

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

Electronic Application Of Kentucky Power	)	
Company For A Certificate Of Public Convenience	)	
And Necessity To Rebuild the Wooton-Stinnett	)	
Portion of the Hazard-Pineville 161 kV Line In	)	Case No. 2022-00118
Leslie County, Kentucky (“Wooton-Stinnett 161	)	
kV Transmission Rebuild Project”)	)	

**Application**

Kentucky Power Company (“Kentucky Power” or the “Company”) moves the Public Service Commission of Kentucky (the “Commission”) pursuant to KRS 278.020(2) and 807 KAR 5:001, Section 15 for a Certificate of Public Convenience and Necessity authorizing Kentucky Power to:

- (a) Rebuild approximately 11 miles of 161 kV transmission line between the Wooton Substation and the Stinnett Substation within or near existing right-of-way in Leslie County, Kentucky;
- (b) Upgrade equipment at the Wooton, Leslie, and Stinnett substations located in Leslie County, Kentucky, including:
  - (i) Upgrade the relaying equipment to accommodate new optical ground wire (“OPGW”) fiber protection at Wooton Substation; reconductoring the 161 kV bus, relaying upgrades, and other improvements at the Leslie Substation; and upgrading relaying to accommodate new OPGW fiber protection at the Stinnett Substation; and
- (c) Reinforce distribution lines between the Leslie and Stinnett substations in order to accommodate future distribution load during construction outages necessary for the Wooton – Stinnett 161 kV Transmission Line Rebuild Project while limiting direct impacts to the customers served.

(Collectively, the “Wooton – Stinnett 161 kV Transmission Line Rebuild Project” or the “Project”). The Project also will include expansion of the existing transmission line right-of-way (“ROW”) to 120 feet (60 feet on either side of the line) in order to adhere to current standards and specifications for a 161 kV transmission line. A map illustrating the location of the Project

components is attached as **EXHIBIT 2**.

The Project is required to address asset renewal and aging infrastructure concerns by rebuilding the 11-mile section of the Hazard – Pineville 161 kV transmission line between the Wooton, Leslie, and Stinnett substations. The Project will also address necessary improvements at the Wooton 161 kV, Leslie 161 kV, and Stinnett 161 kV substations. The Project will yield a stronger and more reliable 161 kV grid currently served by those substations.

Kentucky Power states in support of its application:

**Applicant**

1. Kentucky Power is a corporation organized on July 21, 1919 under the laws of the Commonwealth of Kentucky. The Company currently is in good standing in Kentucky.<sup>1</sup>
2. The post office address of Kentucky Power is 1645 Winchester Avenue, Ashland, Kentucky 41101. The Company's electronic mail address is [kentucky\\_regulatory\\_services@aep.com](mailto:kentucky_regulatory_services@aep.com).
3. Kentucky Power is engaged in the generation, purchase, transmission, distribution and sale of electric power. Kentucky Power serves approximately 165,000 customers in the following 20 counties of eastern Kentucky: Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Greenup, Johnson, Knott, Lawrence, Leslie, Letcher, Lewis, Magoffin, Martin, Morgan, Owsley, Perry, Pike, and Rowan. Kentucky Power also supplies electric power at wholesale to other utilities and municipalities in Kentucky for resale. Kentucky Power is a utility as that term is defined in KRS 278.010.

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<sup>1</sup> A certified copy of the Company's Articles of Incorporation and all amendments thereto was attached to the Joint Application in *In the Matter Of: The Joint Application Of Kentucky Power Company, American Electric Power Company, Inc. And Central And South West Corporation Regarding A Proposed Merger*, P.S.C. Case No. 99-149. The Company's May 25, 2022 Certificate of Existence is filed as **EXHIBIT 1** of this Application.

4. Kentucky Power is a wholly owned subsidiary of American Electric Power Company, Inc. (“AEP”). AEP is a multi-state public utility holding company that includes utilities providing electric service to customers in parts of eleven states: Arkansas, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, and West Virginia.

### **Background**

5. The Project area is located exclusively in Leslie County, Kentucky. It includes the unincorporated communities of Wooton, Wendover, Hoskinston, and Stinnett in Leslie County, Kentucky. The existing Hazard – Pineville 161 kV transmission line is 45.2 miles long, beginning in Perry County, Kentucky and terminating in Bell County, Kentucky. Only an 11-mile section of the Hazard – Pineville 161 kV transmission line between the Wooton, Leslie, and Stinnett substations will be rebuilt as part of the Project.

6. The Project area is served by the following substations located in Leslie County, Kentucky: the Wooton 161 kV Substation, the Leslie 161 kV Substation, and the Stinnett 161 kV Substation. A map illustrating the Project area is attached as **EXHIBIT 2**.

7. The existing Wooton 161 kV Substation is located in northeast Leslie County, Kentucky, approximately three miles west of the intersection of Kentucky Route 80 and Kentucky Route 1807 (Wooton Creek Road). The Wooton Substation only has transmission facilities at 161,000 volts and serves no direct metered customers.

8. The existing Leslie 161 kV Substation is located in northeast Leslie County, Kentucky, approximately 0.25 mile southeast of the intersection of Kentucky Route 80 and Azalea Drive. The Leslie Substation serves 25 MVA of peak load which includes about 3,305 residential customers and serves a large portion of northern Leslie County, Kentucky.

9. The existing Stinnett 161 kV Substation is located in Hoskinston, Leslie County, Kentucky and approximately 0.1 mile east of the intersection of U.S Route 421 and KY Route

2009 (Greasy Creek Road). The Stinnett Substation serves approximately 20 MVA of peak load which includes about 1,717 residential customers.

10. The existing 11-mile Wooton – Stinnett 161 kV transmission circuit consists of 55 structures. The majority of the structures are wooden and were erected as far back as 1942. Diagrams and photos of the existing structures are attached hereto as **EXHIBIT 5**.

11. The Project will be owned solely by the Company. AEP Kentucky Transmission Company, Inc., and any successor entity, will have no ownership of, or investment in, the Project.

12. The Project was posted to the local plan on October 27, 2021 and subsequently assigned Supplemental ID s2428.1 through s2428.8. It was reviewed with stakeholders at the March 19, 2020 meeting and the solution was presented on November 20, 2020 at the Sub-Regional RTEP-Western meetings hosted by PJM.

### **The Proposed Project**

#### **A. The Proposed Wooton – Stinnett 161 kV Transmission Line Rebuild**

13. The proposed Wooton – Stinnett 161 kV Transmission Line Rebuild (“Transmission Line”) will be constructed using single and double circuit configuration structures traversing approximately 11 miles in Leslie County, Kentucky. The proposed route of the Transmission Line generally follows the existing centerline and will be comparable in character to the existing transmission line. Beginning at the existing Wooton Substation near the intersection of Kentucky Route 1807 and Cane Branch Road the proposed Transmission Line will proceed in a southwesterly direction for approximately 4.5 miles toward the existing Leslie Substation near the intersection of Kentucky Route 80 and Azalea Drive. Additionally 0.4 miles of double circuit transmission line (Leslie Extension) will be rebuilt in and out of the Leslie



Substation. Continuing from a proposed tap structure 0.4 miles due east of the existing Leslie Substation, the proposed single-circuit Transmission Line will continue in a southwesterly direction for 5.8 miles towards existing Structure K131-91A, which is approximately 0.35 miles west of the existing Stinnett Substation near the intersection of U.S. Route 421 and Kentucky Route 2009. *See generally* **EXHIBIT 2**. The Project ends where the Hazard – Pineville 161 kV Transmission Line and the existing Stinnett 161 kV Loop intersect at Structure K131-91A.

B. The Existing Wooton 161 kV Substation Upgrade

14. Kentucky Power proposes to upgrade the existing Wooton 161 kV Substation. The substation upgrades will include upgrading the relaying equipment to accommodate new OPGW fiber protection.

C. The Existing Leslie 161 kV Substation Upgrade

15. Kentucky Power proposes to upgrade the existing Leslie 161 kV Substation. The substation upgrades will include reconductoring the 161 kV bus, relaying upgrades for the Wooton and Pineville lines, replacement of the 161kV MOAB W for the Wooton Line and 161kV XF#1 high side switch, and providing transition, entry, and termination for OPGW connectivity.

D. The Existing Stinnett 161 kV Substation Upgrade

16. Kentucky Power proposes to upgrade the existing Stinnett 161 kV Substation. The substation upgrades will include upgrading relaying to accommodate new OPGW fiber protection.

E. Right-Of-Way Expansion

17. The proposed 161 kV transmission line will be constructed within or near the existing ROW. Kentucky Power proposes to slightly widen the existing ROW, which is

maintained at 100 feet wide (50 feet on either side of the line), to 120 feet (60 feet on either side of the line) in order to adhere to current standards and specifications for a 161 kV transmission line.

18. Kentucky Power also proposes a wider ROW of up to 400 feet (200 feet on either side of the line) in those areas of unusually steep terrain or where doing so would be required to safely and efficiently operate the proposed transmission line.

19. The Company also proposes a slight shift of about 85 feet to the northwest of the existing transmission centerline to avoid a residence currently located within the existing right-of-way, which is demonstrated on Rebuild Study Segment 1. *See* Attachment E Map 2 of Rebuild Study, attached hereto as **EXHIBIT 13**.

F. Distribution Line Reinforcement

20. The Company further proposes to reinforce distribution lines between the Leslie and Stinnett substations in order to accommodate future distribution load during construction outages necessary for the Wooton – Stinnett 161 kV Transmission Line Rebuild Project while limiting direct impacts to the customers served.

G. The Proposed Structures

21. Final structure types will be determined during detailed engineering in connection with a ground survey and geotechnical studies.

22. The majority of the existing structures are wood H-frame structures approximately 60 feet in height. Diagrams and photos of the existing structures are attached hereto as **EXHIBIT 5**. Based on preliminary engineering, between Wooton Substation and Stinnett Substation, the existing structures will be replaced primarily with single circuit steel H-frame structures averaging 85 feet in height; however, single circuit steel guyed 3-pole structures averaging 85 feet in height,

single circuit steel lattice structures averaging 85 feet in height, single circuit steel monopole structures averaging 105 feet in height, and single circuit steel guyed lattice structures averaging 85 feet in height may be used in specific locations, as necessary. The existing structures for the Leslie Loop are double circuit lattice structures averaging 110 feet in height. Structures for the Leslie Extension include two double circuit lattice tower structures and one double circuit monopole, approximately 135 feet in height.

23. The primary single circuit structure type, H-Frame structures, are efficient, cost-effective, simple form, and proven structures that have functioned well over the years on transmission lines of all voltages. Additionally, these structures enable long spans, which makes them well-suited for mountainous terrain and rural landscapes.

24. Details of the structure types proposed are provided in **EXHIBITS 6, 7, 8, 9, 10, 11, AND 12.**

25. The proposed single-circuit structures will support three conductors and two overhead groundwires. The proposed double-circuit structures will support six conductors and two overhead groundwires. The conductors will consist of 795 kcmil ACSR conductors; the overhead groundwires will consist of one Alumoweld wire and one fiber optic overhead groundwire, which will be used for relaying communications between stations.

#### H. Rebuild Study.

26. POWER Engineers, Inc. (“POWER”) was engaged to identify and evaluate routes on which to rebuild the Transmission Line and prepare the resulting Rebuild Study for the Project. The Rebuild Study is attached as **EXHIBIT 13** to this Application.

27. The POWER Siting Team developed a study segment network (six study segments total), which are locations where the transmission line can feasibly be rebuilt. Most of the study segments use the existing ROW.

28. Study Segment 1 is on the existing centerline, with the exception of an 85 foot shift to the northwest of the existing transmission centerline to avoid a residence currently located within the existing ROW. After the diversion, Study Segment 1 returns to the existing centerline approximately one mile to the existing Leslie Loop tap location. The existing tap structure and the Leslie Loop (Study Segment 2) must be built in the clear and on new ROW (0.4 mile) due to outage constraints on the existing transmission line. Study Segment 3 begins at the new tap location and gradually returns to the existing centerline after crossing Apple Orchard Road and continues for approximately four miles. Study Segments 4 and 5, are alternative routes and are in the vicinity of the Daniel Boone National Forest parcel. Study Segment 5 remains on the existing centerline; Study Segment 4 diverts to the north to avoid crossing the United States Forest Service (“USFS”) parcel. Study Segment 6 continues on the existing centerline towards the Stinnett Substation. The Project ends where the Hazard – Pineville 161 kV Transmission Line and the Stinnett 161 kV Loop intersect at Structure K131-91A. See **EXHIBIT 4** to this Application for illustrations of the proposed route.

