

FILE

**AMERICAN TRANSMISSION SYSTEMS, INCORPORATED  
A FIRSTENERGY COMPANY**

**LETTER OF NOTIFICATION**

**WEST AKRON-PLEASANT VALLEY EAST 138 kV  
TRANSMISSION LINE TAP TO BATH SUBSTATION  
PROJECT**

**OPSB CASE NO.: 14-1309-EL-BLN**

**August 1, 2014**

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PUCO

American Transmission Systems, Incorporated  
76 South Main Street  
Akron, Ohio 44308

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**LETTER OF NOTIFICATION  
WEST AKRON-PLEASANT VALLEY EAST 138 kV  
TRANSMISSION LINE TAP TO BATH SUBSTATION PROJECT**

The following information is being provided in accordance with Ohio Administrative Code Rule 4906-11-01: Letter of Notification Requirements of the Rules of the Ohio Power Siting Board ("Board").

**4906-11-01 (B): LETTER OF NOTIFICATION REQUIREMENTS**

**4906-11-01 (B) (1) a: Name and Reference Number**

Name of Project: West Akron-Pleasant Valley East 138 kV Transmission Line Tap to Bath Substation Project ("Project").

2014 LTFR Reference: This Project is not included in FirstEnergy Corp. 2014 Long-Term Forecast Report submitted to the Public Utility Commission of Ohio in Case Number 14-0625-EL-FOR.

**4906-11-01 (B) (1) b: Brief Description of Project**

In this Project, American Transmission Systems, Incorporated ("ATSI"), a FirstEnergy company, is proposing to extend the existing West Akron-Pleasant Valley East 138 kV Transmission Line as a tap approximately 0.02 mile (118 feet) to Bath Substation.

As part of the project, two (2) new switch structures will be placed in-line in the existing West Akron-Pleasant Valley East 138 kV Transmission Line. Also, one (1) *new corner dead end structure* will be installed, and one (1) new static structure will be installed as part of the tap. The General Location of the Project is shown in Exhibit 1. The general layout of the Project is shown in Exhibit 2. Diagrams of the proposed structure types are shown in Exhibits 3 through 5. The Project is located on the north side of Shade Road immediately west of Interstate 77 in Bath Township, Summit County, OH.

**4906-11-01 (B) (1) c: Why the Project Meets the Requirements for a Letter of Notification**

The Project meets the requirements for a Letter of Notification because the Project is within the types of projects defined by Items (1)(c) and (4)(a) of the Interim Application Requirement Matrix for Electric Power Transmission Lines in the Finding and Order issued on September 4, 2012, as subsequently modified on December 17, 2012, in Case No. 12-1981-GE-BRO, which modified Appendix A of Admin. Code Rule 4906-1-01. These items state:

- (1) Rerouting or extension or new construction of single or multiple circuit electric power transmission(s) as follows:*
  - (c) Line(s) one hundred twenty-five kV and above, and less than three hundred kV, and not greater than 0.2 miles in length.*
- (4) Replacing electric power transmission line structure(s) with a different type of structure(s) or adding structure(s) within an existing electric power transmission line and:*
  - (a) Two miles or less of new right-of-way is required.*

The proposed Project extends the existing West Akron-Pleasant Valley East 138 kV Transmission Line approximately 0.02 mile (118 feet) to Bath Substation and includes the installation of new structures.

**4906-11-01 (B) (2): Need for the Project**

The Project is being installed to connect the new Bath Substation to the transmission grid. Bath Substation is a distribution substation that is being installed to support removing an existing distribution substation, Ira Substation, from service. Ira Substation is being removed from service to improve system reliability and to address flooding. The Project is one of two separate, but related, Letter of Notification applications for transmission line projects for transmission connections to distribution substations needed to replace the Ira Substation.

**4906-11-01 (B) (3): Location Relative to Existing or Proposed Lines**

The location of the Project relative to existing or proposed transmission lines is shown in the FirstEnergy System Facilities map, "TL-MAP-2," included as part of the confidential portion of the FirstEnergy Corp. 2014 Long-Term Forecast Report. This map was submitted to the PUCO in Case No. 14-0625-EL-FOR under Rule 4901:5-5:04 (C) of the Ohio Administrative Code. The map is incorporated by reference only. This map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations, including the location of the West Akron-Pleasant Valley East 138 kV transmission line. The project area is located approximately 10¾ inches (11 by 17 inch printed version) from the left edge of the map and 3½ inches (11 by 17 inch printed version) from the top of the map. The general location and layout of the Project is shown on Exhibit 1.

**4906-11-01 (B) (4): Alternatives Considered**

Several solutions were considered for modifying or removing the Ira Substation from service. The Ira Substation is a distribution substation that has been subject to flooding. Installation of additional distribution facilities, including the installation of a new distribution substation, i.e. the Bath Substation, were selected as the optimal solution. Given the close proximity of the Bath Substation to the West Akron-Pleasant Valley 138 kV Transmission Line, no other alternatives for the proposed Project were identified that extended a transmission line tap such a short distance to the Bath Substation. As a result, no other alternatives to the Project were identified that had fewer expected impacts.

