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April 22, 2021

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, Second Floor
Harrisburg, Pennsylvania 17120

Re: APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA;
Docket No. A-2021-_____

Dear Secretary Chiavetta:

Enclosed for filing on behalf of Mid-Atlantic Interstate Transmission, LLC ("MAIT") is an Application Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, For Approval Of The Siting and Construction Of The Hunterstown-Orrtanna 115 kV Transmission Line Project Located In Highland, Franklin, Butler, Cumberland And Straban Townships In Adams County Pennsylvania. MAIT has separately paid the associated $350.00 filing fee. The Application includes:

1. The Siting Application and associated Exhibits in support of the Siting Application;
2. The Direct Testimony in support of the Siting Application; and
3. A Notice of Filing.

Due to the ongoing COVID-19 pandemic, these materials are being electronically filed with the Pennsylvania Public Utility Commission. Copies of this Application and a Notice of Filing have been served upon the parties as required by 52 Pa. Code § 57.74 and noted on the attached Certificate of Service.

MAIT has also requested a waiver of Section 57.74(d) of the Commission's regulations, 52 Pa. Code § 57.74(d), pursuant to 52 Pa. Code § 1.9(a) in the Application. As explained in the Application, MAIT is unable to provide access to a physical copy of the Application at a physical location in Adams County at this time due to the ongoing COVID-19 pandemic. As an alternative, MAIT has also proposed to make a publicly accessible electronic copy of the Application and Notice of Filing available online at the website specified in the Application and Notice of Filing.

MAIT requests Commission review and approval of the Application on or before May 15, 2022, in order to allow construction to commence immediately thereafter.

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If you have any questions pertaining to this matter, please do not hesitate to contact me.

Very truly yours,

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Counsel for Mid-Atlantic Interstate Transmission, LLC

Enclosures

cc: Paul Diskin - Bureau of Technical Utility Services (via electronic mail)
Jordan Van Order - Bureau of Technical Utility Services (via electronic mail)
Darren Gill – Bureau of Technical Utility Services (via electronic mail)
Jeremy Haring – Bureau of Technical Utility Services (via electronic mail)
Deborah Backer – Bureau of Technical Utility Services (via electronic mail)

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	:	**Docket No. A-2021-_____**

CERTIFICATE OF SERVICE

I hereby certify that on this date, the parties listed below that are entitled to receive a copy of the above-captioned Siting Application to 52 Pa. Code § 57.74(b) were served by certified mail, return receipt requested, a copy of the above-captioned Siting Application, and the parties listed below that are entitled to receive a Notice of Filing pursuant to 52 Pa. Code § 57.74(c) were served by certified mail, return receipt requested, a copy of the Notice of Filing.

Service by certified mail, return receipt requested, addressed as follows:

Those entitled to receive the Siting Application:

Randy L. Phiel, Chairman
Adams County Commissioner
117 Baltimore Street, Room 201
Gettysburg, PA 17325

James E. Martin, Commissioner
Adams County Commissioner
117 Baltimore Street, Room 201
Gettysburg, PA 17325

Marty Karsteter Qually, Commissioner
Adams County Commissioner
117 Baltimore Street, Room 201
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Matthew Williams
President, Franklin Township
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Cashtown, PA 17310

Sherri Clayton-Williams
Director, Planning & Development
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Jason Stitt
Supervisor, Highland Township
1617 Knoxlyn-Orrtanna Road
Orrtanna, PA 17353

Ed Steinour Jr.
Supervisor, Highland Township
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Steve Toddes, Vice-Chair
Vice-Chair, Cumberland Township
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Gary Dingle
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Cashtown, PA 17310

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Supervisor, Butler Township
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Department of Environmental Protection
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Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105-2063

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Mr. Jeffrey Brauning
Supervisor, Cumberland Township
55 Redding Lane
Gettysburg, PA 17325

Shaun Phiel
Supervisor, Cumberland Township
475 Old Mill Road
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David P. Waybright, Vice Chair
Cumberland Township Supervisors
1370 Fairfield Road
Gettysburg, PA 17325

Mr. Tony M. Sanders
President, Straban Township
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Gettysburg, PA 17325

Ms. Alan N. Zepp
Supervisor, Straban Township
1190 Hunterstown-Hampton Road
New Oxford, PA 17350

Mr. Alfred E. Kammerer
Supervisor, Straban Township
110 Hunterstown-Hampton Road
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Laura Goss, Assistant Director
140 Baltimore Street
Gettysburg, PA 17325

Department of Environmental Protection
Attn: Office of Field Operations
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105-2063

Office of Consumer Advocate
555 Walnut Street
5th Floor Forum Place
Harrisburg, PA 17101-1923

Office of Small Business Advocate
Suite 1102, Commerce Building
300 North Second Street
Harrisburg, PA 17101

Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
P.O. Box 3265
Harrisburg, PA 17105-3265

Those entitled to receive a Notice of Filing:

Honorable Leslie S. Richards, Secretary
c/o Office of Chief Counsel
Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, 9th Floor
Harrisburg, PA 17120
Attn: William J. Cressler

PA Historical & Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Fl.
400 North Street
Harrisburg, PA 17120-0053
Attn: Mr. Douglass C. McLearen, Chief

Mr. Adam McClain
District Manager
Adams County Conservation District
670 Old Harrisburg Road
Suite 201
Gettysburg, PA 17325

U.S. Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Rd, Suite 101
State College, PA 16801-4850
USFWS Project # 2019-1099
Attn: Sonja Jahrsdoerfer

Federal Aviation Administration
Eastern Obstruction Evaluation
Team Manager
FAA Southwestern Regional Office
10101 Hillwood Parkway
Fort Worth, TX 76177
Attn: Chris Shoulders

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Rachel Carson State Office Building
PO Box 8552
Harrisburg, PA 17105-8767
Attn: Rebecca Bowen

PA Fish and Boat Commission
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823-9620
Attn: Contact: Chris Urban

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2001 Elmerton Avenue
Harrisburg, PA 17110-9797
Attn: Peter Sussenbach

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Baltimore, MD 21201
Attn: Wade Chandler, Chief
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Frank E. Buck Jr., et al
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Richand R. & Sharon K. Ford
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Gettysburg, PA 17325

Date: April 22, 2021

By: _____

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Counsel for
Mid-Atlantic Interstate Transmission, LLC

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	**:**	**Docket No. A-2021-_____**

APPLICATION OF MID-ADLANTIC INTERSTATE TRANSMISSION, LLC FOR THE HUNTERSTOWN-ORRTANNA 115 KILOVOLT TRANSMISSION LINE PROJECT

TO THE PENNSYLVNIA PUBLIC UTILITY COMMISSION:

Mid-Atlantic Interstate Transmission, LLC ("MAIT"), pursuant to the Pennsylvania Public Utility Commission's ("Commission" or "PUC") regulations at 52 Pa. Code § 57.72 *et seq*. and its Interim Guidelines for the Filing of Electric Transmission Line Siting Applications at 52 Pa. Code § 69.3101 *et seq*., requests the Commission's approval to locate, construct, operate and maintain a high-voltage ("HV") transmission line referred to as the "Hunterstown-Orrtanna 115 kV Transmission Line Project" (hereinafter, the "Project"). The proposed new 9.1-mile, double circuit, steel overhead 115 kilovolt ("kV") transmission line is located in Highland, Franklin, Butler, Cumberland and Straban Townships in Adams County, Pennsylvania. The Project is needed to support a second source of 115 kV service to Orrtanna Substation to provide redundancy and to improve electric service reliability for customers in Adams County, Pennsylvania.

The Project involves constructing a new double circuit 115 kV transmission line parallel to an existing single circuit 115 kV line within an existing transmission corridor. Upon completion of the Project, the existing single circuit 115 kV line within the corridor will be removed as the

proposed double circuit construction will accommodate both the existing and proposed circuit. The existing easement agreements allow for the installation of the Project. The Project will initially parallel the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line and eliminate the existing 3-terminal line configuration by looping the existing 115 kV transmission line into the Orrtanna Substation. Two new lines will be created by the Project: the Hunterstown-Orrtanna 115 kV Transmission Line and the Lincoln-Orrtanna 963 115 kV Transmission Line.

In addition, as noted in Section II.O. below, MAIT is making this filing available to the public on its website. MAIT has included a link to this website in this Application and in the Notice of Filing. MAIT also intends to provide the link to the filing in the newspaper notice it publishes in newspaper(s) of general circulation in the area of the Hunterstown-Orrtanna 115 kV Transmission Line Project.

Subject to the Commission's approval, construction on the Project is scheduled to begin on or about July 15, 2022 to meet a required in-service date of May 15, 2023. To support tree clearing in advance of construction, MAIT asks that the Project be approved on or before May 15, 2022. In support of this Application, MAIT states as follows:

I. INTRODUCTION

1. The name of the Applicant and the address of its principal business offices are:

Mid-Atlantic Interstate Transmission, LLC
76 South Main Street
Akron, OH 44308

2. MAIT's attorneys in this matter authorized to receive notices and communications on its behalf are:

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Attorney No. 207742
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12th Floor
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3. MAIT also requests that a copy of all notices and communications regarding this matter be sent to:

Mary E. Anderson
Transmission Specialist III
FirstEnergy Service Company
300 Madison Avenue
Morristown, New Jersey 07960
201-787-4238
mcargill@firstenergycorp.com

4. MAIT, a subsidiary of FirstEnergy Corp., is a public utility that provides interstate electric transmission service in the Commonwealth subject to the jurisdiction of the Federal Energy Regulatory Commission ("FERC"). MAIT also has been issued a certificate of public convenience as a Pennsylvania public utility pursuant to the Commission's Opinion and Order entered August 24, 2016 at Docket Nos. A-2015-2488903 et al. Accordingly, the Commission asserts jurisdiction

over the siting and construction of transmission lines by MAIT in Pennsylvania pursuant to the Commission's regulations at 52 Pa. Code § 57.71, et seq.

5. Accompanying this Application, MAIT is submitting written direct testimony, a cross-reference document, and supporting exhibits. Direct testimony of six witnesses, identified as MAIT Statement Nos. 1 through 6, are included in support of the Project. Attachment 1 is included as a cross-reference document that lists provisions of the Commission's regulations and notes the location in this submission. Additionally, MAIT's witnesses sponsor the following Exhibits, which are included with the filing and provide additional detailed information regarding the proposed Project:

- Mary E. Anderson (MAIT Statement No. 1) provides an introduction of MAIT's witnesses and an overview of regulatory requirements, describes MAIT's outreach to the public and receipt of public comments, and sponsors MAIT Exhibits 1 through 4.
  - **MAIT Exhibit 1** – Initial Project Fact Sheet
  - **MAIT Exhibit 2** – Proof of Publication in The Gettysburg Times on June 11, 2019
  - **MAIT Exhibit 3** – Representative Property Owner Update Letter Mailed November 25, 2020
  - **MAIT Exhibit 4** – Updated Project Fact Sheet
- Lawrence A. Hozempa (MAIT Statement No. 2) describes the need for the Project, alternatives to the Project that were considered and the PJM Interconnection, LLC regional transmission expansion planning process, and sponsors MAIT Exhibits 5 through 12.
  - **MAIT Exhibit 5** – Existing MAIT Transmission System Project Area Map

- **MAIT Exhibit 6** – Proposed MAIT Transmission System Project Area Map
- **MAIT Exhibit 7** – First Read Slide From the PJM July 20, 2018 Sub Regional RTEP Committee Mid-Atlantic Meeting
- **MAIT Exhibit 8 –** Second Read Slide From the PJM August 24, 2018 Sub Regional RTEP Committee Mid-Atlantic Meeting
- **MAIT Exhibit 9 –** Need Slide From the PJM June 16, 2020 Sub Regional RTEP Committee Mid-Atlantic Meeting
- **MAIT Exhibit 10 -** Solution Slide From the PJM October 15, 2020 Sub Regional RTEP Committee Mid-Atlantic Meeting
- **MAIT Exhibit 11 -** Graphs of EMF Calculations for Current Normal and PJM RTEP Loading
- **MAIT Exhibit 12 -** Graphs of EMF Calculations and Future Normal and Future PJM TREP Loading

- Barry A. Baker (MAIT Statement No. 3) describes the principal elements of the siting analysis, explains how the environmental assessment was conducted, discusses the reasons why the preferred route was selected, and also sponsors MAIT Exhibits 13 through 16.
  - **MAIT Exhibit 13** – Topographic Overview Map
  - **MAIT Exhibit 14** – Aerial Overview Map
  - **MAIT Exhibit 15** – Route Selection Study
  - **MAIT Exhibit 16** – List of Agency & Permit Requirements

- Lisa Marinelli (MAIT Statement No. 4) explains the process by which easements and other land rights were acquired for the Project, and sponsors MAIT Exhibits 17 through 21.
  - **MAIT Exhibit 17** – Property Owners Crossed by the Right-of-Way
  - **MAIT Exhibit 18** – Representative Property Owner Letter and Notices
  - **MAIT Exhibit 19** – Code of Conduct
- Jeffrey P. Irons (MAIT Statement No. 5) describes the design and engineering for the Project, how the Project will be constructed and MAIT's plans for operating and maintaining the proposed transmission line after it is constructed, including removing and controlling vegetation, and also sponsors MAIT Exhibits 20, 21, 22A and 22B, 23A through 23F, and 24 through 26.
  - **MAIT Exhibit 20** – Typical Cross Section of MAIT Right-Of-Way ("ROW");
  - **MAIT Exhibit 21** – Depiction of the General Layout of the Existing Transmission Corridor
  - **MAIT Exhibit 22A** – Additional ROW With Orrtanna Power, LLC
  - **MAIT Exhibit 22B** – Additional ROW with Roland & Joyce Offutt
  - **MAIT Exhibit 23A** – Typical 115 kV Double Circuit Tubular Steel Structure; Angles 0-5 Degrees
  - **MAIT Exhibit 23B** – Typical 115 kV Double Circuit Tubular Steel Structure; Angles 5-30 Degrees
  - **MAIT Exhibit 23C** – Typical 115 kV Double Circuit Tubular Steel Structure Deadend; Angles 0-50 Degrees
  - **MAIT Exhibit 23D** – Typical 115 kV Single Circuit 2-Pole Wood H-Frame

- **MAIT Exhibit 23E** – Typical 115 kV Single Circuit 3-Pole Angle Dead End Structure
- **MAIT Exhibit 23F** – Typical 115 kV Single Circuit Strain/Dead End Steel Structure
- **MAIT Exhibit 24** – Vegetation Management for New Transmission Construction Projects
- **MAIT Exhibit 25** – Tree Trimming and Comprehensive Vegetation Management Brochure
- **MAIT Exhibit 26** – Vegetation Management Program Document

- Ryan D. Grady (MAIT Statement No. 6) discusses the existing condition of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, explains how the transmission maintenance group provides project recommendations, provides information about current and ongoing maintenance trends, and sponsors MAIT Exhibits 27 through 29.
  - **MAIT Exhibit 27** – Results of Aerial and Ground Line Inspections
  - **MAIT Exhibit 28** – Map Depicting Issues at Structure Locations
  - **MAIT Exhibit 29** – Photographs of Existing Conditions

6. This Application, including the accompanying Exhibits and Statements, which are incorporated herein by reference, contains all of the information required by 52 Pa. Code §§ 57.72(c), 69.1101, 69.3101-69.3107.

II. APPLICATION FOR SITING APPROVAL

A. General Description of the Project

7. MAIT has completed an evaluation of the existing 115 kV transmission system linking the Orrtanna Substation in Highland Township and Hunterstown Substation in Straban

Township, which are both located in the service area of Metropolitan Edison Company ("Met-Ed"), and determined there are reliability concerns in the area. The Orrtanna Substation is presently supplied by a single 115 kV source, the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. The Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line is a radial[1] line that extends approximately 10 miles between the Hunterstown Substation and the Orrtanna Substation. Approximately 1.5 miles west of Hunterstown Substation there is an existing approximately 2-mile-long line tap extending south to Lincoln Substation. An existing 6-pole switch is located immediately east of this tap location on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line.

8. The proposed Project involves the construction of a new double circuit 115 kV line from the Orrtanna 115 kV substation approximately 9.1 miles to existing structure location #223 located 1 span east of the existing switch. This existing wood structure will be replaced with a 3-pole dead end wood structure to accommodate the tie-in. Upon completion of the tie-in, the existing 6-pole switch structure and conductor between the tap location and structure #223 will be removed, eliminating the radial configuration and creating the two separate circuits. As proposed, the Project will utilize 100 feet of existing 200-foot ROW corridor.

9. The proposed Project will provide a networked source for a radial load that presently cannot be transferred to other substations, improve reliability and enhance service for Met-Ed and Adams Electric Cooperative ("AEC") customers, and provide increased operational and maintenance flexibility.

[1] In a "networked" configuration, the transmission line has a voltage source and power supply available at each end of the line. Power can flow from either end of the line to serve the customer load. However, in a "radial" configuration, the transmission line has a voltage source and power supply available at only one end of the line.

10. MAIT is providing with this Application several maps that either depict or aid in understanding the location and description of the Project. MAIT witness Mr. Baker sponsors MAIT **Exhibits 13** and **14** which are, respectively, a topographic and an aerial map of the area encompassing the Project showing the proposed line route in relation to major physical features. **Exhibit 5** is a map showing the existing transmission system project area. **Exhibit 6** is a map showing the proposed transmission system project area. MAIT witness Mr. Hozempa sponsors **Exhibits 5** and **6**.

11. The entire Project will be located in Adams County, Pennsylvania. Approximations of the proposed Hunterstown-Orrtanna 115 kV Transmission Line's situation in each municipality touched are as follows: 1.7 miles will be located within Highland Township, 3.4 miles will be located within Franklin Township, 0.8 mile will be located within Butler Township, 1.4 miles will be located within Cumberland Township, and 1.8 miles will be located within Straban Township.

12. MAIT has an existing generally 200-foot-wide ROW extending from the Orrtanna Substation to the Hunterstown Substation. This ROW is occupied on the southerly side by the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, which has its own dedicated 100-foot ROW. The Project will be constructed within the remaining generally 100-foot-wide portion of the existing transmission corridor on the northerly side of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line.[2] The existing ROW that MAIT proposes to use for the Project satisfies the required ROW width to support the Project (see **Exhibit 21**), which depicts the existing 200-foot transmission corridor and the dedicated 100-foot wide ROWs. MAIT witness

[2] MAIT acquired the existing transmission line corridor from Metropolitan Edison Company ("Met-Ed") when Met-Ed and Pennsylvania Electric Company ("Penelec") transferred their transmission assets to MAIT with the prior approval of the PUC and the FERC. As part of that transaction, Penelec and Met-Ed leased to MAIT the land and land rights on which their transmission facilities were located.

Mr. Irons more fully describes the existing transmission corridor used by the Project and sponsors several exhibits depicting the corridor and the typical structures that will occupy it. The existing ROW agreements with the affected landowners allow MAIT to install the proposed structures to support the proposed Project.

13. The proposed transmission line will extend from Orrtanna Substation to the tie-in location at structure #223 of the existing 115 kV transmission line. Structure #223 is located east of the existing 3-terminal line configuration where the existing transmission line tap extends south to Lincoln Substation. The tie-in location at structure #223 allows the proposed transmission line to utilize the existing structures and conductors for approximately 1.5 miles into Hunterstown Substation once the 3-terminal configuration is eliminated. No work is proposed east of structure #223. **Exhibit 21** provides a general layout of the proposed Project.

14. Although the existing 100-foot wide ROW satisfies the necessary ROW requirement for the proposed Project, MAIT elected to acquire two additional easements to support the Project. Additional ROW was acquired by MAIT across two parcels already traversed by the existing transmission line corridor. Approximately 0.25 acre of additional ROW was acquired from Orrtanna Power, LLC to support the new line exit at the Orrtanna Substation as shown in **Exhibit 23A**. Additionally, approximately 0.7 acre of additional ROW was acquired from Roland and Joyce Offutt to avoid installing a structure in a wetland. The acquisition of this additional ROW reduces potential forested wetland impacts and the amount of vegetation clearing within the wetland that would otherwise be necessary, as shown in **Exhibit 23B**.

15. As previously explained, the proposed route of the Project is depicted in **Exhibits 13** and **14**. MAIT witness Mr. Baker also provides a narrative description of the proposed route in his direct testimony (MAIT Statement No. 3).

B. Engineering Description

16. The new Hunterstown-Orrtanna 115 kV Transmission Line is proposed to be constructed and operated as a double circuit transmission line extending approximately 9.1 miles. The proposed transmission line will be supported by multiple structure types as shown in **Exhibits 23A** through **23F**, and as more fully described in the direct testimony of MAIT witness Mr. Jeffrey P. Irons (MAIT Statement No. 5). Based on preliminary engineering, the proposed Hunterstown-Orrtanna 115 kV Transmission Line will require approximately 74 structures ranging from 52 feet to 115 feet above ground level with the average height being 104 feet. The average span length is approximately 670 feet.

17. The majority of the Project will utilize double circuit tangent steel monopole structures. Approximately 57 structures will utilize this structure type as shown in **Exhibit 23A.** Approximately 8 double circuit angle steel structures and approximately 5 double circuit strain/dead end steel pole structures will be needed as shown in **Exhibits 23B and 23C**. Two single circuit wood tangent horizontal H-Frame strain/dead end structures will be needed to cross under an existing 500 kV line as shown in **Exhibit 23D**. One single circuit 3-pole angle strain/dead end wood structure will be needed at structure #223 to tie into the existing circuit towards Hunterstown Substation as shown in **Exhibit 23E**. Finally, one single circuit tangent horizontal H-Frame wood structure will be needed at structure #37 to tie into the existing circuit towards Lincoln Substation as shown in **Exhibit 23F**.

18. The overhead 115 kV double circuit design will utilize three conductors per circuit, one shield wire and one optical ground wire ("OPGW"). The Project will use 795 kcmil[3] 26/7

[3] Kcmil stands for thousand circular mils. Kcmil wire size is the equivalent cross-sectional area in thousands of circular mils. A circular mil is the area of a circle with a diameter of one thousandth (0.001) of an inch.

aluminum conductor steel reinforced ("ACSR") conductor per phase. The shield wire will be 7#8 alumoweld and the OPGW will be SFPOC/SFSJ-J-6641.

19. The proposed Project will be designed and operated at 115 kV. The transmission line maximum design operating temperature is 212 degrees Fahrenheit. The line will meet or exceed all requirements of the current National Electrical Safety Code ("NESC") under all operating conditions. The lines-to-structure clearances are shown in Exhibits 6A through 6F.

20. The tie-in location is located on parcel 38G11-0033---000. As previously noted, the Project will tie-in to the existing 115 kV transmission line at structure #223, which is located one span east of the existing tap location. Structure #223 is an existing 2-pole H-frame which will be replaced with a 3-pole wood structure. Structure #42 is located one span west of the existing tap location. This structure is an existing 2-pole wood H-frame which will be replaced with a single steel monopole. Surrounding the existing tap location, the existing tap structure is a 3-pole wood structure which is planned to be replaced with a single steel monopole. In addition, there is a 6-pole wood tap structure and two single wood poles supporting static wire in this location which will be removed. Therefore, there is a net reduction of ten poles on parcel 38G11-0033---000.

C. Right-of-Way Assessment

21. MAIT has existing easements for a generally 200-ft wide corridor. Presently, the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line is located on 2-pole wood H-frames and occupies the southern 100 feet of the 200-foot corridor. The proposed double circuit steel monopole line would be constructed in the northern 100 feet of the 200-foot corridor. Steel monopole construction will reduce the number of poles on property owners from the two per structure that presently exist down to one per structure in existing ROW.

D. Property Owners

22. The names and addresses of known persons, corporations and other entities of record who own property within the existing transmission line corridor where the Project is proposed are provided in **Exhibit 17**. Additional ROWs were obtained across two properties currently traversed by the existing transmission line corridor as shown in **Exhibits 22A** and **22B**.

E. Statement of Need

23. MAIT witnesses Mr. Lawrence Hozempa (MAIT Statement No. 2) and Mr. Ryan D. Grady (MAIT Statement No. 6) explain that the need for the Project is based on the existing condition of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line coupled with the intent to improve reliability and enhance service for customers by networking a radial load that presently cannot be transferred to other substations. The Orrtanna 115 kV Substation is currently served by a radial 115 kV transmission line, approximately 9.1 miles long, tapped from the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. A majority of the conductor, hardware and structures for this line were installed in the 1960s.

24. As explained by Mr. Grady in his direct testimony (MAIT Statement No. 6), recent ground inspections, performed in May 2018, and aerial inspections, performed in February 2019, indicate that the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line is exhibiting end of life conditions including, but not limited to, pole top rot, broken down guys, flashed insulators, woodpecker damage and wear caused by aeolian vibrations. The entire line is exhibiting signs of wood pole and hardware deteriorations except for several newer poles that were installed as part of ongoing maintenance efforts. Inspection results indicate that at least 55% of the structures have existing condition issues that need to be addressed in the near term. Mr. Grady sponsors and

provides the results of the aerial and ground inspections in **Exhibit 27** and representative photographs of those existing conditions in **Exhibit 29**.

25. Mr. Grady further explained that in 2018 and 2019, an estimated $1.9 million was spent on addressing condition-based deficiencies on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. If the Project does not proceed, Mr. Grady further estimated that ongoing maintenance costs will be approximately $750,000 per year for the next five years. Based on the existing condition of the line, MAIT believes that the line should be rebuilt within the next 5-10 years, which rebuild will require an extended outage on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line in the future. Taking an extended outage in its current configuration leaves Orrtanna Substation without a 115 kV source to provide service to approximately 6,200 distribution customers (2,600 served by Met-Ed and 3600 served by AEC).

26. MAIT witness Mr. Hozempa (MAIT Statement No. 2) further explained that a second 115 kV source into Orrtanna Substation would provide operational flexibility and improved reliability for customers served from Orrtanna Substation. Constructing a single circuit wood pole line parallel to the existing line was considered as an alternative, as was construction of a double circuit steel pole line parallel to the existing line. Mr. Hozempa also describes the cost benefit analysis performed by MAIT to compare all available options. In this instance, construction of a new double circuit line adjacent to the existing line (i.e., the proposed Project) was determined to be more cost-effective when compared to constructing a new parallel single-circuit with wood poles. Even though the double circuit option requires a greater investment upfront, consideration of other factors when evaluating the single circuit option, such as on-going maintenance of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line and the eventual rebuild of that line, both of which were explained by Mr. Grady (MAIT Statement No. 6), led to this

determination. Specifically, as highlighted in the table below, the estimated total costs including overheads to build a new double circuit line is approximately $37.7M, including the removal cost for the existing single circuit line, while the total costs including overheads to build new parallel singe-circuit lines ranges from approximately $63.5M to $70.5M when the costs of new wood pole construction is combined with the pending rebuild of the existing line in the next 5-10 years.

Option	**1**	**2a**	**2b**
Description	Install New Double Circuit Steel & Remove Existing 963 Line to Tap Location	Install New Parallel Single Circuit Wood to Tap Location & Rebuild Existing 963 Line in 5 Years	Install New Parallel Single Circuit Wood to Tap Location & Rebuild Existing 963 Line in 10 Years
Estimated Cost to Build	$36.7M	$28.4M	$28.4M
Ongoing Maintenance Costs for Existing 963 Line	$0.0	$3.75M*	$7.5M**
Removal of Existing 963 Line	$1.0M	$0.0	$0.0
Future Rebuild of the 963 Line	$0.0	$31.3M	$34.6M
TOTAL ESTIMATED COST	**$37.7M**	**$63.5M**	**$70.5M**
NPV of COST	**$37.7M**	**$53.0M**	**$51.1M**

*Estimated ongoing maintenance costs of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line ("963") for 2021-2025.
** Estimated ongoing maintenance costs of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line ("963") for 2021-2030.

As reflected by the chart above, the proposed Project is clearly the more cost effective and efficient solution as it resolves the reliability issues identified by Mr. Hozempa and the asset health issues identified by Mr. Grady, and avoids ongoing maintenance costs associated with other alternatives that will ultimately still require the line to be rebuilt in the future. Additional information concerning the project need and existing condition of the transmission line facilities is detailed in MAIT Statement Nos. 2 and 6.

F. Safety Considerations

27. The proposed Project will not create any unreasonable risk of danger to the public health or safety. The design, construction and operation of the Project will meet or exceed the

requirements specified in the latest revisions of the NESC and all applicable safety standards established by the Occupational Safety and Health Administration ("OSHA"). All work shall be done in accordance with NESC, OSHA and any applicable local, state or federal requirements.

28. The Project is being completed within an existing transmission line corridor. A description of FirstEnergy's vegetation management practices is provided in **Exhibits 24 through 26** to this Application. **Exhibits 24 through 26** are more fully discussed in the direct testimony of MAIT witness Mr. Irons (MAIT Statement No. 5).

29. An electric and magnetic field ("EMF") study for the proposed transmission line was performed. Results of that study are provided in Table 2 in response to Section 69.3107(b) of the Interim Guidelines for the Filing of Electric Transmission Line Siting Applications, 51 Pa. Code §§ 69.3101-69.3107 ("Interim Guidelines").

30. No communication towers, pipelines, or other utilities will be affected by the proposed Project.

31. Several major roadways, including U.S. Route 30 (Chambersburg Road) and PA Route 34 (Biglerville Road), will be spanned by the proposed Project. Pennsylvania Department of Transportation ("PennDOT") Highway Occupancy Permits, or equivalent type permits, will be acquired by MAIT for these major road crossings prior to construction.

32. MAIT will coordinate with the Federal Aviation Association ("FAA") and Pennsylvania Bureau of Aviation, as necessary, to assess potential interference with any air navigation facility before construction. Aviation coordination has been initiated through the FAA. MAIT will assure that the pole locations and heights are properly recorded by the FAA. MAIT will comply with any additional lighting and other visual aids that may be required by these agencies to assure aviation safety in the region.

G. Route Analysis

33. FirstEnergy Service Company, on behalf of MAIT, retained AECOM Technical Services Corporation ("AECOM"), an international engineering and environmental consulting firm, to prepare a comprehensive study of the projected environmental impacts of the Project and alternative routes. The results of this study are set forth in the AECOM report titled "Hunterstown-Orrtanna 115 kV Transmission Line Project" ("Route Selection Study") which is provided as **Exhibit 15**. The line route adopted for the Project as the Proposed Route is identified as "Alternative Route 2 (Parallel Route)" (referenced further herein as the "Proposed Route") in the Route Selection Study, and a general description of the Proposed Route is attached hereto as Appendix A. The basis for the final route selection is set forth in Section 6.0 and in Table 6-1 of the Route Selection Study and also explained in the direct testimony of MAIT witness Mr. Barry Baker (MAIT Statement No. 3). The Route Selection Study **(Exhibit 15)** and Mr. Baker's direct testimony (MAIT Statement No. 3) also provide information regarding the alternative routes considered by MAIT.

H. Environmental Assessment

34. AECOM conducted a comprehensive review of the environmental constraints located within the Study Area that identified the environmental setting including the physiography, geology, soils, surface waters, vegetation, special use areas, and wildlife habitat. The environmental constraints and impact assessment are set forth in Sections 4.1 and 5.3.2.2 of the Route Selection Study reflected as **Exhibit 15**. No substantial impacts to these resources are anticipated as a result of constructing the Project.

35. As further explained in Mr. Baker's direct testimony (MAIT Statement No. 3), from an environmental perspective, the Proposed Route provides the best opportunity as the Proposed

Route because it utilizes an existing transmission corridor. The Proposed Route will be located within an existing transmission ROW with the exception of two additional easements areas that were voluntarily secured (one of which was secured to avoid installing a structure in a wetland), involve the least amount of tree clearing, involve the least amount of potential forested wetland clearing, involve the least amount of potential impacts to threatened and endangered species habitat, and involve incremental riparian impacts by spanning streams already spanned by the existing 115 kV transmission line. Given the current design, no structures are proposed to be located within a wetland.

36. MAIT will implement appropriate measures during construction and through the subsequent operation of the transmission line to avoid or minimize impacts to environmental resources. MAIT will also obtain all the relevant state and federal permits needed to construct the Project and will adhere to the conditions set forth in those permits. As part of the permitting process, MAIT has conducted detailed ecological surveys of the line route. These surveys include wetland delineations, stream identifications, and threatened and endangered species surveys. MAIT will also implement an erosion and sediment control plan, spill prevention plan and contingency plan for the construction of the Project. MAIT will continue coordination with state and federal agencies to minimize the potential ecological impacts. No substantial environmental impacts are anticipated as a result of constructing the Project

I. Social Assessment

37. The Route Selection Study considered social resources in or near the Study Area. The entire Study Area was evaluated based on land use, conserved lands, agricultural easements, comprehensive plans, historic and cultural resources, and hazardous material sites. In addition, a public open house was held to gather additional comments and opinions from affected landowners

and the local community. Comments received from landowners were considered in the selection of the Proposed Route. The social/built environment constraints and impact assessment are set forth in Sections 4.2 and 5.3.2.1 of the Route Selection Study found in **Exhibit 15** and also discussed by Mr. Baker in his direct testimony (MAIT Statement No. 3). A summary of the public open house is provided in Section 5.2 of the Route Selection Study.

38. From a social perspective, the Proposed Route provides the best opportunity as it would utilize an existing transmission corridor and therefore, generally, require no new easements to support the Project. That fact notwithstanding and as previously noted, two additional easements were voluntarily secured to support the Project. The Proposed Route would also cross the lowest area of conserved lands, which are already traversed by the existing transmission line. The Proposed Route will cross or be in close proximity to approximately 25 residential structures; however, these residences are already in close proximity to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line with an unused portion of that existing ROW crossing the properties. Most of the residential structures are located at or near main roads crossed by the existing ROW. In some cases, the residences were built after the existing Hunterstown-Linocln--Orrtanna 115 kV Transmission Line was constructed. Utilizing the existing corridor will not introduce a new visual element into the viewshed because there is an existing transmission line present in the corridor and there is no anticipated impact to current land use. The Proposed Route also traverses a similar number of total parcels when compared to the alternatives. All of these factors being as such, no substantial impacts to social/built environment are anticipated as a result of constructing the Project.

J. Airports and Aircraft Facilities

39. The Gettysburg Regional Airport is located adjacent to the southern side of the Project Study Area in Gettysburg, Pennsylvania. The Proposed Route is located approximately three miles northwest of the end of the airport runway. No potential aeronautical effects are anticipated as a result of the Project; however, MAIT will continue coordination with the FAA and Pennsylvania Bureau of Aviation, as necessary, to assess potential interference with any air navigation facility before construction.

K. Governmental Agency Requirements

40. A list of local, state and federal governmental agencies that have permitting or licensing requirements in connection with the construction or maintenance of the Project and a list of documents that have been, or are required to be, filed with those agencies in connection with the siting and construction for the Project are set forth in **Exhibit 16**. MAIT will inform the Commission in a timely manner of all changes in the status of all permits and licenses required for the Project.

41. To date, no comments have been received from Highland, Franklin, Butler, Cumberland, or Straban Township officials in response to the proposed Project.

L. Ownership, Cost and Construction Schedule

42. MAIT will own and construct the Project. The estimated cost to construct the Project is included in the breakdown below.[4] Construction is scheduled to begin March 1, 2022. The proposed in-service date for the Project is October 31, 2022. In addition to the proposed transmission line project, the Orrtanna Substation was converted to a 5-breaker ring bus. This project was completed, and the asset placed in service May 2020. Project costs for the Orrtanna Substation Project are also provided below.

[4] The estimated cost is subject to change as the constructability of the Project, sequence of construction, and other factors that may affect cost are identified as the Project progresses.

Transmission Line Costs

Engineering	$973,100
Materials	$3,070,300
Construction	$33,637,500
Total	$**37,680,900**

Substation Upgrade Costs

Engineering	$1,573,473
Materials	$2,432,628
Construction	$10,419,064
Total	**$14,425,165**

M. Litigation

43. There is no litigation concluded or in progress concerning construction of the Project.

N. Additional Information Required By Commission Guidelines

44. The Interim Guidelines contain guidelines for public notice of line siting Applications. **Exhibit 18** contains a representative letter and notices sent to the two property owners on the proposed route for which additional rights have been secured. A copy of the MAIT Code of Conduct is included as **Exhibit 20**. MAIT witness Lisa Marinelli (MAIT Statement No. 4) sponsors **Exhibits 18 and 21**, and explains the outreach conducted by the Company to landowners.

45. A copy of the initial Project Fact Sheet is included as **Exhibit 1** and a copy of the updated Project Fact Sheet is included as **Exhibit 4**. MAIT witness Mary Anderson (MAIT Statement No. 1) sponsors each of these exhibits and explains the distribution of the initial and updated Fact Sheets, as well as the basis for the service of the updated Fact Sheet.

46. Section 69.3103 of the Interim Guidelines provides that applications for eminent domain authority should be filed separately but may be filed simultaneously with the associated transmission siting application, or as soon as reasonably known. MAIT has acquired all the

property rights it needs to complete the Project. Therefore, MAIT does not anticipate the need to use eminent domain for this Project.

47. Section 69.3104 of the Interim Guidelines lists information required for exemption from municipal zoning standards. The proposed Project does not need to rely upon an exemption from municipal zoning standards for public utility facilities because the proposed use is consistent with existing zoning. A list of municipal permits required for the Project, and their status, is contained in **Exhibit 16**.

48. Section 69.3105(1) of the Interim Guidelines provides that applications for siting electric transmission line should utilize a combination of transmission route evaluation procedures including high-level geographic information system data, traditional mapping (including U.S. Geological Survey data and compilation), aerial maps and analysis of physical site-specific constraints raised by affected landowners. This information is included in the Route Selection Study Report in **Exhibit 15** and is more fully described in the direct testimony of MAIT witness Mr. Baker (MAIT Statement No. 3).

49. Section 69.3105(2) of the Interim Guidelines provides that transmission siting applicants should summarize the status of property acquisitions and provide the current status of property acquisition litigation or settlements. MAIT has existing rights to support the Project. A list of property owners of which rights have previously been obtained is included in Exhibit 7. As previously mentioned, MAIT voluntarily secured two additional easements from existing property owners traversed by the transmission line ROW (Orrtanna Power, LLC and Roland and Joyce Offutt).

50. Section 69.3105(3) of the Interim Guidelines states transmission siting applications should provide information regarding the reasonable alternative routes the utility actively

considered in its final phase of the route selection process, and the relative merits of each, including:

i. The environmental, historical, cultural and aesthetic considerations of each route;

ii. The proximity of these alternative routes to residential and non-residential structures;

iii. The applicant's consideration of relevant existing ROWs; and

iv. The comparative construction costs associated with each route.

51. Items (i) through (iii) of Section 69.3105(3) are included as part of **Exhibit 15**. The comparative estimated construction costs (item iv) for the three alternative transmission line routes are shown below in Table 1.

Table 1: Alternative Route Cost Comparison

Route Alternative	Distance (miles)	Cost ($)
1 (North Route)	12.6	$48,934,900
2 (Parallel Route - Preferred)	9.1	$37,680,900
3 (South Route)	9.7	$38,879,800

52. Section 69.3106 of the Interim Guidelines provides that siting applications should include a matrix or list showing all expected federal, state and local government regulatory permitting or licensing approvals that may be required for the project at the time the application is filed, the issuing agency, the approximately timeframe for approval and current status. **Exhibit 13** contains a list of all local, state and federal agencies with requirements for permitting or licensing approvals. MAIT will inform the Commission in a timely manner of all changes in the status for all permits and licenses required for the Project.

53. Section 69.3107(a) of the Interim Guidelines provides that applications should contain a vegetation management plan. **Exhibit 26** is a copy of the FirstEnergy Transmission

Vegetation Program document. **Exhibit 24** is a copy of the FirstEnergy Tree Trimming and Comprehensive Vegetation Management brochure. **Exhibit 25** is a copy of the FirstEnergy Vegetation Management for new Transmission Construction Projects brochure. **Exhibits 24 through 26** contain a general description of the MAIT vegetation plan, vegetation practices and landowner notification procedures.

54. Section 69.3107(b) of the Interim Guidelines provides that siting applications should contain a description of EMF mitigation procedures that the utility proposes to utilize along the transmission line. MAIT's typical transmission line route selection process, which was employed on this Project, evaluates a number of factors to identify the appropriate location for the proposed Project. This evaluation process includes identifying and considering residences and locations where large groups of people typically gather, such as school and places of worship. Although locating the transmission line in close proximity to these types of land uses is not precluded by state or federal rules or guidelines, providing the largest practical distance from residences, school, places of worship and similar facilities is generally more acceptable to the local community and is an effective way to mitigate EMF.

55. As part of MAIT's approach to efficiently construct a transmission line project, the design of all or portions of a transmission line project will typically utilize a compact conductor arrangement. This has the added benefit of reducing electric and magnetic field strengths.

56. As a point of reference, MAIT is providing estimates of the EMF strengths for the Project. The estimates have been prepared utilizing the Electric Power Research Institute's EMF Workstation 2015 program software. The electric and magnetic field strengths directly beneath the centerline at mid-span and at the edges of the ROW for the transmission line have been estimated for the normal maximum load of the transmission line and are provided in Table 2 below.

Typical conductor arrangements of sections of the transmission line that are greater than one mile in length have been modeled and are reported in Table 2. Graphs of the electric and magnetic field calculations are attached as **Exhibit 11** and **Exhibit 12**.

Table 2: Electric and Magnetic Field Calculations: Typical Span of Steel Monopole Tangent Structure to Steel Monopole Tangent Structure

EMF CALCULATIONS		Electric Field kV/meter	Magnetic Field mGauss
Hunterstown-Orrtanna 115 kV Transmission Line	Under Lowest Conductors	1.208	8.11
Orrtanna-Lincoln 115 kV Transmission Line	At Right-of-Way Edge	0.016 / 0.272	0.68 / 4.91

O. Service of Application And Waiver Of 52 Pa. Code § 57.74(d)

57. Copies of this Application and accompanying exhibits, or the Notice of Filing, have been served upon all interested parties by certified mail, return receipt requested, as required by Commission regulation of 52 Pa. Code §57.74(a)-(c).

58. As noted above, MAIT respectfully requests a waiver of the requirements of Section 57.74(d) of the Commission's regulations, 52 Pa. Code § 57.74(d), pursuant to 52 Pa. Code § 1.91(a). Section 57.74(d) of the Commission's regulations requires that MAIT "shall make a copy of the application available for public examination during ordinary business hours at a convenient location within a county in which any part of the proposed HV line will be located." 52 Pa. Code § 57.74(d). However, due to the ongoing COVID-19 pandemic, MAIT's physical office locations in Adams County are not generally open to its employees or the public. As such, MAIT respectfully requests a waiver of the requirement to make a physical copy of the application available for public examination at a physical location in Adams County.

59. As an alternative, MAIT proposes and has included in this Application and the Notice of Filing a link to the website associated with the Hunterstown-Orrtanna 115 kV

Transmission Line Project, which includes a publicly accessible electronic copy of the Application and Notice of Filing for public examination. The associated link is as follows: https://firstenergycorp.com/content/fecorp/about/transmission_projects/pennsylvania/hunterstown-orrtanna.html.

60. As soon as practicable after the filing of this Application, MAIT will also publish notice in newspaper(s) of general circulation in the area of the Hunterstown-Orrtanna 115 kV Transmission Line Project. This notice will: (a) note the filing with the Commission; (b) provide brief description of the Project and its location; (c) provide information regarding where the complete application may be reviewed by the public, by providing a link to where this information can be found on the Company's website; and (d) provide any additional information as directed by the Commission.

61. Consistent with Section 57.74(e) of the Commission's regulations, 52 Pa. Code § 57.74(e), MAIT will also provide any such additional notice and shall service any such additional copies of the Application as the Commission may require.

62. MAIT further requests that the Commission publish notice of this Application in the *Pennsylvania Bulletin*.

III. CONCLUSION

WHEREFORE, based on the forgoing, Mid-Atlantic Interstate Transmission, LLC respectfully requests that the Pennsylvania Public Utility Commission review and approve the application for the location and construction of the Hunterstown-Orrtanna 115 kV High Voltage Transmission Line Project.

Dated: April 22, 2021

By: 

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	:	**Docket No. A-2021-_____**

VERIFICATION

Mary E. Anderson states that she is the Transmission Siting Specialist III, for FirstEnergy Service Company; that she is authorized to make this Verification on behalf of Mid-Atlantic Interstate Transmission, LLC ("MAIT"), a FirstEnergy company ("FirstEnergy"); and that the facts set forth in the Application are true and correct to the best of her knowledge, information and belief. She understands that the statements herein are subject to the penalties of 18 Pa.C.S. §4904 (relating to unsworn falsification to authorities).

Date: _____

Mary Anderson
Mary E. Anderson

The following description of the Proposed Route is provided as required by PA Code Section 57.72 (c)(3).

The Project as shown on **Exhibit 13 and Exhibit 14** will start at the Orrtanna Substation and will extend north and east for approximately 9.1 miles to a switch pole structure near the Hunterstown Substation. The Project will consist of a single-circuit transmission line on new transmission structures in an existing FirstEnergy owned 100-foot wide right-of-way (ROW)that will require clearing.

- The Proposed Route starts in Highland Township, Adams County. Proceeding northeast across agricultural lands and maintained meadows within the existing ROW, the Proposed Route will span over forest lined Little Marsh Creek within the initial 0.2 mile and extend to low-density residentially lined Railroad Lane within 0.7 mile.
- The Proposed Route continues to the northeast for 1.0 miles across agricultural lands and two stream crossings to Seven Stars Road, which is bordered by low density residential development. The Proposed Route enters Franklin Township at this point.
- Continuing to the northeast, the Proposed Route extends for 1.0 miles across agricultural lands, two stream valleys, and several residential yards to U.S. Route 30. The CSX Railroad and a residential driveway would be spanned in this section.
- After crossing U.S. Route 30 at a moderately developed location, the Proposed Route would continue northeast for 1.0 miles across agricultural lands to Crooked Creek Road. Forest lined Marsh Creek and emergent wetland bordered Mummasburg Run would be spanned in this section.
- The Proposed Route would continue to the northeast for 0.7 mile across agricultural fields and a stream to Mummasburg Road, which is lined by low-density residential development.
- After crossing Mummasburg Road, the Proposed Route extends 0.5 mile to the northeast and then turns more to the east to cross Belmont Road, which is also lined by low-density residential development. During this stretch, the Proposed Route meets up with the southern side of the Hunterstown-Conemaugh 500 kV Transmission Line and also crosses into Belmont Township.
- Continuing to parallel the Hunterstown-Conemaugh 500 kV Transmission Line to the northeast, the Proposed Route would extend 0.8 mile across agricultural lands and through fragmented forest to Russel Tavern Road. The route makes a

sharp turn to the southeast and away from the Hunterstown-Conemaugh 500 kV Transmission Line before crossing this road.

- The Proposed Route continues in a southeasterly direction for 0.9 mile to State Route 34. The alignment would cross agricultural lands and span forested Willoughby Run before spanning the Gettysburg and Northern Railroad. East of the railroad, the land use changes from agriculture to moderately dense residential and commercial development adjacent to Herrs Ridge Road and State Route 34. The route enters Cumberland Township in this section.
- Turning to the east, the Proposed Route would extend across predominantly agricultural lands for 0.7 mile to Table Rock Road. The route would pass residential development and a local school located near State Route 34 and cross a forested stream before reaching Table Rock Road.
- Continuing to the east, the Proposed Route would extend for 0.7 mile to Good Intent Road, which is bordered by low density residential development. A commercial business is located adjacent to the Table Rock Road crossing, but the remainder of the route crosses agricultural fields. The route would cross into Straban Township and be spanned by the Hunterstown-Conemaugh 500 kV Transmission Line in this section. Two streams bordered by narrow forested floodplains would also be crossed.
- Turning to the southeast, the Proposed Route would extend for 0.8 mile across agricultural lands to Business Route 15 (Old Harrisburg Road). Rock Creek would be spanned, and a cluster of residential development would be passed along this section.
- From Business Route 15 (Old Harrisburg Road), the Proposed Route would extend for 0.3 mile across a horse farm and agricultural lands ending at the switch pole structure. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing. U.S. Route 15 is located east of the switch pole structure.

The Hunterstown-Orrtanna 115 kV Transmission Line Project will cross 1.7 miles of Highland Township, 3.4 miles of Franklin Township, 0.8 mile of Butler Township, 1.4 miles of Cumberland Township, and 1.8 miles of Straban Township.

ATTACHMENT 1
PUC REGULATION CROSS-REFERENCE MATRIX

Pennsylvania Code Section*	PUC Regulation Requirement	Location in Application	Associated Tables/Figures
57.72 (c)	Application shall contain		
57.72 (c)(1)	The name of the applicant and the address of its principal business office.	• Certification Application	
57.72 (c)(2)	The name, title and business address of the attorney of the applicant and the person authorized to receive notice and communications with respect to the application if other than the attorney of the applicant.	• Certification Application	
57.72 (c)(3)	A general description – not a legal or metes and bounds description – of the proposed route of the HV line, to include the number of route miles, the rights-of-way width and the location of the proposed HV line within each city, borough, town, and township traversed.	• Appendix A	
57.72 (c)(4)	The names and addresses of known persons, corporations, and other entities of record owning property within the proposed rights-of-way, together with an indication of HV line rights-of-way acquired by the applicant.	• Exhibit 17	
57.72 (c)(5)	A general statement of the need of the proposed HV line in meeting identified present & future demands for service, how the proposed line will meet that need, and engineering justifications	• Certification Application	
57.72 (c)(6)	A statement of the safety considerations which will be incorporated into the design, construction, and maintenance of the proposed HV line.	• Certification Application	
57.72 (c)(7)	A description of the studies which had been made as to the projected environmental impact of the HV line as proposed and of the efforts which have been and will be made to minimize the impact of the HV line upon the environment and upon scenic and historic areas.	• Exhibit 15	• Table 6-1

Pennsylvania Code Section*	PUC Regulation Requirement	Location in Application	Associated Tables/Figures
57.72 (c)(8)	A description of the efforts of the applicant to locate and identify archeologic, geologic, historic, scenic, or wilderness areas within 2 miles of the proposed right-of-way and the location and identity of the areas	• Exhibit 15	
57.72 (c)(9)	The location and identity of airports within 2 miles of the nearest limit of the right-of-way of the proposed HV line.	• Exhibit 15	• Figure 6-2
57.72 (c)(10)	A general description of reasonable alternative routes to the proposed HV line, including a description of the corridor planning methodology, a comparison of the merits and detriments of each route, and a statement of the reasons for selecting the proposed HV line route.	• Exhibit 15	
57.72 (c)(11)	A list of the local, state, and federal governmental agencies which have requirements that shall be met in connection with the construction or maintenance of the proposed HV line and a list of documents which have been or are required to be filed with those agencies.	• Exhibit 16	
57.72 c(12)	The estimated cost of construction of the proposed HV line and the projected date for completion.	• Exhibit 15	• Table 6-1
57.72 c(13)(i)	A depiction of the proposed route on aerial photographs and topographic maps of suitable detail.	• Exhibit 14 and Exhibit 13	
57.72 c(13)(ii)	A description of the proposed HV line, including the length of the line, the design voltage, the size, number, and materials of conductors, the design of the supporting structures and their height, configuration and materials of construction, the average distance between supporting structures, the number of supporting structures, the line to structure clearances and the minimum conductor to ground clearance at mid-span under normal load and average weather conditions and under predicted extreme load and weather conditions.	• Certification Application • Exhibit 23A-F	

Pennsylvania Code Section*	PUC Regulation Requirement	Location in Application	Associated Tables/Figures
57.72 c(13)(iii)	A simple drawing of a cross section of the proposed rights-of-way of the HV line and any adjoining rights-of-way showing the placement of the supporting structures at typical locations, with the height and width of the structures, the width of the right-of-way and the lateral distance between the conductors and the edge of the right-of-way indicated.	• Exhibit 20	
57.72 c(13)(iv)	A system map which shows in suitable detail the location and voltage of existing transmission lines and substations of the applicant and the location and voltage of the proposed HV line and associated substations	• Exhibit 5 and Exhibit 6	
57.72 (c)(14)	A statement identifying litigation concluded or in progress which concerns property or matter relating to the proposed HV line, right-of-way route, or environmental matters.	• Certification Application	
Chapter 69	Interim guidelines require		
69.3102 (a)(1)	A Code of Conduct/Internal Practices governing the manner in which public utility employees or their agents interact with landowners along proposed rights of way.	• Exhibit 19	
69.3102 (a)(2)	Copies of information provided to landowners by the public utility of any publicly disseminated notices advising landowners to contact the Commission or OCA in the event of improper land agent practices.	• Exhibit 18	
69.3102 (a)(3)	Copies of all notices sent pursuant to §57.91 (relating to disclosure of eminent domain power of electric utilities).	• Exhibit 18	
69.3102 (b)	Applicants for transmission siting authority should serve a copy of the Code of Conduct on all landowners along the proposed route whose property is to be purchased, subject to easement rights or borders the transmission corridor. The Code of Conduct should also be available on the applicant's website.	• Exhibit 19	

Pennsylvania Code Section*	PUC Regulation Requirement	Location in Application	Associated Tables/Figures
69.3102 (c)	Applicants for transmission siting authority should provide prior notice to the Commission's Office of Communications of informational presentations to community groups by the public utility scheduled after the filing of the transmission siting application so that the Commission, OCA and other interested parties can attend meetings or obtain copies of information being disseminated at the presentations.	• N/A - At this time, no informal presentations are scheduled for after the CPCN is filed.	
69.3103	**Eminent domain filing requirements**	• Separate Application	
69.3104	**Exemption from municipal zoning standards**	• N/A - At this time.	
69.3105 (1)	Transmission applicants should utilize a combination of transmission route evaluation procedures including high-level GIS data, traditional mapping (including US Geological Survey data and compilation), aerial maps and analysis of physical site-specific constraints raised by affected landowners.	• Exhibit 15	
69.3105 (2)	Transmission applicants should summarize the status of property acquisitions (including fee simple acquisitions and rights of way/easements) as part of the application. The applicant should provide the current status and continuing updates on property acquisition litigation or settlements during the course of the siting proceeding.	• Exhibit 17	
69.3105 (3)(i)	In providing information regarding the reasonable alternative routes the utility actively considered in its final phase of the route selection process, and the relative merits of each, in accordance with §57.72(c)(10), the applicant should include the following information: The environmental, historical, cultural and aesthetic considerations of each route.	• Certification Application • Exhibit 15	• Table 6-1

Pennsylvania Code Section*	PUC Regulation Requirement	Location in Application	Associated Tables/Figures
69.3105 (3)(ii)	The proximity of these alternative routes to residential and non-residential structures.	• Exhibit 15	• Table 6-1
69.3105 (3)(iii)	The applicant's consideration of relevant existing rights of way.	• Exhibit 15	
69.3105 (3)(iv)	The comparative construction costs associated with each route.	• Exhibit 15	• Table 6-1
69.3105 (4)	With reference to the proposed route, applicants should provide a summary of efforts made to contact and solicit assistance from local governments and non-governmental organizations regarding areas encompassed within the requirement of §57.72(c)(8).	• Exhibit 15	
69.3106 (1)	A matrix or list showing all expected federal, state and local government regulatory permitting or licensing approvals that may be required for the project at the time the application is filed, the issuing agency, approximate timeline for approval and current status. The applicant should provide an update on the status of the regulatory permitting/licensing approvals as the case progresses.	• Exhibit 16	
69.3107(a)(1)	Applicants for transmission line siting authority should provide a detailed vegetation management plan that includes the following components: A general description of the utility's vegetation management plan.	• Exhibit 26	
69.3107(a)(2)	Factors that dictate when each method, including aerial spraying, is utilized.	• Exhibit 26	
69.3107(a)(3)	Vegetation management practices near aquatic and other sensitive locations.	• Exhibit 26	
69.3107(a)(4)	Notice procedures to affected landowners regarding vegetation management practices.	• Exhibit 26 • Exhibit 18	
69.3107(a)(5)	Provision of a copy of a landowner maintenance agreement that describes the duties and responsibilities of landowners and the utility for vegetation management to the extent utilized.	• Exhibit 26	

Pennsylvania Code Section*	PUC Regulation Requirement	Location in Application	Associated Tables/Figures
69.3107(b)(1)	Transmission siting applications should include the following: A description of the EMF mitigation procedures that the utility proposes to utilize along the transmission line route. This description should include a statement of policy approach for evaluating design and siting alternatives and a description of the proposed measures for mitigating EMF impacts.	• Certification Application	

*Pennsylvania Code 57.71 – 57.75 relates to "Commission Review of Siting and Construction of Electric Transmission Lines". Pennsylvania Code 69.3101 – 69.3107 relates to "General Orders, Policy Statements, and Guidelines on Fixed Utilities". Sections described within EXHIBIT 1 pertain specifically to those items required to be included for an application filing.

Energizing the FUTURE

Orrtanna Transmission Line Project

At FirstEnergy, it's our responsibility to deliver the power our customers depend on in their daily lives. Mid-Atlantic Interstate Transmission LLC (MAIT), a FirstEnergy company, is planning to strengthen the regional transmission system near Gettysburg, Pennsylvania to improve electric service reliability for thousands of customers in Adams County.

Project Overview

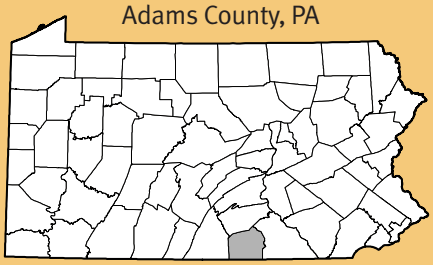
MAIT has completed an evaluation of the existing 115-kilovolt (kV) transmission system linking the Orrtanna Substation in Highland Township and Hunterstown Substation in Straban Township, which are both located in the service area of Metropolitan Edison (Met-Ed), a FirstEnergy utility, and determined there are reliability concerns in the area. Currently, when the transmission line is out of service for maintenance, severe weather or other causes, the Orrtanna Substation loses its electrical source, disrupting service to about 6,100 Met-Ed and Adams Rural Electric Cooperative customers in the Orrtanna and Hunterstown areas.

Construction of a second, 115-kV transmission line connecting the Orrtanna and Hunterstown substations would alleviate this reliability issue. The new 9.5-mile line would provide a second electrical source to the Orrtanna Substation and end at a transmission switch structure just west of the Hunterstown Substation.

PJM, the Regional Transmission System Operator, and the PJM stakeholders have reviewed the proposed Orrtanna Transmission Line Project. The project also includes new equipment within the Orrtanna Substation configured to provide added flexibility to bolster the local electrical system. More information about the project can be found at www.pjm.com under upgrade IDs S1725.1 and S1725.2.

Continued on back

Project Location:
Adams County, PA



COMM9120-05-19-CV
Produced by FirstEnergy's Communications and Branding Department

FirstEnergy®

Transmission Line Siting and Approvals

A detailed routing study is underway to identify potential routes for the second 115-kV line into the Orrtanna Substation. These routes are carefully evaluated to minimize impacts to environmentally sensitive areas, property owners and communities. MAIT will seek approval from the Pennsylvania Public Utility Commission (PaPUC) for the project.

Easements

If new right-of-way easements are necessary for the project, MAIT will negotiate with property owners to obtain the easements and vegetation management rights to support the new transmission line. The new line will primarily be constructed on wood poles, with steel structures used in critical areas such as locations where the line makes a sharp turn.

Permitting

Detailed wetland, stream and other environmental and cultural resource evaluations will be performed along the proposed transmission line routes, and necessary permits will be secured from state and federal agencies before construction.

Construction

Construction of the Orrtanna Transmission Line Project is scheduled to begin in Spring 2021. The new facilities would be completed and in service by late Fall 2021.

Preliminary Project Time

June 2019 . . . . . .Public Open House
Spring/Summer 2020 . . . . . .Real Estate Negotiations
Spring 2021. . . . . .Start Transmission Line Construction
Late Fall 2021 . . . . . .Project Completed and In Service

About *Energizing the Future*

Through *Energizing the Future*, FirstEnergy is upgrading and strengthening the transmission grid to meet the existing and future needs of our customers and communities. Projects are focused on upgrading or replacing aging equipment to harden our transmission infrastructure, reduce outages and cut maintenance costs; enhancing performance by building a smarter, more secure transmission system; and adding flexibility by building in redundancy and allowing system operators to more swiftly react to changing grid conditions.

Proof of Publication of Legal Notice
Under provisions of "Newspaper Advertising Act" c
Pennsylvania and its Supplements.

STATEMENT

It is hereby stated and declared that The Gettysburg Times is a daily newspaper as defined under the "Newspaper Advertising Act" of the Commonwealth of Pennsylvania approved May 16, 1929, and its several supplements and amendments, published at its place of business in the Township of Cumberland, Adams County, Pennsylvania, and is of general circulation throughout said County. That it was established in the year 1902 and has been issued regularly and continuously circulated and distributed from its established place of business daily, from the date of its establishment to the present time; that said newspaper is owned and published by Gettysburg Times Publishing LLC, a corporation organized and existing under the laws of the State of Pennsylvania.

That a legal notice, a true copy of which exactly as printed and published, is securely attached hereto, was published and appeared in the regular editions and issues of said newspaper on the following dates, viz.

6/11/2019

That all of the charges, costs and expenses, including the fee for the affidavit to this proof of publication has not been paid in full.

Advertising Clerk
of Gettysburg Times Publishing LLC

Commonwealth of Pennsylvania } ss.:
County of Adams

On the 12th June 2019, before me, the subscriber, a Notary Public in and for said State and County personally came the above named Danielle Yurcho who having been by me duly sworn according to law on his oath doth depose and say that he is the Advertising Clerk of Gettysburg Times Publishing LLC, a corporation, and is an officer duly authorized by resolution of the Board of Directors of said corporation to make the foregoing statement and this affidavit on its behalf; that the affiant is not interested in the subject matter of the notice or advertising referred to in the foregoing statement and that all of the allegations contained in the foregoing statement as to the time, place and character of publication therein referred to are true.

Copy of notice of publication

Advertising Clerk

Sworn to and subscribed before me the day and year aforesaid.

Notary Public

My commission expires

Commonwealth of Pennsylvania
Notarial Seal
HARRY JOHN HARTMAN – Notary Public
CUMBERLAND TWP, ADAMS COUNTY
My Commission Expires Aug 28, 2021

Statement of Advertising Costs

The Gettysburg Times
To Gettysburg Times Publishing LLC, Dr.
For publishing notice or advertisement attached hereto

on the above dates	$	166.75
Probating same	$	5.00
Total	$	171.75

Publisher's Receipt for Advertising Costs

Gettysburg Times Publishing LLC, a corporation, publisher of the Gettysburg Times, a daily newspaper, hereby acknowledges receipt of the aforesaid advertising and publication of costs and certifies that the same have been fully paid.

Gettysburg Times Publishing LLC,
a corporation, publisher of
The Gettysburg Times,
a daily newspaper.

By _____

Its Advertising Clerk

My Favorite Zombie

Around town

with Fred Snyder

The term "zombie" comes from Haitian folklore and refers to a deceased person who has been re-animated by the use of voodoo or magic. We do have a zombie among us in Adams County. I'm proud to say I've had him as my friend for more than 20 years. He loves gardening and fishing like many other Adams County residents, is married, and has three beautiful granddaughters. Will he appear some night banging on your door to attack you? Highly unlikely.

My friend Jim Krut is a living movie star and a zombie cult icon in name only. Born and raised in Huntington County, he found newspaper writing and acting flowing in his blood at a young age. In college he met Tom Sevini, who eventually ended up doing all the makeup and special effects for Jim's first movie. Uncle Sam interrupted both Jim's and Tom's plans for several years and both served in Vietnam. Jim was a medic and Tom a combat photographer. After the war both returned to the Pittsburgh area and civilian life until Tom call Jim one day and told him he had a great role for him in a new movie. Tom was working for independent filmmaker George Romero who had made the horror film "Night of the Living Dead" in 1968 and was now in the process of making the 1978 classic "Dawn of the Dead." Not knowing what the role would be, Jim agreed, later found out he would be cast as a living dead character, and lose the top of his head as he walked underneath a whirling helicopter blade. The rest is history. This second movie like the first was shot outside Pittsburgh, much of it in Monroeville and at the Monroeville Mall, and had a budget of $1.5 million. It ended up making more than $55 million. The movie rating group Rotten Tomatoes gives the movie a 93 percent rating calling it "one of the most compelling and entertaining zombie films ever made." Following his movie debut, Jim went on to become a magazine editor in Harrisburg and then headed to Adams County. He worked for Adams Electric Cooperative until 2009 when he retired. It was when he worked for Adams Electric I first met him as a spokesman for the company and the voice on their commercials.

At the time the movie came out, zombies were not that popular, and he told me its only been in recent years they became popular after several TV series. Over the past several years, Jim has appeared in about 20 other independent movies. He says while working for Adams Electric he would do movie shoots on weekends or while on vacation, and it never interfered with his job. He says some films have been released, and some have not. He tells me a film he shot two years ago "Host of Sparrows" is now showing on Amazon Prime. In this movie he plays a live flesh and blood hitman. He says he's currently reading a couple of scripts for possible future movies.

Little did he know when he walked under that helicopter blade during that movie shoot at the Monroeville Airport 41 years ago, it would propel him to the horror icon status he enjoys today. If there is one thing fans remember about that film is the scene where Jim loses the top of his head. He makes 8 to 10 horror nostalgia shows a year worldwide: greeting fans and having pictures taken with them, signing his helicopter picture and posters for Dawn of the Dead. He related a short story about a young 8-year-old boy who came up to his table to get a picture signed with his parents. Jim smiled as the boy said he loved him in the picture. His parent then piped up and said they watched it with him. Jim smiled, signed the picture and thanked them. He then told me he didn't allow his daughter to see the movie until she was 16. Jim will be among a large gathering of enthusiasts this coming weekend at the Monroeville Mall for a big show. For this "Living Dead Weekend" event, Jim will appear in full makeup as the Helicopter Zombie for fan photo opportunities and autograph sessions. He says the shows are often reunions for him with other horror show stars and film makers he has worked with, and fans who follow them to the various shows.

I know Jim loves what he does and has found the perfect balance of fame and family and handles it like a true professional. It's always a pleasure chatting with my favorite zombie and I need only to look across my office and see his signed picture on my wall to bring a smile to my face. Thanks Jim.

Gettysburg Borough Manager Charles Gable says last week's D-Day Commemoration was by all accounts a huge success. He told me it was an honor for him to be part of the planning and coordination for our local heroes. He says it was very sobering to see all those WWII vets sitting side by side under the tent, front and center of the speaker's podium. He mentioned they were moved to be invited and asked to participate and be recognized. Charles added "Like the soldiers who fought in Gettysburg in 1863, these soldiers, too, fighting in a different war 81 years later in 1944, changed the trajectory of world history. Our gratitude for their service and sacrifice cannot be understated." He says we will have the opportunity again next year to honor these patriots when we commemorate VE- Day. He says the borough has already begun preparations for that event.

Let's head "Around Town:"

This Friday, the Gettysburg Rec Park is the place to be for the Adams County Library Fun Fest from 4 until 7 p.m. The Fun Fest is a free event featuring activities for the entire family. There will also be face painting, balloon artists, food and vendors. The theme is "A Universe of Stories" with the goal to have activities centered around five literacies: basic information, civic and social, health, and financial. Bring the family for a fun and educational afternoon.

The Historic Gettysburg Adams County Architectural Salvage Warehouse, located at 986 Hanover Road, will be open for business this Saturday June 15 from 10 a.m. until 2 p.m. In addition to the usual assortment of architectural salvage items they have just received a working antique wood/coal stove that is in need of a little TLC. They have also received some vintage red barn board siding which would be perfect for picture frames and other small projects. To see a partial listing of inventory go to www.hgaconline.org and click on Architectural Salvage Warehouse. The warehouse is also open by appointment by calling Barry at 717-677-6400.

Remember if your non-profit club, group, or organization has an upcoming event; be sure to let me know about it. My contact information can be found at the end of the column. Please allow at least 2 weeks prior notice of the event, and limit your announcement to 6 to 8 sentences.

Finally:

Sometimes stupidity has no limitations. Last week, Betty ordered a plastic floor mat to go under the rolling desk chair in my office from a name brand office supply store online. The next day it was delivered. After bringing it in from the porch I noticed the adhesive shipping label had been slapped on the smooth side of the mat rather than attached by a staple or some other method. I spent almost an hour trying to remove it as it shredded in my fingers. I even used Betty's hair dryer and I couldn't free the adhesive. I finally gave up and called customer service. Once again my adventure continued as I spoke with someone who could barely speak English and thanked me at least a dozen times for calling. I explained the problem with the label and asked for a replacement mat. I told the CSR to please make a note to not affix the mailing label with adhesive to the mat. After thanking me another two or three times and calling me "Mr. Fred" another half dozen times, he assured me he would make sure the message about the label would be passed on. Before hanging up he sent me a return UPS label which I attached with scotch tape to the first mat. The next day, a new mat was delivered, and like the first one had the identical adhesive label attached to the smooth side. I called the customer service line again and asked for another return label just mentioning I didn't want the item. Again, I was thanked a half dozen times for calling. Later in the day the UPS guy came to pick up the first mat and he took the second one as well. Betty will get the $30 credited back to her account, but given the size of the mats, could the price of two returned mats cost more than the original mat? I thought maybe this might be just another reason they recently closed their store in Gettysburg.

That does it for this week. Stay safe and I'll be back next Tuesday.

Fred Snyder is a Gettysburg Times columnist. Opinions expressed do not necessarily reflect those of the newspaper. Contact Fred at fsnyder@gburgtimes.com or 717-334-1131, ext. 2850. "Around Town" is published in the Gettysburg Times every Tuesday.

Judge weighs whether health care giants' deal has to expire

By Mark Scolforo
Associated Press

HARRISBURG, Pa. (AP) — A hearing about whether the business relationship between Pittsburgh-based health care giants can be extended past its looming expiration date began Monday with argument about a provision that says the 2014 agreement can be modified.

Commonwealth Court Judge Robert Simpson has said he plans to issue a decision later this week about whether the consent decree involving Highmark Health and UPMC can be extended past its June 30 termination date.

Its expiration will trigger higher costs for Highmark insurance customers who use UPMC's vast network of hospitals, doctors and other medical providers.

Jonathan Goldman, a lawyer for the attorney general's office, which wants the deal extended indefinitely, told Simpson it was too late to change a provision that says parties can seek court modification if it is in the public interest. UPMC and Highmark were sophisticated parties represented by good lawyers when they signed the 2014 agreement, Goldman argued.

"They did not speak up at the time, and silence is not enough," Goldman said.

He said the parties engaged in detailed negotiations over just about every part of the agreement, but UPMC never sought a "carve-out" to exempt the expiration date from the broad language of the modification clause.

A lawyer for UPMC, which wants the consent decree to end, said the modification clause was added by the attorney general's office toward the end of negotiations and characterized it as boilerplate.

"The agreement struck was a five-year transition deal, nothing more," UPMC lawyer Lee DeJulius said.

The state Supreme Court, which issued a divided opinion late last month that ordered the hearing, will consider Simpson's findings in deciding whether UPMC will be able to end its relationship with Highmark, which is on the same side as the attorney general's office.

Attorney General Josh Shapiro sued in February, seeking to keep the consent decree in place and arguing UPMC has wasted charitable assets through "exorbitant executive salaries and perquisites in the form of corporate jets and prestigious office space waste."

An agreement between Highmark and UPMC had been about to expire in 2014 when then-Gov. Tom Corbett got them to sign the consent decree to keep in-network rates for Highmark customers in the Pittsburgh area and Erie.

Ex-Virginia attorney general named to US immigration post

By Colleen Long And Lisa Mascaro
Associated Press

WASHINGTON (AP) — An outspoken supporter of President Donald Trump's hardline immigration policies has been named acting director of the agency that manages legal immigration, despite deep opposition from key Senate Republicans.

Ken Cuccinelli will oversee U.S. Citizenship and Immigration Services starting Monday, Department of Homeland Security Acting Secretary Kevin McAleenan announced.

But it's unclear if Trump will nominate Cuccinelli for the permanent position. That would require Senate confirmation, which could be difficult.

Cuccinelli is a former Virginia attorney general who ran for governor of Virginia, but lost to Democrat Terry McAuliffe in 2013. It's not just Cuccinelli's views on immigration that would generate unease among senators. As the former head of the Senate Conservatives Fund, Cuccinelli has been highly critical of Senate GOP leadership, including once advocating for the removal of Senate Majority Leader Mitch McConnell and his entire leadership team.

The group backed conservative candidates for Senate and primary challengers for incumbent Republicans, putting it at odds with the party's chosen candidates. His group and others complained McConnell was insufficiently delivering on conservative priorities, including immigration. He has in the past advocated for denying citizenship to the American-born children of parents living in the U.S. illegally.

One Republican familiar with the situation said the White House has been made aware that Cuccinelli would have a difficult time winning confirmation in the Senate, where Republicans have the majority. The person, granted anonymity to discuss private conversations, said confirmation would be a tough lift.

Instead, the administration may simply opt to keep Cuccinelli in the acting position, working around rules governing vacancies.

Democrats signaled strong opposition.

Rep. Bennie Thompson, D-Miss., the chairman of the House Homeland Security Committee, called Cuccinelli "an anti-immigrant fringe figure that has no business" helming a key component of the nation's immigration system.

"Besides being a rightwing commentator, Cuccinelli is completely unqualified to the lead USCIS," he said in a statement. "With both Democrats and Republicans opposing him, there is no reason for President Trump to instill someone who has no chance of Senate confirmation."

USCIS is the agency responsible for legal immigration, including benefits and visas. The position opened after Trump forced the resignation of Lee Francis Cissna, who Trump believed wasn't doing enough. Cissna said he worked "passionately."

The departure last month came amid a White House-orchestrated shakeup at Homeland Security, including the April resignation of Secretary Kirstjen Nielsen.

There are more than a dozen vacancies of top leadership positions at the sprawling, 240,000-employee department. This comes as the Trump administration is struggling with a migrant surge at the southern border that is straining federal resources.

Some department positions are being temporarily filled, including secretary and inspector general. The position, like others, requires Senate confirmation.

Cuccinelli's name has been mentioned for months to become part of the Trump administration, including as possible Homeland Security secretary or as an immigration czar. There was debate within the Trump administration over whether that czar's position would be housed within the White House or within Homeland Security, a trickier positioning where the appointment could conflict with top leaders in Senate-confirmed positions.

The action comes as the department is calling on Congress to provide aid for the border crisis and Trump eased off his threat to impose tariffs on Mexico unless it helps stem the number of Central American migrants flowing over the border.

McAleenan has asked Congress for $4.5 billion more in supplemental funding. Mexico agreed to greatly ramp up sending asylum seekers back over the border to wait out their cases and will send National Guard troops to its southern border.

PUBLIC NOTICE

Mid-Atlantic Interstate Transmission, LLC., a FirstEnergy company (MAIT), will hold an Open House public informational meeting to discuss its proposed Orrtanna Transmission Line Project. MAIT has completed an evaluation of the existing 115-kilovolt (kV) transmission system linking the Orrtanna Substation in Highland Township and Hunterstown Substation in Straban Township, which are both located in the service area of Metropolitan Edison (Met-Ed), a FirstEnergy utility, and determined there are reliability concerns in the area. MAIT is proposing construction of a second 115 kV transmission line, approximately 9.5 miles in length, to improve electric service reliability for thousands of customers in Adams County by adding a second electrical source to the Orrtanna Substation.

The purpose of the Open House is to explain the project and seek input from the community. The Open House will be held on June 19, 2019 from 6:00 pm to 8:00 pm at the Adams County Christian Academy 1865 Biglerville Rd., Gettysburg, PA 17325.

Attendees to the Open House will have the opportunity to learn more about the project, view maps that will show alternate routes for the proposed transmission line, and provide feedback on those routes. Company representatives will be available to document your comments, which will be considered before any routes are selected and answer questions one-on-one. The Open House will not include a formal presentation. Interested parties are invited to visit the event any time between 6 p.m. and 8 p.m., as convenient.

Public comments will be considered as part of MAIT's further evaluation of routing alternatives that will be presented in an application to be filed with the Pennsylvania Public Utility Commission for approval. If you cannot attend the meeting but have questions or wish to comment on the project, please leave a message for the project team at 1-800-589-2837 or send an email to transmissionprojects@firstenergycorp.com. Written comments or questions can also be mailed to FirstEnergy Service Company, Attention Orrtanna Transmission Line Project, A-GO-3, 76 South Main Street, Akron, Ohio, 44308.

76 South Main St.
Akron, Ohio 44308

November 25, 2020

Customer Name
Street
City, Zip Code

Hunterstown-Orrtanna 115 kV Transmission Line Project

PROPERTY NO. _____

Dear Resident:

This letter provides an update of progress and activities related to the proposed Mid-Atlantic Interstate Transmission, LLC, (MAIT) Hunterstown-Orrtanna 115 kilovolt (kV) Transmission Line in Adams County, Pennsylvania (Project).