29. Nearly the entirety of the Project is proposed to be rebuilt on or near the existing centerline and within the existing ROW. Two alternatives were proposed for the portion of the line that crosses the USFS parcel (Study Segments 4 and 5). Following the virtual open house and after coordination with the USFS in the summer of 2021, the Siting Team chose to move forward with Study Segment 5, which occupies the existing ROW and would not require any structures to be located on USFS land. The Siting Team determined that rebuilding on existing centerline as shown in Study Segment 5 was feasible and preferred in order to limit disturbance to the surrounding area.

30. Ultimately, the Siting Team carried forward Study Segments 1, 2, 3, 5, and 6 between the Wooton and Stinnett Substations (**EXHIBIT 13**, Attachment E, Map 3) as the Rebuild Route. Company Witness Larson provides details of the POWER Rebuild Study methodology, describes the results and conclusions of the Rebuild Study, and details the proposed Wooton – Stinnett 161 kV Transmission Line Rebuild route.

### **Financial Aspects Of The Project**

31. AEP Kentucky Transmission Company, or any successor entity, will not own nor invest in the Project. Kentucky Power will own the Project in its entirety.

32. The total detailed estimate of the Project cost is approximately \$49 million. The project cost comprises: (a) approximately \$41 million for transmission line work including right-of-way acquisition; (b) approximately \$4.7 million for construction and upgrade of the substations and switch structure; (c) approximately \$2.9 million for the removal of the Wooton 161kV Extension, Wooton-Leslie 161kV and Leslie-Stinnett portions, and the Leslie Loop; and (d) approximately \$110,000 for distribution line work.<sup>2</sup>

33. The Project does not involve sufficient capital outlay to materially affect the existing financial condition of Kentucky Power. Kentucky Power anticipates funding the cost of the Project through its operating cash flow and other internally generated funds.

34. Kentucky Power projects the Company's share of the annual operating cost will be approximately \$78,000 for general maintenance and inspection. The projected annual additional ad valorem taxes resulting from the Company's share of the Project are expected to total approximately \$645,700.

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<sup>2</sup> The sum of the costs of the four major components does not tie to the total cost because of rounding.

### **Property Acquisition**

35. It is not necessary for Kentucky Power to acquire any new property in connection with the upgrade work at the Wooton, Leslie, and Stinnett substations.

36. The proposed 161 kV Transmission Line will be constructed within or near the existing ROW. Kentucky Power proposes to slightly widen the existing ROW, which is maintained at 100 feet wide (50 feet on either side of the line), to 120 feet (60 feet on either side of the line) in order to adhere to current standards and specifications for a 161 kV transmission line. Thus, the Transmission Line will be constructed within a 120-foot ROW, except where a wider ROW is required to address constructability and operational requirements.

37. A wider ROW of up to 400 feet may be required for certain longer spans and in steep terrain to permit the safe and efficient operation of the transmission line. The wider ROW also would facilitate additional tree clearing to prevent the conductors from coming in contact with trees during high wind conditions and tree clearing on the up-hill side in order to prevent trees from falling down hill and into the conductors and structures. These areas of wider ROW will be identified during detailed engineering design and will be included during the ROW negotiations with landowners.

38. The section of the Hazard – Pineville 161 kV transmission line between Wooton and Stinnett substations largely crosses forested, mountainous terrain, mining areas, and scattered residential development located along roadways in the valley bottoms. Surface mining has occurred and continues to occur throughout the study area and several nearby ridges have been mined and are terraced hillsides. The existing 161 kV transmission line also crosses a small piece of property owned by the Daniel Boone National Forest.

39. To ensure the ability to address potential issues that may emerge in connection with ground surveys, final engineering, and right-of-way negotiations, Kentucky Power requests, based upon guidance provided by the Commission's April 13, 2022 Order in Case No. 2021-00346,<sup>3</sup> authority to relocate the centerline and associated right-of-way up to 200 feet in any direction from the location as shown on the maps filed with the Application as **EXHIBIT 4**, if required to address these conditions or issues.

40. This 400-foot wide area is consistent with the width of the proposed ROW at its widest points, and as illustrated on **EXHIBIT 4**. The proposed 400-foot wide area consists of two strips of a buffered area surrounding the centerline and ROW that allows flexibility for minor adjustments that result during final engineering. As explained in greater detail by Company Witness Larson, it is not expected that the centerline will shift significantly from what is shown on **EXHIBIT 4**.

41. The Company proposes to file a motion in this proceeding, as needed, to request approval to move the centerline more than 200 feet in any direction from the centerline as it appears on the maps filed into the record in this proceeding. The motion will identify the proposed new location of the centerline, the affected landowner(s), and state in detail, and with technical specificity, the need for the proposed modification of the centerline. Kentucky Power will serve the motion for approval to move the centerline on any affected landowner(s), even if not a party to this proceeding. The Company respectfully requests that upon receiving adequate information to consider the request, the Commission use its best efforts to rule upon such motions within 14 days.

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<sup>3</sup> See Order, *In the Matter of: Electronic Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 138 kV Transmission Line And Associated Facilities In Breathitt, Floyd And Knott Counties, Kentucky (Garrett Area Improvements 138 kV Transmission Project)*, Case No. 2021-00346 (Ky. P.S.C. March 8, 2022) as amended by the Commission's Order on rehearing dated April 13, 2022.

42. After construction is completed, Kentucky Power will file with the Commission a revised plan showing the final location of the transmission line and structures. Company Witnesses West provides descriptions of the proposed 400-foot wide area and the manner in which Kentucky Power proposes to use it.

43. The 400-foot-wide area and ROW includes 79 parcels (69 unique parcel owners). Sixty-one (61) of the parcels (53 unique parcel owners) are crossed by the proposed 120-foot-wide ROW. A list of parcels and associated landowners within the ROW and the 400-foot-wide area is provided as **EXHIBIT 14**. Kentucky Power worked with property owners affected by the ROW.

44. Kentucky Power plans to begin to acquire ROW in the fourth quarter of 2022 and the first quarter of 2023. Kentucky Power will provide monthly property acquisition status updates beginning October 2022.

#### **Notices**

45. Kentucky Power filed its Notice of Intent in conformity with 807 KAR 5:120, Section 1 on April 13, 2022. This proceeding was assigned Case No. 2022-00118.

46. Kentucky Power, by a mailing made April 28, 2022, provided the notice required by 807 KAR 5:120, Section 2(3) to all property owners, as indicated by the records of the property valuation administrator of Leslie County, whose land is included within ROW and the 400-foot wide area surrounding the proposed centerline (“Affected Landowners”) of the route of the Transmission Line and the proposed station work.

47. The April 28, 2022 Notice included the following information:

- a. notice of the proposed construction;
- b. the docket number (P.S.C. Case No. 2022-00118) under which the Application will be processed;
- c. the address and telephone number of the Commission’s Executive Director;



- d. a description of the property owners' rights to request a public hearing and the right to request intervention; and
- e. a description of proposed Wooton – Stinnett 161 kV Transmission Line and proposed station work and corresponding maps indicating their locations.

48. A sample copy of the April 28, 2022 Notice, including all enclosures, and the verification by Ryan M. Howell of the mailing of the letters are attached as part of **EXHIBIT 15**. The list of the Affected Landowners to whom the Notice was mailed, including their addresses as indicated by the records of the property valuation administrator of Leslie County, is attached as **EXHIBIT 14**.

49. The notice required by 807 KAR 5:120, Section 2(5) was published on April 28, 2022 in *The Leslie County News* and *Hazard Herald*. The published notices included the following information:

- a. a description of the Proposed Route;
- b. the docket number (P.S.C. Case No. 2022-00118) under which the Application will be processed;
- c. the address and telephone number of the Commission's Executive Director;
- d. a description of the property owners' rights to request a public hearing and the right to request intervention; and
- e. a map illustrating the proposed route of the Wooton – Stinnett 161 kV Transmission Line and substation locations.

The notices published in *The Leslie County News* and *Hazard Herald* and Affidavit of Publication are attached as **EXHIBIT 16**.

### **Franchises And Permits**

50. Kentucky Power is not required to obtain a franchise from any public authority. 807 KAR 5:001, Section 15(2)(b).

51. Kentucky Power will obtain all required environmental compliance permits and complete the required studies prior to beginning Project construction. A summary of the

environmental surveys and permitting anticipated to be required is provided in Section VII of Company Witness Larson's testimony.

52. Following receipt of the requested authority, and completion of final design and ROW acquisition, but prior to the beginning of construction, Kentucky Power will update or supplement the listing in Company Witness Larson's testimony of required environmental surveys or permitting, as necessary.

53. The Company will also timely submit the final line design to the Federal Aviation Administration and the Kentucky Transportation Cabinet to secure a "Determination of No Hazard to Air Navigation." Other permits that will be obtained include road and railroad crossing permits. These will be submitted to the Commission once final engineering has been completed.

**The Proposed Construction Is Required By**  
**The Public Convenience And Necessity**

54. The Project is required by the public convenience and necessity.

55. The Project will not produce wasteful duplication. It will not result in an excess of capacity over need, and does not represent an excess of investment in relation to the productivity and efficiencies to be gained. It will not result in an unnecessary duplication of physical properties.

56. The Project addresses substantial deficiencies in existing facilities beyond what could be provided through normal improvements in the ordinary course of business.

57. The Project also will improve the reliability and increase capacity of the Company's 161 kV network in the area of the Wooton, Leslie, and Stinnett substations. The Project also will allow Kentucky Power to address multiple equipment condition and performance risks on the Company's existing 161 kV network in Leslie County.

58. The Wooton – Stinnett Section of the 161 kV line comprises 55 structures; the structures principally are wooden poles that date from 1942 (95 percent). There are 105 open conditions, mainly including damaged poles and cross-arms. Photographs illustrating representative examples of the damaged poles and appurtenances are attached as **EXHIBIT 5**.

59. There were multiple momentary outages and one permanent outage on the Wooton – Stinnett Section of the 161 kV line in the past six years. Temporary measures are inadequate to repair or improve the existing structures

60. The Project will also address necessary improvements at the Wooton, Leslie, and Stinnett substations located on this section of the line.

61. The work to be performed was identified through use of the “AEP Guidelines for Transmission Owner Identified Needs” (“AEP Guidelines”). A copy of the AEP Guidelines is attached as **EXHIBIT 19**.

62. The need for and benefits of the Project are further detailed in the testimony of Company Witness Koehler, **EXHIBIT 20** (the Local Plan) and **EXHIBIT 21** (PJM RTEP Solution Slides).

63. Kentucky Power considered one alternative Study Segment as part of the Project. Otherwise, nearly the entirety of the Project is proposed to be rebuilt on or near the existing centerline and ROW. The alternative Study Segment was proposed for the portion of the line that is adjacent to the USFS parcel (Study Segment 4). Study Segment 4 would have diverted to the north to avoid crossing the USFS parcel. See **EXHIBIT 13** to this Application for an illustration of the proposed alternative and the testimony of Company Witness Larson for additional information on the alternative Study Segment.

64. Kentucky Power rejected the Study Segment 4 alternative following the virtual open house and after coordination with the USFS in the summer of 2021 because Study Segment 5 instead uses the existing centerline and would not require any structures to be located on USFS land. Rebuilding on existing centerline as shown in Study Segment 5 was feasible and preferred in order to limit disturbance to the surrounding area.

65. Kentucky Power has an obligation under KRS 278.030(2) to provide adequate, efficient, and reasonable service to its customers. The Project is necessary to permit the Company to meet its statutory obligation.

66. The Project is located entirely within Kentucky Power's certified territory and will not compete with any public utilities, corporations or persons.

#### **Reviews And Stakeholder Input**

67. Kentucky Power and POWER conducted extensive stakeholder outreach, including publishing a news release to announce the Project and the Proposed Route, as well as establishing a public website to provide information and solicit comments. The news release is attached as **EXHIBIT 17**. The public website may be viewed at <https://www.aeptransmission.com/kentucky/Wooton-Stinnett/>.

