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**AMERICAN TRANSMISSION SYSTEMS, INCORPORATED  
A SUBSIDIARY OF FIRSTENERGY CORP.**

**LETTER OF NOTIFICATION**

**BAYSHORE-JACKMAN AND BAYSHORE-LEMOYNE  
138 kV TRANSMISSION LINE  
LOOPS TO BP OIL**

**OPSB CASE NO.: 09- 860 -EL-BLN**

**September 24, 2009**

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

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**LETTER OF NOTIFICATION  
BAYSHORE-JACKMAN AND BAYSHORE-LEMOYNE  
138 kV TRANSMISSION LINE  
LOOPS TO BP OIL**

The following information is being provided in accordance with the procedures delineated in Ohio Administrative Code Section 4906-11-01: Letter of Notification Requirements 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: Bayshore-Jackman and Bayshore-Lemoyne 138 kV  
Transmission Line Loops to BP Oil Project ("Project")

2009 LTFR Reference: This Project is identified in FirstEnergy Corp.'s 2009  
Electric Long-Term Forecast Report ("LTFR") submitted  
to the Public Utility Commission of Ohio in Case Number  
09-0504-EL-FOR.

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

In the Bayshore-Jackman and Bayshore-Lemoyne 138 kV Transmission Line Loops to BP Oil Project, American Transmission Systems, Incorporated ("ATSP") a subsidiary of FirstEnergy Corp., is proposing to construct 5 new steel pole structures and loop two (2) 138 kV circuits, the Bayshore-Jackman and the Bayshore-Lemoyne 138 kV transmission lines, into a new BP Oil owned substation. The Project is located immediately south of Cedar Point Road adjacent to the BP Oil Refinery in the City of Oregon, Lucas County Ohio.

South of the BP Sub, there are two (2) 69 kV circuits on one set of wood pole structures, six (6) 138 kV circuits supported on three (3) sets of steel lattice towers

and two (2) 345 kV circuits supported on one set of steel lattice towers. The transmission line loops will extend from two (2) of the six (6) 138 kV circuits that parallel Cedar Point Road to the BP Oil owned substation located immediately south of Cedar Point Road.

The first line loop, the Bayshore-Lemoyne 138 kV transmission line, is located on the north side of the southern most 138 kV transmission line towers that also support the Maclean-Lemoyne 138 kV transmission line. (The Bayshore-Lemoyne and Maclean-Lemoyne 138 kV transmission lines are referenced in the Bayshore-Maclean-Lemoyne 138 kV Transmission Line Reconductoring Project in Board Case number 08-1028-EL-BNR. Construction on that project is currently expected to begin in January 2010 and through a relatively simple reconfiguration will convert the double circuit Bayshore-Maclean-Lemoyne 138 kV transmission lines into the single circuit Bayshore-Lemoyne and Maclean-Lemoyne 138 kV transmission lines.) The Bayshore-Lemoyne 138 kV Transmission Line will be looped to the new substation using a three (3) pole steel structure with concrete foundations, as shown in Exhibit 3. The center pole of this structure will have higher attachment points for the existing circuits, which will allow for the new line loop to extend north passing under the Bayshore-Lemoyne conductors. From this structure, the loop will continue north, to a three (3) pole suspension/support structure, as shown in Exhibit 4, that will allow the line loop to pass under the next two existing 138 kV circuits, the Bayshore-Ironville 138 kV line and the Bayshore-Jeep #2 138 kV line that parallel the Bayshore-Lemoyne circuit. This structure also has a higher center pole, allowing the loop to continue north of these existing circuits. From this point, the loop will rise towards a two (2) pole support structure, shown in Exhibit 5. At this structure, the second line loop, the Bayshore-Jackman 138 kV circuit (located on the south side of the existing structures) will be looped and join the Bayshore-Lemoyne circuit, continuing north, crossing over the existing Bayshore-HydraMatic 138 kV line (located on the north side of the existing structures.) Together both line loops continue north crossing above a 69 kV circuit,

which parallels the 138 kV circuits, supported by two (2) adjacent three (3) pole steel structures with concrete foundations, shown in Exhibit 6, and subsequently connects to the customer owned substation. As a result of the proposed construction, the Bayshore-Lemoyne 138 kV Transmission Line will become the Bayshore-BP Oil 138 kV Transmission Line No. 1 and the BP Oil-Lemoyne 138 kV Transmission Line, and the Bayshore-Jackman 138 kV Transmission Line will become the Bayshore-BP Oil 138 kV Transmission Line No. 2 and the BP Oil-Jackman 138 kV Transmission Line.

ATSI owns the Bayshore-Jackman and the Bayshore-Lemoyne 138 kV Transmission Lines and will own the new line loops and associated structures. BP Oil will own the substation.

The general location of the Project is shown in Exhibit 1, which is a partial copy of the United States Geologic Survey, Lucas County Ohio, Monroe County Michigan Quad Map, ID number 41083-F4. Exhibit 2 shows the general layout of the proposed Project. The proposed Bayshore-Jackman and Bayshore-Lemoyne 138 kV Transmission Line Loops to BP Oil are located in the vicinity of the first existing transmission line structures west of N. Lallendorf Road and south of Cedar Point Road.

**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) (e) of the Application Requirement Matrix for Electric Power Transmission Lines in Appendix A of 4906-1-01 of the Ohio Administrative Code. This item states:

- (1) Rerouting or extension or new construction of single or multiple circuit electric power transmission line(s) as follows:*

*(e) 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.*

The proposed Project involves extending two 138 kV transmission lines as loops into a new customer owned substation approximately 1200 feet (0.22 miles) long.

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

The proposed Project is essential for serving an existing large customer, BP Oil. The total projected peak load will exceed the capacity of 69 kV circuits. This Project is therefore necessary to maintain the reliability and stability of the customer's power needs.