Since our initial letter in June 2019, there has been much activity in preparation for filing the application with the Pennsylvania Public Utility Commission (PAPUC) for approval of the location and construction of the transmission line. These activities included wetland and stream delineations, ground surveys, and preliminary design that further assist in refining the alignment for the transmission line.

Initially, the Project was proposed as two separate, parallel lines within existing Metropolitan Edison right of way, however, after further evaluation and development, the proposed 115 kV line will be constructed as a double circuit line, eliminating the need for two separate lines. The double circuit construction will utilize steel monopoles rather than wood poles. One steel pole is needed at each structure location as opposed to two or three poles needed for wood pole construction. This design change will substantially reduce the number of structures on properties.

Next steps for the Project include filing with the PAPUC for the approval. This filing is anticipated to occur in late 2020 or early 2021. Pending approval with the PAPUC, construction on this Project is anticipated to commence in March 2022 with construction completion by Fall 2022.

Thank you, in advance for your cooperation. If you have any questions concerning the Project, please feel free to contact me via the project hotline at 888-311-4737. Please reference the Hunterstown-Orrtanna 115 kV Transmission Line Project.

Sincerely,

Lisa Marinelli
Adv. Real Estate Representative
FirstEnergy Service Company
on behalf of Mid-Atlantic Interstate Transmission, LLC

Energizing the FUTURE

Hunterstown-Orrtanna 115 kV Transmission Line Project

At FirstEnergy, it's our responsibility to deliver the power our customers depend on in their daily lives. Mid-Atlantic Interstate Transmission LLC (MAIT), a FirstEnergy company, is planning to strengthen the regional transmission system near Gettysburg, Pennsylvania to improve electric service reliability for thousands of customers in Adams County.

Project Overview

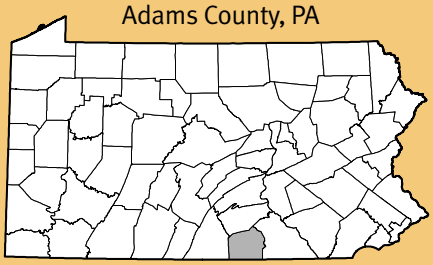
MAIT has completed an evaluation of the existing 115 kilovolt (kV) transmission system linking the Orrtanna Substation in Highland Township and Hunterstown Substation in Straban Township, which are both located in the service area of Metropolitan Edison (Met-Ed), a FirstEnergy utility, and identified reliability concerns in the area. Currently, when the transmission line is out of service due to maintenance, severe weather or other causes, the Orrtanna Substation loses its electrical source, disrupting service to about 6,100 Met-Ed and Adams Rural Electric Cooperative customers in the Orrtanna and Hunterstown area.

Construction of a second, 115 kV transmission line connecting the Orrtanna and Hunterstown substations would alleviate this reliability issue. MAIT is proposing to construct a new approximately 9-mile double circuit 115 kV transmission line on steel monopoles parallel to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line between the Orrtanna Substation and the switch structure identified on the map below. Upon completion of the new double circuit line, the existing wood pole 115 kV line will be removed.

PJM, the Regional Transmission System Operator, and the PJM stakeholders have reviewed the proposed Orrtanna Transmission Line Project. The project also includes new equipment within the Orrtanna

Continued on back

Project Location:
Adams County, PA



COMM9492-11-20-CV
Produced by FirstEnergy's Communications and Branding Department

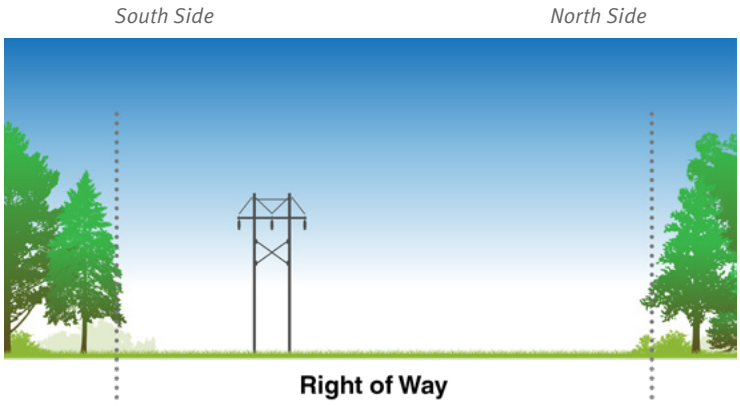
FirstEnergy

Substation configured to provide added flexibility to bolster the local electrical system. More information about the project can be found at www.pjm.com.

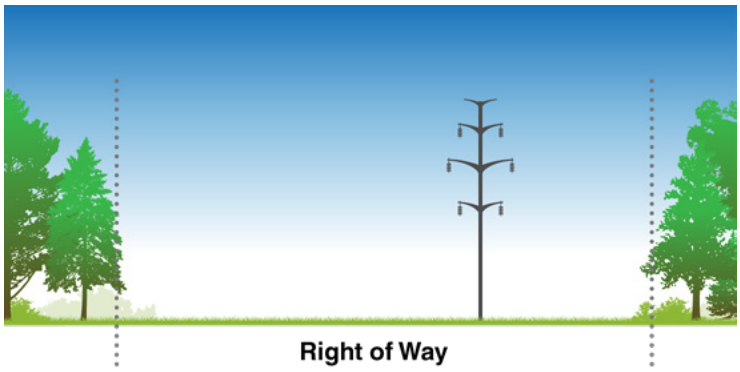
Transmission Line Siting and Approvals

A detailed routing study was performed to identify potential routes for the second 115 kV line into the Orrtanna Substation. These routes were carefully evaluated to minimize impacts to environmentally sensitive areas, property owners and communities. MAIT will seek approval from the Pennsylvania Public Utility Commission (PaPUC) for the project.

Detailed wetland, stream and other environmental and cultural resource evaluations were performed along the proposed transmission line route. Necessary permits will be secured from state and federal agencies before construction.



Existing single circuit H-Frame on the southern side of the corridor.



Proposed double circuit steel monopole to be constructed on the northern side of the corridor. Existing H-Frame line to be removed.

Easements

The new double circuit 115 kV transmission line will be located within existing Met-Ed right-of-way. Field representatives may be in contact with property owners to discuss temporary access roads needed during construction.

Preliminary Project Time

June 2019 . . . . . .Public Open House

Late 2020/Early 2021 . . . . . .Application Submittal

Early 2022 . . . . . .Anticipated Approval

March 2022 . . . . . .Start Transmission Line Construction

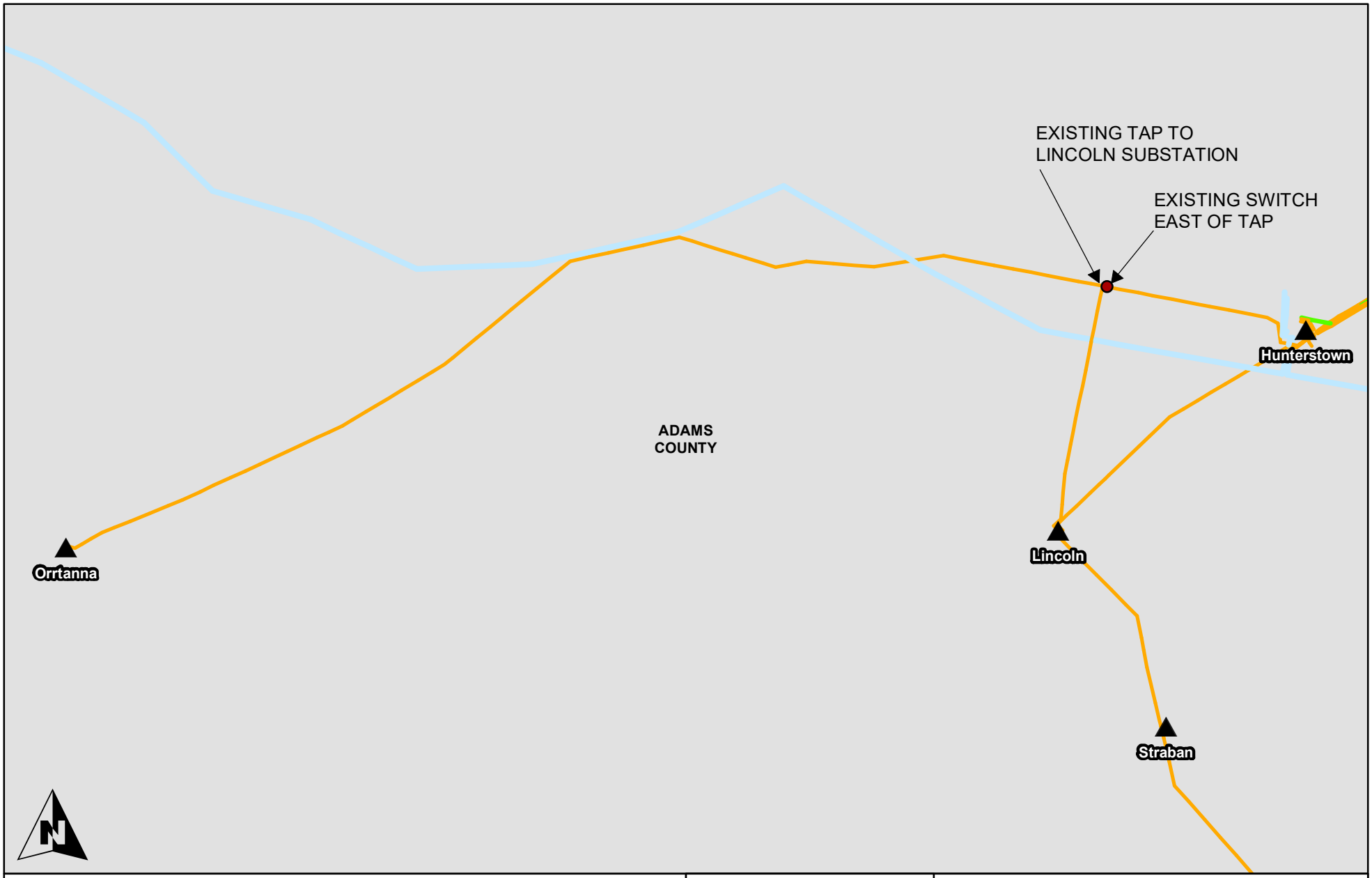
October 2022 . . . . . .Project Completed and In Service

About *Energizing the Future*

Through *Energizing the Future*, FirstEnergy is upgrading and strengthening the transmission grid to meet the existing and future needs of our customers and communities. Projects are focused on upgrading or replacing aging equipment to strengthen our transmission infrastructure, reduce outages and cut maintenance costs; enhancing performance by building a smarter, more secure transmission system; and adding flexibility by building in redundancy and allowing system operators to more swiftly react to changing grid conditions.

Energizing the FUTURE

FirstEnergy



LEGEND

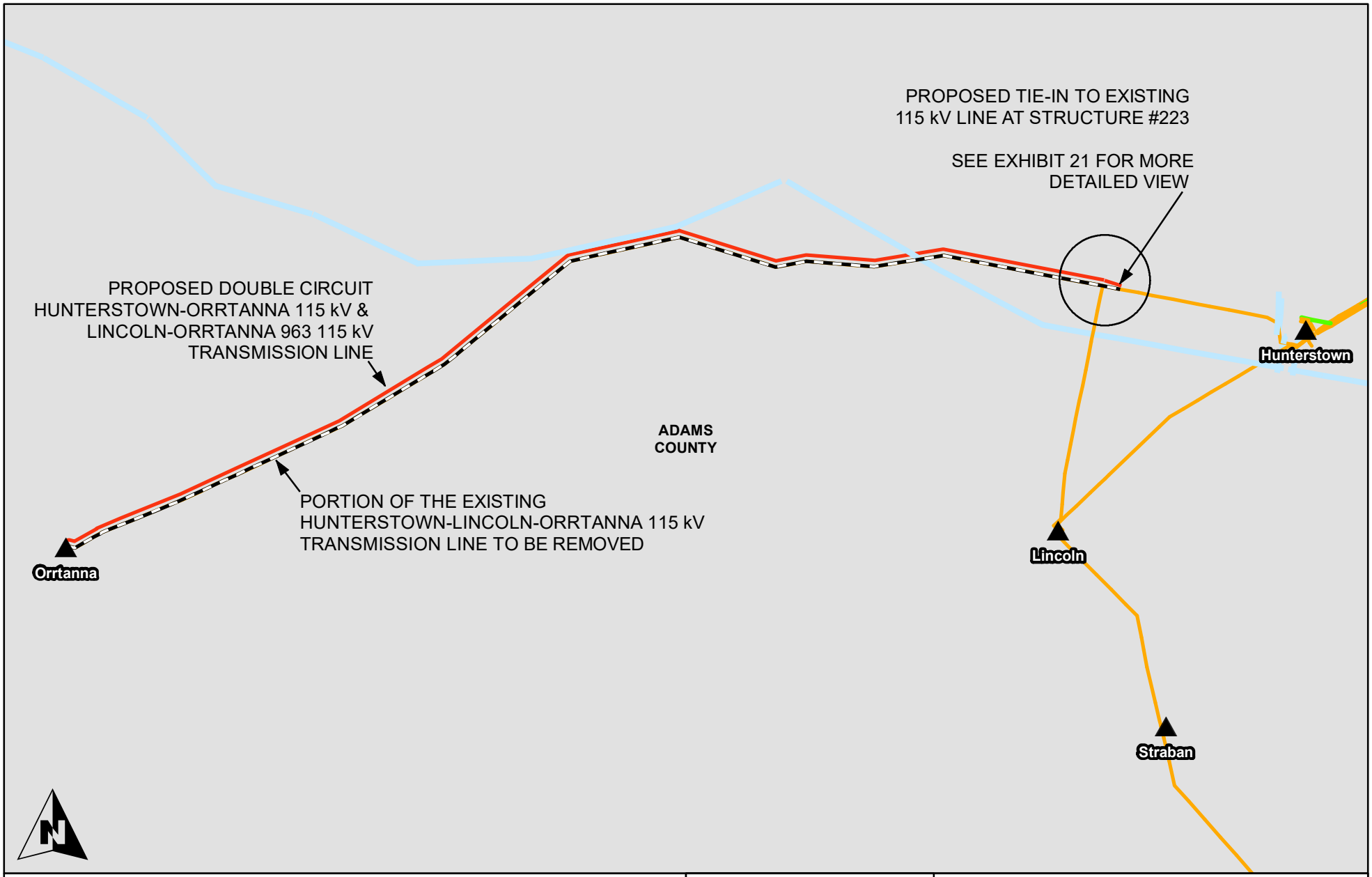
- Sub
- Existing Switch
- County
- 115 kV
- 230 kV
- 500 kV

NOT TO SCALE

MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

MAIT EXISTING TRANSMISSION SYSTEM PROJECT AREA

EXHIBIT 5 - PAGE 1 of 1


PROPOSED TIE-IN TO EXISTING
115 kV LINE AT STRUCTURE #223
SEE EXHIBIT 21 FOR MORE
DETAILED VIEW
PROPOSED DOUBLE CIRCUIT
HUNTERSTOWN-ORRTANNA 115 kV &
LINCOLN-ORRTANNA 963 115 kV
TRANSMISSION LINE
ADAMS
COUNTY
PORTION OF THE EXISTING
HUNTERSTOWN-LINCOLN-ORRTANNA 115 kV
TRANSMISSION LINE TO BE REMOVED
Orrtanna
Lincoln
Hunterstown
Straban
N
LEGEND
Sub
County
115 kV
230 kV
500 kV
Future Double Circuit 115 kV
115 kV To Be Removed
NOT TO SCALE
MAIT
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company
MAIT PROPOSED TRANSMISSION
SYSTEM PROJECT AREA
EXHIBIT 6 - PAGE 1 OF 1

MetEd Transmission Zone: Supplemental Project
Hunterstown – Lincoln (963) 115 kV Line & Orrtanna 115 kV Substation

Problem Statement (Scope and Need/Drivers):

Operational Flexibility and Efficiency

- Provide networked source for radial load that cannot be transferred to other substations

Potential Solution:

Hunterstown – Lincoln (963) 115 kV Line

- Loop the Hunterstown – Lincoln (963) 115 kV line ~9 miles into Orrtanna substation

Orrtanna 115 kV Substation

- Construct a five (5) breaker 115 kV ring bus

Alternatives Considered:

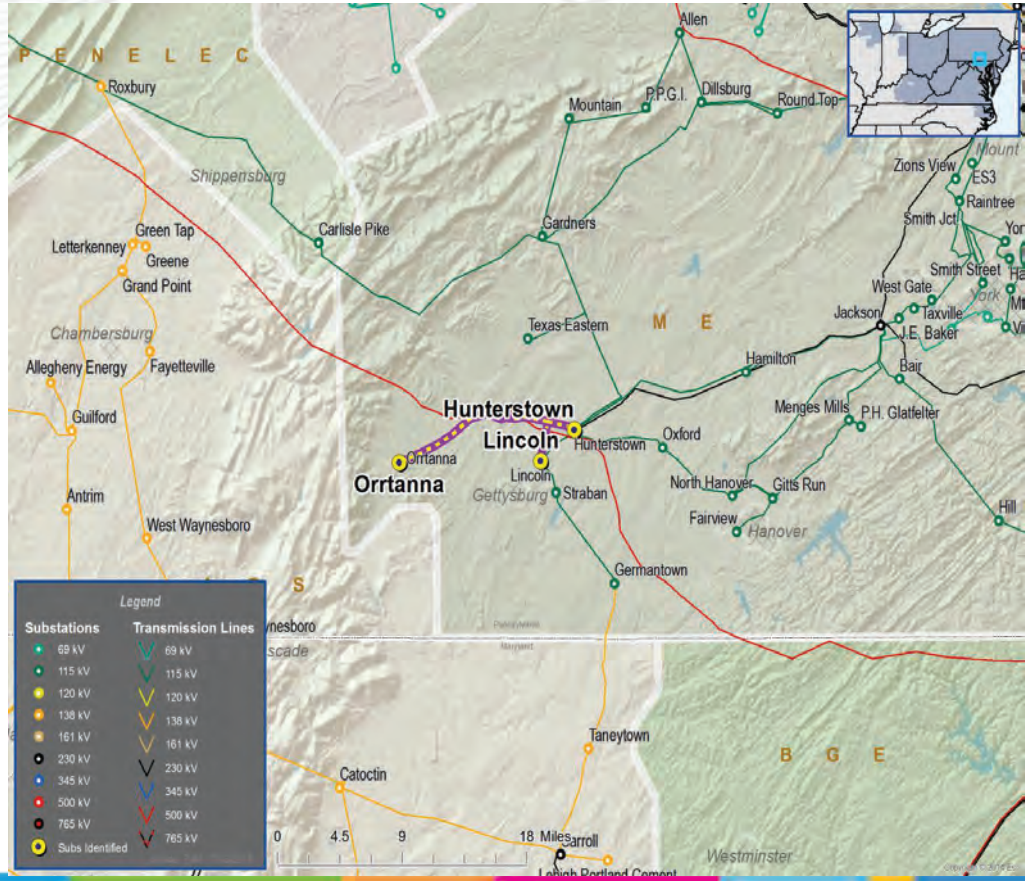
- No Feasible Alternatives

Estimated Project Cost (Line Loop): $30.9M

Estimated Project Cost (Ring Bus): $ 9.2M

Projected IS date: 12/31/2021

Status: Conceptual



MetEd Transmission Zone: Supplemental Project
Hunterstown – Lincoln (963) 115 kV Line & Orrtanna 115 kV Substation

Previously Presented : 07/20/2018

Problem Statement (Scope and Need/Drivers):

Operational Flexibility and Efficiency

- Provide networked source for radial load that cannot be transferred to other substations

Selected Solution:

Hunterstown – Lincoln (963) 115 kV Line. (S1725.1)

- Loop the Hunterstown – Lincoln (963) 115 kV line ~9 miles into Orrtanna substation

Orrtanna 115 kV Substation. (S1725.2)

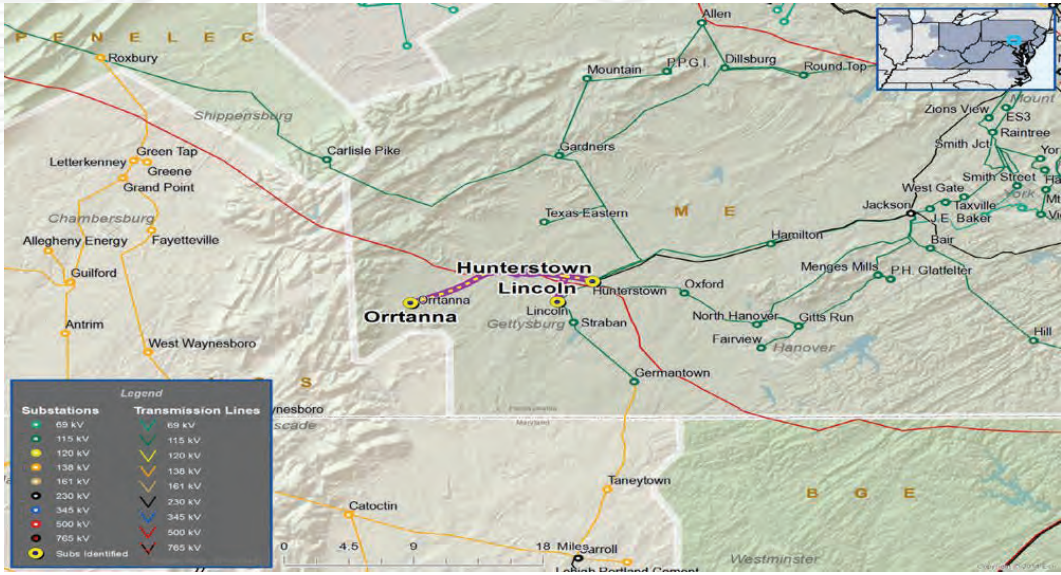
- Construct a five (5) breaker 115 kV ring bus

Estimated Project Cost (Line Loop): $30.9M

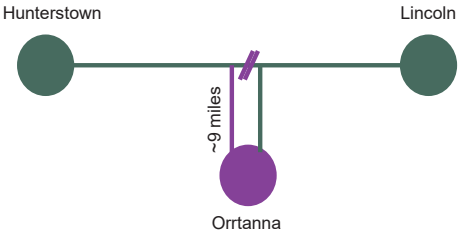
Estimated Project Cost (Ring Bus): $ 9.2M

Projected IS date: 12/31/2021

Status: Conceptual



Legend	
500 kV	
230 kV	
115 kV	
69 kV	
46 kV	
New	



FirstEnergy

Exhibit 9
Page 1 of 1

Met-Ed Transmission Zone M-3 Process

Need Number: ME-2020-009

Process Stage: Need Meeting 6/16/2020

Project Driver:

Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

Line Condition Rebuild/Replacement

- Age/condition of wood pole transmission line structures

Problem Statement:

The Orrtanna tap – Orrtanna section of the Hunterstown – Lincoln – Orrtanna 115 kV 963 line is exhibiting deterioration.

- Total line distance is approximately 9 miles.
- 73 out of 74 structures failed inspection (99% failure rate).
- Failure reasons include age, top rot, woodpecker holes, and cut and missing grounds.

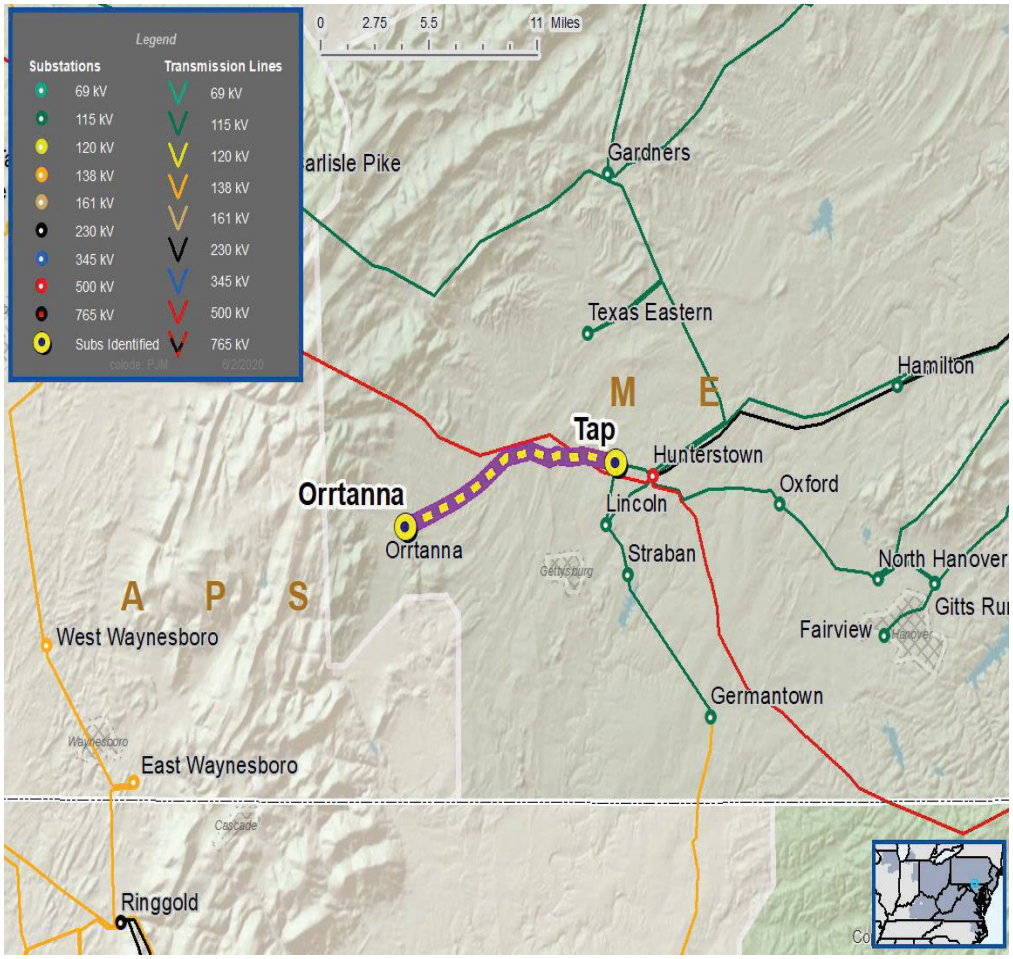


Exhibit 10
Page 1 of 1

Met-Ed Transmission Zone M-3 Process
Hunterstown – Orrtanna – Lincoln (963) 115 kV Line

Need Number: ME-2020-009

Process Stage: Solution Meeting 10/15/2020

Proposed Solution:

- Cancel supplemental upgrade s1725.1
  - Loop the Hunterstown – Lincoln 115 kV line, approximately 9 miles, into Orrtanna substation by constructing a single circuit 115 kV line adjacent to the existing radial 963 line.
  - S1725.1 Estimate Cost - $30.9 M
- Loop the Hunterstown – Lincoln 115 kV line, approximately 9 miles, into Orrtanna substation by constructing a double circuit 115 kV line adjacent to the existing radial 963 line.
- Remove the existing radial 963 line from Orrtanna tap to Orrtanna (approximately 9 miles).

Alternatives Considered:

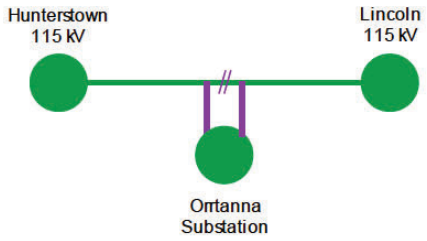
- Rebuild the existing radial line as a double circuit construction.
- Complete the s1725.1 upgraded followed by a rebuild of the existing radial 963 line.

Estimated Project Cost: $38.5M

Projected In-Service: 12/31/2021

Project Status: Conceptual

Model: 2020 RTEP model for 2025 Summer (50/50)



Legend
500 kV
345 kV
230 kV
138 kV
115 kV
69 kV
46 kV
34.5 kV
23 kV
New

EXHIBIT 11

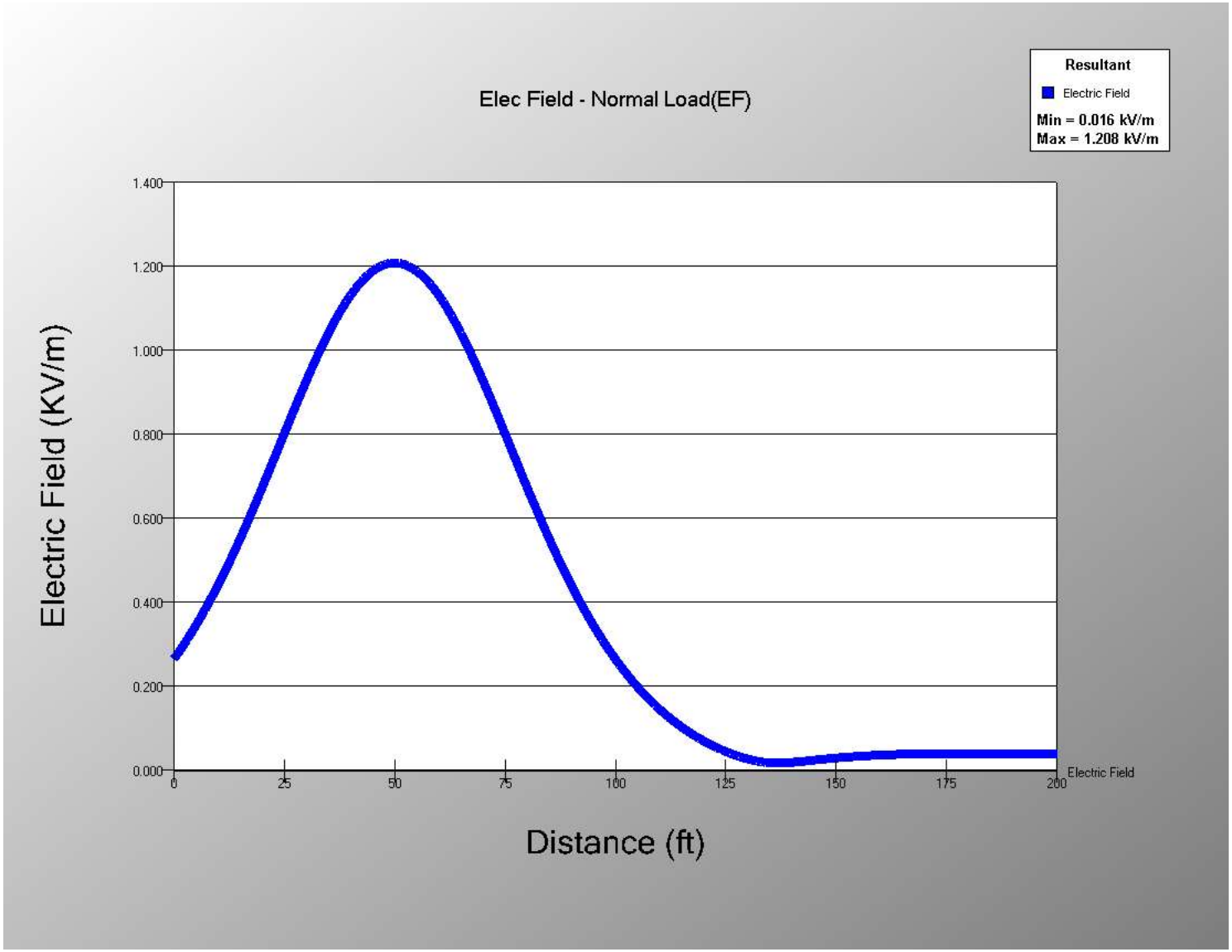
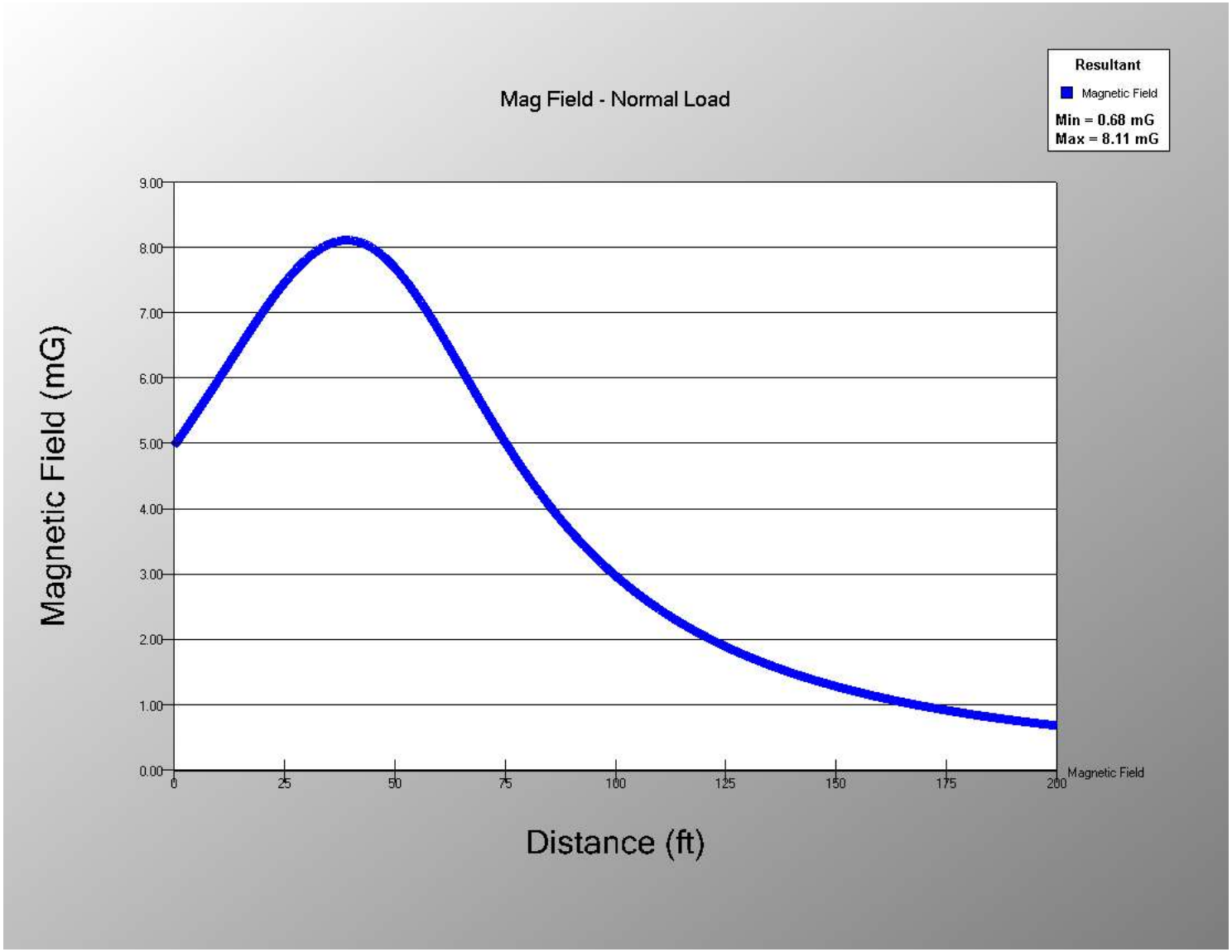
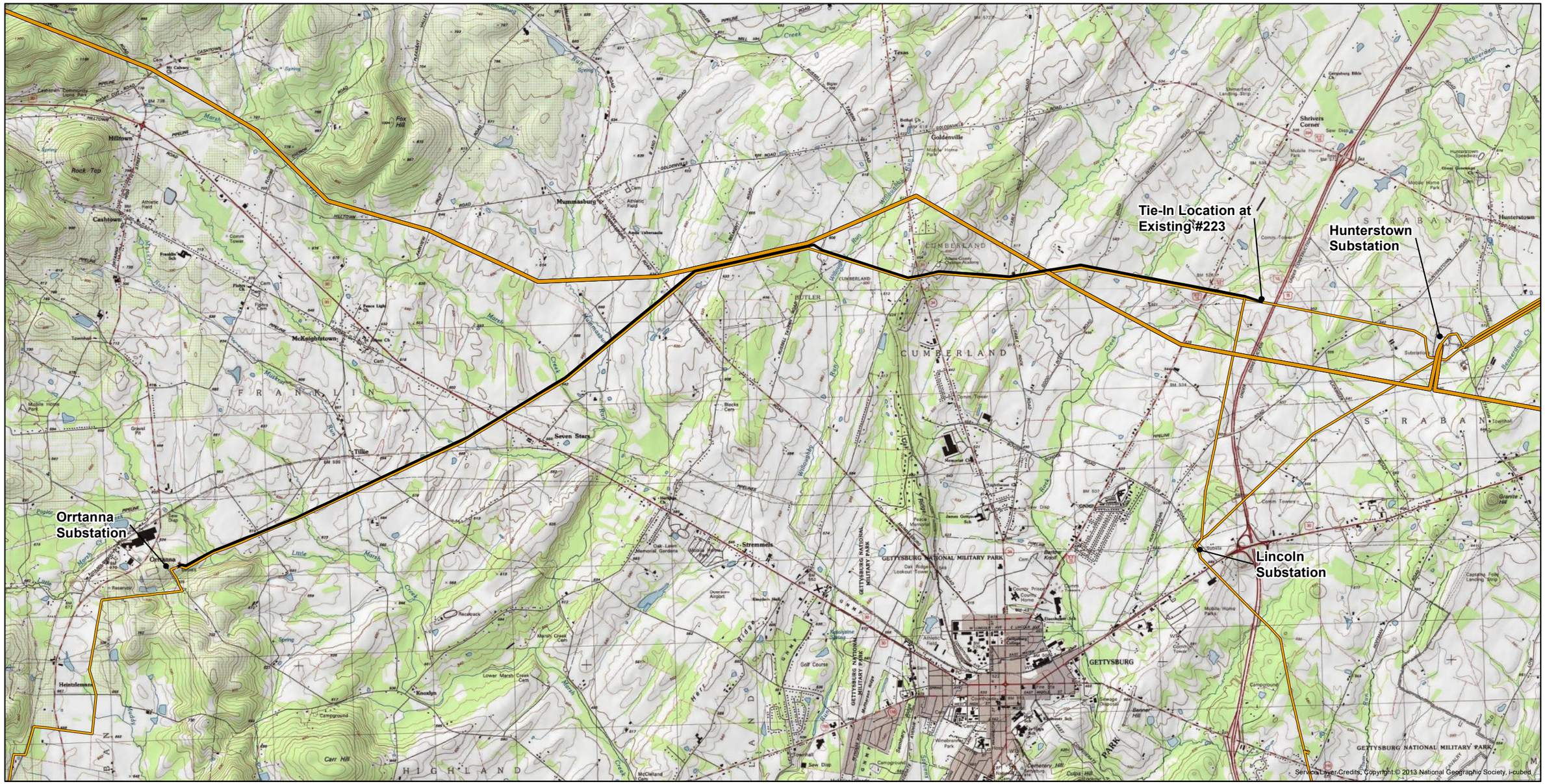

Elec Field - Normal Load(EF)
Resultant
Electric Field
Min = 0.016 kV/m
Max = 1.208 kV/m
Electric Field (KV/m)
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
0
25
50
75
100
125
150
175
200
Electric Field
Distance (ft)

EXHIBIT 12


Mag Field - Normal Load
Resultant
Magnetic Field
Min = 0.68 mG
Max = 8.11 mG
Magnetic Field (mG)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
25
50
75
100
125
150
175
200
Magnetic Field
Distance (ft)



Legend

Proposed Hunterstown-Orrtanna 115 kV Transmission Line

Existing Transmission Lines

115 kV Transmission Lines

500 kV Transmission Lines

Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
USGS Topographic Basemap (ESRI)

0 2,000 4,000 8,000
Feet
1 inch = 4,000 feet

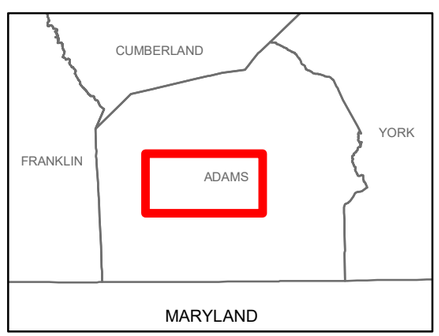


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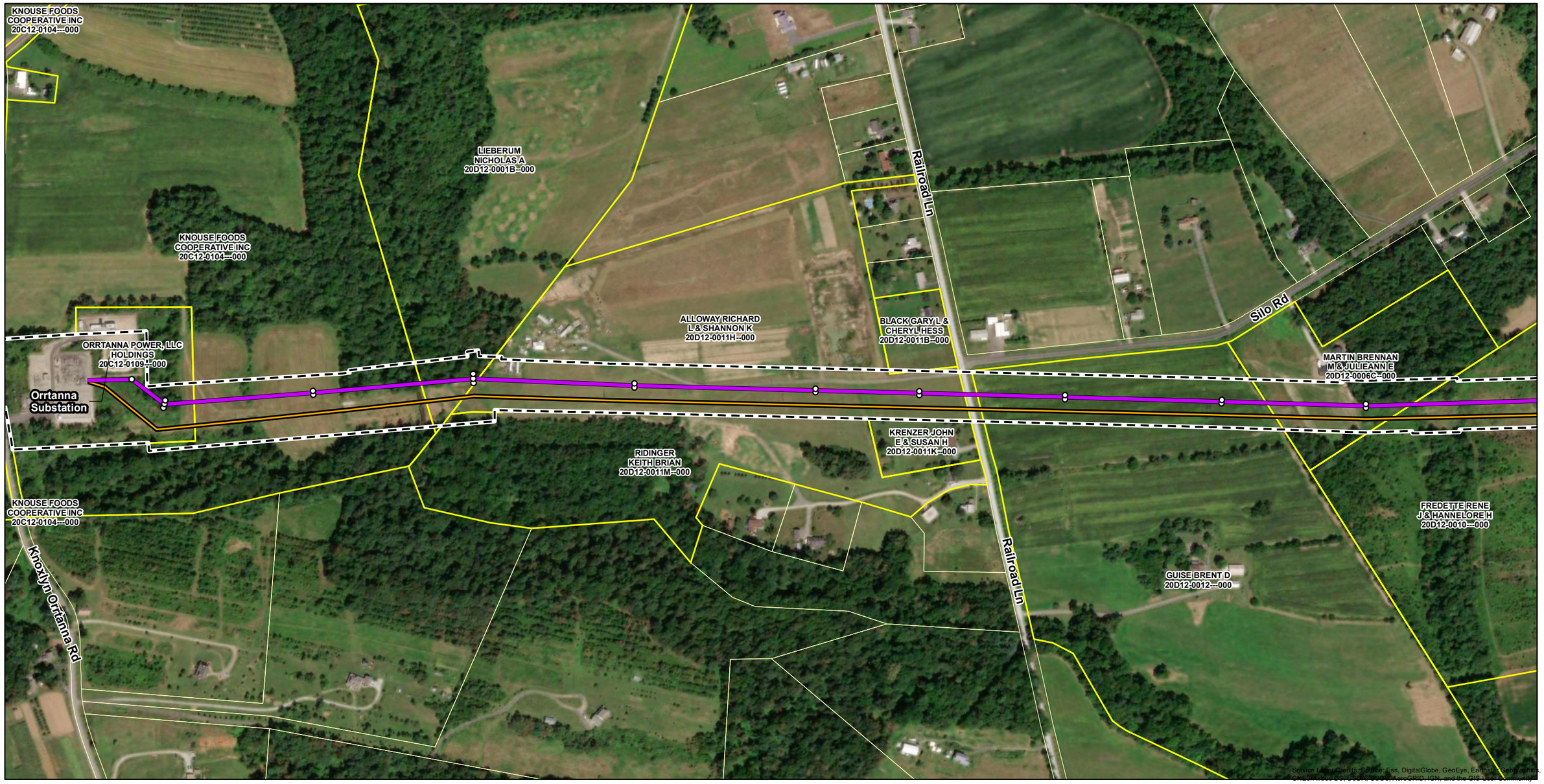
EXHIBIT 13
Topographic Overview Map

Hunterstown-Orrtanna 115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 10/24/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

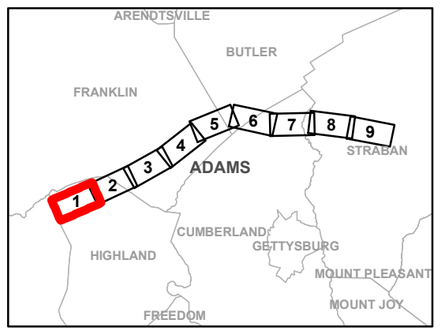
Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

0 200 400 800
Feet
1 inch = 400 feet

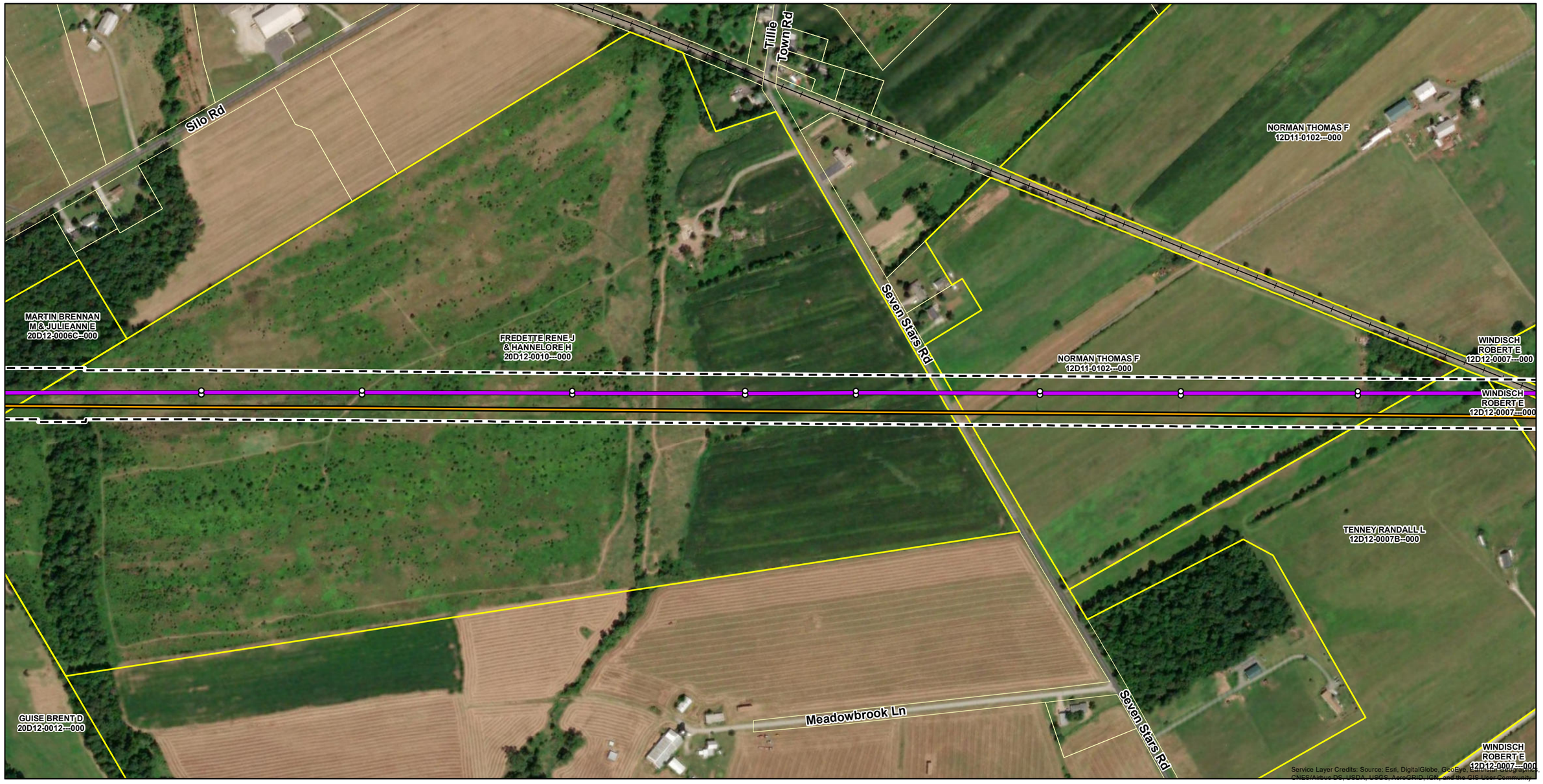


AECOM

EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV Transmission Line Project
Page 1 of 9
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

0 200 400 800
Feet
1 inch = 400 feet

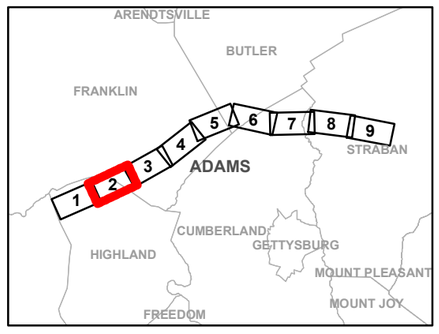


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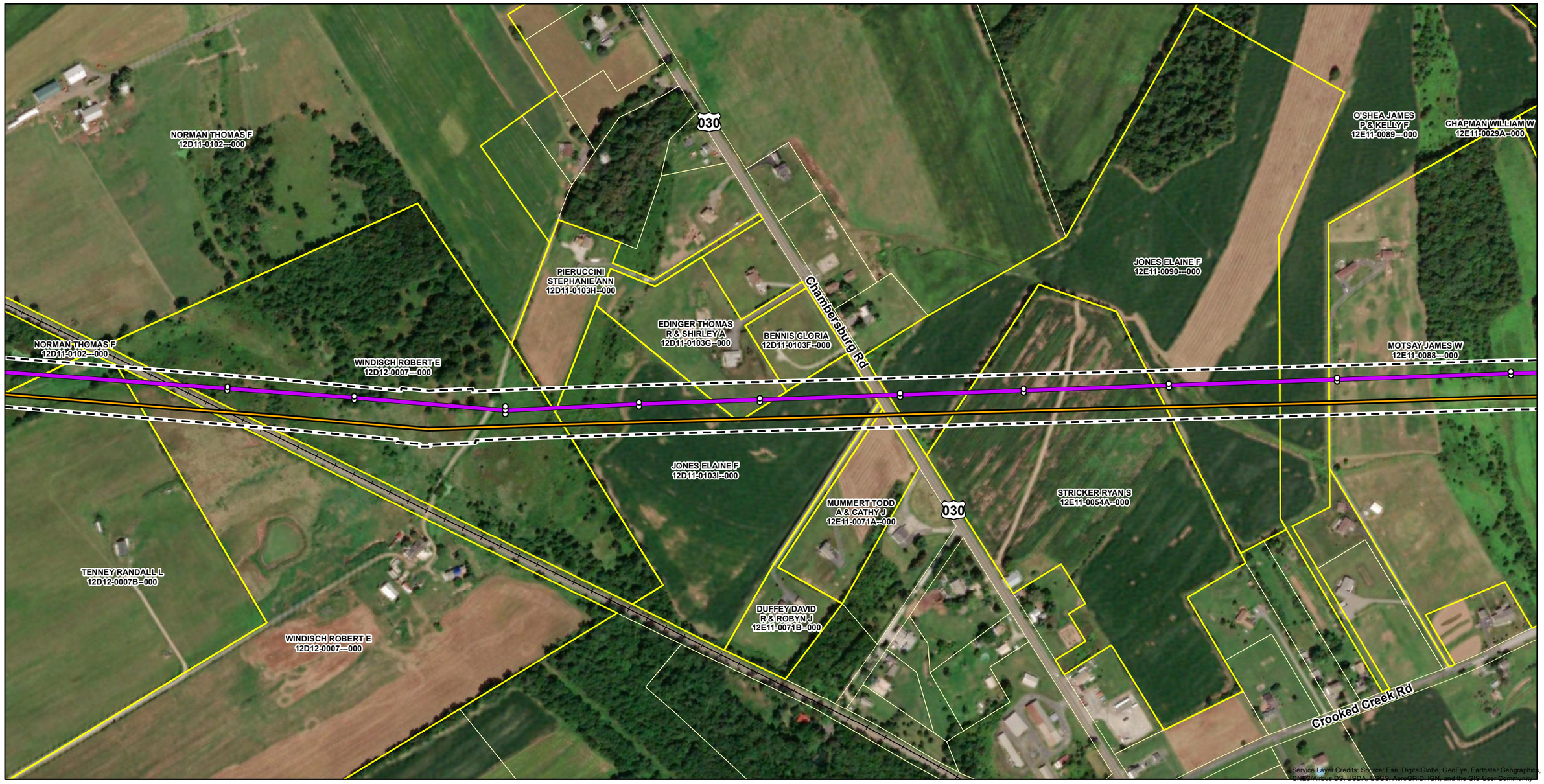
EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV Transmission Line Project
Page 2 of 9
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

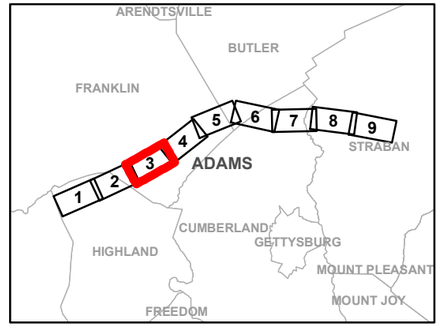
Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

0 200 400 800
Feet
1 inch = 400 feet

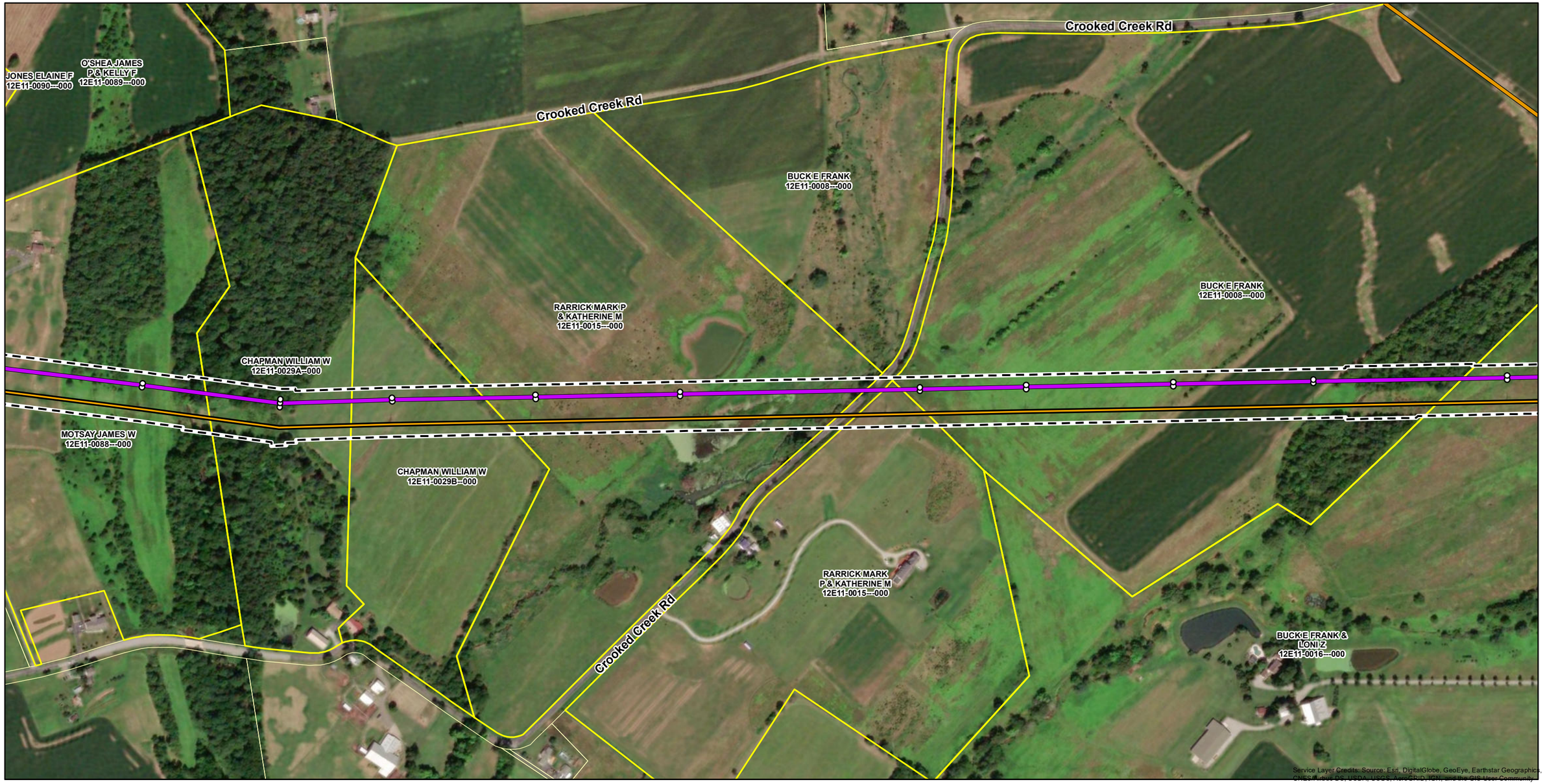


AECOM

EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV
Transmission Line Project
Page 3 of 9
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing 500 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

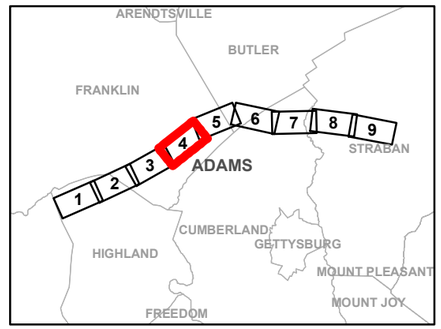
Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

0 200 400 800
Feet
1 inch = 400 feet



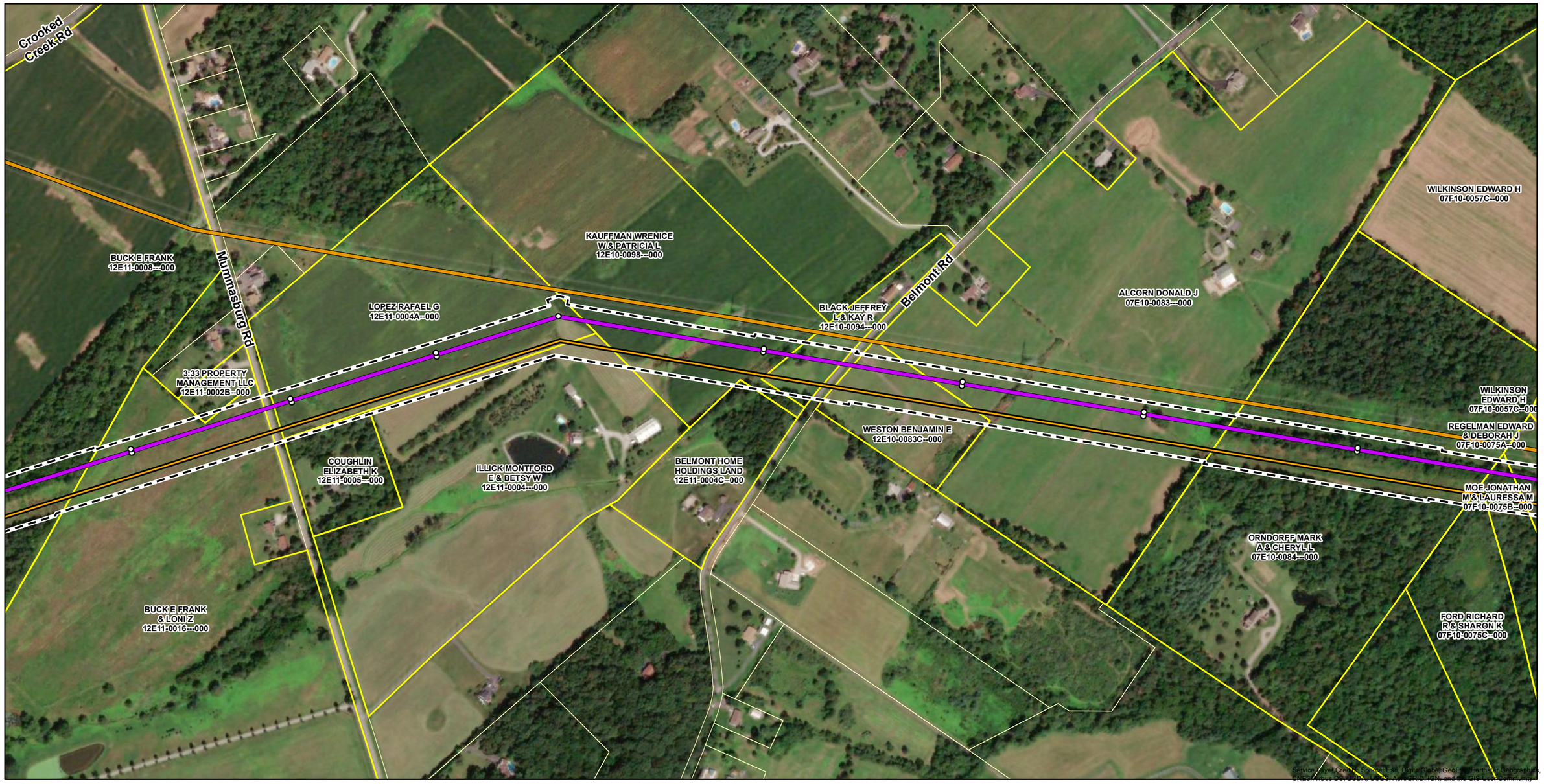
AECOM

EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV Transmission Line Project

Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing 500 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

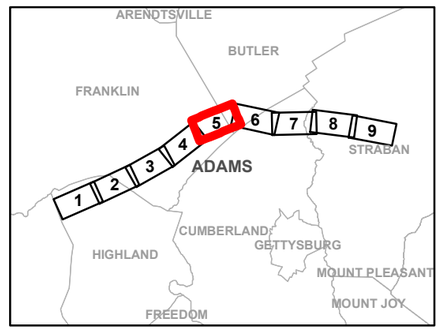
Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

0 200 400 800
Feet
1 inch = 400 feet

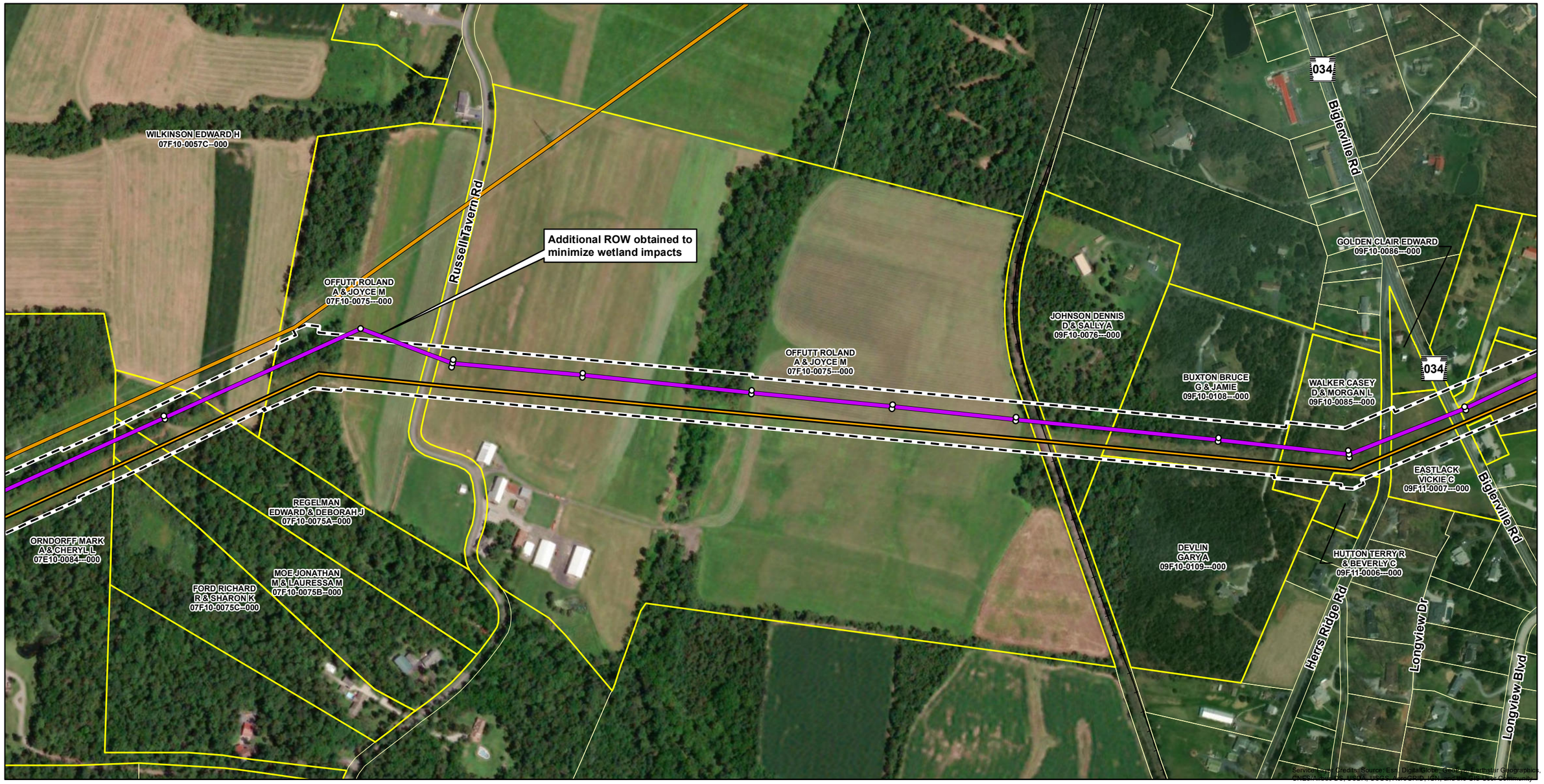


AECOM

EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV Transmission Line Project
Page 5 of 9
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing 500 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

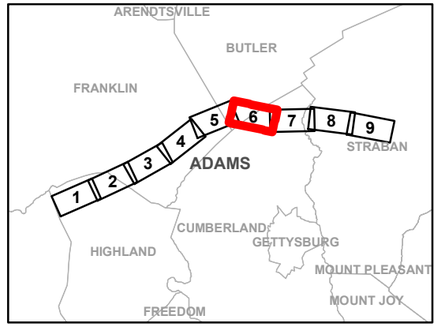
Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

0 200 400 800
Feet
1 inch = 400 feet

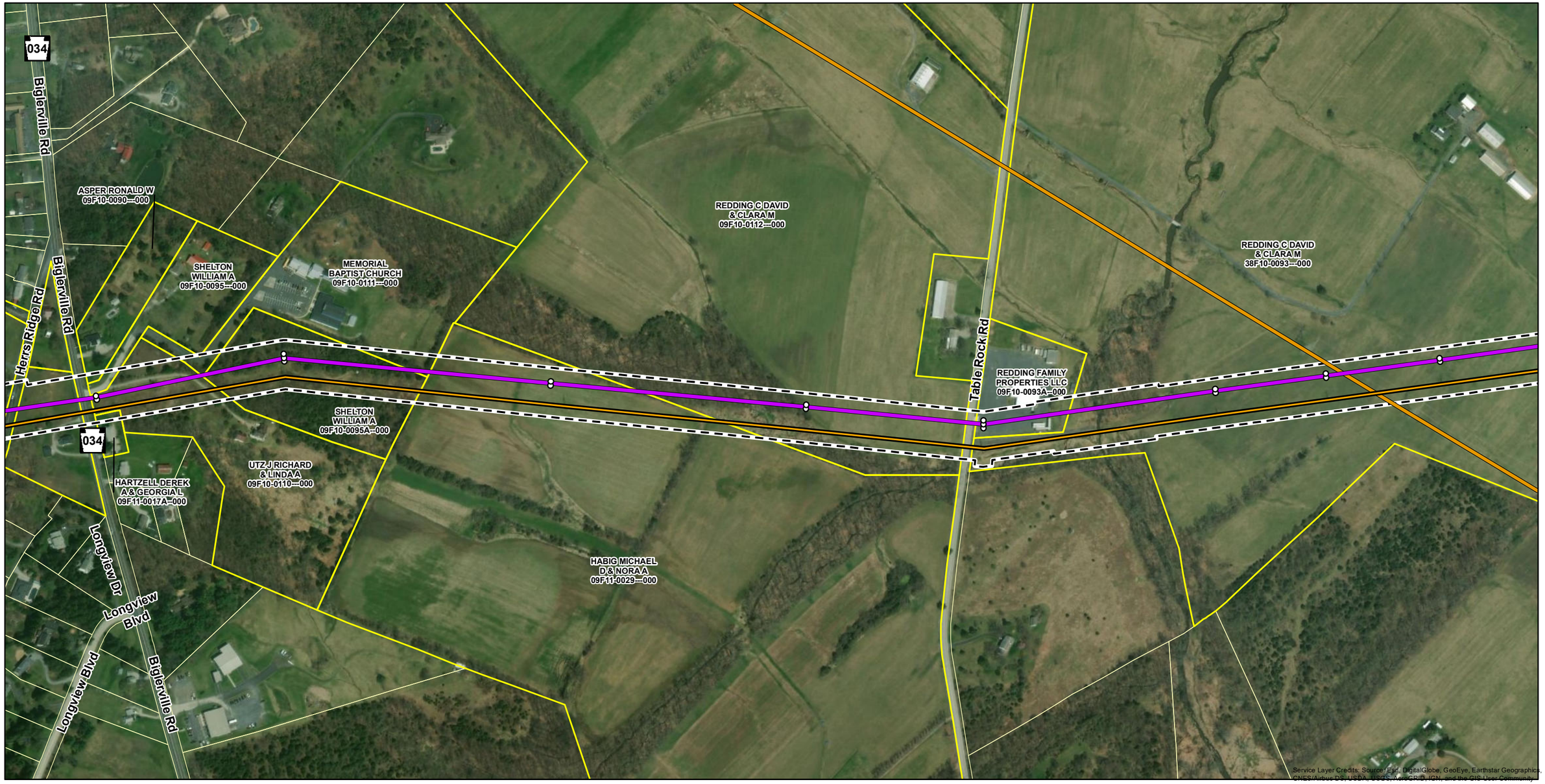


AECOM

EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV
Transmission Line Project
Page 6 of 9
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing 500 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

0 200 400 800
Feet
1 inch = 400 feet

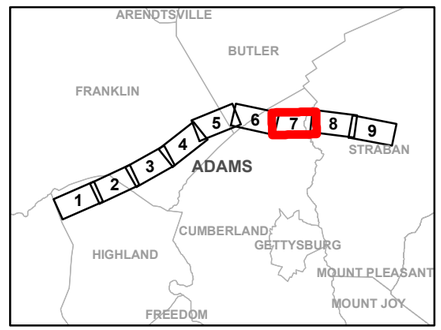


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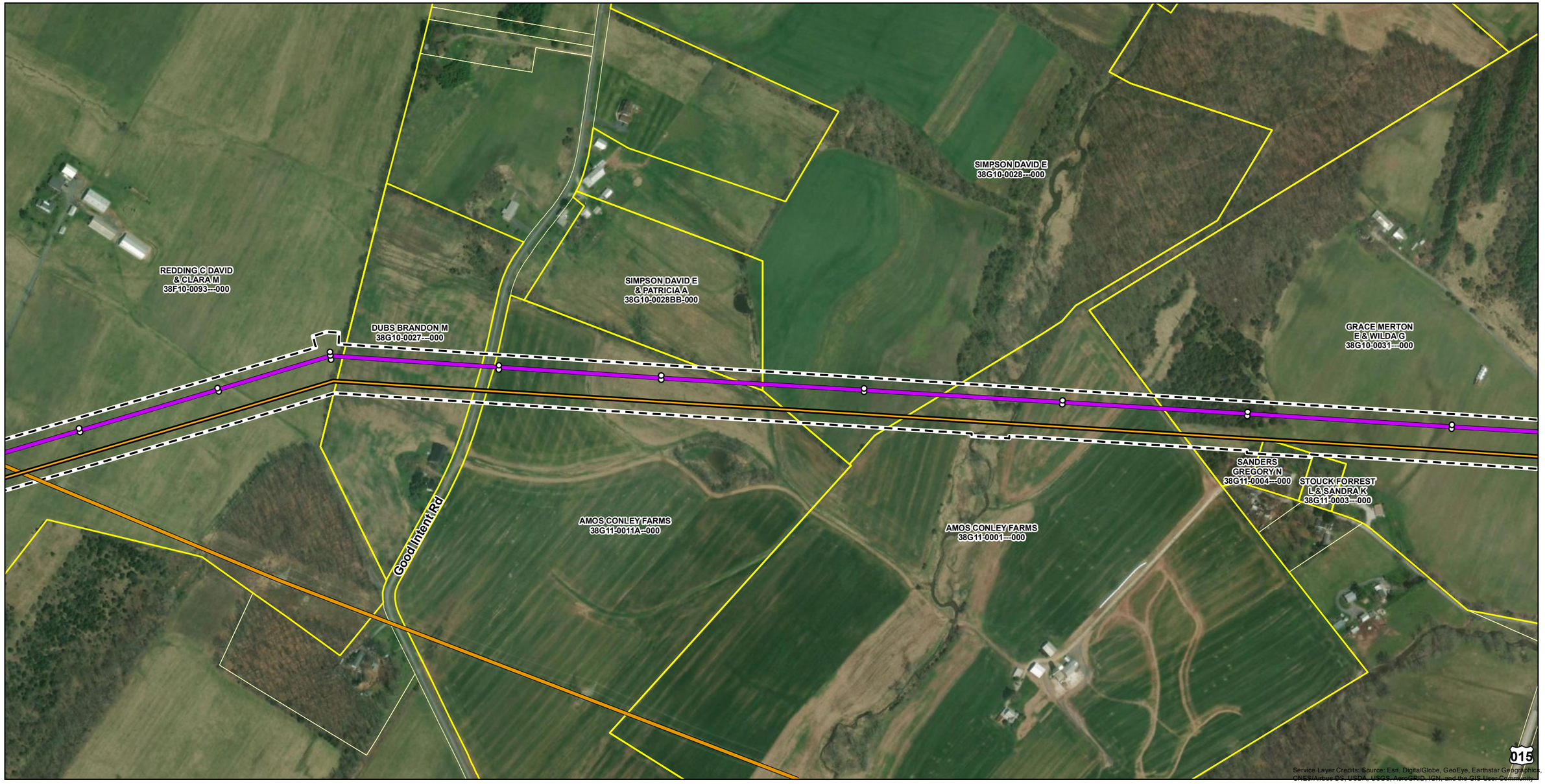
EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV Transmission Line Project
Page 7 of 9
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing 500 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
ExistingTransmission Network (PowerMap)
Existing Orrtanna 115 kV Line (FirstEnergy)
Existing ROW (FirstEnergy)
World Imagery Basemap (ESRI)
Parcel Lines (Adams County)

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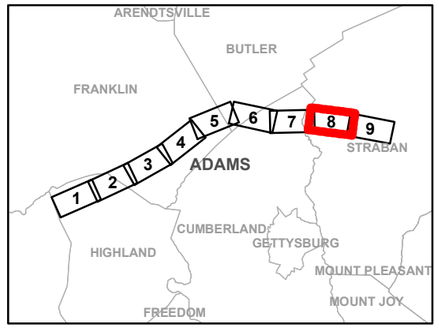
Feet
1 inch = 400 feet



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Page 8 of 9
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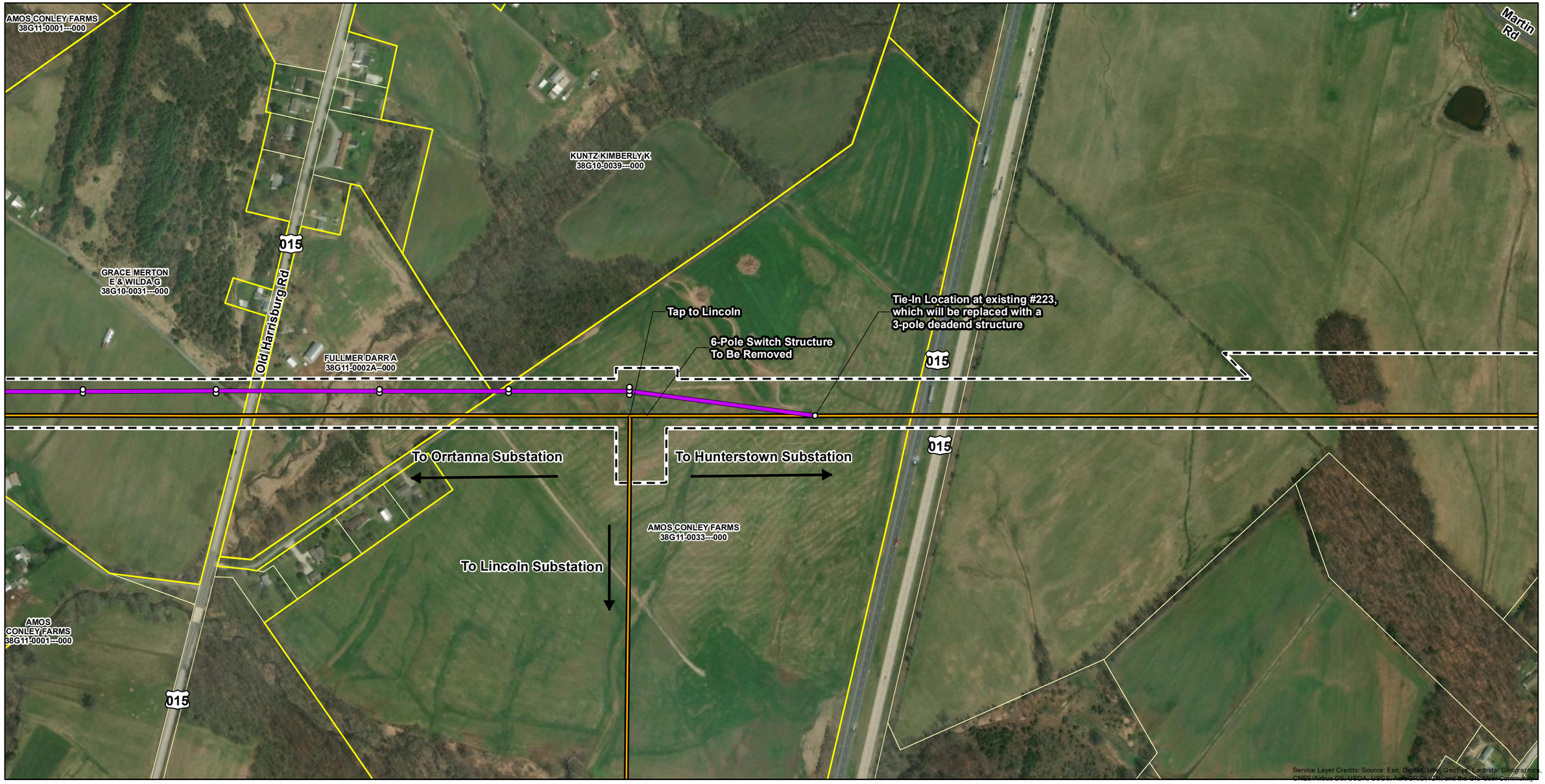

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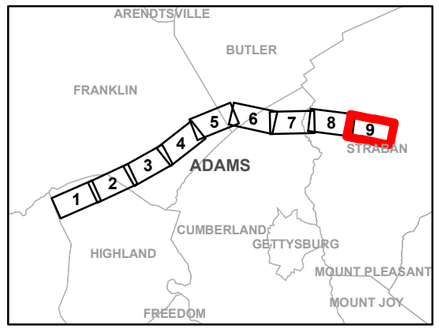

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Hunterstown-Orrtanna 115 kV Transmission Line Project
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Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

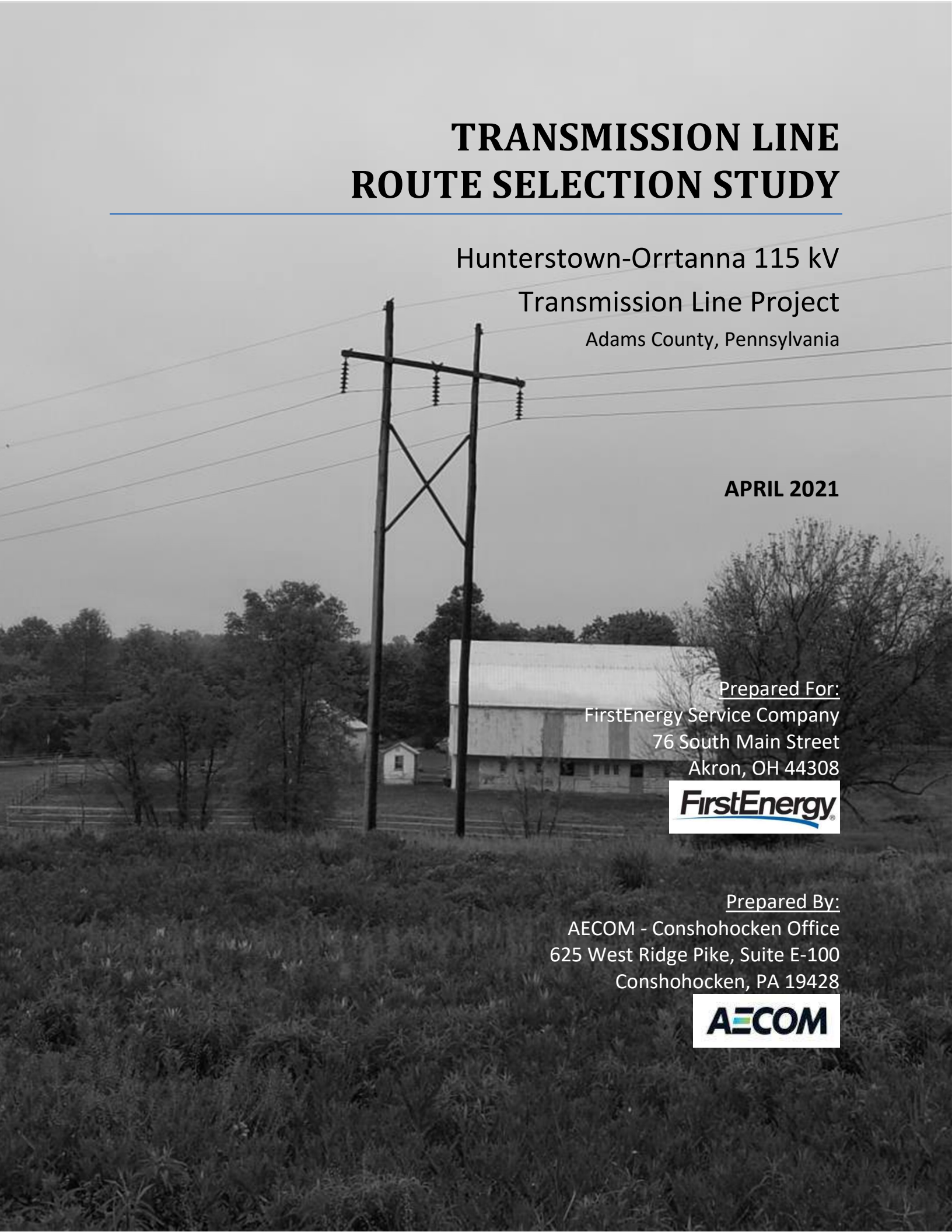
Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/24/2019

TRANSMISSION LINE ROUTE SELECTION STUDY

Hunterstown-Orrtanna 115 kV Transmission Line Project

Adams County, Pennsylvania

APRIL 2021



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1.0 INTRODUCTION AND PROJECT NEED

This document presents the Route Selection Study (Study) conducted for FirstEnergy Service Company (FirstEnergy) to identify the potential route options for developing a new 115 kilovolt (kV) transmission line that will connect the existing Orrtanna 115/69 kV Substation, located within Highland Township, Adams County, to a tie-in location at Structure #223, which is currently east of the existing tap location on the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line (963 Line), located within Straban Township, Adams County, Pennsylvania (Project). The 963 Line is the existing 115 kV transmission line providing electricity from the Hunterstown Substation to the Orrtanna Substation. This transmission line is located within the southern half of a 200-foot wide right-of-way (ROW) corridor for which FirstEnergy has obtained landowner easements.

