76 South Main St. Akron, Ohio 44308

1-800-633-4766

Docketing
Ohio Power Siting Board
c/o Public Utilities Commission of Ohio
Borden Bldg., 12<sup>th</sup> Floor
180 East Broad Street
Columbus, OH 43266-0573

May 21, 2007

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Letter of Notification
Eastlake-Lloyd
138 kV Transmission Line Tap
To The Progressive Substation
Case No. 07-615-EL-BLN

Dear Docketing:

In accordance with Rule 4906-11-01, FirstEnergy Service Company on behalf of American Transmission Systems, Incorporated (ATSI) and The Cleveland Electric Illuminating Company (CEI), transmits one (1) original and eleven (11) copies of the enclosed Letter of Notification. The project involves installing a three-pole tap structure and tapping two existing Eastlake-Lloyd 138 kV transmission lines to supply a new customer owned substation. The project is located on the east side of I-271, approximately 1,800 feet west of the intersection of Parkview Drive and State Route 91 (SOM Center Road) in the Village of Mayfield in Cuyahoga County, Ohio. Eastlake-Lloyd 138 kV transmission line circuits Q12-EL-LY-X and Q13-EL-LY-X will supply power to the substation, with manual provisions to allow all load to be supplied from one circuit. The transmission line taps will be installed in a horizontal configuration, spanning approximately 15 feet from the bottom arm of the tap structure to the substation take-off structures. The transmission line tap structure and associated hardware will be owned by ATSI and the conductors of the tap and hardware at the substation take-off structures will be owned by CEI.

Please be advised of the following:

a) Name and address of the applicants:

American Transmission Systems, Incorporated

76 South Main Street

Akron, Ohio 44308

The Cleveland Electric Illuminating Company

76 South Main Street Akron, Ohio 44308

b) Name of proposed facilities:

Eastlake-Lloyd 138 kV Transmission Line

is is to certify that the images apparing are an surate and complete reproduction of a case file

Tap to the Progressive Substation

c) Location of proposed facilities: The

The project is located on the east side of I-271, approximately 1,800 feet west of the intersection of Parkview Drive and State Route 91 (SOM Center Road) in the Village of Mayfield in Cuyahoga County, Ohio.

d) Description of proposed facilities: The project involves tapping two existing 138 kV

transmission lines to supply a new customer owned substation. A three-pole tap structure is proposed to be installed in the centerline of the existing Q12-EL-LY-X and Q13-EL-LY-X transmission lines. The transmission line taps will be installed in a horizontal configuration, spanning approximately 15 feet from the bottom arm of the tap structure to the substation take-off structures.

e) Applicants' representative:

Jacob D. Merriman
Transmission Engineer
Energy Delivery Technical Services
FirstEnergy Service Company
76 South Main Street
Akron, OH 44308-1890

After docketing, please return a time-stamped copy of the Letter of Notification for our records. We have provided a copy of this 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. Attached for your file are the transmittal letters addressed to the local government representatives of the Village of Mayfield and Cuyahoga County.

Should the Ohio Power Siting Board desire further information or discussion of this submittal, please contact me at (330) 761-4385.

Sincerely,

A. D. Manne

Jacob D. Merriman Transmission Engineer

Energy Delivery Technical Services

FirstEnergy Service Company

Attachments

# AMERICAN TRANSMISSION SYSTEMS, INCORPORATED AND

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, SUBSIDIARIES OF FIRSTENERGY CORP.

#### LETTER OF NOTIFICATION

EASTLAKE-LLOYD

138 kV TRANSMISSION LINE TAP

TO THE

PROGRESSIVE SUBSTATION

OPSB CASE NO. 07-6/5\_-EL-BLN

May 21, 2007

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

The Cleveland Electric Illuminating Company
76 South Main Street
Akron, Ohio 44308

## LETTER OF NOTIFICATION EASTLAKE-LLOYD 138 kV TRANSMISSION LINE TAP TO THE PROGRESSIVE 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 (A) (1): a. Name and Reference Number

Name of Project: Eastlake-Lloyd 138 kV Transmission Line Tap to the

Progressive Substation ("Project").

2007 LTFR Reference: This project is not identified in the FirstEnergy Corp. 2007

Long-Term Forecast Report (LTFR) submitted to the Public

Utility Commission of Ohio.

