

12-2630- EL-BLN

September 25, 2012

Ms. Barcy F. McNeal Secretary Docketing Division The Public Utilities Commission of Ohio 180 East Broad Street Columbus, OH 43215-3793

RECEIVED-DOCKETING DIV

2012 SEP 28 PM I2: 19

PUCO

Letter of Notification

East Akron-Sammis 138 kV Transmission Line
Loop To Knox Substation

Case No. 12
-EL-BLN

Dear Ms. McNeal:

In accordance with Rule 4906-11-01 of the Ohio Administrative Code, American Transmission Systems, Incorporated ("ATSI"), transmit one (1) original and eleven (11) copies of the enclosed Letter of Notification for the above captioned project. In this project, ATSI is proposing to install an approximately 1,716 foot long transmission line loop from the existing East Akron-Sammis 138 kV Transmission Line to the existing Knox Substation. As a part the installation of the transmission line loop, five (5) new structures will be installed to accommodate the new loop to the Knox Substation. Both structures will be a single pole transmission line dead end structure. Three (3) new structures will be installed in the new right-of-way for the East Akron-Sammis 138 kV Transmission Line Loop. The Project area is located near the intersection of Township Highway 808 and County Highway 403 in West Township, Columbiana County, Ohio.

Please be advised of the following:

a) Name and address of the applicant:

American Transmission Systems, Incorporated

76 South Main Street Akron, Ohio 44308

b) Name of proposed facilities:

East Akron-Sammis 138 kV Transmission Line

Loop to Knox Substation

This is to certify that the images appearing are an accurate and complete reproduction of a case fired document delivered in the regular course of business.

Technician And Date Processed SEP 9 8 2012

c) Location of proposed facilities:

The Project area is located near the intersection of Township Highway 808 and County Highway 403 in West Township, Columbiana County, Ohio.

d) Description of proposed facilities:

The Project involves installing an approximately 1,716 foot long transmission line loop from ATSI's existing East Akron-Sammis 138 kV Transmission Line to the existing Knox Substation. As a part of installing the transmission line loop, five (5) new structures will be installed to accommodate the new loop to the Knox Substation.

e) Applicant's representative:

Travis M. Turner, Engineer

Energy Delivery Transmission Engineering

FirstEnergy Service Company

5001 NASA Blvd. Fairmont, WV 26554

After docketing this filing, please return one time-stamped copy of the Letter of Notification for our records to us in the enclosed envelope. We have provided a copy of the Letter of Notification by certified mail, with return receipt requested, to each official of the political subdivisions immediately affected by the proposed project as listed in the attached Exhibit 1. Copies of the transmittal letters addressed to the local government representatives of West Township, and Columbiana County are enclosed for your file.

Should the Ohio Power Siting Board desire further information or discussion of this submittal, please contact me at (304) 534-7456.

Sincerely,

Travis M. Turner

Engineer

Energy Delivery Transmission and

how's m. Turner

Substation Design

FirstEnergy Service Company

EXHIBIT 1: OFFICIALS SERVED COPY OF LON

East Akron-Sammis 138 kV Transmission Line Loop to Knox Substation Case No. 12- -EL-BLN

Columbiana County

The Honorable Michael Halleck President, Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432

The Honorable Jim Hoppel Vice President, Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432

The Honorable John Payne Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432 Mr. Bert Dawson, P.E., P.S. Columbiana County Engineer 235 South Market Street Lisbon, OH 44432

Mr. Don Floding Chairman, Columbiana County Planning Commission 7876 B Lincole Place Lisbon, OH 44432

Ms. Scherry Wilson County Clerk, Columbiana County 105 South Market Street Lisbon, OH 44432

West Township

Mr. Herbert Eglie West Township Trustee 8610 Know School Road Minerya, Ohio 44657

Mr. Richard McClellan West Township Trustee 8610 Know School Road Minerva, Ohio 44657 Mr. Dale Lowmiller West Township Trustee 8610 Know School Road Minerva, Ohio 44657

Ms. Susan Hawk Fiscal Officer, West Township 8610 Know School Road Minerva, Ohio 44657



The Honorable Michael Halleck President, Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432

Letter of Notification

East Akron-Sammis 138 kV Transmission Line
Loop to Knox Substation

Case No. 12- -EL-BLN

Dear Mr. Halleck,

In the above captioned project, American Transmission Systems, Incorporated ("ATSI"), a subsidiary of FirstEnergy Corp., is proposing to install an approximately 1,716 foot long transmission line loop from the existing East Akron-Sammis 138 kV Transmission Line to the existing Knox Substation. As a part the installation of the transmission line loop, five (5) new structures will be installed to accommodate the new loop to the existing Knox Substation. The Project area is located near the intersection of Township Highway 808 and County Highway 403 in West Township, Columbiana County, Ohio.