68. An in-person meeting was held with the Leslie County Judge Executive on June 9, 2021.

69. A virtual Open House with a 30-day public comment period went live on July 8, 2021 on the Project website.

70. The virtual Open House remains available for landowners and stakeholders to visit. (<https://www.aeptransmission.com/kentucky/Wooton-Stinnett/open-house/>). The virtual open house allows affected landowners, interested persons, and other stakeholders to receive

information regarding the Project. Among the topics addressed in the virtual open house are the need for the Project, the Project timeline, right-of-way activities, the routing process, typical structures, and the construction process. The virtual open house also permitted stakeholder to submit questions and receive answers regarding the Project.

#### **Commencement Of Work And Anticipated In-Service Date**

71. Kentucky Power anticipates commencing work, subject to the grant of the requested authority, in the first or second quarter of 2023. The expected in-service date is the fourth quarter of 2024. Distribution work is estimated to begin either during the fourth quarter of 2022 or the first quarter of 2023.

#### **Exhibits And Testimony**

72. The exhibits and testimony listed in the Appendix to this Application are attached to and made a part of this Application.

#### **Communications**

73. Kentucky Power respectfully requests that communications in this matter be addressed to the e-mail addresses identified on Kentucky Power's April 6, 2022 Notice of Election of Use of Electronic Filing Procedures.

#### **Filing Requirements**

74. Kentucky Power's compliance with the requirements of 807 KAR 5:001, Section 14, 807 KAR 5:001, Section 15, and 807 KAR 5:120 is detailed in **EXHIBIT 18** to the Application.

WHEREFORE, Kentucky Power Company requests that the Commission issue an Order:

- (1) Granting Kentucky Power a Certificate of Public Convenience and

Necessity for the Project authorizing Kentucky Power to:

- (a) Rebuild approximately 11 miles of 161 kV transmission line between the Wooton Substation and the Stinnett Substation within or near existing right-of-way in Leslie County, Kentucky;

- (b) Upgrade equipment at the Wooton, Leslie, and Stinnett substations located in Leslie County, Kentucky, including:

- (i) Upgrade the relaying equipment to accommodate new optical ground wire (“OPGW”) fiber protection at Wooton Substation; reconductoring the 161 kV bus, relaying upgrades, and other improvements at the Leslie Substation; and upgrading relaying to accommodate new OPGW fiber protection at the Stinnett Substation; and

- (c) Reinforce distribution lines between the Leslie and Stinnett substations in order to accommodate future distribution load during construction outages necessary for the Wooton – Stinnett 161 kV Transmission Line Rebuild Project while limiting direct impacts to the customers served;

- (2) Granting Kentucky Power the authority to relocate the centerline and associated ROW up to 200 feet in any direction from the location as shown on the maps filed with the Application as **Exhibit 4**, if required to address these conditions or issues;

- (3) Allowing Kentucky Power to file a motion in this proceeding to request approval to move the centerline more than 200 feet in any direction from the centerline as it appears on the maps filed into the record in this proceeding, with such motion containing the following:

- (a) The proposed new location of the centerline, the affected landowner(s), and state in detail, and with technical specificity, the need for the proposed modification of the centerline;

- (b) A statement that Kentucky Power served the motion for approval to move the centerline on any affected landowner(s), even if not a party to this proceeding;

- (4) Stating that upon receiving the Company’s motion to relocate the centerline more than 200 feet from the proposed centerline, the Commission use its best efforts

to rule upon such motions within 14 days; and

- (5) Granting Kentucky Power such other relief as may be appropriate.

Respectfully submitted,



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COUNSEL FOR KENTUCKY POWER  
COMPANY

**EXHIBIT LIST**

<b>Exhibit No.</b>	<b>Exhibit Name</b>
1	Kentucky Power Company Certificate of Existence
2	Project Location Map
3	Circuit Outages
4	Proposed Route
5	Existing Structure Diagrams & Photos
6	Proposed Monopole Single Circuit Structure
7	Proposed H-Frame Single Circuit Structure
8	Proposed Three-Pole Single Circuit Structure
9	Proposed Lattice Tower Single Circuit Structure
10	Proposed Lattice Tower Double Circuit Structure
11	Proposed Monopole Double Circuit Structure
12	Proposed Guyed Lattice Single Circuit Structure
13	Rebuild Study
14	Landowner List
15	Notice Mailed to Landowners and Verification
16	Published Notice and Affidavit of Publication
17	Public News Releases
18	Filing Requirements
19	AEP's Guidelines For Transmission Owner Identified Needs
20	PJM Local Plan
21	PJM Solution

**TESTIMONY**

Direct Testimony of Brian K. West  
Direct Testimony of Emily S. Larson  
Direct Testimony of Nicolas C. Koehler



**Commonwealth of Kentucky**  
**Michael G. Adams, Secretary of State**

Michael G. Adams  
Secretary of State  
P. O. Box 718  
Frankfort, KY 40602-0718  
(502) 564-3490  
<http://www.sos.ky.gov>

**Certificate of Existence**

Authentication number: 271173

Visit <https://web.sos.ky.gov/ftshow/certvalidate.aspx> to authenticate this certificate.

I, Michael G. Adams, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

**KENTUCKY POWER COMPANY**

is a corporation duly incorporated and existing under KRS Chapter 14A and KRS Chapter 271B, whose date of incorporation is July 21, 1919 and whose period of duration is perpetual.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that Articles of Dissolution have not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 25<sup>th</sup> day of May, 2022, in the 230<sup>th</sup> year of the Commonwealth.



*Michael G. Adams*

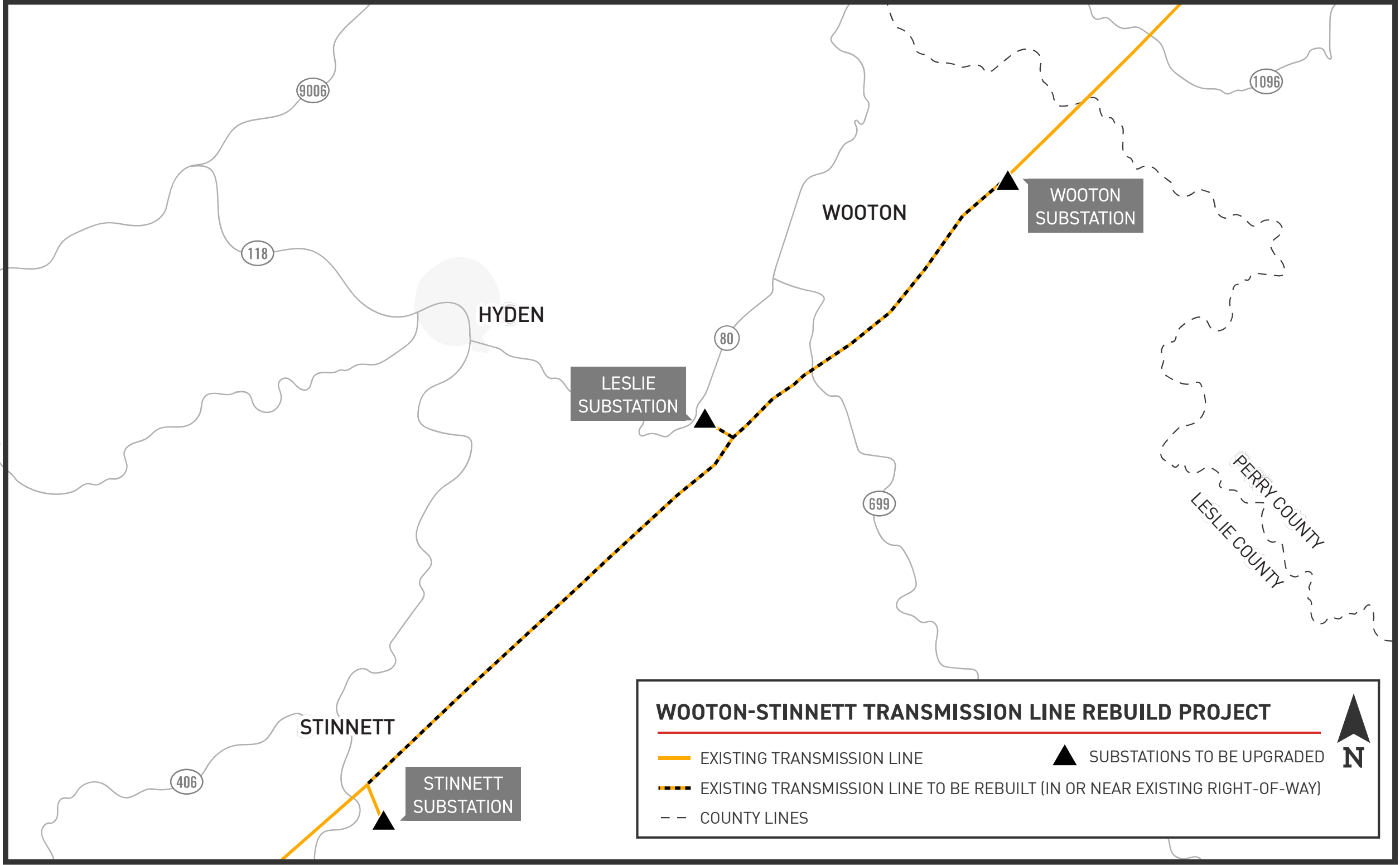
Michael G. Adams  
Secretary of State  
Commonwealth of Kentucky  
271173/0028317

# WOOTON-STINNETT TRANSMISSION LINE PROJECT



An AEP Company

BOUNDLESS ENERGY™



**Table 1**  
**Leslie - Pineville 161 kV Circuit Outage History**

<b>Circuit Outage Cause Summary</b>			
<b>Leslie – Pineville 161kV Circuit (01/01/2017 – 12/31/2021)</b>			
<b>Date</b>	<b>Cause</b>	<b>Duration (Hours)</b>	<b>CI</b>
12/3/21	Fire-Other	174.43	3,445
8/7/21	Weather - Lightning/Tstorm	25.3	0
3/31/21	Weather - Lightning/Tstorm	0.1	0
3/17/21	Equip-Line-Crossarm	34.27	0
1/25/21	Weather - Lightning/Tstorm	0	0
12/24/20	Weather - Ice/Snow	91.65	0
8/16/20	Weather - Lightning/Tstorm	0	0
4/30/20	Weather - Wind	0.07	0
4/12/20	Vegetation Fall-In (Outside R/W)	51.35	0
3/20/20	Weather - Lightning/Tstorm	0	0
12/7/19	Vegetation Fall-In (Outside R/W)	32.8	0
10/21/19	Vegetation Fall-In (Outside R/W)	7.18	0
10/21/19	Vegetation Fall-In (Outside R/W)	6.37	0
10/20/19	Weather - Lightning/Tstorm	0.07	0
7/20/19	Weather - Lightning/Tstorm	0	0
7/7/19	Vegetation Fall-In (Outside R/W)	55.32	0
7/4/19	Weather - Lightning/Tstorm	0	0
7/3/19	Weather - Lightning/Tstorm	0	0
6/5/19	Weather - Lightning/Tstorm	0	0
5/18/19	Vegetation Fall-In (Outside R/W)	26.03	345
4/14/19	Weather - Wind	0	0
12/9/18	Weather - Ice/Snow	58.72	352
4/4/18	Weather - Wind	0	0
6/13/17	Vegetation Fall-In (Outside R/W)	25.57	0
4/19/17	Vegetation Fall-In (Outside R/W)	29.7	0
2/28/17	Weather - Lightning/Tstorm	0	0

**Table 2**  
**Leslie - Wooton 161 kV Circuit Outage History**

<b>Circuit Outage Cause Summary</b>			
<b>Leslie – Wooton 161kV Circuit (01/01/2017 – 12/31/2021)</b>			
<b>Date</b>	<b>Outage</b>	<b>Duration (Hours)</b>	<b>CI</b>
2/18/21	Weather - Ice/Snow	0	0
2/14/21	Vegetation Fall-In (Outside R/W)	22.32	0
4/12/20	Vegetation Fall-In (Outside R/W)	131.98	0

**Table 3**  
**Kentucky (KPCo) 161kV Average Circuit Outages Per Line**

<b>Kentucky (KPCo) 161kV Circuits Annual Outage Averages</b>		
<b>(01/01/2017 – 12/31/2021)</b>		
<b># of 161kV Circuits</b>	<b>Frequency</b>	<b>Duration (Hours)</b>
4	2.4	6.91

