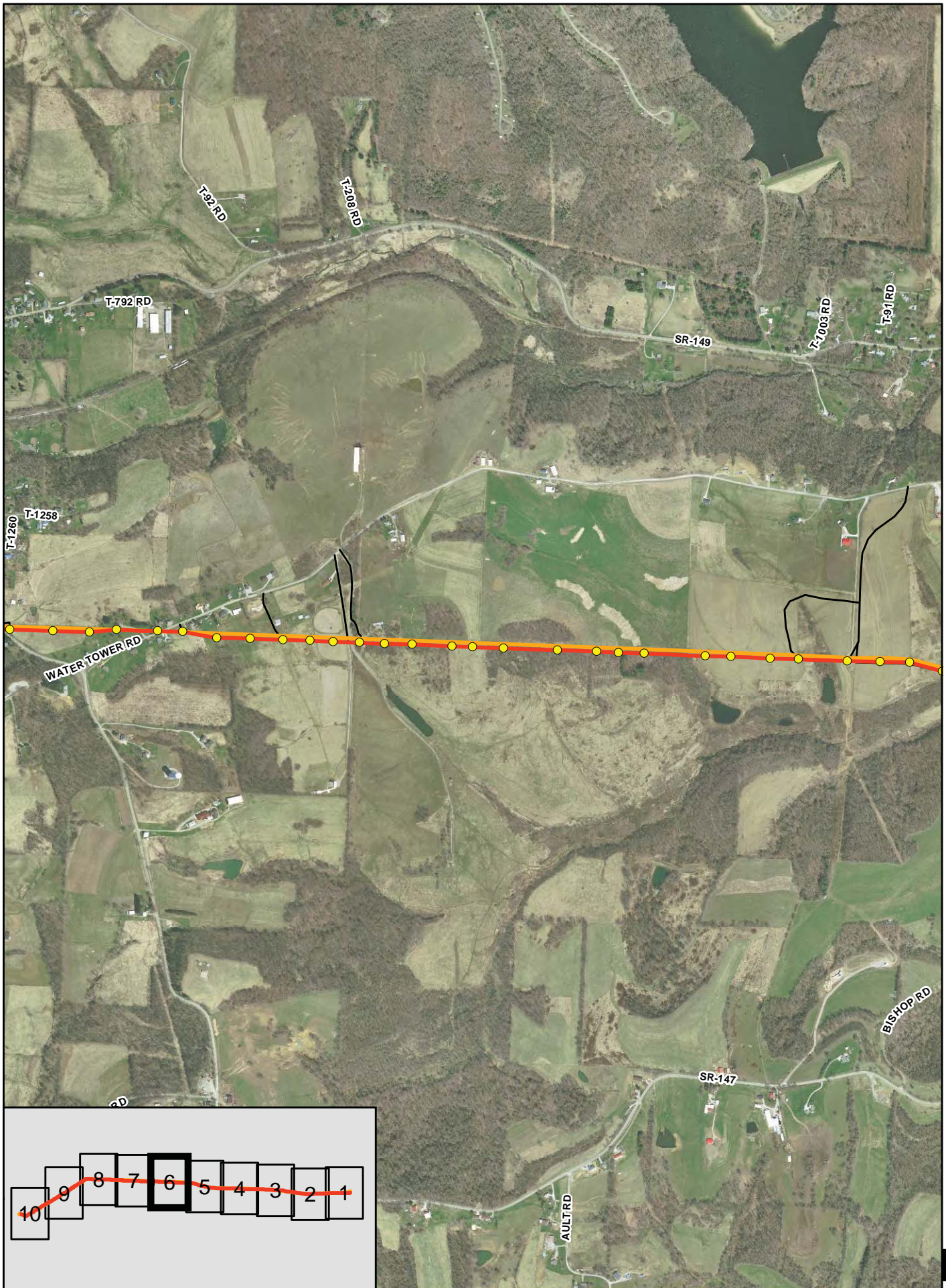




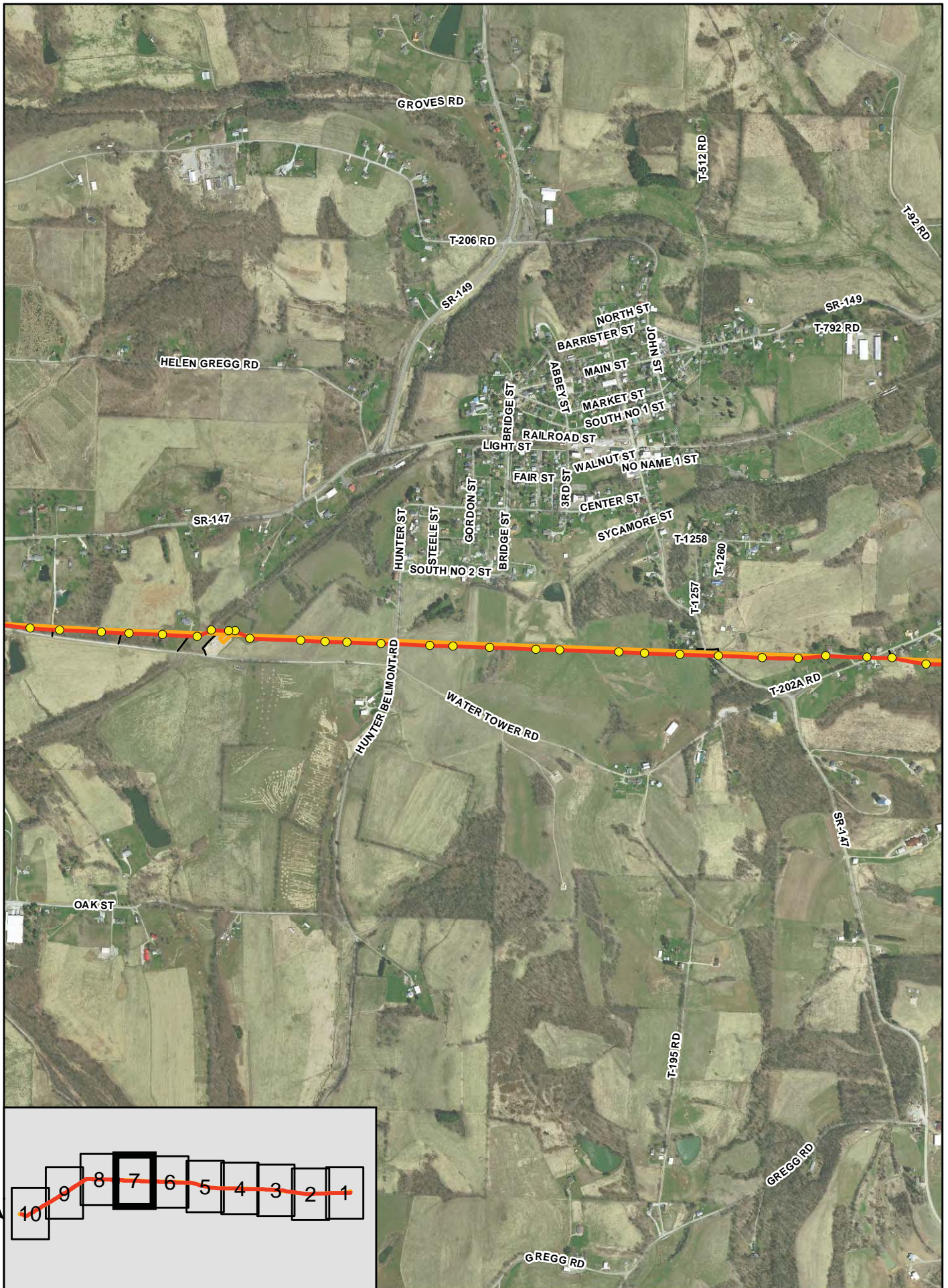
1 inch = 1,250 feet