**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. 2008 Long-Term Forecast Report submitted to the PUCO in case no. 08-504-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 Bayshore-Jackman and Bayshore-Lemoyne 138 kV transmission lines. The project area is located approximately 4 inches (11 by 17 inch printed version) from the left edge of the map box and 7 ¼ 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**

The alternative considered was to add a new breaker at the Bayshore Substation and construct a new line to the BP Oil Refinery. This was not selected because of the greater impacts and costs of installing a new transmission line. Also, because it is an oil refinery with an increasing load, this alternative would not have been sufficient enough to support the electrical demands of BP Oil.

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

Construction on the Project is expected to begin on approximately March 1, 2010 and is expected to be completed and placed in-service by May 31, 2011.

**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 Interstate 71 for approximately 9.7 miles. Take exit 119 to merge for I-270E and follow signs for Indianapolis/I-270. Take exit 23 for US-23 toward Delaware, and then merge onto US-23 and continue for approximately 58.5 miles. Make a slight right at US-23 and continue 7.5 miles. Take the US-23/OH-103 ramp to Fostoria/Carey and continue to follow US-23 for approximately 15.9 miles. Turn right at Midblock Upas and continue to follow US-23 for approximately 22.5 miles. Turn left at Fremont Pike and go about 2.7 miles and take the ramp onto OH-420 approximately 2.3 miles. Continue on I-280 N for approximately 7.8 miles. Take exit 7 toward State Hwy 2/Oregon and merge onto Munding Dr. Turn right at S. Wheeling St and go approximately 1.8 miles. Turn right at Consaul St. then make a left at Otter Creek Road. Turn right at York St and go 1 mile then turn left at N. Lallendorf Rd. The project site will be on the west side of the road.

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

The Project will be located on the existing transmission line right-of-way owned by Toledo Edison Company and new right-of-way obtained from BP Oil. No other right-of-way rights are required. The names and addresses of those owners are listed below:

BP-Husky Refining, LLC.  
PO Box 696  
Toledo, OH 43697-0696  
4001 Cedar Point Road  
Oregon, OH 43616  
Parcel # 44-06541

Toledo Edison Company  
76 S. Main St.  
Akron, OH 44308  
Parcel # 44-06441

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

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

The new transmission line loops will be designed and constructed for 138 kV operations. Both transmission line loops have the following characteristics:

Voltage:	138 kV
Conductor:	636 kcmil 26/7 ACSR
Static Wire:	7#8 Alumoweld
Insulators:	Polymer Horizontal Post
Structure types:	Exhibit No. 3 -- Double Circuit Tap Structure Exhibit No. 4 -- Double Circuit Suspension Structure Exhibit No. 5 -- Double Circuit Suspension Structure Exhibit No. 6 -- Double Circuit Suspension Structure

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

The following table itemizes the line loading of the transmission line loops being installed in the proposed Project. The normal line loading amps is based on the maximum load to be served to the customer owned substation and the normal configuration of the transmission system. The emergency line loading is based on the maximum load to be served by the customer owned substation with a single element outage of the transmission system that produces the highest loads in the new line loops. This is an outage of a 138 kV breaker at the Bayshore generating plant. The winter rating amps 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 Amps	Emergency Loading Amps	Winter Rating Amps
Bayshore-BP Oil No. 1 Line Loop to BP Oil	457.3	1121	1221.6
Bayshore-Lemoyne Line Loop to BP Oil	61.9	460.2	1221.6
Bayshore-BP Oil No. 2 Line Loop to BP Oil	454.8	1121	1221.6
Bayshore-Jackman Line Loop to BP Oil	596.9	1137.9	1221.6

The following EMF calculations were performed using the EPRI EXPOCALC 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. The model utilized the normal, emergency, and winter rating of the transmission line loops based on a wire configuration based on Exhibit 6 with a minimum ground clearance of 24 feet. Only the new line loops were modeled, the affect of the existing perpendicular 345 kV, 138 kV and 69 kV circuits was excluded.

EMF CALCULATIONS		Electric Field kV/meter	Magnetic Field mGauss
Normal Loading	Under Lowest Conductors	2.51	122.8
	At Right-of-Way Edges	0.4	32.55/12.79
Emergency Loading	Under Lowest Conductors	2.51	338.8
	At Right-of-Way Edges	0.4	104/29.89
Winter Rating	Under Lowest Conductors	2.51	498.3
	At Right-of-Way Edges	0.4	206.2/61.56

**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	\$ 3,000
355 Poles and Fixtures	\$938,000
356 Overhead Conductors & Devices	\$ 48,000
<u>Removal</u>	<u>\$ 0</u>
Total	\$989,000

**4906-11-01 D: Socioeconomic Data**

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

The Project area is located in an industrial and agricultural area. Neighboring land use in the area of the proposed Project includes industrial and agricultural activity near the intersection of Cedar Point Road and N. Lallendorf Road. Based on the U.S. Bureau of Census estimates, the 2000 population of the City of Oregon was 19,355, and Lucas County, Ohio was 455,054.

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

The placement of the new structures will minimally impact agricultural land use on the Toledo Edison owned property. The structures placed in the agricultural areas will allow for the continued agricultural use of the land.

**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 the City of Oregon and Lucas County, Ohio.

**Lucas County**

The Honorable Tina Skeldon Wozniak  
Lucas County Commissioner  
One Government Center Ste 800  
Toledo, Ohio 43604

The Honorable Ben Konop  
Lucas County Commissioner  
One Government Center Ste 800  
Toledo, Ohio 43604

The Honorable Pete Gerken  
Lucas County Commissioner  
One Government Center Ste 800  
Toledo, Ohio 43604

Mr. Keith G. Earley, P.E., P.S.  
Lucas County Engineer  
One Government Center Ste 800  
Toledo, Ohio 43604

**City of Oregon**

The Honorable Marge Brown  
Mayor, City of Oregon  
5330 Seaman Road  
Oregon, Ohio 43616

Ms. Tina M. Evans  
Clerk of Council, City of Oregon  
City Council  
5330 Seaman Road  
Oregon, Ohio 43616