The straight-line distance between the Orrtanna Substation and the tie-in location is approximately 9.1 miles. The new transmission line is envisioned as consisting of a single-circuit 115 kV transmission line that would be located within a new approximately 100-foot wide ROW. Alternatively, the new transmission line could be co-located with the 963 Line as a potential double-circuit system within the existing 200-foot ROW. The Study was conducted by AECOM, in consultation with the Mid-Atlantic Interstate Transmission, LLC. (MAIT), a FirstEnergy company, and is a component in the Full Siting Application (FSA) that will be submitted to the Pennsylvania Public Utilities Commission (PUC) for approval to construct the Project.

The routing study for the Hunterstown-Orrtanna 115 kV Transmission Line Project was conducted using a methodology that integrates geographic information system (GIS) technology, statistical evaluation, and expert judgment into the decision-making process. Detailed desktop and field reviews were conducted for the Project to identify key features and to better understand the landscape. The Proposed Route that would be developed will need additional detailed field reviews should this Project move forward. The overall objective of the routing study was to identify at least three transmission line route options that would best minimize impacts to communities and the environment while still being feasible to construct, and then select a Proposed Route for presentation to the PUC.

1.1 Purpose

The Study identifies major opportunities and constraints and uses an evaluation process to compare alternative transmission line routes for the Project that avoid or minimize adverse effects to the extent practicable. FirstEnergy on behalf of MAIT retained AECOM to assist with the evaluations and scoring and ranking of social/built, ecological, and engineering issues identified in the Study.

The purpose of this Study is to provide FirstEnergy with several viable alternatives for a transmission line alignment that provides connection between the existing Orrtanna 115/69 kV Substation and the existing tie-in location at Structure #223 on the existing 963 Line and an assessment of the social/built, ecological, and engineering variables necessary to determine a Proposed Route.

1.2 Project Need

The Orrtanna 115 kV Substation is presently served by a radial 115 kV transmission line tapped from the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. In a radial configuration, transmission line maintenance or line faults result in interruption of service to customers served from Orrtanna Substation. In addition, the Orrtanna Substation is presently constructed in a straight bus configuration on the 115 kV side with one 115-13.2 kV distribution transformer, one MAIT 115 kV transmission line, a generation step-up transformer, and an Adams Electric Cooperative (AEC) 115 kV line which serves one of AEC's substations. In the current straight bus configuration, a faulted or failed 115 kV line, transformer, circuit breaker or 115 kV bus fault results in an outage of the Orrtanna 115 kV bus (i.e. both transformers, the MAIT 115 kV transmission line, and the AEC 115 kV service). There is a PJM Supplemental upgrade (s1725.2) that converts the existing 115 kV straight bus configuration at Orrtanna into a five-breaker ring bus. This will mitigate the substation outages caused by a bus fault or a transformer fault. The proposed Project, combined with the Orrtanna ring bus project, is needed to mitigate substations outages resulting from a faulted or failed 115 kV line faults and/or circuit breaker. The Project is also needed to facilitate transmission line maintenance. Presently transmission line maintenance requires an interruption of service to customer with electric service originating from Orrtanna Substation. More details concerning the Project need can be found in the Siting Application.

2.0 METHODOLOGY OVERVIEW

The methodology of the Study is designed to identify transmission line routes that minimize the overall impacts on social development, sensitive land uses, cultural features, and ecological areas to the greatest extent possible while taking into account economic and technical feasibility. This process relies on analysis of current land use and ecological data collected from multiple public sources and commercial providers, which is confirmed and supplemented through field evaluations by AECOM scientists and engineers, and MAIT construction, real estate, and siting staff. The field evaluation also provides an opportunity to qualitatively assess the various routes. The result of this process is a detailed and comprehensive assessment of the study area and route alternatives that is compiled and summarized in the Study. The data and analysis in the Study is presented in such a manner as to allow consideration and comparison of additional route concepts and alternatives.

The Study consists of a multi-stage suitability analysis that identifies areas of opportunity and constraint and then directly compares the resultant feasible candidate routes. The Study is comprised of four main steps:

1. Definition of a Project Study Area;
2. Review of the Environmental Setting;
3. Identification of Alternative Routes; and
4. Quantitative and Qualitative Analysis of the Alternative Routes to Guide Selection of the Proposed Route by FirstEnergy.

3.0 DEFINING THE PROJECT STUDY AREA

An initial task in the Study was the definition of the Project Study Area. The study area was selected based on professional judgment and the geographic characteristics of the region, as well as the physical endpoints of the Project (i.e., substation and tie-in locations). In general, a selected study area should be within reasonable distance of the end points of the transmission line and it should provide the opportunity to identify multiple potentially feasible transmission line routes for further evaluation. In this case, the boundaries of the study area were developed based on a review of United States Geological Survey (USGS) maps, state and county road maps, and aerial photographs. Constraints such as topography, parks, suburban/developed areas, transportation routes, existing utility corridors, and the locations of the end points played key roles in determining the boundaries of the study area and route candidate selections.

With these criteria in mind, the principal constraints observed for the Project were Gettysburg National Military Park to the south and the range of hills associated with South Mountain to the west and north. Passing to the east of the Hunterstown Substation would be impractical thus this substation defined the eastern boundary of the Project Study Area.

The resulting Project Study Area comprises approximately 63.5 square miles and covers portions of Hamiltonban, Highland, Franklin, Butler, Cumberland, and Straban Townships and the Boroughs of Arendtsville and Biglerville in Adams County (**Figure 3-1**).

4.0 ENVIRONMENTAL SETTING OF THE PROJECT STUDY AREA

Information contained in this section was gathered from a variety of Federal, State, and local GIS databases, published reports and maps, and windshield surveys of the Project Study Area.

4.1 Natural Environment

Features of the natural environment are an important consideration in the routing process. Transmission line routing studies attempt to minimize impacts to the natural environment by avoiding regulated features such as wetlands, streams, and floodplains. This methodology minimizes project permitting issues and costs while preserving key natural habitats. This section provides a general description of the environmental setting of the Project Study Area including the physiography, geology, soils, surface waters, vegetation, special use areas, and wildlife habitat.

4.1.1 Physiographic Region and Topography

The Commonwealth of Pennsylvania is divided into several physical geographic regions, known as physiographic provinces, which are defined based on the terrain and geologic history of the landscape. The Project Study Area is located within the Gettysburg-Newark Lowland Section of the Piedmont Province. The Gettysburg-Newark Lowland Section consists of rolling low hills and valleys developed on red sedimentary rock. The sedimentary rock was deposited in a long, narrow, inland basin that formed when the continents of North America and Africa separated more than 200 million years ago. Relief is generally in the area of 100 to 200 feet, but locally is up to 600 feet on some of the isolated hills (Sevon 2000).

Topography in the Project Study Area is composed of rolling hills and shallow valleys. Elevations range from a high of 680 feet above sea level near the Orrtanna Substation to a low of 500 feet along Rock Creek near the tie-in structure.

4.1.2 Bedrock Geology

The regional geology of the Project Study Area is composed primarily of sedimentary rock units ranging from the Triassic Age (250 million years ago) to the Jurassic Age (150 million years ago). Most of the area is underlain by the Gettysburg Formation from the Triassic Age, which consists of silty mudstone, shale, and sandstone. Smaller sections of igneous diabase rock from the Jurassic Age are scattered across the area. Information provided by the Pennsylvania Department of Environmental Protection's (PADEP) EMapPA website describing these bedrock units is listed in **Table 4-1** (PADEP 2020a)**.**

TABLE 4-1: Summary of Bedrock Units in the Project Study Area

Bedrock Unit Symbol	Bedrock Unit Name	Age of Formation	Primary Composition
Trg	Gettysburg Formation	Triassic	Silty Mudstone
Trgh	Heidlersburg Member of Gettysburg Formation	Triassic	Shale
Jd	Diabase	Jurassic	Diabase

4.1.3 Soil Characteristics

Soils within the Project Study Area were reviewed using the U.S. Department of Agriculture's (UDSA) Natural Resources Conservation Service (NRCS) soil survey website (USDA/NRCS 2020). Information on the hydric soil rating is listed in **Table 4-2**. Hydric soils consisted of four major hydric map units and twelve partially hydric map units, equivalent to about 75 percent of the Project Study Area. These soils are primarily located along the broad stream valleys but also extend up the adjacent hillslopes and into many of the agriculturally active fields (**Figure 4-1**).

TABLE 4-2: Summary of Soils in the Project Study Area

Map Unit Symbol	Map Unit Name	Hydric Soil
AbA	Abbottstown silt loam, 0 to 3 percent slopes	Minor Hydric
AbB	Abbottstown silt loam, 3 to 8 percent slopes	Minor Hydric
BgB	Birdsboro silt loam, 3 to 8 percent slopes	Minor Hydric
Bo	Bowmansville silt loam	Major Hydric
BrB	Brecknock channery silt loam, 3 to 8 percent slopes	NO
BrC	Brecknock channery silt loam, 8 to 15 percent slopes	NO
CrA	Croton silt loam, occasionally ponded, 0 to 3 percent slopes	Major Hydric
CrB	Croton silt loam, occasionally ponded, 3 to 8 percent slopes	Major Hydric
KnB	Klinesville channery silt loam, 15 to 25 percent slopes	NO
KnC	Klinesville channery silt loam, 25 to 40 percent slopes	NO
KnD	Klinesville channery silt loam, 3 to 8 percent slopes	NO

Map Unit Symbol	Map Unit Name	Hydric Soil
KnE	Klinesville channery silt loam, 8 to 15 percent slopes	NO
Lc	Lamington silt loam	Major Hydric
LgB	Legore channery silt loam, 3 to 8 percent slopes	NO
LhA	Lehigh channery silt loam, 0 to 3 percent slopes	Minor Hydric
LhB	Lehigh channery silt loam, 3 to 8 percent slopes	Minor Hydric
LhC	Lehigh channery silt loam, 8 to 15 percent slopes	Minor Hydric
MdB	Mount Lucas silt loam, 3 to 8 percent slopes	Minor Hydric
NaB	Neshaminy channery silt loam, 3 to 8 percent slopes	Minor Hydric
NaC	Neshaminy channery silt loam, 8 to 15 percent slopes	NO
PcB	Penn silt loam, 3 to 8 percent slopes	NO
PcC	Penn silt loam, 8 to 15 percent slopes	NO
PoB	Penn-Klinesville channery silt loams, 3 to 8 percent slopes	Minor Hydric
ReA	Readington silt loam, 0 to 3 percent slopes	Minor Hydric
ReB	Readington silt loam, 3 to 8 percent slopes	NO
RfB	Reaville channery silt loam, 3 to 8 percent slopes	Minor Hydric
Rw	Rowland silt loam	Minor Hydric

4.1.4 Surface Waters

Northern portions of the Project Study Area are located in the Conewago Creek watershed that is part of the larger Lower Susquehanna River watershed, which drains to the Chesapeake Bay. The central and southern portions of the Project Study Area are located in the Little Marsh Creek, Marsh Creek, and Rock Creek watersheds that are part of the larger Monocacy River watershed. The Monocacy River watershed extends south through Maryland to the Potomac River, which drains to the Chesapeake Bay. Major surface water features are depicted in **Figure 4-2** and discussed in detail below.

Streams

Surface water resources mapped within the Project Study Area include streams, floodplains, and open waters (**Figure 4-2**). The information presented in this section is based upon publicly available data provided by the USGS, the Federal Emergency Management Agency (FEMA), and PADEP.

Named steams within the Project Study Area that have been identified on relevant USGS maps are listed in **Table 4-3** (USGS 2020). According to Pennsylvania Code, Title 25, Chapter 93, PADEP has established narrative and numeric water quality criteria necessary to support a variety of protected water uses, which include protection uses for aquatic life (e.g., Cold Water Fishes (CWF), Warm Water Fishes (WWF), Trout Stocked Fishery (TSF), and Migratory Fishes (MF)) and special protection waters (e.g., High Quality (HQ) and Exceptional Value (EV)). PADEP assigns all streams in the Commonwealth a *Designated Use*, which is the water use goal for a particular stream segment, whether or not it is currently being attained. In contrast, a stream's *Existing Use* is the use actually attained by existing water quality. PADEP's antidegradation policy requires existing uses, and the level of water quality necessary to protect existing

uses, shall be maintained and protected. As such, the water quality of a stream segment with an existing use that exceeds its designated use may not be degraded below the water quality levels protective of that existing use (PADEP 2020b). Designated stream classifications are illustrated on **Figure 4-2**. Designated Uses of the streams located in the Project Study Area are also noted in **Table 4-3**. Note that none of the streams has an Existing Use status.

Further, the Pennsylvania Fish and Boat Commission (PFBC) provides additional protection (i.e., season restrictions) to streams that support trout populations. Streams listed as Wild Trout Waters (Natural Reproduction) (PFBC 2020a), Approved Trout Stream (stocked) (PFBC 2020b) Class A Wild Trout Waters (PFBC 2020c) or Wilderness Trout Waters (PFBC 2020d) are also noted on **Table 4-3**.

TABLE 4-3: Named Streams in the Project Study Area

Stream Name	Chapter 93 Designated Use*	Special PFBC Designation
Beaverdam Creek	WWF, MF	None
Conewago Creek	CWF, MF	Stocked Trout
Little Marsh Creek	CWF, MF	Stocked Trout
Marsh Creek	CWF, MF	Wild Trout Water/ Stocked Trout
Mummasburg Run	CWF, MF	None
Muskrat Run	CWF, MF	None
Rock Creek	WWF, MF	None
Willoughby Run	WWF, MF	None

*CWF – Cold Water Fishes; MF – Migratory Fishes, WWF – Warm Water Fishes

PADEP's 2018 Integrated (303(d) and 305(b)) Water Quality Report summarizes the water quality conditions of surface water in the Commonwealth of Pennsylvania. The report classifies streams as impaired or non-impaired and further identifies the standards based on four designated uses: aquatic life, fish consumption, recreation use, and potable water supply (PADEP 2018). Within the Project Study Area, the following streams are classified as impaired:

- Tributaries to Little Marsh Creek – located in the south-central part of the Project Study Area, the aquatic life in these streams are classified as impaired due to roadway runoff, urban/storm sewers, and land development.
- Mummasburg Run and tributaries - located in the central part of the Project Study Area, the aquatic life in this watershed is classified as impaired due to agricultural nutrients and siltation.
- Conewago Creek and tributaries – located in the northern portion of the Project Study Area, the aquatic life of this watershed is classified as impaired due to agricultural siltation and the recreational use is impaired due to pathogens from unknown sources.
- Rock Run – located in the east-central part of the Project Study Area, the aquatic life in this stream is classified as impaired due to agricultural nutrients.

- Beaverdam Creek and tributaries – in the northeastern part of the Project Study Area, the aquatic life in this stream is classified as impaired due to agricultural siltation.

There are no state-listed scenic rivers present within the Project Study Area based on review of the Pennsylvania Department of Conservation and Natural Resources (PADCNR) Scenic Rivers Program (PADCNR 2020a). None of the rivers in the Project Study Area are considered federally-listed wild and scenic rivers according to the National Wild and Scenic Rivers Program managed by the U.S. National Park Service (USNPS 2020a).

Floodplains

100-year floodplains are areas adjacent to streams which would be inundated by a flood elevation that has a 1-percent chance of being equaled or exceeded each year. The Federal Emergency Management Agency (FEMA) delineates the extent of most 100-year floodplains. The 100-year floodplain boundaries are illustrated on **Figure 4-2** (FEMA 2020). Floodplains are located primarily along all of the named streams and several of their larger tributaries.

Lakes and Ponds

Numerous small agriculture-based ponds (0.5 to 2.0 acres) are located within the Project Study Area. The U.S. Fish and Wildlife Services (USFWS) National Wetlands Inventory (NWI) categorizes surface water resources such as open waters (e.g. streams, ponds, and lakes) and wetlands in accordance with the Cowardin system (Cowardin *et al.* 1979). These ponds are categorized by the NWI as palustrine unconsolidated bottom, permanently flooded, (PUBH) features, or freshwater ponds (USFWS 2020). These surface water features are illustrated on **Figure 4-2**.

4.1.5 Wetlands

Review of the NWI wetland maps indicates that numerous small (0.5 to 2.0 acres) and several moderate (2.0 to 30.0 acres) sized palustrine wetlands are located within the Project Study Area, primarily within floodplain areas (**Figure 4-2**). Palustrine systems include all non-tidal vegetated wetlands and are further classified based on the dominant plant type. These classifications include palustrine emergent (PEM) herbaceous systems, palustrine scrub-shrub (PSS) systems, and palustrine forested (PFO) systems. The various classifications of the wetlands located in the Project Study Area are listed in **Table 4-4**.

TABLE 4-4: NWI Wetlands in the Project Study Area

Wetland Code	Wetland Type
PEM5A	Palustrine Emergent, Phragmites australis, Temporarily Flooded
PEM5C	Palustrine Emergent, Phragmites australis, Seasonally Flooded
PEM5E	Palustrine Emergent, Phragmites australis, Seasonally Flooded/Saturated
PSS1A	Palustrine Scrub-Shrub, Broad-Leaved Deciduous, Temporarily Flooded
PSS1/EM5A	Palustrine Scrub-Shrub, Broad-Leaved Deciduous/ Palustrine Emergent, Phragmites australis, Temporarily Flooded
PFO/SS1A	Palustrine Forested/ Palustrine Scrub-Shrub, Broad-Leaved Deciduous, Temporarily Flooded

Wetland Code	Wetland Type
PFO1/EM5A	Palustrine Forested, Broad-Leaved Deciduous/ Palustrine Emergent, Phragmites australis, Temporarily Flooded
PFO1A	Palustrine Forested, Broad-Leaved Deciduous, Temporarily Flooded
PFO1C	Palustrine Forested, Broad-Leaved Deciduous, Seasonally Flooded
PFO1E	Palustrine Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
PUBHh	Palustrine Unconsolidated Bottom, Permanently Flooded, Diked/Impounded

Wetlands depicted on the NWI maps are based primarily on interpretation of aerial photographs taken in the 1980's, and were not field verified or delineated in accordance with standard methodologies. Hence, these data are suitable for planning purposes only.

4.1.6 Vegetation Communities

The Project Study Area lies within the Northern Appalachian Piedmont Section of the Eastern Broadleaf Forest Province (McNab 2005). This province has a continental-type climate of cold winters and warm summers. Annual precipitation is greater during summer and water deficits infrequent. Vegetation is a mixture of oak-hickory deciduous trees and short-leaf pines. According to Rhoads' and Block's *Trees of Pennsylvania*: *A Complete Reference Guide* (Rhoads & Block 2005), the Project Study Area is within the Appalachian Oak Forest, which is the dominant forest type in Pennsylvania. This forest type is characterized by the presence of red oak (*Quercus rubra*), white oak (*Quercus alba*), tulip tree (*Liriodendrohn tulipifera*), red maple (*Acer rubrum*), and hickory trees (*Carya* species). It also generally has a dense layer of shrubs including mountain laurel (*Kalmia latifolia*) and black huckleberry (*Gaylussacia baccata*).

The vegetation of the Project Study Area has been altered considerably by human disturbance. As a result, the landscape is a patchwork of residential and commercial areas, agricultural fields, open meadows, and forested areas. Vegetation within the socially developed areas around Gettysburg, Biglerville, and Arendtsville consists of a wide variety of native and ornamental trees and shrubs planted by various property owners or part of municipal street scape design. Agricultural areas are noted across the entire Project Study Area and are dominated by crop species such as corn, wheat, or soybean; some agricultural areas are used for horses, cows, or other livestock. A few orchard operations are noted in the western part of the area. Narrow forested corridors parallel many of the streams, but larger tracts of forest are noted along Marsh Creek and at the base of South Mountain along the western edge of the Project Study Area. All of these forested areas are second and third growth forests; there are no known areas of old-growth forest in the area.

4.1.7 Wildlife

Typical wildlife species found within the Project Study Area include those found in wetlands, forested habitats, and open/agricultural lands. These habitats contain a diverse population of amphibians, fish, reptiles, and birds, but have a limited diversity of mammals. Common mammals within these habitats

include raccoon (*Procyon lotor*), eastern cottontail rabbit (*Sylvilagus floridanus*), and white-tailed deer (*Odocoileus virginianus*) (Fergus 2000).

Important Bird Areas (IBA) are "designated by the Pennsylvania Ornithological Technical Committee (POTC), as the most critical regions in the Commonwealth for conserving bird diversity and abundance, and are the primary focus of Audubon Pennsylvania's conservation efforts" (Audubon Pennsylvania Birds Conservation 2020). The Southern Adams County Grasslands IBA is composed of extensive pastures, hayfields, and large yards that form open grassland habitat suitable for a diversity of grassland birds including upland sandpiper (*Bartramia longicauda*), loggerhead shrike (*Lanius ludovicianus*), and eastern meadowlark (*Sturnella magna*). The area includes a variety of private owners and national park lands including the Eisenhower Farm National Historic Site. Several large cattle-grazing operations have maintained the open, untilled agriculture features attractive to grassland birds. This IBA extends from the Pennsylvania/Maryland border north to the South Mountain foothills near Biglerville and covers most of the Project Study Area (**Figure 4-2**).

4.1.8 Threatened and Endangered Species

A review of the PADCNR Natural Heritage Program Database would need to be conducted to determine the potential presence of threatened or endangered (T&E) species in the Project Study Area. The search would evaluate for federal (USFWS) and state (PADCNR, Pennsylvania Fish and Boat Commission (PFBC) and Pennsylvania Game Commission (PGC)) listed species. Further coordination with these agencies will be required to obtain specific T&E species data for the Proposed Route.

The Natural Heritage Inventory of Adams County, developed by The Nature Conservancy (TNC), identified several natural areas along the western half of the Project Study Area that may contain T&E species or their habitats (**Figure 4-2**) (TNC 2002). These natural areas and the potential T&E species in these areas are listed in **Table 4-5.**

TABLE 4-5: Natural Areas and Potential T&E Species in the Project Study Area

Natural Area	Community Type and Potential T&E Species
Marsh Creek Wetlands	Site is a mosaic of wet meadows, open marsh and open woodland along Marsh Creek that provides habitat for a species of concern.
Meadow Brook Lane Woods	Floodplain forest includes a small population of a tree species of concern.
Mummasburg Road Fields	Habitat for a species of concern.
Seven Stars Floodplain Forest	Floodplain forest along Marsh Creek supports small populations of two plants recently removed from the species of concern list.

4.1.9 Special Use Areas

Special use areas are defined as governmental owned or controlled lands that are publicly accessible and provide special conservations value and social service. Scenic vistas, wilderness areas, state game lands, and public parks are several examples of these lands.

Scenic Areas

The Project Study Area does not contain any state designated scenic areas (PADCNR 2020b). No federal or state scenic highways, as noted by the Federal Highway Administration (FHA) and the Pennsylvania Department of Transportation (PennDOT), are located in the Project Study Area (FHA 2020; PennDOT 2020).

Wilderness Areas

The Project Study Area is not located within a National Wilderness Preservation System (NWPS 2020).

State Game Lands

State Game Lands are managed by the Pennsylvania Game Commission (PGC) for hunting, trapping, and fishing. No State game Lands are located in the Project Study Area (PGC 2020).

Park Lands

There are no national or state parks located within the Project Study Area (USNPS 2020b; PADCNR 2020c). The Project Study Area does border the northern extent of Gettysburg National Military Park (**Figure 4-3**). No local community parks are located in the Project Study Area.

Natural Areas

There are no state-listed Natural Areas located within the Project Study Area (PADCNR 2020d).

4.2 Built Environment

Human impacts on the natural environment are represented by a number of land use patterns and development types. Evaluation of the land uses considered conventional classifications such as developed, forested, and agricultural uses. Additional evaluation assessed conserved lands, agricultural easements, comprehensive plans, historic and cultural resources, and hazardous material sites.

4.2.1 Land Use/ Land Cover

Land use of the Project Study Area is composed primarily of agricultural and forested lands intersected by numerous local and state transportation corridors that are lined with pockets of residential and commercial development. These distributions can be seen in **Figure 4-4**.

Residential Development

Moderately dense pockets of residential land are located near the Orrtanna Substation on the west side of the Project Study Area, in Arendtsville and Biglerville in the northern part, and on the east side of Gettysburg in the eastern part. Less dense residential development is noted along the main highways specifically U.S. Route 30 (US 30) west of Gettysburg and State Route (SR) 34 north of Gettysburg. Scattered low density residential development is located along many of the secondary roads that crisscross the area.

Residential facilities account for approximately 15% of the Project Study Area.

Institutional/Industrial/Commercial Development

Institutional facilities generally include schools, which are closely tied into the residential development pattern. A few of the schools are located in the moderately dense towns including Gettysburg and Arendtsville (**Figure 4-5**). These facilities generally involve a large main building structure and surrounding open areas that contain ball fields. Several smaller school facilities are noted scattered in rural sections of the Project Study Area. Other institutional lands include municipal facilities such as maintenance yards, office buildings, and water treatment areas.

Industrial lands in the Project Study Area are limited to the International Paper plant in Biglerville, the Knouse Foods processing plant located near the Orrtanna Substation, the Hunterstown Generating Station near the Hunterstown Substation, and the two freight railroad alignments that cross the area. No large scale quarry, mining operations, or refineries are located in the area.

Commercial lands generally include common retail shops such as restaurants, gas stations, and markets, which are noted in concentrated areas along US 30 east and west of Gettysburg, near Arendtsville and Biglerville, and sporadically along the state and local roadways. The Gettysburg Regional Airport, which is located along US 30 west of Gettysburg, is also a contributing factor to the commercial development near this facility.

Institutional, industrial, and commercial lands account for approximately 2% of the Project Study Area.

Agricultural Land

Agricultural land is the dominant land use in the Project Study Area. As discussed in **Section 4.1.6** (Vegetation Communities), agricultural lands are generally used for the production of crops, but some areas are used for grazing and others for orchards and tree farms. Many of these agricultural lands are associated with single farm complexes that may include several hundred acres; numerous others are smaller plots that may be used for grazing.

Agricultural lands account for approximately 60% of the Project Study Area.

Forested Lands

Forested lands are predominately located in the western and southwestern sections of the Project Study Area near South Mountain and Michaux State Forest. Most of these forested lots are part of large private properties and many are protected as conserved lands. Other smaller tracts of forest cover are noted scattered across the Project Study Area. Many of these areas are along the stream corridors but others are surrounded by agricultural lands. These forests may not have been converted to agriculture due to steep slopes, rocky soils, or the presence of wetlands.

Forested lands account for approximately 20% of the Project Study Area.

Transportation and Utilities

The largest highway in the Project Study Area is U.S. Route 15 (US 15), a limited access four-lane roadway that extends north to south along the eastern edge of the area. Four two-lane highways (US 30, Business Route 15 [Old Harrisburg Road], SR 34, and SR 394) are also located in the Project Study Area. US 30 is an

east to west two-lane highway that extends through Gettysburg and along the southern edge of the area and Business Route 15 (Old Harrisburg Road) is a two-lane highway extending from Gettysburg in a northeast to southwest direction along the eastern side of the Project Study Area. SR 34 is a two-lane highway extending north to south from Gettysburg to Biglerville through the central portion of the area and SR 394 is a two-lane highway crossing in a northwest to southeast alignment from Biglerville to Hunterstown in the northeastern corner of the area. These main roads are supplemented with a network of secondary, residential, agricultural, and forest roads.

Two segments of railroad cross through the Project Study Area. The first is the Gettysburg and Northern Railroad, a local freight line that extends north through the center of the Project Study Area from Gettysburg to Mount Holly Springs, Pennsylvania. The second is the CSX Railroad, a national freight line that extends through the southwestern portion of the area from Gettysburg toward Maryland.

There are three gas pipeline ROW corridors that cross east to west through the Project Study Area. Two of the corridors cross in the northern half of the Project Study Area near Biglerville, with the third pipeline corridor being located in the southern half near the Orrtanna and Hunterstown Substations. The northernmost corridor contains four gas pipelines that are managed by Texas Eastern Transmission, Tennessee Gas, and Rockies Express. The remaining northern and southern corridors are managed by Columbia Gas. Two shorter, north to south pipelines connect these two Columbia Gas pipelines. One is located along the eastern side of the Project Study Area near the Hunterstown Substation; the other is in the center of the area.

There are two main electrical transmission line corridors in the Project Study Area. The largest is the Hunterstown-Conemaugh 500 kV Transmission Line that extends from southeast to northwest through the central part of the area. The existing single-circuit Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line alignment extends from southwest to southeast in an arching pattern through the center of the Project Study Area from the Orrtanna Substation to the Hunterstown Substation. A 115 kV tap line extends south from the Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line to the Lincoln Substation located on the eastern side of Gettysburg near US 30 and a second 115 kV transmission line extends east from the Lincoln Substation to the Hunterstown Substation.

The Gettysburg Regional Airport is located adjacent to the southern side of the Project Study Area, but the approximately 2-mile radius buffer around this facility monitored by the Federal Aviation Administration (FAA) extends into the area. The runway has a southwest to northeast alignment that would indicate the potential need for FAA coordination for routes that may extend through the southernmost section of the Project Study Area.

Transportation and utilities account for approximately 3% of the Project Study Area.

All of the aforementioned linear features are included on **Figure 4-5**.

4.2.2 Conservation Lands

Based on review of the National Conservation Easement Database (NCED), there are 43 conserved lands located within the Project Study Area (NCED 2020). Two of the conserved lands are part of the federal

Wetlands Reserve Program managed by NRCS. Both areas are approximately 40 acres in size and are located along the western edge of the Project Study Area.

Twenty-two (22) of the conserved lands are agricultural conservation easements managed through the Adams County Agricultural Land Preservation Program (ACALPP). Agricultural easements restrict and limit the conversion of farmland to nonagricultural use. Money for this program is allocated from both the county and the state, with some federal monies from the USDA/NRCS. ACALPP oversees the terms and conditions of the permitted agricultural activities, as well as restrictions that are established by an easement. Such restrictions include development of buildings and other structures not related to agricultural production, subdivision of the parcel, and mining activities (ACALPP 2020). Based on easement information provided by Adams County, utilities are a permitted use within the ACALPP easements. Most of the agricultural conservation easements involve 100 to 200 acre active farms located in the western portion of the Project Study Area, but also include several scattered farms in the central and eastern part. A few of the agricultural conservation easements in the eastern portion of the Project Study Area are funded through the USDA/NRCS.

The remaining nineteen (19) conserved lands are preserved through the Land Conservancy of Adams County. Since their funding is provided by a variety of sources other than county, state or federal agencies, the Land Conservancy of Adams County provides more flexibility in the lands being preserved relative to the ACALPP. Based on information provided by the Land Conservancy of Adams County, their focus is on preserving the rural lands and character of Adams County. Most of the land conservancy parcels in the Project Study Area involve 50 to 200 acre natural environments and forested areas, with a few being primarily agricultural in use. Land conservancy parcels are primarily located in the western portion of the Project Study Area. Many of the land conservancy easements also involve federal support through the USDA/NRCS.

Cumulatively, conserved lands in the Project Study Area account for approximately 6,000 acres. All of these conserved lands are illustrated in **Figure 4-3**.

4.2.3 Comprehensive Plans

Adams County Planning Commission (ACPC) approved a comprehensive plan in 1991 that has not been updated since that time (ACPC 1991). This plan identifies specific concerns for the area including future development patterns, preservation of physical and environmental characteristics, and the coordination of growth management. The plans offer a series of Goals and Objectives identified by the county to be used as a guide by the local municipalities to minimize the impact of proposed growth and maximize the preservation of the natural and cultural aspects of the area. Specific goals provide strong support for the development of growth areas that will serve as the focus for infrastructure development and consequently direct residential, commercial, and industrial growth. The plan addresses utilities such as water supply and wastewater but does not address the need for additional electrical power.

In 2010, Adams County adopted the *Adams County Greenways Plan* that encourages "identifying areas that are inappropriate for development and areas that are already protected or publicly owned in order to develop an interconnecting system of greenways (Adams County Office of Planning and Development

2010)." The Greenways Plan complemented several of the goals identified in the comprehensive plan that were focused on defining a widespread pattern of parks, forests, game lands, protected environmental features, open space, and conservation areas to be preserved as the backbone of a permanent open space system. Although the focus of many potential greenway trails is on abandoned railroads and scenic byways, the plan does acknowledge that utility corridors, including electrical transmission lines, are options to be considered.

Aside from these county plans, several local municipalities have adopted their own comprehensive plans. Cumberland Township adopted a comprehensive plan in 2000 and also coordinated with Straban Township and Gettysburg Borough in the development of the *Central Adams County Comprehensive Plan* that is currently in draft form (Cumberland Township and Straban Township 2018 (draft)). Arendtsville Borough, Biglerville Borough, Butler Township, and Franklin Township coordinated in the development of the *Northwest Adams County Joint Comprehensive Plan* that was adopted in 2010 (Arendtsville Borough, Butler Township, and Franklin Township 2010). Similar to the county based plans, these documents focus on growth patterns, transportation networks, economic development, and the preservation of cultural and natural resources but provide further resolution to address the goals of the plans through local zoning changes and multi-municipality coordination. None of these plans discuss the potential need for additional transmission lines or any potential effect new lines may have on the surrounding environment.

4.2.4 Cultural Resources

A review of cultural resources within the Project Study Area is required by various state agencies to ensure their preservation. A desktop survey of existing historic structures, properties, and districts within the Project Study Area was conducted by accessing the Pennsylvania Historical and Museum Commission's (PHMC) Bureau of Historic Preservation's Cultural Resources Geographic Information System (CRGIS) to review available information on these historic resources (PHMC CRGIS 2020). Archaeological information was not included in this assessment due to the extensive number of sites that have been evaluated across the area and the sensitive nature of disclosing the site locations. Evaluation for archaeological resources will be required regardless of the route chosen for the Project.

Eighteen National Register of Historic Places (NRHP)-listed or eligible historic properties were identified in the Project Study Area. Historic properties are defined as buildings, structures, objects, sites, and linear historic sites aged 50 years or more. These eighteen properties and their NRHP key number are listed in **Table 4-6**.

TABLE 4-6: NRHP-listed or eligible Historic Properties in the Project Study Area

Key#	Historic Name	National Register Status	Municipality
2369	Middlekauff House	NRHP-Listed	Franklin Township
96366	Wirts House	NRHP-Listed	Straban Township
143997	Thomas Brothers Store	NRHP-Listed	Biglerville Borough
91861	Arendtsville Vocational High School	NRHP-Eligible	Arendtsville Borough

Key#	Historic Name	National Register Status	Municipality
2179	Russell Tavern	NRHP-Eligible	Butler Township
2183	Warner Property	NRHP-Eligible	Butler Township
2382	Shank Farmstead	NRHP-Eligible	Franklin Township
2401	Deardorff Farm	NRHP-Eligible	Franklin Township
13313	Cashtown Inn	NRHP-Eligible	Franklin Township
50653	Round Barn Farm	NRHP-Eligible	Franklin Township
110013	Seven Stars Confederate Hospital Site	NRHP-Eligible	Franklin Township
110730	Marsh Creek Skirmish Site	NRHP-Eligible	Franklin Township
2832	Funt Property	NRHP-Eligible	Highland Township
2833	Funt Schoolhouse	NRHP-Eligible	Highland Township
7271	Weaner House	NRHP-Eligible	Straban Township
7291	Wible Farm	NRHP-Eligible	Straban Township
129255	Lincoln Highway Marker	NRHP-Eligible	Straban Township
208778	Gettysburg Railroad	NRHP-Eligible	Straban Township

The Project Study Area also includes five NRHP-eligible historic districts. These five resources and their NRHP key number are listed in **Table 4-7**.

TABLE 4-7: NRHP-eligible Historic Districts in the Project Study Area

Key#	Historic Name	National Register Status	Municipality
101463	Northern Adams County Fruitbelt Historic District	NRHP-Eligible	Multiple
110934	Gettysburg Battlefield Historic District Boundary (Boundary Increase)	NRHP-Eligible	Cumberland Township
109714	Cashtown Historic District	NRHP-Eligible	Franklin Township
110440	McKnightstown/Flohrs Church Historic District	NRHP-Eligible	Franklin Township
109966	Hunterstown Historic District (Boundary Increase)	NRHP-Eligible	Straban Township

Several of these properties and districts are related to the Civil War battle that occurred in Gettysburg in July 1863, whereas most of the others document the architectural diversity or commemorate the agricultural history of the area. All of these resources are illustrated in **Figure 4-6**.

4.2.5 Hazardous Material Sites

A desktop review of the U.S. Environmental Protection Agency's (USEPA) Superfund National Priority List (NPL) indicated that three sites are present in the Project Study Area (USEPA 2020). These sites are illustrated in **Figure 4-5** and include:

- Schindler Elevator Corporation – This 85-acre site in Cumberland Township was formerly the Westinghouse Elevator Company between 1968 and 1989 and then the Schindler Elevator Corporation from 1989 to 2013. Historic elevator manufacturing operations utilized chlorinated solvents such as trichloroethene and 1,1,1-trichloroethane as degreasing agents. Releases during manufacturing operations and waste material storage resulted in impacts to groundwater, surface water, sediment and soil at the site. Groundwater treatment is ongoing.
- Shriver's Corner – This 10-acre site in Straban Township was an off-site disposal area for drums of waste from the Westinghouse Elevator Company. Dumping of drums, containing volatile organic compounds (VOCs) which are chemical components of solvents, liquid wastes, and paint sludge, took place on the southern part of the site. Waste disposal operations contaminated soil, sediment and groundwater. Groundwater treatment is ongoing.
- Hunterstown Road – This 22-acre site in Straban Township was used for disposal of a variety of toxic wastes between 1970 and 1980. Specific areas around the site were used for disposal of asbestos, paint sludge, solvents, and metal-containing wastes. These activities contaminated soil, surface water and groundwater with hazardous chemicals. The cleanup actions have been completed and operation and maintenance activities are ongoing.

5.0 IDENTIFICATION AND ANALYSIS OF ALTERNATIVE ROUTES

The goal of the Study was to identify viable alternative routes based on reasonable physical placement of the proposed transmission line that avoided or limited impacts to sensitive land uses and ecological, social, and cultural features in the Project Study Area. In evaluating the routing criteria, it is generally considered desirable to maximize certain criteria along a given route, for instance, paralleling existing railroad or utility corridors. These more favorable criteria are known as opportunities. Undesirable criteria for routing, such as residences, wetlands, and historic properties, are generally referred to as constraints and the Study seeks to avoid or minimize their proximity to the Project where practicable.

When siting transmission lines, three main routing opportunities are generally focused on where viable. These opportunities include:

- Replacing or upgrading existing transmission lines,
- Corridor sharing/paralleling existing linear utilities or ROWs, or using existing unbuilt ROWs, and
- Crossing undeveloped lands.

Replacing or upgrading existing transmission lines typically minimizes natural and social impacts by using existing ROW corridors, thus eliminating or reducing additional ROW clearing. For the Hunterstown-Orrtanna 115 kV Transmission Line Project, options for upgrading the existing single-circuit Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line (963 Line) to double-circuit were evaluated by MAIT. One option would involve rebuilding the existing 963 Line alignment to a double-circuit configuration, but MAIT determined that this option was undesirable due to the need to outage the existing circuit to rebuild the line. An alternative option is to build a new double-circuit system in the northern half of the 200-foot wide ROW that would co-locate the 963 Line and the new Hunterstown-Orrtanna 115 kV Transmission Line on the same structures. Development of a double-circuit system would require use of steel monopole structures compared to the wooden H-frame structures that may have been used on other alternative routes involving single-circuit configurations. This alternative would allow for the existing 963 Line to provide energy to the Orrtanna Substation during construction of the double-circuit system, but would also involve the demolition of the existing H-frame structures currently used for the 963 Line once the new system is energized. MAIT determined that this was a viable option to be evaluated as part of the Study.

The corridor sharing scenario pairs the transmission line with an existing linear feature that it can parallel, which can include highways, railroads, gas pipelines, or other existing or unbuilt transmission line ROWs. These corridors are considered opportunity areas because locating a new transmission line parallel to them may require less ROW, concentrates linear land uses thus reducing fragmentation of the landscape, and creates an incremental impact rather than a new impact. Opportunity areas within the Project Study Area for the development of the new 115 kV transmission line included paralleling the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line in the unbuilt 100-foot wide portion of the existing 200-foot wide ROW (as discussed above), paralleling the Hunterstown-Conemaugh 500 kV Transmission Line ROW, and paralleling sections of the active CSX Railroad that extends to Gettysburg.

The third opportunity is to use undeveloped areas such as forests, fields, and agricultural areas to identify routes that cross open lands. Identifying these routes involves assessment of parcel boundaries and land use practices to define routes that minimize potential impacts to private properties and any agricultural or other farming activities such as orchards. Most of the Project Study Area consists of agricultural crop lands and fields that provide opportunities for potential cross-country routes. However, as noted in **Figure 4-6**, the western third of the Project Study Area is located in the historic extent of a "fruitbelt" that encompasses over 20,000 acres of agricultural lands planted as fruit orchards.

Using these fundamental considerations as guidance, information obtained during the environmental field reviews was used to develop an opportunity and constraint map of the Project Study Area using GIS software. Georeferenced data layers of the identified opportunities and constraints obtained from published State and Federal materials and local planning documents were superimposed on available current aerial photography. Evaluation of this desktop data in conjunction with field reviews of the Project Study Area resulted in the identification of three viable alternative routes that provide the required connectivity between the Orrtanna Substation and the tie-in structure. These routes include a circuitous cross-country alignment that extends north of the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line (Alternative Route 1 – North Route), a corridor sharing double-circuit alignment that parallels the north side of the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line within an existing 200-foot wide ROW (Alternative Route 2 – Parallel Route), and a relatively direct cross-country alignment that generally extends south of the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line (Alternative Route 3 – South Route).

5.1 Description of the Alternative Routes

The three alternative routes are described below and illustrated in **Figure 5-1**.

5.1.1 Alternative Route 1 (North Route)

Alternative Route 1 is approximately 12.6 miles in length.

- From the Orrtanna Substation, Alternative Route 1 would extend northwest 0.4 mile to the west side of Orrtanna Road and onto the Knouse Foods property that is used for manufacturing apple products. Adjustments to the west side of the road were conducted to avoid a mature apple orchard on the east side of the road.
- Turning to the northeast, the alignment would parallel the active CSX Railroad for 0.8 mile to an open field just east of Railroad Lane. This segment would start on the south side of the railroad on the Knouse Foods property, but then span to the north side of the railroad before intersecting with Railroad Lane. Little Marsh Creek (CWF, MF) and an adjacent tributary would be spanned along this segment. These streams are bordered by a wide forested floodplain.
- From this point, the alignment would turn north and extend 1.4 miles across predominantly agricultural lands to Lincoln Highway. Some portions of this alignment cross Knouse Foods lands that show signs of prior orchard use, but the fields were noted fallow during the field review.

Narrow forested floodplains bordering Muskrat Run (CWF, MF) and other tributaries to Little Marsh Creek would also be crossed.

- Turning to the northeast, the alignment would extend 0.7 mile to a point in an agricultural field, crossing over Lincoln Highway and U.S. Route 30 along the way. These roadways are generally bordered by sections of moderately dense residential and commercial development, but the alignment would cross both in an area characterized as agriculture, most of which is part of the Adams County agricultural conservation easement program. Marsh Creek (CWF, MF) and the forested floodplain bordering this stream would be spanned near the northern end of this segment. This floodplain area is noted as a potential forested wetland and is protected by a land conservancy easement.
- Alternative Route 1 would then turn to the east for 1.5 miles across agricultural lands, spanning Fairview Fruit Road along the alignment. The route would also cross under the Hunterstown-Conemaugh 500 kV Transmission Line at this road crossing.
- The route would then turn to the northeast and extend for 2.4 miles across agricultural lands to the northwest side of Conewago Creek (CWF, MF). Many of these agricultural lands are part of the Adams County agricultural conservation easement program. Hilltown Road, Mummasburg Road, and B and F Road would be spanned north of the community of Mummasburg at locations with sparse residential development. Denser development was noted closer to Ziegler Mill Road, where the alignment would span Conewago Creek and the bordering forested floodplain. This floodplain area is noted as a potential forested wetland.
- Turning to the east, Alternative Route 1 would extend across agricultural lands for 1.1 miles to a field on the east side of Conewago Creek and SR 34. Some of these agricultural lands are part of the Adams County agricultural conservation easement program. The alignment would parallel and then cross Zeigler Mill Road before reaching a cluster of residential homes near SR 34. SR 34 would be spanned near several commercial buildings. Conewago Creek would also be spanned near this location. A forested floodplain that may also be a forested wetland borders this creek.
- At this point, the alignment would turn to the southeast for 2.8 miles to an open field located south of Good Intent Road and adjacent to the north side of Rock Creek (WWF, MF). Land use along this alignment is predominantly agriculture with clusters of residential development noted adjacent to Table Rock Road and Goldenville Road. The Gettysburg and Northern Railroad and several small forest lined tributaries to Conewago Creek and Rock Creek would be spanned along this section.
- From this point, Alternative Route 1 would extend for 1.5 miles to the tie-in location at Structure #223 on the existing 115 kV transmission line. The alignment would turn sharply to the southwest and parallel the west side of Rock Creek across agricultural lands to the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line and then turn sharply to the east to parallel this transmission line to the tie-in structure. Rock Creek and Business Route 15 (Old Harrisburg Road) would be spanned along this section. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing.

5.1.2 Alternative Route 2 (Parallel Route)

Alternative Route 2 is a double-circuit option that is approximately 9.1 miles in length and parallels the north side of the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line from the Orrtanna Substation to the tie-in structure. This alternative would be located on the north side of the existing 200-foot wide ROW.

- From the Orrtanna Substation, Alternative Route 2 would extend northeast for 2.7 miles across predominantly agricultural lands to U.S. Route 30. This alignment would cross Little Marsh Creek (CWF, MF) and several smaller tributaries, some of which are bordered by forested floodplains. Road crossings would include Railroad Lane and Seven Stars Road, which are bordered by low density residential development. The CSX Railroad would be crossed in this section.
- After crossing U.S. Route 30 at a moderately developed location, the route would continue for 1.9 miles to the northeast to a field located north of Mummasburg Road and adjacent to the south side of the Hunterstown-Conemaugh 500 kV Transmission Line. Land use in this section is agriculture based with only a few homes noted near the Crooked Creek Road and Mummasburg Road crossing areas. Marsh Creek (CWF, MF) and Mummasburg Run (CWF, MF) are spanned along this section. Marsh Creek is bordered by a forested floodplain and Mummasburg Run is bordered by an emergent wetland and pond complex. The parcels around the Mummasburg Run crossing are protected by a land conservancy easement that has federal funding components.
- Turning to the east, Alternative Route 2 would extend for 0.9 mile parallel to the south side of the Hunterstown-Conemaugh 500 kV Transmission Line to a turn point located in a forested wetland near Russel Tavern Road. The route would cross Belmont Road, which is bordered by several homes and then extend across a mix of agricultural lands and forested areas.
- At this point, the route would turn to the southeast and extend for 0.9 mile to SR 34. The alignment would cross Russel Tavern Road, Willoughby Run (WWF, MF), the Gettysburg and Northern Railroad, and Herrs Ridge Road before intersecting with SR 34. Land use changes from agriculture to moderately dense residential and commercial development adjacent to SR 34.
- Turning back to the east, the alignment would extend for 1.5 miles to Good Intent Road. Residential development and a local school are located near the SR 34 crossing and a commercial business is located adjacent to the Table Rock Road crossing, but the remainder of the route crosses agricultural fields. The Hunterstown-Conemaugh 500 kV Transmission Line would span over the alignment in this section. Two streams bordered by narrow forested floodplains that may be forested wetlands would also be crossed.
- Alternative Route 2 would then turn to the southeast for 1.2 miles and extend across agricultural lands to the tie-in location at Structure #223 on the existing 115 kV transmission line. Rock Creek (WWF, MF) and Business Route 15 (Old Harrisburg Road) would be spanned along this section. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing.

5.1.3 Alternative Route 3 (South Route)

Alternative Route 3 is approximately 9.7 miles in length.

- From the Orrtanna Substation, Alternative Route 3 would extend northeast and then southeast for 0.7 miles to Railroad Lane. The alignment extends north of the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line to bypass around a residential structure before turning to the southeast to reconnect with the existing transmission line ROW. Little Marsh Creek (CWF, MF) would be spanned in an area where it is bordered by a wide forested floodplain that may also be a forested wetland.
- From this point, the route would extend for 1.4 miles to Seven Stars Road. The initial 0.2 mile would parallel the existing transmission line but then turn to the southeast, crossing over the Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line, and then turning northeast to bypass around a farm complex. Some of the lands crossed by the alignment are part of the Adams County agricultural conservation easement program.
- Extending to the northeast for 1.2 miles to U.S. Route 30, Alternative Route 3 would parallel the north side of residential lined Seven Stars Road and cross through a forested area before spanning this road and intersecting with U.S Route 30.
- Alternative Route 3 would continue to the northeast for 1.5 miles to a field located south of Mummasburg Road. After crossing U.S. Route 30, the alignment would span the CSX Railroad and traverse a large forested area that contains Marsh Creek (CWF, MF) and several smaller tributaries that are adjoined by potential forested wetland areas. This forested area is protected by a land conservancy easement that has federal funding components. Another parcel crossed closer to Belmont Road is part of the Adams County agricultural conservation easement program. Belmont Road would be spanned in an area where it is bordered by low density residential development. A set of commercial structures used for agricultural research would be passed by the alignment.
- Turning sharply to the northeast, the route would extend across predominantly agricultural lands for 2.1 miles to SR 34. The route would cross Mummasburg Road in an isolated section at the south end of the alignment, cross over the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line in the middle section, and parallel the west side of the Gettysburg and Northern Railroad on the northern end. Prior to crossing SR 34, Alternative Route 3 would cross under the Hunterstown-Conemaugh 500 kV Transmission Line.
- The route would then cross SR 34 and the Gettysburg and Northern Railroad before turning to the southeast and extending for 1.6 miles across agricultural lands to a field west of Good Intent Road where the route would intersect with the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line. Most of this section would parallel the north side of the Hunterstown-Conemaugh 500 kV Transmission Line. The route would span over Table Rock Road in an isolated area.
- From the west side of Good Intent Road, Alternative Route 3 would parallel the north side of the Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line for 1.2 miles across agricultural lands to the tie-in location at Structure #223 on the existing 115 kV transmission line. Rock Creek

(WWF, MF) and Business Route 15 (Old Harrisburg Road) would be spanned along this section. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing.

5.2 Public Open House Summary

On June 19, 2019, FirstEnergy conducted a public open house to review the alternative routes with land owners and local officials. The open house was held from 6-8 p.m. at the Adams County Christian Academy, which is located on SR 34 north of Gettysburg and adjacent to the existing Orrtanna 115 kV Transmission Line corridor. The open house was staffed by FirstEnergy and AECOM personnel that could address questions related to real estate, engineering, vegetation management, and the siting process.

Forty (40) attendees signed in to the meeting and fourteen (14) comment cards were submitted that contained comments and suggestions provided by the landowners or general public. Most of the discussion at this meeting revolved around specific line locations on individual properties and the potential effect of the Project on their properties. The landowners that attended worked productively with FirstEnergy to assess the potential alignments across their properties and address their concerns to the extent practicable. Landowners along the existing Orrtanna 115 kV Transmission Line acknowledged the presence of the additional 100-foot wide ROW parallel to the line. The team was informed about a proposed solar field project that may affect some of the parcels that would be crossed by the alternative routes, including the existing Orrtanna 115 kV Transmission Line alignment. Based on the comments received, most attendees suggested that FirstEnergy strongly consider choosing Alternative Route 2 (Parallel Route) that would use an existing ROW to parallel the Orrtanna 115 kV Transmission Line from the Orrtanna Substation to the tie-in location at Structure #223 on the existing 115 kV transmission line.

5.3 Evaluation of the Alternative Routes

The Alternative Routes were evaluated and compared against each other to determine the Proposed Route. Evaluation of the Alternative Routes included a combination of *quantitative analysis* and *qualitative review*. This section describes the evaluation metrics and comparative analyses used to assess the three Alternative Routes. The quantitative analysis included evaluating the raw number counts to assess the potential impacts in accordance with three perspectives: built/social environment, natural environment, and engineering considerations. The qualitative analysis included an assessment of non-quantifiable factors such as visual concerns; community concerns; special permit requirements; construction, maintenance, and accessibility issues specific to each Alternative Route; and risk of schedule delay.

5.3.1 Evaluation Metrics

The process for identifying the Proposed Route involved quantitatively evaluating the advantages and disadvantages of the Alternative Routes. To evaluate and compare these routes, a table of metrics was developed which focused on the potential impacts of the Project to three general perspective areas: built/social environment, natural environment, and engineering considerations (**Table 5-1**). Examples of the built/social environment include factors such as number of parcels crossed of the Alternative Route

ROW and length across conserved lands. The natural environment includes factors such as number of stream crossings and acres of forested wetland cleared. Comparative factors for engineering include for example, the number of roadway and railroad crossings and number of transmission line crossings.

The quantitative evaluation process also addressed the opportunity scenarios such as paralleling roadways, railroads, or utility corridors and proximity to roads. Construction along these corridors concentrates potential impacts into an already affected area and has the potential to reduce environmental impacts by overlapping ROWs where feasible and using existing access roads in undeveloped areas and hard top roads in developed areas. The relative ease of accessibility and potential lower level of permitting involved typically makes these conditions more favorable compared to being further from these features.

TABLE 5-1: Quantitative Routing Metrics

Social/Built Metrics
Number of Schools, Churches, or Cemeteries within 1,000 feet of Transmission Center Line: Sensitive receptors (e.g., schools, churches) within 1,000 feet of the Alternative Route.
Number of National Register of Historic Places (NHRP) - listed Sites within 1,000 feet of Transmission Center Line: Number of archaeological or historic sites/structures/districts located within 1,000 feet of the Alternative Route.
Number of Residential Structures on Parcels Crossed or within 300 feet to ROW (Current): Identifies the number of residences on parcels currently crossed or located adjacent to an existing transmission line ROW.
Number of Residential Structures on Parcels Crossed or within 300 feet to ROW (Potential): Identifies the number of residences on parcels that would be crossed or located adjacent to a new transmission line ROW.
Number of Parcels Crossed by the Transmission Line ROW: Number of parcels that would be crossed by the proposed ROW of the Alternative Route.
Number of Parcels Crossed by the Transmission Line ROW Requiring New Easements: Number of parcels crossed by each Alternative Route ROW on which a new easement would need to be obtained.
Number of Commercial Buildings within 300 feet of Transmission Center Line: Number of structures in close proximity to the Alternative Route, including retail stores, restaurants, and service garages.
Miles of State-owned and Conserved Lands Crossed: Identifies the length of parks or other conserved lands crossed by the proposed Alternative Route.
Residences within Curtilage: Residences located within the 100 meters (328 feet) of the edge of the Alternative Route right-of-way and on a parcel crossed by the proposed alignment.
Natural/Ecological Metrics
Acres of Natural Forests Crossed: Acres of forest requiring clearing that are crossed by the Alternative Route.
Acres of Potential PFO Wetlands Crossed: Acres of forested (PFO) wetlands requiring clearing that are crossed by the Alternative Route. Forested wetlands were determined based on USFWS NWI mapping and on a combined review of hydric soil layers and aerial analysis of forested land cover.
Acres of Potential PEM or PSS Wetlands Crossed: Acres of potential emergent (PEM) or shrub (PSS) wetlands that would be crossed by the Alternative Route. Potential wetlands were determined based on USFWS NWI mapping and review of hydric soil layers.
Acres of Natural Areas Crossed: Acres of natural areas defined by the Natural Heritage Inventory of Adams County that would be crossed by the Alternative Route. These areas may contain threatened and endangered (T&E) species or habitats.
Number of Stream/River Crossing: Number of streams that would be crossed by the Alternative Route. Values were based upon use of USGS National Hydrography Dataset (NHD) stream data. Smaller tributaries are often not identified in the GIS database; thus, the actual number of crossings may be higher than indicated.
Area of FEMA 100-year Floodplain Crossed: Acres of floodplains that would be crossed by the Alternative Route. Values based on GIS-mapped FEMA floodplains, as available in state databases.
Engineering Metrics
Miles Parallel to an Existing Transmission Line (Inverted): Length of the Candidate Segment located parallel to the ROW of an existing transmission line. These areas have fewer impacts compared to developing completely new right-of-way but require additional coordination and may involve more engineering analysis to ensure safe co-location with the other utility.
Miles Parallel to a Road or Railroad (Inverted): Length of the Candidate Segment adjacent to (within 100 feet) of roadways or railroads. These areas have easier access for construction and maintenance. Conversely, lines routed distant from these features have higher engineering constraints.
Number of Road or Railroad Crossings: Number of public roads or railroad alignments crossed by the Alternative Route. These areas would have engineering constraints due to height and other requirements.
Number of Turns Greater Than 60 Degrees: Number of times the Alternative Route would need to make a turn greater than 60 degrees. Turns place tension on tower structures and may require additional support or engineering to support the stress.
Number of Roads within 500 feet of Transmission Center Line (Inverted): Number of roads that fall within 500 feet of the proposed Alternative Route. Roads may represent better accessibly for construction and limit new access road construction.

Initial steps in this process involved determining the raw number values for each Alternative Route for each metric. These data were then summarized in tabular form organized by evaluation metrics for each of the Alternative Routes and by the three perspectives (**Tables 5-2, 5-3, and 5-4**).

5.3.2 Review of Alternative Routes

The following provides a comparative review of the quantitative metrics determined for each Alternative Route for each of the perspectives evaluated. A qualitative assessment of the Alternative Routes is also incorporated into this review to address the non-tangible factors involved in the transmission line routing process.

5.3.2.1 Built/Social Environment Review

Comparative review of the built/social metrics listed in **Table 5-2** notes that the Parallel Route would be located in close proximity to a school (Adams County Christian Academy on SR 34) and that the South Route would be located near a cemetery (Black's family graveyard on Belmont Road). All three route options would extend through portions of the NRHP-eligible Fruitbelt Historic District, which includes the Orrtanna Substation and the surrounding area. The North Route would extend through a longer section of this historic district as well as pass through the NRHP-eligible McKnightstown/Flohrs Church Historic District located south of the U.S. Route 30 crossing. The South Route would extend through a short section of the NRHP-eligible Fruitbelt Historic District, but would also pass through the NRHP-eligible Marsh Creek Skirmish Site located along U.S. Route 30 and through the NRHP-eligible Gettysburg Battlefield Historic District located around Mummasburg Road. Assessment of the potential impacts to the cultural setting and viewshed at these historic districts may be required as part of the permitting process.

TABLE 5-2: Built/Social Metric Summary

MATRIX/CORRIDOR		NORTH	PARALLEL	SOUTH
BUILT ENVIRONMENT	Number of Schools, Churches, or Cemeteries within 1,000 feet of Transmission Center Line	0	1	1
	Number of NRHP-Listed or -Eligible Sites within 1,000 feet of Center Line	2	1	3
	Number of Residential Structures on Parcels Crossed or within 300 feet to ROW (Current)	4	25	9
	Number of Residential Structures on Parcels Crossed or within 300 feet to ROW (Potential)	13	0	2
	Number of Parcels Crossed by the Transmission Line Right-of-Way	56	61	45
	Number of Parcels Crossed by the Transmission Line ROW Requiring New Easements	48	0	33
	Number of Commercial Buildings within 300 feet of Transmission Center Line	2	2	0
	Miles of State-owned and Conserved Lands Crossed	2.52	0.31	1.29

The Parallel Route would be located within an existing ROW that crosses or is in close proximity to the most parcels that contain residential structures (25). However, these residences are already in close

proximity to the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line and in all cases an unused existing ROW already crosses these properties. Most of these residential structures are located at the several main roadways crossed by the ROW and some were built after the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line was constructed. Short portions of the North Route and South Route would also be located in the ROW adjacent to the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line and would therefore be in close proximity to a subset of these residences (4 and 9 residences respectively). Conversely, the North Route and South Route would involve the development of a new ROW corridor along the majority of their length. The residences located on the parcels crossed or in close proximity to these new transmission lines would encounter a new visual obstruction near their homes. The North Route would be in close proximity to more residences (13) relative to the South Route (2).

The Parallel Route crosses over the most parcels (61) compared to the other options, but the other alternatives would also cross over a relatively similar number of parcels along their alignments with the North Route involving more (56) than the South Route (45). Many of the parcels crossed by the Alternative Routes are large tracts of agricultural or undeveloped lands but some are also smaller tracts of residential or commercial development that are clustered near the roadways crossed by the alignments. New ROW easements will be required for most of the parcels crossed by both the North Route (48) and South Route (33), whereas the Parallel Route would cross parcels where ROW easements are already in place. Acquisition of new ROW agreements can be a source of social concern as landowners decide whether to negotiate or oppose the request for easement rights, with each landowner decision putting additional pressures on their neighbors. The process of securing the necessary easements can also affect the Project schedule if public opposition and legal processes slow down the negotiations.

Conserved lands crossed by the Alternative Routes are parcels that are protected by agricultural conservation easements or by land conservancy easements. Agricultural conservation easements are managed by a county agency that works in conjunction with the state agricultural department to purchase the development rights on specifically defined agricultural lands. The process of securing agricultural conservation easements involves assessment of soils, review of the annual production of a farm, and evaluation of the farming means and methods. The farmer benefits from the lower land assessment which results in lower taxes, but they are limited by what can be done with the land including excluding subdivision of the land and no construction of new residential structures. Crossing these lands with public utilities is often considered permissible since the utility does not affect the ability of the land to be used for agricultural production.

Land conservation easements are managed by local conservancies who focus on protecting agricultural and natural lands to preserve the character of the area. There are differences between the two easement processes specifically in terms of approval and funding sources, but the benefits and restrictions are similar. A key difference in terms of the siting process is that land conservancies protect some lands that are forested and crossing these lands with a transmission line ROW would have an effect on its ability to function as desired.

The Parallel Route crosses the least length of protected lands (0.31 mile across land conservancy protected parcels) and the ROW easement across this agricultural-based parcel has already been approved. The North Route crosses the longest length (2.52 miles) with most of the parcels being protected by agricultural conservation easements, but the one land conservancy easement crossed is associated with the forested floodplain adjacent to Marsh Creek. Similarly, the South Route crosses a moderate length of protected lands (1.29 miles) that are composed predominantly of agricultural conservation easements, but one is a forested land conservancy parcel near Marsh Creek.

From a built/social perspective, the Parallel Route provides the best opportunity as the Proposed Route. This route would be constructed within an existing ROW that parallels an existing transmission line and would not require any new easements. The Parallel Route would be located near residential structures that are currently near the existing transmission line, thus the new line would be an incremental impact to the community and the viewshed versus a new impact. Conserved lands crossed by the Parallel Route are used for agricultural purposes and the existing ROW across these lands has already been approved.

5.3.2.2 Natural/Ecological Review

Comparative review of the natural environment metrics listed in **Table 5-3** notes that the South Route (25.97 acres) and North Route (23.38 acres) would involve the most forest clearing as these alignments extend across less developed areas of the Project Study Area. Impacts to forested areas may also affect state and federally protected bat habitat areas that could involve mitigation requirements. Relatively less forest clearing is anticipated for the Parallel Route (17.34 acres), which is located adjacent to an existing ROW that has already been cleared and extends across predominantly open agricultural lands and through a few unforested residential/commercial areas. Of these forested areas, the South Route would cross the most that may be deemed forested wetlands (24.06 acres) based on the current land cover and extent of underlying hydric soils. Most of these forested wetlands are located along the floodplains of streams. As noted in **Figure 4-1,** hydric soils are relatively extensive across the Project Study Area and may be the basis for other wetland communities that could develop on the agriculturally developed hillsides. Based on the analysis conducted, the Parallel Route crosses the most areas that consist of hydric soils that may have developed into emergent or shrub-based wetlands (69.76 acres), with the other two alternate routes having only slightly less areas. Construction of the Project in these wetland communities would involve temporary impacts from access roads and potential permanent impacts from placing poles directly in the wetlands; however the long-term condition of spanning these features would have limited effect on capacity and functions. From a permitting perspective, clearing forested wetlands is considered more impactful relative to spanning emergent or shrub-based wetlands.

All three alternative routes would need to cross Natural Heritage Inventory defined natural areas that border Marsh Creek. The Marsh Creek Wetlands natural area complex borders a 1-mile wide swath of the creek for approximately 5-miles from the western edge of the Project Study Area to the village of Seven Stars, where it connects to the Seven Stars Floodplain Forest natural area. The Parallel Route would involve the least area of impact to the natural area (7.19 acres), with the South Route having slightly more

impacts (8.68 acres). The North Route would extend for over a mile through the Marsh Creek Wetlands natural area complex and have the most impact on potential T&E habitat (16.05 acres).

TABLE 5-3: Natural Metric Summary

MATRIX/CORRIDOR		NORTH	PARALLEL	SOUTH
NATURAL ENVIRONMENT	Acres of Natural Forests Crossed	23.38	17.34	25.97
	Acres of Forested Wetlands Crossed	16.68	14.60	24.06
	Acres of Other Wetlands Crossed	64.28	69.76	64.39
	Acres of Natural Areas Crossed	16.05	7.19	8.68
	Number of Stream/River Crossings	27	18	18
	Acres of FEMA 100-year Floodplain Crossed	22.34	10.53	13.91

The North Route would cross over the most streams (27) and over the most FEMA floodplain area (22.34 acres) relative to the other two Alternative Routes. Most of this difference is due to the longer length of the North Route and the additional smaller streams that it would cross as the alignment extends out from the Marsh Creek watershed into the Conewago Creek watershed and back again. As noted, many of these streams are bordered by forest cover, which provides stream water temperature protection, cover, and food sources for the aquatic organisms in the stream. Impacts to these riparian forests are monitored by the permitting agencies since new openings in the forest canopy may have an effect on the stream water quality. Impacts to floodplains are also evaluated by the permitting agencies because new obstructions in the floodplain may have an effect on local flooding patterns. Engineering of the Project would strive to avoid placing new structures in these areas, but comparative review notes that the North Route may have the most potential to have an impact.

From a natural environment perspective, the Parallel Route provides the best opportunity as the Proposed Route. This option would involve the least forest clearing and potential forested wetland impacts. The Parallel Route would span the same relatively low number streams as the South Route, but since the alignment would parallel an existing transmission line corridor, the impacts to riparian areas adjacent to the streams would be incremental relative to the other options that will result in new cleared ROWs that will fragment the intact forest canopy.

5.3.2.3 Engineering Considerations Review

Comparative review of the engineering metrics listed in **Table 5-4** notes that the Parallel Route would parallel an existing transmission line for its entire length (8.95 miles). The South Route has the second longest length of paralleling since some sections of this alignment, particularly closer to the tie-in location, would use the same corridor as the Parallel Route; other sections would parallel the Hunterstown-Conemaugh 500 kV Transmission Line. The North Route would parallel the longest length of other linear infrastructure (1.04 miles), mostly the CSX Railroad, but this length is relatively short compared to the overall length of the proposed route (12.9 miles). Each of the options is comparatively close to a high number of roads. These three variables provide insight into the potential level of difficulty to be

encountered during construction of the Project and for the long-term maintenance anticipated for the transmission line. Use of existing public roads to access the transmission lines will reduce the potential social and environmental impacts that may occur if new off-ROW access roads need to be identified and constructed across adjacent properties. Aside from the additional complexity involved in creating a new ROW corridor, construction and maintenance activities along an existing transmission line corridor are typically less impactful due to the presence of access roads and open areas for temporary equipment storage.

Each of the Alternative Routes will need to span the two railroad corridors located in the Project Study Area. Spanning railroads involves additional coordination with the railroad company to secure a license agreement and additional engineering to design the transmission lines to meet their safety standards. Crossing over roadways also involves additional engineering that addresses the existing network of aboveground utilities (i.e., electric, phone, and cable), as well as potential underground utilities (i.e., gas and water) that often parallel the roadways. All three Alternative Routes will need to span the same two main highways (U.S. Route 30 and SR 34) that may involve special permitting coordination with PennDOT for temporary access off of the roadway or potential work within the roadway. Other local roadway crossings may involve further coordination with Adams County or the local municipality. Review of the data indicates that the North Route would involve the most road and railroad crossings (18) and may be the most challenging to engineer and permit.

TABLE 5-4: Engineering Metric Summary

MATRIX/CORRIDOR		NORTH	PARALLEL	SOUTH
ENGINEERING CONSIDERATIONS	Miles Parallel to an Existing Transmission Line (Preferred)	0.87	8.95	1.60
	Miles Parallel to a Road or Railroad (Preferred)	1.04	0.24	0.71
	Number of Road and Railroad Crossings	18	12	11
	Number of Turns >60 Degrees	11	2	6
	Number of Roads within 500 feet of Transmission Center Line (Preferred)	30	31	25

The North Route will also involve the most (11) hard angles (>60 degrees), with the South Route involving the second most (6). Hard angles place more tension on the electrical wires, which then need to be supported by stronger and more complex structures. Some of the structures may require concrete foundations, which are potentially more impactful relative to the direct embed process involved for the tangent (in-line) structures. Other options may involve three-pole structures that could be direct embed but usually involve guide wires that could present challenges to the landowner or create more impacts in wetland areas.