#### 4906-11-01 (A) (1): b. Brief Description of Project

American Transmission Systems, Incorporated ("ATSI") and The Cleveland Electric Illuminating Company ("CEI"), FirstEnergy Corp. subsidiaries, are jointly proposing the Eastlake-Lloyd 138 kV Transmission Line Tap to the Progressive Substation Project ("Project"). In this Project, ATSI and CEI are proposing to install a double circuit 138 kV transmission line tap from an existing double circuit transmission line to a new customer owned substation. The Project involves installing a new three-pole transmission line tap structure along the centerline of ATSI's existing Eastlake-Lloyd Q12-EL-LY-X & Q13-EL-LY-X 138 kV transmission lines and extending two short transmission line taps horizontally to the new Progressive substation. The existing Eastlake-Lloyd 138 kV transmission lines are located on a common series of steel pole structures. The new Progressive substation will be located next to and partially within the right-of-way of the existing transmission line.

The general layout of the Project is shown in Exhibit No. 1. The Project is located on the east side of I-271, approximately 1,800 feet west of the intersection of Parkview

Drive and State Route 91 (SOM Center Road) in the Village of Mayfield of Cuyahoga County. The new three pole tap structure will be supported on reinforced concrete foundations located along the centerline of the Eastlake-Lloyd 138 kV transmission line and within the fenced in portion of the new substation. The substation take-off structure will be located approximately 15' from the tap structure. The conductors of the transmission line tap will extend from the tap structure to the substation take-off structure. With this arrangement, the transmission line tap will be in a horizontal configuration spanning less than 15 feet. The Progressive substation will be served normally from both the Eastlake-Lloyd Q12-EL-LY-X 138 kV and Q13-EL-LY-X 138 kV transmission circuits, with manual provisions to supply all the load from one line.

This Letter of Notification covers the installation of the 138 kV transmission line tap but does not cover the installation of the Progressive Substation. The new tap structure and associated hardware will be owned by ATSI. CEI will own the conductors from the transmission line tap structure to and the hardware associated with the connection to the substation take-off structure.

#### 4906-11-01 (A) (1): c. Need for the Project

The proposed Project is needed to connect the new Progressive substation to the transmission grid. The Progressive substation is being installed adjacent to and will supply the electrical needs of the Progressive Corporation Corporate Headquarters campus and surrounding buildings located in Mayfield Village, Ohio. The substation will provide 138 kV to 13.2 kV transformation. The substation will supply 4.44 MVA of load initially, with an anticipated growth to 17.15 MVA after 5 years. The construction of this Project will minimize the potential overloading of CEI's local distribution facilities. Equipment overloading may result in decreased equipment life and possible equipment failure.

### 4906-11-01 (A) (1): d. Why the Project Meets the Requirements for a Letter of Notification

This Project meets the requirements for a Letter of Notification because the Project is within the types of project defined by Items (1)(c) and (4)(a) of the Application Requirement Matrix for Electric Power Transmission Lines in Appendix A of 4906-1-01 of the Ohio Administrative Code. Which states:

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

The proposed transmission line tap operates at 138 kV, and is approximately 15 feet (0.01 miles) in length, spanning horizontally from the tap structure to the substation take-off structure. Additionally, one new structure, the tap structure, will be added in the existing transmission line and no new transmission line right-of-way is required for the Project

#### 4906-11-01 (A) (2): Location Relative to Existing or Proposed Lines

The location of the Project is shown in Exhibit No. 5. Exhibit No. 5 (which is not attached to the LON) is the FirstEnergy System Facilities map, included as the last page of Chapter 3 of the confidential portion of the FirstEnergy Corp. 2007 Long-Term Forecast Report to the PUCO in case no. 07-504-EL-FOR under rules 4901:5-5:04 (C) of the Ohio Administrative Code. The map is incorporated by reference only. The map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations, including the location of the Eastlake-Lloyd transmission lines. The Project area is located approximately 6 3/8 inches (11 by 17 inch printed version) from the right edge of the map box and 1 7/8 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. 2 and the general arrangement of the new transmission line tap structure is shown in Exhibit No. 3.

#### 4906-11-01 (A) (3): Alternatives Considered

The site of the Progressive substation was chosen after consultation with Progressive Corporation. The layout of the transmission line tap was developed to best fit the new facilities with the new substation, the existing transmission lines and CEI owned property at this location.