In accordance with the provisions of Ohio Administrative Code ("OAC") Rule 4906-1-01, this project falls within the Ohio Power Siting Board's requirements for a Letter of Notification ("LON"). Therefore, in compliance with OAC 4906-11-01 of the OPSB's Rules and Regulations, we have prepared and filed the attached LON with the OPSB for their review and approval. The LON contains a description of the project, and is provided for your information.

I will be glad to answer your questions concerning this matter. You may contact me at (304) 534-7456.

Sincerely,

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The Honorable Jim Hoppel Vice President, Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432

Letter of Notification

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Sincerely,

Travis M. Turner

Engineer

Energy Delivery Transmission and

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FirstEnergy Service Company

Travio M. Zuner



The Honorable John Payne Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432

Letter of Notification

East Akron-Sammis 138 kV Transmission Line

Loop to Knox Substation

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Dear Mr. Payne,

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Sincerely,

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Engineer

Energy Delivery Transmission and

Substation Design

FirstEnergy Service Company

Travis M. Turner_



Mr. Bert Dawson, P.E., P.S. Columbiana County Engineer 235 South Market Street Lisbon, OH 44432

Letter of Notification

East Akron-Sammis 138 kV Transmission Line

Loop to Knox Substation

Case No. 12- -EL-BLN

Dear Mr. Dawson,

In the above captioned project, American Transmission Systems, Incorporated ("ATSI"), a subsidiary of FirstEnergy Corp., is proposing to install an approximately 1,716 foot long transmission line loop from the existing East Akron-Sammis 138 kV Transmission Line to the existing Knox Substation. As a part the installation of the transmission line loop, five (5) new structures will be installed to accommodate the new loop to the existing Knox Substation. The Project area is located near the intersection of Township Highway 808 and County Highway 403 in West Township, Columbiana County, Ohio.

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Travis M. Turner

Engineer

Energy Delivery Transmission and

Substation Design

FirstEnergy Service Company

Travio M. Turner



Mr. Don Floding Chairman, Columbiana County Planning Commission 7876 B Lincole Place Lisbon, OH 44432

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Engineer

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Ms. Scherry Wilson County Clerk, Columbiana County 105 South Market Street Lisbon, OH 44432

Letter of Notification

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Dear Ms. Wilson,

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Sincerely, Trave M. Turner

Travis M. Turner

Engineer

Energy Delivery Transmission and

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FirstEnergy Service Company



Mr. Herbert Eglie West Township Trustee 8610 Know School Road Minerva, Ohio 44657

Letter of Notification

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Mr. Richard McClellan West Township Trustee 8610 Know School Road Minerva, Ohio 44657

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Engineer

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Substation Design

FirstEnergy Service Company



Mr. Dale Lowmiller West Township Trustee 8610 Know School Road Minerva, Ohio 44657

Letter of Notification East Akron-Sammis 138 kV Transmission Line Loop to Knox Substation Case No. 12- -EL-BLN

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Energy Delivery Transmission and

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Ms. Susan Hawk Fiscal Officer, West Township 8610 Know School Road Minerva, Ohio 44657

Letter of Notification

East Akron-Sammis 138 kV Transmission Line

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Case No. 12- -EL-BLN

Dear Ms. Hawk,

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Energy Delivery Transmission and

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FirstEnergy Service Company

Trave M. Turner

AMERICAN TRANSMISSION SYSTEMS, INCORPORATED A SUBSIDIARY OF FIRSTENERGY CORP.