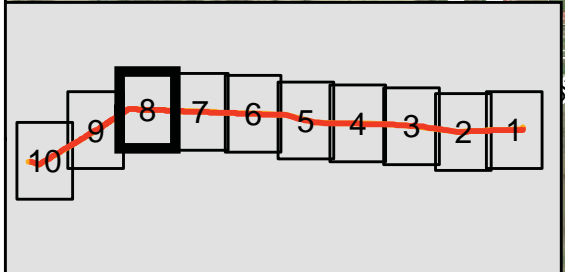
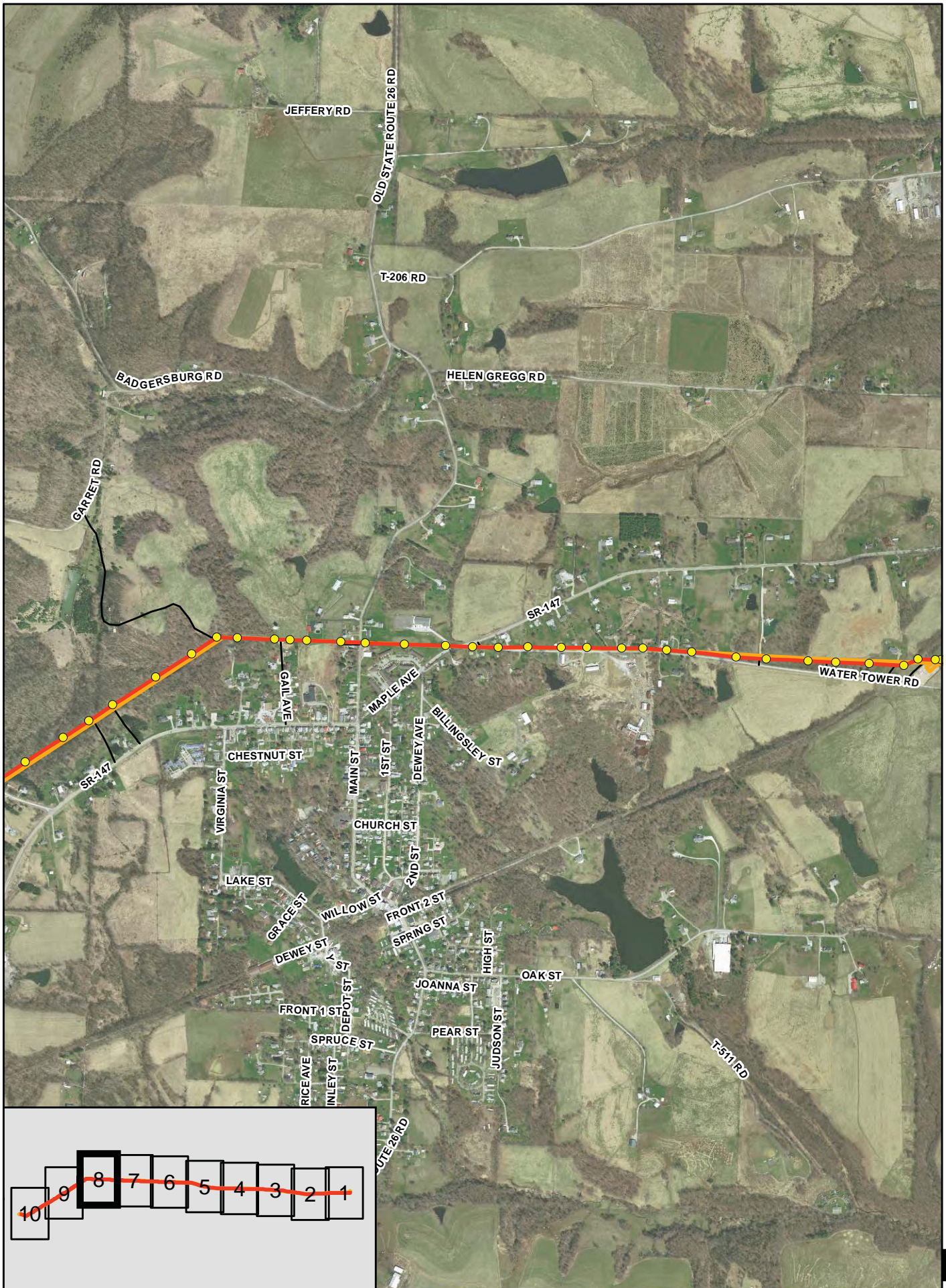
Map Page 4