**4906-11-01 (B) (5): Construction Schedule**

Construction of the Project is expected to begin as early as September 15, 2014 and be completed by October 2, 2014.

**4906-11-01 (B) (6): Area Map**

Exhibit 1 depicts the general location of the Project. This exhibit provides a partial copy of the United States Geologic Survey, West Richfield, Ohio Quad, Map ID 41081-B6. To locate and view the project site from the Columbus, Ohio area travel

north on I-71 for approximately 108 miles. Take exit 218 for OH-18 toward Medina/Akron. Turn right onto OH-18 E/Medina Road, and travel for approximately 5.5 miles. Turn left onto N Medina Line Road and travel for approximately 2.3 miles. Turn right onto W Bath Road and travel for approximately 2.6 miles. Turn left onto Cleveland-Massillon Road and travel for approximately half a mile. Take the first right onto Shade Road, and travel approximately half a mile. Bath Substation will be located on the left.

**4906-11-01 (B) (7): Property Owner List**

The Project is located wholly in existing right-of-way on a FirstEnergy owned in fee property. The property information is below:

| <b>Parcel Number(s)</b> | <b>Property Owner</b>                      | <b>Easement(s) Obtained</b> |
|-------------------------|--|-----------------------------|
| BA0001603005000         | Ohio Edison Company, a FirstEnergy Company | Owned in Fee                |

**4906-11-01 (C): TECHNICAL FEATURES OF THE PROJECT**

**4906-11-01 (C) (1): Operating Characteristics**

The transmission line construction will have the following characteristics:

Voltage: 138 kV  
 Conductors: 336.4 kcmil 26/7 ACSR  
 Static wire: 3 # 6 Alumoweld  
 Insulators: Polymer  
 Structure Types: Exhibit 3: Corner Deadend  
 Exhibit 4: Typical Switch Structure  
 Exhibit 5: Static Deadend

**4906-11-01 (C) (2) a: Calculated Electric and Magnetic Fields**

The following table itemizes the line loading of West Akron - Pleasant Valley East 138 kV Transmission Line Tap to Bath Substation Project. The normal line loading represents FirstEnergy's peak system load for the transmission lines. The

emergency line loading represents the maximum line loading under contingency operation. The winter rating is based on the continuous maximum conductor ratings (MCR) of the circuits for the single conductors per phase 795 kcmil 26/7 ACSR conductors and an ambient temperature of zero degrees centigrade (32 deg. F), wind speed of 1.3 miles per hour, and a circuit design operating temperature of 100 degrees centigrade (212 deg. F).

| Line Name   | Normal Loading Amps | Emergency Loading Amps | Winter Rating Amps |
|---|---------------------|------------------------|--------------------|
| West Akron - Pleasant Valley East 138 kV Transmission Line Tap To Bath Substation Project | 270                 | 475                    | 1099               |

The following calculations provide an approximation of the magnetic and electric fields strengths of the West Akron - Pleasant Valley East 138 kV Transmission Line Tap to Bath Substation Project in the right-of-way. The calculations provide an approximation of the electric and magnetic field levels based on specific assumptions utilizing the EPRI EMF Workstation 2009 program software. This program software assumes the input transmission line configuration is located on flat terrain. Also, a balanced, three-phase circuit loading is assumed for the transmission circuit. The model utilizes the normal, emergency, and winter rating of the transmission lines.

| EMF CALCULATIONS  |                         | Electric Field<br>kV/meter | Magnet Field<br>mGauss |
|-------------------|-------------------------|----------------------------|------------------------|
| Normal Loading    | Under Lowest Conductors | 0.72                       | 18.50                  |
|                   | At Right-of-Way Edges   | 0.36/0.55                  | 10.4/12.6              |
| Emergency Loading | Under Lowest Conductors | 0.72                       | 32.54                  |
|                   | At Right-of-Way Edges   | 0.36/0.55                  | 18.4/22.4              |
| Winter Rating     | Under Lowest Conductors | 0.72                       | 75.29                  |
|                   | At Right-of-Way Edges   | 0.36/0.55                  | 42.5/51.7              |

## 4906-11-01 (C) (2) b: EMF Discussion

### Background Information

Electric and magnetic fields (EMFs) are naturally occurring in the environment and can be found in the Earth's interior and in the human body. EMFs are generated essentially anywhere where there is a flow of electricity, including electrical appliances and power equipment. Electric fields are associated with the voltage of the source; magnetic fields are associated with the flow of current in a wire. The strength of these fields decreases rapidly with distance from the source. EMFs associated with electricity use are not disruptive to cells like x-rays or ultraviolet rays from the sun. EMF fields are thought to be too weak to break molecules or chemical bonds in cells. Scientists have conducted extensive research over the past two decades to determine whether EMFs are associated with adverse health effects, and although the research and debate of this issue continues, at this time there is no firm basis to conclude that EMFs cause adverse health effects. A number of independent scientific panels have reviewed the research and have stated that there is no basis to conclude that EMFs cause adverse health effects nor has it been shown that levels in everyday life are harmful.