From an engineering considerations perspective, the Parallel Route provides the best opportunity as the Proposed Route. This option would be located parallel to the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line for its entire length, which may provide for less impactful construction conditions and a favorable long-term maintenance scenario. Engineering will also be less challenging due to the relatively direct alignment of the route.

6.0 PROPOSED ROUTE DISCUSSIONS

Based on the analysis in **Section 5.0**, MAIT has determined that the Parallel Route is the Proposed Route for the Hunterstown-Orrtanna 115 kV Transmission Line. The following provides a summary of the quantitative and qualitative discussions from **Section 5.3.2**. A summary of the metrics identified for the Project is located in **Table 6-1**.

TABLE 6-1: Project Metric Summary

MATRIX/CORRIDOR		NORTH	PARALLEL	SOUTH
BUILT ENVIRONMENT	Number of Schools, Churches, or Cemeteries within 1,000 feet of Transmission Center Line	0	1	1
	Number of NRHP Sites within 1,000 feet of Center Line	2	1	3
	Number of Residential Structures on Parcels Crossed or within 300 feet to ROW (Current)	0	25	0
	Number of Residential Structures on Parcels Crossed or within 300 feet to ROW (Potential)	17	0	12
	Number of Parcels Crossed by the Transmission Line Right-of-Way	56	61	45
	Number of Parcels Crossed by the Transmission Line ROW Requiring New Easements	40	0	40
	Number of Commercial Buildings within 300 feet of Transmission Center Line	0	2	0
	Miles of State-owned and Conserved Lands Crossed	2.52	0.31	1.29
NATURAL ENVIRONMENT	Acres of Natural Forests Crossed	23.38	17.34	25.97
	Acres of Forested Wetlands Crossed	16.68	14.60	24.06
	Acres of Other Wetlands Crossed	64.28	69.76	64.39
	Acres of Natural Area Crossed	16.05	7.19	8.68
	Number of Stream/River Crossings	27	18	18
	Acres of FEMA 100-year Floodplain Crossed	22.34	10.53	13.91
ENGINEERING CONSIDERATIONS	Miles Parallel to an Existing Transmission Line (Inverted)	0.87	8.95	1.60
	Miles Parallel to a Road or Railroad (Inverted)	1.04	0.24	0.71
	Number of Road and Railroad Crossings	18	12	11
	Number of Turns >60 Degrees	11	2	6
	Number of Roads within 500 feet of Transmission Center Line (Inverted)	30	31	25

- NORTH ROUTE: This Alternative Route was not considered the Proposed Route due to the following:
    - The alignment would require new ROW easements across 40 parcels;
    - The alignment would be in close proximity to 13 residential structures that currently are not located near a transmission line;
    - The alignment would extend through portions of two NRHP-eligible historic districts and as a new transmission line in these districts would potentially be more scrutinized by the reviewing and permitting agencies;
    - The alignment would cross the longest length (2.52 miles) of conserved lands, portions of which are forested lands under a land conservancy easement;
    - The alignment would involve a relatively large area of forest clearing (23.38 acres), a high proportion of which is potentially forested wetlands (16.68 acres);
    - The alignment would cross through the most potential T&E habitat area (16.05 acres);
    - The alignment would span the most stream features (27) and have the potential to impact the largest area of riparian forest;
    - The alignment would parallel the shortest length of existing transmission lines (0.87 mile) and a short length of roadway or railroad (1.04 miles) resulting in poor access conditions that may prove to be difficult during construction and for long-term access;
    - The alignment would involve the most road and railroad crossings (18) and the greatest number of heavy angle turns (11);
    - The alignment would be the costliest to construct due to the longer length and extent of new ROW easements that would need to be acquired.
- SOUTH ROUTE: This Alternative Route was not considered the Proposed Route due to the following:
    - The alignment would require new ROW easements across 40 parcels;
    - The alignment would be in close proximity to 2 residential structures that currently are not located near a transmission line;
    - The alignment would extend through portions of three NRHP-eligible historic districts and as a new transmission line in these districts would potentially be more scrutinized by the reviewing and permitting agencies;
    - The alignment would cross a moderate length (1.29 miles) of conserved lands, portions of which are forested lands under a land conservancy easement;
    - The alignment would involve the largest area of forest clearing (25.97 acres), a predominant proportion of which is potentially forested wetlands (24.06 acres);
    - The alignment would cross a moderate extent of potential T&E habitat area (8.68 acres);
    - The alignment would span a high number of stream features (18) and have the potential to impact a large area of riparian forest;

- The alignment would parallel a short length of existing transmission lines (1.0 miles) and a short length of roadway or railroad (0.71 mile) resulting in poor access conditions that may prove to be difficult during construction and for long-term access;
- The alignment would involve a high number of heavy angle turns (6);
- The alignment would be relatively costlier to construct due to the longer length and the need to acquire new ROW easements along most of the alignment.

Qualitatively, the North Route and South Route were considered potentially more problematic based on the following:

- Both alignments may lead to a high level of community concerns regarding easement acquisitions, as well as new land use impacts and viewshed concerns relative to the incremental impact that would be noted for a new line paralleling an existing transmission line.
- Impacts to environmental and cultural features may result in complex permitting conditions for both alignments.
- Both alignments would extend through relatively inaccessible areas that may be more difficult for construction and long term maintenance.

The **Parallel Route was selected as the Proposed Route** because of the following:

- The alignment will be located in an existing ROW. Two new easements were obtained to address electrical clearance and environmental impact concerns. One new easement at the Orrtanna Substation is to provide adequate spacing for the new electrical wires and the other easement on farmland near the Russel Tavern Road crossing is to provide room for a structure to be moved out of a wetland area. Both easements have been processed with the cooperation of the landowners;
- The alignment will be located near residential structures that are currently adjacent to the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line;
- The alignment will cross the lowest area of conserved lands (0.31 acre) and the easement across these lands has been approved;
- The alignment will involve the least forest clearing (17.34 acres) and the least potential forested wetland clearing (14.60 acres);
- The alignment would impact the least amount of potential T&E habitat area (7.19 acres);
- The alignment will span stream features (18) that are already spanned by the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line resulting in incremental riparian impacts;
- The alignment will be built adjacent to an existing cleared ROW that will provide construction access and long-term maintenance benefits;
- The alignment would be built in close proximity to an existing roadway network that will be beneficial to the construction process and long-term maintenance scenario;
- The alignment will be less complex for engineering to design as it will be relatively direct with few heavy angle turns.

Based on these observations, the Parallel Route was determined to be the Proposed Route for the Hunterstown-Orrtanna 115 kV Transmission Line Project as this alignment will have the least impact on the social/built and natural environment and be feasible to construct. The alignment of the Proposed Route is illustrated in **Figure 6-1**.

6.1 Proposed Route Assessment and Summary

The following provides an assessment of the Proposed Route (Parallel Route) in regards to compliance with zoning, comprehensive plans, and permitting requirements. The Hunterstown-Orrtanna 115 kV Transmission Line Project will cross 1.7 miles of Highland Township, 3.4 miles of Franklin Township, 0.8 mile of Butler Township, 1.4 miles of Cumberland Township, and 1.8 miles of Straban Township.

6.2 Review of Proposed Route

Per Pennsylvania Public Utility Commission (PUC) guidelines found at 52 Pa. Code, § 69.1101 (2)(3) and § 69.3104 (1), a review of the potential effect of the Proposed Route on local comprehensive plans and zoning ordinances was conducted (**Section 6.2.1**). Based on the requirements of § 69.3106 (1), an assessment of the potential environmental and cultural mitigation measures and permit requirements anticipated for the Proposed Route is also provided (**Section 6.2.2**). PUC regulation § 69.3105 (2) also requires that the status of the property acquisition process be provided as part of the route selection study (**Section 6.2.3**). PUC regulation § 57.72 (c)(8) requires that a report of the efforts to locate and identify archaeological, geologic, historic, scenic, and wilderness areas within 2 miles of the Proposed Route also be submitted as part of the route selection study (**Section 6.2.4**).

6.2.1 Review of Township Zoning and County Comprehensive Plans

Public utility features, such as transmission lines and substations are generally exempt from local municipal authority. To further the Commonwealth's goal of making agency actions consistent with sound land use planning by considering the impact of its decision upon local comprehensive plans and zoning ordinances, the PUC adopted a policy on January 11, 2001 that requires the public utility to review local zoning ordinances and comprehensive land use plans to evaluate the impact of proposed projects on these items (See 52 Pa. Code § 69.1101, 31 Pa. Bull. 951 (Feb. 17, 2001)). Local zoning ordinances and comprehensive land use plans were reviewed to evaluate the impact of the proposed Hunterstown-Orrtanna 115 kV Transmission Line Project on these local ordinances and plans.

The route selection study for the Hunterstown-Orrtanna 115 kV Project has concluded that the new 115 kV transmission line should extend approximately 9.1 miles northeast from the existing Orrtanna Substation to the tie-in location at Structure #223 as a double-circuit system co-located with the existing Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line within an existing 200-foot wide ROW. The new transmission line alignment will cross portions of Highland, Franklin, Butler, Cumberland, and Straban Townships. Construction of the new Hunterstown-Orrtanna 115 kV Transmission Line Project will provide a more reliable electrical supply to the Orrtanna Substation and the Adams County Coop and thereby address the Project's goals.

In adherence to PUC regulations, FirstEnergy evaluated the Project's consistency with the zoning ordinances and comprehensive plans of the government entities through which the Proposed Route would pass.

Township Zoning

Four of the five townships located within the Project Study Area have adopted local zoning ordinances; one township (Butler Township) has developed draft zoning ordinances but is currently using the Adams County Zoning ordinances for their zoning review process. Generally, these ordinances are used to guide future land use in the townships by encouraging development of desirable residential, commercial, agricultural, and industrial areas with appropriate groupings of compatible and related land uses.

These ordinances normally define the allowances and restrictions associated with the various zoning districts and typically identify "Essential Services", which include distribution, transmission, or collection systems associated with utilities such as water, gas, and electric, to be conditionally exempt from local regulations, as long as the required actions are approved by the Pennsylvania PUC. In townships that lack local zoning ordinances, county-level land use regulations regarding subdivision and land development supervene.

A list of the zoning districts that will be crossed by the Proposed Route in each of the townships is provided in Table 6-2. Although the zoning district naming conventions vary by township, the predominant zoning category that will be crossed is agriculture, with other areas zoned as residential, industrial, or conservation. Also included in Table 6-2 is a summary of the township's and county's policy regarding public utilities within these specific zoning districts. This summary indicates that several of the townships (Franklin Township and Butler Township (Adams County Zoning)) do not address the potential for public utilities in the zoning districts. Highland Township defines "Essential Services" but does not provide information as to which zoning district these uses are acceptable. Cumberland Township and Straban Township conclude that "Essential Services" and "Public Utilities" are permitted respectively in the various zoning districts crosses in these townships.

TABLE 6-2: Township Zoning Summary

Township	Zoning District	Zoning Summary
Highland	Land Conservancy (LC)	Highland Township defines "Essential Services" but does not provide information as to which zoning district these uses are acceptable
	Agricultural Preservation (AP)	
Franklin	Industrial (I)	Franklin Township does not address the potential for public utilities in the zoning districts
	Agricultural (A)	
Butler (Adams County Zoning)	Land Conservation (LC)	Butler Township (Adams County Zoning) does not address public utilities in zoning districts
Cumberland	Agricultural/Residential (A/R)	Cumberland Township notes that "Essential Services" are permitted uses in these zoning districts
	Residential (R)	
Straban	Rural Residential (R-R)	Straban Township notes that "Public Utilities" are permitted uses in these zoning districts
	Residential Low Density (R-1)	

Based on this review, the proposed Hunterstown-Orrtanna 115 kV Transmission Line Project will not have any effect on zoning within any of the townships crossed.

Comprehensive Plans

Adams County has prepared a comprehensive plan for their area. In general, comprehensive plans are intended to serve as a means to review the assets and pressures within the county and provide guidance for future development and preservation; they are not intended to regulate and have no official authority. According to the *Adams County Comprehensive Plan*, prepared by the Adams County Planning Commission (ACPC), "*The Comprehensive Plan is a blueprint for the future for Adams County, showing how growth can be managed - to preserve farmland, to conserve historic and rural landscapes, and to provide new economic opportunities* (ACPC 1991)."

Adams County's comprehensive plan was adopted in 1991. The *Adams County Comprehensive Plan* provides an assessment of the natural, historic, and agricultural resources within the county, as well as an analysis of the population, employment, circulation, and housing trends. Goals identified by the *Adams County Comprehensive Plan* focus on addressing development patterns, area economics, housing, circulation, natural resource protection, agricultural resources, and community services. Implementation strategies focus on a Land Use Plan that incorporates a growth-area concept to provide for an orderly extension of development. Specific polices would involve assisting municipalities in the preparation and adoption of local comprehensive plans and land use controls consistent with the Land Use Plan, planning for additions to existing built-up areas and new residential, employment, and mixed-use areas, consistent with the Land Use Plan, and promoting the establishment of a permanent, designated, interconnected open space network throughout the county.

Review of the proposed Land Use Plan map provided in the *Adams County Comprehensive Plan* indicates that the Proposed Route would be located within the Agriculture, Resource Conservation & Very Low Residential, Parks, Permanent Open Space & Preservation, and Residential Medium-Low Density land use categories. The purpose of the Agriculture, Resource Conservation & Very Low Residential area is to provide areas that limit *"development outside the growth zones and encouraging continuing agricultural production, as well as the protection of the county's historic and rural landscape*." The Parks, Permanent Open Space & Preservation areas are focused primarily along stream corridors and would provide for "*low-intensity recreation and open space uses, limited agriculture, and forest management*." Residential Medium-Low Density areas are located along some of the roadways that are designated as growth areas. The Proposed Route will parallel an existing transmission line within an existing ROW across these areas and will result in incremental impacts to the proposed land uses by reducing some agricultural production, removing some forest resources, and limiting residential growth at specific road crossing areas.

In terms of the goals identified in the *Adams County Comprehensive Plan*, the Proposed Route will not affect local cultural or historic resources, the expansion of community and economic opportunities, or the availability of community services and facilities. FirstEnergy has sited the route to avoid as many dense residential and culturally sensitive areas as possible. Potential effects of the Proposed Route on the county's natural resources have been minimized through the identification of a Proposed Route that

parallels an existing transmission line. The *Adams County Comprehensive Plan* identifies streams, wetlands, and woodlands as key components of its natural resources. Development of the Proposed Route will require crossing streams and wetlands. FirstEnergy has minimized the impacts to streams by siting the route to cross at right angles and adjacent to an existing transmission line, thereby decreasing loss of riparian buffer areas, which naturally help maintain the stream's water quality. During construction, however, FirstEnergy is aware that it will also be required to develop and implement stormwater erosion and control plans that will protect these waterways from runoff that could negatively affect water quality. Wetlands are another natural resource that FirstEnergy will minimize impacts to by adjusting monopole positions to allow the resource to be spanned. The Proposed Route will have a nominal effect on the county's woodlands due the safety regulations involved with transmission lines that require forest clearing in the ROW.

The two multi-municipal comprehensive plans reviewed do not provide any specific guidance or objection for the development of electrical transmission lines. Similar to the county comprehensive plan, these multi-municipal plans focus on growth planning, resource protection, and preservation of the agricultural character of the area. Goals and objectives noted in these plans focus on the means of controlling growth and protecting resources primarily through the use of ordinances and zoning policies.

Based on this review, the proposed Hunterstown-Orrtanna 115 kV Transmission Line Project will not affect the ability of the county or townships from meeting the goals of their comprehensive plan.

6.2.2 Compliance with Potential Permit and Mitigation Requirements

The following is a discussion of the anticipated Project impacts and potential permit and mitigation requirements of the proposed Hunterstown-Orrtanna 115 kV Transmission Line Project.

Efforts were made during the transmission line routing process to minimize impacts on existing and future land uses, as well as avoid sensitive natural resources such as wetlands and streams. Where potential impacts are unavoidable, mitigating factors will be employed. As part of the permitting process, any required waterway or wetland encroachment permits will be obtained from PADEP and the USACE prior to construction and FirstEnergy will comply with all special conditions placed on the permits. In addition, to address water quality standards within the watersheds crossed by the Project corridor, FirstEnergy will comply with the regulations of the National Pollutant Discharge Elimination Systems (NPDES) permit program, obtain the required soil erosion and sedimentation control permits, and follow the specified conditions required for the permit.

Land Use

Siting analysis for the Proposed Route was conducted with acknowledgement of existing and proposed land uses. Some impact on existing and future land use may occur, including clearing of forest areas and reducing potential areas for agricultural uses. The existing ROW easement areas located along the Proposed Route corridor currently preclude certain uses such as constructing structures, installing swimming pools, or establishing fruit orchards and tree farms within the easement area.

The Proposed Route will also be designed to avoid conflicts with the existing transportation network and other utilities currently located or proposed along the route. One major roadway (U.S. Route 30) will be spanned by the Project. Pennsylvania Department of Transportation (PennDOT) Highway Occupancy Permits or equivalent type permits will be acquired by FirstEnergy for work that may need to be done within this highway ROW area and all other state road access points prior to construction. PennDOT permit processes will be followed to coordinate the actual crossing of the highway with the conductor wires, which often requires the temporary closure of the highway. Such permits are not required for railroad crossings, but plan reviews and safety coordination will be conducted for the CSX Railroad and Gettysburg and Northern Railroad crossings. Aviation coordination will be conducted through the Federal Aviation Association (FAA) and the Pennsylvania Aviation Association (PAA). To assure that the poles are properly recorded by these agencies, information on the location and height of the new poles will be provided to them through use of Form 7460-1 and AV-57 (Notice of Proposed Construction or Alteration), respectively. FirstEnergy will comply with any additional lighting or other visual aids that may be required by these agencies to assure aviation safety in the region.

Natural Features

Vegetation clearing is required to ensure the safe and reliable operation of the line on the Proposed Route. FirstEnergy's vegetation management practices will allow for the re-generation of compatible species of low growing trees, shrubs, and grasses where practicable. Herbicides used on the ROW will be EPA-approved and will be applied selectively in accordance with all label instructions. Determination of the mitigation requirements for the forest impacts, as well as for impacts to the other natural resources, will be part of the permit review process.

Wetlands along the Proposed Route have been delineated. This task was accomplished using PADEP and USACE approved methodologies based on the "*Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*" (USACE 2012). Using the results of this delineation effort, an engineering review was conducted to avoid the potential permanent impact to these resources from structure placement. The original engineering layout involved a structure-for-structure pattern that paralleled the existing alignment, which would have resulted in several structures in a wetland. Further engineering design adjusted the structures in a staggered pattern such that out of the seventy-two (72) steel monopole structures planned for the route, **none will be located in a wetland**. Most of the wetlands along the Proposed Route consist predominantly of emergent vegetation that will be spanned by the new conductor wires and possibly crossed by temporary timber-matted access roads during construction. Development of the Proposed Route will also require the clearing of forested wetlands. Some of these features are considered Exceptional Value (EV) wetlands due to their location adjacent to PFBC-classified wild trout streams. Approximately 3.5 acres of forested wetlands are anticipated to be cleared, of which 0.55 acres would be EV forested wetlands.

Streams along the Proposed Route have also been delineated using PADEP and USACE approved methodologies. Long-term impacts to these watercourses are expected to be minimal, as they will be spanned by the proposed transmission line, but some mitigation efforts may be required as a result of the reduction in riparian buffer along these features. An Individual NPDES permit will be required to mitigate

any potential short-term impacts of erosion and sedimentation during construction. As part of the Individual NPDES process, Best Management Practices (BMPs) are required during construction to maintain the water quality levels in the watersheds and obtain the NPDES permit.

FEMA and state-identified floodplains are found adjacent to watercourses and identify the areas that routinely flood during heavy rain events. Encroachment within a floodplain area is discouraged by the regulatory agencies due to the potential of the structure to increase the flooding hazard in the local area. According to PADEP's Title 25, Chapter 106 *Floodplain Management*, floodways are more specifically "*The channel of the watercourse and those portions of the adjoining floodplains which are reasonably required to carry and discharge the 100-year flood. The boundary of the 100-year floodway is as indicated on the maps and flood insurance studies provided by FEMA. In an area where neither FEMA maps nor studies have defined the boundary of the floodway, it is assumed, absent evidence to the contrary, that the floodway extends from the stream to 50 feet landward from the top of the bank of the stream*" (PADEP 2020c). Where practicable, transmission structures will be constructed outside the FEMA floodplain and PADEP 50-foot floodway areas. Due to the shallow valleys associated with many of the waterways along the Proposed Route, many of the floodplains and floodways will be relatively narrow and can be spanned by the transmission line. For those locations where the floodplains may not avoidable, additional analysis of the proposed structures may be required by PADEP to confirm the activity will not create flooding conditions in the local area. No structures will be located in the FEMA floodway of any stream.

All required permits for impacts to these regulated resources will be obtained from the PADEP and the USACE prior to construction.

Threatened and Endangered Species

Coordination with state and federal agencies regarding potential threatened and endangered (T&E) species along the Proposed Route was completed. Responses from the various state and federal agencies have been received through the Pennsylvania Natural Diversity Inventory (PNDI) review process. PADCNR and PFBC noted that no T&E species under their jurisdiction are known to be located near the Proposed Route. PGC noted that further review was necessary to resolve potential impacts. Additional information about the Proposed Route was provided to PGC in June 2019, who responded with a clearance letter on July 5, 2019. USFWS noted that the Proposed Route is located within the habitat area of the federally endangered northern bog turtle (*Glyptemys muhlenbergii*). Based on directions provided in the PNDI receipt, a Phase 1 habitat assessment was conducted for all of the wetlands within the Proposed Route corridor. These surveys identified two adjacent wetland areas that contained the habitat conditions suitable for bog turtles. FirstEnergy coordinated a Phase II presence/absence survey of these two wetlands to determine if bog turtle inhabited the areas. The Phase II surveys did not locate any bog turtles in these wetlands. The results of the Phase I and Phase II surveys have been forwarded to USFWS for review, who provided their concurrence that the Project will have no effect on bog turtle habitat areas on August 12, 2019.

Cultural Resources

Cultural resource coordination with the Pennsylvania Historical and Museum Commission (PHMC) will be initiated in mid-August 2020 due to the need to wait for engineering to provide information on structure locations and heights. Initial coordination will involve the submission of a Cultural Resource Notification document that provides information about the Project and summarizes the known aboveground and belowground cultural resources within a 0.5 mile radius of the Project. PHMC will review the information and either conclude that the Project will not have any effect on these resources or request that additional studies be conducted to determine if potential effects to a resource may occur. FirstEnergy is committed to working with the PHMC to complete any required studies and address any potential impacts and required mitigation activities.

Community Features and Conserved Lands

Community features, which include schools, churches, and cemeteries, were identified and effectively avoided during the route selection process. The Proposed Route will parallel an existing transmission line within an existing ROW that currently passes one school. The impacts of the new transmission line to this facility will be incremental since a transmission line is already located in close proximity.

Conserved lands involve areas preserved as private or public open space. Two adjacent parcels protected through the Land Conservancy of Adams County are located along the Proposed Route. These two parcels are also identified as being part of the federal agricultural easement program with funding provided by the USDA/NRCS. Both parcels are currently spanned by the Hunterstown-Lincoln-Orrtanna 963 115 kV Transmission Line and are crossed by the 200-foot wide ROW that FirstEnergy proposes to use to build the Hunterstown-Orrtanna 115 kV Transmission Line. Since the transmission line and ROW were in place prior to the implementation of the conservation easements, no effect is anticipated to these conserved lands.

Anticipated Agency Requirements and Permits

In summation of the items reviewed above, coordination with USFWS and PHMC will be conducted in the near future that may provide information on possible avoidance and impact areas along the Proposed Route. Given the limited impacts anticipated for the stream and wetland crossings required for the Project and the anticipated minimal environmentally sensitive habitats along the Proposed Route, a series of PADEP Chapter 105 (Dam Safety and Waterways) General Permits is expected. As a result of the limited water quality standards of the streams in the Project Study Area, an Individual NPDES permit is expected from PADEP for erosion and sedimentation control during construction.

6.2.3 Sensitive Features within 2 Miles

Desktop and field efforts were conducted to locate and identify archaeological, geologic, historic, scenic, and wilderness areas within 2 miles of the Proposed Route. Most of the scenic and historic areas were addressed during initial analysis of the Project Study Area and were incorporated into the route selection analysis conducted for the Proposed Route. **Figure 6-2** provides an overview of the culturally and environmentally sensitive features within 2-miles of the Proposed Route.

7.0 REFERENCES

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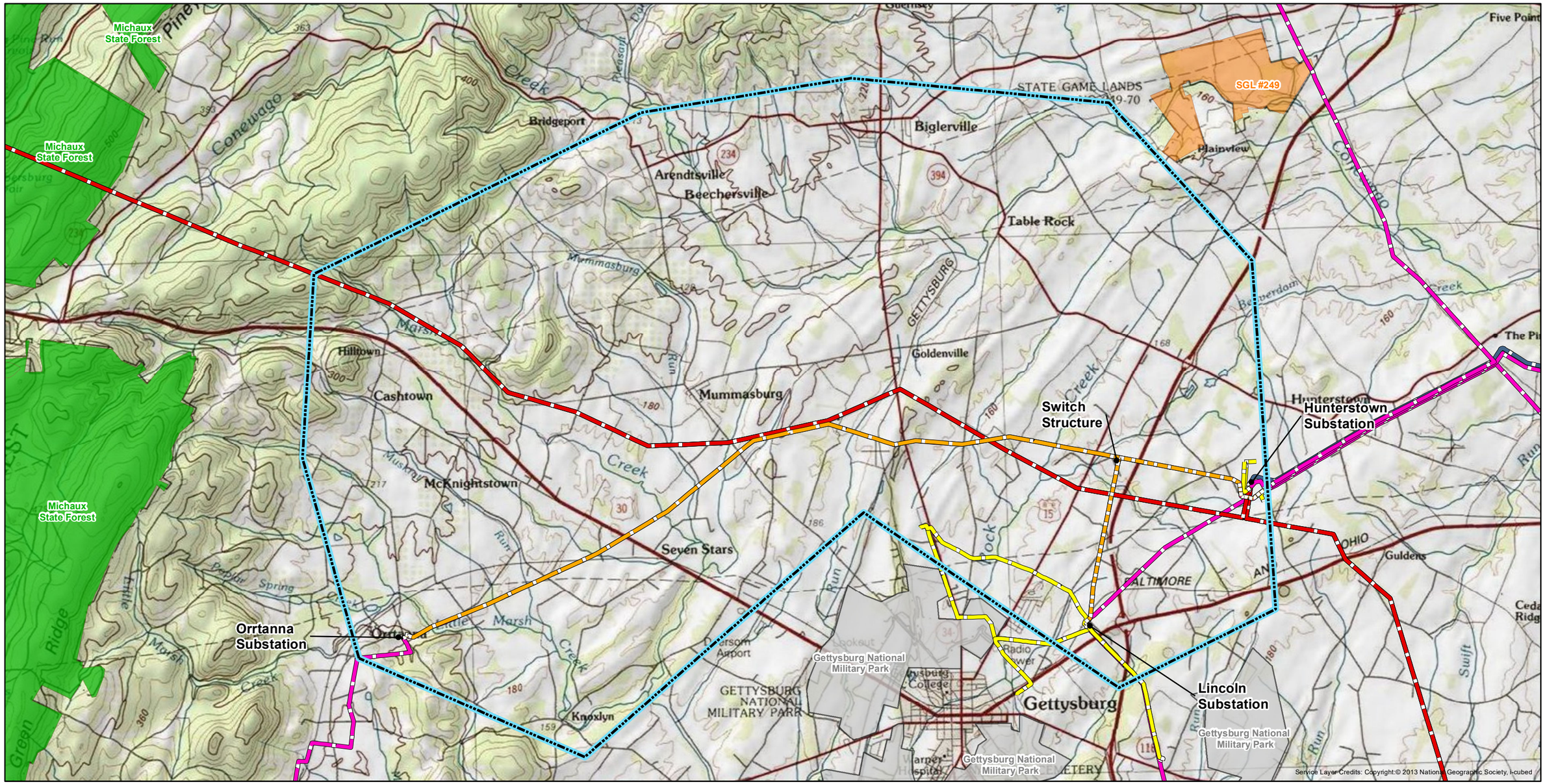
FIGURES



Legend

- Orrtanna 115 kV Transmission Line
- Project Study Area

Existing Transmission Lines

- 69 kV
- 115 kV
- 230 kV
- 500 kV
- Gettysburg National Military Park
- State Forest Land
- State Game Land

Notes

1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
Orrtanna-Lincoln-Hunterstown Transmission Line (FirstEnergy)
ExistingTransmission Network (PowerMap)
USGS Topographic Basemap (ESRI)
State Forest and State Game Lands (PA DCNR 2015)
Gettysburg National Military Park (ESRI)

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Feet
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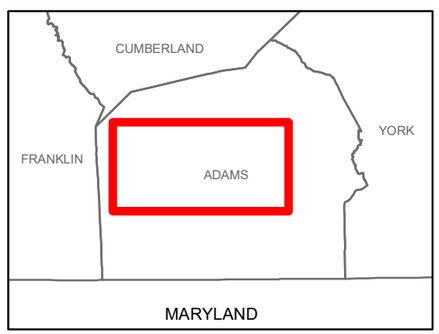

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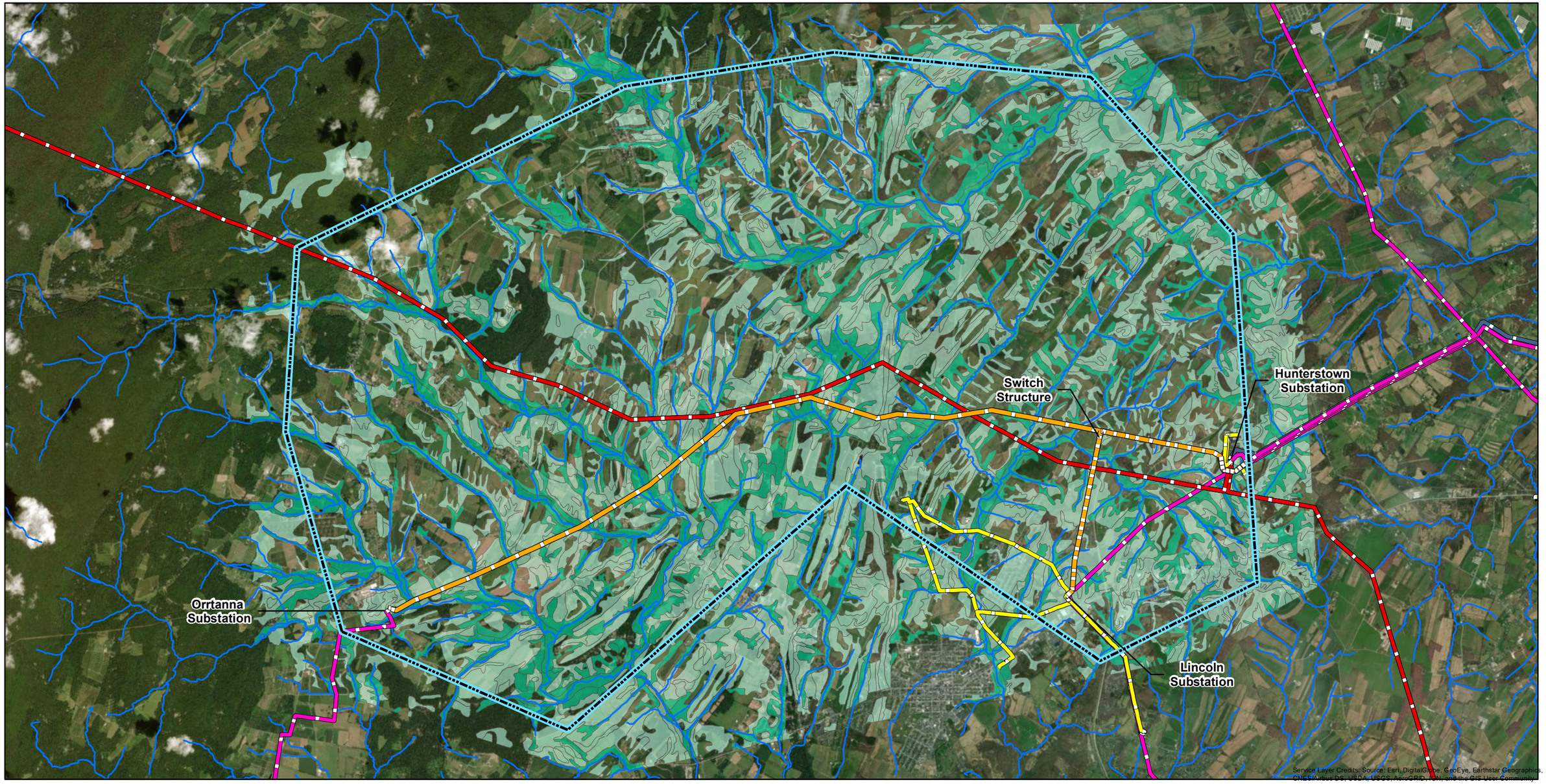
FIGURE 3-1
Project Study Area

Hunterstown-Orrtanna 115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019



Legend

- Orrtanna 115 kV Line
- Streams
- Project Study Area

Existing Transmission Lines

- 69 kV
- 115 kV
- 230 kV
- 500 kV

Hydric Soils

- Minor Hydric
- Major Hydric

Notes

1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
SSURGO Soils (NRCS 2018)
Ch. 93 Design. Use Streams (USGS 2017)
ExistingTransmission Network (PowerMap)
Aerial Basemap (ESRI)

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Feet
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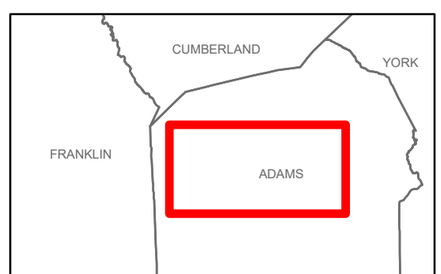

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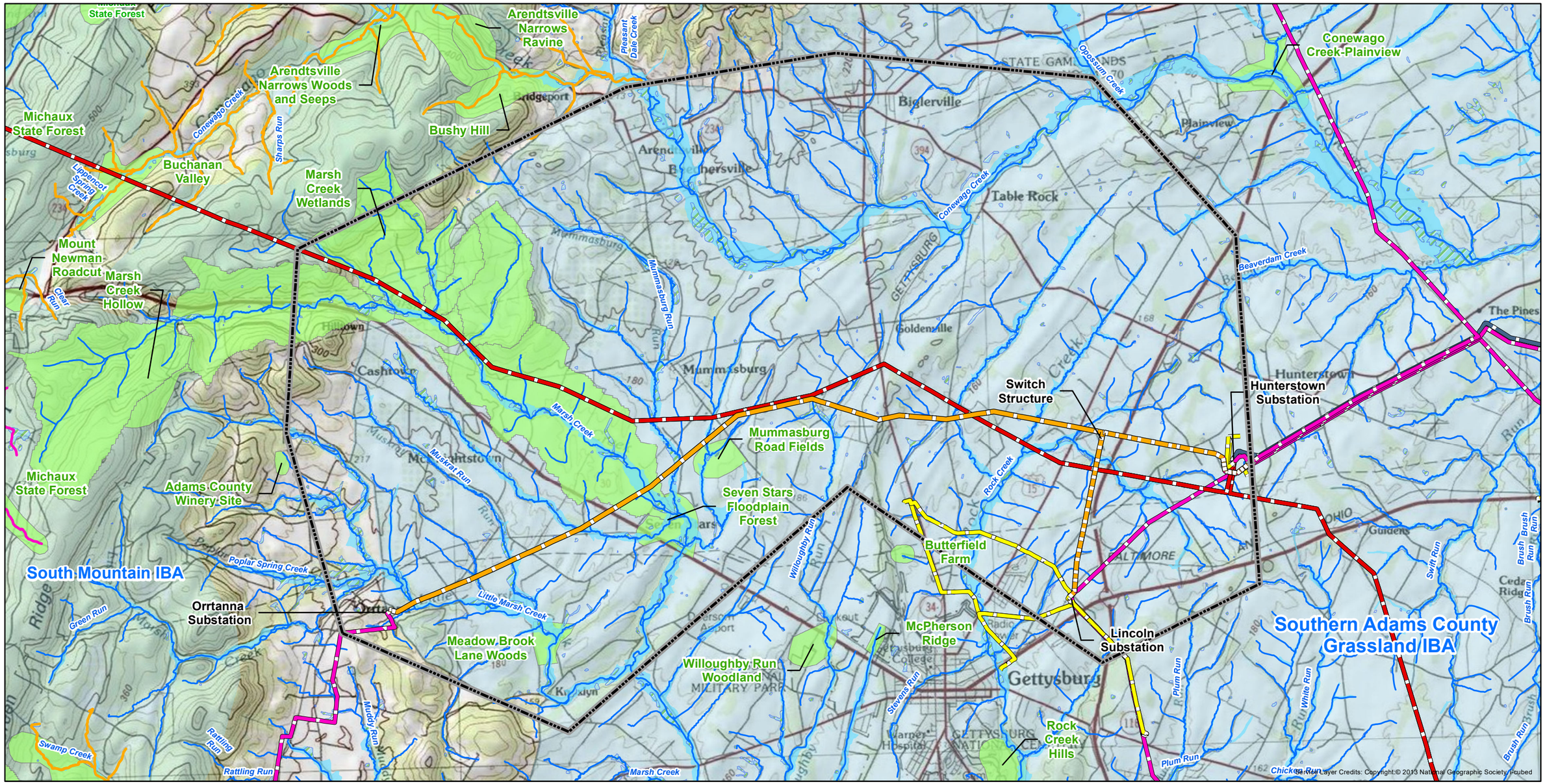
FIGURE 4-1
Soil Characteristics

Hunterstown-Orrtanna115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019



Legend

- Project Study Area
- Orrtanna 115 kV Line

Existing Transmission Lines

- 69 kV
- 115 kV
- 230 kV
- 500 kV
- NWI Wetlands
- 100-Year Floodplain
- Natural Heritage Area Core
- IBA

NHD Stream (Ch. 93 Designated Use)

- Exceptional Value
- High Quality
- Other

Notes

1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
Ch. 93 Design. Use Streams (USGS 2017)
NWI Wetlands (USFWS 2009)
100-Year Flood Zones (FEMA 2016)
NHA Core Areas (WPC 2014)
Important Bird Areas (Audubon 2019)
ExistingTransmission Network (PowerMap)
USGS Topographic Basemap (ESRI)

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Feet
1 inch = 6,000 feet

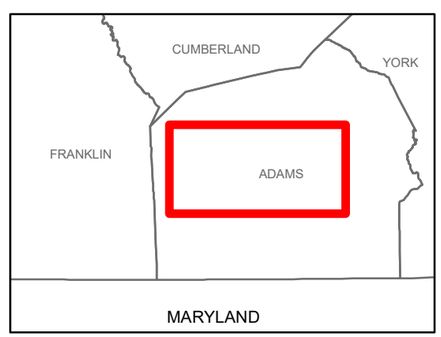

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FIGURE 4-2
Natural Environment

Hunterstown-Orrtanna115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019

Legend

- Project Study Area
- Orrtanna 115 kV Line

Existing Transmission Lines

- 69 kV
- 115 kV
- 230 kV
- 500 kV
- Streams
- Gettysburg National Military Park
- Local Parks
- State Forest Land
- State Game Land

Conserved Lands

- Adams County Agricultural Conservation Easements
- Land Conservancy of Adams County
- Federal Wetland Preserve
- Federal Agricultural Easements

Notes

1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
Gettysburg National Military Park (ESRI)
PA State Lands and Parks (DCNR 2017)
Conserved Lands (Adams County 2018)
Streams (USGS 2017)
Aerial Basemap (ESRI)

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Feet
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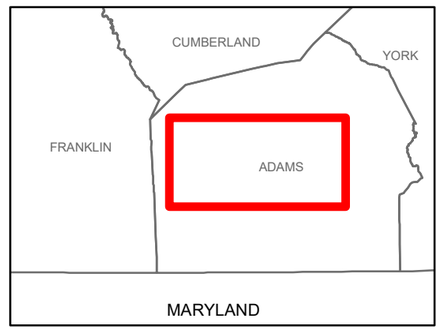

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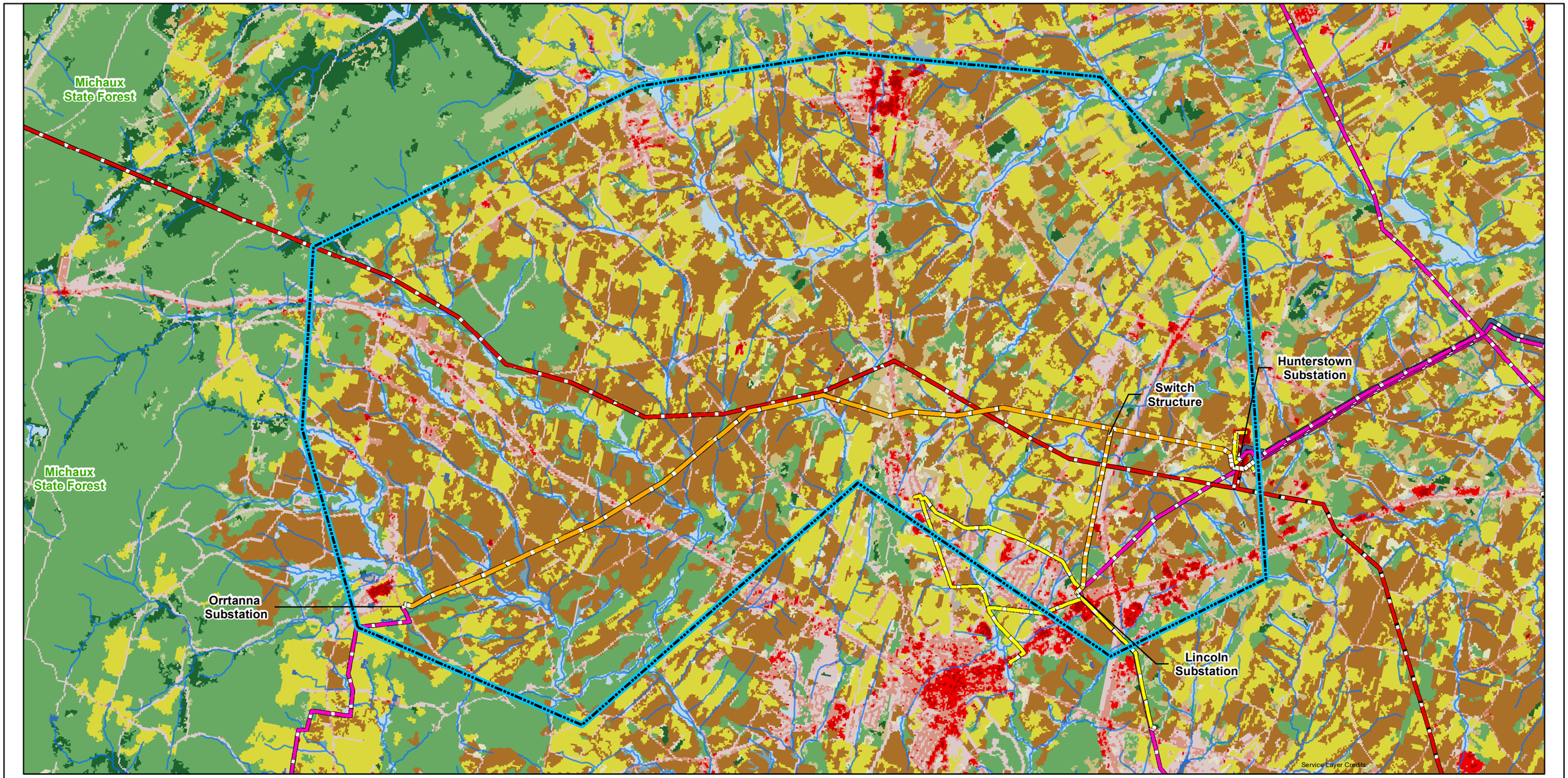
FIGURE 4-3
Conserved Lands

Hunterstown-Orrtanna115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019



Legend

- Project Study Area
- Orrtanna 115 kV Line

Existing Transmission Lines

- 69 kV
- 115 kV
- 230 kV
- 500 kV
- Streams

Land Use Categories

- Emergent Wetlands
- Woody Wetlands
- Cultivated Crops
- Pasture/Hay
- Grassland
- Shrub/Scrub
- Mixed Forest
- Evergreen Forest
- Deciduous Forest
- Barren Land
- High Density Development
- Medium Density Development
- Low Density Development
- Open Space Development
- Open Water

Notes

1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
Streams (USGS 2017)
National Land Cover Database (NLCD 2011)
Aerial Basemap (ESRI)

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Feet
1 inch = 6,000 feet

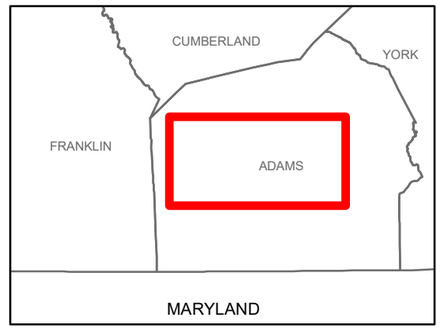

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FIGURE 4-4
Land Use/Land Cover

Hunterstown-Orrtanna115 kV
Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019

Michaux State Forest

Michaux State Forest

Michaux State Forest

Switch Structure

Hunterstown Substation

Orrtanna Substation

Lincoln Substation

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Project Study Area
- Orrtanna 115 kV Line
- Existing Transmission Lines
  - 69 kV
  - 115 kV
  - 230 kV
  - 500 kV
- School
- Cemetery
- Place of Worship
- Gas Pipelines
- Superfund Sites
- Local Parks
- State Forest Land
- Gettysburg Regional Airport Airspace
- Gettysburg_Airport_Approach

Notes

1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
Schools (USGS 2010)
Cemetaries (USGS 2010)
Places of Worship (USGS 2010)
Transmission and Pipeline Network (PowerMap)
USGS Topographic Basemap (ESRI)
State Forest Land (PA DCNR 2015)
Airport (Adams County 2018)
Superfund Sites (USEPA)

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Feet
1 inch = 6,000 feet

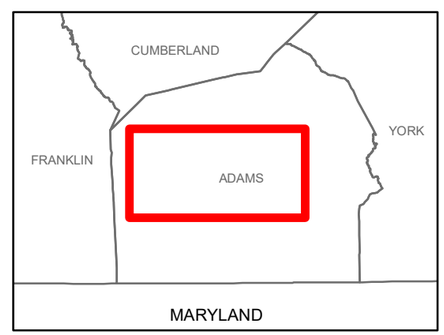

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FIGURE 4-5
Social Environment

Hunterstown-Orrtanna 115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019

Michaux State Forest
Michaux State Forest
Michaux State Forest
Thomas Brothers Store
Arendtsville Vocational High School
Fruitbelt Historic District
Round Barn Farm
Wirts House
Russell Tavern
Warner Property
Conewago Presbyterian Church
Hunterstown Historic District
Cashtown Inn
Cashtown Historic District
Switch Structure
Hunterstown Historic District Increase
Hunterstown Substation
Deardorff Farm
Middlekauff House
McKnightstown Historic District
Shank Farmstead
Seven Stars Hospital Site
Gettysburg Battlefield Historic District
Marsh Creek Skirmish Area
Weaner House
Gettysburg Railroad
Orrtanna Substation
Funt Property
Funt Schoolhouse
Noble Farm
Lincoln Highway Marker
Gettysburg National Military Park
Lincoln Substation
Fairfield Calvary Historic District
Gettysburg Battlefield Historic District
Gettysburg National Military Park
Gettysburg National Military Park
Gettysburg National Military Park

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Project Study Area
- Orrtanna 115 kV Line

Existing Transmission Lines
- 69 kV
- 115 kV
- 230 kV
- 500 kV
- Gettysburg National Military Park
- Historic Railroad

Historic Structures
- LISTED
- SHPO Eligible

Historic Areas
- LISTED
- SHPO Eligible

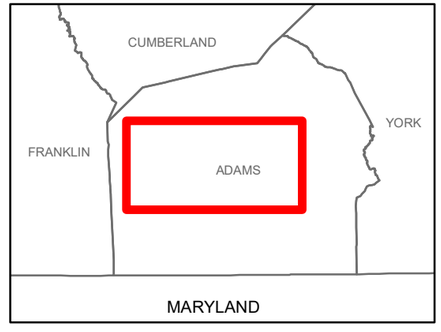
Notes

1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
Historic Areas and Structures (CRGIS)
Transmission and Pipeline Network (PowerMap)
Aerial Basemap (ESRI)

0 3,000 6,000 12,000
Feet
1 inch = 6,000 feet



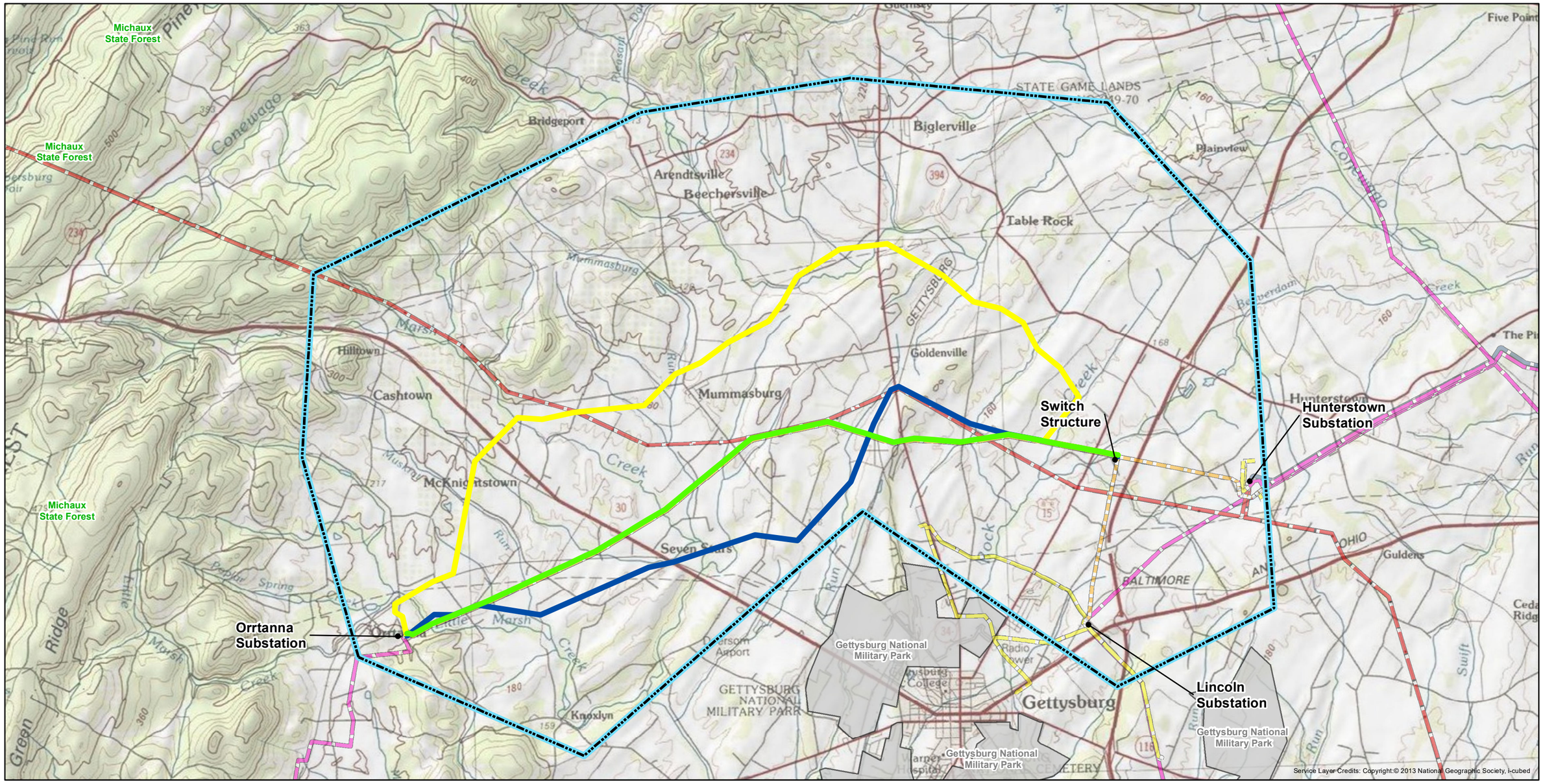
AECOM

FIGURE 4-6
Cultural and Historic Resources

Hunterstown-Orrtanna 115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019



Legend

- Orrtanna 115 kV Transmission Line
- Project Study Area
- North Route
- Parallel Route
- South Route

Existing Transmission Lines

CATEGORY

- 69 kV
- 115 kV
- 230 kV
- 500 kV
- Gettysburg National Military Park

Notes

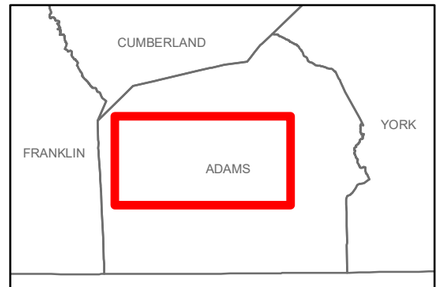
1. Existing Orrtanna-Lincoln-Hunterstown transmission line system based on KMZ provided by FirstEnergy in May 2017.
2. Other transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
Orrtanna-Lincoln-Hunterstown Transmission Line (FirstEnergy)
ExistingTransmission Network (PowerMap)
Gettysburg National Military Park (ESRI)
USGS Topographic Basemap (ESRI)

0 3,000 6,000 12,000
Feet

1 inch = 6,000 feet



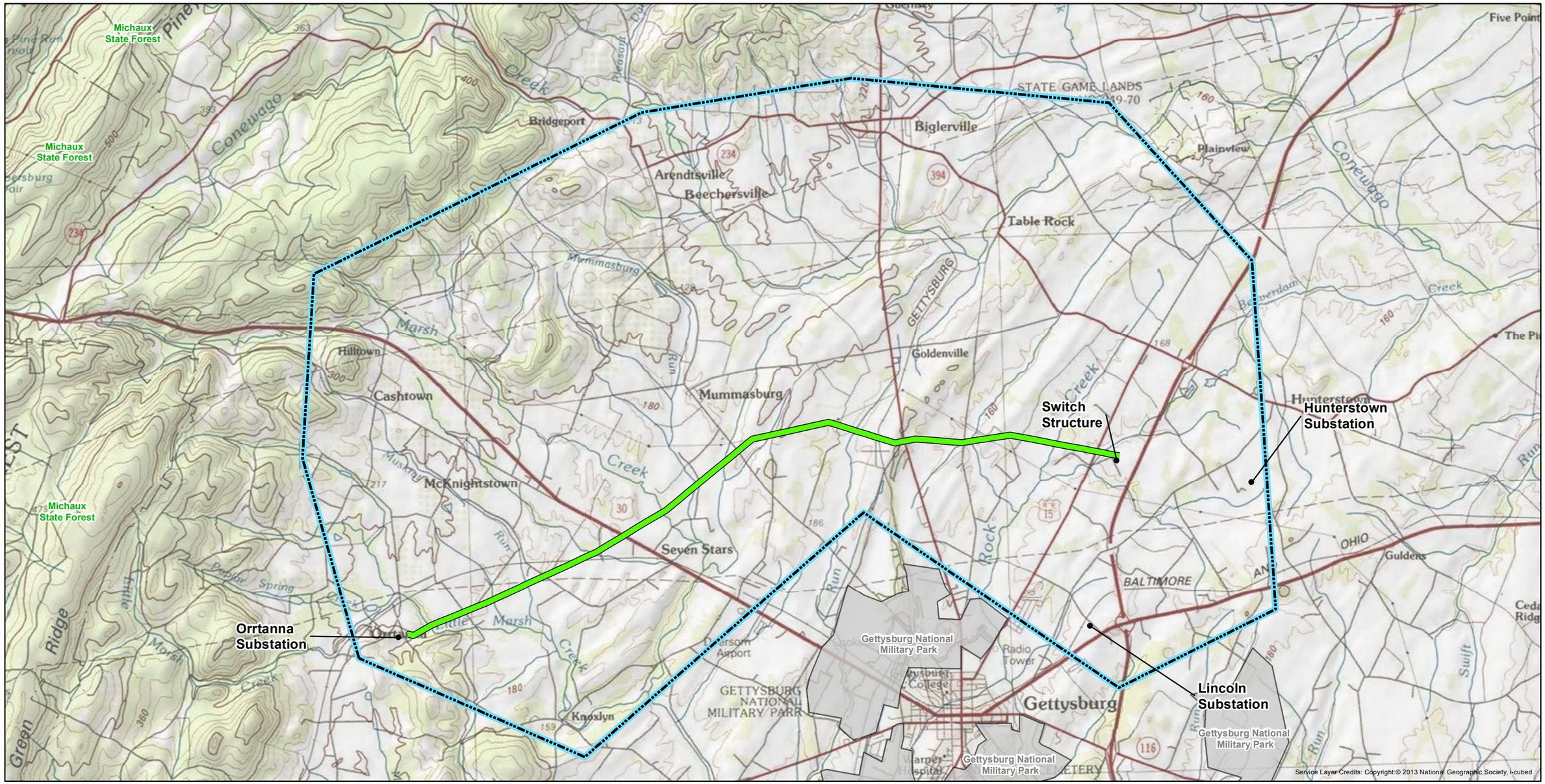
AECOM

FIGURE 5-1
Alternative Routes

Hunterstown-Orrtanna 115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019



Legend

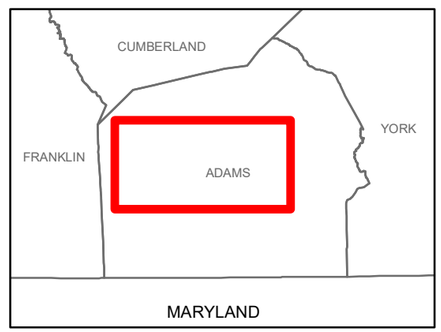
- Project Study Area
- Proposed Route
- Gettysburg National Military Park

Notes

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
USGS Topographic Basemap (ESRI)
Gettysburg National Military Park (ESRI)

0 3,000 6,000 12,000
Feet
1 inch = 6,000 feet



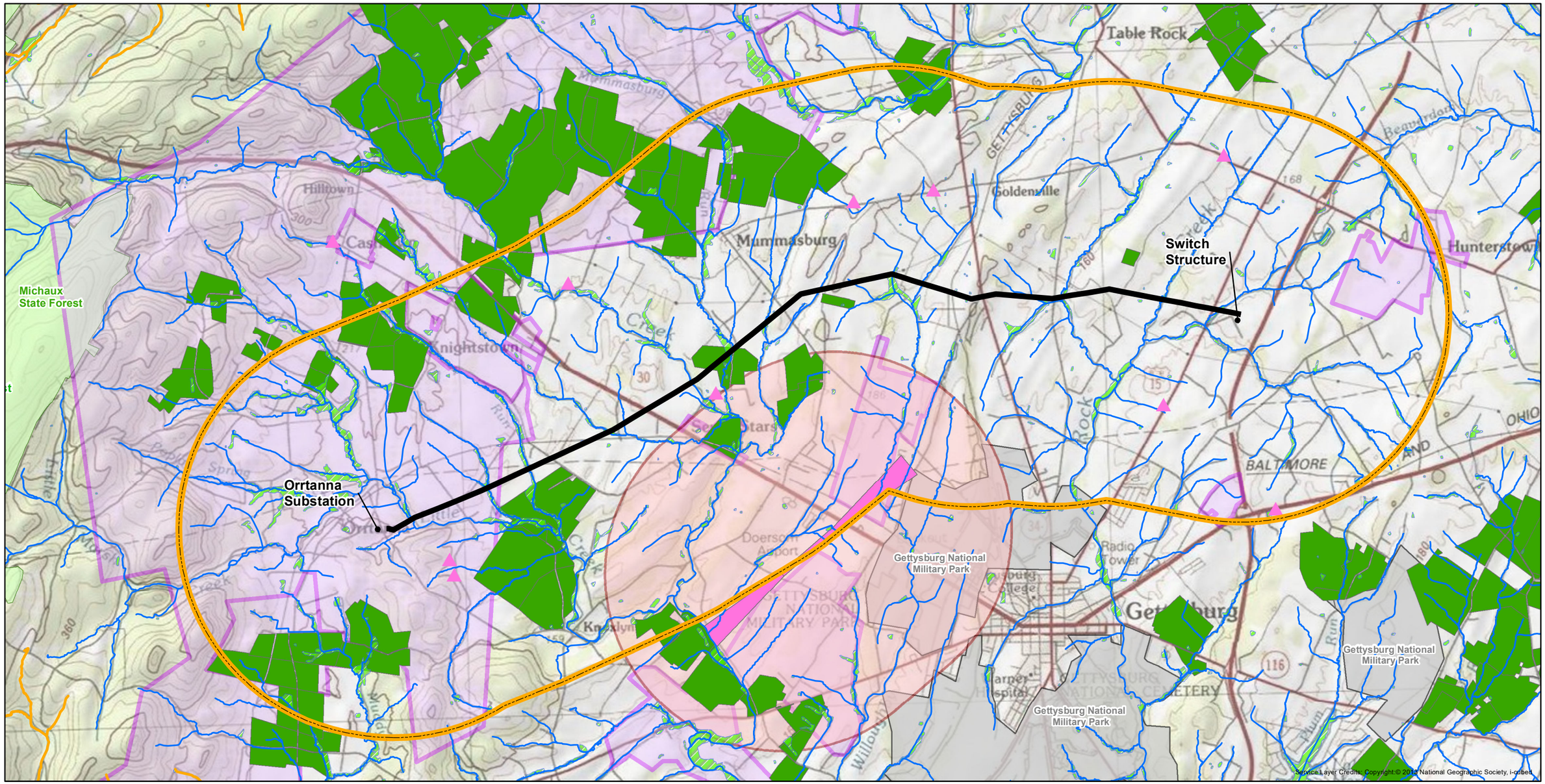
AECOM

FIGURE 6-1
Proposed Route

Hunterstown-Orrtanna 115 kV Transmission Line Project
Adams County, Pennsylvania

FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/14/2019



Legend

- Proposed Route
- 2-Mile Buffer
- Gettysburg Airport
- Gettysburg Regional Airport Airspace
- Preserved Lands
- Gettysburg National Military Park
- Historic Structures
- Historic Districts
- State Forest Land
- NWI Wetlands

Streams CH93

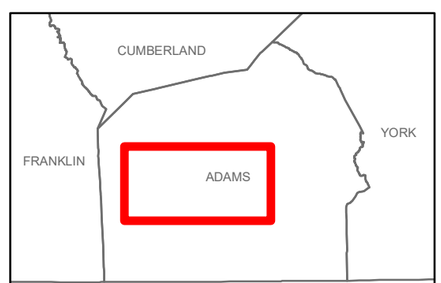
- High Quality
- Other

Notes

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

References:
USGS Topographic Basemap (ESRI)
Cultural Resources (CRGIS)
Gettysburg National Military Park (ESRI)
State Forest (PASDA)
NWI Wetlands (USFWS)
NHD Streams (USGS)
Gettysburg Airport (Adams County)
Preserved Lands (Adams County)

0 2,500 5,000 10,000
Feet
1 inch = 5,000 feet



AECOM

FIGURE 6-2
Sensitive Features within 2-miles of the Proposed Route

Hunterstown-Orrtanna 115 kV Transmission Line Project
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/BSF	Checked By: BAB
Job: Orrtanna	Date: 8/13/2019

EXHIBIT 16
LIST OF GOVERNMENTAL AGENCIES CONTACTED FOR APPROVALS TO CONSTRUCT AND MAINTAIN THE LINE

FEDERAL – a list of federal permit/approval requirements is provided in the matrix below

U.S. Army Corps of Engineers (USACE)
Baltimore District Office
2 Hopkins Plaza
Baltimore, MD 21201
Contact: Wade Chandler, Chief Pennsylvania Section

U.S. Fish and Wildlife Service (USFWS)
Pennsylvania Field Office
110 Radnor Rd, Suite 101
State College, PA 16801-4850
USFWS Project # 2019-1099
Contact: Sonja Jahrsdoerfer

Federal Aviation Administration (FAA)
Eastern Obstruction Evaluation (OE) Team Manager
FAA Southwestern Regional Office
10101 Hillwood Parkway
Fort Worth, TX 76177
Contact: Chris Shoulders

STATE – a list of state permit/approval requirements is provided in the matrix below

Pennsylvania Department of Environmental Protection (PADEP)
South-central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110
Contact: Nathan Phillips, P.E. – Permits Section

Pennsylvania Department of Conservation and Natural Resources (PADCNR)
Rachel Carson State Office Building
PO Box 8552
Harrisburg, PA 17105-8767
PNDI # 683712
Contact: Rebecca Bowen

Pennsylvania Fish and Boat Commission (PFBC)
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823-9620
Contact: Chris Urban

Pennsylvania Game Commission (PGC)
2001 Elmerton Avenue
Harrisburg, PA 17110-9797
PGC Identification Number: 201906040401
Contact: Peter Sussenbach

Pennsylvania Historical and Museum Commission (PHMC)
Bureau for Historic Preservation
Commonwealth Keystone Building, Second Floor
400 North Street
Harrisburg, PA 17120-0053
Contact: Steven McDougal (archaeological resources)
Contact: Ann Safley (historic structures)

Pennsylvania Department of Transportation (PennDOT)
Commonwealth Keystone Building
400 North Street, 8th Floor
Harrisburg, Pennsylvania 17120
Contact: Jason D. Sharp, Chief Counsel

COUNTY – a list of county permit/approval requirements is provided in the matrix below

Adams County Conservation District
670 Old Harrisburg Road
Suite 201
Gettysburg, Pennsylvania 17325
Contact: Adam McClain – District Manager

LIST OF AGENCY PERMIT/APPROVAL REQUIREMENTS

Agency	Permits, Approvals, or Documentation	Anticipated Approval Date	Status of Permit or Approval	Regulated Activity
Federal Permits & Authorizations				
U.S. Army Corps of Engineers (USACE)	Clean Water Act Section 404/401 permits for regulated waters/wetlands encroachments (State Programmatic General Permits [PASPGP-5] from USACE and PADEP).	10/22/2019	Project approved by PADEP	Dredge and fill in Waters of the U.S.
U.S. Fish & Wildlife Service (USFWS)	Federal threatened and endangered species reporting and compliance with Section 7 of Endangered Species Act for federal permits.	8/12/2019	Consultation completed	Determination of potential impact to Federal listed and candidate threatened and endangered species and habitat if present and impacted.
Federal Aviation Administration (FAA)	FAA Notification FAA 7460-1	TBD	Not yet submitted.	Notice of Proposed Construction.
State Permits & Authorizations				
Pennsylvania Department of Environmental Protection (PADEP)	Waters/wetland obstruction and encroachment permits or waivers (PA code, Title 25, Chapter 105).	10/22/2019	Project approved by PADEP	Activities in watercourses, floodways, bodies of water (incl. wetlands)

Agency	Permits, Approvals, or Documentation	Anticipated Approval Date	Status of Permit or Approval	Regulated Activity
Pennsylvania Department of Environmental Protection (PADEP)	Individual NPDES Permit and Post-Construction Stormwater Review (PA code, Title 25, Chapter 92, 93, 96, 102, and 106.)	4/14/2021	Completed. Minor modification anticipated to address design change.	Activities that require earth disturbance must institute practices that minimize accelerated erosion and resulting sediment pollution to the waters of the Commonwealth or U.S. Discharge of storm water associated with construction activities.
Pennsylvania Department of Conservation & Natural Resources (PADCNR) – Bureau of Forestry	State rare threatened & endangered species (T&E) consultation and approvals.	5/8/2019	PNDI Coordination Complete. No species of concern in project area and no additional coordination required.	Determination of potential impact to state listed and candidate threatened and endangered species and habitat if present and impacted (plants only.)
Pennsylvania Fish and Boat Commission (PFBC)	State rare threatened & endangered species (T&E) consultation and approvals.	5/8/2019	PNDI Coordination Complete. No species of concern in project area and no additional coordination required.	Determination of potential impact to state listed and candidate threatened and endangered species and habitat if present and impacted (reptiles, amphibians, fish)

Agency	Permits, Approvals, or Documentation	Anticipated Approval Date	Status of Permit or Approval	Regulated Activity
Pennsylvania Game Commission (PGC)	State rare threatened & endangered species (T&E) consultation and approvals.	7/5/2019	PNDI Coordination Complete. Federal and state species of concern in project area under jurisdiction of USFWS and PGC. No Impact Anticipated	Determination of potential impact to state listed and candidate threatened and endangered species and habitat if present and impacted (birds and mammals only)
Pennsylvania Historical and Museum Commission (PHMC)	Consultation, cultural resources (archaeology & historic structures) investigation and associated approvals as part of federal and state permits; compliance with Section 106 of National Historic Preservation Act; Federal and state listed or eligible cultural resources consultation.	4/13/2021	Completed. Additional coordination anticipated based on design change.	Historic and cultural resources listed or eligible for listing on the State and/or Federal National Register of Historic Places.
Pennsylvania Department of Transportation (PennDOT)	PennDOT Access Road Permits	TBD	Not yet submitted	Construction access off of state highways.
Pennsylvania Department of Transportation (PennDOT)	PennDOT Aerial Crossing Permits	Not Applicable	Not Applicable	Construction of an aerial crossing over a state highway.

Agency	Permits, Approvals, or Documentation	Anticipated Approval Date	Status of Permit or Approval	Regulated Activity
County				
Local Conservation Districts (CCDs)	Individual NPDES Permit and Post-Construction Stormwater Review (PA code, Title 25, Chapter 92, 93, 96, 102, and 106)	4/14/21	Completed. Minor modification anticipated to address design change.	Activities that require earth disturbance must institute practices that minimize accelerated erosion and resulting sediment pollution to the waters of the Commonwealth or U.S. Discharge of storm water associated with construction activities.

Exhibit 17

Names and Addresses of Known Persons, Corporations and Other Entities of Record Owning Property Within the Existing Transmission Line Corridor for the Orrtanna Transmission Line Project

3:33 Property Management LLC
2202 Mummasburg Road
Gettysburg, PA 17325
Parcel(s): 12E11-0002B—000

Adams County Christian Academy
1865 Biglerville Road
Gettrysburg, PA 17325
Parcel(s): 09F10-0111---000

Donald J. Alcorn
1059 Belmont Road
Gettysburg, PA 17325
Parcel(s): 07E10-0083---000

Amos Conley Farms
570 Prospect Road
Mount Joy, PA 17552
Parcel(s): 38G11-0001---000
38G11-0033---000
38G11-0011A--000

Ronald W. Asper, et al
2574 Biglerville Road
Gettysburg, PA 17325
Parcel(s): 09F10-0090---000

B&A Farm, LLC
590 Railroad Lane
Orrtanna, PA 17353
Parcel(s): 20D12-0011H--000

Gloria Bennis
PO Box 4523
Gettysburg, PA 17325
Parcel(s): 12D11-0103F--000

Gary L. & Cheryl Hess Black
610 Railroad Lane
Orrtanna, PA 17353
Parcel(s): 20D12-0011B--000

Jeffrey L. & Kay R. Black
970 Belmont Road
Gettysburg, PA 17325
Parcel(s): 12E10-0094---000

Frank E. & Loni Z. Buck
2080 Mummasburg Road
Gettysburg, PA 17325
Parcel(s): 12E11-0016---000

Frank E. Buck Jr., et al
2080 Mummasburg Road
Gettysburg, PA 17325
Parcel(s): 12E11-0008---000

Buohl Properties, LLC
95 Mountain Top Drive
Orrtanna, PA 17353
Parcel(s): 38G10-0039---000

Bruce G. & Jamie Buxton
43 Herris Ridge Road
Gettysburg, PA 17325
Parcel(s): 09F10-0108---000

William W. Chapman
240 Crooken Creek Road
Gettysburg, PA 17325
Parcel(s): 12E11-0029B--000
12E11-0029A--000

William W. Chapman
214 Crooken Creek Road
Gettysburg, PA 17325
Parcel(s): 12E11-0029B--000
12E11-0029A--000

Joseph A. Curtis
921 Belmont Road
Gettysburg, PA 17325
Parcel(s): 12E10-0083C--000

Brandon M. Dubs
540 Good Intent Road
Gettysburg, PA 17325
Parcel(s): 38G10-0027---000

David R. & Robyn J. Duffey
2154 Chambersburg Road
Gettysburg, PA 17325
Parcel(s): 12E11-0071B--000

Thomas R. & Shirley A. Edinger
2216 Chambersburg Road
Gettysburg, PA 17325
Parcel(s): 12D11-0103G--000

Richand R. & Sharon K. Ford
490 Russell Tavern Road
Gettysburg, PA 17325
Parcel(s): 07F10-0075C--000

Rene J. & Hannelore H. Fredette
181 Twin Lakes Drive
Gettysburg, PA 17325
Parcel(s): 20D12-0010---000

Darr A. Fullmer
1991 Old Harrisburg Road
Gettysburg, PA 17325
Parcel(s): 38G11-0002A--000

Merton E. & Wilda G. Grace
1966 Old Harrisburg Road
Gettysburg, PA 17325
Parcel(s): 38G10-0031---000

Brent D. Guise
485 Railroad LN
Orrtanna, PA 17353
Parcel(s): 20D12-0012---000

Michael D. & Nora A. Habig
1116 Stratford Drive
Carlisle, PA 17013
Parcel(s): 09F11-0029---000

Richard E. Heflin
1018 Belmont Road
Gettysburg, PA 17325
Parcel(s): 12E10-0098---000

Montford E. & Betsy W. Illick
2075 Mummasburg Road
Gettysburg, PA 17325
Parcel(s): 12E11-0004---000

Dennis D. & Sally A. Johnson
37 Herris Ridge Road
Gettysburg, PA 17325
Parcel(s): 09F10-0076---000

Elaine F. Jones Trust
6086 Douglas Avenue
New Market, MD 21774
Parcel(s): 12D11-0103I—000
12E11-0090---000

Brandon & Amy M. Knoess
2135 Mummasburg Road
Gettysburg, PA 17325
Parcel(s): 12E11-0005---000

Knouse Foods Cooperative Inc.
800 Peach Glen Idaville Road
Peach Glen, PA 17375
Parcel(s): 20C12-0104---000

Nicholas A. Lieberum
60 Ditzler Avenue
Biglerville, PA 17307
Parcel(s): 20D12-0001B--000

Rafael G. Lopez, et al
1416 Madison Avenue
2nd Floor
Baltimore, MD 21217
Parcel(s): 12E11-0004A--000

Brennan M. & Julieann E. Martin
410 Silo Road
Orrtanna, PA 17353
Parcel(s): 20D12-0006C--000

Jonathan M. & Lauressa M. Moe
510 Russell Tavern Road
Gettysburg, PA 17325-8059
Parcel(s): 07F10-0075B--000

James W. Motsay
138 Crooken Creek Road
Gettysburg, PA 17325
Parcel(s): 12E11-0088---000

Thomas F. Norman
PO Box 104
McKnightstown, PA 17343
Parcel(s): 12D11-0102---000

Roland A. & Joyce M. Offutt
575 Russell Tavern Road
Gettysburg, PA 17325
Parcel(s): 07F10-0075---000

Mark A. & Cheryl L. Orndorff
450 Russell Tavern Road
Gettysburg, PA 17325
Parcel(s): 07E10-0084---000

Orrtanna Power, LLC
3520 Piedmont Road NE
Suite 410
Atlanta, GA 30305
Parcel(s): 20C12-0109---000

James P. & Kelly F. O'Shea
1290 Hilltown Road
Biglerville, PA 17307
Parcel(s): 12E11-0089---000

Stephanie Ann Pieruccini
2238 Chambersburg Road
Gettysburg, PA 17325
Parcel(s): 12D11-0103H--000

Kenneth K. & Amanda E. Ransom
1886 Biglerville Road
Gettysburg, PA 17325
Parcel(s): 09F11-0007---000

Mark P. & Katherine M. Rarrick
375 Crooken Creek Road
Gettysburg, PA 17325
Parcel(s): 12E11-0015---000

Redding Family Properties LLC
1085 Table Rock Road
Gettysburg, PA 17325
Parcel(s): 09F10-0093A—000

David C. Redding
1199 Table Rock Road
Gettysburg, PA 17325
Parcel(s): 09F10-0112---000

Edward & Deborah J. Regelman
1685 Detters Mill Road
Dover, PA 17347
Parcel(s): 07F10-0075A—000

Rock Creek Acres, LLC
1199 Table Rock Road
Gettysburg, PA 17325
Parcel(s): 38F10-0093---000

Gregory N. Sanders
1906 Old Harrisburg Road
Gettysburg, PA 17325
Parcel(s): 38G11-0004---000

William A. Shelton
1863 Biglerville Road
Gettysburg, PA 17325
Parcel(s): 09F10-0095A—000
09F10-0095---000

David E. Simpson
619 Good Intent Road
Gettysburg, PA 17325
Parcel(s): 38G10-0028---000

David E. & Patricia A. Simpson
619 Good Intent Road
Gettysburg, PA 17325
Parcel(s): 38G10-0028BB-000

Ryan S. Stricker
95 Stricker Drive
York Haven, PA 17370
Parcel(s): 12E11-0054A--000

Randall L. Tenney
715 Seven Stars Road
Gettysburg, PA 17325
Parcel(s): 12D12-0007B--000

Richand J. & Linda A. Utz
1857 Biglerville Road
Gettysburg, PA 17325
Parcel(s): 09F10-0110---000

Casey D. & Morgan L. Walker
55 Herris Ridge Road
Gettysburg, PA 17325
Parcel(s): 09F10-0085---000

Edward H. & Daniel L. Wilkinson
555 Rentzel Road
Gettysburg, PA 17325
Parcel(s): 07F10-0057C--000

Robert E. Windisch Sr.
2300 Chambersburg Road
Biglerville, PA 17307
Parcel(s): 12D12-0007---000

FirstEnergy
76 South Main St.
Akron, Ohio 44300

July 5, 2019

Ronald A. and Joyce M. Offutt
575 Russell Tavern Road
Gettysburg, PA 17325

RE: Orrtanna Transmission Line Project
Parcel ID: 07F10-0075-000

Dear Mr. & Mrs. Offutt

Mid-Atlantic Interstate Transmission, LLC (MAIT), a FirstEnergy company, is planning to strengthen the regional transmission system near Gettysburg, Pennsylvania to improve electric service reliability for thousands of customers in Adams County.