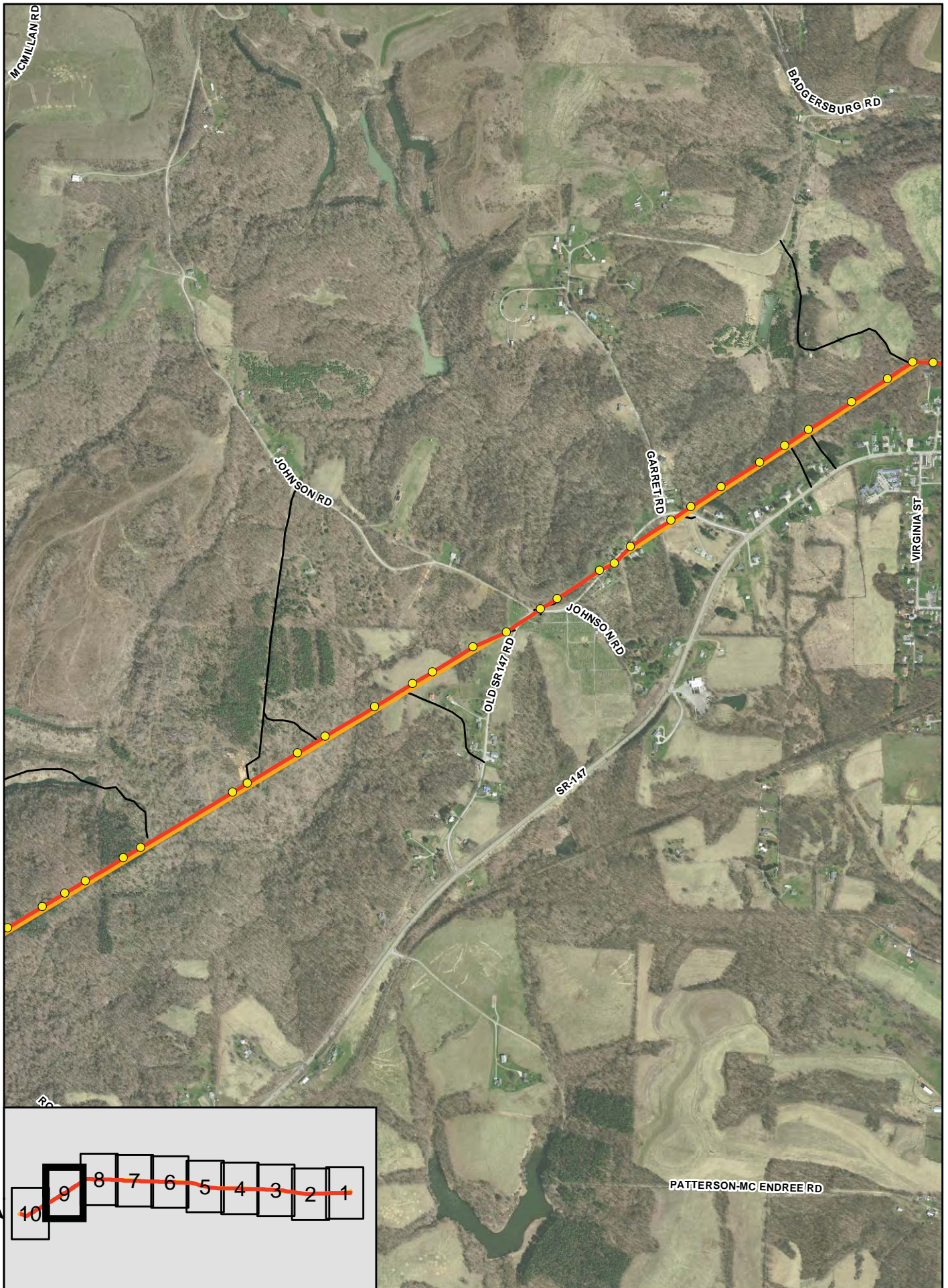
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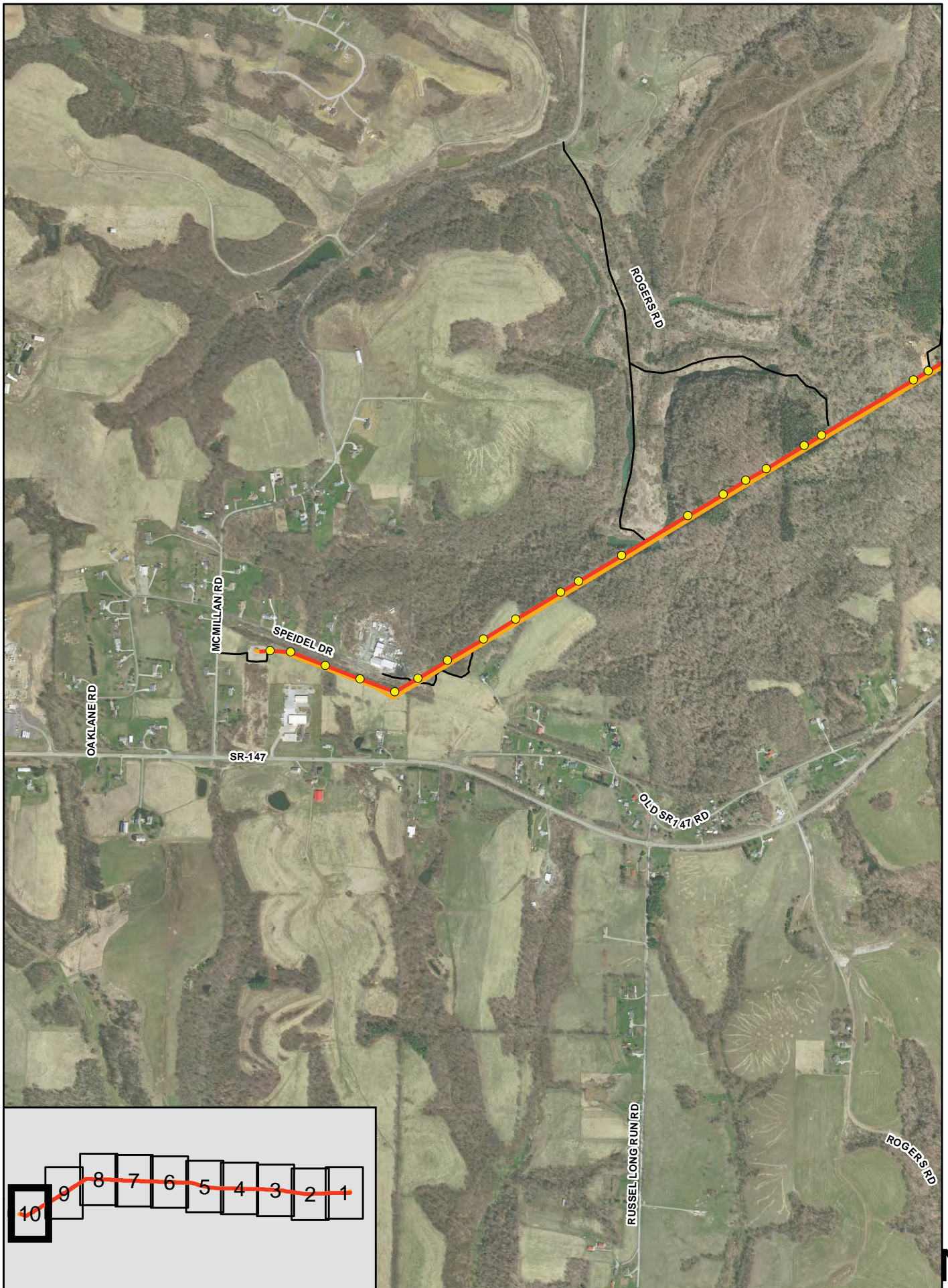




1 inch = 1,250 feet







1 inch = 1,250 feet

Map Page 10

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III. CONSIDERATIONS AND RECOMMENDED FINDINGS

In the matter of the application of AEP Ohio Transmission Company, Inc., Staff submits the following considerations and recommended findings pursuant to R.C. 4906.07(C) and 4906.10(A).

Considerations for R.C. 4906.10(A)(1)

BASIS OF NEED

Pursuant to R.C. 4906.10(A)(1), the Board must determine the need for the proposed facility if the facility is an electric transmission line or gas pipeline.

Purpose of Proposed Facility

The proposed facility is part of the Applicant's improvement plan to modernize and improve the reliability of the Applicant's transmission system Belmont County. The proposed facility would be a 12.7 mile 138 kV transmission line.

The existing 69 kV transmission line was constructed in the 1940s. The existing structures have reached their end of service life, and would not meet National Electric Safety Code clearance standards for an upgraded 138 kV conductor. In addition, the existing conductors are made of copper and have deteriorated. The proposed project would be constructed at 138 kV and would improve reliability, improved service to customers, and faster recovery time during outages.

Long Term Forecast

AEP Ohio Transco identified the need for the proposed transmission line project in the 2018 AEP Ohio Transmission Company Long-Term Forecast Report to the Public Utilities Commission of Ohio.^{17, 18}

System Economy and Reliability

The proposed project is not expected to adversely impact the existing transmission grid. The Applicant identified reliability problems and deteriorated equipment associated with the existing 69 kV transmission line. These problems are discussed in more detail in the Electric Grid section of this report. Replacing the existing 69 kV line with the proposed facility should address these problems and thus improve system reliability.

Conclusion

Staff concludes that the Applicant has demonstrated the basis of need due to the reliability issues and deteriorating equipment caused by the age of the 1940s transmission line. The proposed facility should allow the transmission system to provide safe, reliable electric service.

Recommended Findings

Staff recommends that the Board find that the basis of need for the project has been demonstrated and therefore complies with the requirements specified in R.C. 4906.10(A)(1), provided that any

17. "AEP Ohio Transmission Company LTFR," Public Utilities Commission of Ohio case number 18-1501-EL-FOR, <http://dis.puc.state.oh.us>.

18. R.C. 4935.04(C) and Ohio Adm.Code. 4901:5-5.

certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(2)

NATURE OF PROBABLE ENVIRONMENTAL IMPACT

Pursuant to R.C. 4906.10(A)(2), the Board must determine the nature of the probable environmental impact of the proposed facility.

Socioeconomic Impacts

Land Use Planning

The Applicant states that no formally adopted development or land use plans were identified for the areas of this project in Belmont County. As the proposed facility would include existing right-of-way for a large portion of the project, the proposed facility should not limit future development or population growth in the region.

Land Use

The proposed right-of-way width for this project is 100 feet. Where the routes traverse more heavily populated areas near the Village of Bethesda, the Applicant would utilize a 50-foot right-of-way. Both proposed routes predominantly utilize the existing 69 kV right-of-way, thus minimizing the additional right-of-way needed for the proposed transmission line.

There are 279 residences (consisting of both single and multi-family residences) within 1,000 feet of the Preferred Route. Twenty-four of these residences are located within 100 feet of the Preferred Route. There are 282 residences within 1,000 feet of the Alternate Route. Twenty-nine of these residences are located within 100 feet of the Alternate Route. Residents in the area would experience temporary ambient noise increases during facility construction.