### Recent Developments

As a part of the National Energy Policy Act of 1992, the Electric and Magnetic Fields Research and Public Information Dissemination (EMF RAPID) program was initiated within the five-year effort under the National EMF Research Program. The culmination of this five-year effort resulted in a final RAPID Working Group report, which was released for public review in August 1998. The Director of the National Institute of Environmental Health Sciences (NIEHS) then prepared a final report to Congress after receiving public comments. The NIEHS' Director's final report, released to Congress on May 4, 1999, concluded that extremely low frequency electric and magnetic fields (ELF-EMF) exposure cannot be recognized at this time as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard. The Director further stated that the conclusion of this report was insufficient to warrant aggressive regulatory concern.

### Sources for Additional Information

The following websites sponsored by federal agencies or other organizations provide additional information on EMF:

- Centers for Disease Control/National Institute for Occupational Safety and Health: <http://www.cdc.gov/niosh/topics/emf/>
- National Institute of Environmental Health Sciences (NIEHS) EMF Rapid Program: <http://www.niehs.nih.gov/health/topics/agents/emf/>

#### **4906-11-01 (C) (3): Estimated Costs**

The following are the estimated capital costs by FERC Accounts for the proposed project:

| <u>Account</u>                     | <u>Cost</u> |
|------------------------------------|-------------|
| 350 Land Rights, Engineering, etc. | \$ 257,220  |
| 355 Poles and Fixtures             | \$ 64,130   |
| 356 Overhead Conductors & Devices  | \$ 67,100   |
| <hr/>                              |             |
| Total                              | \$ 388,450  |

#### **4906-11-01 D: SOCIOECONOMIC DATA**

##### **4906-11-01 (D) (1): Land Use**

The Project is located in Bath Township, in Summit County, Ohio. The land use along the route of the line is open field. Based on the U.S. Bureau of Census estimates, the 2010 population of Bath Township was 9,702. The 2010 population of Summit County was 541,781. As the proposed Project involves extending the existing transmission line as a tap, no significant changes or impacts to current land use is anticipated.

##### **4906-11-01 (D) (2): Agricultural Land**

Agricultural land use does not exist through the Project right-of-way.

##### **4906-11-01 (D) (3): Archaeological or Cultural Resources**

As part of ATSI's investigation of the project site, a search of Ohio Historic Preservation Office (OHPO) National Register of Historic Places on-line database was conducted and several historic sites are located within one mile of the Project area. However, given the nature of the Project, it is very unlikely that any



archaeological or cultural resources would be disturbed due to the limited nature of work for the Project. The OHPO database includes all Ohio listings on the National Register of Historic Places, including districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.

**4906-11-01 (D) (4) a: Documentation of Letter of Notification Transmittal**

This Letter of Notification is being provided concurrently to the following officials of the Bath Township, Summit County, Ohio.

**Summit County**

Ilene Shapiro, President  
Summit County Commissioner  
175 South Main Street  
Room 700  
Akron, OH 44308

Russell Pry  
Summit County Executive  
175 South Main Street  
8<sup>th</sup> Floor  
Akron, OH 44308

Frank Comunale  
Summit County Commissioner  
175 South Main Street  
Room 700  
Akron, OH 44308

Alan Brubaker, P.E., P.S.  
Summit County Engineer  
538 E. South Street  
Akron, OH 44311

Kristen Scalise, CPA, CFE  
Summit County Fiscal Officer  
Ohio Building  
175 South Main Street  
Akron, OH 44308

**Bath Township**

Ms. Elaina Goodrich, President  
Bath Township Board of Trustees  
3864 West Bath Road  
Akron, OH 44333

Mr. James Nelson, Vice President  
Bath Township Board of Trustees  
3864 West Bath Road  
Akron, OH 44333

Ms. Becky Corbett  
Bath Township Board of Trustees  
3864 West Bath Road  
Akron, OH 44333

Ms. Sharon Troike  
Fiscal Officer  
3864 West Bath Road  
Akron, OH 44333

Mr. Vito Sinopoli  
Township Administrator  
3864 West Bath Road  
Akron, OH 44333

Copies of the transmittal letters to these officials have been included with the transmittal letter submitting this Letter of Notification to the Ohio Power Siting Board.

**4906-11-01 (D) (4) b: Public Information Program**

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Transmission Line Project as necessary.

**4906-11-01 (D) 5: Current or Pending Litigation**

There is no known current or pending litigation involving this project.

**4906-11-01 (D) 6: Local, State, and Federal Requirements**

There are no known local, state, or federal requirements that must be met prior to commencement of construction of the proposed transmission line project.

**4906-11-01 (E): ENVIRONMENTAL DATA**

**4906-11-01 (E) (1): Endangered, Threatened, and Rare Species Investigation**

As part of the investigation, a request was submitted by AEP to the Ohio Department of Natural Resources-Division of Wildlife (ODNR) on April 23, 2014, to research the presence of any endangered, threatened, or rare species within the project area. The location of ATSI's portion of the Project is included in their submittal. The ODNR's April 29, 2014 response, attached as Exhibit No. 6, indicated that they have records of rare or endangered species within one mile of the identified Project area; but none of these records are within the Project area.