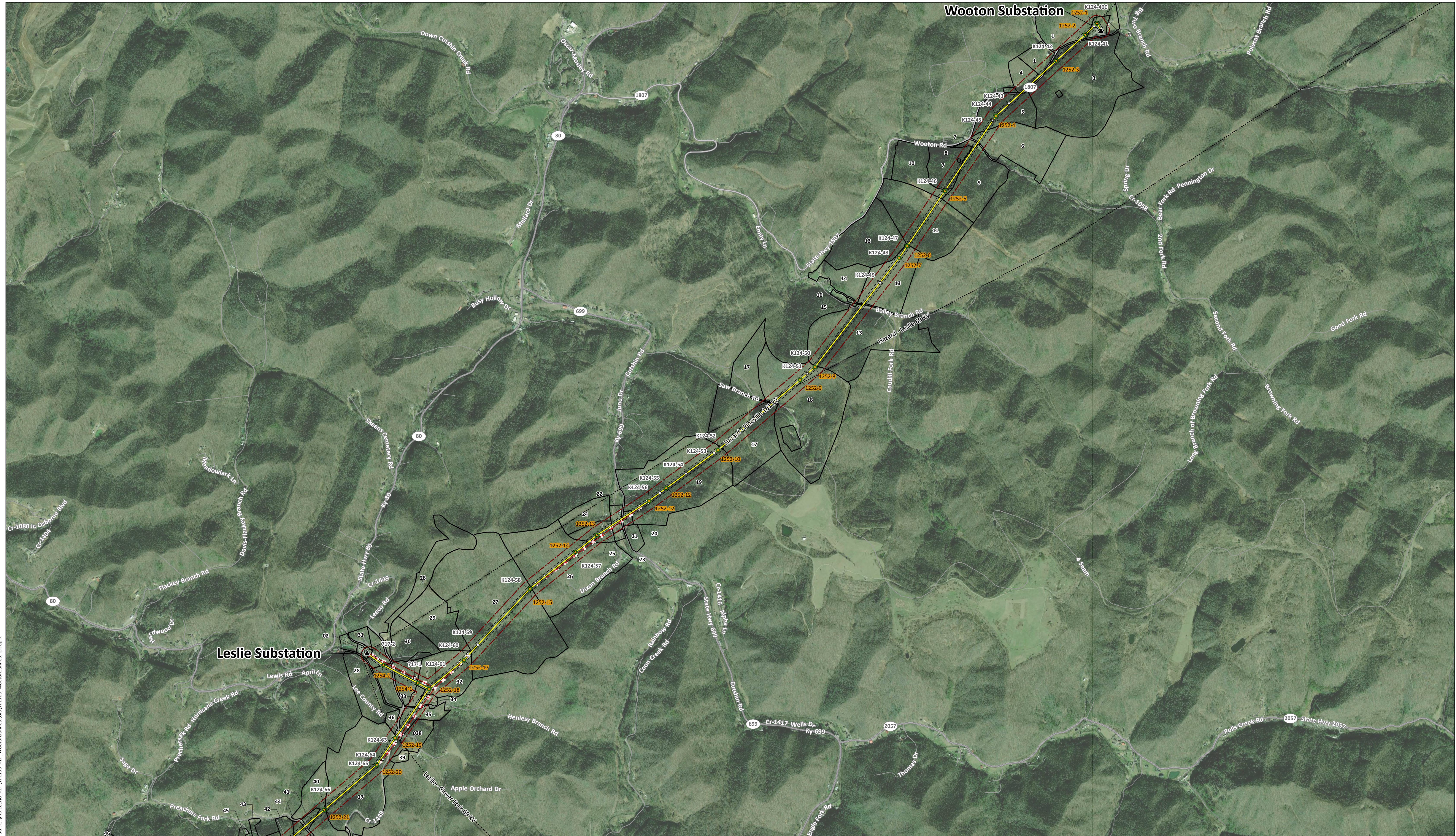
**Table 4**  
**Leslie - Pineville 161 kV Circuit Outage Averages**

<b>Circuit Annual Outage Averages</b>		
<b>(01/01/2017 – 12/31/2021)</b>		
<b>Circuit Name</b>	<b>Frequency</b>	<b>Duration (Hours)</b>
Leslie – Pineville 161kV	5.2	26.97

**Table 5**  
**Leslie - Wooton 161 kV Circuit Outage Averages**

<b>Circuit Annual Outage Averages</b>		
<b>(01/01/2017 – 12/31/2021)</b>		
<b>Circuit Name</b>	<b>Frequency</b>	<b>Duration (Hours)</b>
Leslie – Wooton 161kV	0.6	28.63





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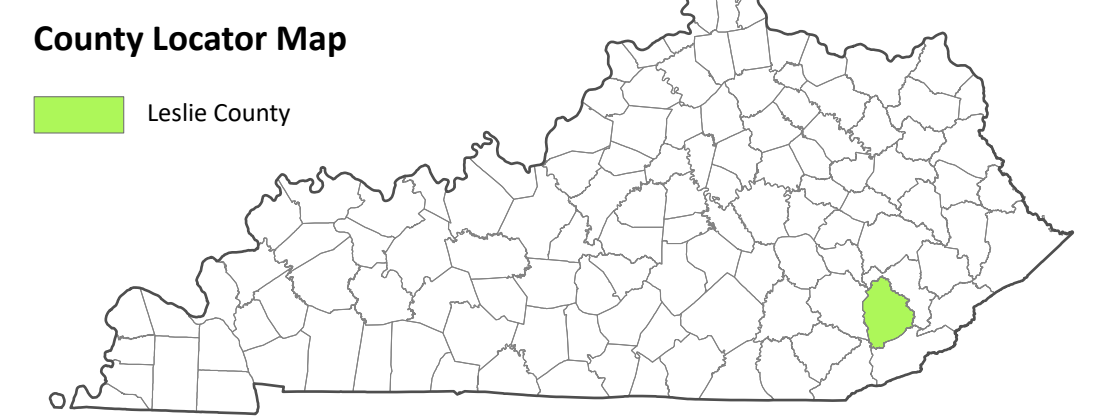
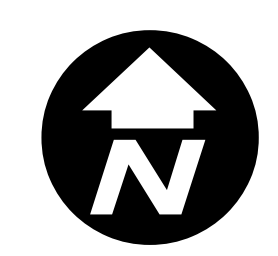
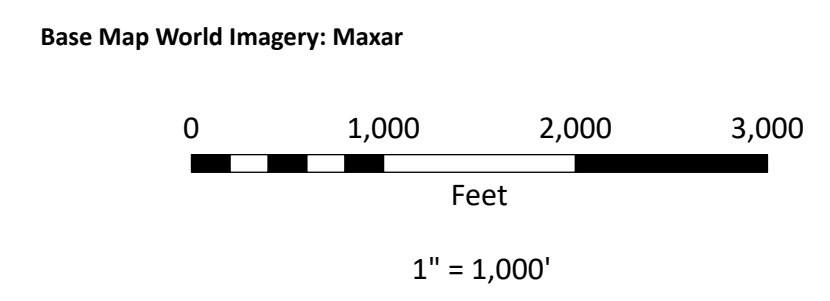
# Wooton - Stinnett Transmission Line Rebuild Project

## Exhibit 4: Proposed Route

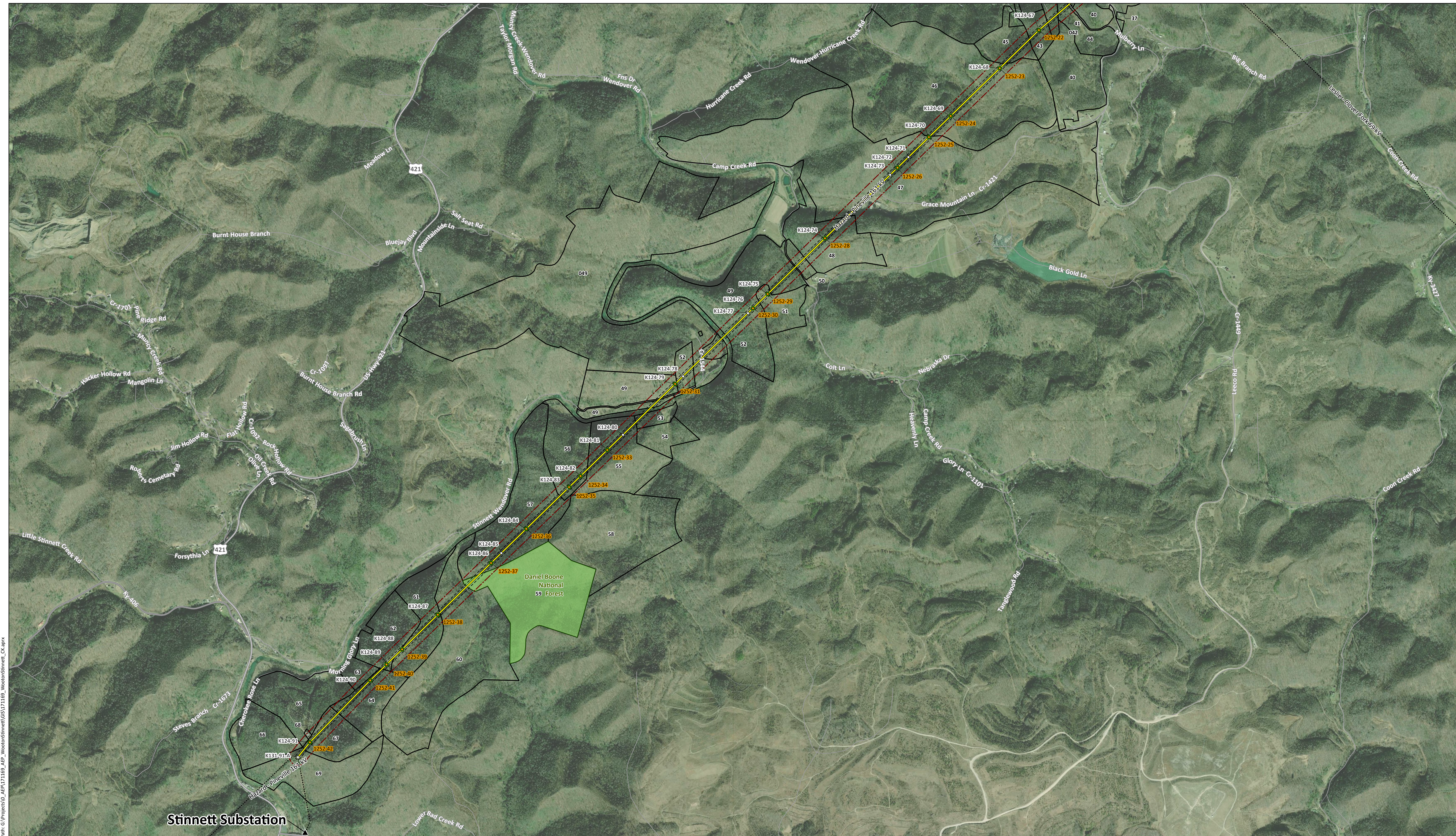
Date: 5/10/2022  
Sheet 1 of 4

- Proposed Structure<sup>1</sup>
- Existing AEP Structure
- ▲ Existing Substation
- Proposed Route<sup>1</sup>
- - - - - Existing Transmission Line
- - - - - Existing Transmission Line to be Removed
- Proposed 120-foot ROW<sup>2</sup>
- Proposed 400-foot Filing Corridor<sup>2</sup>
- Property Line Boundary with PSC Filing ID<sup>3</sup>

**NOTES**  
 1) Shown is a preliminary design. This design is not the final route centerline or structure locations. Final line route and structure locations will be determined during final engineering, which includes ground survey and geotechnical and environmental studies. Nonetheless, the Company believes the centerline illustrated is the most suitable alignment based upon preliminary analysis.  
 2) A 120-foot wide right-of-way will be sited within the Filing Corridor. The Company needs the flexibility to shift the centerline within the Filing Corridor indicated as necessary after completion of the final engineering. Ground surveys and interviews with the landowner.  
 3) The PVA parcels are not based on an accurate ground survey and should not be construed or used as exact descriptions of legal boundaries. See Exhibit 10 for list of landowners in proposed ROW and Filing Corridor.