The Honorable Michael P. Sheehy  
President, City of Oregon City Council  
5330 Seaman Road  
Oregon, Ohio 43616

Mr. Paul Roman  
Public Service Director, City of Oregon  
5330 Seaman Road  
Oregon, Ohio 43616

Mr. Rodney Schultz, P.E.  
Deputy City Engineer, City of Oregon  
5330 Seaman Road  
Oregon, Ohio 43616

Mr. Ken Filipiak  
City Administrator, City of Oregon  
5330 Seaman Road  
Oregon, Ohio 43616

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**

Toledo Edison's Area Manager 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 (C) (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) on February 2, 2009 to research the presence of any endangered, threatened, or rare species within the Project area. The ODNR's response of February 2, 2009, attached as Exhibit No. 7 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**

The project is located in an open area along an established transmission line right-of-way. Visual observations of the project area did not indicate areas of ecological concern near 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 NESC as adopted by the PUCO and will meet all applicable safety standards established by OSHA.

# EXHIBIT 1

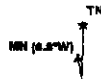
## PROJECT AREA

Orig Date: 1980  
 Quad Series: 7.5'  
 Paper Source: Topographic 1:24,000  
 Quad Order ID: 41083-F4  
 Coverage:  
 Lucas County, OH  
 Monroe County, MI

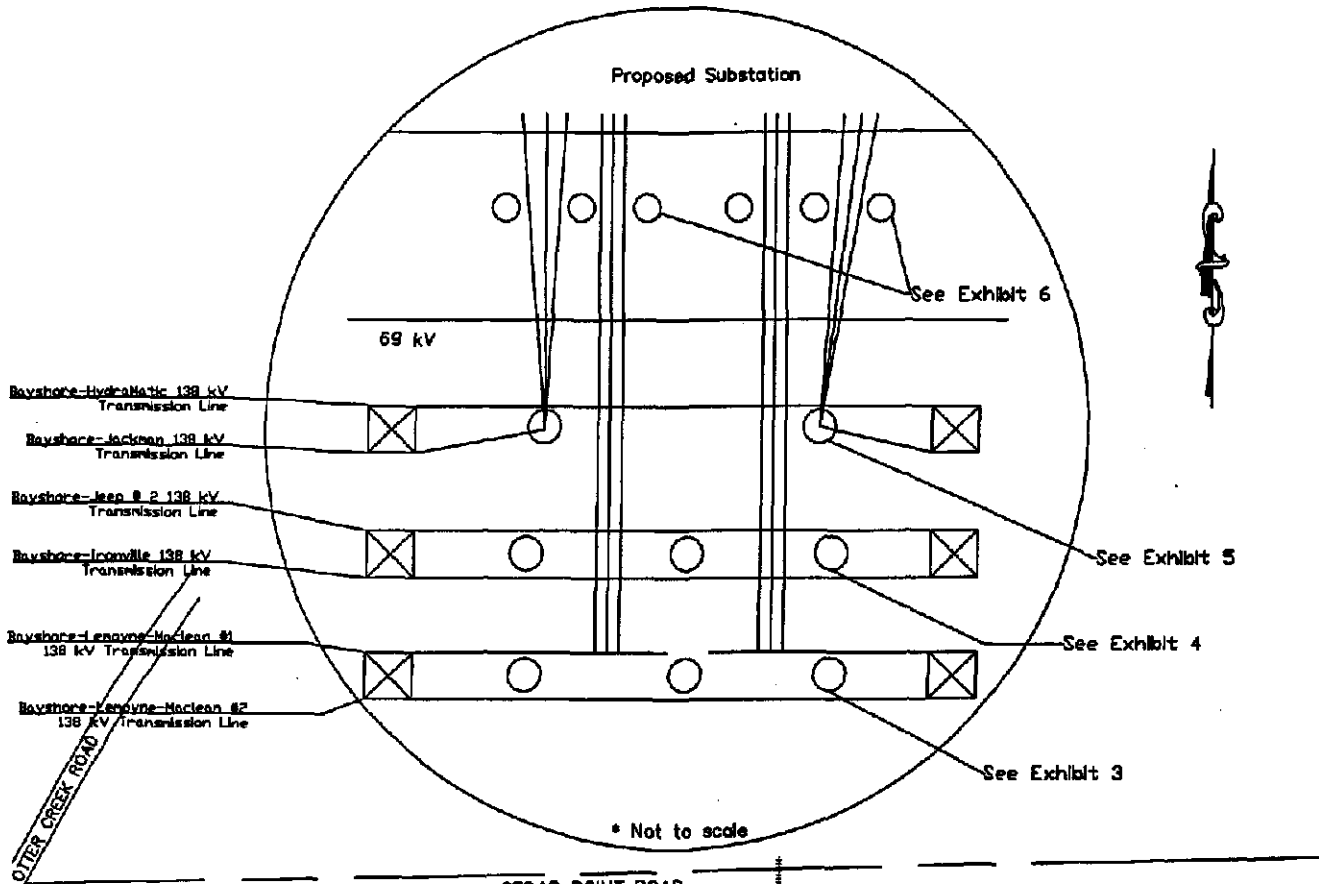
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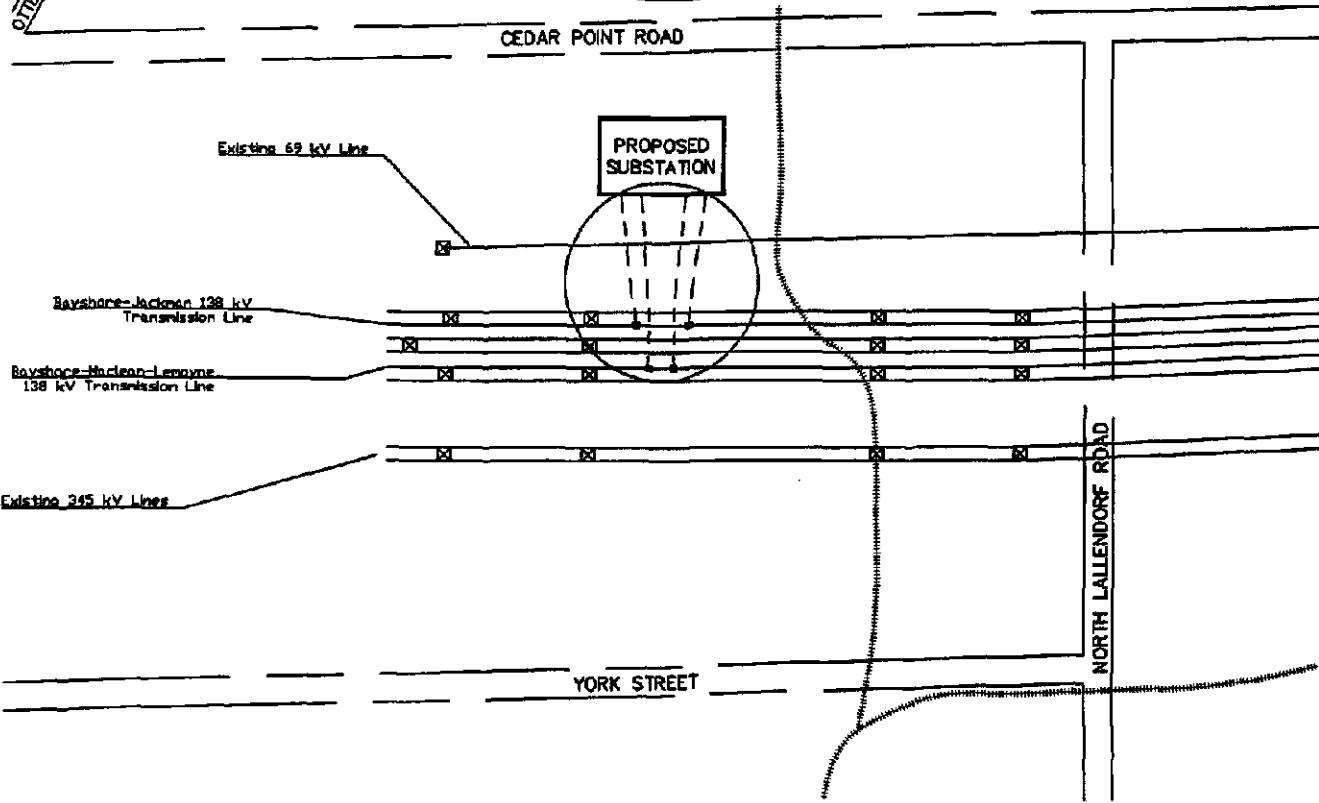
www.delorme.com