One mobile home needs to be moved from under the existing 69 kV line. The Applicant is working with the property owner to have this mobile home moved from the right-of-way prior to this rebuild project. No other residences would need to be removed due to the construction and operation of this line.

The Preferred Route crosses 128 parcels and the Alternate Route crosses 129 parcels. Approximately 25 percent of both the Preferred and Alternate routes cross-agricultural land and open land/pasture. As the purpose of this project is to rebuild an existing transmission line, permanent additional impacts to agricultural fields would be minimal.

There are nine commercial facilities and twenty industrial buildings within 1,000 feet of both the Preferred and Alternate routes. The only commercial or industrial structure within 100 feet of the right-of-way is a commercial building east of the Village of Bethesda. No negative impacts to commercial or industrial land uses are anticipated as a result of the project.

No schools, hospitals, nor parks were identified as being within 1,000 feet of the Preferred or Alternate routes. One place of worship was identified as being located approximately 200 feet from the Preferred and Alternate routes.

Expanding the right-of-way would require additional tree clearing. No negative impacts to institutional and recreational land uses are expected from the construction, operation, or maintenance of either the Preferred or the Alternate routes for the project.

Cultural, Archaeological, and Architectural Resources

The Applicant conducted a cultural resources literature review, Phase I fieldwork, and a history/architectural study of the project area. The literature review for the project resulted in identifying two previously recorded archaeological sites within 1,000 feet of both routes, none of which are located within 100 feet. Six individual structures 50 years of age or older were identified within the project area. These properties are listed on the Ohio Historic Inventory, with one structure located within 100 feet of both routes. Three cemeteries are located within 1,000 feet of both routes, with one cemetery boundary located within 100 feet of both routes.

No National Register of Historic Places properties were identified within 1,000 feet of either route. The Applicant has sited structure placement away from existing cultural resources, and has submitted Phase I fieldwork results for archaeology and architecture to the Ohio Historic Preservation Office (OHPO). At the time of this report, the OHPO was reviewing the findings for potential impacts on historic properties. Staff recommends the Applicant continue to coordinate with OHPO and Staff to ensure the project will minimize impacts to cultural resources.

Aesthetics

Permanent visual impacts would result from the introduction of a new manmade element to the landscape. Aesthetic impacts would vary with the viewer and setting, depending on the degree of contrast between the proposed transmission line and the existing landscape. Because the new transmission line would be constructed where existing aboveground utilities are already located, the aesthetic impact would be lessened. In areas where existing screening trees would need to be removed, the aesthetic impact would be greater. Staff notes that upon completion of the new 138 kV transmission line, the 69 kV line would be taken out of service and removed.

Economics

The Applicant estimates the applicable intangible and capital costs for the Preferred Route are \$26,041,568 and for the Alternate Route are \$24,999,906. The table below provides a summary.

INTANGIBLE AND CAPITAL COSTS		
Category	Preferred Route	Alternate Route
Land and Land Rights	\$2,139,445	\$2,053,867
Structures and Improvements	NA	NA
Substation Equipment	NA	NA
Towers and Fixtures	NA	NA
Poles and Fixtures	\$10,093,458	\$9,689,720
Overhead Conductors and Devices	\$7,855,225	\$7,541,017
Underground Conductors and Insulation	NA	NA
Underground-to-Overhead Conversion Equipment	NA	NA
Right-of-way Clearing and Roads, Trails, or other Access	\$5,953,440	\$5,715,302
Total	\$26,041,568	\$24,999,906

Both routes are located within Belmont County. The projected tax revenue generated from the project would benefit the local school districts, mental health organization, and public libraries. Based on 2018 tax rates, the Preferred Route would generate approximate annual property taxes of \$1,153,800 over the first year of operation, while the Alternate Route would generate \$1,107,640.

By upgrading service reliability and providing greater capacity in the region, the proposed transmission line would facilitate future economic growth.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Socioeconomic Conditions** heading of the Recommended Conditions of Certificate section.

Ecological Impacts

Geology

Belmont County lies within the western flank of the unglaciated Allegheny plateau region. Both the Preferred and Alternate Routes and the Rebuild Sections are in a rugged area of the county that has been dissected by drainage. The ridgetops and valleys are narrow. The side slopes are steep to very steep.

The bedrock found beneath both the Preferred and Alternate Routes are sedimentary rocks of the Pennsylvanian and Permian Systems consisting of shale, sandstone, mudstone, siltstone, clay, limestone, and coal. The exposed strata belong entirely to the upper portion of the Conemaugh and the Monongahela formations of the Pennsylvanian System and the Dunkard group of the Permian System.

The Conemaugh formation is exposed only in the western part of the county and in the valleys of northeastern part of Belmont County. The Monongahela formation is mostly exposed in the western part of the county at a greater extent than the Conemaugh formation and to a less extent than the Dunkard group. There are 56 members and coal seams recognized and named within these formations.

Coal was and is commercially mined along the right-of-way of both routes. Although there is the presence of active and abandoned mining along the project right-of-way, the Applicant would address these site specific conditions by allowing for additional slack in the transmission lines and by designing and constructing foundations based upon the results of the geotechnical soil borings and laboratory test results. Therefore, past and present mining activity would not pose an adverse effect to the construction of either the Preferred or Alternate Route or the Rebuild Sections.

The transmission line rebuild project is also located in the oil and gas region of the Marcellus and Utica shale plays. However, the proposed routes do not interfere with natural gas drilling and gas transmission pipeline activities.

Slopes and Soil Suitability

The soils in the project area, as characterized in the *Soil Survey of Belmont County, Ohio* generally consist of silt loam, stony clay loam, and clay loam. The major soil associations that would be crossed by the Preferred and Alternates routes are the Lowell-Westmoreland-Morristown and Lowell-Westmoreland-Wellston.

The Applicant noted that 10.7 miles (84%) of Preferred and Alternate routes cross areas mapped with slopes greater than 12 percent. In the area around the Village of Bethesda, 0.38 miles of the right-of-way cross slopes greater than 20 percent. Soil units mapped that occupy areas on these slopes within the project area are susceptible to erosion or prone to landslides. The Applicant has stated that they will perform soil testing at representative sites along the approved route. The borings would extend to the proposed depth within the soil subsurface or to competent bedrock, whichever would be encountered first. The Applicant would provide Staff a detailed geotechnical report of the borings and laboratory testing, along with recommendations on construction methods and foundation design.

The Applicant would implement a stormwater pollution prevention plan and best management practices (BMP) as necessary to ensure during and after construction the long-term stability of the transmission line. Although there are limitations related to degree of slope, hillside slippage, severe erosion, droughtiness, moderately slow permeability, seasonal wetness, and moderate shrink-swell potential, these limitations should not adversely affect or restrict the construction of either proposed route.

Surface Waters

The Preferred Route right-of-way contains 31 streams, including six perennial streams, 20 intermittent streams, and five ephemeral streams, totaling 5,114 linear feet of streams. The Alternate Route right-of-way contains 33 streams, including six perennial streams, 22 intermittent streams and five ephemeral streams, totaling, 5,316 linear feet of streams.

The proposed transmission line would aerially span all streams, and no in-water work is expected. The Applicant has committed not to conduct mechanized clearing within 25 feet of any stream, and would only clear trees in this area, which are tall enough to have the potential to interfere with safe construction and operation of the line. Construction vehicles may cross some streams. The Applicant has proposed temporary culvert stream crossings, and temporary access bridge crossing methods to minimize impacts. In the event that the use of culverted stream crossings become necessary, impacts would be covered under the Army Corps of Engineers Nationwide 12 Permit.

The Preferred Route right-of-way contains 10 wetlands with 1.5 acre of the wetland within the right-of-way. The Alternate Route right-of-way contains 15 wetlands, with 1.4 acre of wetland within the right-of-way. All delineated wetlands are category 1 and category 2 wetlands. Fill within wetlands is not anticipated.