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# Wooton - Stinnett Transmission Line Rebuild Project

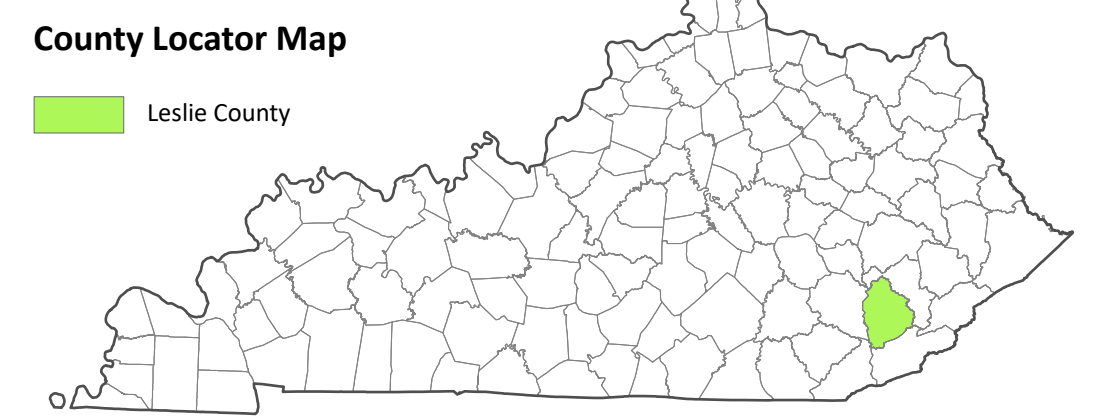
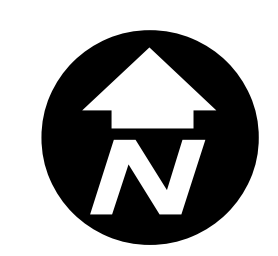
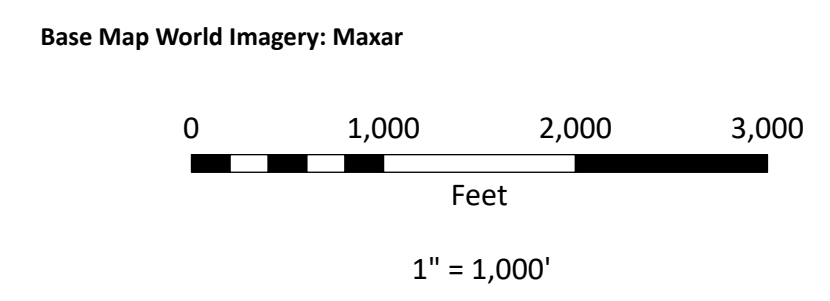
## Exhibit 4: Proposed Route

Date: 5/10/2022  
Sheet 2 of 4

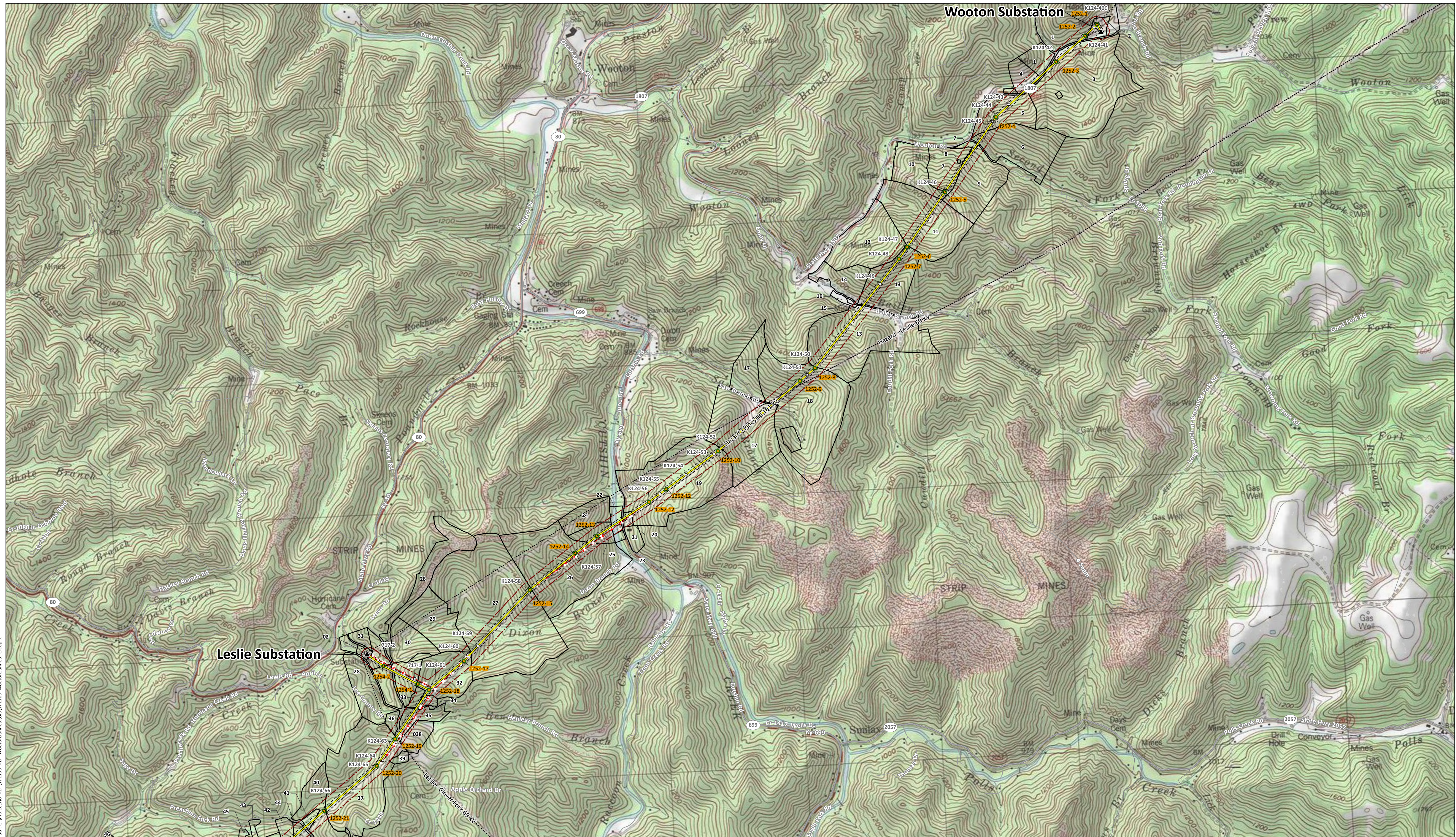


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- ▲ Existing Substation
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# Wooton - Stinnett Transmission Line Rebuild Project

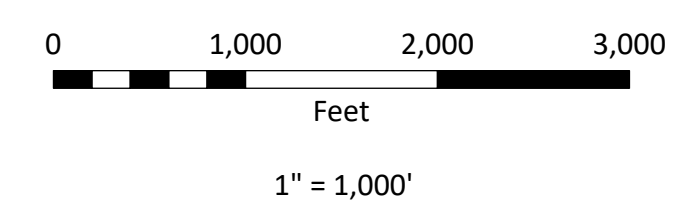
## Exhibit 4: Proposed Route

Date: 5/10/2022  
Sheet 3 of 4

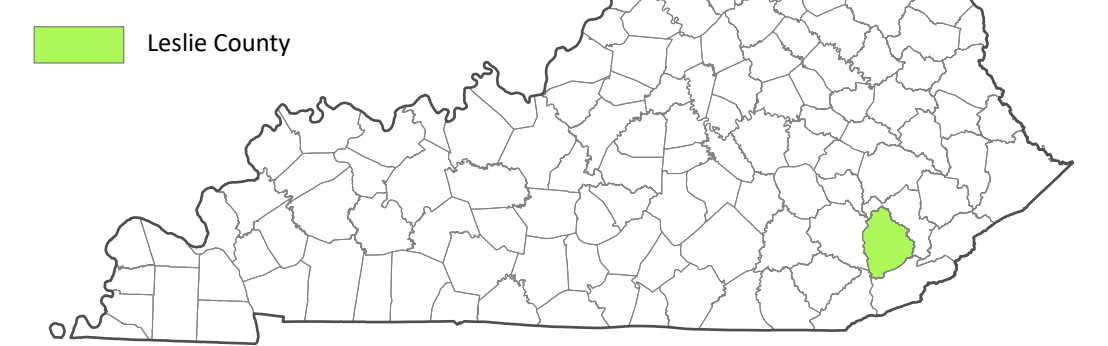
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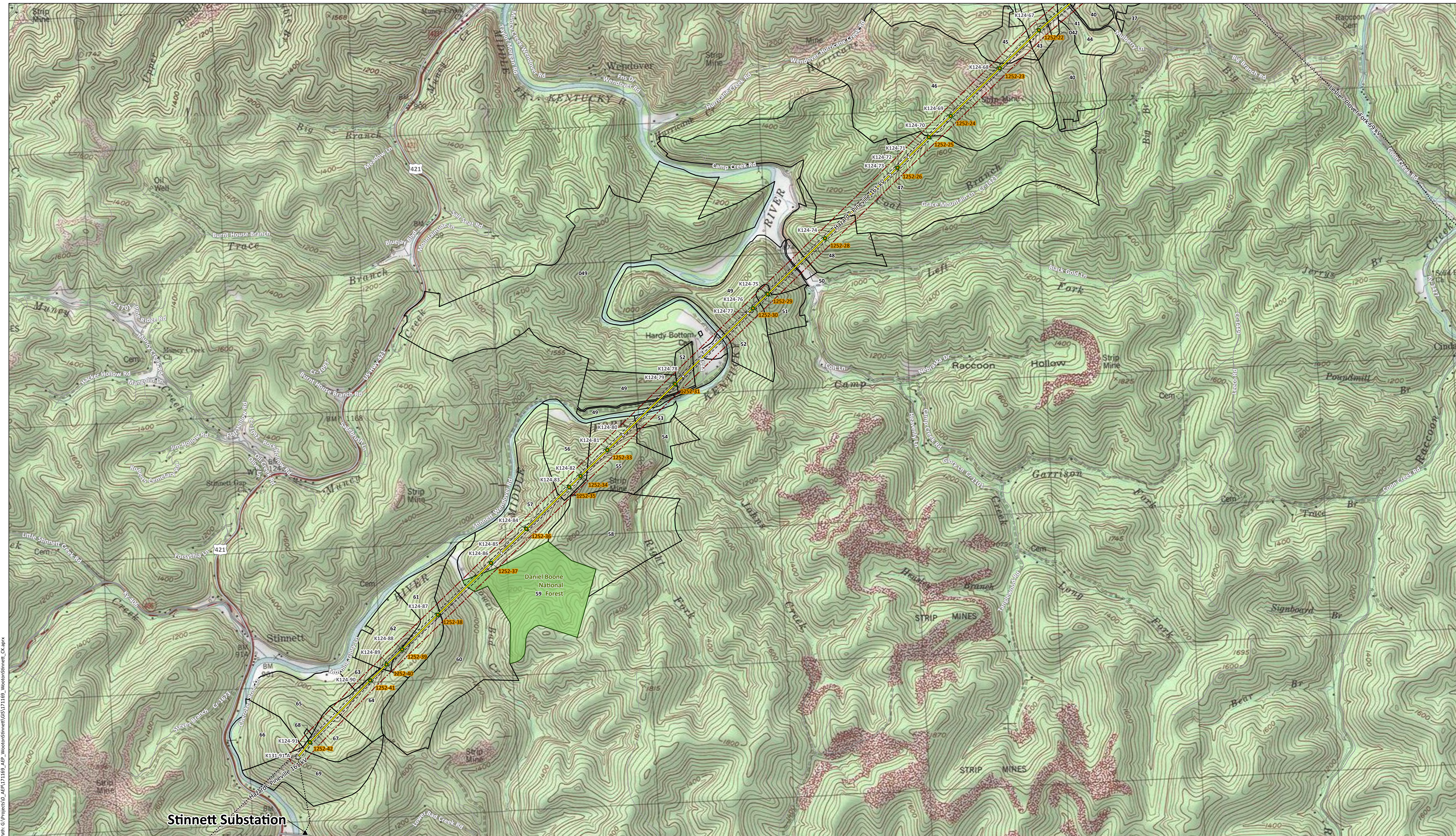
Base Map USA Topo Maps: Copyright: © 2013 National Geographic Society, I-cubed



### County Locator Map







Path: G:\Projects\0\_AEP\171169\_AEP\_WootonStinnett\05171169\_WootonStinnett\_CK.aprx