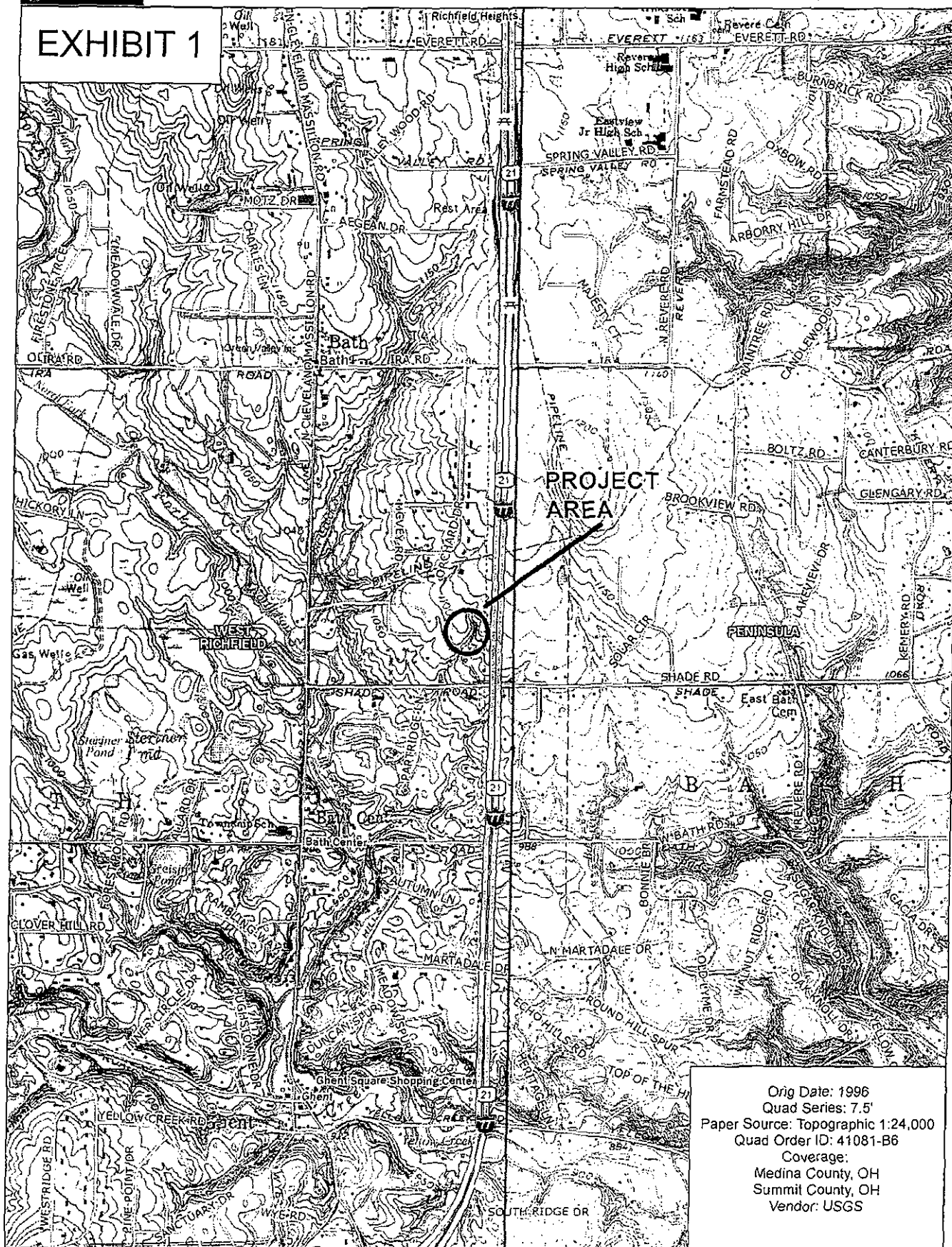
**4906-11-01 (E) (2): Areas of Ecological Concern**

As part of the development of the Bath Substation, Davey Resource Group conducted a Water Resources Delineation for the both the Bath Substation and the Project. A report of the delineation is attached as Exhibit No. 7. This delineation did not identify any streams or wetlands within the Project's right-of-way; therefore no ecological impacts are expected for this Project.

**4906-11-01 (E) (3): Additional Information**

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electric Safety Code as adopted by the Public Utilities Commission of Ohio (PUCO) and will meet all applicable safety standards established by the Occupational Safety and Health Administration.

# EXHIBIT 1



Orig Date: 1996  
 Quad Series: 7.5'  
 Paper Source: Topographic 1:24,000  
 Quad Order ID: 41081-B6  
 Coverage:  
 Medina County, OH  
 Summit County, OH  
 Vendor: USGS

BATH TOWNSHIP  
SUMMIT COUNTY  
STATE OF OHIO

TO HARPER & PLEASANT VALLEY  
SUBSTATIONS

I-77  
SOUTHBOUND

I-77  
NORTHBOUND

BATH MOD  
SUBSTATION

✕ SWITCH STRC.  
(SEE EXHIBIT 4)

✕ STATIC DEADEND STRC.  
(SEE EXHIBIT 5)

✕ CORNER DEADEND STRC.  
(SEE EXHIBIT 3)