LETTER OF NOTIFICATION

EAST AKRON-SAMMIS 138 KV TRANSMISSION LINE LOOP TO KNOX SUBSTATION

OPSB CASE NO.: 12-2630-EL-BLN

September 25, 2012

2012 SEP 28 PM 12: 18

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

LETTER OF NOTIFICATION EAST AKRON-SAMMIS 138 kV TRANSMISSION LINE LOOP TO KNOX SUBSTATION

The following information is being provided in accordance with the procedures delineated in Ohio Administrative Code Section 4906-11-01: <u>Letter of Notification Requirements</u> of the Rules and Regulations of the Ohio Power Siting Board.

4906-11-01 (B): General Information

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

Name of Project: East Akron-Sammis 138 kV Transmission Line Loop to

Knox Substation Project ("Project")

2012 LTFR Reference: This Project is identified on page 159 in FirstEnergy

Corp.'s 2012 Electric Long-Term Forecast Report

("LTFR") submitted to the Public Utility Commission of

Ohio in Case Number 12-504-EL-FOR.

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

In this Project, American Transmission Systems, Incorporated (ATSI), a subsidiary of FirstEnergy Corp., is proposing to install an approximately 1,716 foot long transmission line loop from the existing East Akron-Sammis 138 kV Transmission Line to the existing Knox substation.

The Project area is located near the intersection of Township Highway 808 and County Highway 403, in West Township, Columbiana County, Ohio. The general location of the Project is shown in Exhibit 1, which is a partial copy of the United States Geologic Survey, Columbiana County and Stark County Ohio Quad Map, ID number 40081-G1. Exhibit 2 shows the general layout of the proposed Project.

1

The transmission line loop will extend from the existing East Akron-Sammis 138 kV Transmission Line to Knox Substation. The new transmission line loop will trend north to the Knox Substation, which is located approximately 2,500 feet southeast of the intersection of Township Highway 808 and County Highway 403. As a part the installation of the transmission line loop, two (2) new structures will be installed in the existing East Akron-Sammis 138 kV Transmission Line right-of-way to accommodate the new loop to the Knox Substation. Both structures will be a single pole transmission line dead end structure. Three (3) new structures will be installed within newly obtained right-of-way for the East Akron-Sammis 138 kV Transmission Line Loop. Two (2) structures will be a single pole angle dead end structure and one (1) structure will be a three pole tangent dead end structure.

ATSI owns the existing East Akron-Sammis 138 kV Transmission Line and will own the new dead end structures, angle dead end structures, and tangent dead end structure, as well as the transmission line loop to the Knox Substation. ATSI and/or other FirstEnergy Corp. subsidiary maintains, operates, and owns the Knox Substation.

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 project defined by Items (1)(d) and (4)(a) of the Interim Application Requirement Matrix for Electric Power Transmission Lines in Appendix A of 4906-1-01 of the Ohio Administrative Code. These items state:

- 1) Rerouting or extension or new construction of single or multiple circuit electric power transmission line(s) as follows:
 - (d) Line(s) one hundred twenty-five kV and above, but less than three hundred kV, and greater than 0.2 miles in length but not greater than two 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 required.

The proposed Project includes installing an approximately 1,716 foot long single-circuit 138 kV transmission line loop, with two (2) single pole transmission line dead end structures in the existing transmission line right-of-way, two (2) single pole angle dead end structures, and one (1) three pole tangent dead end structure.

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

The proposed Project is essential for preventing low voltage violations for Washington REC and Knox Substation loads from the loss of the Bluebell-Knox 138 kV Transmission Line due to the retirement of Burger Power Station. An outage on the Bluebell Bus causes voltages to fall bellow 90% at Knox Substation and Washington REC. Retirement of the Burger Power Station reduces support to this area and causes lower voltages and a voltage collapse to occur. ATSI will loop the existing East Akron-Sammis 138 kV Transmission Line into Knox Substation to replace the Bluebell-Knox 138 kV Transmission Line.

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, included as the last page of Chapter 3 of the confidential portion of the FirstEnergy Corp. 2012 Long-Term Forecast Report submitted to the PUCO in case no. 12-504-EL-FOR under rules 4901:5-5:04 (C) of the Ohio Administrative Code. This map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations, including the location of the East Akron-Sammis 138 kV Transmission Line. The project area is located approximately 3 ½ inches (11 by 17 inch printed version) from the right edge of the map box and 5 ¾ inches (11 by 17 inch printed version) from the bottom of the map

box. The general location of the Project is shown on Exhibit No. 1. The general layout of the Project is shown in Exhibit No. 2.