Proposed Substation



\* Not to scale



**ATSI.**

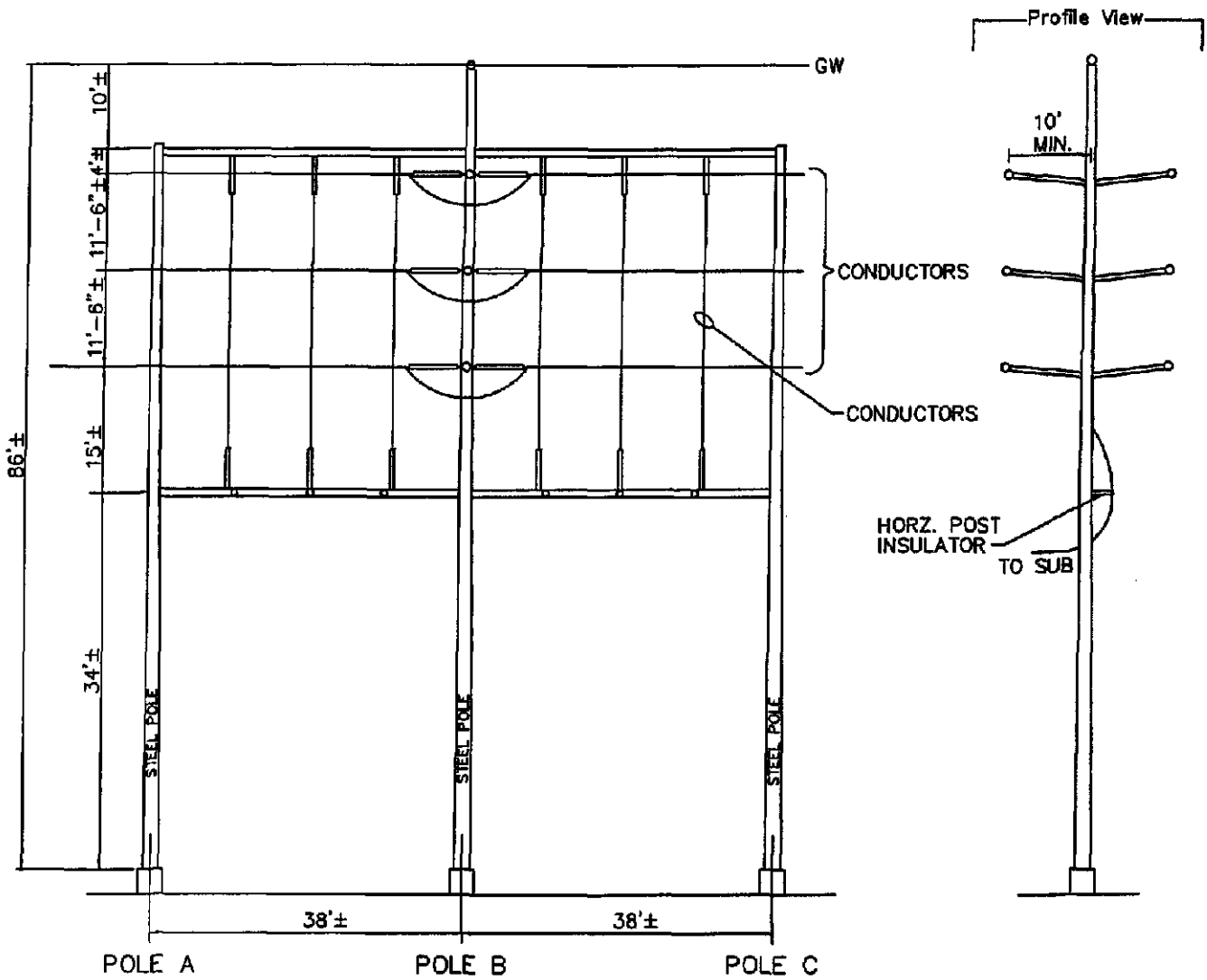
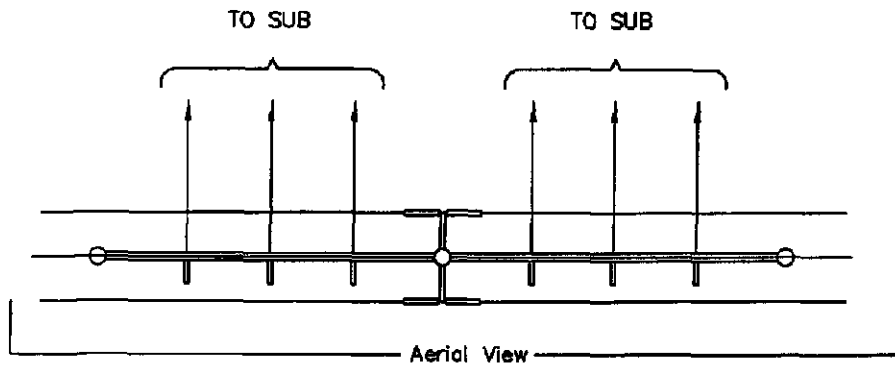
American Transmission Systems, Inc.  
a subsidiary of Westinghouse Electric