Enclosed is a property owner information packet that includes a property owner notice required by the Pennsylvania Public Utility Commission (PaPUC), a Code of Conduct for right-of-way agents and subcontractor employees, a survey permission form, and a brochure entitled "Maintaining Safe and Reliable Transmission System-Vegetation Management for New Transmission Construction Projects" which explains FirstEnergy's right-of way maintenance practices.

You have been identified as a property owner along the proposed line route. This letter is to notify you of upcoming survey work and obtain your permission to perform preliminary engineering including but not limited to surveying, core boring, cultural and environmental assessments, and property valuations. Please note that soil and sod moved during survey work will be returned to the excavated area, and no heavy equipment will be used as part of this effort.

These initial activities allow MAIT to evaluate the proposed route and work closely with you, the landowner, to address any of your questions or concerns. A real estate agent will contact you soon to discuss the project and the upcoming surveys and studies expected to begin in the Fall of 2019. Transmission line construction is scheduled to commence in Spring 2021. PaPUC regulations prohibit us from engaging in negotiations with you to acquire a transmission line right-of way for at least 15 calendar days from the time you receive this package.

To indicate your permission for us to begin the necessary studies on your property, please sign the enclosed permission form and send it back in the enclosed self- addressed stamped envelope.

If you have any questions, please contact our contract field agent Joe Delaney from AFS, LLC, at 607-423-2441 (jdelaney@afsrow.com) or call our project hotline at 1-888-311-4737.

Sincerely,

Kevin Phillips

Kevin Phillips
Sr. Real Estate Representative, Right-of-Way Services
FirstEnergy Service Company on behalf of MAIT

Enclosures:
PA PUC Notice
Agent Code of Conduct
Survey Form
Vegetation Management Brochure

Ronald A. and Joyce M. Offutt
575 Russell Tavern Road
Gettysburg, PA 17325

NOTICE

RE: Orrtanna 115 kV Transmission Line Project
Parcel ID: 07F10-0075-000

Dear Mr. & Mrs. Offutt,

The Pennsylvania Public Utility Commission requires that Mid-Atlantic Interstate Transmission, LLC (MAIT), a FirstEnergy company, give you the following information:

MAIT is planning to strengthen the regional transmission system near Gettysburg, Pennsylvania to improve electric service reliability for thousands of customers in Adams County.

Construction of a second, 115-kV transmission line connecting the Orrtanna and Hunterstown substations would alleviate this reliability issue. The new 9.5-mile line would provide a second electrical source to the Orrtanna Substation and end at a transmission switch structure just west of the Hunterstown Substation.

New right of way may be required on your property identified as County Parcel ID Number 07F10-0075-000, in Adams County, PA. A representative of the utility will contact you in the near future to discuss the utility's plans as they may affect your property. In order to better prepare you for these discussions and to avoid possible misunderstandings, we want to take this opportunity to inform you of your legal rights and the legal rights and duties of MAIT with regard to this project.

You have the right to have legal counsel represent you in these negotiations. You do not have to sign any agreement without the advice of counsel. If you do not know an attorney, you may contact your local bar association.

MUST YOU ACCEPT ANY OFFER MADE BY THE UTILITY FOR YOUR PROPERTY?

No. You may refuse to accept it. However, the utility has the power to take property by eminent domain, subject to the approval of the Public Utility Commission, for the construction of transmission lines if the utility is unable to negotiate an agreement to buy the right-of-way. If your property is condemned, you must be paid "just compensation". "Just compensation" has been defined by the courts in Pennsylvania as the difference between the fair market value of your property before condemnation, unaffected by the condemnation, and the fair market value of your remaining property after condemnation, as affected by the condemnation.

CAN THE UTILTIY CONDEMN YOUR HOUSE?

No. The utility cannot condemn your house or a reasonable "curtilage" around your house. Generally, curtilage includes the land or buildings within 100 meters (328 feet) of your house which are used for your domestic purposes. However, the 100-meter limit does not automatically extend beyond the homeowner's property line.

DO YOU HAVE A RIGHT TO A PUBLIC HEARING WHEN THE UTILITY SEEKS TO CONDEMN YOUR PROPERTY?

Yes. When an electric utility seeks to have your property condemned, the utility must first apply to the Pennsylvania Public Utility Commission for a certificate finding the condemnation to be necessary or proper for the service, accommodation, convenience, or safety of the public. The Commission will then hold a public hearing. As the landowner whose property may be condemned, you are a party to the proceeding and may retain counsel, present evidence, and/or testify yourself in opposition to the application for the certification. If you wish to testify at the public hearing, you should make your intention known by letter to Secretary, Pennsylvania Public Utility Commission, P. O. Box 3265, Harrisburg, Pennsylvania 17120. If the Commission approves the utility's application for a certificate finding the condemnation in the public interest, then the utility may proceed before the local Court of Common Pleas to condemn your land. If the Commission denies the utility's application, the utility cannot condemn your land. If you retain an attorney to represent you before the Commission, you must do so at your own expense.

The Commission will not decide how much money you should receive if your land is condemned. The only issue the Commission will decide is whether the condemnation serves the public interest. If the Commission approves the utility's application for condemnation, the amount of money to which you are entitled will be determined by a local Board of View or the Court of Common Pleas. However, you may at any time make an agreement with the utility as to the amount of damages you are to be paid.

DOES THE UTILITY HAVE THE RIGHT TO ENTER YOUR LAND AT ANY TIME PRIOR TO CONDEMNATION?

Yes. The utility has the right, for the purpose of making studies, tests, surveys, soundings, and appraisals, to enter any land which they could condemn. However, the owner must be notified prior to entering the property. Any actual damages to your property, as a result of such entry prior to condemnation, must be paid by the utility. The utility may not engage in any construction, and its right to enter exists only to the extent necessary to condemn the property.

MUST THE UTILITY FURNISH YOU WITH INFORMATION ON THE RIGHT-OF-WAY MAINTENANCE PRACTICES FOR THIS PROJECT?

Yes. The Pennsylvania Public Utility Commission requires MAIT give you the following information on the RIGHT-OF-WAY MAINTENANCE PRACTICES for this project.

The methods currently used by ATSI are set forth in *FirstEnergy Vegetation Management Specification*, which will be made available to you for your inspection upon request. If you wish further information concerning right-of-way maintenance methods, you can contact Transmission Vegetation Management Specialist, Keith Fuller by phone at 717-825-1941 or email (kfuller@firstenergycorp.com). You may discuss with this person, either before or during negotiation of the right-of-way agreement, these methods and any other questions you may have about right-of-way maintenance.

Once a utility has constructed an electric transmission line on a right-of-way across your land, the utility must maintain the right-of-way free of tall growing trees and brush which might impair the reliability of electric service, the safety of the line, and access to the line or its towers. The utility or its contractors may remove and control tall growing trees and brush by several methods; hand cutting of trees, limbs and brush; mechanical cutting with chain saws or motorized cutting machines; application of herbicides, either from the ground or from a helicopter. The utility must confine its maintenance activities to the approved right-of-way across you land, except where tall growing trees or brush or their root systems grow into the right-of-way from adjoining land and constitute a threat to the electric transmission line and its structures.

If you believe that the maintenance method(s) used by the company would raise problems with your use of your land adjacent to the right-of-way, it is your responsibility as the landowner to bring this to the attention of the utility before you sign the right-of-way agreement.

The utility company has a responsibility to maintain its right-of-way and regular maintenance must occur. Although you as the landowner cannot determine whether or not maintenance will occur, your right-of-way agreement may specify certain conditions on the performance of the maintenance program which are important to you. These conditions can be part of the negotiations between you and the utility company for your land, since the right-of-way agreement is a legal contract between the landowner and the utility company. It is important for you to understand also that the maintenance methods used by the utility may change over time as the costs of maintenance or the methods of performing maintenance change. You may want to specify in your right-of-way agreement that the utility company inform you of changes in its maintenance methods or in the maintenance schedule for your land.

The provisions of the right-of-way agreement are enforceable in the local Court of Common Pleas. The right-of-way agreement cannot be enforced by the Pennsylvania Public Utility Commission. Any claims for damage resulting from improper maintenance of the right-of-way must be settled with the utility, its contractors, or in local Court of Common Pleas at your expense. The Commission cannot award damages for violations of the right-of-way agreement.

FirstEnergy
76 South Main St.
Akron, Ohio 44300

August 21, 2019

Orrtanna Power, LLC
3520 Piedmont Rd NE
Suite 410
Atlanta, GA 30305

RE: Orrtanna Transmission Line Project
Parcel ID: 20C12-0109-000

To Whom it May Concern at Orrtanna Power, LLC:

Mid-Atlantic Interstate Transmission, LLC (MAIT), a FirstEnergy company, is planning to strengthen the regional transmission system near Gettysburg, Pennsylvania to improve electric service reliability for thousands of customers in Adams County.

Enclosed is a property owner information packet that includes a property owner notice required by the Pennsylvania Public Utility Commission (PaPUC), a Code of Conduct for right-of-way agents and subcontractor employees, a survey permission form, and a brochure entitled "Maintaining Safe and Reliable Transmission System-Vegetation Management for New Transmission Construction Projects" which explains FirstEnergy's right-of way maintenance practices.

You have been identified as a property owner along the proposed line route. This letter is to notify you of upcoming survey work and obtain your permission to perform preliminary engineering including but not limited to surveying, core boring, cultural and environmental assessments, and property valuations. Please note that soil and sod moved during survey work will be returned to the excavated area, and no heavy equipment will be used as part of this effort.

These initial activities allow MAIT to evaluate the proposed route and work closely with you, the landowner, to address any of your questions or concerns. A real estate agent will contact you soon to discuss the project and the upcoming surveys and studies expected to begin in the Fall of 2019. Transmission line construction is scheduled to commence in Spring 2021. PaPUC regulations prohibit us from engaging in negotiations with you to acquire a transmission line right-of way for at least 15 calendar days from the time you receive this package.

To indicate your permission for us to begin the necessary studies on your property, please sign the enclosed permission form and send it back in the enclosed self- addressed stamped envelope.

If you have any questions, please contact our contract field agent Joe Delaney from AFS, LLC, at 607-423-2441 (jdelaney@afsrow.com) or call our project hotline at 1-888-311-4737.

Sincerely,

Kevin Phillips

Kevin Phillips
Sr. Real Estate Representative, Right-of-Way Services
FirstEnergy Service Company on behalf of MAIT

Enclosures:
PA PUC Notice
Agent Code of Conduct
Survey Form
Vegetation Management Brochure

Orrtanna Power, LLC,
3520 Piedmont Rd NE
Suite 410
Atlanta, GA 30305

NOTICE

RE: Orrtanna 115 kV Transmission Line Project
Parcel ID: 20C12-0109-000

To Whom it May Concern at Orrtanna Power, LLC:

The Pennsylvania Public Utility Commission requires that Mid-Atlantic Interstate Transmission, LLC (MAIT), a FirstEnergy company, give you the following information:

MAIT is planning to strengthen the regional transmission system near Gettysburg, Pennsylvania to improve electric service reliability for thousands of customers in Adams County.

Construction of a second, 115-kV transmission line connecting the Orrtanna and Hunterstown substations would alleviate this reliability issue. The new 9.5-mile line would provide a second electrical source to the Orrtanna Substation and end at a transmission switch structure just west of the Hunterstown Substation.

New right of way may be required on your property identified as County Parcel ID Number 20C12-0109-000, in Adams County, PA. A representative of the utility will contact you in the near future to discuss the utility's plans as they may affect your property. In order to better prepare you for these discussions and to avoid possible misunderstandings, we want to take this opportunity to inform you of your legal rights and the legal rights and duties of MAIT with regard to this project.

You have the right to have legal counsel represent you in these negotiations. You do not have to sign any agreement without the advice of counsel. If you do not know an attorney, you may contact your local bar association.

MUST YOU ACCEPT ANY OFFER MADE BY THE UTILITY FOR YOUR PROPERTY?

No. You may refuse to accept it. However, the utility has the power to take property by eminent domain, subject to the approval of the Public Utility Commission, for the construction of transmission lines if the utility is unable to negotiate an agreement to buy the right-of-way. If your property is condemned, you must be paid "just compensation". "Just compensation" has been defined by the courts in Pennsylvania as the difference between the fair market value of your property before condemnation, unaffected by the condemnation, and the fair market value of your remaining property after condemnation, as affected by the condemnation.

CAN THE UTILTIY CONDEMN YOUR HOUSE?

No. The utility cannot condemn your house or a reasonable "curtilage" around your house. Generally, curtilage includes the land or buildings within 100 meters (328 feet) of your house which are used for your domestic purposes. However, the 100-meter limit does not automatically extend beyond the homeowner's property line.

DO YOU HAVE A RIGHT TO A PUBLIC HEARING WHEN THE UTILITY SEEKS TO CONDEMN YOUR PROPERTY?

Yes. When an electric utility seeks to have your property condemned, the utility must first apply to the Pennsylvania Public Utility Commission for a certificate finding the condemnation to be necessary or proper for the service, accommodation, convenience, or safety of the public. The Commission will then hold a public hearing. As the landowner whose property may be condemned, you are a party to the proceeding and may retain counsel, present evidence, and/or testify yourself in opposition to the application for the certification. If you wish to testify at the public hearing, you should make your intention known by letter to Secretary, Pennsylvania Public Utility Commission, P. O. Box 3265, Harrisburg, Pennsylvania 17120. If the Commission approves the utility's application for a certificate finding the condemnation in the public interest, then the utility may proceed before the local Court of Common Pleas to condemn your land. If the Commission denies the utility's application, the utility cannot condemn your land. If you retain an attorney to represent you before the Commission, you must do so at your own expense.

The Commission will not decide how much money you should receive if your land is condemned. The only issue the Commission will decide is whether the condemnation serves the public interest. If the Commission approves the utility's application for condemnation, the amount of money to which you are entitled will be determined by a local Board of View or the Court of Common Pleas. However, you may at any time make an agreement with the utility as to the amount of damages you are to be paid.

DOES THE UTILITY HAVE THE RIGHT TO ENTER YOUR LAND AT ANY TIME PRIOR TO CONDEMNATION?

Yes. The utility has the right, for the purpose of making studies, tests, surveys, soundings, and appraisals, to enter any land which they could condemn. However, the owner must be notified prior to entering the property. Any actual damages to your property, as a result of such entry prior to condemnation, must be paid by the utility. The utility may not engage in any construction, and its right to enter exists only to the extent necessary to condemn the property.

MUST THE UTILITY FURNISH YOU WITH INFORMATION ON THE RIGHT-OF-WAY MAINTENANCE PRACTICES FOR THIS PROJECT?

Yes. The Pennsylvania Public Utility Commission requires MAIT give you the following information on the RIGHT-OF-WAY MAINTENANCE PRACTICES for this project.

The methods currently used by ATSI are set forth in *FirstEnergy Vegetation Management Specification*, which will be made available to you for your inspection upon request. If you wish further information concerning right-of-way maintenance methods, you can contact Transmission Vegetation Management Specialist, Keith Fuller by phone at 717-825-1941 or email (kfuller@firstenergycorp.com). You may discuss with this person, either before or during negotiation of the right-of-way agreement, these methods and any other questions you may have about right-of-way maintenance.

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If you believe that the maintenance method(s) used by the company would raise problems with your use of your land adjacent to the right-of-way, it is your responsibility as the landowner to bring this to the attention of the utility before you sign the right-of-way agreement.

The utility company has a responsibility to maintain its right-of-way and regular maintenance must occur. Although you as the landowner cannot determine whether or not maintenance will occur, your right-of-way agreement may specify certain conditions on the performance of the maintenance program which are important to you. These conditions can be part of the negotiations between you and the utility company for your land, since the right-of-way agreement is a legal contract between the landowner and the utility company. It is important for you to understand also that the maintenance methods used by the utility may change over time as the costs of maintenance or the methods of performing maintenance change. You may want to specify in your right-of-way agreement that the utility company inform you of changes in its maintenance methods or in the maintenance schedule for your land.

The provisions of the right-of-way agreement are enforceable in the local Court of Common Pleas. The right-of-way agreement cannot be enforced by the Pennsylvania Public Utility Commission. Any claims for damage resulting from improper maintenance of the right-of-way must be settled with the utility, its contractors, or in local Court of Common Pleas at your expense. The Commission cannot award damages for violations of the right-of-way agreement.

MID-ATLANTIC INTERSTATE TRANSMISSION, LLC (MAIT)
Ortanna 115kV Transmission Line Project
Code of Conduct
For
Right-of-Way Agents and Subcontractor Employees

To Property Owner and any affected adjacent Property Owner on the Transmission Line Project:

This Code of Conduct applies to all communications and interactions with property owners and occupants of property by all right-of-way agents and subcontractor employees representing MAIT in the negotiation of right-of-way, subsequent acquisition of property rights, including the performance of surveying, environmental assessments and other activities for the Orrtanna 115kV Transmission Line Project ("Project") on property not owned by MAIT.

Property owners may report improper public utility employee/land agent practices to the following agencies:

Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
1-800-692-7380 (Utility Customer Hotline)

Pennsylvania Office of Consumer Advocate
555 Walnut Street
5th Floor Forum Place
Harrisburg PA 17101-1923
717-783-5048
1-800-684-6560 (PA Only)

CODE OF CONDUCT

1. **All communications with property owners and occupants must be factually correct and made in good faith.**

    a. Do provide maps and documents necessary to keep the landowner properly informed
    b. Do not make false or misleading statements.
    c. Do not misrepresent any fact.

d. If you do not know the answer to a question, do not speculate about the answer. Advise the property owner that you will investigate the question and provide an answer later.
e. Follow-up in a timely manner on all commitments to provide additional information.
f. Do not suggest that the Project is required for national or homeland security reasons or has been authorized by the federal government.
h. Do not send written communications suggesting an agreement has been reached when, in fact, an agreement has not been reached.
i. If information provided is subsequently determined to be incorrect, follow up with the property owner as soon as practical to provide the corrected information.
j. Do provide the property owner with appropriate contact information should additional contacts be necessary.

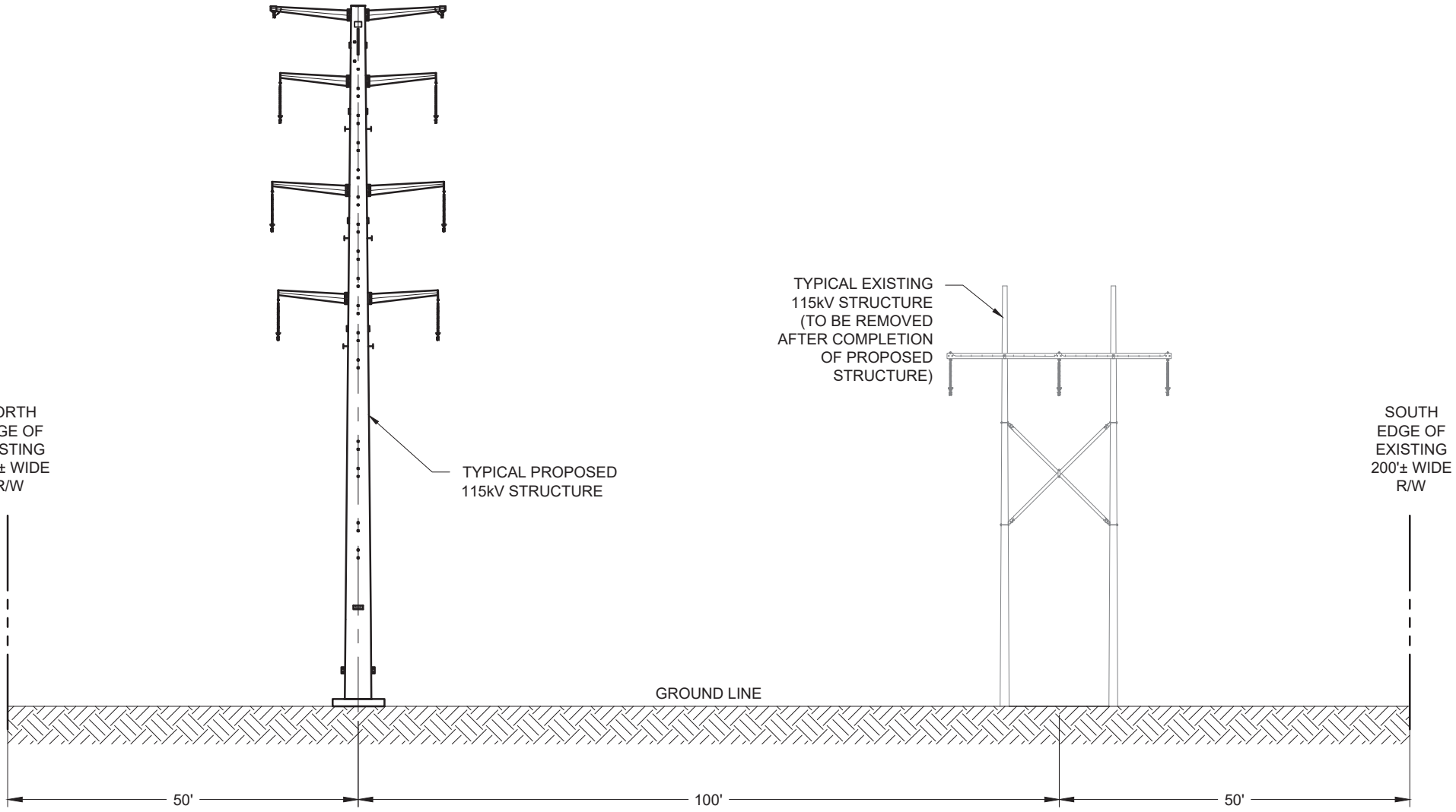
2. **All Communications and interactions with property owners and occupants of property must be respectful and reflect fair dealing**.

a. When contacting a property owner in person, promptly identify yourself as representing MAIT and display your Company photo ID badge.
b. When contacting a property owner by telephone, promptly identify yourself as representing MAIT.
c. Do not engage in behavior that may be considered harassing, coercive, manipulative, intimidating or causing undue pressure.
d. All communications by a property owner, whether in person, by telephone or in writing, in which the property owner indicates that he or she does not want to negotiate or does not want to give permission for surveying or other work on his or her property, must be respected and politely accepted without argument. Unless specifically authorized by MAIT, do not contact the property owner again regarding negotiations or requests for permission.
e. When asked to leave property, promptly leave and do not return unless specifically authorized by MAIT.
f. If discussions with the property owner become acrimonious, politely discontinue the discussion and withdraw from the situation.
g. Obtain permission to enter property for purposes of surveying or conducting environmental assessments or other activities. Clearly explain to the property owner the scope of the work to be conducted based on the permission given. Attempt to notify the occupant of the property each time you enter the property based on this permission.
h. Do not represent that a relative, neighbor and/or friend have signed a document or reached an agreement with MAIT.
i. Do not ask a relative, neighbor and/or friend of a property owner to convince the property owner to take any action.

j. Do not represent that a relative, neighbor and/or friend supports or opposes the Project.
k. Do not suggest that any person should be ashamed of or embarrassed by his or her opposition to the Project or that such opposition is inappropriate.
l. Do not argue with property owners about the merits of the Project.
m. Do not suggest that an offer is "take it or leave it."
n. Do not threaten to call law enforcement officers or obtain court orders.
o. Do not threaten the use of eminent domain.
p. Do not suggest that MAIT will seek federal authorization to construct the Project.
q. Avoid discussing a property owner's failure to note an existing easement when purchasing the property and other comments about the property owner's acquisition of the property.

3. **All communications and interactions with property owners and/or their representatives of property must respect the privacy of property owners and other persons.**

a. Discussions with property owners and/or their representatives are to remain confidential
b. Do not discuss your negotiations or interactions with other property owners or other persons.
c. Do not ask relatives, neighbors and/or friends to influence the property owner or any other person.
d. Avoid discussions of personal matters about the property owner, others and yourself.



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

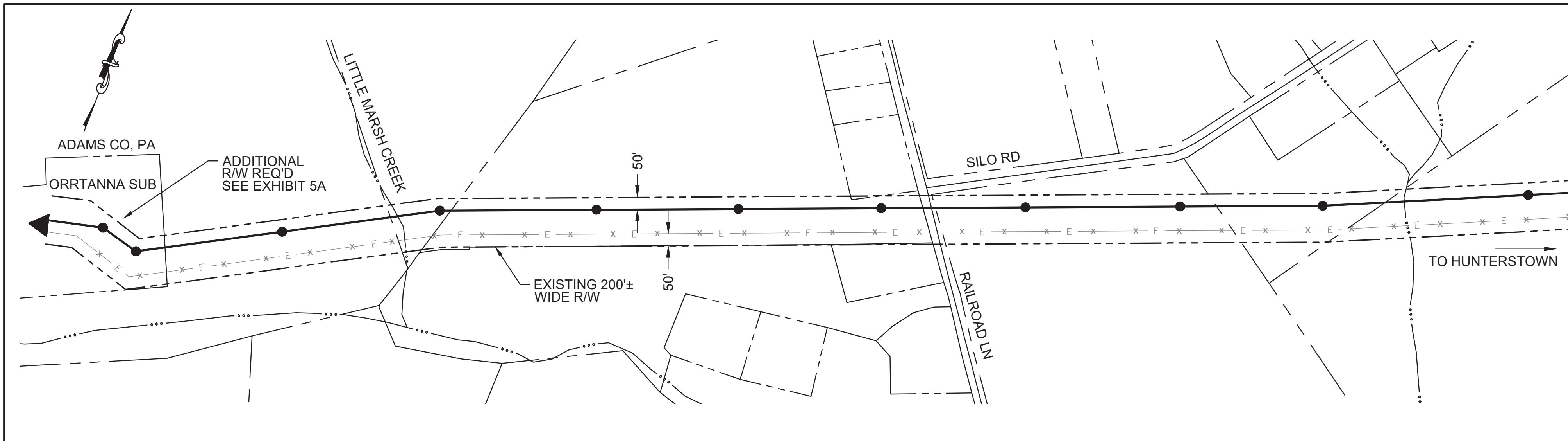
HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

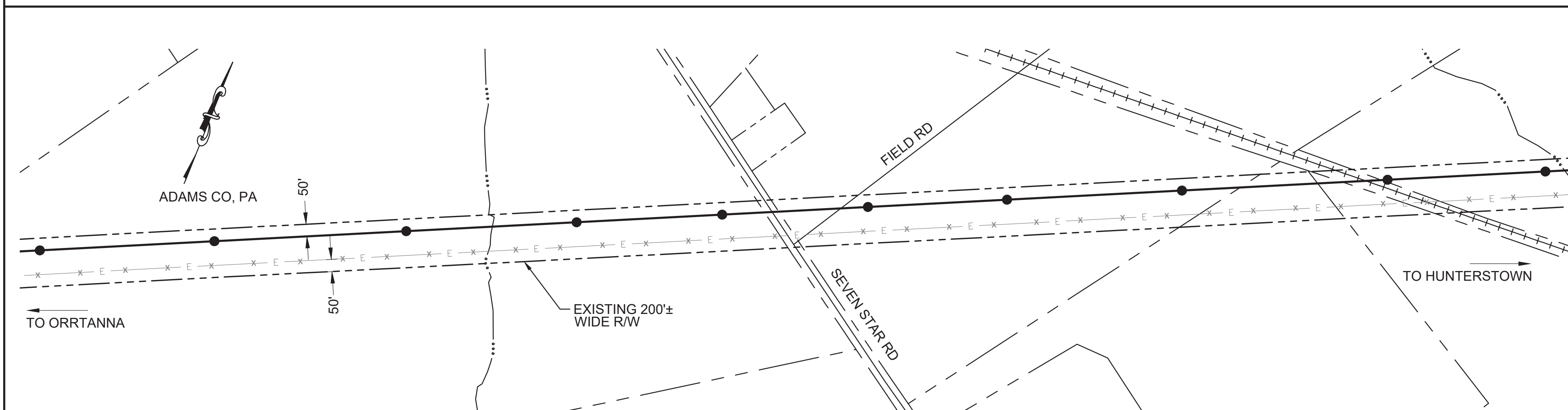
TYPICAL RIGHT OF WAY
CROSS SECTION

EXHIBIT 20

PAPER SIZE: 11X8.5

SCALE: NTS





LEGEND

- PROPOSED 115kV TRANSMISSION LINE
- PROPOSED STEEL STRUCTURE
- EXISTING 115kV TO BE REMOVED
- EXISTING 500kV TRANSMISSION LINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE

PAPER SIZE: 17X11

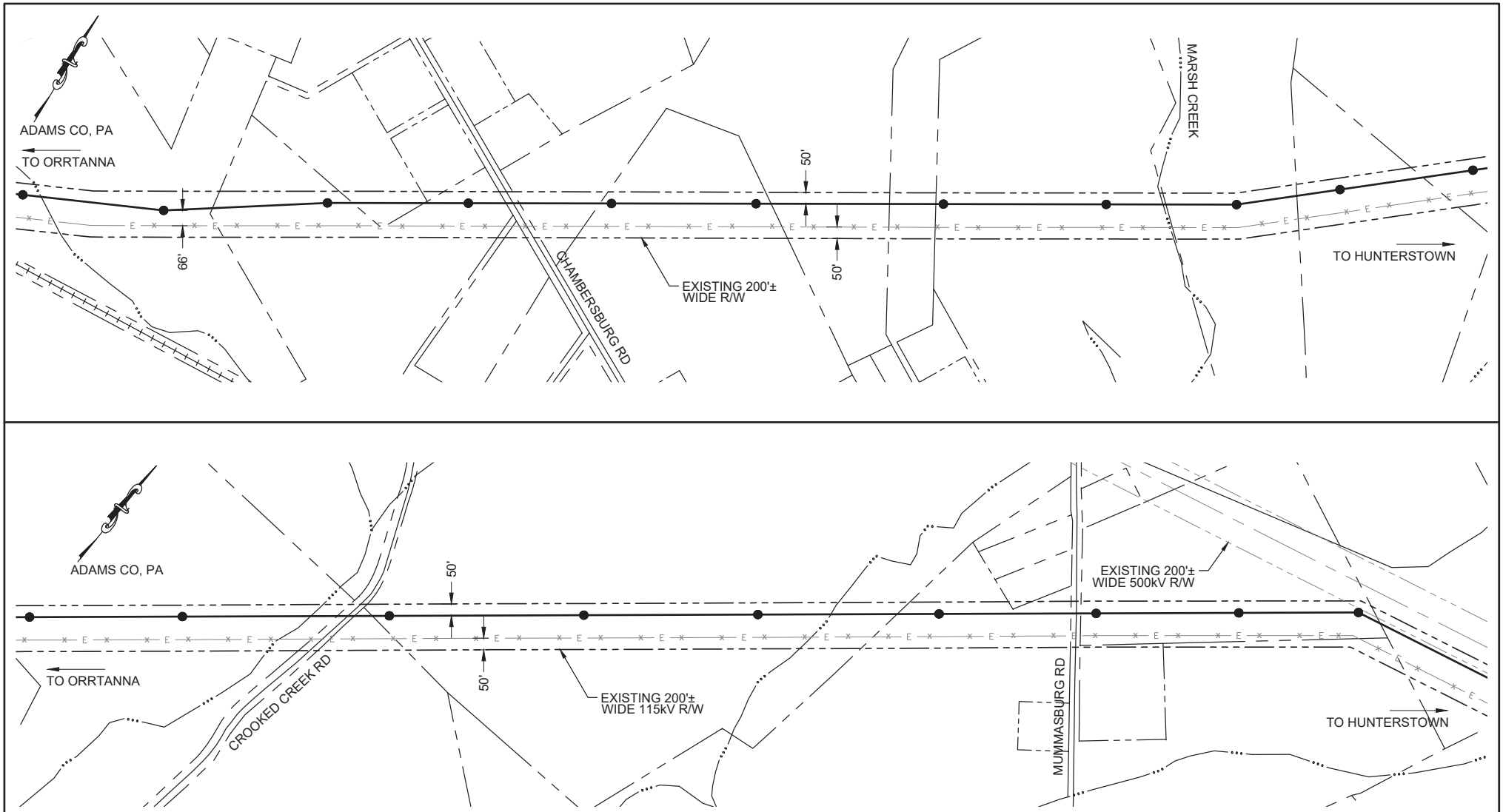
SCALE: NTS

MAIT Mid-Atlantic Interstate Transmission, LLC

HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

GENERAL LAYOUT

EXHIBIT 21 (SHEET 1 OF 5)



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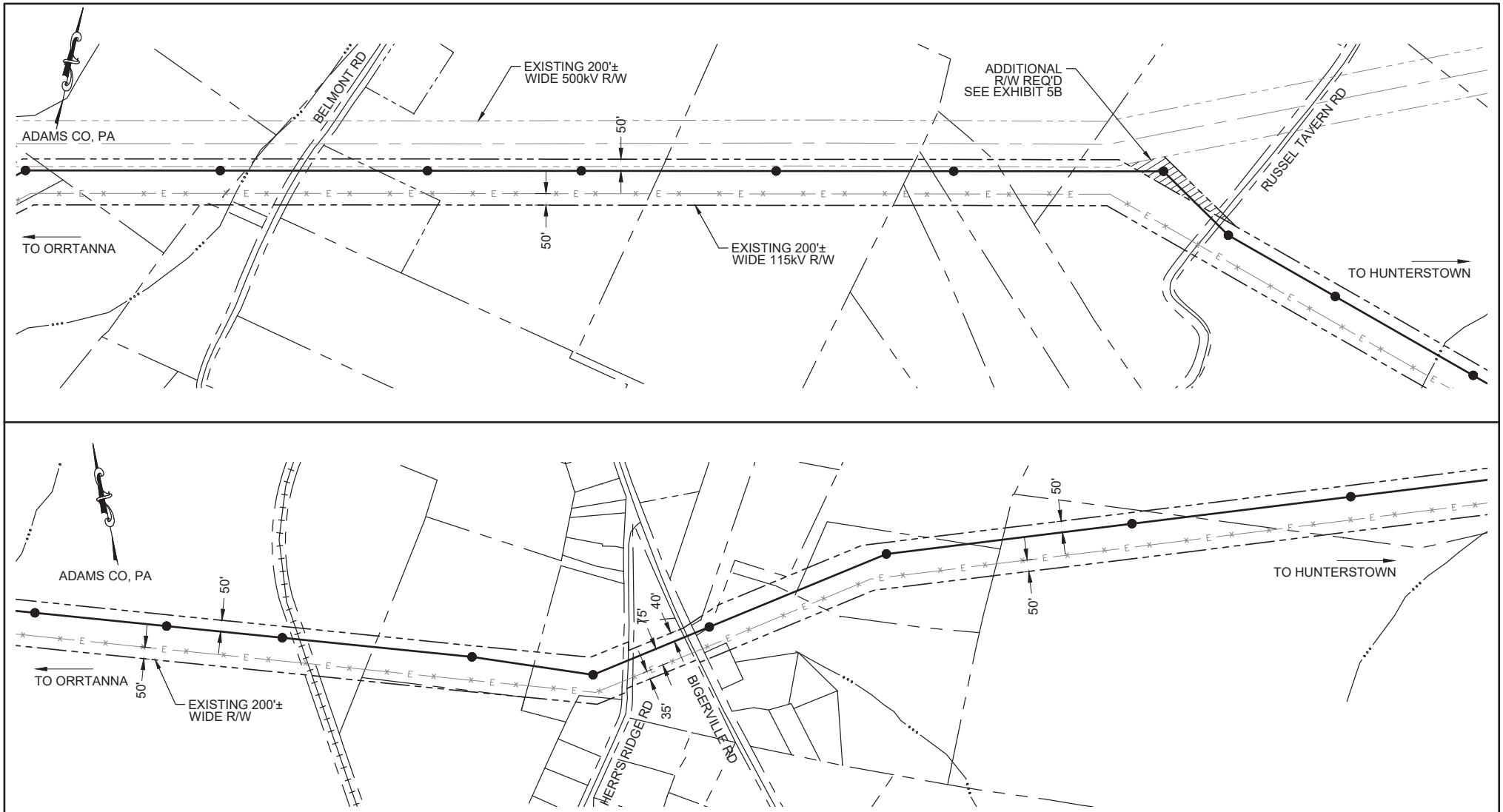
MAIT
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

GENERAL LAYOUT

EXHIBIT 21 (SHEET 2 OF 5)



LEGEND

- PROPOSED 115kV TRANSMISSION LINE
- PROPOSED STEEL STRUCTURE
- EXISTING 115kV LINE TO BE REMOVED
- EXISTING 500kV TRANSMISSION LINE
- RIGHT–OF–WAY LINE
- PROPERTY LINE

SCALE: NTS

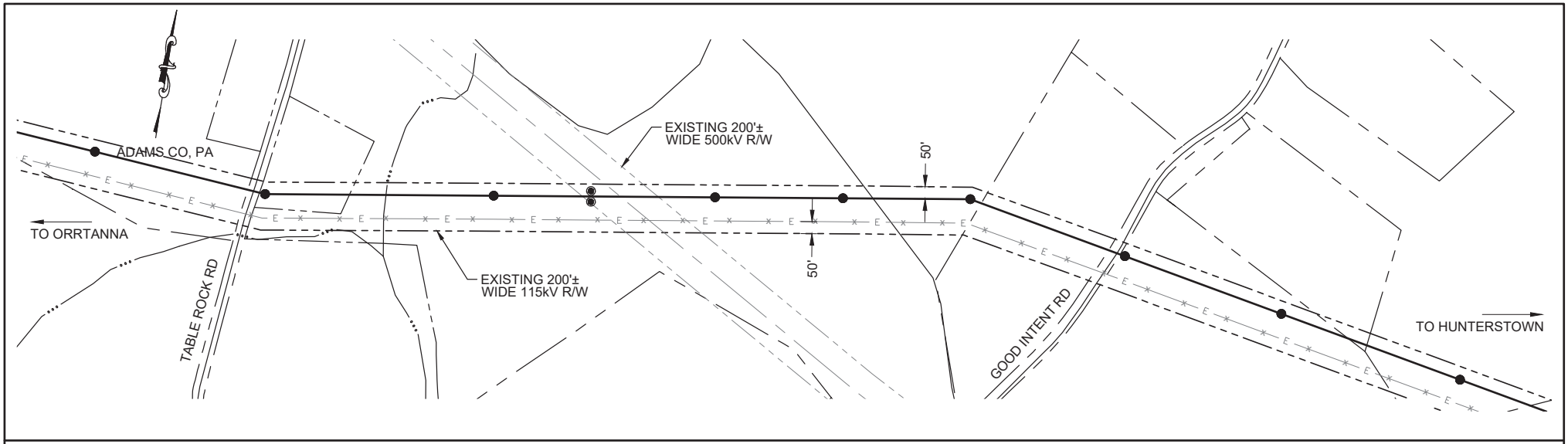
MAIT. Mid-Atlantic Interstate Transmission, LLC

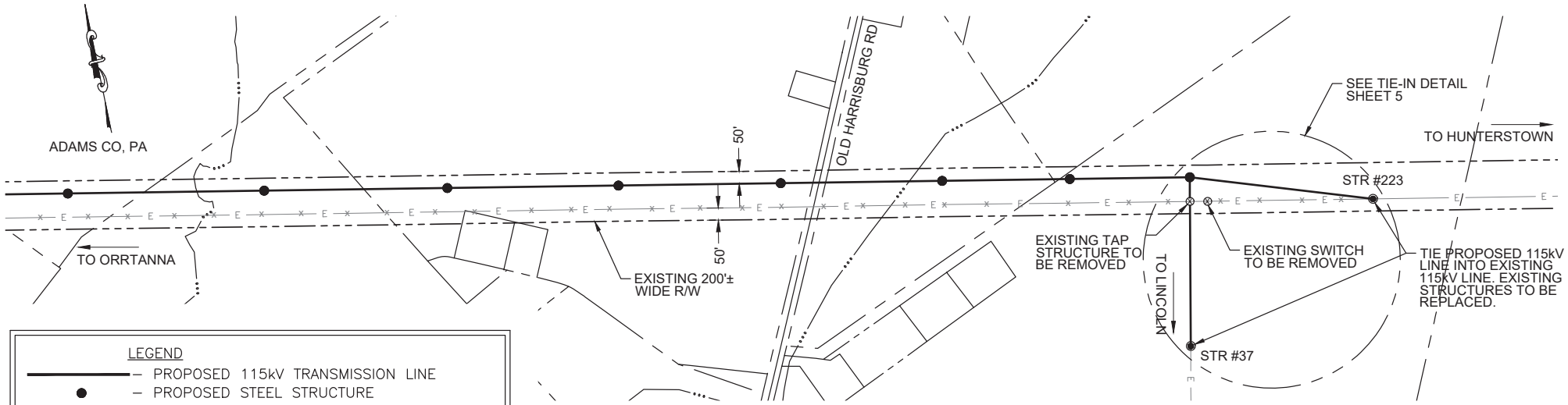
HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

GENERAL LAYOUT

EXHIBIT 21 (SHEET 3 OF 5)

PAPER SIZE: 17X11





LEGEND

- PROPOSED 115kV TRANSMISSION LINE
- PROPOSED STEEL STRUCTURE
- PROPOSED WOOD STRUCTURE
- EXISTING STRUCTURE TO BE REMOVED
- EXISTING 115kV TRANSMISSION LINE
- EXISTING 500kV TRANSMISSION LINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- EXISTING 115kV LINE TO BE REMOVED

SCALE: NTS

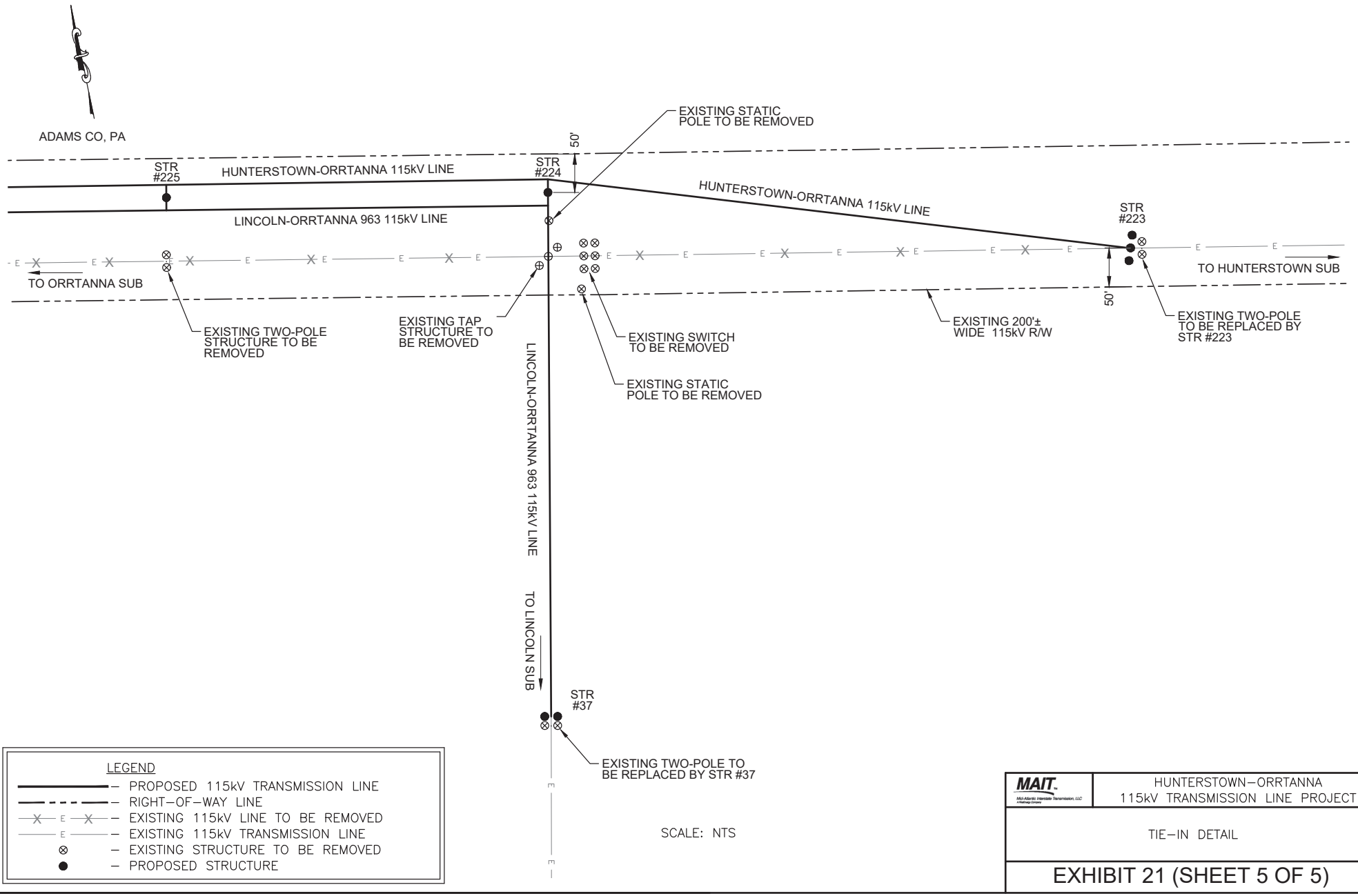
PAPER SIZE: 17X11

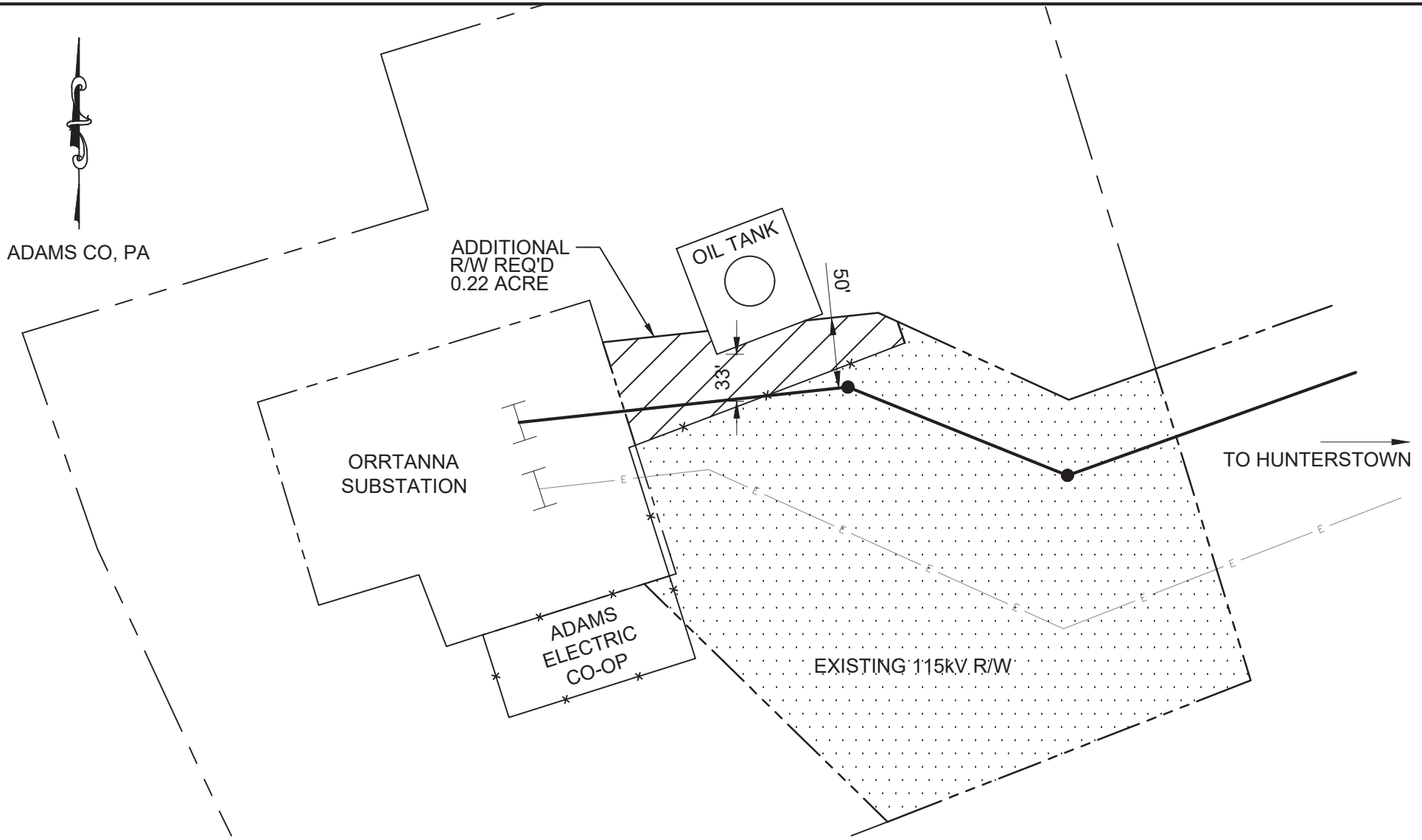
MAIT. Mid-Atlantic Interstate Transmission, LLC

HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

GENERAL LAYOUT

EXHIBIT 21 (SHEET 4 OF 5)


ADAMS CO, PA
STR #225
HUNTERSTOWN-ORRTANNA 115kV LINE
STR #224
50'
EXISTING STATIC POLE TO BE REMOVED
HUNTERSTOWN-ORRTANNA 115kV LINE
LINCOLN-ORRTANNA 963 115kV LINE
STR #223
TO ORRTANNA SUB
TO HUNTERSTOWN SUB
50'
EXISTING TWO-POLE STRUCTURE TO BE REMOVED
EXISTING TAP STRUCTURE TO BE REMOVED
EXISTING SWITCH TO BE REMOVED
EXISTING STATIC POLE TO BE REMOVED
EXISTING 200'± WIDE 115kV R/W
EXISTING TWO-POLE TO BE REPLACED BY STR #223
LINCOLN-ORRTANNA 963 115kV LINE
TO LINCOLN SUB
STR #37
EXISTING TWO-POLE TO BE REPLACED BY STR #37
LEGEND
PROPOSED 115kV TRANSMISSION LINE
RIGHT-OF-WAY LINE
EXISTING 115kV LINE TO BE REMOVED
EXISTING 115kV TRANSMISSION LINE
EXISTING STRUCTURE TO BE REMOVED
PROPOSED STRUCTURE
SCALE: NTS
MAIT.
Mid-Atlantic Interstate Transmission, LLC
HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT
TIE–IN DETAIL
EXHIBIT 21 (SHEET 5 OF 5)
PAPER SIZE: 17X11



LEGEND

- PROPOSED 115kV TRANSMISSION LINE
- PROPOSED STEEL STRUCTURE
- E — EXISTING 115kV TRANSMISSION LINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE

SCALE: NTS

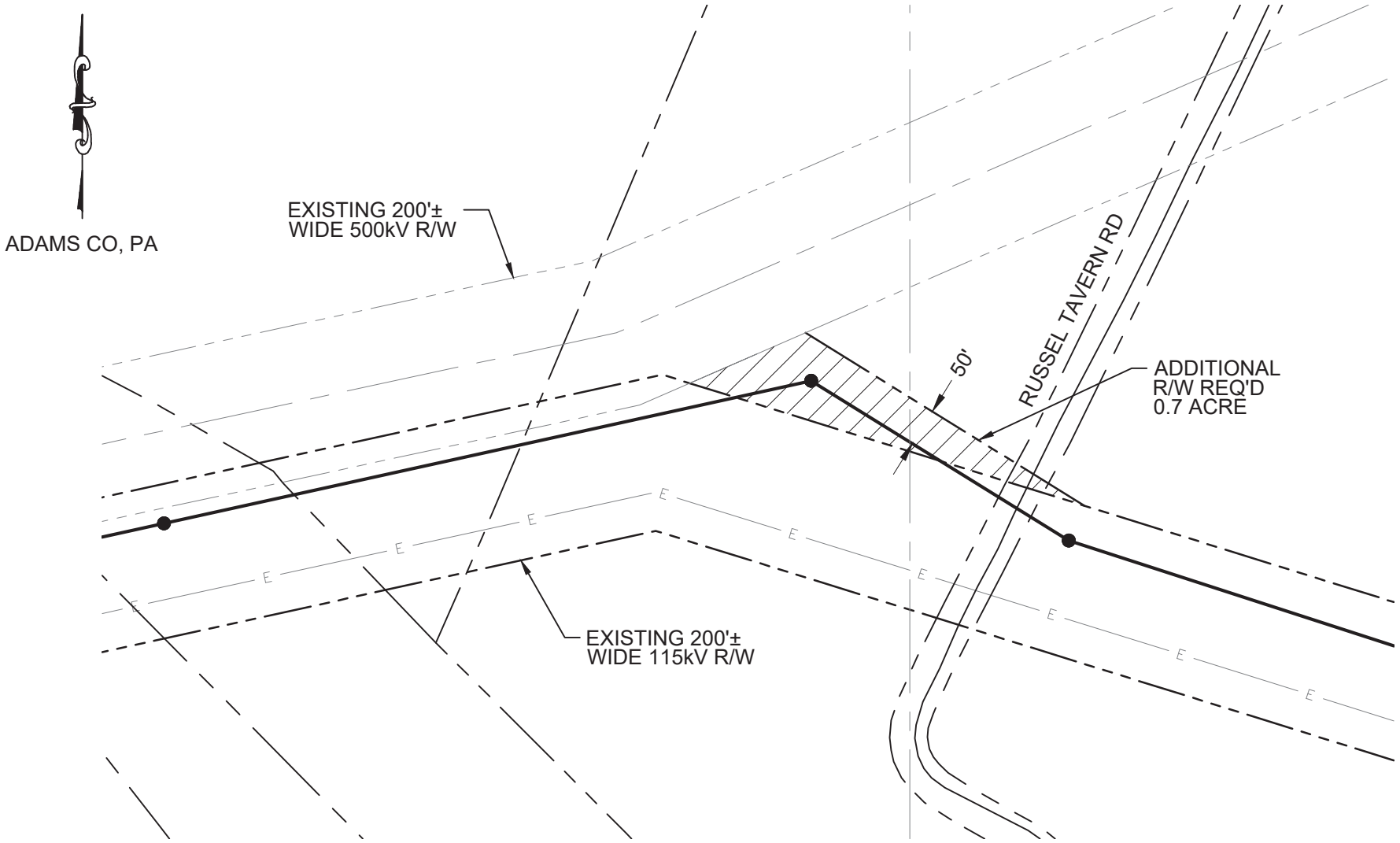
MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

ORRTANNA POWER, LLC
PARCEL 20C12–0109–000
EASEMENT DRAWING

EXHIBIT 22A

PAPER SIZE: 11X8.5



LEGEND

- PROPOSED 115kV TRANSMISSION LINE
- PROPOSED STEEL STRUCTURE
- EXISTING 115kV TRANSMISSION LINE
- EXISTING 500kV TRANSMISSION LINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE

SCALE: NTS

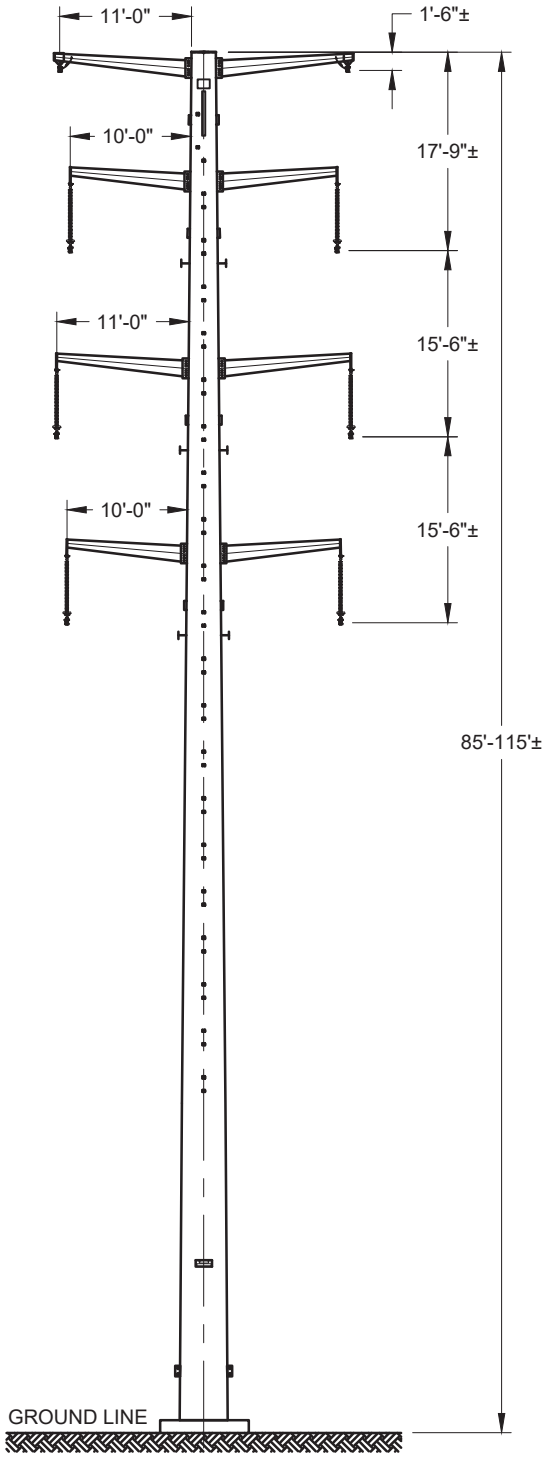
MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

ROLAND & JOYCE OFFUTT
PARCEL 07F10–0075–000
EASEMENT DRAWING

EXHIBIT 22B

PAPER SIZE: 11X8.5



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

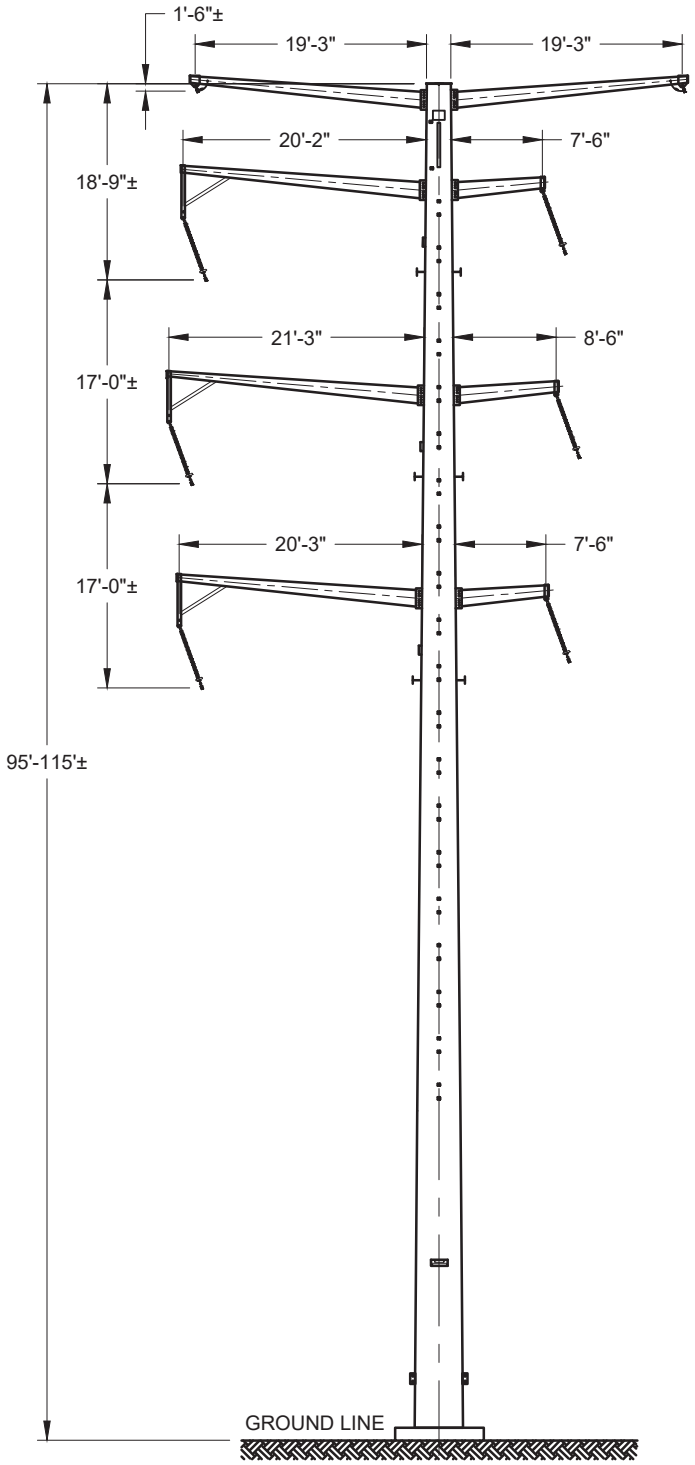
HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

115kV DOUBLE CIRCUIT TUBULAR STEEL
STRUCTURE SUSPENSION SINGLE POLE
ANGLES 0° TO 5°

EXHIBIT 23A

PAPER SIZE: 8.5X11

SCALE: NTS



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

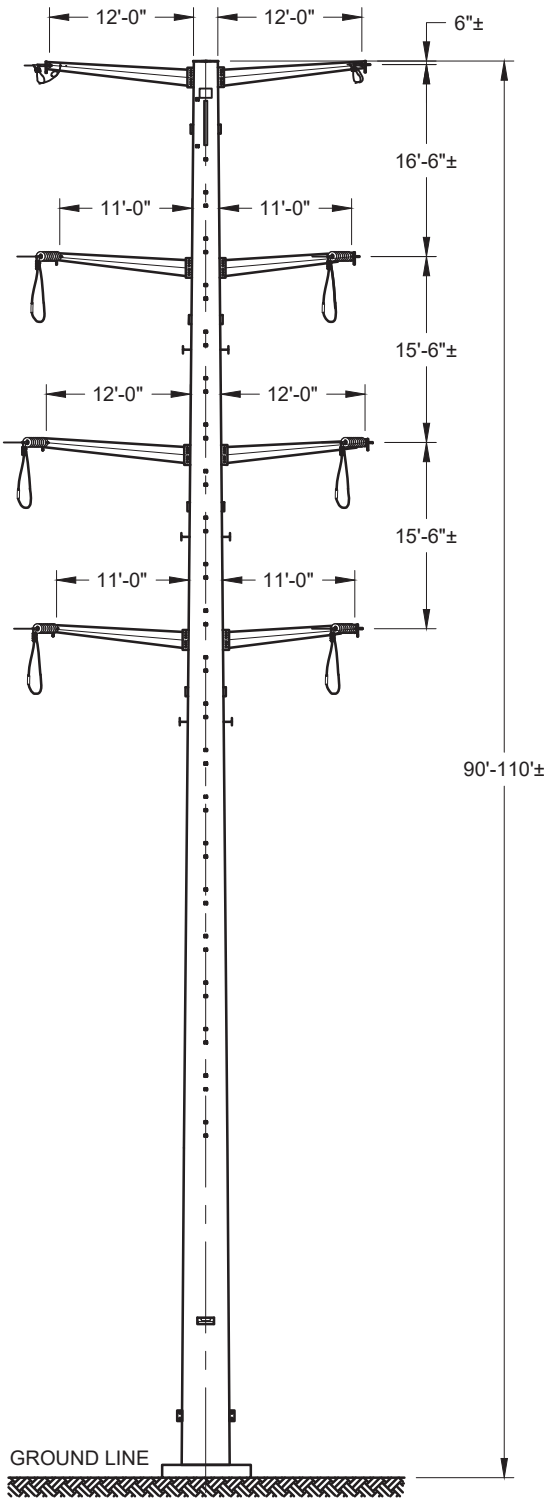
HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

115kV DOUBLE CIRCUIT TUBULAR STEEL
STRUCTURE SUSPENSION SINGLE POLE
ANGLES 5° TO 30°

EXHIBIT 23B

SCALE: NTS

PAPER SIZE: 8.5X11



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

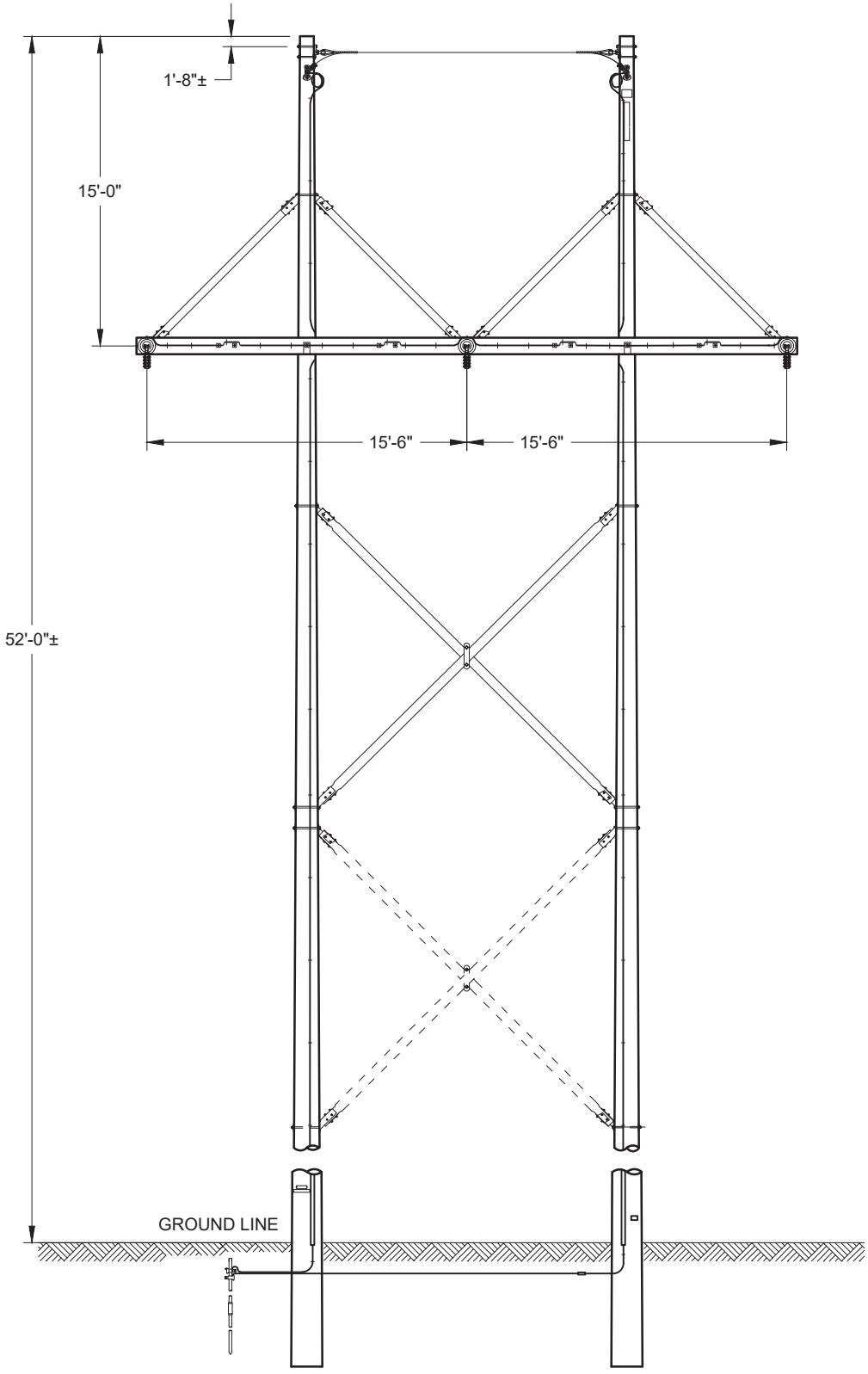
HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

115kV DOUBLE CIRCUIT TUBULAR STEEL
STRUCTURE DEADEND SINGLE POLE
ANGLES 0° TO 50°

EXHIBIT 23C

PAPER SIZE: 8.5X11

SCALE: NTS



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

115kV SINGLE CIRCUIT WOOD POLE STRUCTURE
TANGENT STRAIN HORIZONTAL
TWO POLE H–FRAME

EXHIBIT 23D

SCALE: NTS

PAPER SIZE: 8.5X11

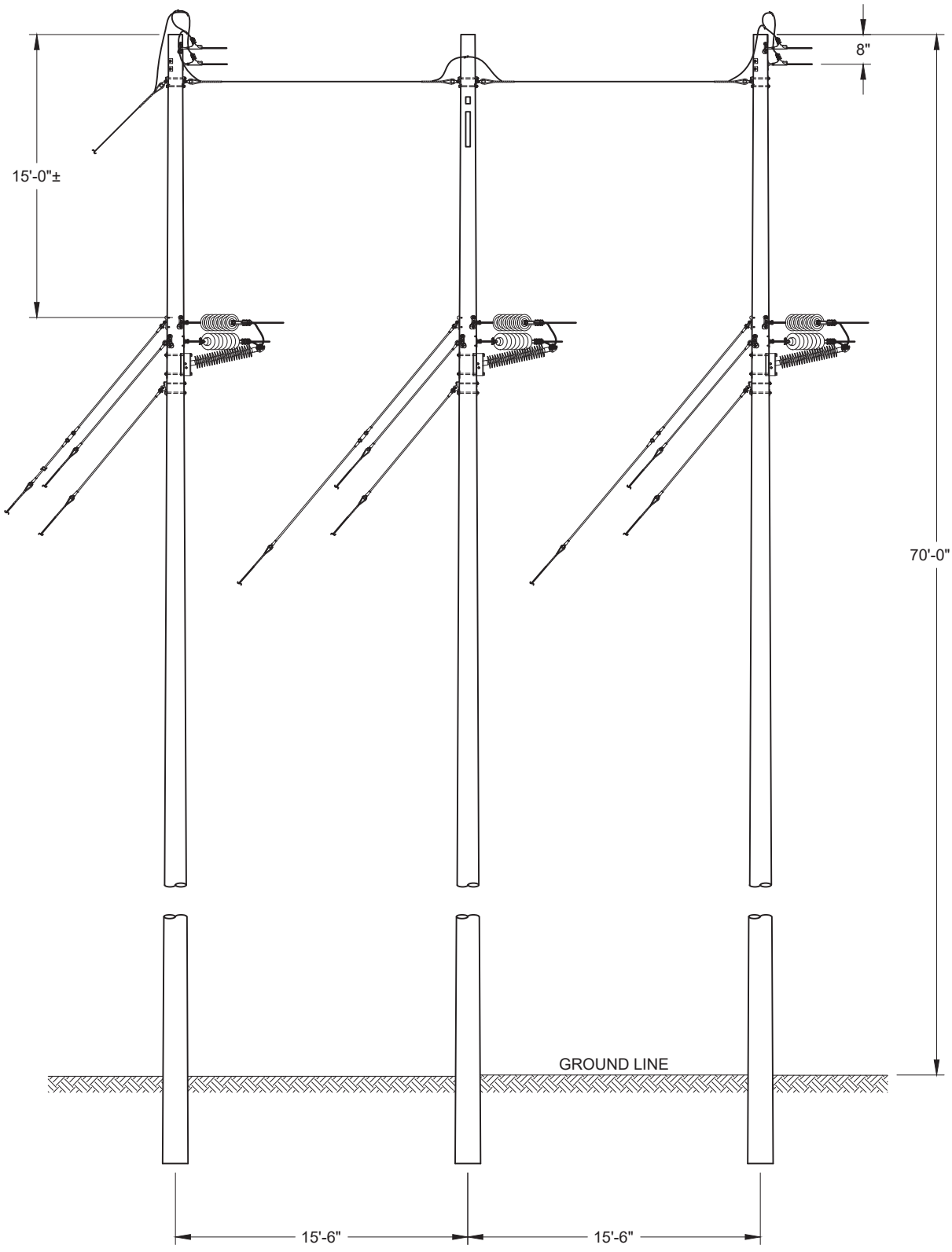


EXHIBIT 23A

MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

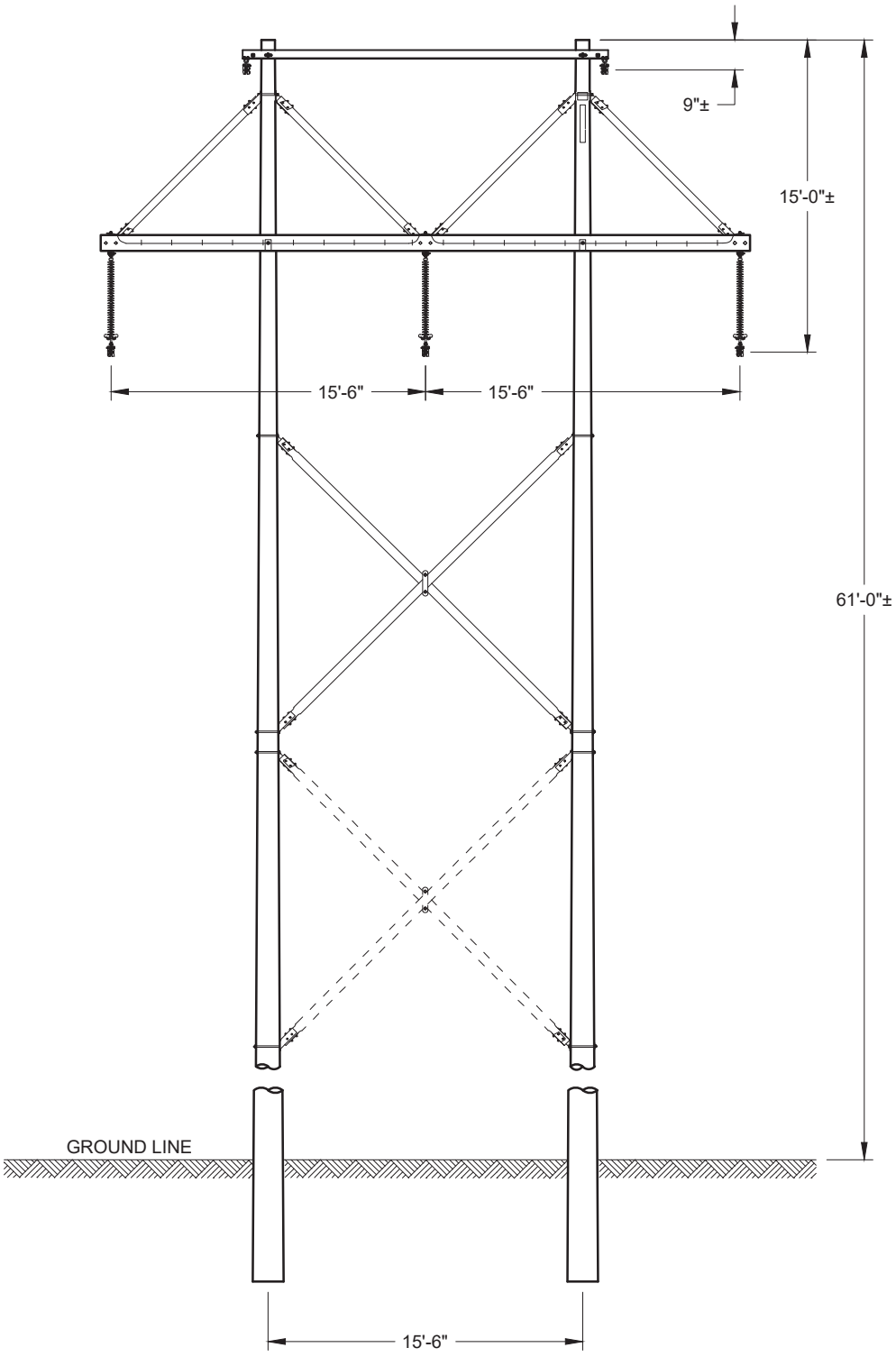
HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

115kV SINGLE CIRCUIT WOOD POLE STRUCTURE
DEADEND HORIZONTAL THREE POLE
ANGLES 3° TO 27°

EXHIBIT 23E

SCALE: NTS

PAPER SIZE: 8.5X11



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

HUNTERSTOWN–ORRTANNA
115kV TRANSMISSION LINE PROJECT

115kV SINGLE CIRCUIT WOOD POLE STRUCTURE
SUSPENSION HORIZONTAL TWO POLE H–FRAME
ANGLES 0° TO 5°

EXHIBIT 23F

SCALE: NTS

PAPER SIZE: 8.5X11

MAINTAINING A
SAFE AND RELIABLE

TRANSMISSION SYSTEM

VEGETATION MANAGEMENT FOR NEW
TRANSMISSION CONSTRUCTION PROJECTS

FirstEnergy®

EXHIBIT 24

Transmission lines are considered the “superhighway” of the electric grid, moving large amounts of energy across our region from where it is generated to where it is needed.