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

Alternatives considered were the American Electric Power's (AEP) new Burger 345 kV to 138 kV Substation Project. AEP plans to build a new 345 kV to 138 kV Substation near the Burger Power Station and looping the AEP Tib to Beverly 345 kV Transmission Line to the new Substation. This project was rejected as a possible alternative as it is unlikely to meet the required in-service date.

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

Construction on the Project is expected to begin on approximately December 3, 2012 and is expected to be completed and placed in-service by June 1, 2013.

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

Exhibit No. 1 is a map depicting the general location of the project site. To locate and view the project site from the Columbus, Ohio area, travel north on I-71 for approximately 67.7 miles. Take Exit 176 onto US-30 east towards Wooster for approximately 60 miles. Merge onto US-30 east/Trump Ave. for approximately 1 mile. Turn right onto OH-172 east/US 30 east/Lincoln Street follow for approximately 15.9 miles. Turn left onto Knox School Rd. follow for approximately 1.3 miles. The Project site will be approximately 1,000 feet east of Knox School Road/County Highway 403.

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

The following is the property information for which an easement will be obtained prior to constructing the project:

Anna M. Buckman Knox School Road Minerva, OH 44657

4906-11-01 (C): Technical Features of the Project

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

The new transmission line tap will be designed and constructed for 138 kV operation. The transmission line loop has the following characteristics:

Voltage:

138 kV

Conductor:

795 kcmil 26/7 ACSR

Static Wire:

7#8 Alum weld

Insulators:

138 kV Polymer Suspension and Polymer Horizontal Post

Structure types:

Exhibit No. 3 – Dead End Structure

Exhibit No. 4 – Angle Dead End Structure Exhibit No. 5 – Tangent Dead End Structure

The proposed project is located within the existing 200 foot right-of-way of the East Akron-Sammis 138 kV Transmission Line and the new 60 foot right-of-way for the East Akron-Sammis Transmission Line loop to Knox Substation.

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

The following table itemizes the line loading of the transmission line loop being installed in the proposed Project. The normal line loading is based on the maximum load to be served to the Knox Substation and the normal configuration of the transmission system. The emergency line loading is based on the maximum load to be served to the Knox Substation with a single element outage of the transmission system that produces the highest loads in the new line loop. The winter rating for the proposed Project is based on the continuous maximum conductor ratings (MCR) of the circuits for 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	Emergency	Winter Rating
	Amps	Loading Amps	Amps
Hagan-Knox 138 KV Transmission Line	320	415	1450

East Akron-Knox 138 KV Transmission Line	334	410	1451
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The following calculations provide an approximation of the magnetic and electric fields strengths of the new 138 kV transmission line loop. 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 tap.

ЕМБ	CALCULATIONS	Electric Field kV/meter	Magnetic Field mGauss
Normal Loading	Under Lowest Conductors	1.57	29.17
	At Right-of-Way Edges	1.01 / 1.10	19.89 / 20.25
Emergency Loading	Under Lowest Conductors	1.57	36.75
	At Right-of-Way Edges	1.01 / 1.10	24.33 / 26.10
Winter Rating	Under Lowest Conductors	1.57	129.24
	At Right-of-Way Edges	1.01 / 1.10	86.15 / 91.50

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 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. These fields are thought to be too weak to break molecules or chemical bonds in cells. Extensive research has been conducted over the past three decades to determine whether EMFs are associated with 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 Institutes 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 is 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/emfrapid/home.htm

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

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

Account	Cost
350 Land Rights, Engineering, Ect.	\$ 46,000
355 Poles and Fixtures	\$ 80,000
356 Overhead Conductors & Devices	\$ 50,000
Removal	\$ 0
Total	\$ 176,000

4906-11-01 (D): Socioeconomic Data

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

The Project area is located in an agricultural area. Neighboring land use in the area of the proposed Project includes agricultural and residential use. Based on the U.S. Bureau of Census estimates, the 2010 population of the West Township was 3,307, and Columbiana County, Ohio was 107,841.