# Wooton - Stinnett Transmission Line Rebuild Project

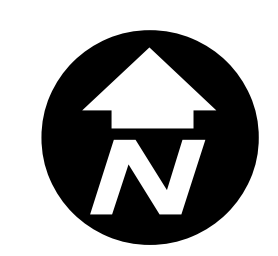
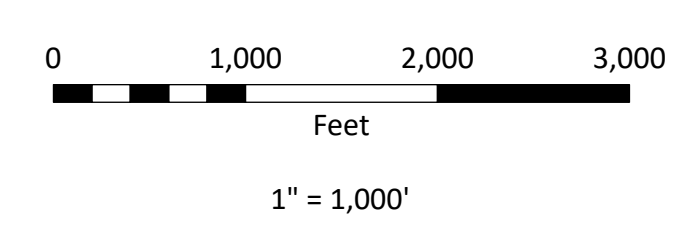
## Exhibit 4: Proposed Route

Date: 5/10/2022  
Sheet 4 of 4

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Base Map USA Topo Maps: Copyright: © 2013 National Geographic Society, I-cubed



County Locator Map

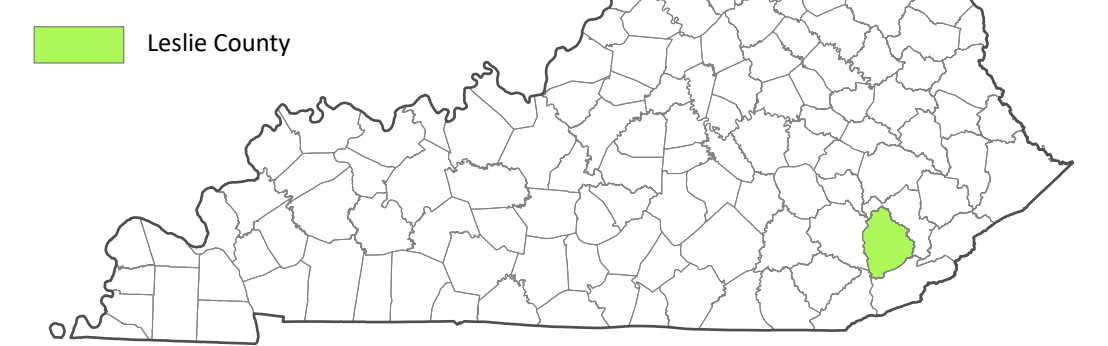




EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS

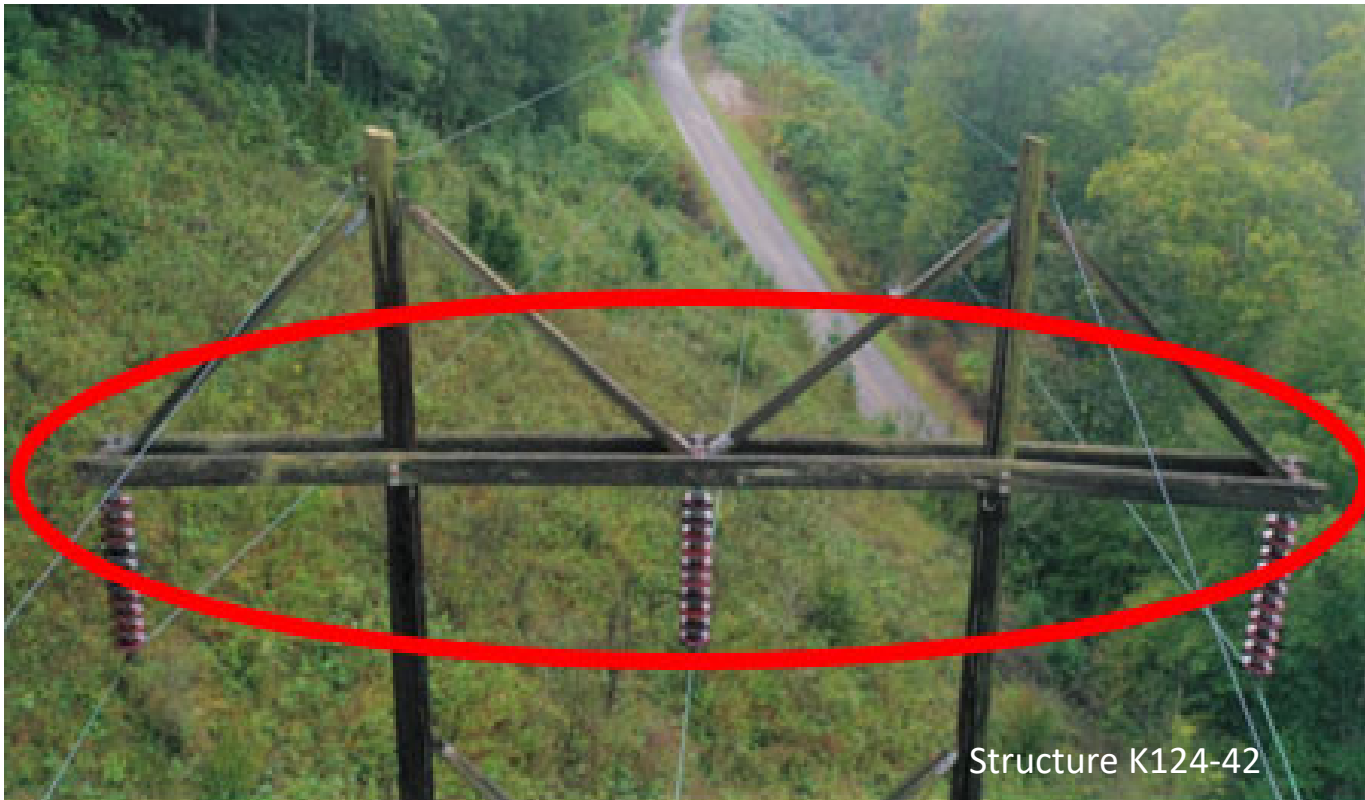


The Hazard – Pineville 161kV Line is being rebuilt between the Wooton and Stinnett substations to address the degraded condition of the wood structures. 5 structures were photographed by drone and the following conditions were found on those structures.

<b>AEP; Hazard-Pineville</b>							
<i>Date of Aerial Inspection: 20 September 2021</i>							
<i>Provided by: Asymmetric Technologies LLC.</i>							
<b>Structure Number</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Picture Range</b>	<b>Full Structure Image</b>	<b>Deficiency Remarks</b>	<b>Primary Image</b>	<b>Cat</b>
K124-42	37.18041326	-83.26290981	1-20	1	Slight deformity of crossarm	3	B
					Static bond lead disconnected	15	B
					Crossarm & knee brace weathering	19	B
K124-44	37.17687897	-83.26804138	21-39	21	Crossarm & crossarm block splitting	24	A3
					Crossarm & crossarm block splitting	29	A2
					Upper pole splitting	29	B
					Flashover-arcing damage to insulator	31	B
K124-45	37.17652341	-83.26835196	40-60	40	Crossarm & crossarm block splitting	44	A3
					Crossarm & crossarm block splitting	54	A3
					Upper pole splitting	59	B
K124-59	37.14275139	-83.31221913	61-80	61	Upper pole splitting	64	B
K124-65	37.13492847	-83.3208891	81-99	81	Pole cavity	84	B

Please view slides 2 - 12 showing representative photographs regarding the condition on the Hazard – Pineville 161kV Line between Wooton and Stinnett substations.

EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-42

- Structure K124-42:
- Crossarm Weathering
  - Slight Deformity of the Crossarm

EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-42:  
- Crossarm & Knee Brace Weathering

EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-44:  
- Crossarm & Crossarm Block Splitting  
- Upper Pole Splitting



EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-44

- Structure K124-44:
- Crossarm & Crossarm Block Splitting
  - Upper Pole Splitting

EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-44

Structure K124-44:  
- Flashover-Arcing Damage to Insulator

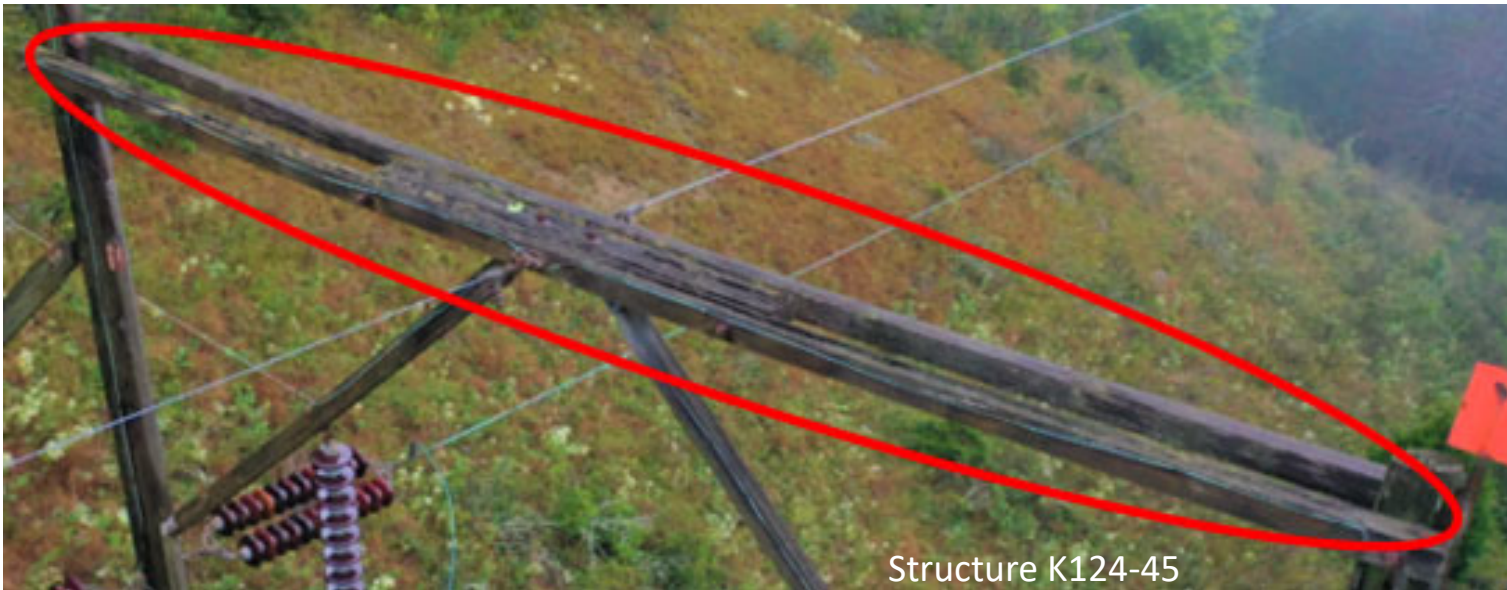
EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-45

- Structure K124-45:
- Crossarm Splitting
  - Upper Pole Splitting

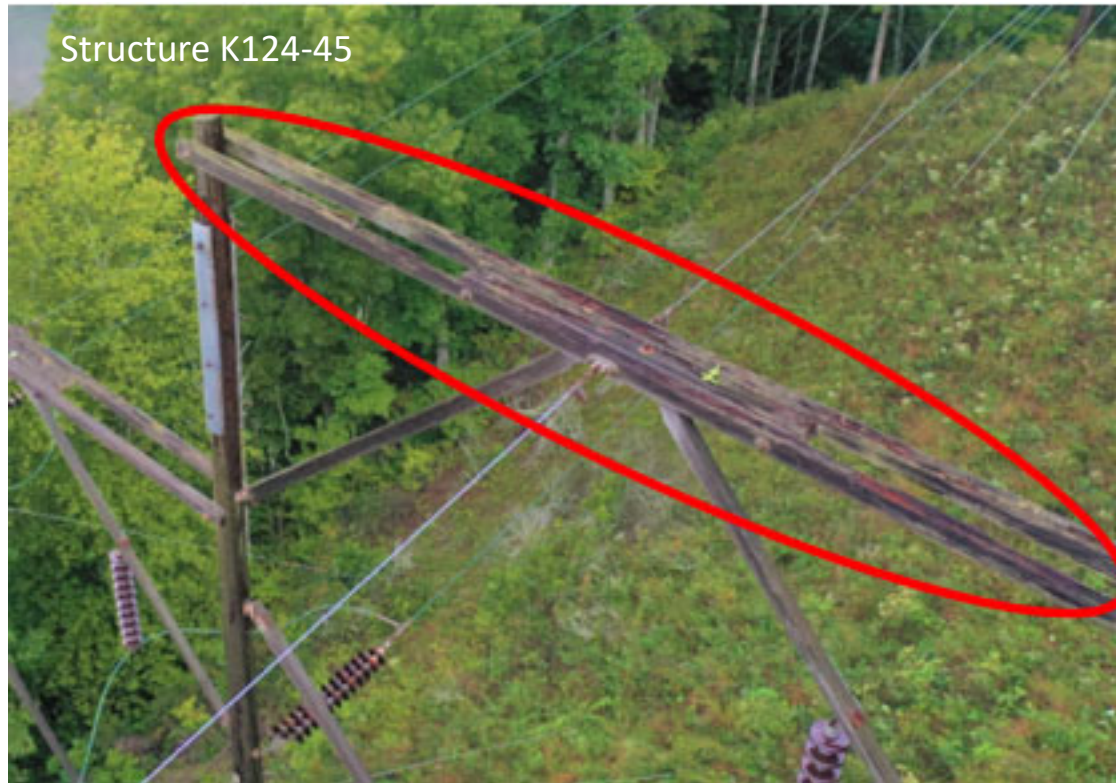
EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-45:  
- Crossarm & Crossarm Block Splitting



EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-45:  
- Crossarm & Crossarm Block Splitting

EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-59:  
- Upper Pole Splitting

EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



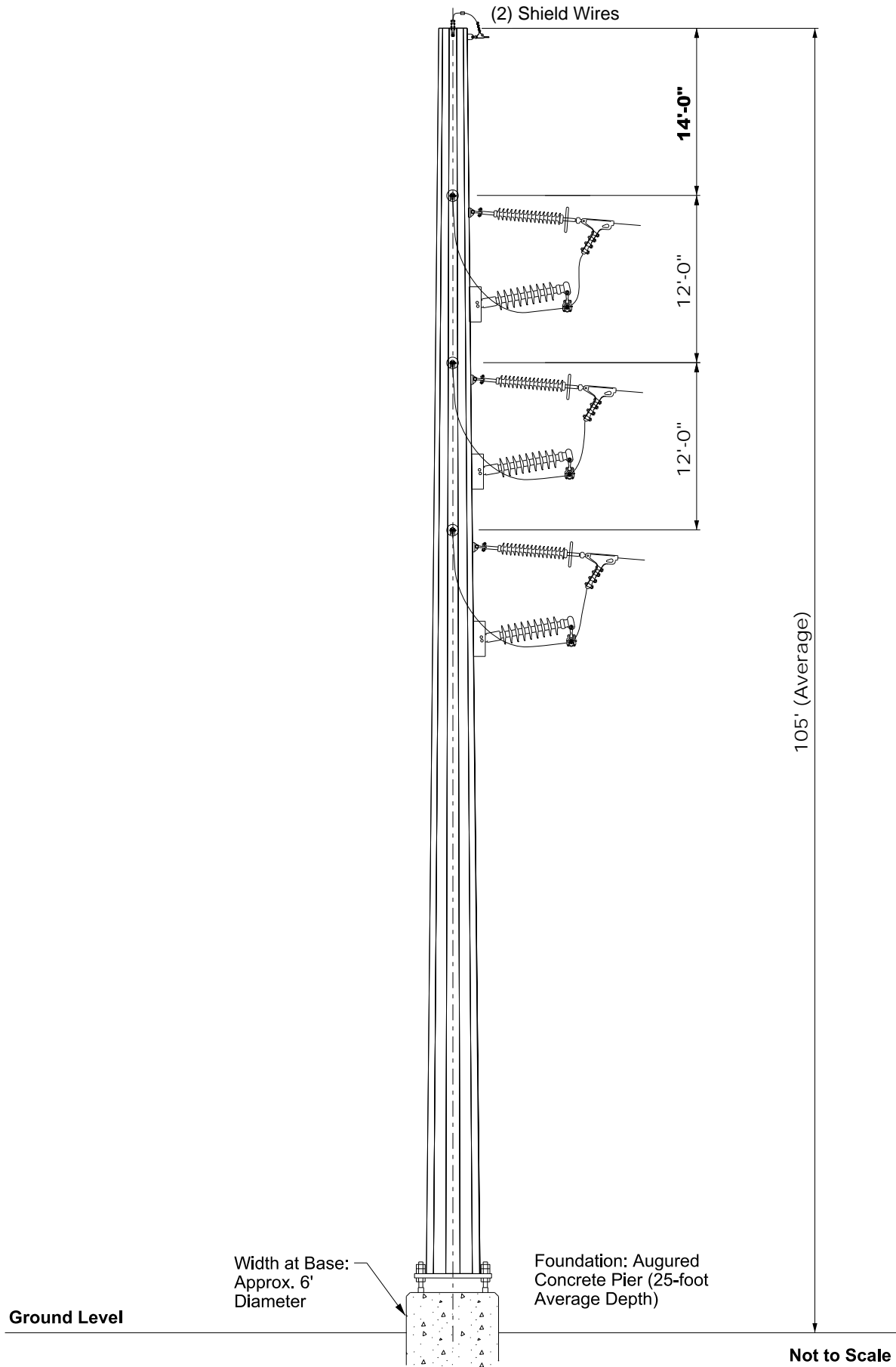
Structure K124-65:  
- Pole Cavity



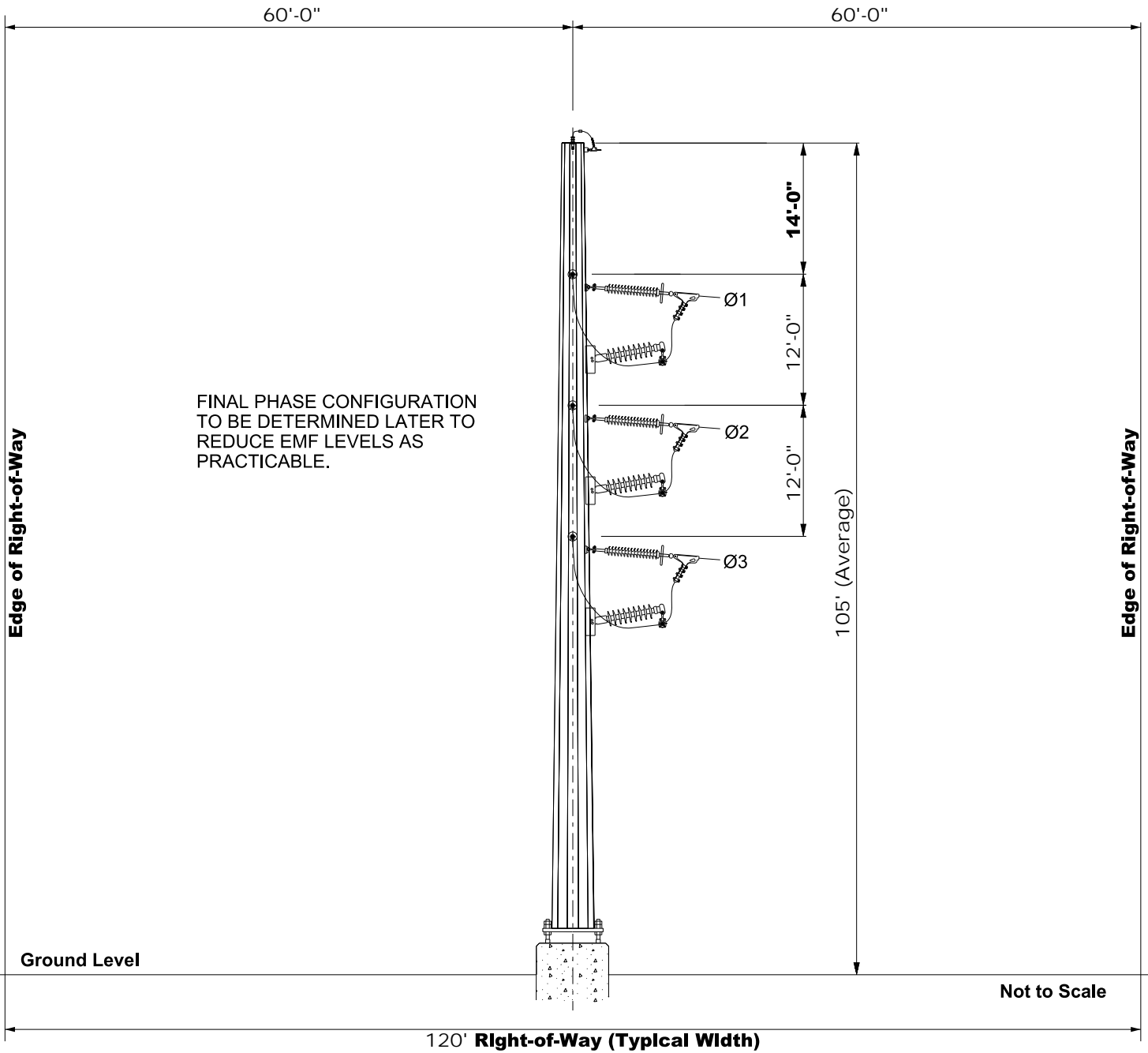
EXHIBIT 5 – EXISTING STRUCTURE DIAGRAMS AND PHOTOS