The Applicant stated that it would use timber matting at any areas where construction access through wetlands is necessary and that selective non-mechanized clearing would be used to remove woody vegetation in wetlands that would otherwise interfere with the operation of the transmission line. In the event that fill within any of the other wetlands becomes necessary, impacts would be covered under the Army Corps of Engineers Nationwide 12 Permit.

No lakes, reservoirs, or ponds were observed along the construction corridor of the routes.

The Applicant would obtain coverage under the Ohio EPA General National Pollutant Discharge Elimination System (NPDES) Permit. Sedimentation that may occur as a result of construction activities would be minimized through BMP, such as silt fences. BMP would be outlined in the Applicant's Stormwater Pollution Prevention Plan (SWPPP) required as part of the NPDES Permit. Both the Preferred Route and the Alternate Route would cross within several small portions

of 100-year floodplain areas. Staff recommends the Applicant coordinate with the Belmont county floodplain administrator to obtain any necessary floodplain development permit.

Threatened and Endangered Species

The Applicant requested information from the ODNR and the USFWS regarding state and federal listed threatened and endangered plant and animal species. Staff gathered additional information through field assessments and review of published ecological information. The following table reflects the results of the information requests, field assessments, and document review.

REPTILES AND AMPHIBIANS				
Common Name	Scientific Name	Federal Status	State Status	Presence in Project Area
eastern hellbender	<i>Cryptobranchus alleganiensis alleganiensis</i>	Species of concern	Endangered	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
FISH				
banded killifish	<i>Fundulus diaphanus menona</i>	N/A	Endangered	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
paddlefish	<i>Polyodon spathula</i>	N/A	Threatened	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
Tippecanoe darter	<i>Etheostoma Tippecanoe</i>	N/A	Threatened	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
channel darter	<i>Percina copelandi</i>	N/A	Threatened	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
river darter	<i>Percina shumardi</i>	N/A	Threatened	Due to no in-water work in a perennial stream, no impacts to this species are anticipated.
MUSSELS				
butterfly	<i>Ellipsaria lineolata</i>	N/A	Endangered	Due to no in-water work, no impacts to this species are anticipated.
black sandshell	<i>Ligumia recta</i>	N/A	Threatened	Due to no in-water work, no impacts to this species are anticipated.
threehorn wartyback	<i>Obliquaria reflexa</i>	N/A	Threatened	Due to no in-water work, no impacts to this species are anticipated.

MAMMALS				
Indiana bat	<i>Myotis sodalis</i>	Endangered	Endangered	Historical range includes the project area.
northern long-eared bat	<i>Myotis septentrionalis</i>	Threatened	N/A	Historical range includes the project area.
black bear	<i>Ursus americanus</i>	N/A	Endangered	Historical range includes the project area. Due to the mobility of this species, this project is not likely to impact this species.

The Applicant did not identify any listed plant or animal species during field surveys. Further, the ODNR and the USFWS did not identify any concerns regarding impacts to listed plant species. In the unexpected event that the Applicant encounters listed plant or animal species during construction, Staff recommends that the Applicant contact Staff, the ODNR, and the USFWS, as applicable. Staff also recommends that if the Applicant encounters any listed plant or animal species prior to construction, the Applicant include the location and how impacts would be avoided in the final access plan to be provided to Staff.

The project area is within the range of state and federal endangered Indiana bat (*Myotis sodalis*) and the federal threatened northern long-eared bat (*Myotis septentrionalis*). As tree roosting species in the summer months, the habitat of these species may be impacted by the project. In order to avoid impacts to the Indiana bat and northern long-eared bat, Staff recommends the Applicant adhere to seasonal tree cutting dates of October 1 through March 31 for all trees over 3 inches in diameter, unless coordination efforts with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) allows a different course of action. USFWS also stated that if any caves or abandoned mines, which provide potential Indiana bat and northern long-eared bat hibernating habitat (hibernacula), may be disturbed, further coordination with their office is requested to determine if fall or spring portal surveys are warranted. Staff identified abandoned underground mines and associated mine openings near the routes using ODNR's Mines of Ohio online mapping system. These areas may provide suitable hibernacula. Staff recommends that the Applicant coordinate with USFWS regarding these mine openings to determine if fall or spring portal surveys are warranted.

Vegetation

The Preferred and Alternate routes cross through several vegetative communities. The following table reflects the major vegetative communities present in the construction corridor and associated acres of impact for each route.

VEGETATION		
Community Type	Preferred Route Impacts (Acres)	Alternate Route Impacts (Acres)
Agricultural	37	39
Forest	58	54
Old Field	4	5
Scrub Shrub	18	18

Impacts to vegetation along both the routes would be limited to the initial clearing for the proposed 50 and 100-foot right-of-way and along access roads, and operational maintenance. Tree clearing would be limited for either route as the Alternate Route is proposed on the centerline of an existing 50-foot right-of-way, while the Preferred Route is proposed near the edge of the same existing right-of-way. The Alternate Route would require less clearing because it would utilize more of the existing right-of-way. Trees adjacent to the proposed transmission line right-of-way, which would be significantly encroaching or prone to failure, may require clearing to allow for safe operation of the transmission line. Vegetative wastes generated during construction would be windrowed or chipped and disposed of appropriately depending on landowner requests. The Applicant does not anticipate the use of herbicides during construction or operation.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Ecological Conditions** heading of the Recommended Conditions of Certificate section.

Public Services, Facilities, and Safety

Public Services and Traffic

The principal impact on public roadways would be temporary increases in traffic during construction on routes leading to the project area due to delivery of equipment and materials. Once operational, related traffic would be minimal and would not be expected to significantly impact local roadways.

Roads and Bridges

Public road access to the project area for most construction traffic would be from McMillan Road, State Route 147, and State Route and 149. Access to the proposed right-of-way would be located off of Centerville Warnock Road, Glencoe Whitney Road, Warnock Glencoe Road, Lucas Lash Road, Pearson Park Road, Chapel Hill Road, Watertower Road, Bethesda Belmont Road, Gail Avenue in Bethesda, Garrett Road, Barnesville Bethesda Road, Old State Route 147, N Johnson Road, McMillan Road, and Speidel Drive Extension.

Noise

Most noise impacts associated with this project would occur during the proposed construction period. The Applicant would mitigate noise impacts by using standard construction techniques and limiting construction activities to daylight hours, to the extent feasible.

Safety

The Applicant stated that it would comply with all applicable safety standards set by the Occupational Safety and Health Administration, safety standards of the PUCO, and the North American Electric Reliability Corporation (NERC) Reliability Standards. The Applicant would additionally design the facility to meet the requirements of the National Electric Safety Code.

The Applicant stated it will also administer a contractor safety program where contractors are required to maintain internal safety programs and to provide safety training.

Communications

The Applicant does not expect radio or television interference to occur from the operation of the proposed transmission line along either the Preferred or Alternate route. Any likely source of radio

or television interference would be a localized effect primarily from defective hardware that could be easily detected and replaced.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Public Services, Facilities, and Safety Conditions** heading of the Recommended Conditions of Certificate section.

Recommended Findings

Staff recommends that the Board find that the Applicant has determined the nature of the probable environmental impact for the proposed facility, and therefore complies with the requirements specified in R.C. 4906.10(A)(2), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(3)

MINIMUM ADVERSE ENVIRONMENTAL IMPACT

Pursuant to R.C. 4906.10(A)(3), the proposed facility must represent the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, along with other pertinent considerations.

Route Selection

The Applicant conducted a route selection study to identify potential electric transmission line routes that avoid or limit impacts to sensitive land uses, ecological resources, and cultural features, while taking into consideration the engineering and construction needs of the project. The Applicant's study area focused on the existing Glencoe-Speidel 69 kV Transmission Line right-of-way and the immediate area. The Applicant identified the Village of Bethesda as a constrained focus area based on the proximity of several residences and outbuildings near the existing centerline.