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

The placement of the new structures and guying will be within existing Right-of-Way and on the outer edge of agricultural land. Agricultural land will not be adversely impacted by the proposed project.

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

As part of ATSI's investigation of the project site, a search of the Ohio Historic Preservation Office (OHPO) National Register of Historic Places on-line database was conducted. This search did not identify the existence of any historic sites within the project area. Properties in the OHPO database include all Ohio listings on the National Register of Historic Places as well as 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 West Township, and Columbiana County, Ohio.

Columbiana County

The Honorable Michael Halleck President, Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432 Mr. Bert Dawson, P.E., P.S. Columbiana County Engineer 235 South Market Street Lisbon, OH 44432

The Honorable Jim Hoppel Vice President, Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432 Mr. Don Floding Chairman, Columbiana County Planning Commission 7876 B Lincole Place Lisbon, OH 44432

The Honorable John Payne Columbiana County Commissioner 105 South Market Street Lisbon, OH 44432 Ms. Scherry Wilson County Clerk, Columbiana County 105 South Market Street Lisbon, OH 44432

West Township

Mr. Herbert Eglie West Township Trustee 8610 Know School Road Minerva, Ohio 44657 Mr. Dale Lowmiller West Township Trustee 8610 Know School Road Minerva, Ohio 44657

Mr. Richard McClellan West Township Trustee 8610 Know School Road Minerva, Ohio 44657 Ms. Susan Hawk Fiscal Officer, West Township 8610 Know School Road Minerva, Ohio 44657

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

Ohio Edison'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 on the proposed transmission line Project.

4906-11-01 (E): Environmental Data

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

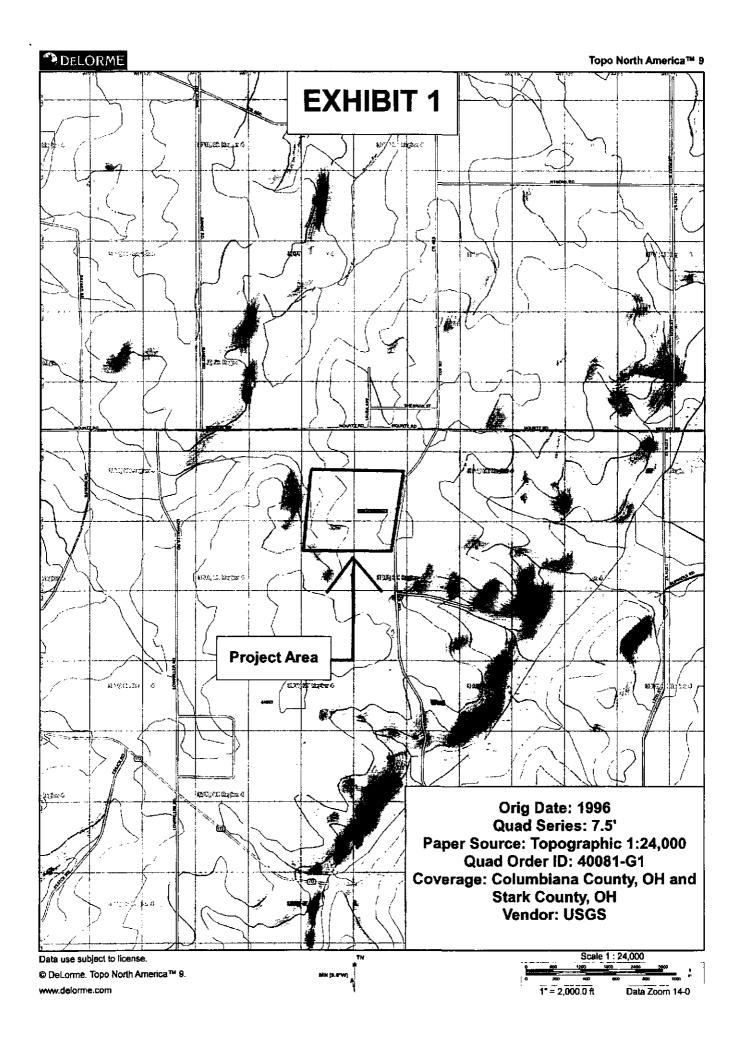
A written request was submitted to the Ohio Department of Natural Resources (ODNR) to research the presence of any endangered, threatened, or rare species within the Project area. The ODNR's response of February 9, 2012, attached as Exhibit 6, indicated that they have no records of rare or endangered species within one half mile of the identified Project area.