#### 4906-11-01 (A) (4): Construction Schedule

Construction on the Project is expected to begin on August 21, 2007. The Project is expected to be completed by January 31, 2008.

#### 4906-11-01 (A) (5): Area Map

Exhibit No. 2 depicts the location of the Project site on a partial copy of the United States Geologic Survey, Mayfield Heights, Ohio Quad, Map ID 41081 E4. To locate and view the Project site, take Interstate 71 north from Columbus to Interstate 271 east to the Wilson Mills Road exit (Exit 34). Travel east on Wilson Mills Road to State Route 91 (SOM Center Road). Travel north on State Route 91 for approximately 2.4 miles and turn left onto Parkview Drive. Travel west on Parkview Drive, continue straight through the Progressive Corporation parking lot, to the project site, which is adjacent to I-271. The Project is located on the east side of I-271, approximately 0.3 miles west of the Parkview Drive – State Route 91 intersection. The new tap structure will be located along the centerline of the double-circuit transmission line, approximately 60 feet north of the existing transmission line pole structure #5843.

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

#### 4906-11-01 (B) (1): Operating Characteristics

The transmission line tap will have the following characteristics:

Voltage:

Eastlake-Lloyd Q12-EL-LY-X: 138 kV Eastlake-Lloyd Q13-EL-LY-X: 138 kV

Existing conductors:

1192.5-kcmil 36/1 ACSR on the tap structure

New tap conductors:

795-kcmil 26/7 ACSR on and from the tap

structure to the substation take-off structure

Existing static wire:

1 – 7#8 Alumoweld

Insulators:

138 kV Polymer Suspension and Horizontal Post

Structures:

Exhibit No. 3 – 138 kV Three-Pole Line Tap Structure

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

The following table itemizes the line loading of the transmission line tap. The normal and emergency loading is based on the initial loading of the substation being equally supplied from both the Eastlake-Lloyd Q12-EL-LY-X 138 kV and Q13-EL-LY-X 138 kV transmission lines. The emergency line loading is based on the future projected load of the substation supplied from only one transmission line tap. The winter rating is based on the continuous maximum conductor ratings (MCR) of both transmission line tap conductors for an ambient temperature of zero degrees centigrade (32 degree F), wind speed of 1.3 miles per hour, and a circuit design operating temperature of 100 degrees centigrade (212 degree F).

Line Name	Normal Loading Amps	Emergency Loading Amps	Winter Rating Amps (WN)
Eastlake-Lloyd Q12-EL-LY-X 138 kV transmission line tap to Progressive Substation	9.3A	71.8A	1,400A
Eastlake-Lloyd Q13-EL-LY-X 138 kV transmission line tap to Progressive Substation	9.3A	71.8A	1,400A

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 for the transmission circuits. The calculations are based on an approximate model of the transmission line tap based on a horizontal wire arrangement at the bottom arm of the tap structure, with a minimum ground clearance of 20.0 feet. No effect from the existing transmission lines or substation facilities is included in the model and the transmission line right-of-way is modeled as a 118-foot wide right-of-way.

EMF CALCULATIONS		Electric Field kV/meter	Magnet Field mGauss	
Normal	Under Lowest Conductors	2.38	2.57	
Loading	At Right-of-Way Edges	0.74	0.75	
	Under Lowest Conductors	2.38	21.49	
	At Right-of-Way Edges	0.74	1.30/4.54	
	Under Lowest Conductors	2.38	386.3	
	At Right-of-Way Edges	0.74	112.3	

#### 4906-11-01 (B) (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. The results of more recent studies continue to provide varied results and have not significantly advanced or eliminated EMF related health concerns.

#### 4906-11-01 (B) (3): Estimated Costs

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

Total	\$ 162,000		\$	3,000	
Removal	\$	00	\$	0	
356 Overhead Conductors & Devices	\$ 30	,000	\$	3,000	
355 Poles and Fixtures	\$132	-	\$	0	
350 Land Rights	\$	0	\$	0	
Account ATSI		rsi Cost		CEI Cost	

#### 4906-11-01 C: Socioeconomic Data

#### 4906-11-01 (C) (1): Land Use

The new transmission line tap is located within an existing transmission line right-of-way. The new substation is located partially within the transmission line right-of-way and between the right-of-way and the Progressive Corporation parking lot. The existing land use in the immediate area of the proposed Project is commercial and is adjacent to an interstate highway. Based on the U.S. Bureau of Census estimates, the 2000 population of the Village of Mayfield was 3,435 and the 2000 population of Cuyahoga County was 1,393,978.