The Applicant developed four study segments within the Bethesda focus area. From among these four, the Applicant selected the "rebuild segment" that follows the existing line along the north side of Noon Road as its Preferred Route within the Bethesda focus area. This segment would have a narrower 50 foot right-of-way instead of 100 feet, lessening impacts to surrounding land use and resources. Outside of the Bethesda focus area, the Preferred Route would be offset from the existing centerline by 35 feet. The Alternate Route would follow the existing centerline for its entire length. The Preferred Route would avoid potential reliability issues associated with extensive outages necessitated by construction on the existing centerline.

Minimizing Impacts

Because this project is proposed as a rebuild of an existing 69 kV line, potential impacts are generally limited to those associated with an existing and expanded utility right-of-way. While both routes are viable, they each have issues unique to one another, and no route is without impact. Staff has analyzed each route and concluded that potential impacts are expected to be less for the Preferred Route.

The Preferred Route was designed to avoid several encroaching structures into the existing 69kV right-of-way, but requires more tree clearing than the Alternate Route due to new right-of-way acquisition. The number of properties crossed, and number of residences within 1,000 feet of either route are very similar. Likewise, agricultural impacts and potential wetland and stream crossing are similar for both routes.

The Preferred Route would allow the Applicant to construct the project while keeping the existing 69 kV transmission line in service, lessening safety and reliability concerns. Because of necessary outage constraints, the Alternate Route would have to be constructed in segments. Thus it would take more than twice as much time to construct the Alternate Route than the Preferred Route.

Therefore, Staff concludes that the Preferred Route represents the minimum adverse environmental impact when compared to the Alternate Route.

Recommended Findings

Staff recommends that the Board find that the Preferred Route represents the minimum adverse environmental impact, and therefore complies with the requirements specified in R.C. 4906.10(A)(3), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(4)

ELECTRIC GRID

Pursuant to R.C. 4906.10(A)(4), the Board must determine that the proposed electric facilities are consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facilities will serve the interests of electric system economy and reliability. The purpose of this section is to evaluate the impact of integrating the proposed facility into the existing regional transmission grid.

The Applicant proposes that the existing 69 kV transmission line, which was constructed in the 1940s, will be replaced with a 12.7-mile single-circuit 138 kV transmission line. The facility would begin at the existing Speidel Station and terminate at the existing Glencoe Station. The proposed facility will initially be operated at 69 kV and increased to 138 kV as load increases.

The Applicant states the proposed facility should increase reliability and allow for future load growth by replacing the existing deteriorating structures which have reached their end of service life and would not meet National Electric Safety Code clearance standards for an upgraded 138 kV conductor. In addition, the existing conductors are made of copper and have deteriorated.

AEP Ohio Transco Planning Criteria

AEP Ohio Transco follows internal transmission planning reliability criteria to plan their system. These criteria are required by the Federal Regulatory Energy Commission (FERC) and are filed as part of the annual FERC Form No. 715 filing. The criteria must comply with NERC Reliability Standards and PJM Interconnection, LLC (PJM) planning and operating manuals for the bulk electric system. The proposed project is designed to meet AEP Ohio Transco's planning criteria. The figure below highlights a portion of AEP Ohio Transco's planning criteria.^{19, 20}

AEP TRANSMISSION PLANNING RELIABILITY CRITERIA		
System Condition	Voltage Performance	Thermal Performance
Normal	95% - 105% of nominal voltage	No facility may exceed its normal rating
Contingency (single & multiple)	92% - 105% of nominal voltage Voltage deviation from system normal of 8% or greater is not acceptable	No facility may exceed its emergency rating

NERC Planning Criteria

NERC is responsible for the development and enforcement of the federal government's approved Reliability Standards, which are applicable to all owners, operators, and users of the bulk power system. As an owner, operator, and/or user of the bulk power system, the Applicant is subject to compliance with various NERC Reliability Standards, including but not limited to those related to transmission planning for contingency events.

19. "Transmission Planning Reliability Criteria - AEP PJM," American Electric Power, accessed October 24, 2018, <https://www.aep.com/about/codeofconduct/OASIS/TransmissionStudies>.

20. "Form No. 715 - Annual Transmission Planning and Evaluation Report," Federal Regulatory Energy Commission, accessed October 24, 2018, <https://www.ferc.gov/docs-filing/forms/form-715/overview.asp>.

PJM Interconnection

The proposed project was submitted to PJM as a supplemental project and reviewed at the PJM Subregional RTEP Committee - Western meeting on July 26, 2016. PJM assigned the project upgrade ID S1158. The construction status of the transmission project can be tracked on PJM's website.^{21, 22}

Customer Outages

AEP Ohio Transco reported that during the years 2012 through 2017 the existing line has experienced 24 momentary outages (4.8 per year) and 8 sustained outages (1.6 per year). The Applicant states the proposed facility should decrease outages and improve reliability.

Conclusion

The Applicant provided information demonstrating the proposed project would improve reliability by eliminating the existing 80-year-old transmission line and replacing it with a single-circuit 138 kV transmission line. The proposed facility is consistent with plans for expansion of the regional transmission grid.

Recommended Findings

Staff recommends that the Board find that the proposed facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems, and that the facility would serve the interests of electric system economy and reliability. Therefore, Staff recommends that the Board find that the facility complies with the requirements specified in R.C. 4906.10(A)(4), provided that any certificate issued by the Board for the proposed facilities include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

21. PJM Interconnection, "7.26.2016 - Subregional RTEP Committee – Western," accessed November 24, 2018, <http://pjm.com/committees-and-groups/committees/srrtep-w.aspx>.

22. PJM Interconnection, "Transmission Construction Status," accessed October 24, 2018, <https://pjm.com/planning/services-requests/interconnection-queues.aspx>.

Considerations for R.C. 4906.10(A)(5)

AIR, WATER, SOLID WASTE, AND AVIATION

Pursuant to R.C. 4906.10(A)(5), the facility must comply with Ohio law regarding air and water pollution control, withdrawal of waters of the state, solid and hazardous wastes, and air navigation.

Air

Air quality permits are not required for construction of the proposed facility. However, fugitive dust rules adopted under R.C. Chapter 3704 may be applicable to the construction of the proposed facility. The Applicant would control fugitive dust through dust suppression techniques such as irrigation, mulching, or application of tackifier resins. These methods of dust control are sufficient to comply with fugitive dust rules.

Water

Neither construction nor operation of the proposed facility would require the use of significant amounts of water. Therefore, the requirements under R.C. 1501.33 and 1501.34 are not applicable to this project. The Applicant would seek coverage, if needed, under the U.S. Army Corps of Engineers Nationwide Permit 12 for Utility Line Activities for surface water impacts associated with the proposed transmission line.

The Applicant intends to submit a Notice of Intent for coverage under the Ohio EPA's NPDES general permit for stormwater discharges associated with construction activities. The Applicant would submit a SWPPP to the Ohio EPA as part of the NPDES permit. This SWPPP would include a detailed construction access plan and indicate BMP for construction activities that minimize erosion-related impacts to streams and wetlands. The Applicant has committed to identify wetlands, streams, and other environmentally sensitive areas before commencement of clearing or construction. The Applicant has also stated that no construction or access would be permitted in these areas unless clearly specified in the construction plans and specifications, thus minimizing any clearing-related disturbance to surface water bodies. With these provisions, construction of this facility would comply with the requirements set forth under R.C. Chapter 6111.

Solid Waste

Debris generated during construction would consist of items such as conductor scrap, construction material packaging, including cartons, boxes, insulator crates, conductor reels, wrapping; and used stormwater erosion control materials. Materials with salvage value would include clearance poles and conductor reels. All construction-related debris would be disposed of in accordance with state and federal requirements.