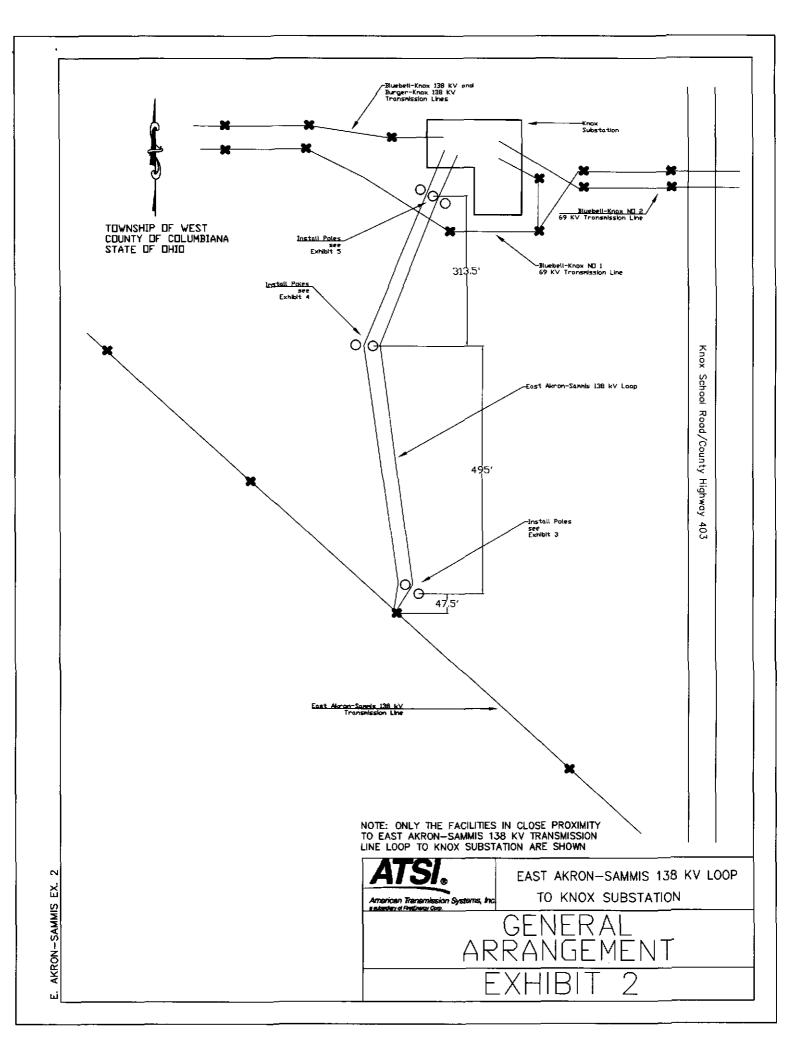
4906-11-01 (E) (2): Areas of Ecological Concern