#### 4906-11-01 (C) (2): Agricultural Land

The new transmission line tap will be located in an existing transmission line right-ofway. The substation site is currently owned by Progressive Corporation. Installation of the transmission line tap will not significantly impact agricultural land.

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

The new transmission line tap structure is located in an existing transmission line right-of-way, in close proximity to a new substation and in relatively close proximity to existing transmission line structures. Given the limited ground surface impact associated with installing the three foundations of the new tap structure, the current commercial use of the area, and the previous use of the area as a golf course, it is unlikely that any archaeological or cultural resources would be disturbed by the limited nature of the proposed Project.

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 or near 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 (C) (4) (a): Documentation of Letter of Notification Transmittal

This Letter of Notification is being provided concurrently to the following officials of the Village of Mayfield and Cuyahoga County.

#### Village of Mayfield (Cuyahoga County)

The Honorable Bruce G. Rinker, Mayor Village of Mayfield 6622 Wilson Mills Road Mayfield Village, OH 44143

Ms. Tom Cappello Engineering Department Village of Mayfield 6622 Wilson Mills Road Mayfield Village, OH 44143

#### Cuvahoga County

The Honorable Peter Lawson Jones Commissioner, Cuyahoga County Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

The Honorable Timothy F. Hagan Commissioner, Cuyahoga County Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

The Honorable Jimmy Dimora Commissioner, Cuyahoga County Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

Mr. Dennis Madden Cuyahoga County Administrator 1219 Ontario Street Cleveland, Ohio 44113 Mr. John Marrelli Building Commissioner Village of Mayfield 6622 Wilson Mills Road Mayfield Village, OH 44143

Mr. Bill Buckholtz Council President Village of Mayfield 6622 Wilson Mills Road Mayfield Village, OH 44143

Ms. Penelope Hughes Clerk of the Board Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

The Honorable Robert C. Klaiber, Jr., P.E., P.S. Cuyahoga County Engineer 2100 Superior Viaduct Cleveland, OH 44113

Mr. Vern J. Hartenburg Executive Director, Cleveland Metroparks 4101 Fulton Parkway Cleveland, OH 44144

Mr. Paul A. Alsenas, Director Cuyahoga County Planning Commission 323 Lakeside Avenue West, Suite 400 Cleveland, Ohio 44113 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 (C) (4) (b): Public Information Program

FirstEnergy's Area Manager will advise local officials of features and the status of the proposed Project as necessary.

#### 4906-11-01 (C) (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 (D): Environmental Data

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

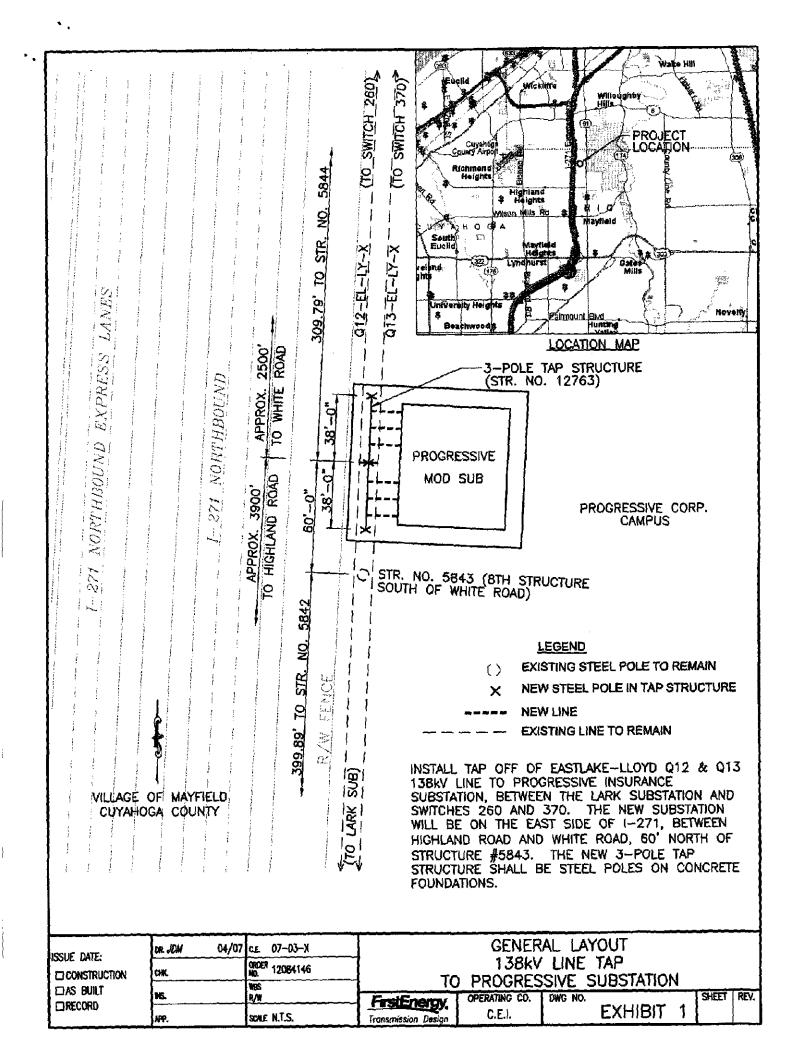
As part of our investigation, a written request was made with the Ohio Department of Natural Resources (ODNR) on April 9, 2007 to research the presence of any endangered, threatened, or rare species within the project area. The ODNR's response of April 10, 2007, attached as Exhibit No. 4, indicated that they have no records of rare or endangered species within one half mile of the identified project area.