HARPER—WEST AKRON 138KV

✕ SWITCH STRC.  
(SEE EXHIBIT 4)

WEST AKRON—PLEASANT VALLEY  
EAST 138KV

SHADE RD

TO WEST AKRON  
SUBSTATION

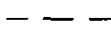
**LEGEND**



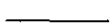
PROPOSED STRUCTURE



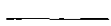
EXISTING STRUCTURE



EXISTING TRANSMISSION LINE



PROPOSED TRANSMISSION LINE



EXISTING ROADS

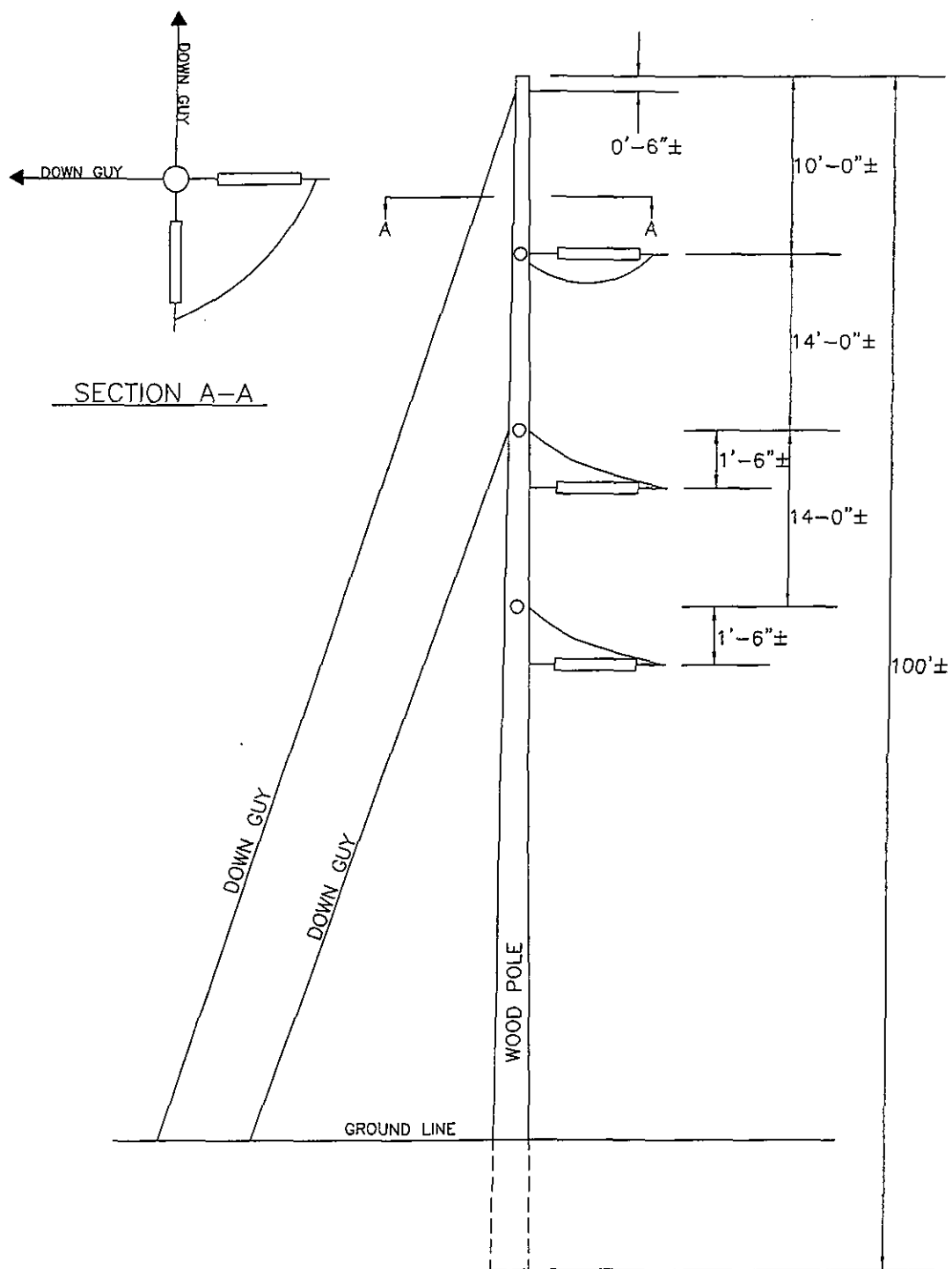
**ATSI**<sup>®</sup>

American Transmission Systems, Inc.  
a subsidiary of Harsco Energy Corp.

WEST AKRON—PLEASANT VALLEY EAST  
138 kV TRANSMISSION LINE TAP TO  
BATH SUBSTATION

GENERAL LAYOUT

EXHIBIT 2



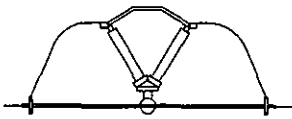
**ATSI**®

American Transmission Systems, Inc.  
a subsidiary of FirstEnergy Corp.