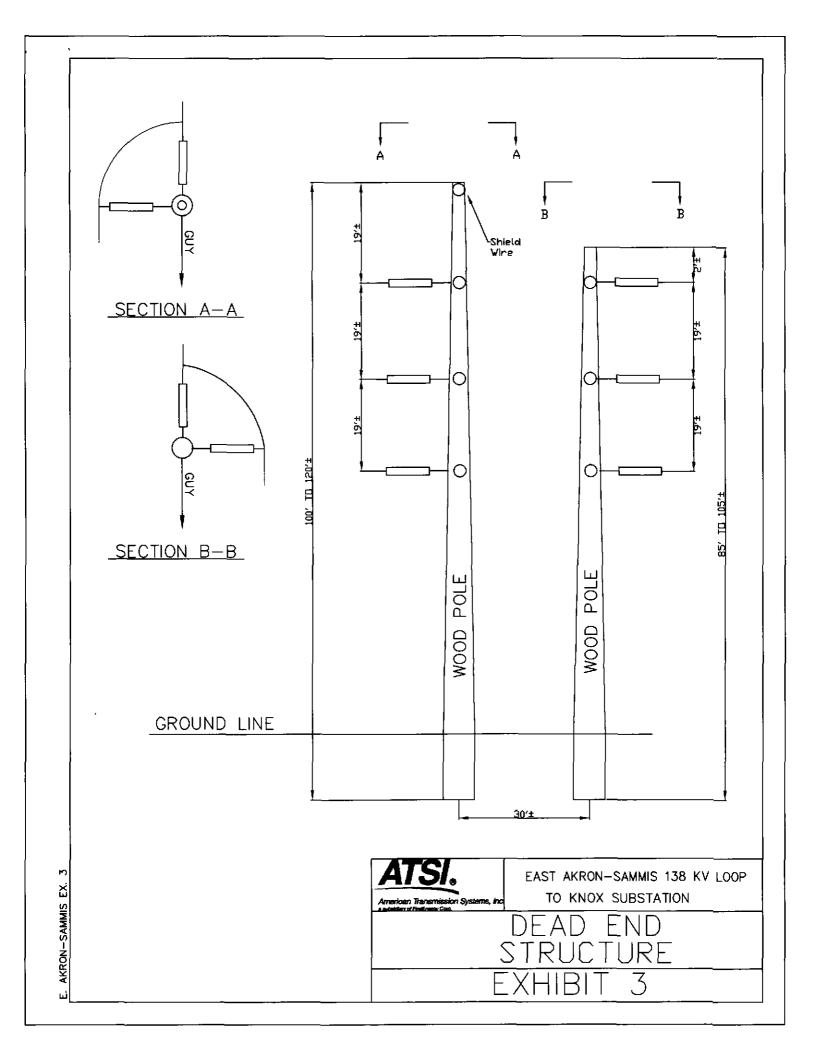
A visual assessment of the Project area did not identify areas of ecological concern in the immediate vicinity of the Project.

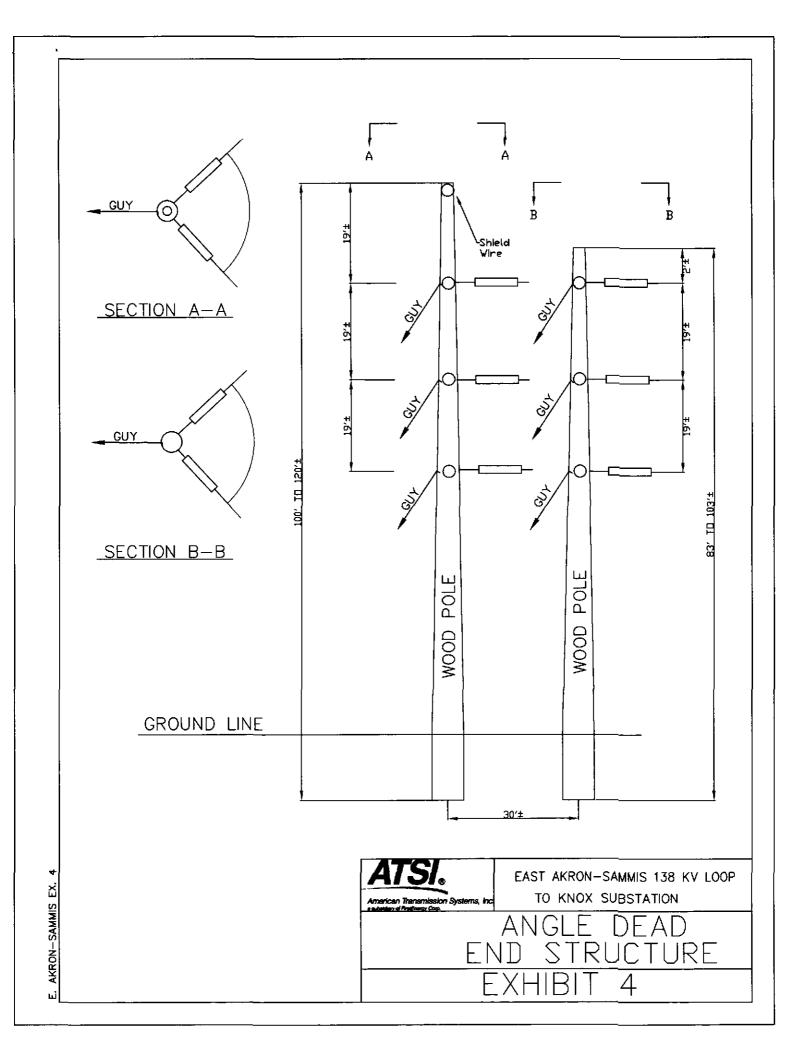
4906-11-01 (E) (3): Additional Information