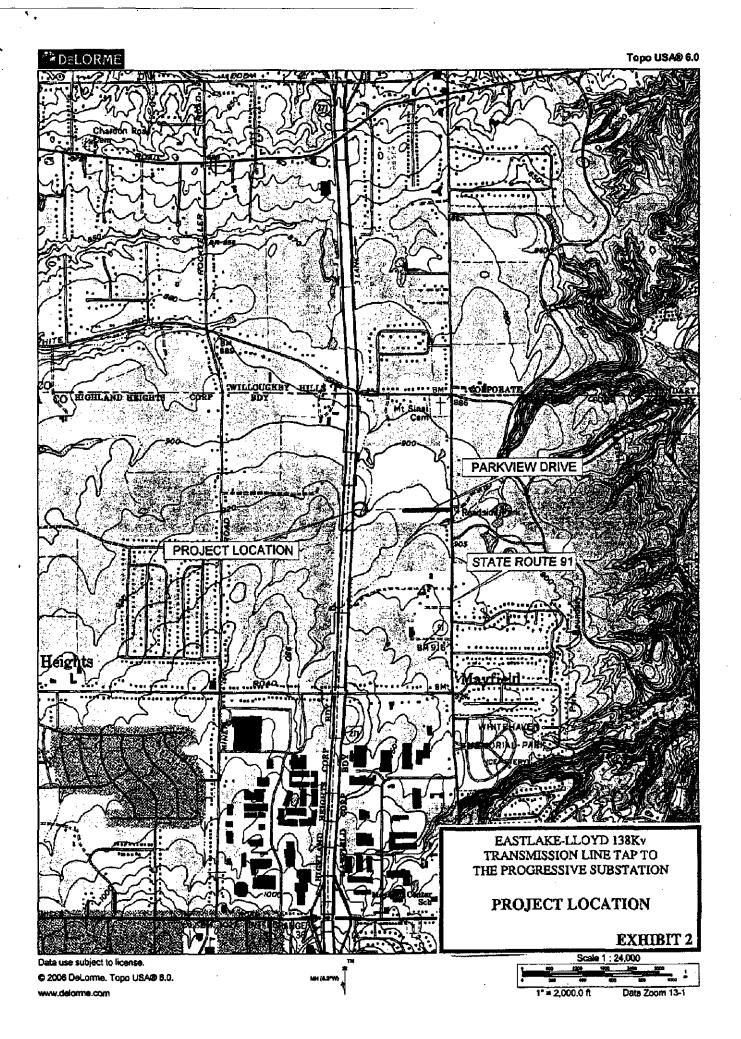
#### 4906-11-01 (D) (2): Areas of Ecological Concern