Any contaminated soils discovered or generated during construction would be handled in accordance with applicable regulations. The Applicant intends to have a Spill Prevention Plan in place and would follow the Spill Prevention Plan for any spill cleanup. The Applicant's solid waste disposal plans comply with solid waste disposal requirements set forth in R.C. Chapter 3734.

Aviation

The height of the tallest above ground structure of the transmission line and construction equipment would be approximately 180 feet. According to the Federal Aviation Administration (FAA), the closest public-use airports are Alderman, Barnesville-Bradfield, Harrison County, Marshall County, Monroe County, Salt Fork Lodge, and Wheeling Ohio County airports which are all between 3 and 20 miles from the proposed transmission line. The closest heliport is Bannock, which is approximately 6 miles away. Upon completion of the final design, the Applicant will consult with the FAA and the ODOT Office of Aviation to determine if a Notice of Construction or Alteration or other permitting is required.

In accordance with R.C. 4906.10(A)(5), Staff contacted the ODOT Office of Aviation during the review of this application in order to coordinate review of potential impacts of the facility on local airports. As of the date of this filing, no such concerns have been identified.

All Staff recommendations for the requirements discussed in this section of the *Staff Report of Investigation* are included under the **Air, Water, Solid Waste, and Aviation Conditions** heading of the Recommended Conditions of Certificate section.

Recommended Findings

Staff recommends that the Board find that the proposed facility complies with the requirements specified in R.C. 4906.10(A)(5), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(6)

PUBLIC INTEREST, CONVENIENCE, AND NECESSITY

Pursuant to R.C. 4906.10(A)(6), the Board must determine that the facility will serve the public interest, convenience, and necessity.

Public Interaction

The Applicant hosted a public informational meeting for this project. Attendees were provided the opportunity to speak with representatives of the Applicant about the proposed project, view proposed route maps, and provide feedback regarding potential routes.

The Applicant served copies of the complete application on officials representing Belmont County; Goshen, Smith, and Warren townships; the villages of Belmont and Bethesda; and the Belmont County Soil and Water Conservation District. The Applicant also sent hard copies of the application to the Belmont County District Library and the Bethesda Public Library. Copies of the complete application are available for public inspection at the offices of the PUCO and online at <http://opsb.ohio.gov>, and are available upon request from the Applicant.

The Applicant maintains a website at <http://aepttransmission.com/ohio/glencoe-speidel> that provides details about the project. Members of the public may contact the Applicant's project outreach specialist with questions or concerns during any phase of the project. The Applicant has committed to log all comments provided through its public interaction program and to share them with Staff. The Applicant has also committed to notify affected landowners or tenants by mail or telephone, or in person, at least seven days prior to the start of any construction activities. Staff recommends conditions requiring the Applicant to develop and provide to Staff a public information program that informs affected property owners and tenants of the nature of the project and a complaint resolution procedure to address potential public grievances resulting from project construction and operation.

The Board will conduct a local public hearing and an adjudicatory hearing for this proceeding. The local public hearing, at which the Board will accept written or oral testimony from any person, is scheduled for November 29, 2018, at 6:00 p.m. at the Ohio University Eastern Campus, 45425 National Road West, Shannon Hall, Room 219, St. Clairsville, Ohio 43950. The adjudicatory hearing is scheduled for December 12, 2018, at 10 a.m. at the offices of the Public Utilities Commission of Ohio, 180 East Broad Street, Hearing Room 11-C, Columbus, Ohio 43215

As of the filing of this Staff Report, the Board has not received any public comments or motions to intervene in this case.

Electromagnetic Fields

Electric transmission lines, when energized, generate electromagnetic fields (EMF). Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. There have been concerns, however, that EMF may have impacts on human health.

Because these concerns exist, the Applicant has computed the EMF associated with the new circuits.²³ The fields were computed based on the maximum loadings of the lines, which would

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lead to the highest EMF values that might exist along the proposed transmission line. Daily current load levels normally operate below the maximum load conditions, thereby further reducing nominal EMF values.

The electric field is a function of the voltage, the line configuration, and the distance from the transmission lines. Electric fields are produced by voltage or electric charge. For example, a plugged in lamp cord produces an electric field, even if the lamp is turned off. The electric field for this transmission line would be 0.12 kV/meter or less. Electric fields are easily shielded by physical structures such as the walls of a house, foliage, etc.

Magnetic fields are a function of the electric current, the configuration of the conductors, and the distance from the transmission lines. The magnetic fields for this project are estimated at the right-of-way edge to be less than 79.6 milligauss. The magnetic field output is comparable to that of common household appliances. A list of typical magnetic fields from household items, as well as the maximum magnetic field scenarios for this facility, is in the application.²⁴ The Applicant states that the transmission facilities would be designed according to the requirements of the National Electric Safety Code.

Recommended Findings

Staff recommends that the Board find that the proposed facility would serve the public interest, convenience, and necessity, and therefore complies with the requirements specified in R.C. 4906.10(A)(6), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

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Considerations for R.C. 4906.10(A)(7)

AGRICULTURAL DISTRICTS

Pursuant to R.C. 4906.10(A)(7), the Board must determine the facility's impact on the agricultural viability of any existing agricultural district land within the Preferred and Alternate routes of the proposed utility facility. The agricultural district program was established under R.C. Chapter 929. Agricultural district land is exempt from sewer, water, and electrical service tax assessments.

Agricultural land can be classified as an agricultural district through an application and approval process that is administered through local county auditors' offices. Eligible land must be devoted exclusively to agricultural production or be qualified for compensation under a land conservation program for the preceding three calendar years. Furthermore, eligible land must be at least 10 acres or produce a minimum average gross annual income of \$2,500.

The Preferred and Alternate routes would include approximately 35 acres and approximately 40 acres, respectively, of agricultural land. The area of agricultural land impacted by the project is expected to be no more than the area currently impacted by existing facilities. The majority of agricultural land to be impacted is designated as pasture/hay field. Some row crop fields would be impacted. According to the Applicant's research of county records, the Preferred and Alternate route crosses two parcels with the agricultural district designation.

The Applicant would take measures to minimize impacts to field operations, irrigation, agricultural and field drainage systems associated with agricultural lands that would occur as a result of construction, operation, and maintenance of the proposed project. Construction would only interrupt field operations for a relatively short duration. The Applicant stated it would coordinate with landowners to mitigate any impact to irrigation systems. Field drainage systems damaged by construction activities would be repaired by the Applicant. Because this project involves the replacement of existing transmission facilities in the same general location, the viability of agricultural district land is not expected to have any increased impacts. The Applicant has stated mitigation procedures for damage to crops and land are outlined in the individual easement agreements. Structures would be located, where feasible, at the edge of fields, and excavated top soil would be segregated and stockpiled. Top soil would also be restored to original conditions unless otherwise specified by the affected land owners. According to the Applicant, no agricultural structures are anticipated to be impacted by this project.

Recommended Findings

Staff recommends that the Board find that the impact of the proposed facility on the viability of existing agricultural land in an agricultural district has been determined, and therefore complies with the requirements specified in R.C. 4906.10(A)(7), provided that any certificate issued by the Board for the proposed facility include the conditions specified in the section of this *Staff Report of Investigation* entitled Recommended Conditions of Certificate.

Considerations for R.C. 4906.10(A)(8)

WATER CONSERVATION PRACTICE

Pursuant to R.C. 4906.10(A)(8), the proposed facility must incorporate maximum feasible water conservation practices, considering available technology and the nature and economics of the various alternatives.

The facility may require the use of minimal amounts of water for dust control and for concrete foundations during construction. However, the transmission line would not require the use of any water during operation. Therefore, the facility would comply with water conservation practice as specified under R.C. 4906.10(A)(8).

Recommended Findings

Staff recommends that the Board find that the proposed facility would incorporate maximum feasible water conservation practices, and therefore complies with the requirements specified in R.C. 4906.10(A)(8).