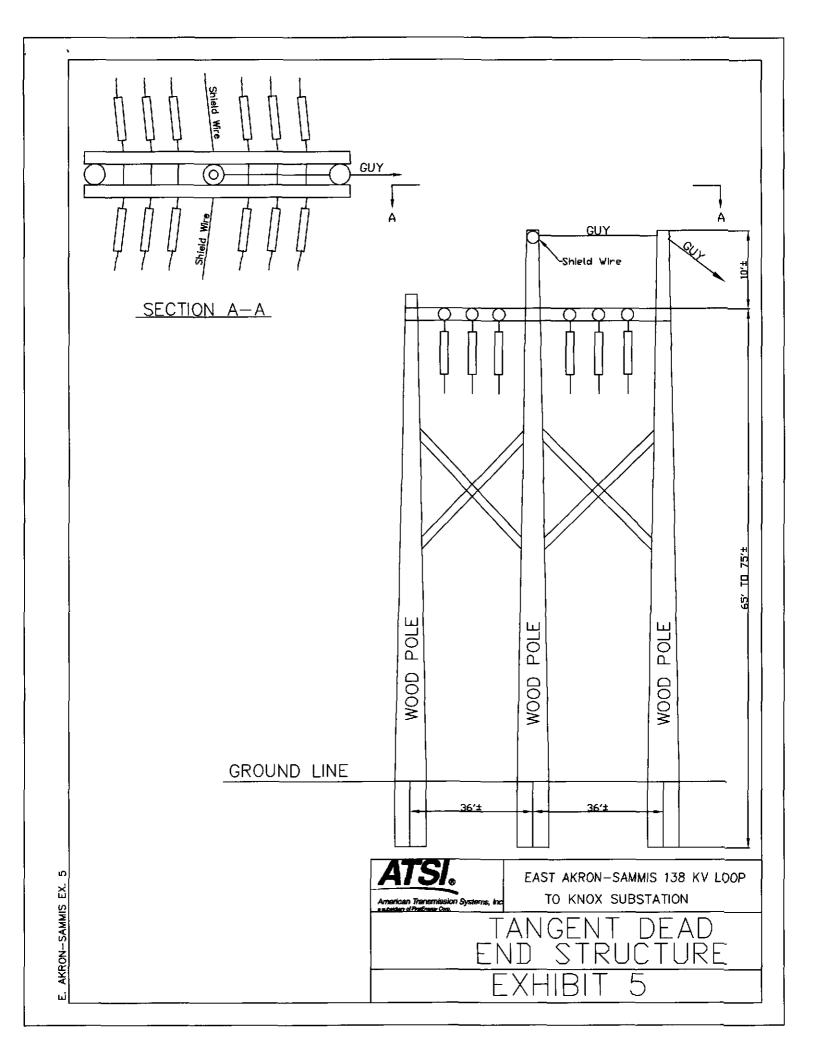
Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the National Electrical Safety Code as adopted by the Public Utilities Commission of Ohio and will meet all applicable safety standards established by Occupational Safety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













Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife Scott Zody, Chief 2045 Morse Rd., Bldg. G Columbus, OH 43229-6893 Phone: (614) 265-6300

February 9, 2012

Sarah Beli URS Corporation 36 E. 7th St., Suite 2300 Cincinnati, OH 45202

Dear Ms. Bell:

After reviewing the Biodiversity Database, I find the Division of Wildlife has no records of rare or endangered species in the unnamed substation project area, including a one mile radius, in sections 33 and 34 of Knox Township and sections 3 and 4 of West Township, Columbiana County, and on the Homeworth Quad (14950572). We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohlo 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. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 If I can be of further assistance.

Sincerely.

Debbie Woischke, Ecological Analyst Ohio Biodiversity Database Program