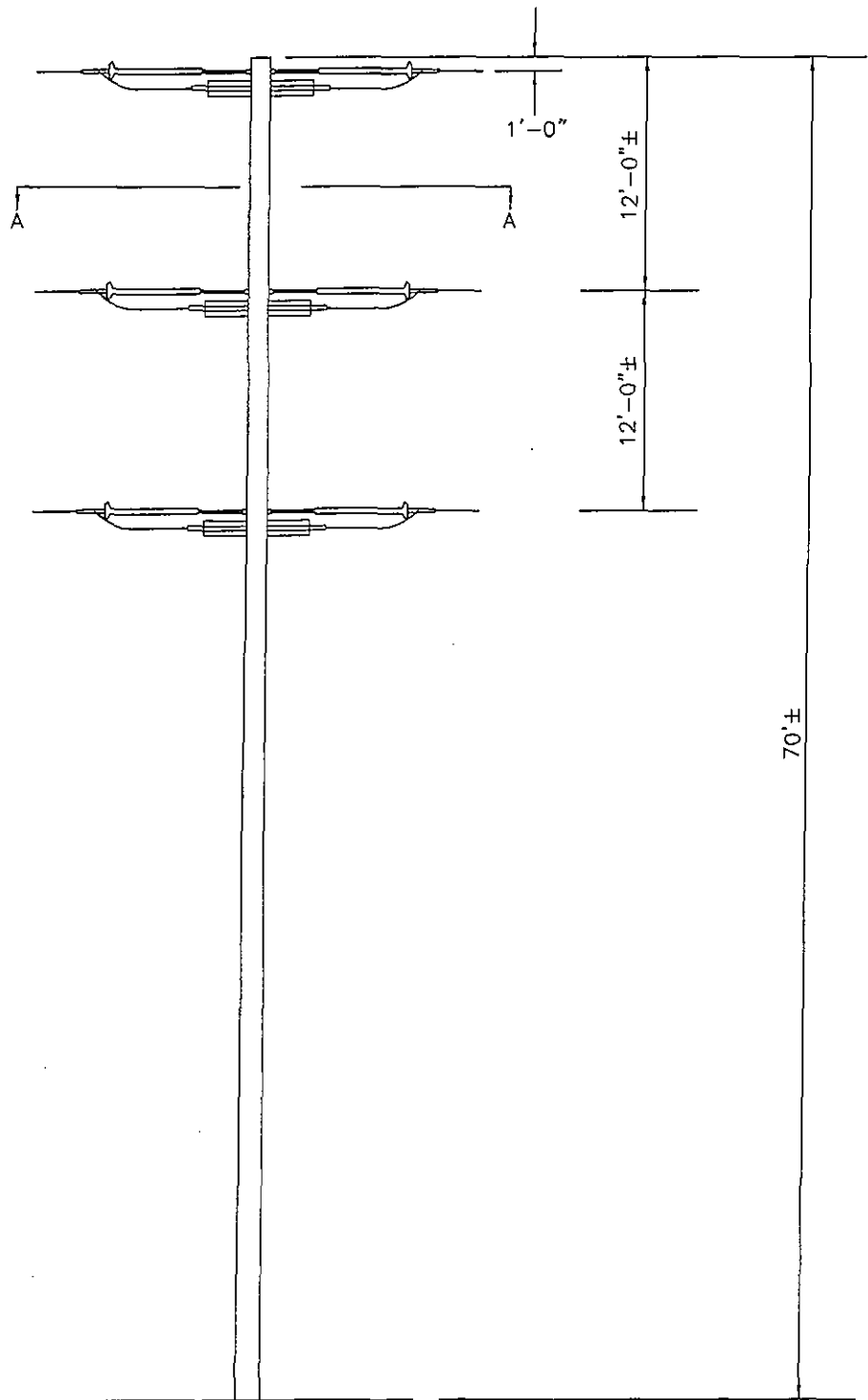
WEST AKRON-PLEASANT VALLEY EAST  
138 kV TRANSMISSION LINE TAP TO  
BATH SUBSTATION