IV. RECOMMENDED CONDITIONS OF CERTIFICATE

Following a review of the application filed by AEP Ohio Transco, and the record compiled to date in this proceeding, Staff recommends that a number of conditions become part of any certificate issued for the proposed facility. These recommended conditions may be modified as a result of public or other input received subsequent to the issuance of this report. At this time, Staff recommends the following conditions:

GENERAL CONDITIONS

Staff recommends the following conditions to ensure conformance with the proposed plans and procedures as outlined in the case record to date, and to ensure compliance with all conditions listed in this Staff Report:

- (1) The facility shall be installed on the Applicant's Preferred Route, utilizing the equipment, construction practices, and mitigation measures as presented in the application filed on June 13, 2018, and further clarified by recommendations in this *Staff Report of Investigation*.
- (2) The Applicant shall conduct a preconstruction conference prior to the start of any construction activities. Staff, the Applicant, and representatives of the prime contractor and/or subcontractors for the project shall attend the preconstruction conference. The conference shall include a presentation of the measures to be taken by the Applicant and contractors to ensure compliance with all conditions of the certificate, and discussion of the procedures for on-site investigations by Staff during construction. Prior to the conference, the Applicant shall provide a proposed conference agenda for Staff review to ensure compliance with this condition. The Applicant may conduct separate preconstruction conferences for each stage of construction.
- (3) At least 30 days before the preconstruction conference, the Applicant shall submit to Staff one set of detailed engineering drawings of the final project design, including the facility, temporary and permanent access roads, construction staging areas, and any other associated facilities and access points, so that Staff can determine that the final project design is in compliance with the terms of the Certificate. The final project design shall be provided in hard copy and as geographically referenced electronic data. The final design shall include all conditions of the Certificate and references at the locations where the Applicant and/or its contractors must adhere to a specific condition in order to comply with the Certificate.
- (4) Within 60 days after the commencement of commercial operation, the Applicant shall submit to Staff a copy of the as-built specifications for the entire facility. The Applicant shall provide as-built drawings in both hard copy and as geographically referenced electronic data.
- (5) The certificate shall become invalid if the Applicant has not commenced a continuous course of construction of the proposed facility within five years of the date of journalization of the certificate.
- (6) As the information becomes known, the Applicant shall provide to Staff the date on which construction will begin, the date on which construction was completed, and the date on which the facility begins commercial operation.

- (7) At least 30 days prior to the preconstruction conference, the Applicant shall provide to Staff a complaint resolution procedure to address potential public grievances resulting from project construction and operation. The resolution procedure must provide that the Applicant will work to mitigate or resolve any issues with those who submit either a formal or informal complaint and that the Applicant will immediately forward all complaints to Staff.
- (8) At least 30 days prior to the preconstruction conference, the Applicant shall provide to Staff a copy of its public information program that informs affected property owners and tenants of the nature of the project, specific contact information of Applicant personnel who are familiar with the project, the proposed timeframe for project construction, and a schedule for restoration activities. The Applicant shall give notification to property owners and tenants at least 7 days prior to work on the affected property.
- (9) Prior to the commencement of construction activities in areas that require permits or authorizations by federal or state laws and regulations, the Applicant shall obtain and comply with such permits or authorizations, including any permits necessary for aviation clearance. The Applicant shall provide copies of permits and authorizations, including all supporting documentation, to Staff within seven days of issuance or receipt by the Applicant. The Applicant shall provide a schedule of construction activities and acquisition of corresponding permits for each activity at the preconstruction conference.

SOCIOECONOMIC CONDITIONS

Staff recommends the following conditions to address the impacts discussed in the **Socioeconomic Impacts** section of the Nature of Probable Environmental Impact:

- (10) Prior to the commencement of construction, the Applicant shall finalize coordination of the assessment of potential effects of the proposed facility on cultural resources, if any, with Staff and the Ohio Historic Preservation Office (OHPO). If the resulting coordination discloses a find of cultural or archaeological significance, or a site that could be eligible for inclusion in the National Register of Historic Places, then the Applicant shall submit a modification or mitigation plan to Staff. Any such mitigation effort, if needed, shall be developed in coordination with the OHPO and submitted to Staff for review that it complies with this condition.

ECOLOGICAL CONDITIONS

Staff recommends the following conditions to address the impacts discussed in the **Ecological Impacts** section of the Nature of Probable Environmental Impact:

- (11) Prior to construction, the Applicant shall provide a copy of any floodplain permit required for construction of this project, or a copy of correspondence with the floodplain administrator showing that no permit is required.
- (12) The Applicant shall adhere to seasonal cutting dates of October 1 through March 31 for removal of any trees greater than or equal to three inches in diameter, unless coordination efforts with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) allows a different course of action.

- (13) The Applicant shall coordinate with USFWS regarding potential disturbance to Indiana bat or northern long-eared bat hibernacula such as caves or abandoned mines to determine if fall or spring portal surveys are warranted.
- (14) The Applicant shall contact Staff, the ODNR, and the USFWS within 24 hours if state or federal threatened or endangered species are encountered during construction activities. Construction activities that could adversely impact such plants or animals shall be halted until an appropriate course of action has been agreed upon by the Applicant, Staff, and the ODNR in coordination with the USFWS. Nothing in this condition shall preclude agencies having jurisdiction over the facility with respect to threatened or endangered species from exercising their legal authority over the facility consistent with law.
- (15) The Applicant shall provide a construction access plan for review prior to the preconstruction conference. The plan shall consider the location of streams, wetlands, wooded areas, and sensitive plant species, as identified by the ODNR Division of Wildlife, and explain how impacts to all sensitive resources will be avoided or minimized during construction, operation, and maintenance. The plan shall include the measures to be used for restoring the area around all temporary access points, and a description of any long-term stabilization required along permanent access routes.

PUBLIC SERVICES, FACILITIES, AND SAFETY CONDITIONS

Staff recommends the following conditions to address the requirements discussed in the **Public Services, Facilities, and Safety** section of the Nature of Probable Environmental Impact:

- (16) Prior to commencement of construction activities that require transportation permits, the Applicant shall obtain all such permits. The Applicant shall coordinate with the appropriate authority regarding any temporary or permanent road closures, lane closures, road access restrictions, and traffic control necessary for construction and operation of the proposed facility.
- (17) General construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m., or until dusk when sunset occurs after 7:00 p.m. Impact pile driving, hoe ram, and blasting operations, if required, shall be limited to the hours between 10:00 a.m. to 5:00 p.m., Monday through Friday. Construction activities that do not involve noise increases above ambient levels at sensitive receptors are permitted outside of daylight hours when necessary. The Applicant shall notify property owners or affected tenants of upcoming construction activities including potential for nighttime construction activities.

AIR, WATER, SOLID WASTE, AND AVIATION CONDITIONS

Staff recommends the following conditions to address the requirements discussed in the **Air, Water, Solid Waste, and Aviation** section of the Nature of Probable Environmental Impact:

- (18) The Applicant shall remove all construction staging area and access road materials after completion of construction activities, as weather permits, unless otherwise directed by the landowner. Impacted areas shall be restored to preconstruction conditions in compliance with the Ohio Environmental Protection Agency (Ohio EPA) General National Pollutant

Discharge Elimination System permit(s) obtained for the project and the approved Stormwater Pollution Prevention Plan created for this project.

- (19) The Applicant shall not dispose of gravel, or any other construction material, during or following construction of the facility by placing such material on agricultural land. All construction debris and all contaminated soil shall promptly be removed and properly disposed of in accordance with Ohio EPA regulations.



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180 E. Broad St.
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Commission of Ohio Docketing Information System on

11/14/2018 12:16:00 PM

in

Case No(s). 18-0279-EL-BTX

Summary: Staff Report of Investigation electronically filed by Docketing Staff on behalf of PUCO Staff