BAYSHORE-JACKMAN and BAYSHORE-LEMOYNE  
138 kV TRANSMISSION LINE LOOPS TO BP OIL

GENERAL LAYOUT

EXHIBIT 2

\* Not to scale



**ATSI.**

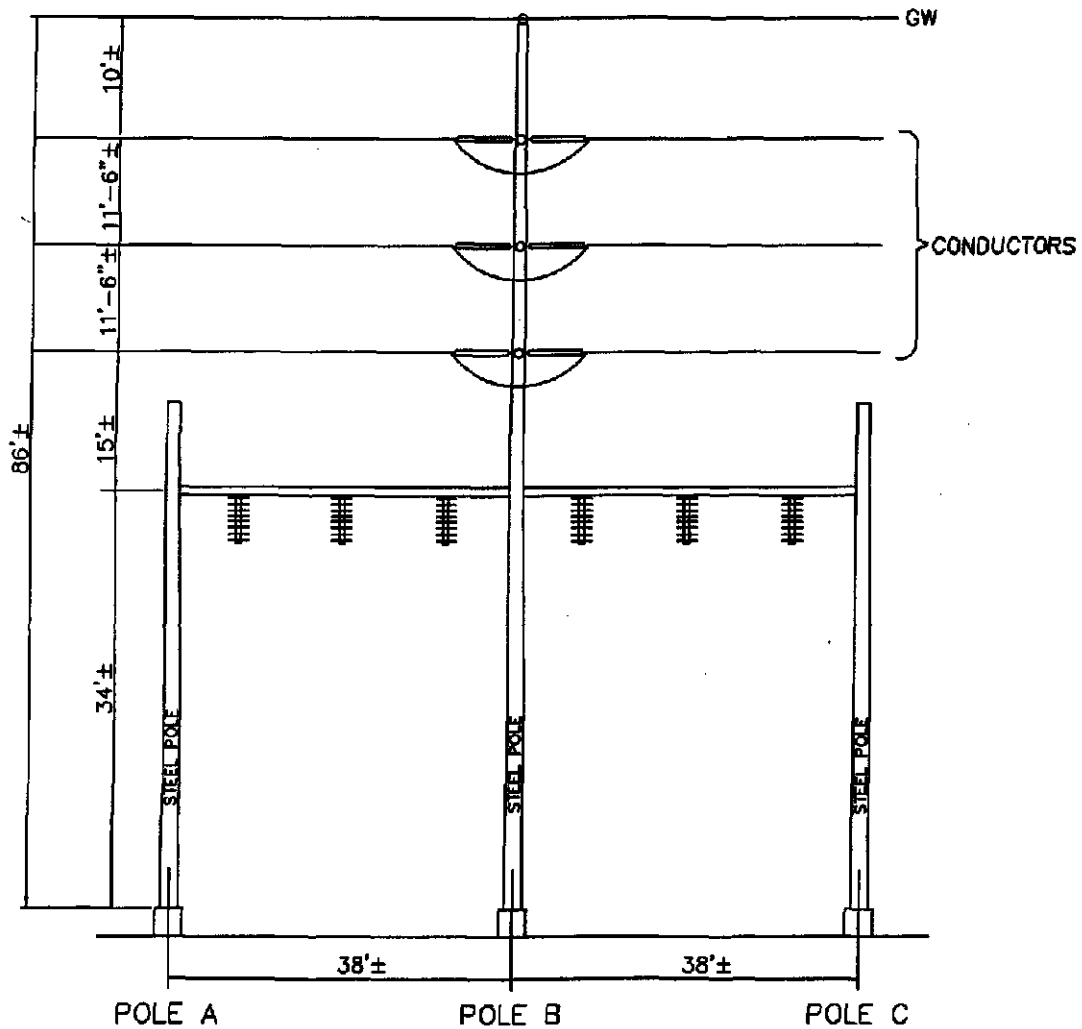
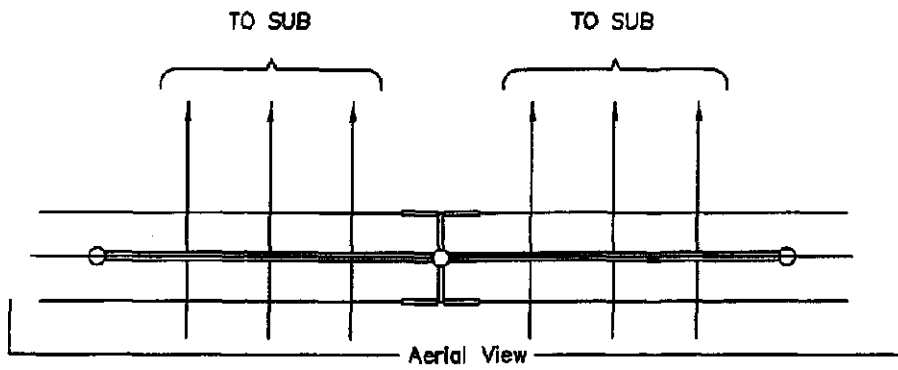
American Transmission Systems, Inc.  
a subsidiary of FluorEnergy Corp.