CORNER DEADEND

EXHIBIT 3



SECTION A-A



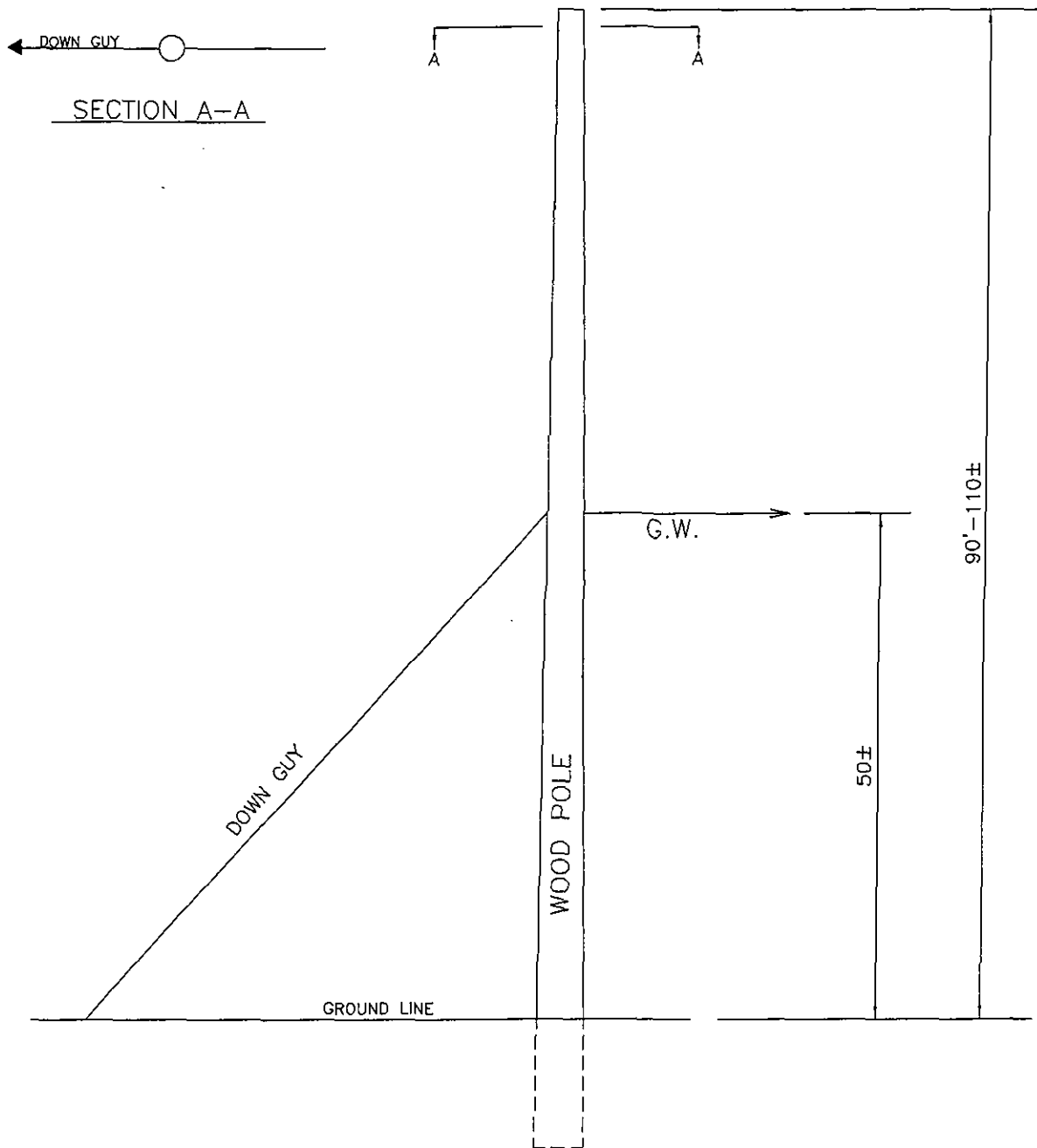
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a subsidiary of FirstEnergy Corp.

WEST AKRON-PLEASANT VALLEY EAST  
138 kV TRANSMISSION LINE TAP TO  
BATH SUBSTATION

TYPICAL SWITCH STRUCTURE

EXHIBIT 4



**ATSI**<sup>®</sup>

American Transmission Systems, Inc.  
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WEST AKRON-PLEASANT VALLEY EAST  
138 kV TRANSMISSION LINE TAP TO  
BATH SUBSTATION

STATIC DEADEND

EXHIBIT 5





# Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEDLER, DIRECTOR

## Ohio Division of Wildlife

Scott Zody, Chief

2045 Morse Rd., Bldg. G  
Columbus, OH 43229-6693  
Phone: (614) 265-6300

Columbus, OH 43229-6693

April 29, 2014

Janice Arch  
FirstEnergy Corporation  
76 South Main Street  
Akron, OH 44308

Dear Ms. Arch

I have reviewed the Natural Heritage Database for the Pleasant Valley-West Akron 138 kV Transmission Line Tap to Bath Substation Project area, including a one mile buffer, in Bath Township, Summit County, Ohio. We have records for rare species and managed areas in your search area. A map showing the location of these elements is provided with this letter.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