Safely operating the power grid is a cornerstone of delivering reliable and affordable energy to our customers. An easement gives FirstEnergy the right to build, maintain and safely operate transmission lines, which includes removing trees and managing vegetation. The width of a transmission line right-of-way (ROW) varies according to the voltage of the lines and the easement rights originally negotiated with property owners. An easement agreement with a property owner remains in place even if the property is transferred or sold to a new owner.

ENSURING SERVICE RELIABILITY

Unless properly maintained by FirstEnergy, trees have the potential to come in contact with power lines and other electric facilities and cause power outages, especially during severe weather. We’re aware that tree trimming and tree removal can sometimes be a sensitive issue for property owners, but the work must be done to comply with reliability mandates established by the Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC), and state public utility commissions.

FirstEnergy employees and forestry contractors follow strict safety precautions and are committed to managing vegetation in ways that have a minimal impact on the environment.

Creating and sustaining compatible, stable and low-growing habitat on the ROW is a key component of a successful vegetation management program. A properly maintained transmission line corridor should include a diverse mixture of grasses, low-growing shrubs and other ground cover preferred by birds, deer and other wildlife to promote a thriving habitat. A well-managed ROW provides food and cover wildlife need to survive, and the electric service reliability our customers require.

FirstEnergy’s policy regarding transmission lines includes the removal of all trees, regardless of height, to the edge of the ROW. This may include removing trees where pruning was completed.

We also inspect areas adjacent to the ROW. Trees that are dead, dying, diseased, structurally defective, leaning or significantly encroaching the ROW may be removed if they pose a danger of falling into or near a transmission line. Strict vegetation management practices are followed for new transmission projects as well as scheduled maintenance work.

A properly maintained transmission line corridor should include a diverse mixture of grasses, low-growing shrubs and other ground cover preferred by birds, deer and other wildlife to promote a thriving habitat.

NEW TRANSMISSION CONSTRUCTION PROJECTS

FirstEnergy's *Energizing the Future* program is a long-term transmission initiative that involves upgrading and modernizing the grid to meet the future demands of our customers and communities.

This initiative includes the construction of new transmission lines as well as the rebuilding of existing lines. These projects require the removal of vegetation in the ROW to ensure proper clearance for overhead lines. Vegetation also is frequently removed in areas where construction activities occur. In some cases, FirstEnergy may need to acquire tree-removal rights from property owners for projects that do not require additional ROW.

FirstEnergy's policy is to make every reasonable effort to notify property owners before vegetation management work begins along a new or existing transmission corridor. During construction projects, our contractors generally use tree-marking paint and flagging to identify trees and brush that require removal or pruning. Our crews attempt to make follow-up contact with property owners after trees are marked to address questions or concerns.

MANUAL REMOVAL AND TRIMMING

For as long as there have been power lines, forestry personnel have used manual saws and bucket trucks to remove trees and limbs. Manual tree work requires a forestry professional to climb a tree and remove limbs or use a chainsaw to remove the tree at ground level. In recent years, the forestry industry has moved toward mechanical techniques to increase worker safety, improve crew efficiency and enhance quality.

MECHANICAL REMOVAL

Qualified professionals determine the techniques and equipment used to get the job done based on site conditions and accessibility. Some of the tools commonly used during mechanical removal operations to cut, transport and stack trees include harvesting equipment, skidders, chippers, excavators, log trucks, bucket trucks and large brush-mowing equipment.

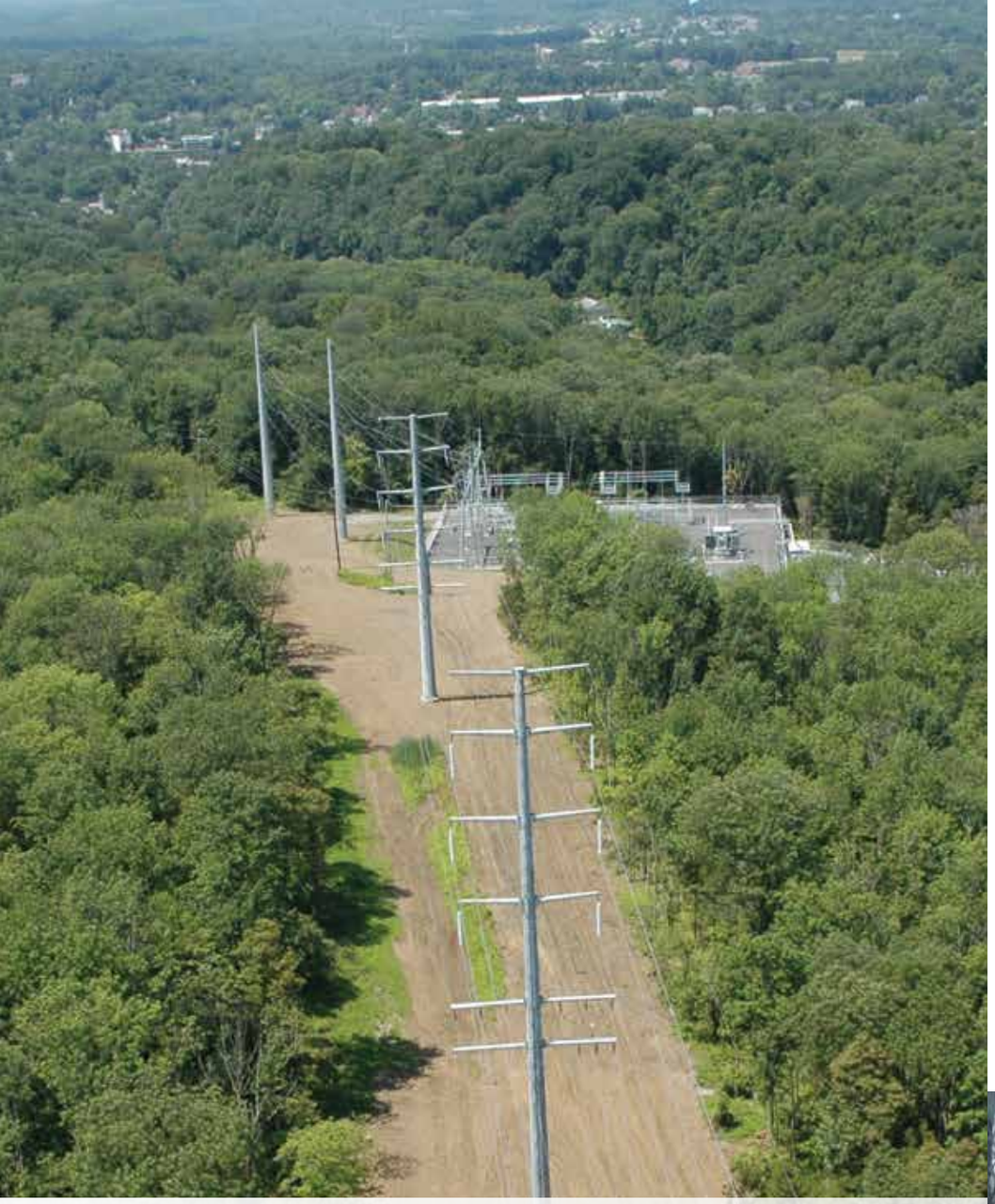
Construction matting is often installed in the work area to support equipment, protect underground infrastructure and minimize damage to private property and sensitive areas.

AERIAL SAW

Manual tree trimming is limited by the reach of a bucket truck or a tree climber, which can make trimming the very top of the tree a challenge. Another way to trim along the edge of a ROW is by using helicopters equipped with an aerial saw, which consists of multiple 24-inch rotary blades powered by a motor suspended on a vertical boom beneath the helicopter. FirstEnergy has been safely using aerial tree trimming since 1988, in accordance with American National Standards Institute tree-pruning standards.

As the helicopter slowly flies along the ROW, the aerial saw trims trees and other vegetation efficiently and thoroughly. Tree limbs are neatly cut without tearing, and typically fall straight down, assisted by air blasts from the helicopter rotors.

The aerial saw eliminates the risk of injury to workers using bucket trucks or climbing trees near energized lines. It is most commonly used in remote areas or places inaccessible by vehicles. In addition, this method helps protect private land and roads from damage by heavy equipment during the course of the vegetation management work. The aerial saw can perform work quickly, trimming both sides of a 10- to 12-mile ROW in one week. It also is an effective tool to use in environmentally sensitive areas because it eliminates the use of heavy equipment to perform the work. This method is not typically used to trim trees in residential areas unless safety buffers are used.



CLEAN UP

FirstEnergy contractors clean up debris following clearing, trimming or aerial saw work. Debris is removed from maintained yards, agricultural fields, access roads and environmentally sensitive areas. In unmaintained forested areas, debris is stacked in piles along the edge of the ROW. This practice is used where appropriate to minimize impacts associated with debris disposal, and also benefits the environment by leaving material for wildlife habitat and nutrient recycling.

EPA-APPROVED HERBICIDE APPLICATION

Once the ROW is cleared of trees, it is important to take steps to prevent future growth of unwanted trees, shrubs and other incompatible plants. This is most effectively accomplished by using herbicides approved by the Environmental Protection Agency and authorized for use on utility ROW.

The EPA approves these products only after determining they will not adversely affect people, animals or the environment when properly applied. EPA-approved products have undergone significant testing. In fact, some of the products our contractors use are the same as those commonly used by homeowners to control weeds and other vegetation. Herbicide application is the preferred method to control immature trees or brush. Herbicide-control options are determined by terrain, brush height and density, and are designed to control only incompatible vegetation.

While mechanical methods such as cutting and mowing might appear to be less harmful compared with herbicide use, these methods have some disadvantages. For example, cutting and mowing vegetation may have the undesired effect of causing it to grow back thicker and fuller, requiring repeated and more frequent maintenance.

In subsequent years, once the preferred low-growing vegetation becomes dominant, less herbicide is needed for maintenance as incompatible species become less prevalent. Herbicide use also eliminates the need for much more frequent mechanical treatments, like tree trimming and mowing – meaning vegetation management crews are needed less often.

Herbicides also are important vegetation management tools to stop the spread of invasive plant species. Using herbicides helps control weeds and other nuisance plants from overtaking the ROW, and will stop the spread to adjacent areas, including private property.

Herbicides are applied by state-certified applicators, or under the supervision of a certified applicator. Herbicide application methods include individual cut-stump treatments directly applied to the stump; low-volume applications using a backpack spray kit; high-volume applications using off-road vehicles; and in some instances in remote areas and difficult terrain, the use of helicopters to apply an aerial spray. FirstEnergy vegetation managers and contractors are trained and certified in the use of herbicides.

An EPA-registered herbicide is applied to a freshly-cut stump to prevent regrowth.

INSPECTING AND MAINTAINING TRANSMISSION CORRIDORS

Inspections are a key component of FirstEnergy's comprehensive vegetation management program.

Twice a year, helicopters fly low over our transmission line corridors to inspect the condition of the electrical equipment and monitor any ROW encroachments from trees, shrubs or other vegetation.

In addition to the inspections, most of FirstEnergy's transmission corridors are maintained on a five-year cycle, based on expected growth rates. In New Jersey and certain areas of Pennsylvania, the vegetation maintenance work is done every four years. If a helicopter inspection uncovers an issue with a leaning tree or fast-growing vegetation, the problem will be addressed immediately rather than waiting until the next regularly scheduled vegetation management cycle.

During regularly scheduled maintenance cycles, FirstEnergy contractors perform detailed inspections of the corridor and identify areas where tree trimming, tree removal and brush control are required. FirstEnergy's policy is to make every reasonable effort to notify property owners before vegetation management work takes place along a ROW. However, in the event of storms or other emergencies, advance notice may not always be possible.

FirstEnergy employs integrated vegetation management (IVM) techniques, which involve evaluating the ROW to identify incompatible vegetation, the timeframe for control and the evaluation and selection of control options. These options include manual operations, mechanical methods, and the selective use of EPA-approved herbicides. Site characteristics, environmental impact and safety are analyzed to determine the most effective control options. The goal of IVM is to create and sustain stable and compatible vegetation within and along the transmission corridor.

Before

After

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GUIDELINES FOR PLANTING ON RIGHTS-OF-WAY

Before planting shrubs or other vegetation in or near any ROW, please contact a member of FirstEnergy's transmission forestry staff to determine if the species is compatible.

Remember, it's important to select the right plant for the right location. Planting proper vegetation in and around a ROW can help provide a sustainable and compatible plant community. However, the vegetation must be limited to low-growing plants – such as grasses, herbs and shrubs – that are less than 5 feet high when fully grown. Vegetation also must be planted at least 10 feet away from any pole, tower or guy wire and should not hinder access to the transmission line.

FirstEnergy foresters plant low-growing milkweed on a ROW as part of a demonstration project to encourage the growth of plant species that could help rejuvenate declining populations of bees, monarch butterflies and other pollinating insects.

FirstEnergy customer service phone numbers

During construction projects, FirstEnergy and its affiliates typically develop a project hotline number that can be used to reach the project team directly with questions or concerns. This number is generally provided to all property owners well in advance of construction. If customers need to contact FirstEnergy and a project hotline number is not available, these Customer Service numbers may be used.

THE ILLUMINATING COMPANY	1-800-589-3101
JCP&L	1-800-662-3115
MET-ED	1-800-545-7741
MON POWER	1-800-686-0022
OHIO EDISON	1-800-633-4766
PENELEC	1-800-545-7741
PENN POWER	1-800-720-3600
POTOMAC EDISON	1-800-686-0011
TOLEDO EDISON	1-800-447-3333
WEST PENN POWER	1-800-686-0021

Information about FirstEnergy's tree trimming and vegetation management program for its transmission system is available online at www.firstenergycorp.com/help/brochures.html.

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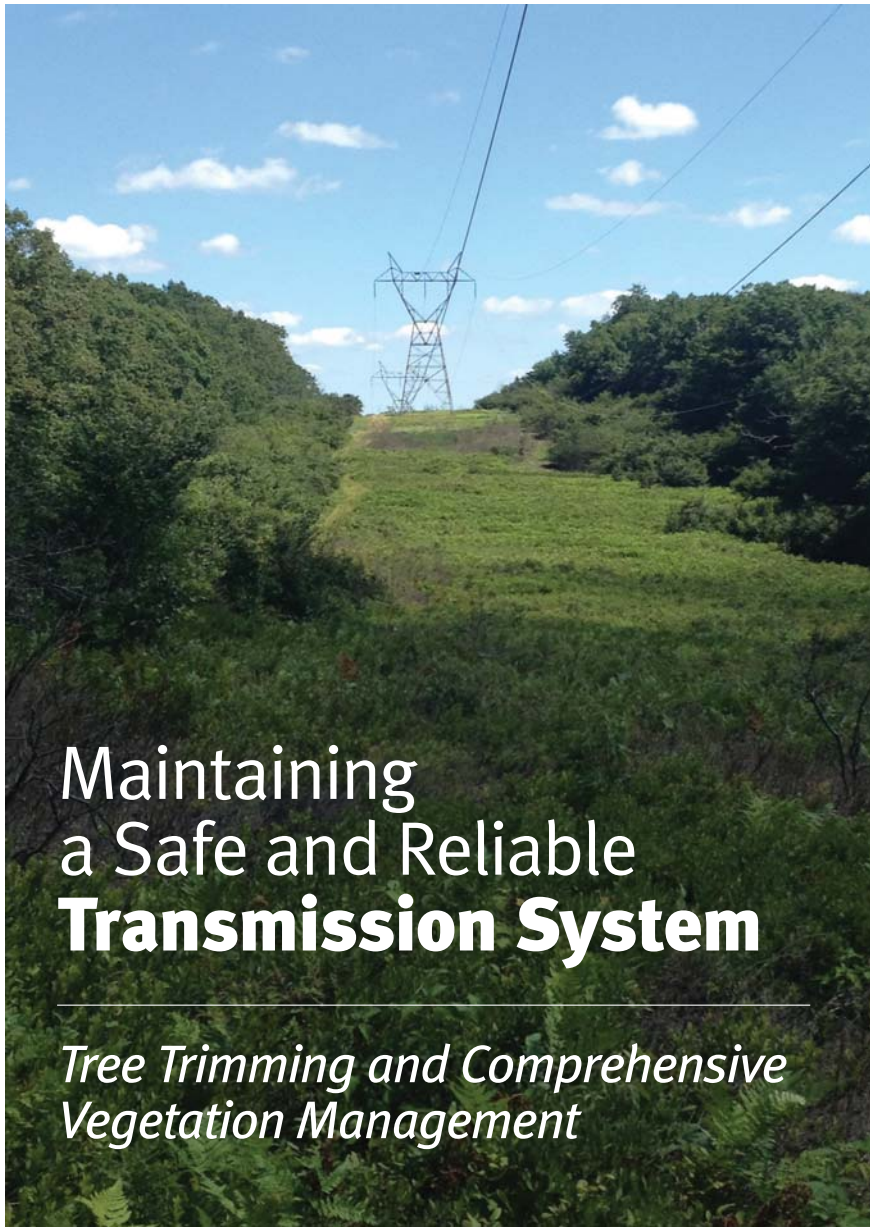

Maintaining a Safe and Reliable **Transmission System**

Tree Trimming and Comprehensive Vegetation Management

FirstEnergy

EXHIBIT 25
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Managing Vegetation Along FirstEnergy's Transmission System

Transmission lines are considered the "super highway" of the electric grid, allowing large amounts of electricity to be moved across the country from power plants to end-use customers.

As part of its ongoing efforts to enhance service reliability, FirstEnergy has a comprehensive, year-round program to remove and trim trees and manage vegetation along more than 13,000 miles of transmission line corridors in six states.

FirstEnergy's transmission system includes lines ranging in size from 69,000 to 500,000 volts. The width of transmission line rights-of-way (ROW) vary according to the voltage of the lines and the easement rights that were negotiated with the property owner prior to the lines being constructed.

Easements give FirstEnergy the right to build, operate and maintain transmission lines, which includes removing trees and managing vegetation. While many easements were negotiated by previous property owners, the terms of the agreement remain in place even if the property is transferred or sold.

Unless properly maintained by FirstEnergy, trees have the potential to come in contact with power lines and other electric facilities and can be a major cause of power outages, especially during severe weather.

As utilities look to enhance reliability and safety, it is important that existing vegetation management easement rights are enforced. The removal of trees under high-voltage lines rather than pruning serves to minimize the chance of any vegetation contact.

FirstEnergy is aware that this can be an emotional issue for property owners – but the work must be done to remain in compliance with reliability mandates established on the federal level by the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Council (NERC), and by state public utility commissions.

Proper vegetation management does not always involve removal of all vegetation. Compatible shrubs that do not have the potential to interfere with electric facilities typically are not disturbed.

Ultimately, transmission line corridors should include a diverse mixture of grasses, low growing shrubs and other ground cover preferred by birds, deer and small animals to promote a thriving wildlife habitat. In this way, a well-managed ROW provides food and cover wildlife need to survive, and the reliability electric customers require.

Ensuring **Service Reliability**

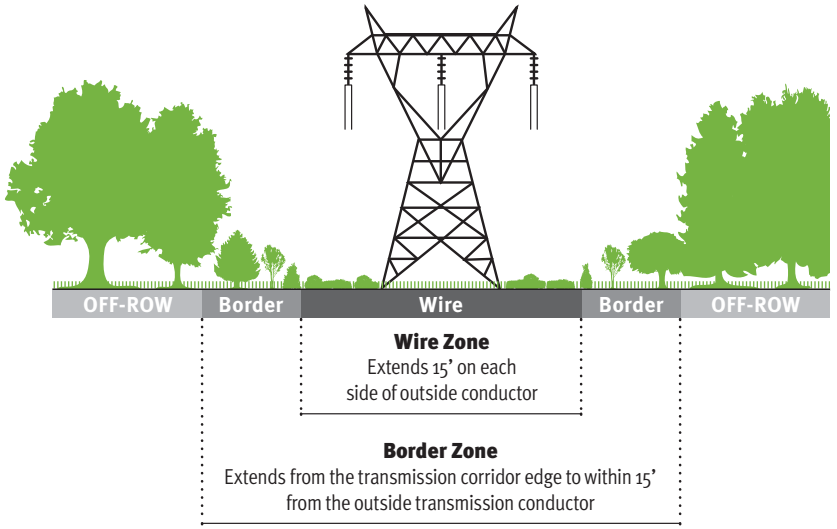
FirstEnergy has a comprehensive vegetation management program designed to maintain its transmission ROW. As part of this program, all safety precautions are utilized by FirstEnergy employees and forestry contractors. We are committed to managing vegetation in ways that will have a minimal impact on our environment.

Creating and sustaining a compatible, stable and low-growing plant community on the ROW is a key component to a successful vegetation management program.

FirstEnergy's policy regarding transmission lines includes the removal of all trees, regardless of height, to the edge of the ROW. This could include removing trees where pruning was done in the past.

In order to perform vegetation maintenance, FirstEnergy also requires a clear path for trucks and other heavy equipment to access the ROW and transmission structures. As a result, we focus on removing or controlling vegetation that may impede access and affect our ability to inspect transmission equipment for maintenance work.

When site conditions permit, FirstEnergy utilizes the "wire zone-border zone" approach for maintaining most of its higher voltage



transmission line corridors, typically those that are more than 100 feet wide. All trees and incompatible vegetation are removed and controlled in both zones. In the "wire zone," which extends about 15 feet beyond each side of where the wires are attached to tower or structure, efforts are made to encourage low growing grasses and shrubs that mature at less than five feet tall. In the "border zone," which extends beyond the wires to the edge of the ROW, taller shrubs and plants that mature at 15 feet or less are allowed to grow.

If the ROW is 100 feet or less, all incompatible vegetation will be controlled from edge to edge.

We also inspect the areas beyond the ROW. Trees that are leaning, dead or diseased may be removed if they are determined to pose a danger of falling into the transmission line.

Inspecting the **Corridors**

Inspections are a key component of FirstEnergy's comprehensive vegetation management program.

Twice a year, helicopters fly low over our transmission line corridors to inspect the condition of the electrical equipment and monitor any ROW encroachments from trees, shrubs or other vegetation.

In addition to the inspections, for most company transmission corridors, the vegetation is maintained on a five-year cycle, based on expected growth rates. In New Jersey and certain areas of Pennsylvania, the vegetation maintenance work is done every four years.

However, if a mid-cycle inspection uncovers an issue with a leaning tree or fast growing vegetation, the problem will be addressed immediately rather than waiting until the next regularly scheduled vegetation management cycle.

Multiple Options Can Be Used to Control Trees and Vegetation

FirstEnergy's policy is to make every reasonable effort to notify property owners prior to vegetation management work taking place along the transmission ROW. However, in the event of storms or other emergencies, advance notice may not always be possible.

FirstEnergy utilizes integrated vegetation management (IVM) techniques, which involve evaluating the transmission ROW to identify incompatible vegetation, the timeframe for control, and evaluation and selection of control options. These options include manual, mechanical and chemical methods that are used to prevent encroachments from vegetation located on and adjacent to transmission corridors. Site characteristics, environmental impact and worker/public safety are analyzed to determine the most effective control options. The goal of using IVM techniques is to create and sustain stable and compatible vegetation within and along the transmission corridor.

Depending on the location and the voltage of the transmission line, FirstEnergy and its tree contractors can utilize specific control methods – manual saws, aerial saws or herbicides – or a combination of methods, to safely and effectively remove and control vegetation.

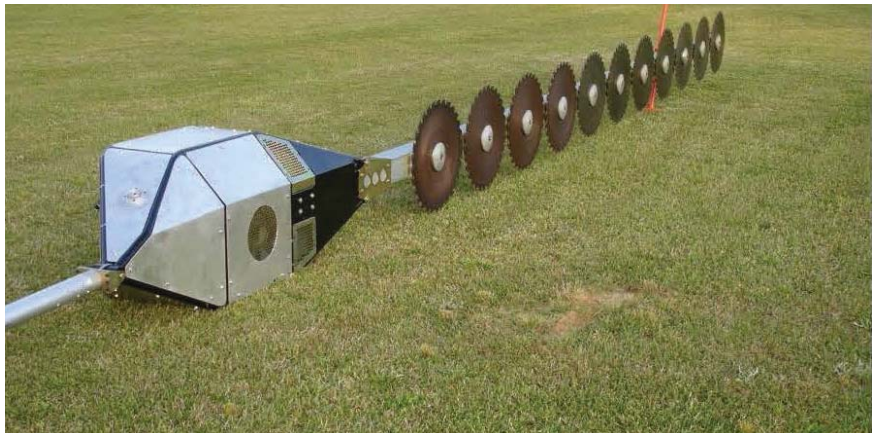
Manual Trimming

For as long as there have been power lines, forestry personnel have used manual saws and bucket trucks to remove trees and limbs. However, using this method is very labor intensive and some transmission lines are not easily accessible by foot or in a vehicle.

Manual tree trimming also is limited by the reach of the bucket truck or ladder, which can make trimming the very top of the tree a challenge.

Aerial Saw

Another way to trim along the edge of a ROW is using helicopters equipped with aerial saws. The saw attachment consisting of multiple 24-inch rotary blades powered by a motor suspended on a vertical



boom beneath the helicopter. The company has been safely using aerial tree-trimming since 1988 and aerial saws are in accordance with American National Standards Institute (ANSI) A300 tree pruning standards.

As the helicopter flies slowly along the ROW, the aerial saw cuts and trims trees and other vegetation rapidly and cleanly. Tree limbs 8 to 10 inches are neatly cut without tearing, and typically fall straight down, assisted by the air blasts from the rotors of the helicopter.

Benefits

The aerial saw eliminates the risk of injury to workers using bucket trucks or climbing trees near energized lines. The aerial saw can be used in remote areas or places inaccessible to a vehicle. In addition, this method helps protects private land and roads from damage by heavy equipment making repeated trips during the course of the work schedule.

Multiple Options Can Be Used to Control Trees and Vegetation (continued)

The aerial saw can perform work quickly, side-trimming both sides of a 10-to-12 mile right-of-way in one week. It also is an effective tool to use in environmentally sensitive areas since it is not necessary to take equipment in to perform the work.

Clean Up

Brush that has fallen onto access roads, maintained yards, agricultural fields or in streams will be moved to adjacent wooded areas by a ground crew shortly after the aerial saw has been used. The ground crew also will identify and remove individual dead trees found along the ROW that potentially threaten the transmission line.

The aerial saw is not a replacement for conventional tree-trimming methods, but it is very effective on hard-to-reach transmission and sub-transmission lines. This method is not used to trim trees in residential areas unless safety buffers are utilized.

Using an aerial saw allows subsequent maintenance work to focus on the removal of “priority” trees off the ROW. By using the aerial saw, we expect to extend the length of our tree-trimming cycle in rural areas.

EPA-Approved Herbicide Application

Once the ROW is cleared of trees, it is important to take steps to prevent future growth of incompatible vegetation. U.S. Environmental Protection Agency (EPA)- approved herbicides for use on utility ROW provide the most effective means of controlling unwanted trees, shrubs and other incompatible plants.

Safe and Effective

The EPA approves such products for use only after determining that they will not adversely affect people, animals or the environment when properly applied. Nearly 60 years of university and industry research also has shown that herbicide use on ROWs can help create optimum plant and wildlife habitats.

These products have undergone significant testing. In fact, some of the materials our contractors use are the same as those commonly used by homeowners to control weeds and other vegetation.

Herbicide application is the preferred method to control immature trees or brush. Herbicide control options are determined by terrain, brush height, and density and are designed to control only incompatible vegetation.

Multiple Options Can Be Used to Control Trees and Vegetation (continued)

While mechanical methods such as cutting and mowing might appear to be less harmful compared to herbicides, these methods have many disadvantages. For example, cutting and mowing vegetation have the undesired effect of causing vegetation to grow back thicker and fuller, requiring repeated and often more frequent trimming.

Less Needed Over Time

In subsequent years, once the preferred low-growing shrub/herb community becomes dominant, less herbicide will be needed for future maintenance as incompatible species are brought under control.

Ultimately, herbicides eliminate the need for much more frequent mechanical treatments, like tree trimming and mowing — meaning you'll see our crews much less often.

Professional Application

All herbicides used on ROWs are applied by state-certified applicators or under the supervision of a certified applicator. FirstEnergy vegetation managers and its contractors are trained and certified in the use of herbicides.

Herbicides can be applied using several methods:

1.) Aerial applications using a helicopter are used in less populated areas where terrain and accessibility make it difficult and dangerous for ground-based crews to safely apply herbicides.

2.) Trucks or ATVs with spray tanks can be used in areas with accessible ROW.

3.) Backpack sprayers can be used in populated areas, as well as near parks, ponds and other sensitive areas.

Herbicides are important vegetation management tools to stop the spread of invasive plant species. Using herbicides helps control these weeds and other nuisance plants from overtaking ROWs, and will stop the spread to adjacent areas, including your property.

Guidelines for Planting Near Rights-of-Way

If you are considering planting shrubs or other plants on any transmission ROW, please contact a member of FirstEnergy's transmission forestry staff using the customer service numbers listed on the following page. You also can consult your local arborist, nursery professional or cooperative extension agent for more information regarding compatible plant species.

It is important to select the right plant for the right place.

Planting proper vegetation in and around transmission ROW can help provide a sustainable and compatible plant community. However, the vegetation must be limited to low-growing plants – such as grasses, herbs and shrubs – that are less than five feet high at mature height. Plus, vegetation must be planted at least 10 feet away from any pole, tower or guy wire and should not hinder access to the transmission line.

FirstEnergy **Customer Service** Phone Numbers

The Illuminating Company	1-800-589-3101
JCP&L	1-800-662-3115
Met-Ed	1-800-545-7741
Mon Power	1-800-686-0022
Ohio Edison	1-800-633-4766
Penelec	1-800-545-7741
Penn Power	1-800-720-3600
Potomac Edison	1-800-686-0011
Toledo Edison	1-800-447-3333
West Penn Power	1-800-686-0021

Information about FirstEnergy's transmission tree trimming and vegetation management are available online at www.firstenergycorp.com/help/brochures.html.

FirstEnergy

Energy Delivery & Customer Service

FirstEnergy Transmission Vegetation FAC-003 Program Document

Table of Contents

I Overview

FirstEnergy (FE) Transmission Vegetation Management (TVM) uses a defense-in-depth strategy to manage vegetation located on transmission rights of way (ROW) and minimize encroachments from vegetation located adjacent to the ROW, thus preventing the risk of those vegetation-related outages that could lead to Cascading. FE TVM employs a vegetation-to-conductor distance maintenance strategy which utilizes a variety of work methods to control vegetation. FE TVM incorporates maintenance strategies, vegetation inspections, and Target Clearances that exceed the Minimum Vegetation Clearance Distances (MVCD) contained in FAC-003 Table 2 into a comprehensive vegetation management program. The maintenance strategies and procedures in the vegetation management program are elements of an annual work plan that is deployed to ensure full compliance with the FAC-003 Transmission Vegetation Management Standard.

It is important to reiterate that FE TVM has established vegetation Targets Clearances which *exceed* the MVCD as a best practice. This ensures that FirstEnergy will avoid encroachments into the MVCD, in accordance with the requirements in the FAC-003 Standard.

II Applicable Transmission and Generation Owner Facilities

FE TVM maintains communication with FE's Energy Delivery Planning and Protection and Generation departments to perform a periodic review of the transmission and generation facilities that are in scope for the FAC-003 Standard. A periodic review of PJM Manual 3 and Manual 37 determines which transmission lines are identified as an element of an Interconnection Reliability Operating Limit (IROL). FE's Transmission and Generation Facilities subject to the FAC-003 may be referred to in this document, collectively, as "Applicable Lines," or individually as an "Applicable Line."

FirstEnergy Transmission Owner (TO) Facilities

- Overhead transmission lines operated at 200kV and Above
  - FE has transmission lines operated at 230kV, 345kV, and 500kV
- Overhead transmission lines operated below 200kV identified as an element of an Interconnection Reliability Operating Limit (IROL) under NERC Standard FAC-014 by PJM
  - FE has transmission lines operated at 138kV identified as an element of an IROL

- All above-referenced lines located outside the fenced area of the switchyard, station, or substation or crossing the substation fence

FirstEnergy Generation Owner (GO) Facilities

- Overhead transmission lines that extend greater than one mile or 1.609 kilometers beyond the fenced area of the generating station switchyard to the point of interconnection with the TO's facility and are 200kV and Above or 138kV IROL
  - FE does not have generation facilities that fit this criteria
- Overhead transmission lines that do not have clear line of sight[1] from the generating station switchyard fence to the point of interconnection with the TO's facility and are 200kV and Above or 138kV IROL
  - FE has one generation facility operated at 345kV that fits this criteria

III FAC-003 Requirements

1. Preventing Encroachments into the MVCD (R1-R2)

The objective of the vegetation management program is to ensure that vegetation with the potential to encroach FE's Vegetation Target Clearances is identified and mitigated, that vegetation clearances are achieved at the time of maintenance to prevent encroachments into the MVCD, and to ensure safe and reliable operation of the electric transmission system.

FirstEnergy accomplishes this through the use of Targets Clearances that exceed the applicable MVCD, which allows FirstEnergy to avoid all types of potential encroachment into the MVCD and prevent sustained, vegetation caused outages, on Applicable Lines.

*NOTE: FE Target Clearances **exceed** FAC-003-Table 2-Minimum Vegetation Clearance Distances (MVCD).*

[1] FAC-003-4 Footnote 3 page 2 of standard: "Clear line of sight" means the distance that can be seen by the average person without special instrumentation (e.g., binoculars, telescope, spyglasses, etc.) on a clear day.

Encroachments are defined as follows:

1. An encroachment into the MVCD as shown in FAC-003-Table 2 (Exhibit 1), observed in Real-time[2], absent a Sustained Outage
2. An encroachment due to a fall-in from inside the ROW that caused a vegetation-related Sustained Outage
3. An encroachment due to the blowing together of Applicable Lines and vegetation located inside the ROW that caused a vegetation-related Sustained Outage
4. An encroachment due to vegetation growth into the MVCD that caused a vegetation-related Sustained Outage

2. Documented Maintenance Strategies, Procedures, Processes, Specifications (R3)

FE's vegetation maintenance strategies, procedures, processes, and specifications are designed to prevent both encroachments of vegetation into the MVCD and vegetation related outages. FE uses integrated vegetation management techniques to create and sustain a stable and compatible vegetated community within and along the transmission corridor.

The approach that FirstEnergy employs is the control or removal of all incompatible vegetation in the Wire Zone and Border Zone (further defined in Table 1 below) that has the potential to interfere with the safe and efficient operation of the transmission system. This is accomplished through either removal by mechanical means or the application of herbicides. The goal in the Wire Zone is to promote a low growing plant community of grasses, herbs, and low growing shrubs, and in the Border Zone, to support a plant community of forbs and compatible shrubs.

Along the transmission corridor, Priority Trees are also identified and removed to prevent encroachments into the MVCD. Priority Trees include those trees that are dead, dying, diseased, structurally defective, leaning or significantly encroaching where the transmission facilities are at risk of arcing or failing should the tree or portions of the tree (i) fall near or into the transmission facilities or (ii) grow towards or into the transmission facilities.

[2] NERC Glossary definition: Real Time: Present time as opposed to future time. (From Interconnection Reliability Operating Limits standard.)

Work activities are performed under established vegetation management cycles, considering the inter-relationships between vegetation growth rates, vegetation control methods, local conditions, and inspection frequency. These cycles also take into consideration vegetation conditions, species characteristics, and the movement of applicable line conductors under their Rating and all Rated Electrical Operating Conditions, as well as terrain.

The vegetation management program also acknowledges legal, safety, and environmental requirements during maintenance activities; including, but not limited to:

- Interconnection Reliability Operating Limit (IROL) designation
- Easement rights and limitations
- State, Federal and Local laws and requirements as well as statutes, regulations, ordinances, and standards
- Public, FirstEnergy employee, and contractor safety
- Environmental restrictions and guidelines
- NESC Clearances
- Worker approach distance requirements
- Fire risk

A. Integrated Vegetation Management (IVM) Methods (R3)

FirstEnergy utilizes IVM methods to manage vegetation, which requires the evaluation of the transmission corridor to identify incompatible vegetation, defining the timeframe for control, and performing an evaluation and selection of control options. IVM control options include manual, mechanical, cultural, and chemical methods that are used to prevent encroachments from vegetation located on and adjacent to transmission corridors. The choice of control options considers site characteristics, environmental impact, and worker/public safety. The goal of using IVM techniques is to create and sustain a stable and compatible vegetated community within and along the transmission corridor.

B. Vegetation Management Cycles (R3)

- New Jersey Operating Company (Board of Public Utilities mandate) – Four Years
- Ohio Operating Companies, Pennsylvania Operating Companies, Maryland Operating Company, West Virginia Operating Company and Virginia Operating Company – Four to Five Years

C. Transmission Vegetation Management (TVM) Procedures (R3)

FirstEnergy has established vegetation maintenance and target clearances to prevent encroachments between vegetation and overhead conductors, taking into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, and the effects of wind velocities on conductor blowout. TVM procedures are to be implemented at the time of maintenance, as demonstrated below in Table 1: Vegetation Maintenance Implementation. The required maintenance clearances are demonstrated in Table 2: Required Maintenance Clearance by Voltage.

Target Clearances, a FirstEnergy established best practice, are target vegetation clearances that exceed the MVCD, allowing FirstEnergy to avoid encroachments into the MVCD for Applicable Lines. The vegetation Target Clearances are shown in Table 3: Target Clearance by Voltage, and are based on vegetation to conductor distances.

i. Vegetation Maintenance (R1, R2, and R3)

Table 1: Vegetation Maintenance Implementation			
	Procedures to Implement	Applicable Facilities	
		200kV and Above	138kV IROL
1	**Typical ROW Width:** The transmission corridor typical ROW widths by Operating Company, Voltage, and Facility are identified, and all vegetation management work is completed within the corridor.	√	√
2	**Wire Zone:** All incompatible vegetation is controlled in the entire wire zone to promote a low-growing plant community dominated by grasses, herbs, and low growing shrubs (approximately 3 – 5'); the wire zone is the section of the transmission corridor directly under the wires, and extending outward to 15' on each side of the wires.	√	
3	**Border Zone:** All incompatible vegetation is controlled in the border zone to support a plant community of forbs and compatible shrubs (approximately 12-15'); the border zone is the section of the transmission corridor that extends from 15' outside the wires to the ROW edge.	√	
4	**Wire Zone Border Zone Concept:** The wire zone border zone concept is the preferred method of controlling incompatible vegetation, however, in some instances, it may not be suitable due to topography; for these locations, all incompatible vegetation is controlled on the transmission corridor, edge to edge.	√	
5	**Limited Width Corridors:** In locations where the transmission corridor width is limited (typically 100' or less), all incompatible vegetation is controlled from edge to edge.		√
6	**Tree Pruning:** To the greatest extent possible, all branches overhanging the transmission corridor are to be pruned to ANSI A300 standards or removed back to the main stem. Tree Pruning is to be performed back to the typical ROW width via mechanical or manual methods.	√	√
7	**Priority Tree:** Trees that are dead, dying, diseased, structurally defective, leaning or significantly encroaching where the transmission facilities are at risk of arcing or failing should the tree or portions of the tree (i) fall near or into the transmission facilities or (ii) grow towards or into the transmission facilities.	√	√
8	**Pruning (no-easement):** In cases where FirstEnergy does not have an easement authorizing it to control vegetation and cannot otherwise obtain permission from the landowner, then vegetation shall be pruned following directional pruning methods, as defined in the ANSI 300 Standards and Amendments.	√	√
9	**Maintenance Clearance by Voltage:** Maintenance Clearance is the appropriate clearance distance to be minimally achieved between vegetation and any overhead ungrounded supply conductors at the time of vegetation maintenance, which is based upon local conditions and time frame of the next scheduled maintenance cycle.	√	√

Table 2: Required Maintenance Clearance by Voltage	
Voltage	**Required Clearance**
138kV IROL	Shall be cleared 25' or greater from conductor
200kV and Above	Shall be cleared 30' or greater from conductor

Note: Pruning for the transmission corridor is dependent on the voltage of the conductor and shall be done in such a manner to achieve the clearances listed in Table 2.

ii. Vegetation Target Clearance (R1, R2 and R3)

As part of performing annual work plan maintenance activities, it is critical that encroaching vegetation be identified and mitigated. During the course of performing vegetation inspections, initial work identification, and marking the transmission corridor, vegetation within a specified distance of a transmission conductor is identified, classified, and reported as vegetation that does not meet the specified Target Clearance. As a best practice, FE set target clearances which exceed the MVCD, as shown in Table 3: Target Clearance by Voltage:

Table 3: Target Clearance by Voltage*	
Voltage	**Target Clearance**
138kV IROL	Vegetation less than 12' from conductor
230kV	Vegetation less than 15' from conductor
345kV	Vegetation less than 20' from conductor
500kV	Vegetation less than 25' from conductor

**Target Clearances are based on conditions As Observed: the visual inspection that occurs at the time an FE Representative is on the transmission corridor.*

- Observer considers and anticipates growth through the current growing season to prevent close vegetation from encroaching in the Target Clearance
  - Corrective action is performed for vegetation identified during this review

D. Vegetation Work Procedures and Specifications (R3)

Vegetation management is required to prevent the encroachment of vegetation into the MVCD. Vegetation control is the removal of vegetation that has the potential to interfere with the safe and efficient operation of the transmission system. Methods used to manage and control vegetation include manual control methods, such as using hand-operated tools, mechanical control methods, such as using equipment-mounted saws, mowers or other devices, and various herbicide application techniques, such as selective basal, stem foliage, and cut stubble.

i. Tree Pruning

All pruning shall be done in accordance with modern arboricultural standards using the current ANSI A300 Standards and Amendments. Directional pruning is the preferred method of line clearance pruning, and involves removing entire branches and limbs back to the main trunk of the tree that is growing under, beside and over the electric conductors. Pruning shall be done in a manner that will promote growth away from the power lines. Branches that are growing away from the electrical facilities are usually undisturbed unless they impede access to facilities.

ii. Tree Removal

Trees that are expected to be removed or controlled are:

- Incompatible trees located within the transmission corridor
- Dead or defective trees which pose a threat to the conductor or facilities (i.e., guy wires, poles, or structures)
- Priority Trees: trees that are dead, dying, diseased, structurally defective, leaning or significantly encroaching where the transmission facilities are at risk of arcing or failing should the tree or portions of the tree (i) fall near or into the transmission facilities or (ii) grow towards or into the transmission facilities.
- When using tree removal as a control method, the worker will consider relevant factors pertaining to the tree and site and shall take appropriate actions by selecting and cutting a notch that is best suited to allow the tree to fall safely in the

desired direction ensuring a safe removal operation (ANSI Z133 - Safety Requirements for Arboricultural Operations)

iii. Brush Removal

Brush that may grow tall enough to interfere with overhead electric facilities or impedes access and/or the ability to visually inspect the transmission corridor is removed and/or treated with an herbicide.

- Mowing of brush on the transmission corridor may be utilized, at times, for sites where vegetation heights and densities exceed requirements for other vegetation management methods.
- Mowing may be required on company-owned properties that are subject to local maintenance ordinances.

iv. Herbicide Applications

Herbicide application is the preferred method to control brush within the transmission corridor. Herbicide control options are determined by site condition, including terrain, brush height, and density, with emphasis placed on preserving a low-growing plant community dominated by grasses, herbs, and low growing shrubs. In cases where a landowner will not allow the application of herbicide on the transmission corridor for purposes of controlling incompatible vegetation, FirstEnergy will explore and fully exercise legal rights and options regarding herbicide refusals.

Herbicide application methods are:

1) Cut Stubble Treatment

- Cut stubble is used in areas that have been mowed for access or because vegetation was too dense or too tall to foliar treat
- A broadcast treatment is made over areas that were just mowed

2) High Volume Foliage applications

- High volume applications usually cover large areas of incompatible brush
- This control method is best suited for medium to high-density incompatible vegetation species

3) **Low Volume Foliage applications**
   - This selective method of application targets specific incompatible vegetation species by spraying the herbicide directly on the foliage of the target vegetation
   - This control method is best suited for low density incompatible brush
4) **Basal Herbicide applications**
   - This control option may be used in highly visible areas and sometimes is the only method allowed in sensitive areas such as parks or large tracts of government land use
   - This control method is used where there is low-density incompatible brush
5) **Stump applications**
   - The herbicide mixture is applied to the freshly cut stump so as to completely wet the cambium area, which is the area next to the bark

E. Vegetation Inspection Frequency (R3, R6)

Maintenance inspections are scheduled annually for those corridors that are scheduled for vegetation maintenance based on their established vegetation management cycle. Aerial and/or associated ground inspections are conducted on 100% of FE's Applicable Lines, at least once per calendar year but with no more than 18 calendar months between inspections on the same ROW[3].

F. Imminent Threat Communication Procedure (R4)

The Imminent Threat Communication procedure serves to notify FirstEnergy's System Control Center (SCC), without intentional delay of a confirmed vegetation condition that is likely to cause a fault at any moment. See Exhibit 2 to view the Imminent Threat Procedure Flow Chart.

[3] FAC-003-4 Footnote 14: When the applicable Transmission Owner or applicable Generator Owner is prevented from performing a Vegetation Inspection within the timeframe in R6 due to a natural disaster, the TO or GO is granted a time extension that is equivalent to the duration of the time the TO or GO was prevented from performing the Vegetation Inspection.

Implementation Steps

1. The FE TVM representative and/or FE employee, without any intentional delay, will notify the SCC of vegetation conditions that are likely to cause a fault at any moment.
2. A field review of the vegetation condition will determine what action is necessary to address the threat.
3. The FE TVM representative and/or FE employee and SCC through communication will determine what operating action may be necessary and/or taken until the threat is corrected. Examples of operating actions are temporary reduction in line rating, switching the line out of service, etc.
4. If an operating action is granted, the SCC will notify the FE TVM representative and/or FE employee prior to them engaging in performing corrective action.
5. If no operating action is required, the necessary vegetation corrective action can be performed as authorized by the FE TVM representative and/or FE employee.
6. Once corrective action is completed, the FE TVM representative and/or FE employee notifies the SCC to return to normal operations or that the likelihood of a fault is no longer a threat.
   a) Once the Imminent Threat Procedure has been completed, contact FE TVM Supervisor, Managers, and General Manager.
7. The FE TVM representative and/or FE employee documents the Imminent Threat communication using form X-4335 – Imminent Threat Procedure Activation Report, and submits to FE TVM Compliance.

G. Constraints [FE Mitigation Measures] (R5)

Constraints on FirstEnergy's transmission corridors are documented and referred to as "Mitigation Measures". Mitigation Measure inspections are performed in addition to the annual work plan and annual transmission inspections, based on an appropriate inspection cycle. The purpose of the Mitigation Measure procedure is to document areas where FirstEnergy is constrained from performing vegetation work, and where the constraint may lead to a vegetation encroachment into the FE Target Clearance distances (see Table 3) prior to the next established maintenance cycle. Since FE Target Clearances **exceed** the Minimum

Vegetation Clearance Distances (MVCD), documenting mitigation measures avoids encroachments into the MVCD.

Examples of Mitigation Measures include, but are not limited to: easement restrictions, terrain, transmission facilities, and property owner refusals that cannot be resolved within the current maintenance year and are adjustments to the annual work plan.

H. Vegetation Management Program Inspections (R6)

FE vegetation management program inspections consist of both aerial and ground inspections as described below.

i. Aerial Inspection

Aerial and/or associated ground inspections are conducted on 100% of FirstEnergy Applicable Lines, at least once per calendar year but with no more than 18 calendar months between inspections on the same ROW. FirstEnergy performs two annual inspections:

- TVM Specialist Inspection
- TVM Supervisor Inspection
  - The second inspection conducted provides an additional field inspection and observation by a Supervisor to ensure the system does not have vegetation conditions which could lead to an encroachment into FE Target Clearances.

The primary purpose of the aerial inspections is to identify spans requiring vegetation maintenance in order to ensure adequate conductor to vegetation clearances beyond FE Target Clearances, to prevent and/or avoid encroachments into the MVCD. This includes identifying incompatible brush and trees on the corridor and Priority Trees adjacent to the corridor that may warrant further inspection from the ground and require potential corrective actions.

1) Ground Inspection

Sections of line that cannot be inspected from the air for various reasons are identified and inspected from the ground and documented as complete. At times, a ground inspection may be performed in lieu of an aerial inspection, to review current vegetation conditions, to ensure adequate conductor to vegetation clearances on the electric transmission system, and to avoid encroachments into the MVCD.

I. Annual Work Plan (R7)

The creation of the FE annual work plan involves scheduling transmission corridors every year for vegetation management based on the next vegetation management cycle date. The priority of each corridor is based on current conditions. The transmission corridors are designed and tracked to completion based on their overall mileage. The completion of the annual work plan is measured in units of corridor miles actually completed divided by the number of corridor miles in the final amended plan. The work plan is flexible enough to adjust to changing conditions, taking into consideration anticipated growth of vegetation, and all other environmental factors that may impact the reliability of the transmission system.

i. Modifications to the Annual Work Plan

The FE annual work plan may be modified during the year to address changing conditions related to vegetation located on or adjacent to the transmission corridor. Modifications to the annual work plan are tracked and documented until completed.

Consideration for annual work plan modifications encompass, but are not limited to, changing conditions and environmental factors such as:

- Initiation of an emergency aerial patrol after major weather events
- Additional vegetation management work due to high rate of tree mortality caused by insect infestations, disease, or storm damage
- Work refusals that are not resolved within the calendar year of the annual work plan, yet have adequate clearance, and will be tracked and monitored using the annual work plan until completed. In circumstances where the affected property owner refuses to allow FirstEnergy to exercise its legal rights, the TVM representative will contact FirstEnergy's legal counsel for assistance to take legal

action to reach resolution. If the refusal property becomes an immediate threat likely to cause a fault, FirstEnergy will implement its imminent threat procedure.

- In the event of severe weather, vegetation maintenance work may be postponed or accelerated, and will be reflected in the work plan.
- Time required to make contacts with landowners or obtain permits from regulatory authorities.
- Change in expected growth rate/ environmental factors
- Circumstances that are beyond the control of the TO or GO
- Rescheduling work between growing seasons
- Crew or contractor availability/ Mutual assistance agreements
- Identified unanticipated high priority work
- Weather conditions/Accessibility
- Permitting delays
- Land ownership changes/Change in land use by the landowner
- Emerging technologies

ii. Annual Work Plan Documentation

Completed vegetation maintenance cycle activities are documented in FirstEnergy's annual work plan. Work activities are documented on FE weekly timesheets by the contractors, and are entered into the Vegetation Management System (VGMS).

iii. TVM Work Verification

FirstEnergy TVM specialists inspect and approve all planned work performed by TVM contractors to ensure compliance with FirstEnergy's work procedures and specifications, as defined in the FE FAC-003 Vegetation Management Program. VGMS is the final repository for documenting the completion of the annual work plan.

3. Periodic Data Submittal (R1-R2)

Quarterly outage reports are submitted to ReliabilityFirst (RF), identifying all Sustained Outages of applicable lines operated within their Rating and all Rated Electrical Operating Conditions to have been caused by vegetation. This reporting requirement does not apply to circumstances that are beyond the control of the TO or GO, as defined in FAC-003[4]. Quarterly and 48-Hour outage reporting is submitted in accordance with the RF vegetation outage reporting guidelines.

[4] FAC-003-4 Footnote 4 page 4 of standard: This requirement does not apply to circumstances that are beyond the control of an applicable Transmission Owner or applicable Generator Owner subject to this reliability standard, including natural disasters such as earthquakes, fires, tornados, hurricanes, landslides, wind shear, fresh gale, major storms as defined either by the applicable Transmission Owner or applicable Generator Owner or an applicable regulatory body, ice storms, and floods; human or animal activity such as logging, animal severing tree, vehicle contact with tree, or installation, removal, or digging of vegetation. Nothing in this footnote should be construed to limit the Transmission Owner's or applicable Generator Owner's right to exercise its full legal rights on the ROW.

IV Exhibits

Exhibit 1: Minimum Vegetation Clearance Distances (MVCD) Table 2 – FAC-003-4

FAC-003 — TABLE 2 — Minimum Vegetation Clearance Distances (MVCD)[17]

For **Alternating Current** Voltages (feet)

(AC) Nominal System Voltage (KV)†	(AC) Maximum System Voltage (kV)[18]	MVCD (feet) Over sea level up to 500 ft	MVCD feet Over 500 ft up to 1000 ft	MVCD feet Over 1000 ft up to 2000 ft	MVCD feet Over 2000 ft up to 3000 ft	MVCD feet Over 3000 ft up to 4000 ft	MVCD feet Over 4000 ft up to 5000 ft	MVCD feet Over 5000 ft up to 6000 ft	MVCD feet Over 6000 ft up to 7000 ft	MVCD feet Over 7000 ft up to 8000 ft	MVCD feet Over 8000 ft up to 9000 ft	MVCD feet Over 9000 ft up to 10000 ft	MVCD feet Over 10000 ft up to 11000 ft	MVCD feet Over 11000 ft up to 12000 ft	MVCD feet Over 12000 ft up to 13000 ft	MVCD feet Over 13000 ft up to 14000 ft	MVCD feet Over 14000 ft up to 15000 ft
765	800	11.6ft	11.7ft	11.9ft	12.1ft	12.2ft	12.4ft	12.6ft	12.8ft	13.0ft	13.1ft	13.3ft	13.5ft	13.7ft	13.9ft	14.1ft	14.3ft
500	550	7.0ft	7.1ft	7.2ft	7.4ft	7.5ft	7.6ft	7.8ft	7.9ft	8.1ft	8.2ft	8.3ft	8.5ft	8.6ft	8.8ft	8.9ft	9.1ft
345	362[19]	4.3ft	4.3ft	4.4ft	4.5ft	4.6ft	4.7ft	4.8ft	4.9ft	5.0ft	5.1ft	5.2ft	5.3ft	5.4ft	5.5ft	5.6ft	5.7ft
287	302	5.2ft	5.3ft	5.4ft	5.5ft	5.6ft	5.7ft	5.8ft	5.9ft	6.1ft	6.2ft	6.3ft	6.4ft	6.5ft	6.6ft	6.8ft	6.9ft
230	242	4.0ft	4.1ft	4.2ft	4.3ft	4.3ft	4.4ft	4.5ft	4.6ft	4.7ft	4.8ft	4.9ft	5.0ft	5.1ft	5.2ft	5.3ft	5.4ft
161*	169	2.7ft	2.7ft	2.8ft	2.9ft	2.9ft	3.0ft	3.0ft	3.1ft	3.2ft	3.3ft	3.3ft	3.4ft	3.5ft	3.6ft	3.7ft	3.8ft
138*	145	2.3ft	2.3ft	2.4ft	2.4ft	2.5ft	2.5ft	2.6ft	2.7ft	2.7ft	2.8ft	2.8ft	2.9ft	3.0ft	3.0ft	3.1ft	3.2ft
115*	121	1.9ft	1.9ft	1.9ft	2.0ft	2.0ft	2.1ft	2.1ft	2.2ft	2.2ft	2.3ft	2.3ft	2.4ft	2.5ft	2.5ft	2.6ft	2.7ft
88*	100	1.5ft	1.5ft	1.6ft	1.6ft	1.7ft	1.7ft	1.8ft	1.8ft	1.8ft	1.9ft	1.9ft	2.0ft	2.0ft	2.1ft	2.2ft	2.2ft
69*	72	1.1ft	1.1ft	1.1ft	1.2ft	1.2ft	1.2ft	1.2ft	1.3ft	1.3ft	1.3ft	1.4ft	1.4ft	1.4ft	1.5ft	1.6ft	1.6ft

* Such lines are applicable to this standard only if PC has determined such per FAC-014 (refer to the Applicability Section above)

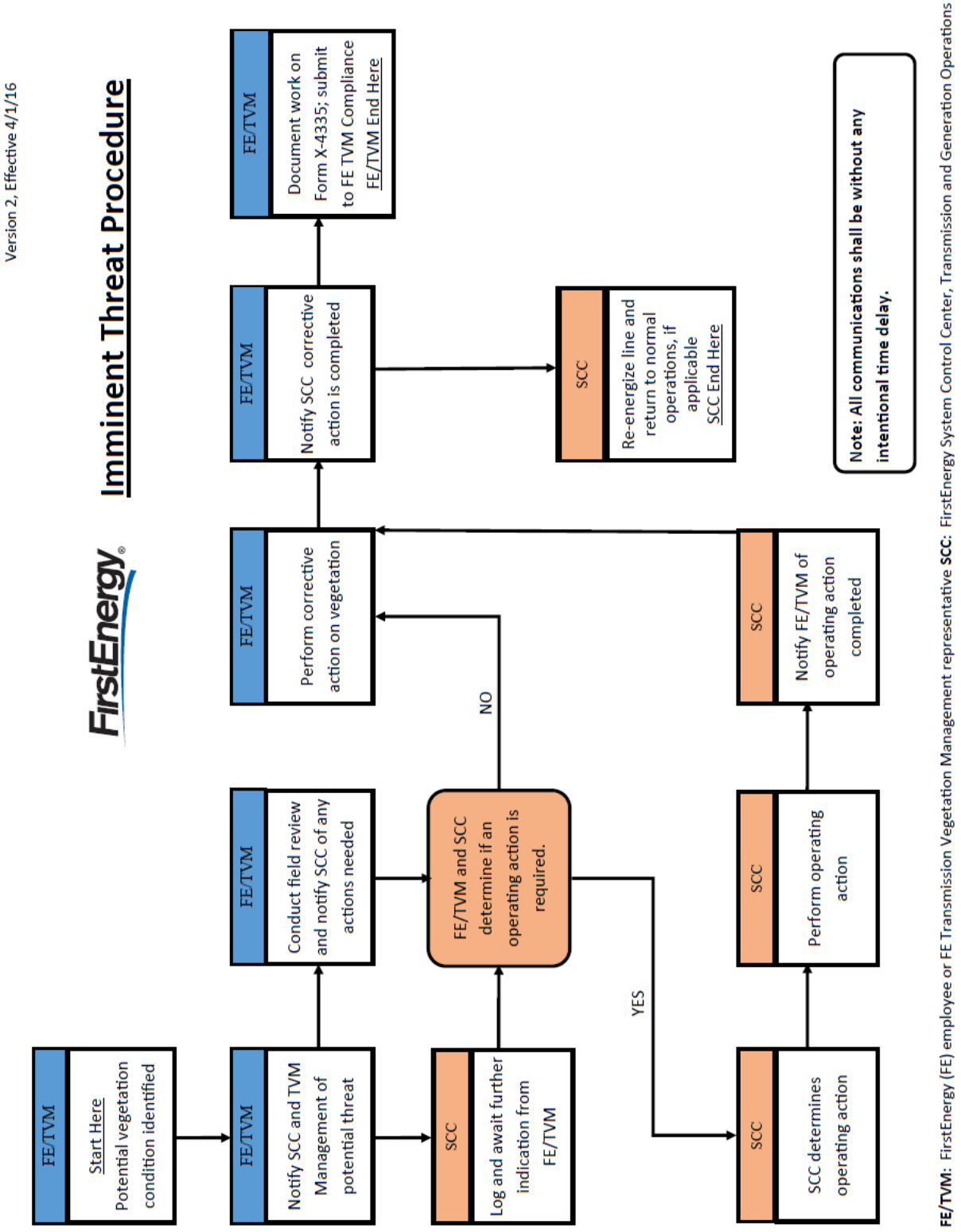
† *Table 2 – Table of MVCD values at a 1.0 gap factor (in U.S. customary units), which is located in the EPRI report filed with FERC on August 12, 2015. (The 14000-15000 foot values were subsequently provided by EPRI in an updated Table 2 on December 1, 2015, filed with the FAC-003-4 Petition at FERC)*

[17] The distances in this Table are the minimums required to prevent Flash-over; however prudent vegetation maintenance practices dictate that substantially greater distances will be achieved at time of vegetation maintenance.

[18] Where applicable lines are operated at nominal voltages other than those listed, the applicable Transmission Owner or applicable Generator Owner should use the maximum system voltage to determine the appropriate clearance for that line.

[19] The change in transient overvoltage factors in the calculations are the driver in the decrease in MVCDs for voltages of 345 kV and above. Refer to pp.29-31 in the Supplemental Materials for additional information.

Exhibit 2: Imminent Threat Procedure Flow Chart



V Additional Information

References

- ANSI-A300 – Part 1 American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practice - Pruning
- ANSI-A300 – Part 7 American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practice – (Integrated Vegetation Management a. Electric Utility Rights-of-Way)
- Best Management Practices – Integrated Vegetation Management – Companion Publication to ANSI A300 – Part 7
- ANSI-Z133.1 – American National Standard for Arboricultural Operations – Safety Requirements
- Standard FAC-003-4 – Transmission Vegetation Management Standard
- NESC – National Electrical Safety Code

Compliance Monitoring Process

In accordance with NERC Reliability Standard FAC-003-4 Compliance Section C - 1.2 Evidence Retention – Data or evidence records are required to be retained for 3 years unless directed by its Compliance Enforcement Authority.

Revision History

Rev. No.	Date	Name	Comments/Change Description
0	6/30/14	Bill Boyd, Rebecca Spach and Katrina Schnobrich	The document was updated to be compliant with FAC-003-3. This version will be effective 07/01/2014.
1	7/28/14	Bill Boyd, Rebecca Spach and Katrina Schnobrich	Minor edit 7/28/14-removed non-pertinent words on page 11-no content change. No signatures required.
2	10/1/16	Rebecca Spach, Mark Contat, Shawn Standish, Katrina Schnobrich, Crystal Kenmuir	Modified to comply with FAC-003-4 new MVCD table, updated associated procedures/forms, updated language throughout

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APPROVAL SIGNATURES:

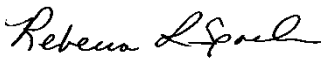
Title	Signature	Date
General Manager, TVM		8/11/16
Director, Vegetation Management		8/11/16

EXHIBIT 27
RESULTS OF AERIAL AND GROUND LINE INSPECTIONS

Issue Category	Occurrences
Pole Top Rot Beyond Repair	42
Woodpecker Damage	32
Disconnected Ground	23
Conductor Damage	2
Split Pole Top	1
Missing Guy Guards	1
Missing Armor Rod	1
No major issues, exhibiting signs of deterioration/rot	40

EXHIBIT 28
MAP DEPICTING ISSUES AT STRUCTURE LOCATIONS

Legend

- Structure has issues that need addressed and exhibits signs of end of useful life
- Structure exhibits signs of end of useful life
- No issues
- Substation

EXHIBIT 29
PHOTOGRAPHS OF EXISTING CONDITIONS

Photograph 1: Pole top rot (common on majority of wood poles on the Line)

Photograph 2: Pole top rot and woodpecker damage

Photograph 3: Pole top rot and woodpecker damage

Photograph 4: Woodpecker damage

Photograph 5: Pole fire and broken-down ground

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Application of Mid-Atlantic Interstate Transmission, LLC Filed Pursuant to 52 Pa. Code Chapter 57, Subchapter G, for Approval of the Siting and Construction of the Hunterstown-Orrtanna 115 kV Transmission Line Project Located in Highland, Franklin, Butler, Cumberland, and Straban Townships in Adams County, Pennsylvania

Docket No. A-2021-_____

TESTIMONY INDEX

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	**:**	**Docket No. A-2021-_____**

Direct Testimony
of
Mary E. Anderson

List of Topics Addressed

Introduction of Witnesses; Overview of Regulatory Requirements; Out-Reach to Public; and Public Comments

DIRECT TESTIMONY
OF
MARY E. ANDERSON

I. RESPONSIBILITIES, EXPERIENCE AND EDUCATION

Q. Please state your name and business address.

A. My name is Mary E. Anderson, and my business address is 300 Madison Avenue, Morristown, New Jersey 07960.

Q. By whom are you employed and in what capacity?

A. I am employed by FirstEnergy Service Company ("FESC") as a Transmission Specialist III. In that capacity, my primary responsibility is siting transmission facilities for utility subsidiaries of FirstEnergy Corp. ("FirstEnergy") that provide service in Maryland, New Jersey, Ohio, Pennsylvania, Virginia and West Virginia and obtaining necessary siting and other related approvals from the utility regulatory authorities in those states for transmission facilities.

Q. Please describe your educational background and professional experience.

A. I graduated from Ashland University in in 2012 with a Bachelor of Science Degrees in Biology and Environmental Science. I have been employed by FESC since September 16, 2019 as a Transmission Specialist III. Prior to working for FESC, I was employed by GPD Group as an Environmental Scientist from September 2012 through September 2019. During my time with GPD Group, I was promoted to Environmental Scientist III. Between January 2015 and September 2019, I worked exclusively for FirstEnergy via contract supporting the Transmission and Substation Design departments.

Q. **Have you testified previously before the Pennsylvania Public Utility Commission ("Commission") or other regulatory agencies?**

A. No.

II. PURPOSE OF TESTIMONY

Q. On whose behalf are you providing this testimony?

A. I am testifying in support of Mid-Atlantic Interstate Transmission, LLC's ("MAIT") Application for approval to locate and construct the Hunterstown-Orrtanna 115 kilovolt ("kV") Transmission Line Project ("Project").

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide an overview of the Project, describe my role in the siting process, provide an overview of the findings that the Commission is required to make to approve the siting of a high voltage ("HV") transmission line, and finally, to describe the public information outreach that MAIT conducted prior to selecting its proposed route for the Project.

III. INTRODUCTION OF OTHER WITNESSES

Q. Please identify the other witnesses who will be providing direct testimony on behalf of MAIT in this proceeding and the topics they address.

A. In addition to me, five other witnesses are submitting direct testimony on MAIT's behalf in support of its Application:

> **Lawrence A. Hozempa (MAIT Statement No. 2)** is a General Manager, Transmission Planning, for FESC. Mr. Hozempa will describe the need for the Project, the alternatives to the Project that

were considered and the PJM Interconnection, LLC regional transmission expansion planning process.

Barry A. Baker (MAIT Statement No. 3) is the Vice President and Department Manager for the Impact Assessment & Permitting Department at AECOM Corporation. Mr. Baker will describe the principal elements of the siting analysis, explain how the environmental assessment was conducted, and discuss the reasons why the preferred route was selected.

Lisa Marinelli (MAIT Statement No. 4) is an Advanced Real Estate Representative in Real Estate Services for FESC. Ms. Marinelli will explain the process by which easements and other land rights were acquired for the Project.

Jeffrey P. Irons (MAIT Statement No. 5) is the Supervisor of Transmission Design for FESC. Mr. Irons will describe the design and engineering for the Project and how the Project will be constructed. Mr. Irons will also describe MAIT's plans for operating and maintaining the proposed transmission line after it is constructed, including removing and controlling vegetation.

Ryan D. Grady (MAIT Statement No. 6) is the Supervisor of Transmission Maintenance for FESC. Mr. Grady will discuss the existing condition of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, explain how the transmission maintenance group provides project recommendations, and provide information about current and ongoing maintenance trends.

Each of these witnesses is also sponsoring various exhibits that accompany the Application, as identified in their respective written direct testimonies.

IV. APPLICATION

Q. What is your role with regard to Project?

A. I am responsible for coordinating MAIT's efforts to obtain the Commission's approval to locate and construct the Project. In that role, I provided input and overall coordination with regard to the Environmental Assessment, Line Route Study, and MAIT's Application. I

will also act as MAIT's lead technical representative throughout the regulatory process for obtaining siting approval.

Q. Do you have final decision-making authority for the Project?

A. No. Final decision-making authority for the Project lies with MAIT's management. My role is to formulate issues and recommendations for executive review and approval, and to implement management's decisions and guidance. As such, I am responsible for identifying issues that require management's prior approval, presenting those issues to management, answering questions from management, and executing management's decisions and directions. In this role, I was the project lead for preparing the Application and presenting it for management's authorization. Once MAIT's management approved the filing of the Application, I became responsible for acting as MAIT's lead representative to the Commission throughout the regulatory process.

Q. What are the fundamental requirements an applicant must satisfy to obtain siting approval for an HV transmission line?

A. The Commission's regulations at 52 Pa. Code § 57.71 require prior Commission approval to locate and construct an HV (greater than 100 kV) transmission line. To obtain such approval, an applicant must file an application that contains the information specified in 52 Pa. Code § 57.72 and must serve the application or provide the requisite notice of its filing as specified in 52 Pa. Code § 57.74. In order to grant approval to locate and construct an HV transmission line, the Commission must make four findings, as set forth in 52 Pa. Code § 57.76:

(1) That there is a need for the line.
(2) That it will not create an unreasonable risk of danger to the health and safety of the public.

(3) That it is in compliance with applicable statutes and regulations providing for the protection of the natural resources of this Commonwealth.

(4) That it will have minimum adverse environmental impact, considering the electric power needs of the public, the state of available technology and the available alternatives.

Q. Do MAIT's Application and its accompanying exhibits and direct testimony satisfy the requirements imposed by the Commission's siting regulations?

A. Yes, they do. MAIT's Application and its accompanying direct testimony and supporting exhibits provide the information specified in the Commission's regulations and provide evidence that will support all of the findings required by 52 Pa. Code § 57.76. As explained in the Application, MAIT has also satisfied all service and notice requirements imposed by the Commission's regulations. In addition, MAIT is a Pennsylvania public utility that was issued a Certificate of Public Convenience pursuant to the Commission's final order entered on August 24, 2016 at Docket Nos. A-2015-2488903 *et al*. Accordingly, the Commission has already found and determined that MAIT has the technical, financial and legal fitness to own and operate transmission facilities and to provide transmission service in Pennsylvania.

Q. Do MAIT's Application and the accompanying exhibits and direct testimony demonstrate that the proposed Project is in the public interest and should be approved?

A. Yes.

V. PUBLIC INFORMATION

Q. Did MAIT hold public information meetings for the Project?

A. Yes. On June 19, 2019, from 6:00 p.m. to 8:00 p.m., a public information meeting was held in the Project area at 1865 Biglerville Road, Gettysburg, Pennsylvania 17325. Landowners, public officials, and the general public were invited to attend in order to learn about the need for the Project; the alternative line routes that were studied; MAIT's construction, engineering, tree clearing and maintenance practices; MAIT's approach to negotiating with landowners to obtain necessary rights-of-way ("ROW"); and the environmental impacts of the Project. Landowners and the public were also given the opportunity to comment on the Project.

Q. How were landowners informed of the public information meeting?

A. On June 10, 2019, MAIT mailed letters to the landowners owning properties that would be crossed by the alternative routes studied for the Project. These letters informed the landowners of the public meetings' locations, dates, and times. In addition, the letters were accompanied by a fact sheet setting forth relevant facts about the Project. I have enclosed a copy of the fact sheet as MAIT Exhibit 1.

Q. How were public officials notified of the public information meeting?

A. FirstEnergy's External Affairs Manager for Adams County provided notice by telephone, electronic mail, and United States mail to public officials in the county and townships that are within the Project area. These public officials were notified of the location, date, and time of the public meeting. In addition, the External Affairs Manager provided the public officials with a copy of the fact sheet for the Project.

Q. How was the general public informed of the public information meeting?

A. A Notice of Proposed Utility Facility was published in The Gettysburg Times on June 11, 2019 notifying the general public of the location, date, and time of the public information

meeting to be held in Gettysburg, Pennsylvania. I have provided a copy of the proof of publication for the public information meeting is provided as MAIT Exhibit 2.

Q. Did MAIT consider the comments received from landowners, public officials and the general public as part of the siting process?

A. Yes, it did. The comments MAIT received were evaluated and addressed as part of the siting process.

Q. Has there been any further communication with landowners since the public information meeting?

A. Aside from the real estate outreach and negotiations referenced in MAIT Statement No. 4 by Lisa Marinelli, MAIT sent a letter on November 25, 2020 to landowners along the proposed route to update them on a modification to the construction type for this Project. Initially, MAIT proposed to construct a single circuit, wood pole line parallel to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. After further review, MAIT determined that constructing a new double circuit steel monopole line in the existing corridor and removing the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line would be more prudent from a cost-benefit standpoint, which is further discussed in MAIT Statement No. 2 by Lawrence A. Hozempa and MAIT Statement No. 6 by Ryan D. Grady. Adjusting the construction type from wood to steel did not change the routing presented as the public information meeting. I have provided a copy of the letter and updated factsheet provided in the November 25, 2020 mailing to landowners as MAIT Exhibits 3 and 4.

Q. Does this conclude your direct testimony?

A. Yes, it does. However, I reserve the right to file such additional testimony or exhibits as may be necessary or appropriate.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION FOR AUTHORIZATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC TO SITE AND CONSTRUCT THE HUNTERSTOWN-ORRTANNA 115 kV TRANSMISSION LINE PROJECT SITUATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND, AND STRABAN TOWNSHIPS, ADAMS COUNTY, PENNSYLVANIA	:	**DOCKET NO. _____**

VERIFICATION

I, Mary E. Anderson, hereby state that the facts set forth in my Testimony, MAIT Statement No. 1, are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

4/21/2021
_____
Date

Mary Anderson
_____
Mary E. Anderson
Transmission Specialist III

MAIT Statement No. 2

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	**:**	**Docket No. A-2021-_____**

Direct Testimony
of
Lawrence A. Hozempa

List of Topics Addressed

Project Need; Alternatives Considered

TABLE OF CONTENTS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Lawrence A. Hozempa and my business address is 76 South Main Street, Akron, Ohio 44308.

Q. By whom are you employed and in what capacity?

A. I am employed by FirstEnergy Service Company as the General Manager, Planning in the Transmission Planning and Protection department. In this proceeding, I am testifying on behalf of Mid-Atlantic Interstate Transmission, LLC ("MAIT").

Q. Please describe your professional experience and educational background.

A. I received a Bachelor of Science Degree in Electrical Engineering from Pennsylvania State University. I am a registered Professional Engineer in the Commonwealths of Pennsylvania and Virginia, and the states of Maryland, New Jersey and West Virginia. My professional experience includes distribution planning, distribution operations and maintenance, and transmission planning and operations. My professional experience began in 1987 as an Engineer for the West Penn Power Company ("West Penn"). During the merger and reorganization of West Penn with Allegheny Power Service Corporation ("Allegheny Power") in 1996, I was assigned to the Planning department as an Engineer with responsibilities for several service centers located in the Northern Region of Allegheny Power's service territory. I moved into the Transmission Planning group of Allegheny Power in 2000 where I was responsible for planning the company's electric transmission system for southwestern Pennsylvania. In 2004, I was named Service & Design Manager in the Jeannette Region. In 2005, I returned to the Transmission Planning

group as a Senior Engineer with the responsibility for planning the company's extra high voltage system, and while in the group I was promoted to Consulting Engineer in 2008. After the merger with FirstEnergy Corp. was completed in 2011, I was named Supervisor of the Transmission Planning and Protection group. In 2015, I was promoted to Manager of Transmission Planning followed by a promotion to Manager of Transmission Operations in the FirstEnergy South Transmission Operations Control Center in 2016. In 2018, I was promoted to my current role of General Manager, Planning with responsibilities including the oversight of transmission network planning activities. My education, experience and qualifications are fully set forth in Appendix A to my testimony.

Q. Have you testified previously before the Pennsylvania Public Utility Commission ("Commission") or other regulatory agencies?

A. Yes, I have testified before the Commission in the proceedings at Docket Nos. A-110172, A-110172F0002, A-110172F0003, A-110172F0004, and G-00071229, in support of the need for the Trans Allegheny Interstate Line and the Prexy facilities in 2007. I have also testified before the Federal Energy Regulatory Commission and other state regulatory agencies as listed in Appendix A.