BAYSHORE-JACKMAN and BAYSHORE-LEMOYNE  
138 KV TRANSMISSION LINE LOOPS TO BP OIL

DOUBLE CIRCUIT TAP STRUCTURE

EXHIBIT 3





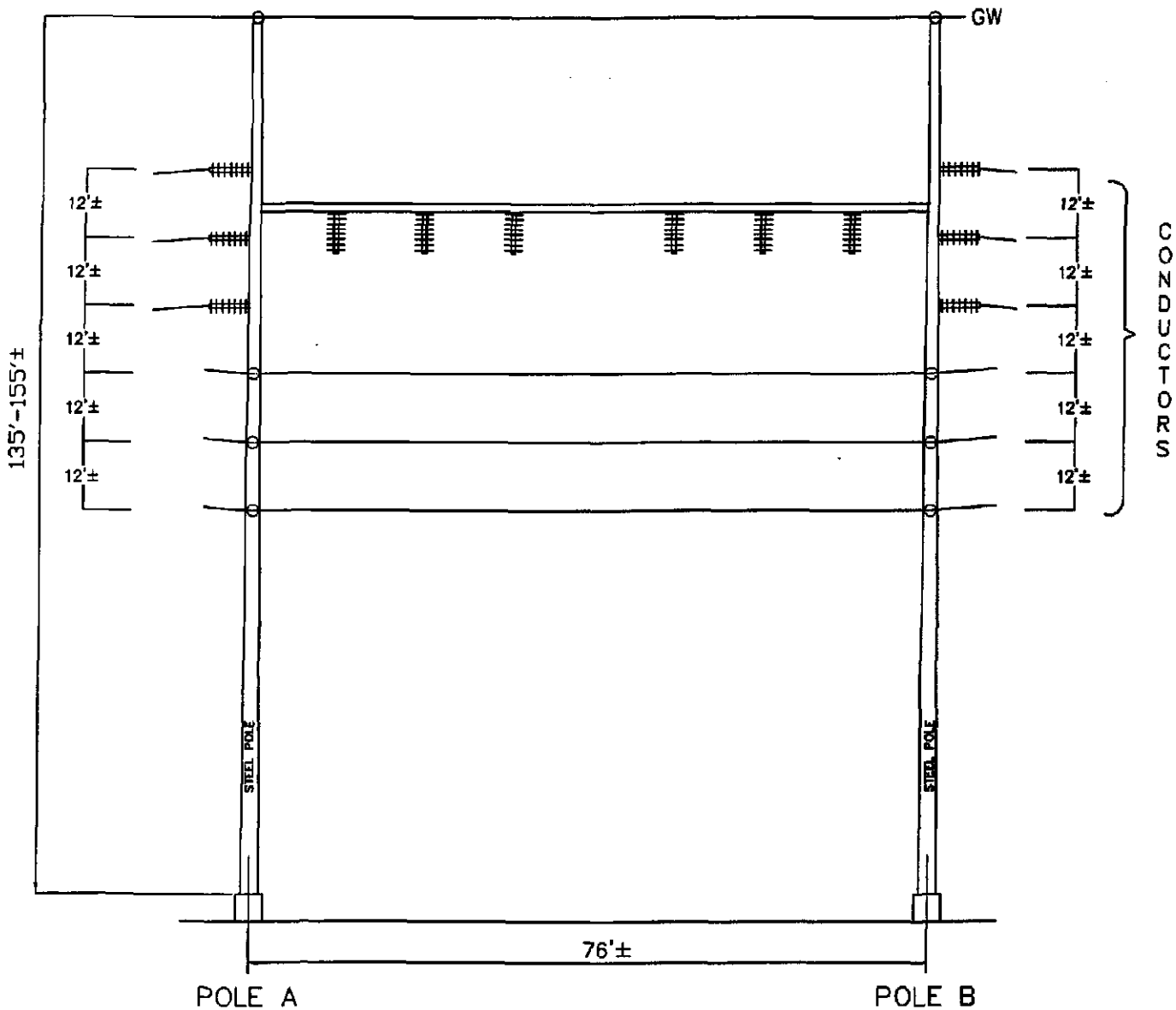
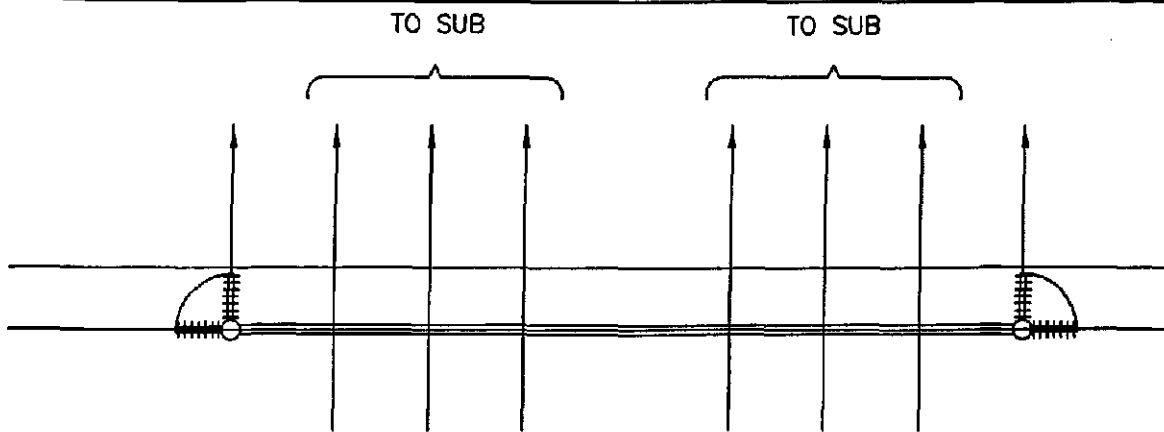
**ATSI**