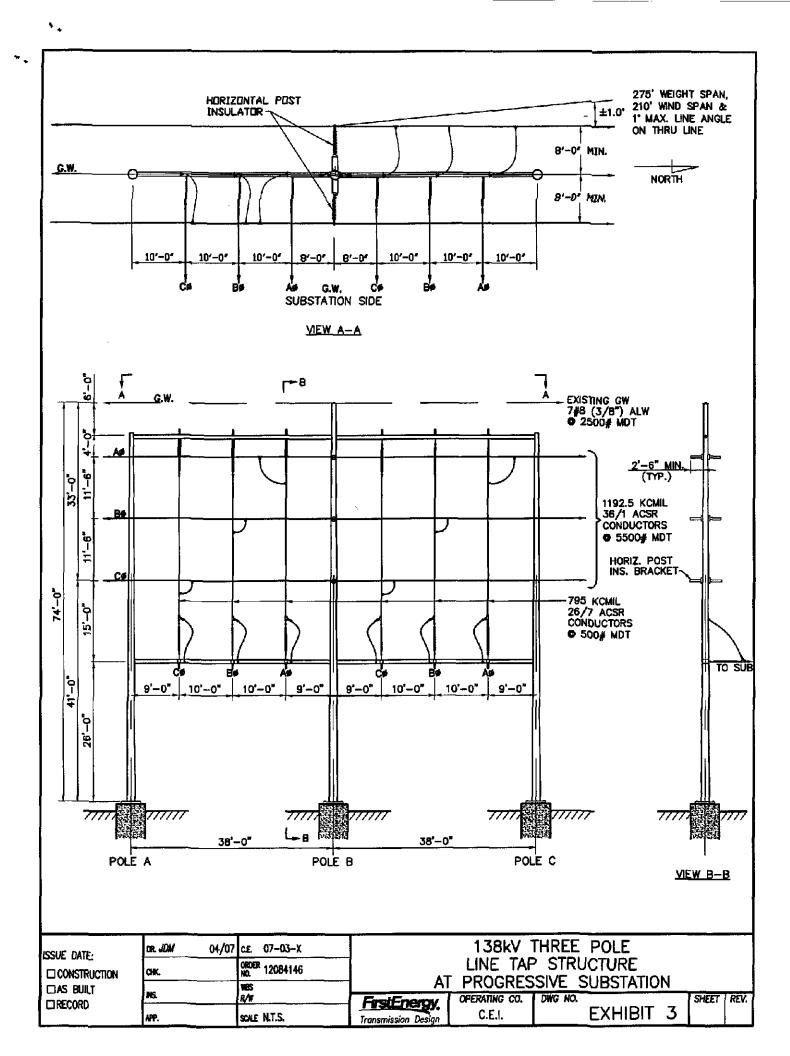
The Project is located in an open area of a commercially zoned area along an established transmission line right-of-way. Visual observations of the Project area did not indicate areas of ecological concern near the project. An existing or a new access drive that will be constructed and installed by Progressive Corporation will provide access to the substation area from the Progressive Corporation parking lot. The construction access drive will cross over a small swale near the Progressive Corporation parking lot. If a new structure is needed where the drive crosses over the swale, Progressive Corporation will construct the structure.

#### 4906-11-01 (D) (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.









### 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., Bidg. F-1 Columbus, OH 43229-6693 Phone: (614) 265-6453; Fax: (614) 267-3096

April 10, 2007

EASTLAKE-LLOYD 138kV TRANSMISSION LINE TAP TO THE PROGRESSIVE SUBSTATION

ODNR RESPONSE

EXHIBIT 4

Jacob Merriman FirstEnergy Service Co. 76 S. Main St. Akron, OH 44308

Dear Mr. Merriman:

I have reviewed our Natural Heritage maps and files for the Eastlake-Lloyd Q12 & Q13 138 kV Transmission Line Tap to Progressive Substation project area, including a half mile radius, in Mayfield, Cuyahoga County, and on the Mayfield Heights Quad. We have no records for rare or endangered species or other significant natural features within the project area. However, please note the location of the North Chagrin Reservation (Cleveland Metro Park District) within a half mile radius to the east of the project site and as shown in green 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 or state parks, forests or wildlife areas in the project vicinity.

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 5 highest quality areas. Also, we do not have data for all Ohio wetlands. For National Wetlands Inventory maps, please contact Madge Fitak in the Division of Geological Survey at 614-265-6576.

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

Sincerely.

Debbie Woischke, Ecological Analyst

bhre Wiselle

Natural Heritage Program

ohiodar.com