Q. Please describe the purpose of your testimony.

A. The purpose of my testimony is to describe the electrical need for the "Hunterstown-Orrtanna 115 kilovolt ("kV") Transmission Line Project" (the "Project"). On behalf of MAIT, I will:

- Describe the Project;
- Explain the electrical need for the Project;

- Describe the PJM Interconnection, LLC ("PJM") regional transmission expansion planning process; and,
- Describe the Company's electromagnetic field ("EMF") mitigation procedures that will be utilized along the proposed transmission line.

Although I will describe the general route of the Project, the details of the specific route proposed by MAIT are described and supported by MAIT witness Barry Baker in his direct testimony (MAIT Statement No. 3).

Q. Please identify and describe the exhibits that you are sponsoring and summarize the contents of those exhibits.

A. I am sponsoring eight exhibits with my direct testimony:

- Exhibit 5 is a map of the existing MAIT transmission system in the Project area;
- Exhibit 6 is a map of the proposed MAIT transmission system in the Project area;
- Exhibit 7 is the First Read slide from the PJM July 20, 2018 Sub Regional Regional Transmission Expansion Plan ("RTEP") Committee Mid-Atlantic meeting where the Project was announced; and
- Exhibit 8 is the Second Read slide from the PJM August 24, 2018 Sub Regional RTEP Committee Mid-Atlantic meeting.
- Exhibit 9 is the Need slide from the PJM June 16, 2020 Sub Regional RTEP Committee Mid-Atlantic meeting where the Project was re-presented;
- Exhibit 10 is the Solution slide from the PJM October 15, 2020 Sub Regional RTEP Committee Mid-Atlantic meeting;

- Exhibit 11 is Graphs of EMF Calculations for Current Normal and PJM RTEP Loading; and
- Exhibit 12 is Graphs of EMF Calculations and Future Normal and Future RTEP Loading.

II. PROJECT OVERVIEW AND NEED

Q. Please describe the Project from an electrical perspective.

A. The Orrtanna 115 kV Substation is presently served by a radial 115 kV transmission line, 9.1 miles long, tapped from the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line as illustrated in Exhibit 5. The proposed Project involves construction of a new double circuit 115 kV line from the Orrtanna 115 kV Substation to the area of the switch structure on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, parallel to the existing 115 kV transmission line as illustrated in Exhibit 6. Upon completion of the new 115 kV double circuit line, the tap configuration and the existing 9.1 miles radial line to Orrtanna on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line will be removed. The new 115 kV line will be constructed in a double circuit configuration using 795 aluminum conductor steel reinforced ("ACSR") conductors.

Q. Please explain why MAIT is proposing the Project.

A. As an initial matter, I note that the Project is required to address two specific needs associated with the existing radial 115 kV transmission line to Orrtanna Substation. MAIT witness Mr. Ryan D. Grady (MAIT Statement No. 6) describes the substantial deterioration exhibited on the existing wooden poles that comprise this line. As discussed in the Application, the proposed Project immediately and completely resolves the deteriorated

conditions exhibited on the existing line by installing new steel poles and avoids substantial future costs associated with ongoing maintenance and, ultimately, rebuilding the transmission line in the future.

Importantly, the addition of a second circuit to this new line, which is required to address the reliability issues, has a minimal incremental cost relative to the replacement of the existing poles. In this regard, the Project represents the more cost effective and efficient solution to address both of the needs affecting the existing system.

Q. Please describe the electrical need for the Project.

A. PJM Supplemental upgrade (s1725.2) was completed in May 2020 to reconfigure the 115 kV bus at Orrtanna Substation into a five-breaker ring bus configuration. The Orrtanna Substation consists of one 115-13.2 kV distribution transformer, one MAIT 115 kV transmission line, a generation step-up transformer, and an Adams Electric Cooperative ("AEC") 115 kV line which serves one AEC substation. In the current ring bus configuration, a faulted or failed 115 kV line or circuit breaker results in an outage of the Orrtanna 115 kV bus (*i.e.* both transformers, the MAIT 115 kV transmission line, and the AEC 115 kV service). The proposed Project is needed to mitigate potential substation outages resulting from 115 kV line faults, line maintenance, or circuit breaker failure. Presently, transmission line maintenance or line faults result in an interruption of service to customers with electric service originating from Orrtanna Substation.

It is conservatively estimated, if a breaker failure not otherwise mitigated by the ring bus were to occur, that the outage duration could be as long as three hours. The estimated outage duration is based on the event occurring outside normal working hours

and incorporates the time needed to contact after-hours substation maintenance personnel, have the personnel travel to the substation site, diagnose the outage to determine the mode of failure, determine the optimum solution to restore service to the substation, perform any necessary switching to isolate the failed or faulted components, and restore the remaining equipment to service.

In the event of a transmission line outage (i.e., a failed 115 kV line), it is conservatively estimated that the outage duration could be as long as 24 hours. The estimated restoration duration is based on the event occurring outside normal working hours and incorporates the time needed to contact after-hours transmission line maintenance personnel, have the personnel patrol the line to identify the location of the outage, diagnose the outage to determine the mode of failure, determine the optimum solution to restore service to the line, perform any necessary switching to isolate the failed or faulted components, and repair or replace the failed equipment.

Immediately following a breaker failure or 115 kV line outage, approximately 6200 customers (2600 served by Met-Ed and 3600 served by AEC) with a total load of approximately 27 megawatts ("MW") will not have electric service. Approximately 1600 customers (800 served by Met-Ed and 800 served by AEC) can be restored through distribution switching. However, the remaining approximately 4600 (1800 served by Met-Ed and 2800 served by AEC) customers will be without electric service until the Orrtanna 115 kV Substation bus can be returned to service.

The proposed Project, combined with the completed Orrtanna ring bus project, substantially reduces the likelihood of transmission related outages to customers with electric service originating from the Orrtanna 115 kV Substation.

Q. Please describe the methodology used by MAIT in assessing its transmission facilities.

A. In general, FirstEnergy's reliability enhancement methodology is intended to: (i) proactively upgrade or replace transmission lines and substation components that present an increasing risk to reliability; (ii) modernize transmission infrastructure by implementing technological advances to enhance reliability and promote increased efficiencies; (iii) increase or restore load serving capability; (iv) improve the resiliency of the existing transmission system to better withstand and recover from storms and unusual weather events such as extreme heat and cold; (v) address heightened concerns with cyber and physical security; (vi) improve customer reliability by installing new equipment with real-time monitoring capabilities to optimize maintenance intervals and reduce the likelihood of equipment failure; and (vii) better address our customers' needs by reducing the duration and frequency of unscheduled outages. Reliability Enhancement projects, like the Orrtanna project, are largely driven to meet increased reliability demands of customers.

The proposed Project networks the radial line that presently serves the Orrtanna 115 kV Substation. When modifying an existing radial line, specifically in cases where the number of customers impacted by the loss of the line is 5000 or more, and/or where the load impacted by the loss of the line exceeds approximately 25 MW, the line is evaluated to determine if it can be networked; substations are also evaluated to determine if modifications can be made to meet the current minimum design standard used for new

substations. Consistent with PJM's General Transmission Owner Guidelines the standards are intended to:

- Minimize the magnitude and duration of system outages in the event of a component failure,
- Minimize widespread system effects on voltage, dynamic stability, etc., that occur because of an unplanned event,
- Facilitate the isolation of failed component(s) while maximizing the amount of transmission system equipment that can remain in service, and
- Include plans for expeditious restoration of failed facilities/components (dedicated spare equipment, etc.).

Q. Were planning criteria violations identified when performing planning assessments?

A. No. The Project is a reliability upgrade, a Supplemental Project, that converts the radial 115 kV line serving the Orrtanna substation into a looped or networked line and significantly improves the reliability for distribution and wholesale customers served from the Orrtanna Substation. PJM performs a No Harm Analysis on all Supplemental Projects to identify Planning Criteria violations that may develop as a result of the project. The Orrtanna line loop project did not result in any NERC, PJM, or FirstEnergy Planning Criteria violations.

Q. How many unplanned outages have occurred on the subject transmission facilities over the previous 10 years?

A. In the last ten years, the main 115 kV bus at the Orrtanna substation and the radial 115 kV transmission line have had five unplanned outages. A summary of the events is as follows:

1. The first event (12/10/2012) occurred during maintenance of the generation step-up ("GSU") transformer. GenOn crews power washing the GSU caused a fault which resulted in an outage of the Orrtanna 115 kV bus. This event resulted in a loss of electric service to 2465 Met-Ed customers for approximately six minutes.
2. The second event (1/22/2013) was caused when a bushing lead conductor failed on the distribution transformer at Orrtanna Substation which resulted in an outage of the Orrtanna 115 kV bus. This event resulted in a loss of electric service to 2479 Met-Ed customers. Customers were out of power for up to approximately 9 hours and 45 minutes.
3. The third event (4/19/2013) was caused when a failed switch at the Hunterstown 115 kV Substation resulted in outage of the Hunterstown buses and the Hunterstown-Orrtanna-Lincoln 115 kV Transmission Line. This event resulted in a loss of electric service to 2481 Met-Ed customers. Customers were out of power for up to approximately 4 hours and 10 minutes.
4. The fourth event (7/13/2016) occurred during a lightning storm that resulted in a loss of the Hunterstown 115 kV bus and the Hunterstown-Orrtanna-Lincoln 115 kV Transmission Line. This event resulted in a loss of electric service to 2499 Met-Ed customers for approximately eight minutes.
5. The fifth event (11/14/2016) was caused by the GSU's differential relay which resulted in an outage of the Orrtanna 115 kV bus. This event resulted in a loss of electric service to 2501 Met-Ed customers for approximately nine minutes.

Q. If the Project had been in service, would it have mitigated the experience to customers in any of these instances?

A. Yes. As previously mentioned, the modifications proposed at Orrtanna 115 kV Substation will substantially reduce the likelihood of a simultaneous outage of multiple facilities at Orrtanna 115 kV Substation via a line fault or breaker failure condition which would, under current configuration, result in the loss of electric service to nearly 2600 Met-Ed and 3600 AEC existing customers with a combined load of approximately 27 MW. The proposed upgrade from a radial transmission line to a network arrangement, combined with the Orrtanna ring bus project, ensures that no more than two elements at the Orrtanna 115 kV Substation would trip due to a breaker failure or bus fault condition. Had the Project and the Orrtanna 115 kV ring bus been in service, every one of the above interruptions to customers would have been avoided.

Q. Is load growth a factor driving the need for the project?

A. No. Met-Ed's historic growth rate for customers with electric service originating from Orrtanna Substation has been approximately 1.5% annually since 2012. The load growth has not led specifically to a change in circumstances driving the need for the Project.

Q. Are any of the loads served by the transmission facilities to be replaced considered to be critical customers?

A. Yes. There are 28 critical customers (*e.g.*, telecommunications facilities, wholesale electric cooperatives, nursing homes, and local government establishments) that would be affected by an outage on these facilities.

Q. Have you quantified the anticipated reliability benefits that the Project would create?

A. Yes. While in the current radial configuration, an outage of the 115 kV line from Hunterstown and Lincoln substations due to a line structure failure results in an immediate loss of electrical service to approximately 6200 customers. In the moments following the event, it is anticipated that approximately 1600 customers can be restored by distribution switching. However, approximately 4600 customers will remain without electric service. Again, it is conservatively estimated, if this event were to occur, the outage duration could be as long as 24 hours for those reasons outlined earlier in this testimony. The anticipated impact resulting from such an outage relative to the Commission's benchmarks would be as follows:

	Benchmark performance	**Outage Impact**	**Effect on otherwise Benchmark**
SAIDI	141.0	4.6	145.6
SAIFI	1.18	0.003	1.18
CAIDI	119.0	4.0	123.0

In the table above, the "Outage Impact" lists the system average interruption duration index ("SAIDI"), system average interruption frequency index ("SAIFI"), and customer average interruption duration index ("CAIDI") impact caused by the conservatively estimated 24-hour outage. The "Effect on otherwise Benchmark" is calculated by respectively adding the "Outage Impact" SAIDI, SAIFI, and CAIDI values to the Commission's 2019 "Benchmark performance" values for Met-Ed. This results in the effect the outage would have on Met-Ed's performance assuming it would otherwise be meeting the Commission's benchmark performance metrics.

Q. Were electrical alternatives to the Project considered?

A. Yes, two alternatives were considered and rejected. The first alternative considered was to construct an approximately nine-mile line to Orrtanna 115 kV Substation adjacent to the existing line. A cost benefit analysis was performed on this alternative to compare it to the proposed Project, which involves constructing a new parallel double circuit line on steel poles to accommodate the new circuit and the existing circuit. In this instance, construction of a new double circuit line adjacent to the existing line, *i.e.* the proposed Project, is more cost-effective when compared to constructing a new parallel single-circuit wood pole line. Even though the double circuit option is a greater investment upfront, additional factors were considered when evaluating the single circuit option, including ongoing maintenance of the existing Hunterstown-Lincoln-Orrtanna 115kV Transmission Line and the eventual rebuild of that line. Based on information explained further by Mr. Grady in MAIT Statement No. 6, ongoing maintenance costs of the existing line will average $0.75M annually until the line will need to be rebuilt – a need which is expected to materialize within 5-10 years. When factoring in these additional costs, as highlighted in Table 1 below, the estimated total costs including overheads to build a new double circuit line is approximately $37.7M while the total costs including overheads to construct a new parallel single-circuit line in the immediate term, followed by a rebuild of the existing single circuit line in the next 5-10 years ranges from approximately $63.5M to $70.5M.

Table 1: Estimated cost of new construction options including future rebuild or removal cost considerations with wood and steel scenarios. Costs below in millions ("M").

Option	**1**	**2a**	**2b**
Description	Install New Double Circuit Steel & Remove Existing Line to Tap Location	Install New Parallel Single Circuit Wood to Tap Location & Rebuild Existing Line in 5 Years	Install New Parallel Single Circuit Wood to Tap Location & Rebuild Existing Line in 10 Years
Estimated Cost to Build	$36.7M	$28.4M	$28.4M
Ongoing Maintenance Costs for Existing Line	$0.0	$3.75M*	$7.5M**
Removal of Existing Line	$1.0M	$0.0	$0.0
Future Rebuild of the Line	$0.0	$31.3M	$34.6M
Total Estimated Cost	**$37.7M**	**$63.5M**	**$70.5M**
Net Present Value ("NPV") of Total Cost	**$37.7M**	**$53.0M**	**$51.1M**

*Estimated ongoing maintenance costs of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line for 2021-2025.
** Estimated ongoing maintenance costs of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line for 2021-2030

The other alternative considered was to construct a new greenfield 115 kV line from Orrtanna Substation to Germantown Substation. The new greenfield line contemplated under this alternative would be at least 13.5 miles long, which is the straight-line distance between Orrtanna Substation and Germantown Substation. Intuitively, a route from Germantown Substation to Orrtanna Substation would be longer than 13.5 miles once the actual line route was determined. The new greenfield 115 kV line would require all new right-of-way ("ROW") and a second three-breaker ring bus at the existing tap point on the Hunterstown-Lincoln 115 kV line to avoid creating a three-terminal line between Orrtanna Substation, Hunterstown Substation, and Lincoln Substation.

III. THE PJM PLANNING PROCESS

Q. Please describe PJM's role in planning for the project.

A. PJM, in its capacity as the regional planning coordinator, transmission planner and transmission operator, identifies the need and timing for mandatory transmission system upgrades as part of the reliability planning, economic planning, and interconnection planning processes to preserve the reliability of the electricity grid that is under its operational control as the regional transmission organization. The PJM planning process is an 18-month cycle starting in September of every calendar year. The process ultimately produces a PJM Board-approved RTEP 18 months later (February). The RTEP identifies transmission system upgrades and enhancements to provide for the operational, economic, and reliability requirements of PJM customers. The RTEP consists of system upgrades produced from one or more of four planning processes: reliability planning; economic planning; interconnection planning; and local planning.

Supplemental projects are upgrades initiated by a transmission owner ("TO") and are part of the local planning process. In accordance with Attachment M-3 of its PJM Open Access Transmission Tariff ("OATT'), FirstEnergy provides information regarding the criteria used to plan and identify supplemental projects at an assumptions meeting. The process for developing supplemental projects includes identification and review of system needs at a separate needs meeting and provides an opportunity for stakeholders to comment. Next, there is a solutions meeting where potential solutions are discussed, as well as any alternatives identified. Stakeholders may then provide comments on the potential solutions.

Q. Please describe supplemental project upgrades.

A. FirstEnergy supplemental project upgrades are typically: (i) a request for electric service from new or existing customers; and/or, (ii) a project identified pursuant to FirstEnergy's Reliability Enhancement methodology. This methodology and any identified projects are presented to PJM and its stakeholders in accordance with the PJM OATT, Attachment M-3. MAIT projects, like the proposed Project, are presented at the PJM Sub Regional RTEP Committee - Mid-Atlantic meetings, which occur monthly. Supplemental project upgrades that have been reviewed through the Attachment M-3 process are identified with an "s" followed by a four-digit number.

Q. Are supplemental project upgrades mandated by PJM?

A. Supplemental project upgrades are not mandated or directed by PJM but are necessary in order to address planning functions not transferred to PJM (*e.g.*, asset management and customer interconnections). These projects reflect the PJM TOs' obligation to reliably serve its local service territory and are grounded in good utility practice.

Q. Has PJM included the Project in its RTEP?

A. Yes. A First Read of the Project was presented at the PJM Sub Regional RTEP Committee – Mid-Atlantic meeting on July 20, 2018 (Exhibit 7) and a Second Read occurred at the August 24, 2018 meeting (Exhibit 8) where PJM assigned the Project upgrade ID s1725.1. The Project need was subsequently re-presented to PJM on June 16, 2020 (Exhibit 9) with the solution being re-presented on October 15, 2020 (Exhibit 10). It has since been reassigned upgrade ID s2381.

Q. Was the proposed Project part of the PJM competitive planning process?

A. No. PJM supplemental projects do not take part in the competitive planning process.

IV. ELECTROMAGNETIC FIELD STUDY

Q. Please describe MAIT's procedures to mitigate EMF along the proposed Hunterstown-Orrtanna 115 kV Transmission Line.

A. MAIT's typical transmission line route selection process, which was employed on this Project, evaluates a number of factors to identify the appropriate location for the proposed Project. This evaluation process includes identifying and considering residences and locations where large groups of people typically gather, such as schools and places of worship. Although locating the transmission line in close proximity to these types of land uses is not precluded by state or federal rules or guidelines, providing the largest practical distance from residences, schools, places of worship and similar facilities is generally more acceptable to the local community and is an effective way to mitigate EMF.

Q. Does the Project utilize specific design features to reduce EMF strength?

A. Yes. As part of MAIT's approach to efficiently construct a transmission line project, the design of all or portions of a transmission line project will typically utilize a compact conductor arrangement. This has the added benefit of reducing electric and magnetic field strengths.

Q. Did MAIT prepare an EMF field study as a part of this Project?

A. Yes. As a point of reference, MAIT is providing estimates of the EMF strengths for the Project. The estimates have been prepared utilizing the Electric Power Research Institute's EMF Workstation 2015 program software. The electric and magnetic field strengths directly beneath the centerline at mid-span and at the edges of the ROW for the

transmission line have been estimated for the normal maximum load of the transmission line and are provided in the table below.

EMF CALCULATIONS		Electric Field kV/meter	Magnetic Field mGauss
Hunterstown-Orrtanna 115 kV Transmission Line	Under Lowest Conductors	1.208	8.11
Orrtanna-Lincoln 115 kV Transmission Line	At Right-of-Way Edge	0.016 / 0.272	0.68 / 4.91

Typical conductor arrangements of sections of the transmission line that are greater than one mile in length have been modeled and are reported in this table. In addition, graphs of the electric and magnetic field calculations are included as Exhibits 11 and 12.

Q. Does this conclude your direct testimony?

A. Yes, it does. However, I reserve the right to file such additional testimony as may be necessary or appropriate.

LAWRENCE (LARRE) ANTHONY HOZEMPA

76 S. Main Street, Akron, OH 44308| 330.384.5231 | lhozemp@firstenergycorp.com

EDUCATION

The Pennsylvania State University, University Park, PA

B.S. in Electrical Engineering **1986**

PROFESSIONAL ENGINEERING LICENSES

State of Maryland	June 2008 – Present
State of New Jersey	March 2015 – Present
Commonwealth of Pennsylvania	Sept 1999 – Present
Commonwealth of Virginia	June 2007 – Present
State of West Virginia	March 2007 – Present

ENGINEERING EXPERIENCE

FirstEnergy Service Company 76 South Main Street, Akron, OH 44308

General Manager, Planning **2018-Present**

Oversee the network planning activities of the Transmission Planning department. Coordinate transmission projects and programs with other departments and the regions to insure transmission reliability and resiliency is improved. Interact with PJM Interconnection, LLC and other regulatory agencies to exchange information on the state of the transmission system and planned enhancements to the transmission system.

FirstEnergy Service Company 76 South Main Street, Akron, OH 44308

Manager, Transmission Operations, System Operations-South **2016-2018**

Manage the operation of the transmission and sub-transmission systems for the Monongahela Power Company, The Potomac Edison Company, and the West Penn Power Company regions within the FirstEnergy footprint. Oversee coordination of the operation of the transmission system with PJM, neighboring control areas and regional personnel. Insure Transmission System Operators are knowledgeable of and follow FirstEnergy, PJM, and NERC procedures.

FirstEnergy Service Company 76 South Main Street, Akron, OH 44308

Manager, Transmission Planning **2015-2016**

Manage the transmission planning function for the Jersey Central Power & Light, Monongahela Power Company, and The Potomac Edison Company regions. Provide technical guidance to staff engineers. Coordinate the planning function with regional and corporate personnel. Write and review reports on planning studies including generation interconnection studies, load connection studies, and annual transmission system assessments. Provide written and oral testimony as necessary to support transmission projects. Meet with public, government officials, and regulators to support transmission projects.

FirstEnergy Service Company 76 South Main Street, Akron, OH 44308
Supervisor, Transmission Planning and Protection **2011-2015**
Supervise the transmission planning function for the Jersey Central Power & Light, Monongahela Power Company, and The Potomac Edison Company regions. Provide technical guidance to staff engineers. Coordinate the planning function with regional and corporate personnel. Write and review reports on planning studies including generation interconnection studies, load connection studies, and annual transmission system assessments. Provide written and oral testimony as necessary to support transmission projects. Meet with public, government officials, and regulators to support transmission projects.

Allegheny Power Service Company 800 Cabin Hill Drive, Greensburg, PA 15601
Senior Engineer / Consulting Engineer **2005-2011**
Performed planning studies on the EHV and transmission system in the Allegheny Power transmission zone. Member of the Reactive Support / Voltage Profile Task Force at PJM Interconnection, LLC. Major projects: Provided technical studies and testimony to support the Trans-Allegheny Interstate Line (TrAIL) and the Potomac Appalachian Transmission Highline (PATH) including meeting with the public, government officials, and regulators; preparing written testimony and exhibits; and providing oral testimony during the court proceedings.

Allegheny Power Service Company 800 Cabin Hill Drive, Greensburg, PA 15601
Service & Design Manager **2004-2005**
Managed 12 Lines Engineering Designers in the Jeannette Operations Region. Supervised engineering for new service, rehabilitation work, and upgrades and reinforcements to the distribution and subtransmission lines. Prepared the capital and operations budgets, had oversight for manpower allocation, managed process improvements, and reviewed audit controls.

Allegheny Power Service Company 800 Cabin Hill Drive, Greensburg, PA 15601
Engineer, Planning **2000-2004**
Performed planning studies on the transmission system in southwestern Pennsylvania. Performed generation interconnection studies including coordination of planning studies with PJM Interconnection, LLC. Major projects: generation interconnection studies for Allegheny Energy Supply, Dominion Resources, and Duke Energy North America.

Allegheny Power Service Company 800 Cabin Hill Drive, Greensburg, PA 15601
Engineer, Planning **1996-2000**
Performed planning studies and overcurrent protection coordination on the distribution system. Prepared capital and operations budgets for division work.

West Penn Power Company 800 Cabin Hill Drive, Greensburg, PA 15601
Engineer, Division Planning **1987-1996**
Responsible for planning studies and overcurrent protection coordination on the distribution system. Major projects: Cheswick substation rebuild, 4 kV to 12 kV conversions in Natrona Heights, Cheswick and Springdale, installation of 138-12 kV substations in North Washington, Ethel Springs, and Silverville

TESTIMONY AND PROCEEDINGS

Docket No. ER02-136 before the Federal Energy Regulatory Commission
Provided written and oral testimony on behalf of Allegheny Power before the Federal Energy Regulatory Commission regarding the direct assigned facilities charges to Allegheny Electric Cooperative. 2002

Case No. 07-0508-E-CN before the Public Service Commission of West Virginia
Provided written and oral testimony on behalf of Trans Allegheny Interstate Line Company before the Public Service Commission of West Virginia to support the need for the Trans Allegheny Interstate Line. 2007

Case No. PUE-2007-00033 before the State Corporation Commission of Virginia
Provided written and oral testimony on behalf of Trans Allegheny Interstate Line Company before the State Corporation Commission of Virginia to support the need for the Trans Allegheny Interstate Line. 2007

Docket Nos. A-110172, A-110172F0002, A-110172F0003, A-110172F0004, and G-00071229 before the Pennsylvania Public Utility Commission
Provided written and oral testimony on behalf of Trans Allegheny Interstate Line Company before the Public Utility Commission of Pennsylvania to support the need for the Trans Allegheny Interstate Line and the Prexy facilities. 2007

Case No. PUE-2009-00043 before the State Corporation Commission of Virginia
Provided written testimony on behalf of PATH Allegheny Virginia Transmission Corporation before the State Corporation Commission of Virginia to support the need for the Potomac Appalachian Transmission Highline. 2009

Case No. 09-0770-E-CN before the Public Service Commission of West Virginia
Provided written testimony on behalf of PATH West Virginia Transmission Company and PATH Allegheny Transmission Company before the Public Service Commission of West Virginia to support the need for the Potomac Appalachian Transmission Highline. 2009

Case No. 9223 before the Maryland Public Service Commission
Provided written testimony on behalf of The Potomac Edison Company before the Public Service Commission of Maryland to support the need for the Potomac Appalachian Transmission Highline. 2009

Case No. PUE-2010-00115 before the State Corporation Commission of Virginia
Provided written testimony on behalf of PATH Allegheny Virginia Transmission Corporation before the State Corporation Commission of Virginia to support the need for the Potomac Appalachian Transmission Highline. 2010

Case No. 9239 before the Maryland Public Service Commission
Provided written testimony on behalf of The Potomac Edison Company before the Public Service Commission of Maryland to support the modified scope of the Monocacy-Ringgold-Carroll Transmission line project. 2012

Case No. 9309 before the Maryland Public Service Commission
Provided written testimony on behalf of The Potomac Edison Company before the Public Service Commission of Maryland to support the need to rebuild the Maryland segments of the Doubs-Mt. Storm 500 kV transmission line. 2012

Case No. PUE-2014-00070 before the State Corporation Commission of Virginia
Provided written testimony on behalf of The Potomac Edison Company before the State Corporation Commission of Virginia to support the need for reconductoring/rebuilding the Millville-Old Chapel 138 kV line. 2014

Docket No. EO14030281 before the State of New Jersey Board of Public Utilities
Adopted the written testimony of Jeffrey Goldberg on behalf of Jersey Central Power & Light Company before the Board of Public Utilities of New Jersey to support the need for constructing the Oceanview 230 kV transmission project. 2014

Before the Jefferson Township Planning Board, Morris County, New Jersey
Provided oral testimony on behalf of Jersey Central Power & Light Company before the Jefferson Township Planning Board to support the need for constructing the West Wharton Static var Compensator (SVC). 2014

Before the Township of Rockaway Board of Adjustment, Morris County, New Jersey
Provided oral testimony on behalf of Jersey Central Power & Light Company before the Township of Rockaway Board of Adjustment to support the need for constructing the West Wharton Static var Compensator (SVC). 2015

Before the Township of Old Bridge Zoning Board of Adjustment, Middlesex County, New Jersey
Provided oral testimony on behalf of Jersey Central Power & Light Company before the Township of Old Bridge Zoning Board of Adjustment to support the need for expanding the Deep Run Substation. 2015

Docket No.EO15030383 before the State of New Jersey Board of Public Utilities
Provided written and oral testimony on behalf of Jersey Central Power & Light Company before the Board of Public Utilities of New Jersey to support the need for constructing the Montville-Whippany 230 kV transmission project. 2015

Civil Action No.15-C-128-2 before the Circuit Court of Harrison County, West Virginia
Provided oral testimony on behalf of Trans-Allegheny Interstate Line Company before the Circuit Court of Harrison County to support the need for constructing the Oak Mound-Waldo Run 138 kV transmission project. 2015

Docket No.PUE-2016-00077 before the State Corporation Commission of Virginia
Provided written testimony on behalf of The Potomac Edison Company before the State Corporation Commission of Virginia to support the need for reconductoring/rebuilding the Double Toll Gate-Riverton 138 kV transmission project. 2016

Docket No. EO16080750 before the State of New Jersey Board of Public Utilities
Provided written and oral testimony on behalf of Jersey Central Power & Light Company before the Board of Public Utilities of New Jersey to support the need for constructing the Monmouth County Reliability Project. 2016

Docket No. 12-SU-00-0644 and 12-SU-00-0645 before the Maryland Tax Court
Reviewed list of assets of transmission and distribution equipment owned by Potomac Edison in Maryland and was later deposed on my review of those assets regarding use in a production activity. 2018

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION FOR AUTHORIZATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC TO SITE AND CONSTRUCT THE HUNTERSTOWN-ORRTANNA 115 kV TRANSMISSION LINE PROJECT SITUATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND, AND STRABAN TOWNSHIPS, ADAMS COUNTY, PENNSYLVANIA	:	**DOCKET NO. _____**

VERIFICATION

I, Lawrence A. Hozempa, hereby state that the facts set forth in my Testimony, MAIT Statement No. 2, are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

28 April 2021
Date

Lawrence O. Hozempa
Lawrence A. Hozempa
General Manager, Planning

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	:	**Docket No. A-2021-_____**

Direct Testimony
Of
Barry A. Baker

List of Topics Addressed

Line Route Study;
Environmental Assessment

I. RESPONSIBILITIES, EXPERIENCE AND EDUCATION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Barry Alan Baker. My business address is 625 West Ridge Pike, Suite E-100, Conshohocken, Pennsylvania 19428

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by AECOM Technical Services Corporation ("AECOM") as a Vice President and Eastern United States (U.S.) Regional Practice Lead for the Impact Assessment & Permitting Practice. I also serve as a Senior Project Manager and Technical Lead in the AECOM energy market sector.

Q. WHAT ARE YOUR PRINCIPAL RESPONSIBILITIES IN THESE POSITIONS?

A. In these roles, I am a Certified Project Manager and manage projects for siting and permitting of new transmission lines, power plants, and other facilities. I manage a Practice of approximately four hundred individuals responsible for environmental, cultural resources, and information technology services. Additionally, I serve as a Technical Lead for transmission and distribution services on the east coast of the U.S.

Q. PLEASE PROVIDE A SUMMARY OF YOUR EDUCATION AND PROFESSIONAL WORK EXPERIENCE.

A. I received a Bachelor of Science with Honors degree in Environmental Science from the University of East Anglia in Norwich, England in 1996. A key focus was on the use of geographic information systems ("GIS") and computer applications for environmental

problem solving. My additional continuing education relevant to my current position includes the following courses and programs:

- Approximately 50 project management classes necessary for formal certification.
- Creating and Integrating Data for Natural Resource Applications (ESRI).
- Geoprocessing with ArcGIS Desktop (ESRI).
- Spatial Hydrology Using ArcView (ESRI).
- Introduction to ArcIMS (ESRI).
- System Architecture Design for GIS (ESRI).

I have been employed by AECOM for the last fifteen years in the roles previously discussed. In these positions, I have been responsible for siting studies both as a Project Manager and as a technical lead for transmission line siting as well as new power development throughout the eastern region of the U.S., including: Pennsylvania, New Jersey, Maryland, New York, Connecticut, Ohio, Illinois, Virginia, Delaware, Massachusetts, and Florida. I also manage the Eastern U.S. Impact Assessment & Permitting practice where I am responsible for teams of biologists, ecologists, cultural resource specialists, and GIS analysts. Additionally, I am an AECOM Technical Lead designated for supporting and developing major transmission opportunities on the U.S. east coast. Prior to joining AECOM, I held GIS and environmental development positions for other environmental and government consultants as outlined in my resume, which is attached as Appendix A.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY REGULATORY PROCEEDINGS?

A. Yes, I have provided siting testimony before the Pennsylvania Public Utility Commission ("Commission"), the New Jersey Board of Public Utilities, and the Maryland Public Service Commission, in a variety of proceedings, as further outlined in Appendix A.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A. My testimony explains the selection of the route for the "Hunterstown-Orrtanna 115 kV Transmission Line Project" (the "Project").

Q. WERE ANY PORTIONS OF THE SITING APPLICATION PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes. I am sponsoring certain attachments and exhibits for this project filing. Specifically, I am responsible for portions of Attachment 1 to the Application and MAIT Exhibits 13 through 16.

I was integrally involved in preparing these materials or otherwise provided oversight to AECOM technical staff who prepared them. I also provided review for the complete Application prior to assembly and submission to the Commission.

Q. WHAT ARE YOUR RESPONSIBILITIES IN CONNECTION WITH THE PROJECT?

A. I serve as AECOM's Project Manager, on behalf of MAIT, for the siting and permitting components of the Project. My responsibilities on the Project began in March 2018 and have involved oversight of the AECOM routing efforts that identified three potential

routes: Alternative Route 1 (hereinafter the "North Route"),Alternative Route 2 (Parallel Route) (referenced further herein as the "Proposed Route"), and Alternative Route 3 (hereinafter the "South Route"). The Proposed Route is presented for Commission approval. I oversee the scientists, biologists, planners, cultural resource specialists, GIS analysts, and other technical specialists that have helped define the routes considered for the proposed transmission line. I also attend numerous teleconferences that take place concerning project-related routing, permitting, and public outreach efforts.

For project environmental consultation, I reviewed and helped coordinate the initial agency consultation and survey efforts on behalf of MAIT. These include submission of a Pennsylvania Natural Diversity Inventory ("PNDI") large project review to the U.S. Fish and Wildlife Service ("USFWS"), Pennsylvania Department of Conservation and Natural Resources ("DCNR"), Pennsylvania Game Commission ("PGC"), and Pennsylvania Fish and Boat Commission ("PFBC"); and wetland delineation activities along the Proposed Route right-of-way ("ROW").

III. ROUTE SELECTION STUDY

Q. PLEASE EXPLAIN HOW THE STUDY AREA WAS DETERMINED AND THE DEVELOPMENT OF POTENTIAL AND ALTERNATIVE ROUTES.

A. The MAIT Routing Team, which included subject matter experts from transmission line siting, real estate, construction, electrical engineering, environmental, and permitting groups, conducted a detailed siting analysis to determine a location for the Hunterstown-Orrtanna 115 kV Transmission Line that best balances social, environmental, engineering and economic considerations. This analysis included the determination of a study area,

the compilation of an environmental inventory, identification and analysis of alternative line routes and, finally, selection of the Proposed Route.

The study area is the region in which transmission line route alternatives could be sited to practicably meet the Project's functional requirements and, at the same time, minimize potential environmental impacts and Project costs. The study area was selected based on professional judgment and the geographic characteristics of the region, as well as the physical endpoints of the Project (*i.e.*, substation and switch pole locations). In this case, the boundaries of the study area were developed based on a review of U.S. Geological Survey ("USGS") maps, state and county road maps, and aerial photographs. Constraints such as topography, parks, suburban/developed areas, transportation routes, existing utility corridors, and the locations of the end points played key roles in determining the boundaries of the study area route candidate selections.

Given these considerations, the Routing Team identified a Study Area encompassing approximately 40,600 acres, or 63.5 square miles, within Adams County, Pennsylvania. The Project study area is bounded generally by South Mountain and Michaux State Forest to the west and north; Gettysburg National Military Park to the south; and the existing Hunterstown Substation to the east (the "Study Area"). Using this established Study Area, the MAIT Routing Team began its efforts to determine potential routes for the line.

Q. WHAT GUIDELINES WERE USED TO ANALYZE POTENTIAL ALTERNATIVE ROUTES?

A. The Routing Team developed basic route selection criteria that would be used to select and analyze potential alternative routes. These guidelines included the following criteria:

- Maximize the use of any existing transmission line ROW and seek rebuild options;
- Maximize use of any existing unused ROWs;
- Evaluate potential to parallel existing linear utilities or transportation corridors;
- Avoid or limit circuitous routes and special design requirements;
- Maximize the distance from and/or minimize impact on dwellings, schools, daycare facilities, hospitals, and other community facilities;
- Avoid or minimize visibility from scenic roadways or viewpoints;
- Avoid crossing or minimize impacts to designated public resource lands such as national and state forests and parks, recreational lands, nature preserves, designated historic resources and sites, and conservation areas;
- Minimize environmental impact and construction/maintenance cost by selecting shorter, direct routes; and route corridors through terrain where economical construction and environmental best management practices can be employed, and where line operational/maintenance is most feasible (*e.g.*, use existing access roads where practicable); and
- Avoid or minimize new crossings of large lakes, rivers and large wetland complexes, critical habitat, and other unique or distinct natural resources.

Using these established routing guidelines, the Routing Team identified opportunity and constraint features within the Study Area that would take advantage of existing corridors to the extent practicable and minimize potential impacts to the natural

and human (or built) environment. A key existing corridor for the Project is a 200-foot wide ROW held by Metropolitan Edison Company that extends between the Hunterstown and Orrtanna Substations. Half of this ROW is occupied by the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, which is currently the only source of power to the Orrtanna Substation and would need to be maintained throughout the duration of the Project. The option to use portions of the unused ROW paralleling the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line was a primary consideration in the routing assessment, as using existing ROWs would potentially minimize environmental impacts, alleviate the need for new easement agreements, and reduce total project costs. This unused transmission ROW has sufficient space to build a new single-circuit 115 kV transmission line or a double-circuit arrangement with the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. The Routing Team used this information to develop alternative routes following the general routing and technical guidelines described above. Details of the opportunity and constraints used to develop the alternative routes are included in the Project Route Selection Study, which is attached as MAIT Exhibit 15.

Q. CAN YOU DESCRIBE HOW THE ROUTING TEAM IDENTIFIED THE ALTERNATIVE ROUTES?

A. When siting transmission lines, three main routing opportunities are generally focused on where viable. These opportunities include:

- Replacing or upgrading existing transmission lines;

- Corridor sharing/paralleling existing linear utilities or ROWs, or using existing unbuilt ROWs; and
- Crossing undeveloped lands.

Replacing or upgrading existing transmission lines typically minimizes natural and social impacts by using the existing ROW, thus eliminating or reducing additional ROW clearing. For the Hunterstown-Orrtanna 115 kV Transmission Line Project, upgrading the existing single-circuit Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line to double-circuit was evaluated by MAIT. MAIT determined that this option was undesirable due to the need to outage the entire circuit to rebuild the line to double-circuit configuration. The option to co-locate the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line into the adjacent 100-foot wide ROW with the new Hunterstown-Orrtanna 115 kV Transmission Line was considered more favorable.

The corridor sharing scenario pairs the transmission line with an existing linear feature that it can parallel, which can include highways, railroads, gas pipelines, or other existing or unbuilt transmission line ROWs. These corridors are considered opportunity areas because locating a new transmission line parallel to them may require less ROW, concentrates linear land uses thus reducing fragmentation of the landscape, and creates an incremental impact rather than a new impact. Opportunity areas within the Project Study Area for the development of the new 115 kV transmission line included paralleling the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line in the unbuilt 100-foot wide portion of the existing 200-foot wide ROW, paralleling the Hunterstown-Conemaugh 500 kV Transmission Line ROW, and paralleling sections of the active CSX Railroad that extends to Gettysburg.

The third opportunity is to use undeveloped areas such as forests, fields, and agricultural areas to identify routes that cross open lands. Identifying these routes involves assessment of parcel boundaries and land use practices to define routes that minimize potential impacts to private properties and any agricultural or other farming activities such as orchards. Most of the Project Study Area consists of agricultural crop lands and fields that provide opportunities for potential cross-country routes. However, the western third of the Project Study Area is located in the historic extent of a "fruitbelt" that encompasses over 20,000 acres of agricultural lands planted as fruit orchards.

Using these fundamental considerations as guidance, information obtained during the environmental field reviews was used to develop an opportunity and constraint map of the Project Study Area using GIS software. Georeferenced data layers of the identified opportunities and constraints obtained from published state and federal materials and local planning documents were superimposed on available current aerial photography. Evaluation of this desktop data in conjunction with field reviews of the Project Study Area resulted in the identification of three viable alternative routes that provide the required connectivity between the Orrtanna Substation and the switch pole structure. These routes include a cross-country alignment that extends north of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line (*i.e.*, the North Route), a corridor sharing or potential co-location alignment that parallels the north side of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line within an existing 200-foot wide ROW (*i.e.*, the Proposed Route), and a relatively direct cross-country alignment that generally extends south of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line (*i.e.*, the (South Route).

Q. PLEASE BRIEFLY DESCRIBE THE ALTERNATIVE ROUTES.

A. The three alternative routes are briefly described below and more fully in Section 5.1 of the Project Route Selection Study, which is attached as MAIT Exhibit 15.

North Route

The North Route is approximately 12.6 miles in length. From the Orrtanna Substation, the North Route would extend northwest 0.4 mile to the west side of Orrtanna Road and onto the Knouse Foods property that is used for manufacturing apple products. Turning northeast, the alignment would parallel the active CSX Railroad for 0.8 mile to an open field just east of Railroad Lane. Little Marsh Creek and an adjacent tributary would be spanned along this segment. From this point, the alignment would turn north and extend 1.4 miles across predominantly agricultural lands to Lincoln Highway. Narrow forested floodplains bordering Muskrat Run and other tributaries to Little Marsh Creek would be crossed along this segment. Turning northeast, the alignment would extend 0.7 mile to a point in an agricultural field, crossing over Lincoln Highway, U.S. Route 30, and Marsh Creek along the way. The North Route would then turn to the east for 1.5 miles across agricultural lands, spanning Fairview Fruit Road and under the Hunterstown-Conemaugh 500 kV Transmission Line along the alignment. The route would then turn northeast and extend for 2.4 miles across agricultural lands and over Hilltown Road, Mummasburg Road, B and F Road, and Zeigler Mill Road to the west side of Conewago Creek.. Hilltown Road, Mummasburg Road, and B and F Road would be spanned north of the community of Mummasburg at locations with sparse residential development. The alignment would parallel and then cross Zeigler Mill Road before reaching a cluster of

residential homes near State Route ("SR") 34. The alignment would span Conewago Creek and the bordering forested floodplain wetland just west of SR 34. Turning east, the North Route would then extend across agricultural lands for 1.1 miles to a field on the east side of Conewago Creek and SR 34, which is bordered by several commercial buildings. At this point, the alignment would turn southeast for 2.8 miles across predominantly agriculture lands to an open field located south of Good Intent Road and adjacent to the north side of Rock Creek. Land use along this alignment is predominantly agriculture with clusters of residential development noted adjacent to Table Rock Road and Goldenville Road. The Gettysburg and Northern Railroad and several small forest lined tributaries to Conewago Creek and Rock Creek would be spanned along this section. From this point, the North Route would extend for 1.5 miles to the switch pole structure. The alignment would turn southwest and parallel Rock Creek across agricultural lands to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line and then turn east to parallel this transmission line to the switch pole structure. Rock Creek and Business Route 15 (Old Harrisburg Road) would be spanned along this section. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing.

Proposed Route

The Proposed Route is approximately 9.1 miles in length and parallels the north side of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line from the Orrtanna Substation to the switch pole structure in an existing 200-foot wide ROW. From the Orrtanna Substation, the Proposed Route would extend northeast for 2.7 miles across predominantly agricultural lands to U.S. Route 30. This alignment would cross Little

Marsh Creek and several smaller tributaries. Road crossings would include Railroad Lane and Seven Stars Road, which are bordered by low density residential development. The CSX Railroad would also be spanned in this section. After crossing U.S. Route 30, the route would continue for 1.9 miles to the northeast to a field located north of Mummasburg Road and adjacent to the south side of the Hunterstown-Conemaugh 500 kV Transmission Line. Land use in this section is predominantly agriculture with few homes noted at the road crossings. Marsh Creek and Mummasburg Run are spanned along this section. Turning east, the Proposed Route would extend for 0.9 mile, spanning residential bordered Belmont Road and paralleling the south side of the Hunterstown-Conemaugh 500 kV Transmission Line, to a turn point located adjacent to Russel Tavern Road. At this point, the route would turn southeast and extend for 0.9 mile to SR 34, spanning Russel Tavern Road, Willoughby Run, the Gettysburg and Northern Railroad, and Herrs Ridge Road before intersecting with SR 34. Land use changes from agriculture to moderately dense residential and commercial development adjacent to SR 34. Turning east, the alignment would extend for 1.5 miles across predominantly agricultural lands to Good Intent Road, with residential development and a local school noted near the SR 34 crossing and a commercial business noted adjacent to Table Rock Road. The Hunterstown-Conemaugh 500 kV Transmission Line and two tributaries to Rock Creek would be spanned in this section. The Proposed Route would then turn southeast for 1.2 miles and extend across agricultural lands to the switch pole structure. Rock Creek and Business Route 15 (Old Harrisburg Road) would be spanned along this section. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing.

South Route

The South Route is approximately 9.7 miles in length. From the Orrtanna Substation, the South Route would extend northeast and then southeast for 0.7 miles to Railroad Lane. The alignment extends north of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line to bypass around a residential structure before turning to the southeast to reconnect with the existing transmission line ROW. From this point, the route would extend for 1.4 miles to Seven Stars Road, initially paralleling the existing transmission line but then turning southeast to span over the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, and then turning northeast to bypass around a farm complex. Extending northeast for 1.2 miles to U.S. Route 30, the South Route would parallel the north side of residential lined Seven Stars Road before spanning this road and intersecting with U.S Route 30. The South Route would continue to the northeast for 1.5 miles to a field located south of Mummasburg Road, spanning U.S. Route 30, the CSX Railroad, Belmont Road, and Marsh Creek., Belmont Road would be spanned in an area where it is bordered by low density residential development. Turning northeast, the route would extend across predominantly agricultural lands for 2.1 miles to SR 34, spanning Mummasburg Road, crossing over the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, and crossing under the Hunterstown-Conemaugh 500 kV Transmission Line in this section. The South Route would then span SR 34 and the Gettysburg and Northern Railroad before turning southeast and extending for 1.6 miles across agricultural lands and parallel the north side of the Hunterstown-Conemaugh 500 kV Transmission Line to a field west of Good Intent Road, where the route would intersect with the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line.

The route would span over Table Rock Road in an isolated area. From the west side of Good Intent Road, the South Route would parallel the north side of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line for 1.2 miles across agricultural lands to the switch pole structure. Rock Creek and Business Route 15 (Old Harrisburg Road) would be spanned along this section. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing.

Q. WAS OUTREACH PART OF THE ROUTING PROCESS?

A. Yes. MAIT conducted extensive public outreach throughout the siting process, including initial regulatory agency consultation, public notification and a public information meeting and meetings with property owners.

On June 19, 2019, MAIT conducted a public information meeting to review the alternative routes with landowners and local officials. The meeting was held from 6-8 p.m. at the Adams County Christian Academy, which is located on SR 34 north of Gettysburg and adjacent to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line corridor. The public information meeting was staffed by MAIT and AECOM personnel that addressed questions related to project need, real estate, engineering, construction, vegetation management, and the siting process. Forty attendees signed into the meeting and fourteen comment cards were submitted that contained comments and suggestions provided by the landowners or general public. Most of the discussion at this meeting revolved around specific line locations on individual properties and the potential effect of the Project on their properties. The landowners that attended worked productively with MAIT to assess the potential

alignments across their properties and address their concerns to the extent practicable. Landowners along the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line acknowledged the presence of the additional 100-foot wide ROW parallel to the line. Based on the comments received, most attendees suggested that MAIT strongly consider choosing Alternative Route 2 (Parallel Route) that would use an existing ROW to parallel the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line from the Orrtanna Substation to the switch pole structure

IV. ENVIRONMENTAL ASSESSMENT

Q. DID THE ROUTING TEAM EVALUATE THE IMPACTS OF THE ALTERNATIVE ROUTES ON THE BUILT ENVIRONMENT?

A. Yes. The Routing Team evaluated the potential impact of the three alternative routes on existing residential and commercial development; land uses; archaeological and historical areas; recreational and scenic resources; conserved lands; and terrain and landscape. With the exception of the developed areas surrounding the U.S. Route 30, SR 34, and Business Route 15 crossing areas, nearly the entire length of the alternative routes crossed agricultural and forested land coverages. The Project is not anticipated to impact any scenic, geologic, or wilderness areas.

The closest airport is the Gettysburg Regional Airport, which is located approximately 4.0 miles east of the Orrtanna Substation along U.S. Route 30. The airport runway is 3000 feet long and is approximately 1.2 miles from the South Route, 2.0 miles from the Proposed Route, and over 3.0 miles from the North Route. MAIT will need to file the appropriate documentation with both the Federal Aviation Administration and the

Pennsylvania Department of Transportation's Bureau of Aviation to ensure the Project will not present a hazard to the airport's flight operations. No other smaller airports or heliports were identified within 2 miles of the Study Area.

Many of the agricultural parcels located in the Study Area are protected through state based agricultural conservation easements or land conservation easements that are managed by local conservancies, which focus on protecting agricultural and natural lands to preserve the character of the area. Some of the land conservancy parcels also involved forested lands that provide ecological value to the region. Assessment of these conserved lands identified that the Proposed Route would cross the least area relative to the other options. Lands crossed by the alignment are currently used for agriculture and the transmission line ROW was in place prior to the land being conserved. The other options would involve new ROW impacts across these protected agricultural and forested lands.

After analyzing and comparing the three alternative routes against potential impacts on the built environment, the Proposed Route is preferred over other alternatives. The entire length of the Proposed Route can be constructed within an existing 100-foot ROW that parallels the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line and it is the shortest, most direct route of all of the alternatives. Other options would require significantly more new ROW. Although the Proposed Route crosses within 300 feet of more residences than other options, these residences are already located within 300 feet of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. Therefore, the Proposed Route is expected to result in minimal incremental impacts to land use, cultural resources, and will not introduce a new visual

element into the viewshed because there is an existing transmission line present in the corridor.

Q. DID THE ROUTING TEAM CONSIDER IMPACTS OF CONSTRUCTING THE TRANSMISSION LINE ON EACH ALTERNATIVE ROUTE ON THE NATURAL ENVIRONMENT?

A. Yes. Natural environment impacts include potential impacts to vegetation and habitat, surface waters, and wetlands. Potential impacts are evaluated based on publicly available maps and data, consultation with federal and state agencies, as well as field review from public locations.

All three routes would extend across several forested floodplain areas that border the streams that bisect the Study Area. None of the streams are classified as High Quality or Exceptional Value ("EV"), but several of the streams in the Study Area are provided state protection as Wild Trout Streams, thereby classifying adjacent wetlands as EV features, most of which are forested. Due to their intrinsic ecological value, impacts to EV forested wetland are highly scrutinized by the state permitting agencies, thus minimizing these impacts is paramount during the siting review process. The Proposed Route would span the same relatively low number of streams as the South Route, but because the alignment would parallel an existing transmission line corridor, impacts to the EV forested wetlands adjacent to the streams would be incremental relative to the other options. Compared to the other two options, the Proposed Route would involve the least potential forested wetland impacts.

Most of the vegetation crossed by the alternative routes consists of agricultural land cover, but all of the options will cross forested lands. In these areas, a 100-foot-wide ROW will be cleared and maintained in accordance with MAIT's Vegetation Management Program. Based on a review of aerial imagery and field reviews, other options would require significantly more forest clearing than the Proposed Route.

After analyzing and comparing the three routes against potential impacts to the natural environment, the Routing Team concluded that the Proposed Route is preferred over the other alternatives. This alignment would result in significantly less forest clearing and potential impacts to forested wetlands compared to other options. Forest clearing can result in numerous impacts including forest fragmentation and creation of new edge habitat, wetland function modification, soil erosion and increased stormwater runoff. The Proposed Route would also minimize the number of aerial stream crossings and the amount of 100-year floodplain crossed. MAIT will obtain and adhere to all required state and federal permits.

After determination of the Proposed Route, MAIT conducted a delineation of the wetlands and streams along the Proposed Route alignment. This effort identified fifty-four wetlands and twenty-four intermittent or perennial streams within the 200-foot wide ROW. The wetlands accounted for a total area of 33.4 acres, of which 29.3 were classified as palustrine emergent wetlands, 3.5 acres palustrine forested wetlands, and 0.6 acre palustrine scrub/shrub wetlands. Using the results of this delineation effort, an engineering review was conducted to avoid the potential permanent impact to these resources from structure placement. The original engineering layout involved a structure-for-structure pattern that paralleled the existing alignment, which would have resulted in

several structures in a wetland. Further engineering evaluation adjusted the structures in a staggered pattern such that out of the seventy-two predominantly single monopole steel structures planned for the route, none will be located in a wetland.

As part of the federal and state permitting process, MAIT also conducted a PNDI review of the Proposed Route . The USFWS's response to MAIT's PNDI letter request indicated that this alignment is located within the habitat area of the federally endangered northern bog turtle (*Glyptemys muhlenbergii*). Based on directions provided in the PNDI receipt, a Phase 1 habitat assessment was conducted for all of the wetlands within the Proposed Route corridor. These surveys identified two adjacent wetland areas that contained the habitat conditions suitable for bog turtles. MAIT coordinated a Phase II presence/absence survey of these two wetlands to determine if bog turtle inhabited the areas. The Phase II surveys did not locate any bog turtles in these wetlands. The results of the Phase I and Phase II surveys were forwarded to USFWS for review, which provided its concurrence that the Project will have no effect on bog turtle habitat areas on August 12, 2019.

PGC noted that further review was necessary to resolve potential impacts. Additional information about the Proposed Route was provided to PGC in June 2019, to which PGC responded with a clearance letter on July 5, 2019.

DCNR and PFBC response indicated no adverse impact is anticipated to threatened and endangered species and/or special concern species and habitat.

Q. DID MAIT CONSIDER LOCAL ZONING ORDINANCES AND COMPREHENSIVE PLANS IN SELECTING THE PROPOSED ROUTE?

A. Yes. As a preliminary note, I want to acknowledge that public utility facilities, such as transmission lines and substations, are usually exempt from local municipal authority. The Commission's interim siting guidelines found at 52 Pa. Code, § 69.1101 (2)(3) and § 69.3104 (1), however require that local zoning ordinances and comprehensive land use plans be reviewed to evaluate the impact of the Proposed Route on these local ordinances and plans. As part of the siting analysis, MAIT evaluated the Proposed Route's consistency with the zoning ordinances and comprehensive plans of the government entities through which the Proposed Route would pass. MAIT has also reviewed the Project with representatives of Adams County and the commissioners of the townships through which the Proposed Route would pass. A discussion of MAIT's review of the local zoning ordinances and land use comprehensive plans is provided in Sections 4.2.3 and 6.2.1 of the Route Selection Study, which is attached as MAIT Exhibit 15.

V. ROUTE SELECTION STUDY CONCLUSION

Q. DID THE MAIT ROUTING TEAM DECIDE WHICH ALTERNATIVE IS THE PROPOSED ROUTE?

A. Yes. Based on a quantitative and qualitative review of information obtained from GIS data, field reconnaissance, and engineering and constructability considerations for this Project, the MAIT Routing Team selected **Alternative Route 2 (Parallel Route)** as the Proposed Route. The MAIT Routing Team believes that the cumulative social, environmental, and financial impacts associated with constructing this alignment will be less than any other alternative route. Specific reasons include the following:

- The Proposed Route will be located within an existing 100-foot wide ROW that parallels an existing transmission line alignment;
- The Proposed Route would involve the fewest new easements;
- The Proposed Route will involve significantly fewer acres of forest clearing and minimizes the number of new stream crossings;
- The Proposed Route will involve the least potential forested wetland clearing;
- While any route selected would result in changes to the existing viewshed, The Proposed Route would parallel an existing transmission line for its entire length, which minimizes changes to the existing viewshed compared to constructing an all new transmission line in areas without an existing transmission line;
- The Proposed Route is shorter and requires fewer angled structures compared to the other alternative routes; and
- The Proposed Route would also be the least costly of the alternative routes. MAIT evaluated the alternative routes from a cost perspective based on estimates from siting, real estate, engineering, procurement, and construction.

Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A. Yes, it does. I reserve the right to supplement my testimony as additional issues arise during the course of this proceeding.

Barry A. Baker
Technical Expert

Education
BS, Environmental Science (Honors), University of East Anglia Norwich, England

Location
Philadelphia

Years of experience
24

Years with AECOM
15

Registration/certification
Certified Project Manager
Certified Project Approver
Approved Lead Verifier – Impact Assessment & Permitting

Affiliations
None

Mr. Baker has over 20 years of environmental experience and three additional years' experience in construction and laboratory work. Mr. Baker is an AECOM Certified Project Manager and manages AECOM's Eastern U.S. Impact Assessment and Permitting Practice. He has managed projects for the siting and permitting of renewable and fossil facilities, energy lines, authors sections of state utility commission applications, and provides testimony support for utility commission hearings. Facility siting work has involved projects for power plant siting (solar, natural gas, coal gasification, and hydro), including natural gas pipeline and transmission line route identification, fatal flaw/critical issues studies, and permitting for new plants, with work conducted in PA, NJ, MD, DE, OH, NY, MA, and CT. His energy line work has included siting and permitting of electric transmission and gas pipelines, involving energy projects in PA, NJ, DE, OH, MD, NY, IL, VA, and FL. Additionally Mr. Baker has provided direct testimony support for applications with the Pennsylvania Public Utility Commission, New Jersey Board of Public Utilities, Maryland Public Service Commission, along with providing technical support for applications in Connecticut and Virginia.

Select project experience

Technical Task Manager, IEC Project - Routing Studies for 230 kV Transmission Lines, Multiple Counties in MD & PA, AEP/Transource: Technical task lead for the development of two new 230 kV transmission lines located in MD and PA. Technical work includes defining alternatives, evaluating and comparing the impacts, evaluating zoning considerations, and selecting a preferred alternative for each project. Additional work has included Public Open House support and coordination with agencies in both MD and PA such, as the MD PPRP, MD Joint Evaluation Meetings, and PADEP. The projects are currently under review by the MD PSC and PA PUC where Mr. Baker is providing Expert Witness services and testimony support for both the MD and PA filings.

AECOM Program Manager, PPL Northern Lehigh Reliability Program: Transmission Line Siting & PUC Filings; Environmental and Cultural Resource Studies; and Chapter 102 and 105 Permitting - Lehigh County, PA, PPL,: AECOM Siting & Environmental Program Manager for rebuild of 500 kV transmission line, substation upgrades, and multiple 69 kV to 138 kV upgrade projects in Lehigh County PA. Work involves data acquisition, mapping, and environmental analysis; Letter of Notification and support for PUC filings. Additional tasks include environmental coordination with Agencies for PNDI review and PHMC consultation. Permitting efforts, include wetland delineations, T&E species reviews e.g., Bog Turtle, eastern spade footed toad, and multiple botanical studies; agency coordination; Chapter 102 NPDES Individual Permit applications and Chapter 105 Permit applications.

AECOM Program Manager, PPL Sugar Notch Reliability Project: Transmission & Substation Siting & PUC Filings; Environmental and Cultural Resource Studies; and Chapter 102 and 105 Permitting - Multiple Counties, PA, PPL,: AECOM Siting & Environmental Program Manager for rebuild and new 230kV transmission lines and substation in northeast PA. Work involves data acquisition, mapping, and environmental analysis; Letter of Notification and support for PUC filings. Additional tasks include environmental coordination with Agencies for PNDI review and PHMC consultation. Permitting efforts, include wetland delineations, T&E species reviews e.g., Bats, rattlesnakes, and multiple botanical studies; agency coordination; Chapter 102 NPDES Individual Permit applications and Chapter 105 Permit applications.

AECOM Program Manager, PPL Greater Scranton Reliability Project: Transmission Siting & PUC Filings; Environmental and Cultural Resource Studies; and Chapter 102 and 105 Permitting - Multiple Counties, PA, PPL,: AECOM Siting & Environmental Program Manager for new 230kV transmission lines and substations, along with rebuild of 69kV lines and connectors in northeast PA. Work involves data acquisition, mapping, and environmental analysis; Letter of Notification and support for PUC filings. Additional tasks include environmental coordination with Agencies for PNDI review and PHMC consultation. Permitting efforts, include wetland delineations, T&E species reviews e.g., Bats, rattlesnakes, and multiple botanical studies; agency coordination; Chapter 102 NPDES General Permit applications and Chapter 105 Permit applications.

AECOM Project Manager, PPL Northeast/Pocono 230kV Transmission Siting & PUC Filings; Peckville-Varden Siting & PUC Filings; and Paupack Substation Connection Siting & PUC Filings; Environmental and Cultural Resource Studies; and Chapter 102 and 105 Permitting - Multiple Counties, PA, PPL,: Project Manager and technical siting and permitting lead for ~ 60-miles of new 230kV transmission lines and substations, along with rebuild of 69kV lines and connectors in northeast PA. Siting methodology incorporates an adapted EPRI-GTC transmission siting process using an AECOM built GIS model application to assist with stream-lining the siting process. Work involves data acquisition, mapping, and environmental analysis; Letter of Notification and Full Siting Application support for PUC filings, along with testimony support for the PUC filings. Additional tasks included public outreach presentations and initial environmental coordination with Agencies for PNDI review and PHMC consultation. Permitting efforts, include wetland delineations, T&E species reviews e.g., Bog Turtle, Indiana Bat, rattlesnakes, and multiple botanical studies; agency coordination; Chapter 102 NPDES Individual Permit applications and Chapter 105 Joint Permit applications.

Project Manager, Transmission Siting and Permitting of Ten Transmission Lines, and BPU Support, Southern NJ, Atlantic City Electric,: Manager of permitting team and technical siting manager for the rebuild or development of ten transmission lines within southern New Jersey. Siting analysis included development and comparison of alternative alignments for both overhead and underground options. Permitting efforts, include wetland delineations, T&E species reviews and multiple botanical studies; agency coordination in Pinelands, NJDEP, Army Corps and the associated permit applications.

Permitting Project Manager and Technical Task Manager, – 30-inch Gas Pipeline Transmission Siting, Pinelands Commission & BPU Filings New Jersey Natural Gas Southern Reliability Link Project: Overall manager of permitting team and technical siting manager for the development of a new 28-mile 30-inch gas pipeline in southern New Jersey. Siting analysis includes development and comparison of alternative alignments for the line. Permitting efforts, include wetland delineations, T&E species reviews and multiple botanical studies; agency coordination with the Pinelands and NJDEP, and the associated permit applications.

Permitting Project Manager and Technical Task Manager, GBW Transmission Siting and BPU Filings, Northern and Southern NJ, PSE&G,: Overall manager of permitting team and technical siting manager for the development of two new 230 kV transmission line upgrade projects within New Jersey – one within north central NJ (North Central Reliability Project) and the second in south central NJ (Burlington Camden Project). Siting analysis included development and comparison of alternative alignments for both overhead and underground options. The project study area involved highly complex and constrained environments including some of the most densely populated areas of the U.S. Technical tasks involved data acquisition and geoprocessing, complex model development and analysis, natural and human resource assessments and general project mapping. Additional tasks included public outreach presentation support, BPU filing and testimony support, data integration for next step engineering, and licensing and permitting strategy development. Permitting team has been responsible for the overall program management of permitting sub-consultants, permitting strategy in coordination with PSE&G; agency meetings and outreach; and detailed Level 3 schedule development.

Project Manager, New Generation Siting, Northeast U.S., Multiple Clients,: Project manager and technical siting lead for fourteen separate multistate (PA, NY, CT, MA, NJ, MD, DE, and OH) siting analysis and environmental assessments for new power generation projects; (Combined Cycle, Peaking, Solar, Hydroelectric, and IGCC). Work included selecting optimal site locations based on proximity analysis to critical infrastructure and rights-of-way; site layout and design; and environmental impact assessments to wetlands and other critical habitats; additional review of socio-economic climate at potential facilities was also included. Right-of-way investigation involved detailed analysis of land use and other critical aspects using an appropriately scaled linear siting approach to determine potential rights-of-way. Further tasks included Landowner identification and

purchase introductions, Township committee presentations and negotiations, and land Option negotiation assistance. Multiple sites reached option agreement status, provisional permitting review (fatal flaw/critical issues), and full permitting. Many development projects listed in the PJM Queues were the direct result of this work.

Project Manager, New Generation Critical Issues Analysis and Permitting, Northeast U.S., Multiple Clients: Managed permitting projects and Critical Issues Analysis for development of new power generation facilities in PA, CT, and NJ. Responsible for all aspects of project work including land use, water diversion / discharge, zoning, and air permitting activities. CT project tasks included application for State funding that successfully allowed client to receive multi-million dollar grant funding, along with full approval through the CT Siting Council.

Project & Technical Task Manager, Routing and Engineering Constraints Review – Near-shore connection NJ coast, NJ Orsted: Project manager and technical siting lead for the development of high voltage offshore and onshore cable/overhead line routing, shore landings and onshore substations to accommodate up to 1000 MW of offshore generation development. Onshore HV cable installation methodologies review includes routing, trench design, utility analysis, and constructability concerns. Grid Reinforcement Unit Costs and Risks review included initial analysis of existing infrastructure that may require upgrades as part of the project and the associated impacts for these reinforcements. Additional tasks include preliminary and detailed design of ten horizontal directional drills (HDDs) to be located at multiple locations for establishing onshore connection points.

Siting and Permitting manager FERC 1000 Transmission Line Siting, Substation Review, & Permit Analysis, Multiple Counties, NY, Confidential Client

Technical siting and permitting manager for development and analysis of transmission lines and substation upgrades in New York for FERC 1000 project support. Work included development of multiple alternative route options and selection of likely preferred alternative. Following development of alternatives, AECOM completed assessments of potential environmental impacts for each alternative and developed the associated permit requirements. Reports were used to support client submissions to PJM for FERC 1000 bids.

Technical Task Manager, GSRP Transmission Siting, Northern NJ, PSE&G,: Technical siting manager for the development of a new 50-plus mile 500 kV transmission line and associated substations within New Jersey. Siting analysis developed seven alternative alignments across the project study area within highly complex and constrained environments including some of the most densely populated areas of the U.S. The comprehensive analysis and resulting report to support a BPU filing was completed on time despite an extremely compressed schedule and under budget. Technical tasks involved data acquisition and geoprocessing, complex model development and analysis, natural and human resource assessments and general project mapping.

Technical Task Manager, Routing and Engineering Constraints Review - Transmission Line Crossing Baltimore Harbor, MD BGE: Technical task lead to evaluate and compare the impacts, zoning considerations, and permitting scenarios for underground or overhead transmission line route alternatives in MD. The evaluation was completed within the context of the best engineering and cost alternatives for underwater crossing of harbor compared to overhead crossing options. Additionally AECOM identified, evaluated, and developed a matrix that compared the best engineering and cost scenarios that may be required for each of the alternatives.

Project Manager, Transmission Line Conceptual Engineering Studies - Siting and Costing Study, IL, PJM Interconnection:

Project Manager and Technical Siting Lead for two competing transmission line projects in Illinois. The conceptual studies evaluated the feasibility of the projects and addressed routing and siting, real estate acquisition, engineering, construction, and potential environmental impacts related to developing the proposed transmission line and upgrading the existing substations.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION FOR AUTHORIZATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC TO SITE AND CONSTRUCT THE HUNTERSTOWN-ORRTANNA 115 kV TRANSMISSION LINE PROJECT SITUATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND, AND STRABAN TOWNSHIPS, ADAMS COUNTY, PENNSYLVANIA	:	**DOCKET NO. _____**

VERIFICATION

I, Barry A. Baker, hereby state that the facts set forth in my Testimony, MAIT Statement No. 3, are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

4/21/2021

Date

Barry A. Baker
Consultant

BEFORE THE
PENNSYLVANIA PUBLIC UTIILTY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	**:**	**Docket No. A-2021-_____**

Direct Testimony
of
Lisa Marinelli

List of Topics Addressed

Real Estate and Property Rights

I. RESPONSIBILITIES, EXPERIENCE AND EDUCATION

Q. Please state your name and business address.

A. My name is Lisa Marinelli and my business address is 800 Cabin Hill Drive, Greensburg, Pennsylvania 15601.

Q. By whom are you employed and in what capacity?

A. I am employed by FirstEnergy Service Company as an Advanced Real Estate Representative. My primary responsibility is the acquisition of land rights (easement and fee) necessary for the construction and maintenance of transmission facilities and providing project management oversight for contracted right-of-way ("ROW") acquisition projects. In this proceeding I am testifying on behalf of the Mid-Atlantic Interstate Transmission, LLC ("MAIT").

Q. Please describe your professional experience and educational background.

A. I graduated from the University of Pittsburgh in 1990 with a Bachelor of Arts in Finance and Accounting. I graduated from Duquesne University with a Master's degree in Taxation in 2004. I have been employed with FirstEnergy Service Company since 2011 when the merger of FirstEnergy Corp. ("FirstEnergy") and Allegheny Energy, Inc. was complete. Prior to the merger and since 2001, I was employed with Allegheny Energy Service Corporation. I worked within its Audit department from 2001 to 2006 where I was responsible for conducting operational, environmental and financial audits. From 2006, I worked within its Real Estate department where I was responsible for acquisition and divestiture of company owned assets, and acquisition of right of way for the construction and maintenance of distribution and transmission facilities.

II. PURPOSE OF TESTIMONY

Q. Please describe the purpose of your testimony.

A. The purpose of my testimony is to:

- describe the process used by MAIT in acquiring the necessary ROW to permit the construction of the proposed "Hunterstown-Orrtanna 115 kV Transmission Line Project" (the "Project");
- identify the potentially affected landowners and properties;
- describe the Code of Conduct applicable to MAIT's employees, agents, contractors and subcontractors in their respective interactions with impacted property owners; and
- describe the process leading to use of eminent domain.

Q. What are your responsibilities in connection with the Hunterstown-Orrtanna 115 kV Transmission Line Project?

A. It is my department's responsibility to identify all property owners along the preferred route for the Hunterstown-Orrtanna 115 kV Transmission Line Project (referred to as the "Proposed Route"). We review and determine adequacy of easement rights in areas we plan to use existing ROW and identify any area where we will require new or enhanced rights for the Proposed Route. For the areas where we may need new or enhanced ROW, we attempt to negotiate with these property owners for the appropriate land rights needed. We also deliver literature concerning the project to all property owners affected by the Proposed Route, including a project fact sheet, a property owner notice required by the Pennsylvania Public Utility Commission ("Commission"), a Code of Conduct for ROW

agents and subcontractor employees, a survey permission form and a brochure entitled "Maintaining Safe and Reliable Service" which explains FirstEnergy's ROW maintenance practices and other information to help them fully understand the project. The ROW agent provides the property owner with information on how he/she can be contacted at any time to answer questions or to address issues or concerns. The ROW agent is a direct link for the property owner to communicate with MAIT.

Q. Are you sponsoring any exhibits to accompany your testimony?

A. Yes. I am sponsoring MAIT Exhibits 17 through 19.

III. REAL ESTATE AND PROPERTY RIGHTS

Q. How has MAIT addressed ROW procurement and related matters since the Proposed Route for the Huterstown-Orrtanna 115 kV Transmission Line was selected?

A. After the siting process was completed and the Proposed Route selected, the process of identifying property owners commenced. The siting contractor, AECOM Technical Services Corporation ("AECOM"), identified and MAIT confirmed the property owners along the proposed route using publicly available information, such as tax maps and courthouse records. Because this line is proposed to be constructed within an existing transmission corridor, MAIT reviewed the easement documents to confirm the easement widths and identify any properties where additional ROW may be required for this Project. The proposed route occupies existing ROW on 62 tracts including that upon which the Orrtanna Substation is situated. Of the 62 tracts, it was determined that additional ROW would need to be obtained on two parcels. A property owner list was

developed, which is reflected in MAIT Exhibit 17. Based on that list, letters were sent on July 5, 2019 to Ronald and Joyce Offutt and on August 21, 2019 to Orrtanna Power, LLC via certified mail. These letters provided the landowners with information pertaining to the Project and MAIT's proposed activities relating to their properties. Those letters are provided as MAIT Exhibit 18, respectively. The letters also included a "Fact Sheet" about the project, a Code of Conduct, a vegetation management brochure and pursuant the Commission's rules and regulations, a Disclosure of Eminent Domain Power of Electric Utilities. In addition, MAIT sent a letter and updated factsheet on November 25, 2020, to all landowners along the proposed route to update them on a modification to the construction type for this Project. That letter and the associated fact sheet is discussed by Ms. Anderson in MAIT Statement No. 1 and sponsored by her as MAIT Exhibits 3 and 4.

Q. Please describe how MAIT intends to interact with property owners.

A. Throughout the Project, MAIT's ROW agents have worked with affected property owners to acquire the necessary rights to construct the Project. These rights include the transmission line easement, vegetation management rights, access roads, and storage yards, as applicable. The ROW agent is responsible for describing the work to be conducted on the property, as well as negotiating in good faith using fair market offers for the necessary ROW. These offers are based on the current market values, amount and type of ROW needed and the use of the property.

Q. What is the current status of ROW negotiations?

A. To date, MAIT has reached agreements with all landowners representing the 2 parcels for which additional ROW was needed.

Q. Is there any pending or prior litigation involving MAIT relating to property or ROW matters with respect to the Project?

A. There is no litigation involving MAIT or its affiliates with respect to the Project.

Q. Does MAIT have a form of notice it intends to provide to impacted property owners advising them of the Company's vegetation maintenance plan?

A. Yes. A brochure entitled "Maintaining a Safe and Reliable Transmission System Vegetation Management for New Transmission Construction Projects" was provided to all of the known landowners crossed by the proposed route as part of the landowner package sent on July 5, 2019 to the Offutts and on August 21, 2019 to Orrtanna Power, LLC. This brochure provides the landowner with information regarding ROW clearing during and post construction. A copy of this brochure is being sponsored by MAIT witness Mr. Jeffrey P. Irons (MAIT Statement No. 5) as MAIT Exhibit 24.

Q. Please describe MAIT's Code of Conduct related to property rights.

A. The Code of Conduct outlines MAIT's expectations for its employees, contractors and subcontractors that are interacting with property owners and the general public on this and all other Projects. This Code of Conduct applies to all MAIT employees, agents, contractors and subcontractors who have any contact with impacted property owners. This list of "do's and don'ts" clearly communicates to all those involved in interacting with property owners in any aspect of the siting and construction process MAIT's expectations of how the process should proceed and, more importantly, how property owners and others should be treated.

Q. Was that Code of Conduct followed relative to this project?

A. Yes. In addition, a copy of the Code of Conduct was provided as part of the package sent on July 5, 2019 to the Offutts and on August 21, 2019 to Orrtanna Power, LLC. I am sponsoring a copy of that Code of Conduct as MAIT Exhibit 19.

Q. Does this conclude your direct testimony?

A. Yes, it does. However, I reserve the right to file such additional testimony as may be necessary or appropriate.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

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VERIFICATION

I, Lisa Marinelli, hereby state that the facts set forth in my Testimony, MAIT Statement No. 4, are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

4/21/2021
Date

Lisa Marinelli
Advanced Real Estate Representative

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	**:**	**Docket No. A-2021-_____**

Direct Testimony
of
Jeffrey P. Irons

List of Topics Addressed

The Design, Engineering, Construction, Operation and Maintenance of the Proposed Hunterstown-Orrtanna 115 kV Transmission Line Project

I. RESPONSIBILITIES, EXPERIENCE AND EDUCATION

Q. Please state your name and business address.

A. My name is Jeffrey P. Irons and my business address is 800 Cabin Hill Drive, Greensburg, Pennsylvania 15601.

Q. By whom are you employed and in what capacity?

A. I am employed by FirstEnergy Service Company as an Engineering Supervisor in the Transmission Design Group. FirstEnergy Service Company is a subsidiary of FirstEnergy Corp. ("FirstEnergy") that provides legal, financial and other corporate support services to FirstEnergy's subsidiaries.