American Transmission Systems, Inc.  
a subsidiary of The McGraw-Hill Companies

BAYSHORE-JACKMAN and BAYSHORE-LEMOYNE  
 138 kV TRANSMISSION LINE LOOPS TO BP OIL

DOUBLE CIRCUIT  
 SUSPENSION STRUCTURE

EXHIBIT 4

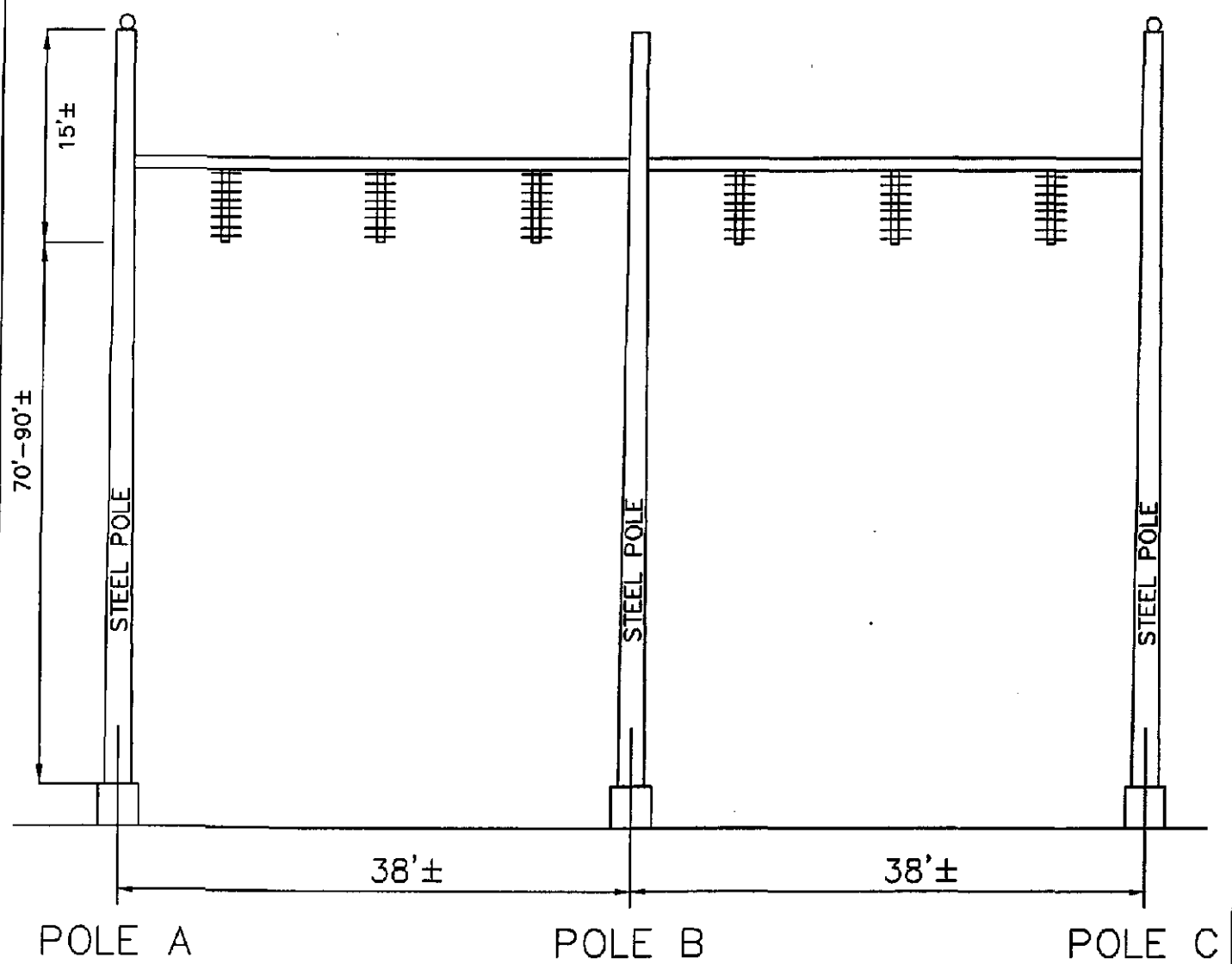
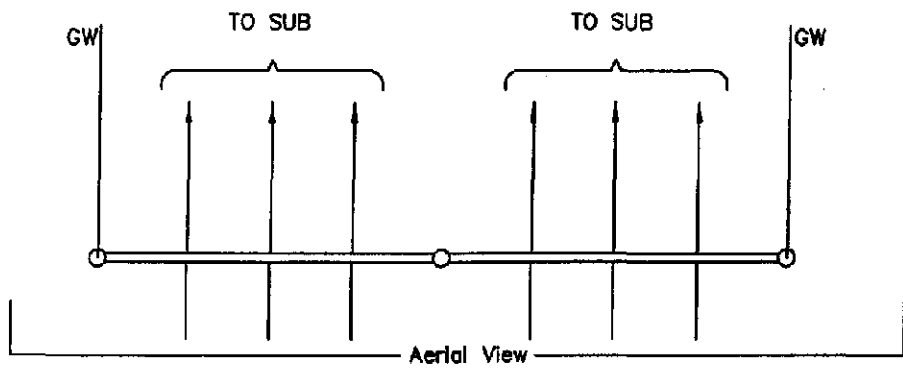