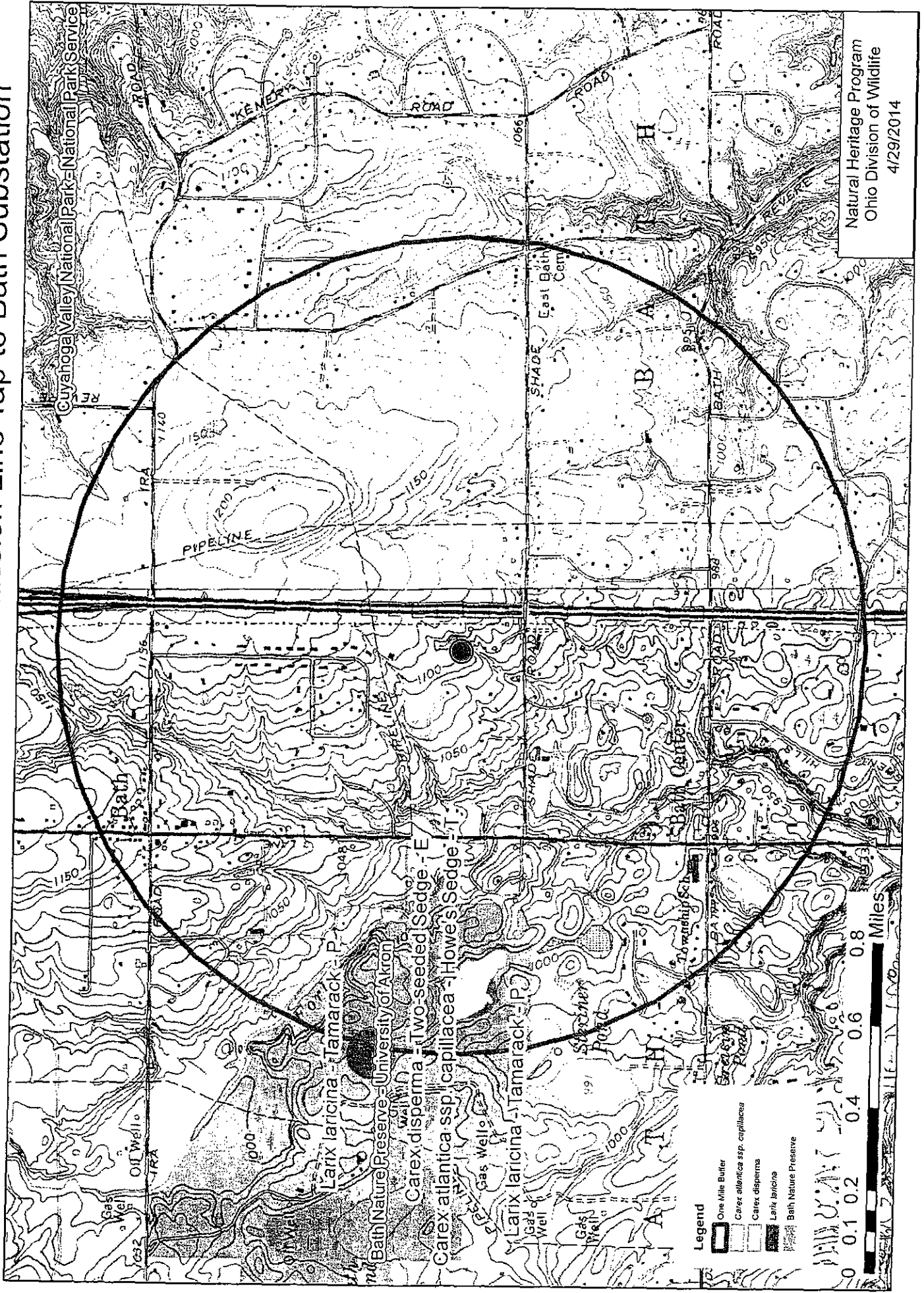
Please contact me at 614-265-6452 if I can be of further assistance.

Sincerely,

A handwritten signature in cursive script that reads "Greg Schneider".

Greg Schneider, Administrator  
Ohio Natural Heritage Program

# Pleasant Valley-West Akron 138 kV Transmission Line Tap to Bath Substation





*A Division of The Davey Tree Expert Company*

April 26, 2012

Corporate Headquarters

1600 North Mantua Street

P.O. Box 5193

Kent, Ohio 44240-5193

330.673.6685

Toll Free 1.800.828.8312

Fax 330.673.0880

Vince Conant  
FirstEnergy Corp.  
Environmental Department  
76 South Main Street  
Akron, Ohio 44308

RE: *Water Resources Delineation—Shade Road Project, Bath Township, Summit County, Ohio*

Dear Mr. Conant:

Enclosed, please find a map showing the results of the water resources delineation for the Shade Road Project. The study area is within a cleared electric transmission line right-of-way. There are no wetlands within the study area. There are two extremely small, ephemeral streams that extend to the western edge of the study area.

If you have any comments regarding our findings, you may contact me at 800-828-8312, ext. 8033 or via e-mail at [todd.crandall@davey.com](mailto:todd.crandall@davey.com). Please let me know if you need any additional information for this site including Headwater Habitat Evaluation Index (HHEI) forms for the ephemeral streams. The AutoCAD drawing can be obtained by contacting Ken Christensen at [ken.christensen@davey.com](mailto:ken.christensen@davey.com). Thank you.

Sincerely,

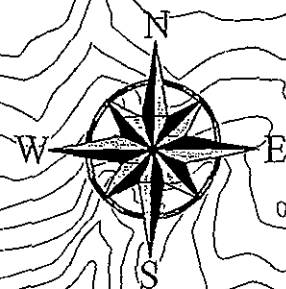
Todd Crandall, Senior Wetlands Biologist  
Natural Resource Consulting

Enclosures

# Attachment A Water Resources Map

|   |  |
|---|--|
| <b>FirstEnergy Corp.</b>                                    |  |
| 3 Acres, Shade Road<br>Bath Township<br>Summit County, Ohio |  |
| Prepared by<br><b>DAVEY</b><br>RESOURCE GROUP               | Data used to produce this<br>map were collected<br>on April 24, 2012 |

- - - - - = Approximate study area
- - - - - = Ephemeral stream (outside study area)
- - - - - = Direction of flow



Shade Road