Q. Please describe your professional experience and educational background.

A. I earned a Bachelor of Science Degree in Civil Engineering from The Pennsylvania State University in 1993. I have been a registered Professional Engineer since March of 1999, and I am currently a registered Professional Engineer in the States of Maryland, Ohio, New Jersey and West Virginia, as well as in the Commonwealths of Pennsylvania and Virginia. I started with Allegheny Energy ("Allegheny") in 1994 as a Project Engineer in the Engineering Services department. My responsibilities included: design of transmission lines and substation sites, preparation and review of engineering surveys, permit acquisition, construction drawings, specifications and project management. After approximately two years in that role, I became a Team Leader and Engineer in the Transmission unit of Allegheny. Over the next 11 years, I maintained the same job responsibilities while working under various department names. In December of 2006, I became Senior Engineer of the Transmission Projects group of Allegheny. As a result of

Allegheny's merger with FirstEnergy in April 2011, I was promoted to Supervisor, Transmission Design and hold that position today.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to describe the design and construction methodology of Mid-Atlantic Interstate Transmission, LLC ("MAIT") for the proposed "Hunterstown-Orrtanna 115 kV Transmission Line Project" (the "Project"). I will also provide information on the maintenance of this line.

Q. Briefly outline your testimony.

A. My testimony will cover:

- Proposed transmission line configuration
- Right-of-way ("ROW") details
- Design criteria
- Construction activities
- Maintenance activities

Q. Does your testimony address the filing requirements of 52 Pa. Code §§ 57.71 – 57.77 concerning the siting and construction of high-voltage ("HV") transmission lines?

A. Yes. My direct testimony, together with the Siting Application for authorization to locate and construct a high-voltage transmission line ("Application") filed by MAIT, provides information to respond to the requirements of 52 Pa. Code §§ 57.72(c)(6) (safety considerations to be incorporated into the design, construction and maintenance of the

proposed HV line), (c)(13)(ii) (an engineering and design-based description of the proposed line), and (c)(13)(iii) (a simple drawing of a cross section of the ROW of the HV line showing the placement of supporting structures at typical locations, with structure sizes, ROW widths, and the lateral distances between the conductors and the edge of the ROW indicated).

III. EXHIBITS

Q. Please identify and describe the exhibits you will refer to in your testimony.

A. I will refer to certain exhibits accompanying MAIT's Application that were prepared under my direction. Exhibit 20 depicts the typical ROW cross section for this Project. Exhibit 21 depicts the route of the proposed line in relation to the existing 200 foot wide ROW and the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. Exhibits 22A and 22B depict the areas where additional rights were obtained for the Project. Exhibits 23A through 23F to the Application depict the types of structures that will be used on the Project. I also sponsor MAIT Exhibits 24 through 26, which are respectively copies of MAIT's "Maintaining a Safe and Reliable Transmission System Vegetation Management for New Transmission Construction Projects," "Maintaining a Safe and Reliable Transmission System Tree Trimming and Comprehensive Vegetation Management," and Vegetation Management Program Document.

IV. DESIGN AND CONFIGURATION FOR THE PROPOSED LINE

Q. Has a general description of the Project been provided?

A. Yes, a description of the proposed Project has been provided in the Application. Additionally, other MAIT witnesses provide a general description of the need for the Project, the proposed route and similar basic information about the Project. My discussion of the engineering and construction of the project which follows is consistent with those descriptions.

Q. Please describe the general design configuration planned for the Project.

A. The Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line as currently configured is a radial line that extends approximately 10.6 miles between the existing Hunterstown Orrtanna Substations. Approximately 9.1 miles east of Orrtanna Substation there is an existing approximately 2-mile-long line tap extending south to the existing Lincoln Substation. An existing 6-pole switch is located immediately east of this tap location on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line.

The proposed Project involves the construction of a new 115 kV transmission line on double circuit structures, parallel to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. Proposed construction will extend from the Orrtanna substation for approximately 9.1 miles and will tie into the existing 115 kV transmission line at existing structure #223, which will be replaced as part of this Project. Existing structure #223 is located one span east of the existing switch depicted on sheets 4 and 5 of MAIT Exhibit 21. This existing structure will be replaced with a 3-pole dead end structure as depicted in Exhibit 23E to accommodate the tie-in. Upon completion of the tie-in, the 6-pole switch

structure, two single shield wire poles, and conductor between the tap location and structure #223 will be removed, eliminating the radial configuration and creating the Hunterstown-Orrtanna 115 kV Transmission Line on the northerly arms of the new double circuit structures.

Following the energization of the Hunterstown-Orrtanna 115 kV Transmission Line, the conductor on the southerly arms of the new double circuit structures will be tied into the existing 115 kV transmission line at existing structure #37, which will also be replaced as part of this Project. Existing structure #37 is located one span south of the existing switch depicted on sheets 4 and 5 of MAIT Exhibit 21. This structure will be replaced with a 2-pole tangent H-frame structure as depicted in Exhibit 23F to accommodate the tie-in. Upon completion of the tie-in, the existing 3-pole tap structure will be removed, thus creating the Lincoln-Orrtanna 963 115 kV Transmission Line. The existing wood structures and conductor from the tap structure west to Orrtanna Substation will then be removed from the ROW. As proposed, the Project will utilize 100 feet of the existing 200-foot wide ROW corridor.

In general, the double circuit steel pole construction will reduce the burden on landowners by decreasing the total number of poles needed. In its current configuration, the Hunterstown-Lincoln-Orrtanna 115kV Transmission Line utilizes multi-pole wood structures with guy wires, as needed, to support the structures. After Project completion, both the Hunterstown-Orrtanna and Lincoln-Orrtanna 963 115kV transmission lines will be supported primarily on shared single steel pole structures and the existing wood transmission structures from Orrtanna Substation to the tap structure will be removed.

Further, the number of poles needed near the existing tie-in location will be reduced. As previously noted, the Project will tie in to the existing 115 kV transmission line at structure #223, which is located one span east of the existing tap location. Structure #223 is an existing 2-pole H-frame which will be replaced with a 3-pole wood structure. Structure #42 is located one span west of the existing tap location. This structure is an existing 2-pole wood H-frame which will be replaced with a single steel monopole. Surrounding the existing tap location, the existing tap structure is a 3-pole wood structure which is planned to be replaced with a single steel monopole. In addition, there is a 6-pole wood tap structure and two single wood poles supporting static wire in this location which will be removed. Therefore, there is a net reduction of ten poles on parcel 38G11-0033---000.

The Project requires the installation of approximately 74 structures ranging from 52 feet to 115 feet above ground level with an average structure height of 104 feet. The existing Hunterstown-Lincoln-Orrtanna 115kV line consists of structures ranging from 48 feet to 76 feet above ground level with an average structure height of 59 feet above ground level. The proposed average span length is approximately 670 feet. During construction, the proposed transmission line will share a common ROW with the existing Hunterstown-Lincoln-Orrtanna 115kV Transmission Line. The proposed transmission line will be located on the northerly side of the line corridor for the entire 9.1 miles. After Project completion, the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line will become the Hunterstown-Orrtanna and Lincoln-Orrtanna 963 115kV transmission lines and the existing wood pole transmission facilities on the southerly side of the line corridor

will be removed. Refer to Exhibits 23A through 23F to MAIT's Application, which depict the various structure types that will be used on the Project.

Exhibit 23A shows a typical double circuit tangent steel pole structure. A tangent steel pole structure is used to support the transmission lines where they run in a straight line or where they turn at angles less than 5 degrees. In certain locations, this structure may need to be installed atop drilled shaft concrete foundations, but it will most commonly be directly embedded in the soil. This is the most utilized structure in the preliminary engineering design and will utilize a vertical conductor arrangement. Approximately 57 structures will utilize this structure type.

Exhibit 23B shows a typical double circuit angle steel structure. A double circuit angle steel pole structure is used to support the transmission lines where they turn at an angle between 5 and 30 degrees. These structures will be installed atop drilled shaft concrete foundations and will utilize a vertical conductor arrangement. Approximately 8 structures will utilize this structure type.

Exhibit 23C shows a typical double circuit strain/dead end steel pole structure. A double circuit strain/dead end steel pole structure is used to support the transmission line where it is desirable to terminate a section of transmission line wire at locations where it turns at an angle between 0 and 50 degrees. These structures will be installed atop drilled shaft concrete foundations and will utilize a vertical conductor arrangement. Approximately 5 structures will utilize this structure type.

Exhibit 23D shows a typical single circuit tangent horizontal H-frame strain/dead end wood structure. A tangent horizontal H-frame strain/dead end wood structure is used

to support the transmission line where it is desirable to terminate a section of transmission line wire for the purpose of controlling conductor height uplift. Two of these structures will be used in one location in order to cross under an existing 500 kV line corridor, depicted on sheet 4 of MAIT Exhibit 4, and will utilize a horizontal conductor arrangement.

Exhibit 23E shows a typical single circuit 3-pole angle strain/dead end wood structure. A 3-pole angle/strain/dead end wood structure is used to support the transmission line where it is desirable to terminate a section of transmission line wire at locations where it turns at an angle between 3 and 27 degrees. This structure type will be used in one location in order to tie in the proposed transmission line in to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line at Structure #223 (depicted on sheets 4 and 5 of MAIT Exhibit 4). This structure is typically guyed for structural support and will utilize a horizontal conductor arrangement.

Exhibit 23F shows a typical single circuit tangent horizontal H-frame wood structure. A tangent horizontal H-frame wood structure is used to support the transmission line where it runs in a straight line or where it turns at angles less than 5 degrees. This structure type will be used in one location in order to tie in the proposed transmission line in to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line at Structure #37 and will utilize a horizontal conductor arrangement.

Q. Do you anticipate the need for any other types of structures for the project?

A. No. We do not anticipate the need for any types of structures other than those shown in Exhibits 23A through 23F to the Application. It is possible that detailed design engineering for this project may reveal the need for other structure types; however, we do not anticipate

that any such structures will be substantially different from those depicted in the Application.

Q. Will the proposed transmission line occupy the existing transmission line ROW?

A. Yes, in all but two areas. Refer to Exhibits 22A and 22B to the Application, which depict the two areas where additional ROW was obtained for this Project. Exhibit 22A depicts an area where additional ROW was needed due to the location of the line exit/entrance from the Orrtanna Substation. The existing electric easement near the substation did not account for this proposed line and additional ROW was needed in this area to provide necessary conductor clearances based on structure type, structure placement, span length between supporting structures, conductor motion, line voltage, and National Electrical Safety Code ("NESC") defined weather conditions. Exhibit 22B depicts an area where additional ROW was needed in order to avoid placing a structure in a wetland. Placing a structure in an area with standing water, such as a wetland, would be detrimental to construction and maintenance activities, but would also negatively impact structural longevity and the reliability of the proposed line. The remainder of the proposed transmission line will utilize an existing transmission ROW.

Q. What width of ROW is planned for the project?

A. The required ROW width to support the Project is 100 feet. The existing ROW that MAIT proposes to use for this Project satisfies this ROW requirement. As shown on pages 1-5 of Exhibit 21 to the Application, the Project will be constructed on existing ROW, with the exception of the two locations noted earlier. For a majority of the proposed line, this existing transmission corridor is 200 feet wide and can vary plus/minus 10 feet in areas

where property lines permit and design considerations require. One area, between Herrs Ridge Road and Biglerville Road, reduces to 150 feet wide the ROW for approximately 250 feet before returning to the typical 200-foot width. All necessary clearances are met, and operation and maintenance are unimpeded for this area of reduced width. See Exhibit 21, page 3 for this specific location.

Q. Where will the proposed electric transmission centerline fall within the existing MAIT ROW?

A. As shown in Exhibit 20 to the Application, the typical proposed transmission line centerline will be offset 50 feet to the south of the northern edge of ROW within the existing corridor and 100 feet north of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line centerline. In all cases, the design will meet or exceed NESC requirements for clearances to edge of ROW and to existing transmission facilities.

Q. Will the supporting structures carry any wires other than transmission conductors?

A. Yes. The line will have one standard shield wire and one optical ground wire ("OPGW") that will be located above the transmission conductors. The purpose of the shield wire is to protect the conductors from lightning strikes. The OPGW also protects the conductors from lightning as well as providing a means of communication between substations.

Q. Does the project meet FirstEnergy's existing engineering and design specifications?

A. Yes. The structures depicted in Exhibits 23A through 23F to the Application are designed to meet FirstEnergy's applicable and existing engineering and design criteria for 115 kV transmission lines.

V. DETAILED ENGINEERING SPECIFICATIONS FOR THE PROPOSED LINE

Q. Please describe the voltage, temperature and other electrical parameters for which the conductors are designed and how these parameters will conform to the NESC.

A. The proposed Project will be designed for 115 kV operation. The transmission line maximum design operating temperature is 212 degrees Fahrenheit. The line will meet or exceed all requirements of the current NESC under all operating conditions.

Q. Please describe in more detail the type and size of wire planned for the conductors and static wire.

A. The six conductors to be installed on the new double circuit structures are 795.0 thousand circular mills ("kcmil") 26/7 aluminum conductor, steel reinforced ("ACSR"). The 26/7 designation indicates the stranding of the conductor, with the "26" representing the outer 26 aluminum wires and the "7" representing the inner 7 steel wires. The existing conductor from the tie-in point at structure #37 west to Orrtanna Substation is 336.4 kcmil 26/7 ACSR. This existing conductor will be removed and will be replaced by the three new 795.0 kcmil 26/7 ACSR conductors on the southerly arms of the new double circuit structures to meet FirstEnergy Design and Construction standards. The shield wire is 7#8 Alumoweld. The OPGW is SFPOC/SFSJ-J-6641.

Q. Please describe the relationship of the existing ROW widths to the design and NESC requirements for the Project.

A. When evaluating transmission design criteria and the location of structures with respect to the edge of the ROW, an array of parameters must be considered. These include structure type, conductor size, stringing tension, conductor motion, line voltage, and NESC defined

weather conditions. The proposed transmission line will be designed to ensure all applicable NESC conductor clearances to the edge of the ROW will be met.

VI. CONSTRUCTION ACTIVITIES

Q. Please describe the construction process in general terms.

A. The project will be constructed following MAIT's standard construction practices to perform all work safely and in compliance with the Occupational Safety and Health Administration ("OSHA") Rules and Regulations, while keeping environmental impact to a minimum. Project activities will include the installation and maintenance of soil erosion and sedimentation control measures, construction of temporary access roads, ROW clearing, installation of foundations, structures and wire, and rehabilitation of all disturbed areas due to the construction process.

Q. Will a construction project contractor and/or manager be utilized?

A. FirstEnergy Service Company, on behalf of MAIT, plans to construct the line with contracted construction labor and supervision with FirstEnergy Service Company and consultant oversight.

Q. How will MAIT oversee and monitor the construction cost and progress of the Project?

A. FirstEnergy Service Company, on behalf of MAIT, will assign a project manager to monitor and oversee the project construction activities and cost.

Q. What is the estimated cost to site and construct the Project?

A. The cost of the project is currently estimated to be $37.7 Million.

Q. Over what time period will the Project be constructed?

A. Pending approval of the Project by the Pennsylvania Public Utility Commission ("Commission"), construction is scheduled to commence in Spring 2022 and run through Fall 2022.

Q. What steps are planned for minimizing the effects of construction on areas within and outside of the ROW, including such things as traffic and other local community issues?

A. No work will begin until the necessary permits for that work have been issued. All work will be conducted in accordance with all state and local permits, property releases, and approved special conditions. At all times, MAIT will minimize to the greatest extent practical the impacts of construction activities on local communities.

VII. ROW CLEARING AND PREPARATION

Q. What methods will be used to clear and prepare the ROW for construction?

A. The construction specifications adopted for the project will be designed to keep environmental impact to a minimum. MAIT's efforts to minimize environmental impact during the ROW preparation phase of construction will include the following:

1. A copy of the Soil Erosion and Sedimentation Control Plan, along with the appropriate permit forms, will be submitted to the Pennsylvania Department of Environmental Protection and, as necessary, the County Conservation District for approval.

2. Best management practices for soil erosion measures and sedimentation control will be put in place prior to any earth disturbance.

3. Construction access routes will be installed in accordance with the approved Soil Erosion and Sedimentation Control Plan and, where possible, will utilize existing roads, private farms lanes, private forest roads and similar paths. It is not typical FirstEnergy practice to install any permanent access roads. Where new access routes are needed for construction, the routes will be re-graded to pre-construction contours and re-vegetated with appropriate vegetation upon completion of construction. If requested by the property owner and permits allow, consideration will be given to allowing the access route improvements to remain in place.

4. Disturbed work areas will be re-vegetated in accordance with the approved Soil Erosion and Sediment Control Plan.

5. MAIT will clear the corridor to the edge of the ROW in accordance with the FirstEnergy Initial Clearing of Transmission Lines Specification. Trees located adjacent to the transmission corridor that are dead, dying, diseased, structurally defective, and/or leaning or significantly encroaching such that the transmission conductor is a potential target, could cause a flashover upon tree failure, or could grow within close proximity of the transmission conductor will be deemed Priority Trees. These Priority Trees shall be identified and removed. Before removing Priority Trees that are located off of the ROW, MAIT will first obtain any necessary rights from the applicable property owners.

When required to comply with all terms of the governing permits applicable to construct the project, MAIT's specifications will be modified and/or amended for construction of the project.

Q. What steps will be taken to upgrade, seed, or otherwise restore disturbed ROW once construction is complete?

A. After construction is complete, the transmission line ROW will be restored to conditions as good as or better than those that existed prior to construction. Such work includes restoring drainage ditches, fencing, and field drainage tiles. Non-cultivated areas that are disturbed by construction activities will be fertilized, seeded, and mulched. Temporary soil erosion and sedimentation control measures will be removed after vegetative cover has been established.

Q. Please describe the steps that will be taken to control erosion and the siltation of streams where the ground is disturbed during construction activities along the ROW.

A. FirstEnergy will follow all applicable guidelines from the Commonwealth of Pennsylvania, Department of Environmental Protection Office of Water Management's Erosion and Sediment Pollution Control Program Manual (Chapter 102).

VIII. ROW MAINTENANCE

Q. Please describe the procedures that will be employed to maintain the ROW free of incompatible vegetation following the completion of construction and the commencement of operations.

A. The approach MAIT employs is the control or removal of all incompatible vegetation that has the potential to interfere with the safe and efficient operation of the transmission system. This is accomplished through either removal by mechanical means or the application of herbicides in order to promote a plant community of grasses, herbs, and low growing compatible species within the transmission corridor. Also, along the transmission corridor, priority trees are identified and removed. These work activities are performed under established cycles considering the inter-relations between vegetation growth rates, vegetation control methods, and inspection frequency. These cycles have been developed based on consideration of vegetation conditions, species, movement of line conductors under their rated electrical operating conditions, as well as terrain, state regulatory requirements, easement restrictions, and environmental concerns.

MAIT's methods to manage and control vegetation include manual control methods using hand-operated tools and/or mechanical control methods using aerial and equipment-mounted saws, mowers, or other devices. Various herbicide application techniques are also used such as selective basal, stem foliage and cut stubble.

Q. Under what general parameters will MAIT maintain this project ROW?

A. MAIT will maintain the Project in accordance with the Company's Transmission Vegetation Management Program. I am sponsoring "Maintaining a Safe and Reliable Transmission System Vegetation Management for New Transmission Construction Projects" and "Maintaining a Safe and Reliable Transmission System Tree Trimming and Comprehensive Vegetation Management," which are each attached as Exhibits 24-25 of

the Application. In addition, a copy of the Vegetation Management Program Document is attached to the Application as Exhibit 26.

As described in these documents, the objective of the MAIT Transmission Vegetation Management Program is to ensure the continued and safe operation of transmission circuits through the removal and control of all incompatible vegetation that has the potential to interfere with the safe and efficient operation of the transmission system. MAIT's vegetation management practices are designed to prevent vegetation related outages by creating and sustaining a stable and compatible vegetated community within and along the transmission corridor using various vegetation management techniques, as mentioned previously.

Q. Will MAIT's vegetation control procedures observe specific legal or regulatory standards?

A. Yes. The vegetation management procedures described above are designed to ensure that MAIT complies with all required federal, state, and local vegetation management standards.

Q. Please describe the expected ROW maintenance cycle for this project.

A. The FirstEnergy Transmission Vegetation Management program within the Met-Ed service territory is currently on a four-year maintenance schedule for all transmission voltages.

Q. Does this conclude your direct testimony?

A. Yes, it does. However, I would like to reserve the right to file additional testimony or exhibits as may be necessary or appropriate.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION FOR AUTHORIZATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC TO SITE AND CONSTRUCT THE HUNTERSTOWN-ORRTANNA 115 kV TRANSMISSION LINE PROJECT SITUATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND, AND STRABAN TOWNSHIPS, ADAMS COUNTY, PENNSYLVANIA	:	**DOCKET NO. _____**

VERIFICATION

I, Jeffrey P. Irons, hereby state that the facts set forth in my Testimony, MAIT Statement No. 5, are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

4/21/2021
_____
Date

_____
Jeffrey P. Irons
Supervisor, Transmission Engineering Design

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	**:**	**Docket No. A-2021-_____**

Direct Testimony
Of
Ryan D. Grady

List of Topics Addressed

Re: Transmission Line Maintenance

I. RESPONSIBILITIES, EXPERIENCE AND EDUCATION

Q. Please state your name and business address.

A. My name is Ryan Daniel Grady and my business address is 76 S. Main Street, Akron, Ohio 44308.

Q. By whom are you employed and in what capacity?

A. I am employed by FirstEnergy Service Company as Supervisor of Transmission Maintenance. In this proceeding, I am testifying on behalf of Mid-Atlantic Interstate Transmission, LLC ("MAIT" or "Company").

Q. Please describe your professional experience and educational background.

A. I received a Bachelor of Science Degree in Civil Engineering from The University of Akron and a Master of Business Administration Degree from Walsh University. I have been employed by FirstEnergy Service Company for approximately 13 years. I've held various engineering and project management roles within FirstEnergy Corp.'s ("FirstEnergy") and its subsidiaries. As Supervisor of Transmission Maintenance, I am responsible for coordinating maintenance and inspections of all transmission lines on behalf of the utility subsidiaries of FirstEnergy, including facilities owned by MAIT, to ensure the delivery of safe, reliable electricity.

Q. Have you testified previously before the Pennsylvania Public Utility Commission ("PUC" or the "Commission") or other regulatory agencies?

A. No.

II. PURPOSE OF TESTIMONY

Q. Please describe the purpose of your testimony.

A. The purpose of my testimony is to discuss the existing condition of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line and how it relates to the "Hunterstown-Orrtanna 115 kV Transmission Line Project" (the "Project"). On behalf of MAIT, I will:

- Explain how the maintenance group provides project recommendations,
- Describe the current condition of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line, and
- Explain the need for the Project from a reliability and maintenance perspective.

Q. Please identify and describe the exhibits to your testimony and summarize the contents of those exhibits.

A. I am sponsoring the following Application exhibits with my direct testimony:

- Exhibit 25: Results of Aerial and Ground Line Inspections
- Exhibit 26: Map Depicting Issues at Structure Locations
- Exhibit 27: Photographs of Existing Conditions

Q. Briefly outline your testimony.

A. My testimony provides insight on the role of transmission line maintenance and justification for capital investments on FirstEnergy transmission lines. I will discuss drivers for condition-based projects, types of inspections performed to evaluate condition, and the current state of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line.

Q. Please explain the role of the transmission line maintenance department.

A. Transmission Line Maintenance is responsible for regulatory required inspections on all FirstEnergy transmission lines. These inspections include aerial patrols and ground line inspections. In addition, Transmission Line Maintenance performs other maintenance and inspections such as structural steel inspections/repairs, structural steel coating, and grounding inspections/repairs. Transmission Line Maintenance recommends and sponsors condition-based capital projects to be executed as part of the Energizing the Future ("EtF") capital investment program. Another role Transmission Line Maintenance has is to address right of way ("ROW") concerns such as encroachments, streambank erosion, and landslides, providing technical support to all ten distribution FirstEnergy operating companies.

Q. Why is the condition of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line relevant to the proposed Project?

A. The Project proposes to construct a new double circuit steel 115 kV transmission line parallel to the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. When the Project is complete, the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line will be removed and the existing reliability concerns based on existing condition eliminated.

Q. What are the main drivers for condition-based projects?

A. The main driver for condition-based projects is age-related deterioration that represents a risk to the integrity of transmission lines and subsequently leads to reduced system reliability.

Q. What are some examples of age-related deterioration?

A. Common conditions include rot, cracking, and splitting of wood poles and wooden components such as crossarms and braces. Other age-related deterioration examples are worn and rusted components.

Q. Please discuss how determinations to replace wood pole and steel pole structures based on past maintenance history.

A. Service life of wood, galvanized steel, weathering steel, and other components can vary greatly depending on environmental conditions, material quality, mechanical and electrical loading, and extreme weather. Wood poles are the primary structure installed along the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. Wood poles are considered rejected and/or failed when defects deem a pole to not be safe, reliable, code compliant, or have strength reduced to 2/3rd of the original design. This is in line with National Electric Safety Code ("NESC") Table 261-1, note 2 which states "[w]ood and reinforced structures shall be replaced or rehabilitated when deterioration reduces the structure strength to 2/3 of that required when installed…"

Q. How are projects recommended for rehabilitation versus replacement?

A. Recommended solutions are developed by investigating failure, maintenance, outage, and other trends. In addition, cost benefit analyses can assist in determining if rehabilitation versus rebuild is warranted for a transmission line.

Q. Please discuss the types of inspections used to evaluate the existing condition of transmission lines.

A. Routine aerial inspections are conducted twice per year on FirstEnergy-owned transmission lines. In addition, FirstEnergy conducts an aerial comprehensive visual inspection ("CVI"), in general, once every four years on higher voltages and prior to the development of a project. A CVI is a slow, structure-by-structure, span-by-span aerial inspection where an onboard observer will thoroughly look from top to bottom of each structure, associated hardware such as clamps, insulators, cotter keys, nuts and bolts, and conductors. The helicopter moves very slowly along the transmission line and will hover near structures to document recognized defects that could result in a reliability concern.

FirstEnergy performs a wood pole inspection and treatment program based on a periodicity set by regulating bodies. Inspectors will assess the pole by conducting a hammer sound test, boring into the pole to measure shell thickness or internal rot, treat the pole with fumigant to prevent rot, and install a bitumastic protectant around the pole below groundline. If a pole has less than sufficient strength, the pole will be analyzed for reinforcement or future replacement. Similarly, FirstEnergy has a pre-engineering groundline assessment that will document defects on structures from the ground. This is a less-invasive assessment than the wood pole inspection and treatment program but assists FirstEnergy in evaluating existing condition of transmission lines.

Q. When were the inspections performed for the existing Hunterstown-Lincoln-Orrtanna 115 kV transmission line?

A. The initial ground line inspection was performed on May 18, 2018. An aerial inspection was performed February 17, 2019.

Q. Please provide a summary of the existing condition of the Hunterstown-Lincoln-Orrtanna 115 kV transmission line.

A. The results of the ground line and aerial inspection are presented in Exhibit 25. Based on the inspection results, the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line is exhibiting end of service life conditions including but not limited to pole top rot, broken down grounds, flashed insulators, and woodpecker damage. Broken down grounds have led to electrical tracking on some structures that subsequently resulted in pole fires or burn marks. The entire Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line is exhibiting signs of wood pole and hardware deterioration except for the four newer poles near Hunterstown Substation that were recently installed as part of ongoing maintenance. Exhibit 26 is a map showing the locations of structures on the portion of the line between Orrtanna substation and the three-way tap structure found to have existing condition issues. The inspection results show that 55% of the structures have existing condition issues that need to be addressed in the near term. In addition, aeolian vibration of the conductor has led to wear on the conductor attachment hardware and potentially the conductor itself. Further, Exhibit 27 has representative photographs of the existing conditions present on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line including pole top rot, woodpecker damage and pole fires due to broken grounds.

Q. Can you explain what aeolian vibration is and how it impacts the condition of electric facilities?

A. Aeolian vibration is a high frequency, low amplitude motion of wires caused by non-turbulent, steady winds. Over time, this repetitive motion can wear out conductor hardware such as clamps, bolts, clevises, armor rod, and the conductor itself.

Q. What reliability concerns are there from a transmission line maintenance perspective based on the results of the inspections performed on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line?

A. All conditions found during inspections pose a risk to the safe, reliable delivery of electric service. Pole top rot can result in the static or guy wire becoming detached and falling into a phase conductor, resulting in an outage. Woodpecker damage can significantly reduce the strength of a pole, resulting in a pole breaking and causing a long duration outage until the pole can be replaced. If multiple poles have reduced strength, the failure of one pole could result in a cascading failure of adjacent structures which could result in an extended duration outage. Disconnected grounds or poor grounding on the line can cause tracking along a pole. The small electrical arc caused by tracking can subsequently lead to pole fires, as seen in photograph 5 of Exhibit 27. If the tracking and fire continues for an extended period, this may result in a pole failure and potential wildfire of the surrounding vicinity.

Q. How much remaining life does the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line have before full replacement is needed?

A. Based on observed deterioration and associated risk of continued degradation, the line needs to be replaced. Reduced performance and disruptions of electrical service can be anticipated if not addressed.

Q. How was the remaining life of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line determined?

A. Remaining life of the transmission line was determined by an overall evaluation of the structures, hardware, wire, and other components which were identified by the CVI and ground line assessment.

Q. What are the current and project maintenance costs for the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line?

A. In 2018 through 2019, an estimated $1.9M was spent on addressing deficiencies on the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line. If the Project does not proceed, we can anticipate the yearly cost of maintenance to be approximately $750,000 per year for the next five years between Orrtanna Substation and the existing 3-way tap. There are approximately 73 structures located between the Orrtanna Substation and the 3-way tap location that support the Hunterstown-Lincoln-Orrtanna 115kV Transmission Line as shown on Exhibit 26.

Q. Would continued maintenance efforts extend the life of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line?

A. No. Based on the current inspection data and ongoing rate of deterioration, transmission line maintenance anticipates recommending the line for full rebuild in the next 5-10 years.

Q. Does this conclude your direct testimony?

A. Yes, it does. However, I would like to reserve the right to file additional testimony or exhibits as may be necessary or appropriate.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION FOR AUTHORIZATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC TO SITE AND CONSTRUCT THE HUNTERSTOWN-ORRTANNA 115 kV TRANSMISSION LINE PROJECT SITUATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND, AND STRABAN TOWNSHIPS, ADAMS COUNTY, PENNSYLVANIA	:	**DOCKET NO. _____**

VERIFICATION

I, Ryan D. Grady, hereby state that the facts set forth in my Testimony, MAIT Statement No. 6, are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

4/16/2021
Date

Ryan D. Grady
Supervisor, Transmission Maintenance

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

APPLICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FILED PURSUANT TO 52 PA. CODE CHAPTER 57, SUBCHAPTER G, FOR APPROVAL OF THE SITING AND CONSTRUCTION OF THE HUNTERSTOWN-ORRTANNA 115 KV TRANSMISSION LINE PROJECT LOCATED IN HIGHLAND, FRANKLIN, BUTLER, CUMBERLAND AND STRABAN TOWNSHIPS IN ADAMS COUNTY, PENNSYLVANIA	**:**	**Docket No. A-2021-_____**

NOTICE OF FILING

An Application will be filed with the Pennsylvania Public Utility Commission ("Commission") on or about April 22, 2021, pursuant to the Commission's or regulations at 52 Pa. Code § 57.72 *et seq*. and its Interim Guidelines for the Filing of Electric Transmission Line Siting Applications at 52 Pa. Code § 69.3101 *et seq*. The purpose of the Application is to seek Commission review and approval required to locate, construct, operate and maintain a high-voltage ("HV") transmission line referred to as the "Hunterstown-Orrtanna 115 kV Transmission Line Project" (hereinafter, the "Project"). The proposed new 9.1-mile, double circuit, steel overhead 115 kilovolt ("kV") transmission line is located in Highland, Franklin, Butler, Cumberland and Straban Townships in Adams County, Pennsylvania. Pursuant to 52 Pa. Code § 57.74(c), you are receiving this Notice because you are the specified official of a relevant agency, or because you are the record owner of property within the proposed right-of-way for the Project. You are not required to appear or participate in this matter, but you may request Commission permission to intervene.

OVERVIEW OF THE PROJECT

Mid-Atlantic Interstate Transmission, LLC ("MAIT" or the "Company") has completed an evaluation of the existing 115 kV transmission system linking the Orrtanna Substation in Highland Township and Hunterstown Substation in Straban Township, which are both located in the service area of Metropolitan Edison Company ("Met-Ed"), and determined the Project is necessary to address the existing condition of the Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line and to improve reliability and enhance service for customers by networking a radial load that presently cannot be transferred to other substations. A majority of the conductor, hardware and structures for this line were installed in the 1960s.

As such, MAIT proposes to construct a new double circuit 115 kV transmission line parallel to an existing single circuit 115 kV line within an existing transmission corridor. Upon completion of the Project, the existing single circuit 115 kV line within the corridor will be removed as the proposed double circuit construction will accommodate both the existing and proposed circuit.

The entire Project will be located in Adams County, Pennsylvania. Approximations of the proposed Hunterstown-Orrtanna 115 kV Transmission Line's situation in each municipality touched are as follows: 1.7 miles will be located within Highland Township, 3.4 miles will be located within Franklin Township, 0.8 mile will be located within Butler Township, 1.4 miles will be located within Cumberland Township, and 1.8 miles will be located within Straban Township. 9.8. The proposed Project involves the construction of a new double circuit 115 kV line from the Orrtanna 115 kV substation approximately 9.1 miles to existing structure location #223 located 1 span east of the existing switch. This existing wood structure will be replaced with a 3-pole dead end wood structure to accommodate the tie-in. Upon completion of the tie-in, the existing 6-

pole switch structure and conductor between the tap location and structure #223 will be removed, eliminating the radial configuration and creating the two separate circuits. Upon Commission approval, construction is scheduled to commence on or about July 15, 2022 to meet a required in-service date of May 15, 2023.

ROUTE FOR THE PROJECT

The Project, as proposed, will utilize 100 feet of existing 200-foot ROW corridor. MAIT conducted an extensive, multi-faceted analysis to determine the preferred route for the Project. The goal of MAIT's siting analysis for the proposed Project was to determine the most suitable route to interconnect the proposed transmission line with the existing system, which best balances social, environmental, engineering and economic considerations.

The Proposed Route is approximately 9.1 miles in length and parallels the north side of the existing Hunterstown-Lincoln-Orrtanna 115 kV Transmission Line from the Orrtanna Substation to the switch pole structure in an existing 200-foot wide ROW. From the Orrtanna Substation, the Proposed Route would extend northeast for 2.7 miles across predominantly agricultural lands to U.S. Route 30. This alignment would cross Little Marsh Creek and several smaller tributaries. Road crossings would include Railroad Lane and Seven Stars Road, which are bordered by low density residential development. The CSX Railroad would also be spanned in this section. After crossing U.S. Route 30, the route would continue for 1.9 miles to the northeast to a field located north of Mummasburg Road and adjacent to the south side of the Hunterstown-Conemaugh 500 kV Transmission Line. Land use in this section is predominantly agriculture with few homes noted at the road crossings. Marsh Creek and Mummasburg Run are spanned along this section. Turning east, the Proposed Route would extend for 0.9 mile, spanning residential bordered Belmont Road and paralleling the south side of the Hunterstown-Conemaugh 500 kV Transmission Line, to a turn

point located adjacent to Russel Tavern Road. At this point, the route would turn southeast and extend for 0.9 mile to SR 34, spanning Russel Tavern Road, Willoughby Run, the Gettysburg and Northern Railroad, and Herrs Ridge Road before intersecting with SR 34. Land use changes from agriculture to moderately dense residential and commercial development adjacent to SR 34. Turning east, the alignment would extend for 1.5 miles across predominantly agricultural lands to Good Intent Road, with residential development and a local school noted near the SR 34 crossing and a commercial business noted adjacent to Table Rock Road. The Hunterstown-Conemaugh 500 kV Transmission Line and two tributaries to Rock Creek would be spanned in this section. The Proposed Route would then turn southeast for 1.2 miles and extend across agricultural lands to the switch pole structure. Rock Creek and Business Route 15 (Old Harrisburg Road) would be spanned along this section. Light residential development is located near the Business Route 15 (Old Harrisburg Road) crossing.

MAP

Enclosed are maps showing the route for the Project across all affected properties.

EXAMINATION

As described in the Application, MAIT has requested a waiver of Section 57.74(d) of the Commission's regulations, 52 Pa. Code § 57.74(d), which requires that MAIT "shall make a copy of the application available for public examination during ordinary business hours at a convenient location within a county in which any part of the proposed HV line will be located." Due to the ongoing COVID-19 pandemic, MAIT's physical office locations in Adams County are not generally open to its employees or the public. As such, MAIT has requested a waiver of this requirement and has made available a copy of the Application for public examination online at the following link:

https://firstenergycorp.com/content/fecorp/about/transmission_projects/pennsylvania/hunterstown-orrtanna.html.

PARTICIPATION

You are not required to appear or participate in this matter, but you may request Commission permission to intervene. To intervene as a formal party to this proceeding, you should file a petition to intervene with the Secretary of the Pennsylvania Public Utility Commission at P.O. Box 3265 Harrisburg, Pennsylvania 17105-3265. The petition to intervene should state your alleged right or interest to participate in the formal proceeding, the grounds of the proposed intervention, and your position regarding the issues in the formal proceeding. A copy of the petition to intervene should be served on the undersigned counsel for MAIT.

In the event you have any questions concerning the proposed Project but do not wish to participate as a formal party to the proceeding, you should contact either Mary E. Anderson, Transmission Specialist III, at 888-311-4737 or Transmissionprojects@firstenergycorp.com, or Tori L. Giesler, legal counsel for MAIT, at 610-921-6658.

Dated: April 22, 2021

By: 

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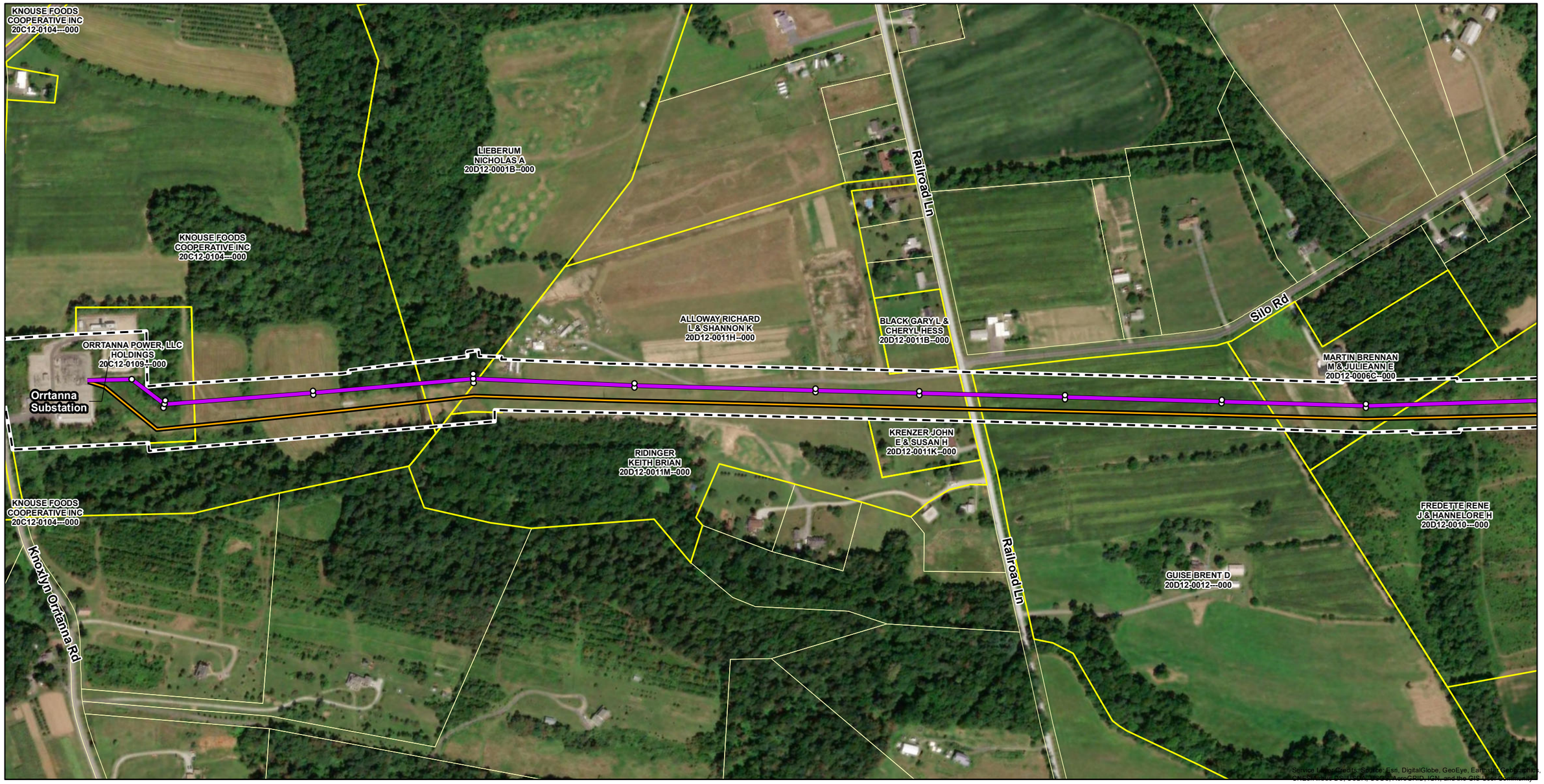

Legend

- Proposed Structures
- Proposed Hunterstown-Orrtanna 115 kV Transmission Line
- Existing 115 kV Transmission Lines
- Existing Transmission Line Right of Way (ROW)
- Properties Crossed by ROW
- Parcel Boundary

Notes

1. Existing transmission line alignments provided by PowerMap.

NAD 1983 State Plane
Pennsylvania South FIPS 3702
Projection: Lambert Conformal Conic
Linear Unit: US Foot

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Feet
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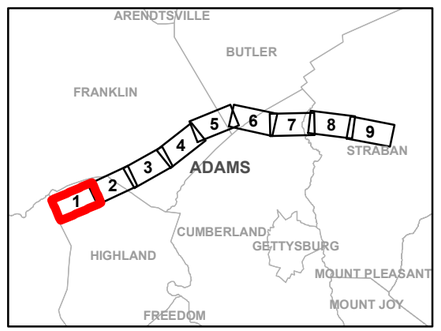

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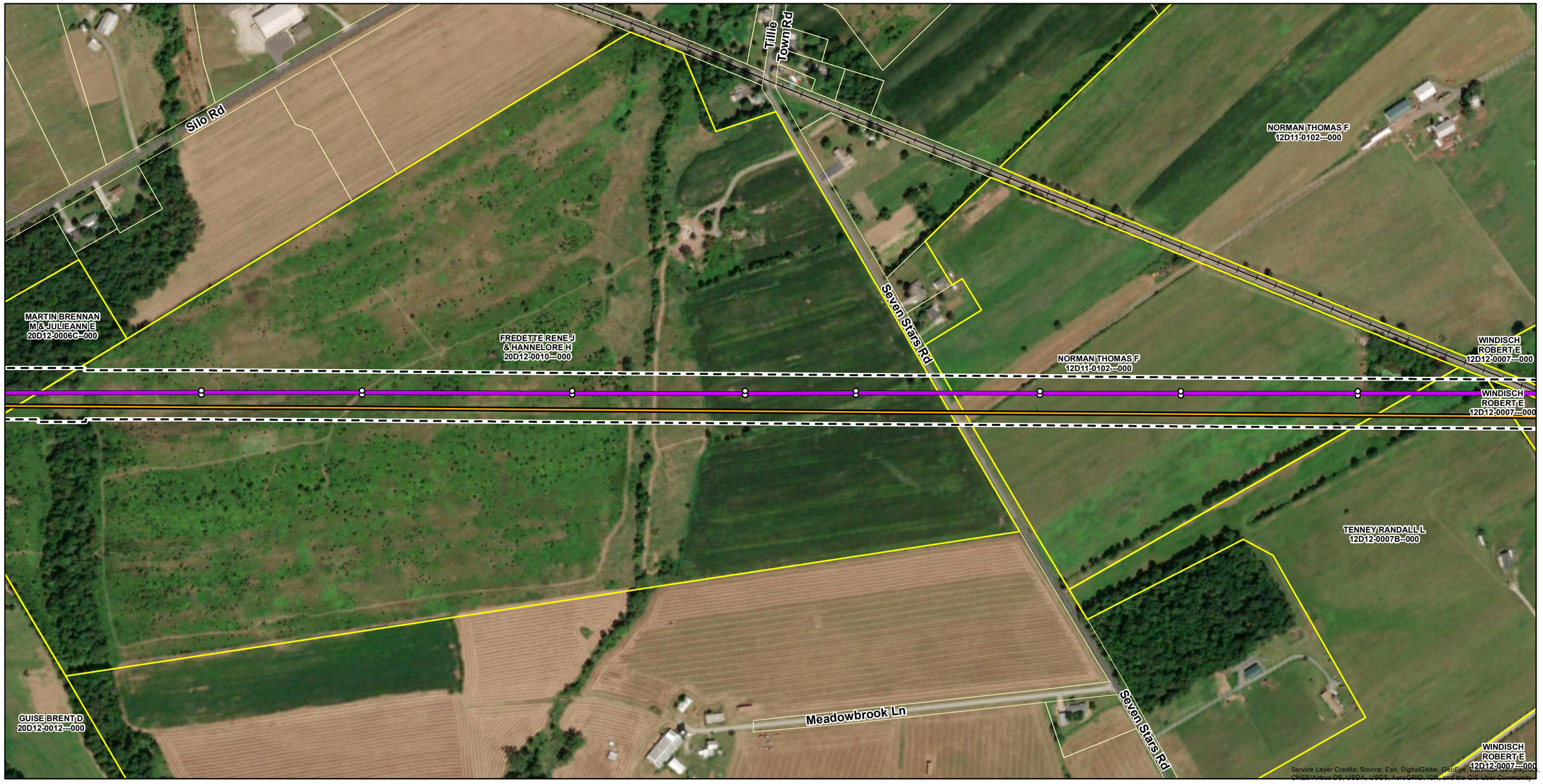
EXHIBIT 14
Aerial Overview Map

Hunterstown-Orrtanna 115 kV Transmission Line Project
Page 1 of 9
Adams County, Pennsylvania
FirstEnergy Corporation: Akron, Ohio

Prepared By: DJY/NAB	Checked By: BAB
Job: Orrtanna	Date: 10/23/2019



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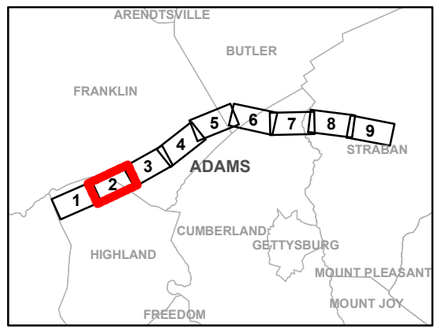

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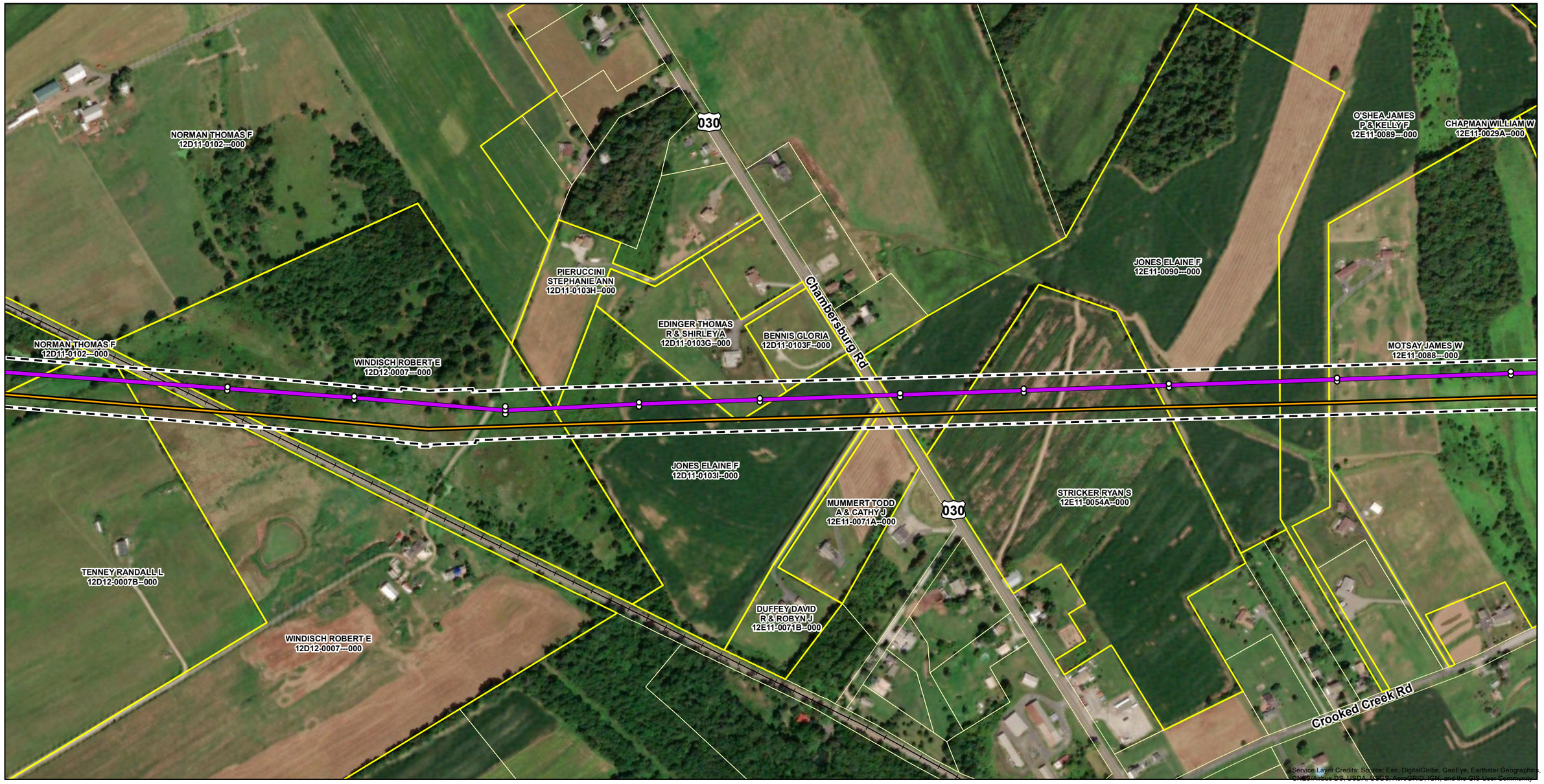

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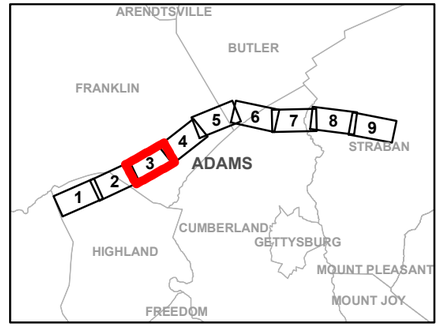

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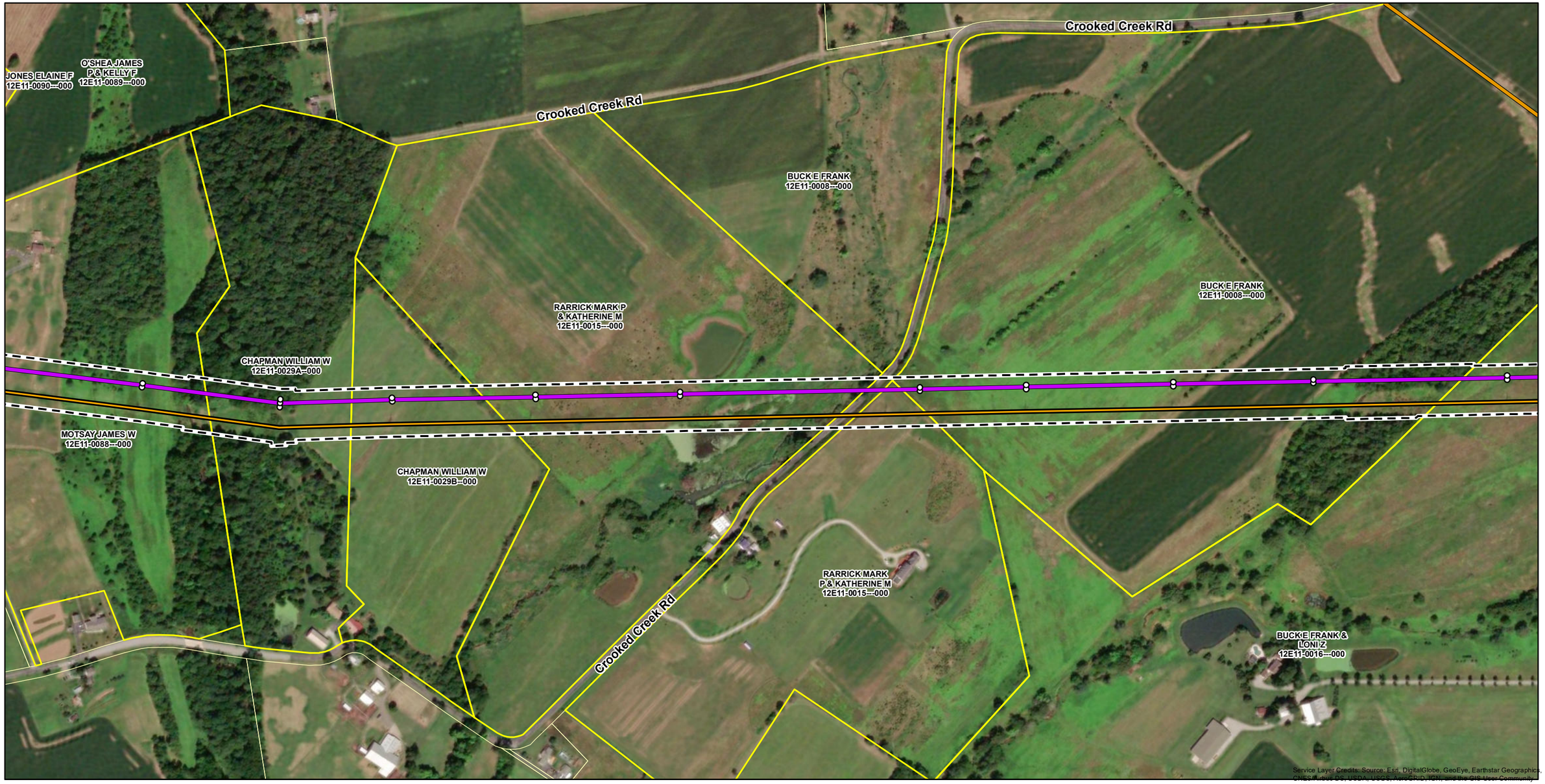

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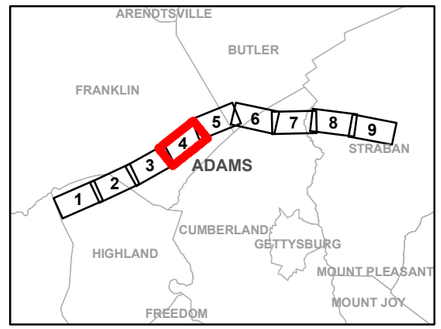

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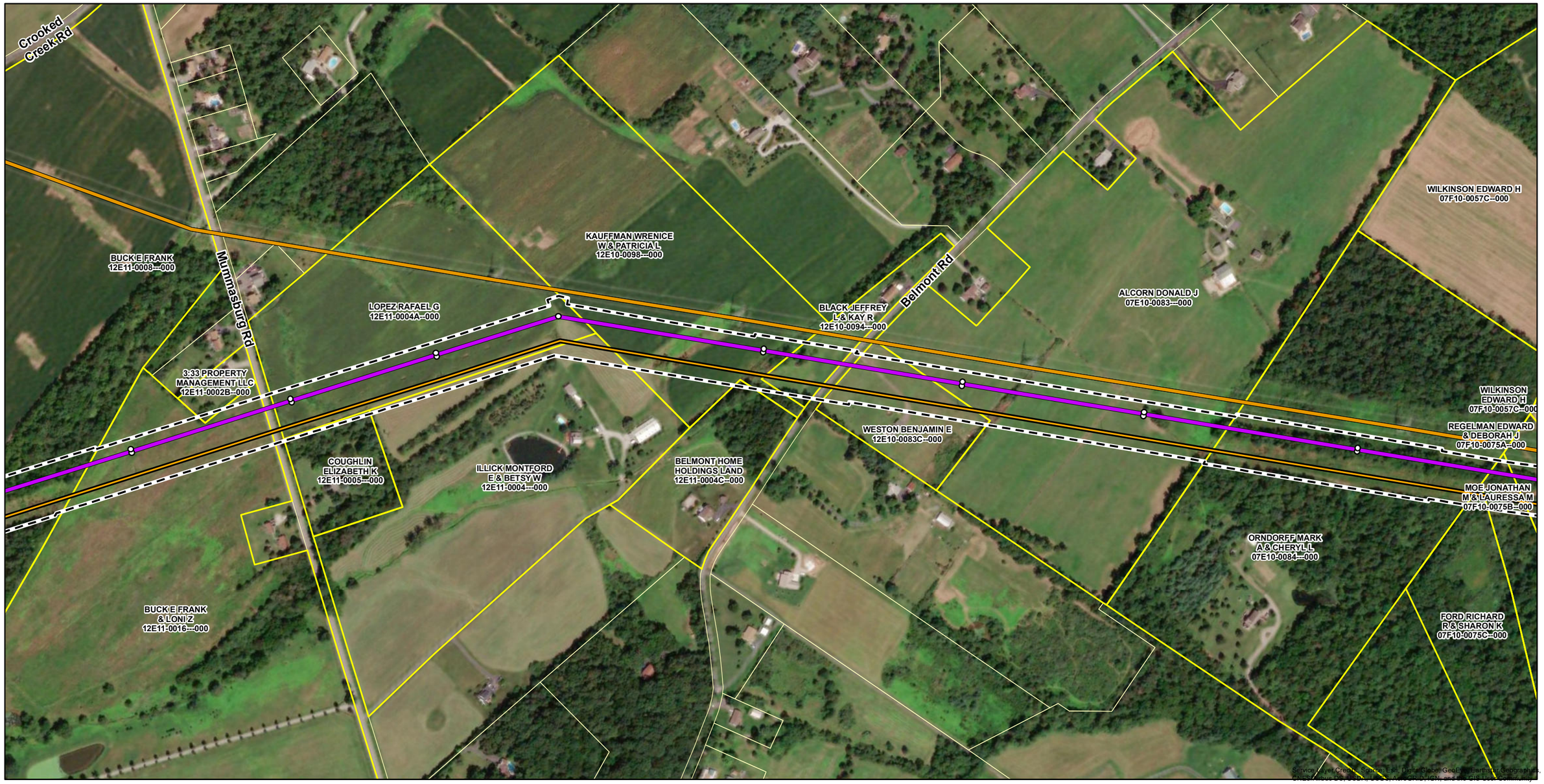

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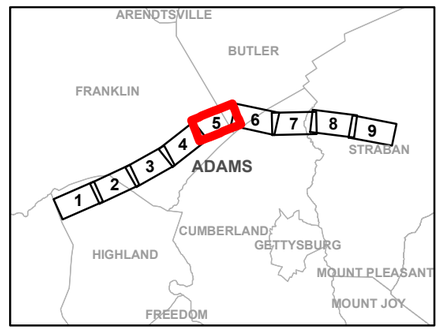

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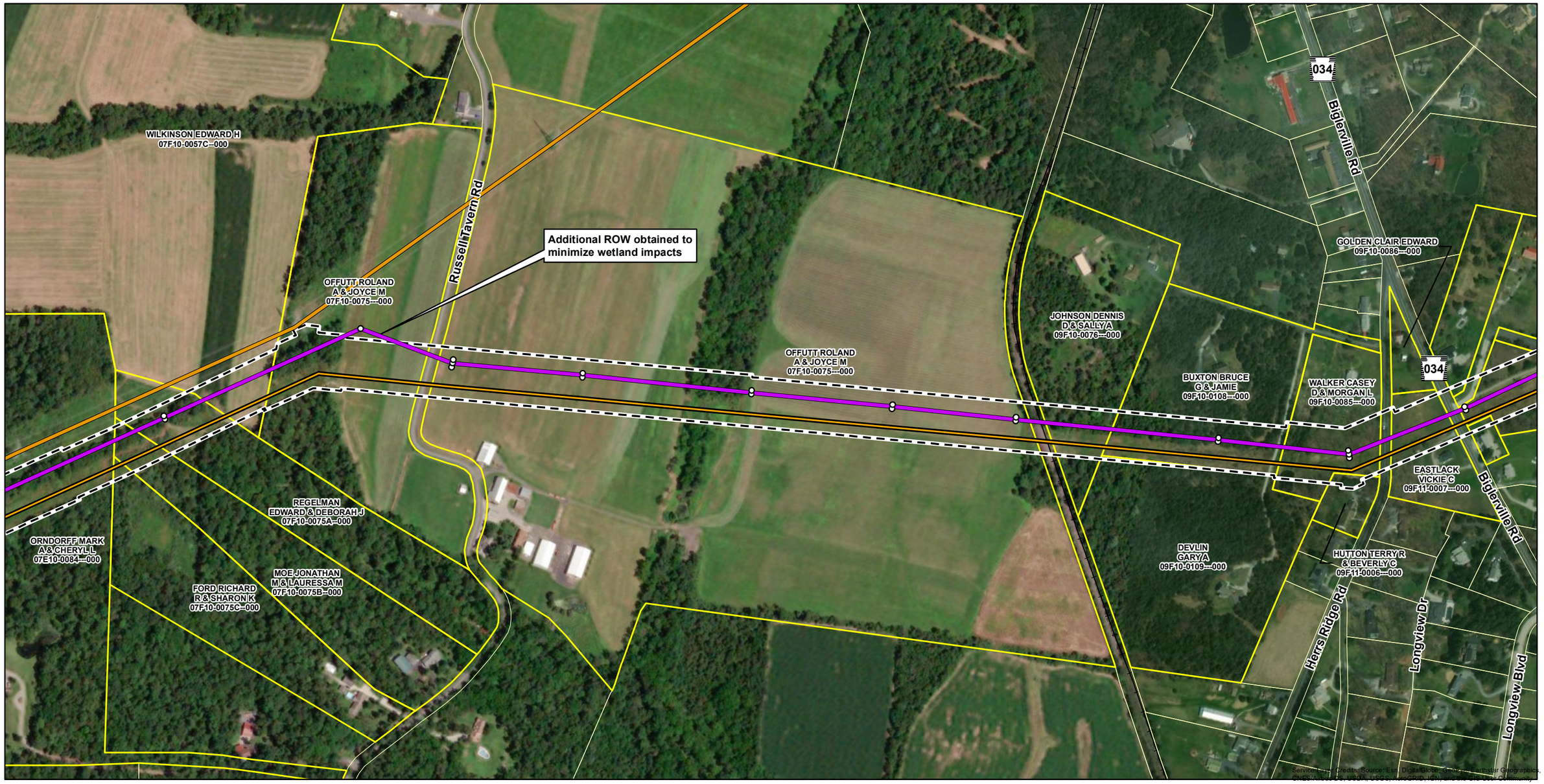

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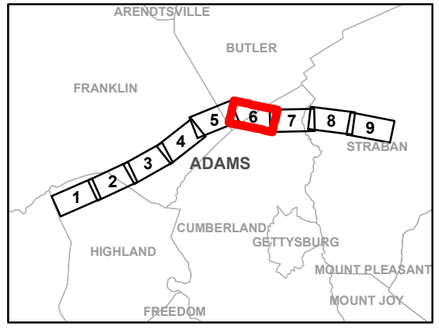

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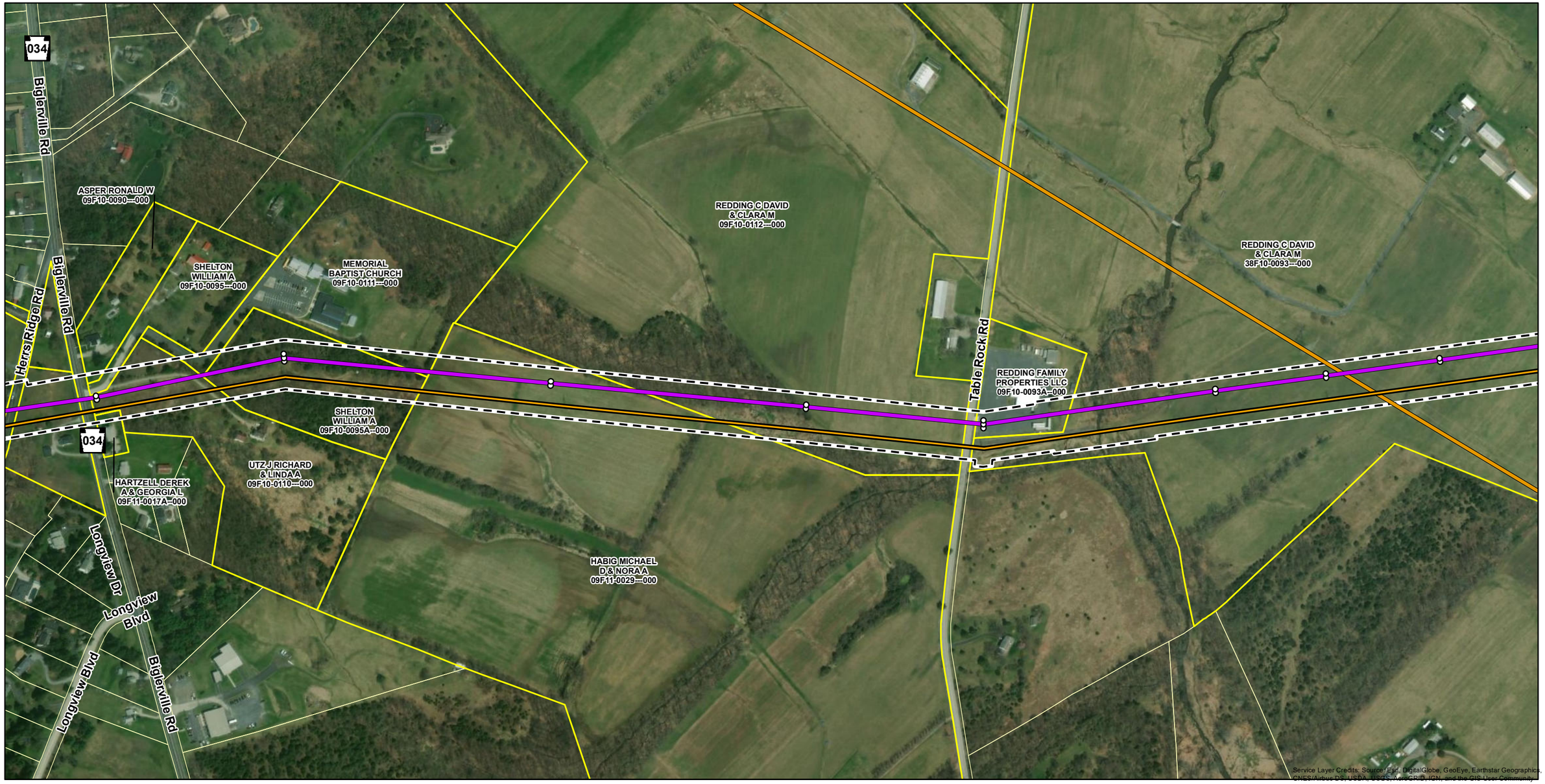

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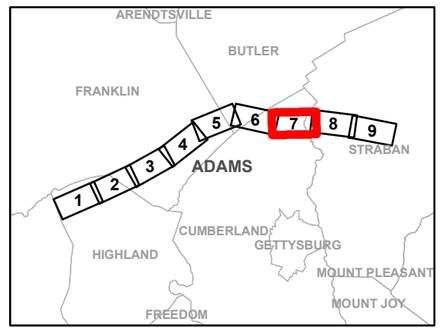

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Page 7 of 9
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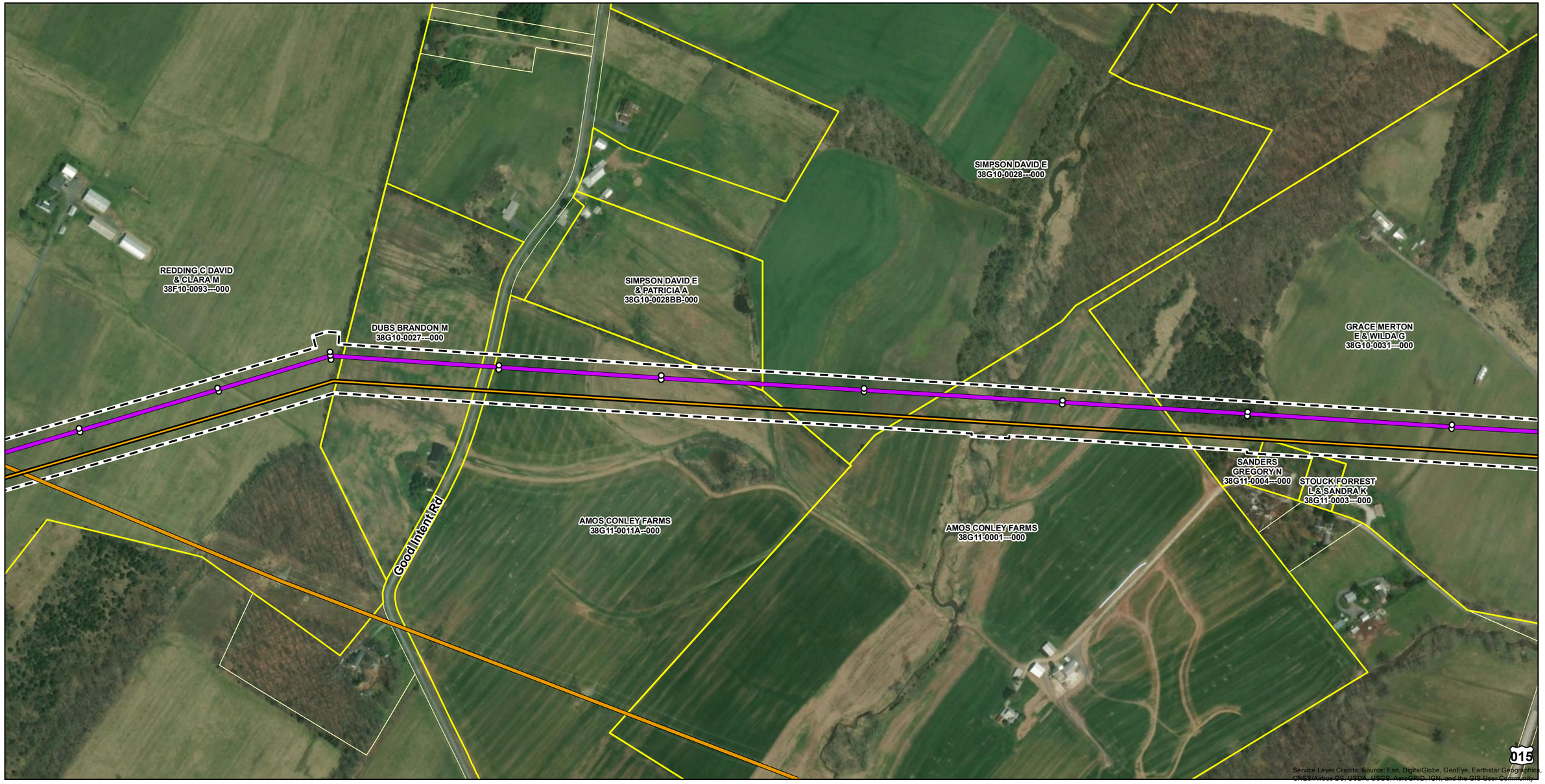

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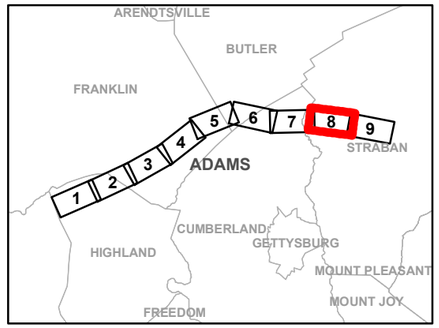

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Page 8 of 9
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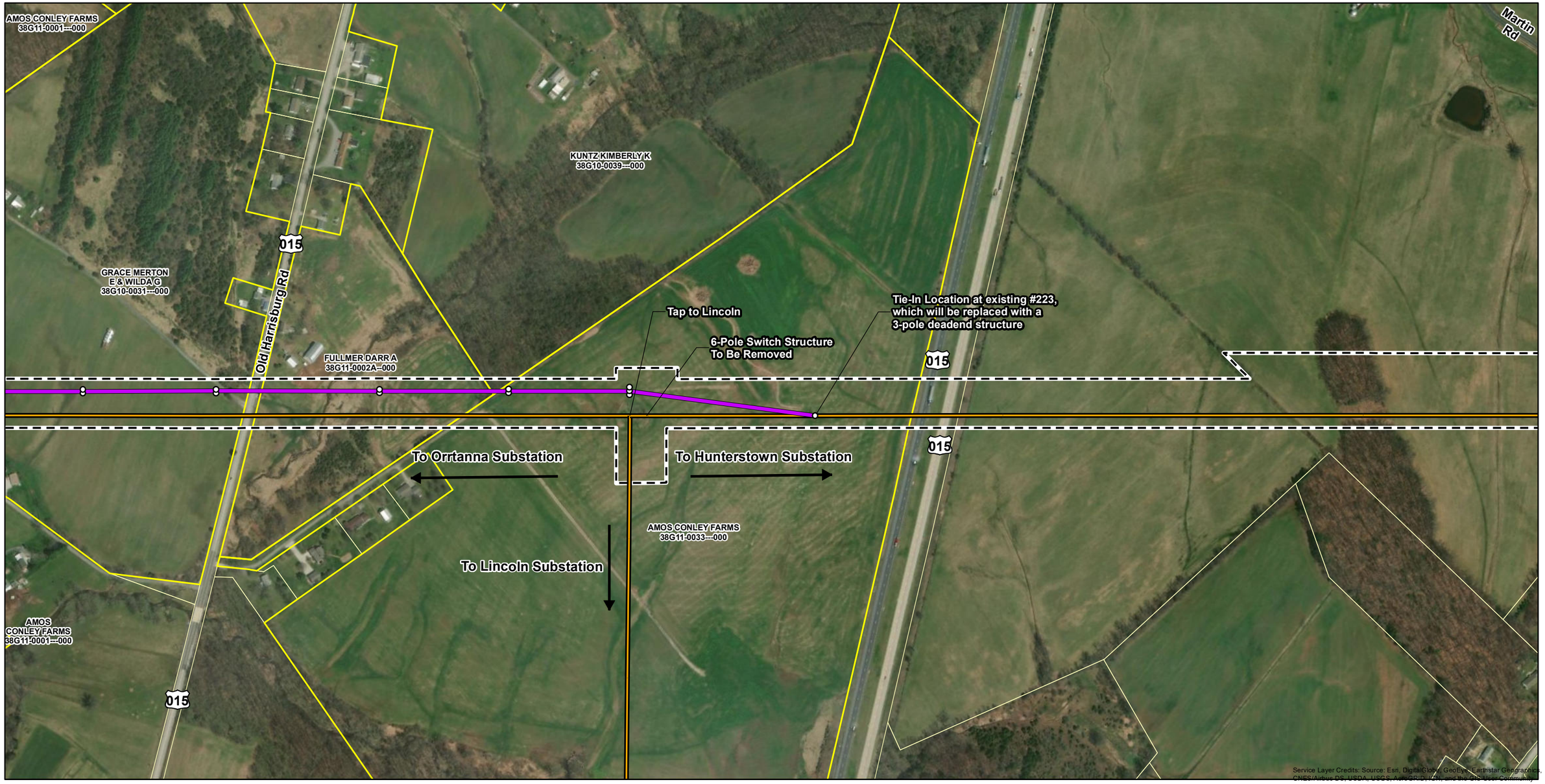

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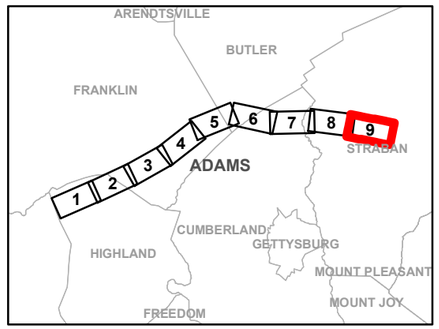

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Page 9 of 9
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