**ATSI**  
 American Transmission Systems, Inc.  
 a subsidiary of Fluor Corp.

BAYSHORE-JACKMAN and BAYSHORE-LEMOYNE  
 138 kV TRANSMISSION LINE LOOPS TO BP OIL

DOUBLE CIRCUIT  
 SUSPENSION STRUCTURE

EXHIBIT 5



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

BAYSHORE-JACKMAN and BAYSHORE-LEMOYNE  
 138 kV TRANSMISSION LINE LOOPS TO BP OIL

DOUBLE CIRCUIT  
 SUSPENSION STRUCTURE  
 EXHIBIT 6



## Ohio Department of Natural Resources

TED STRICKLAND, GOVERNOR

SEAN D. LOGAN, DIRECTOR

Division of Natural Areas and Preserves  
Steven D. Maurer, Chief  
2045 Morse Rd., Bldg. F-1  
Columbus, OH 43229-6693  
Phone: (614) 265-6453; Fax: (614) 267-3096

February 2, 2009

Scott Humphrys  
First Energy Service Co.  
76 S. Main St.  
Akron, OH 44308

Dear Mr. Humphrys:

I have reviewed our Natural Heritage maps and files for the BP Oil Electrical Transmission Line Loop project area, including a one mile radius, in section 27, Oregon, Lucas County, and on the Oregon Quad. We have no records for rare or endangered species or other significant natural features within the project area. However, we have one record within the one mile radius of the project site. The location for the Blanding's Turtle (*Emydoidea blandingii*), a species of concern, is shown in red on the attached map.

There are no state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, animal assemblages, state parks, state forests or state wildlife areas within a one mile radius of the project area.

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.

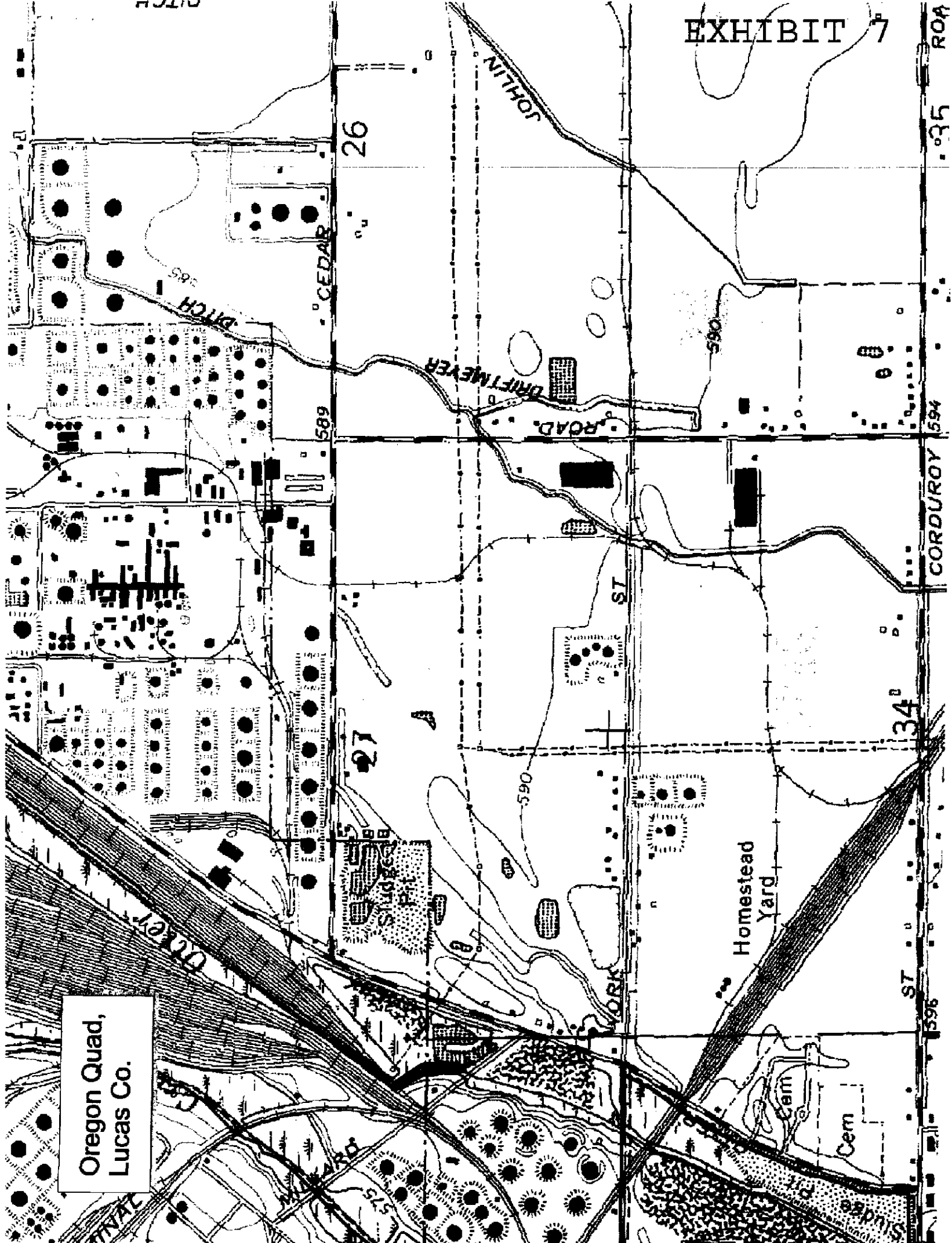
Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Debbie Woischke".

Debbie Woischke, Ecological Analyst  
Natural Heritage Program





Oregon Quad,  
Lucas Co.