Structure K124-65:  
- Pole Cavity



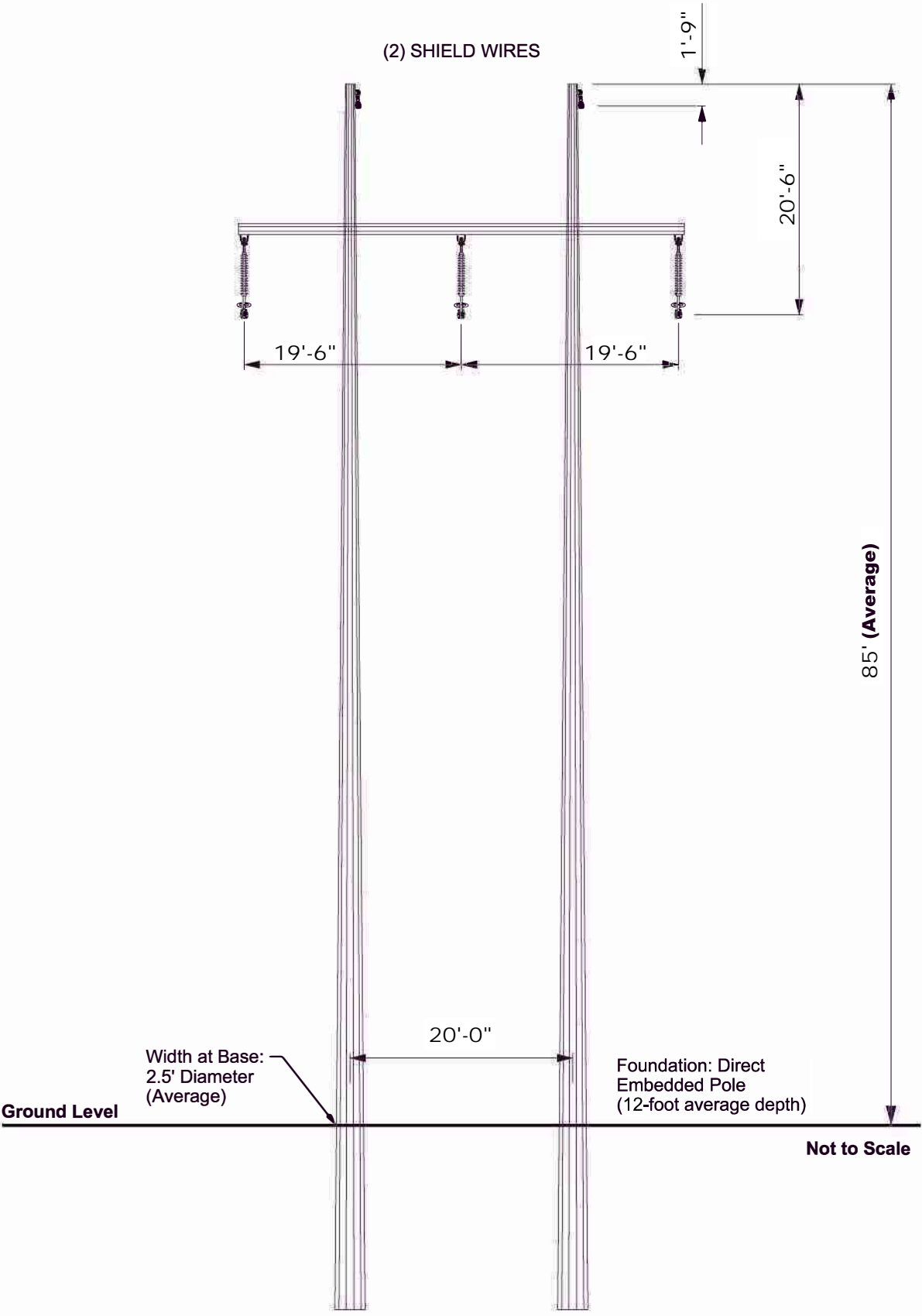
TYPICAL SCHEMATIC



TYPICAL RIGHT-OF-WAY CROSS SECTION

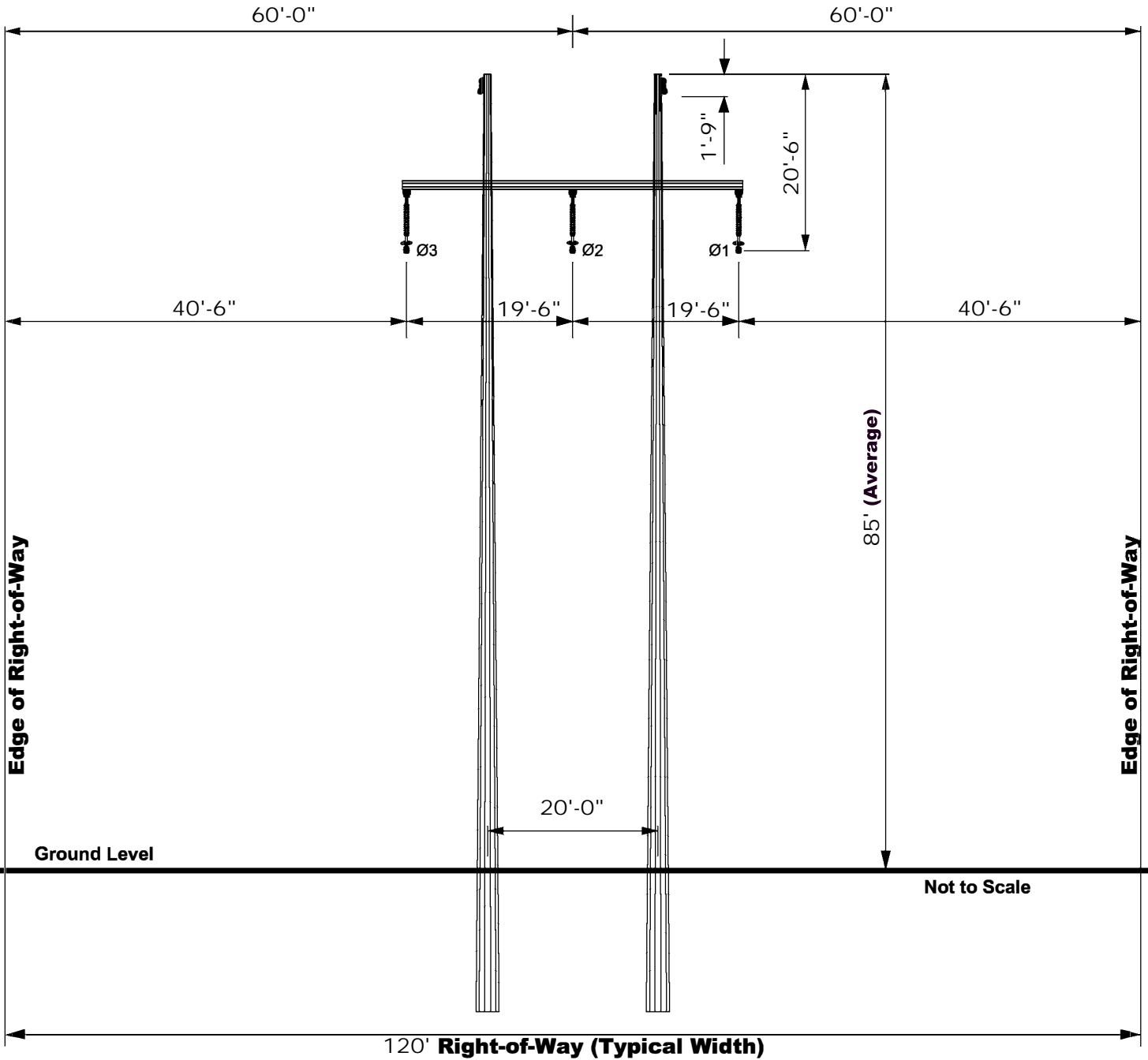


COMPARABLE EXISTING STRUCTURE PHOTOGRAPH



TYPICAL SCHEMATIC

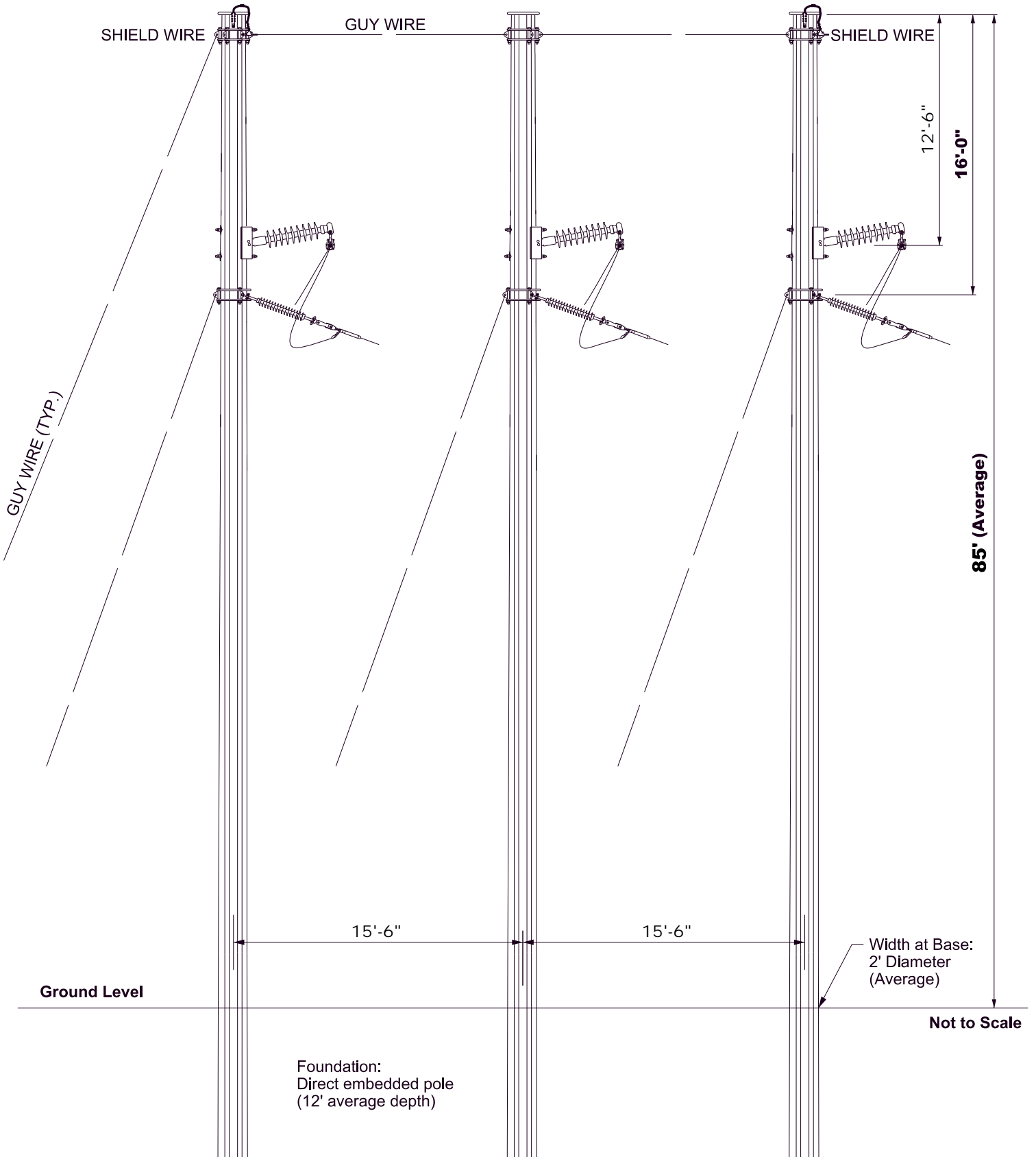




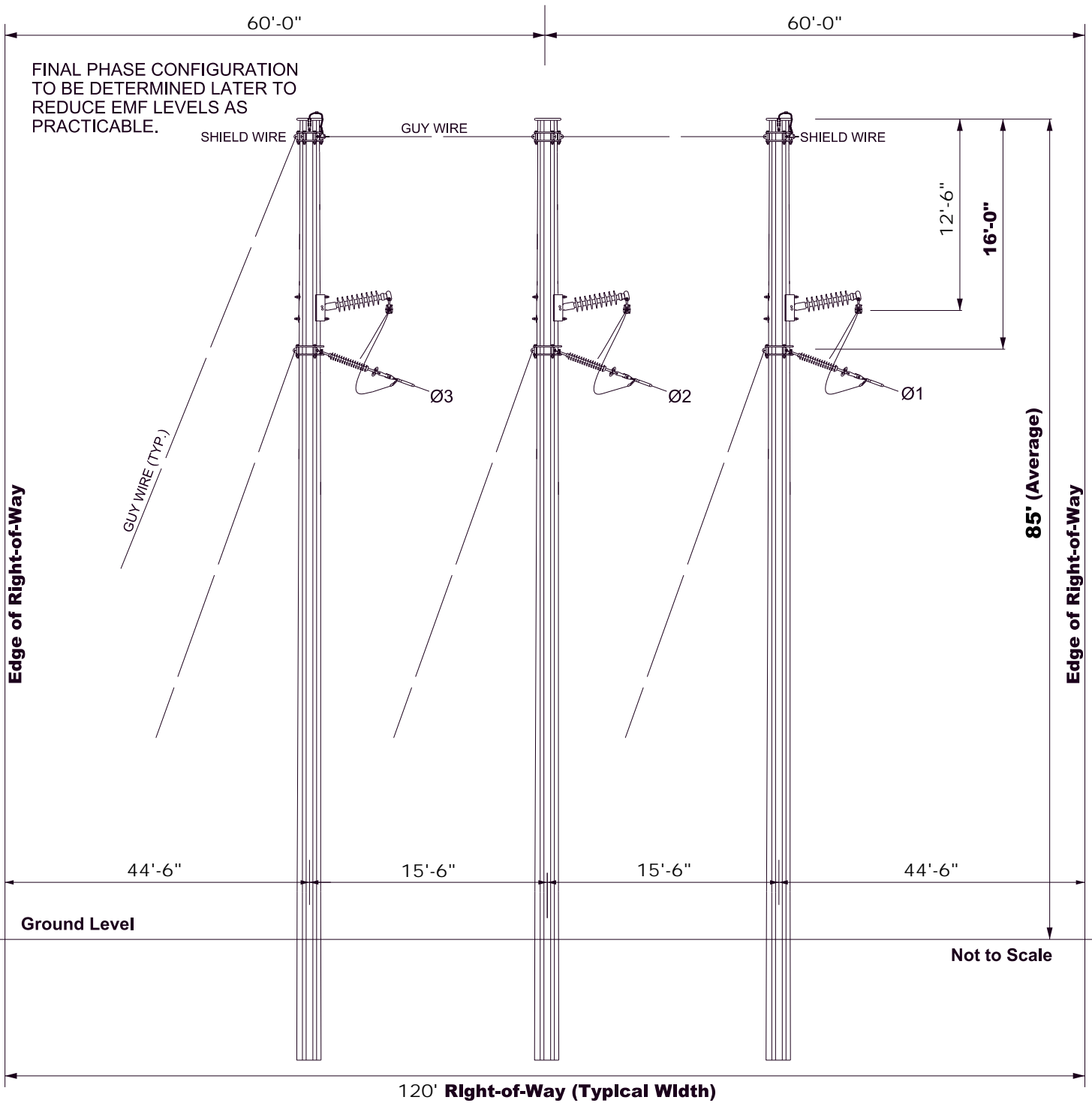
TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE STRUCTURE PHOTOGRAPH



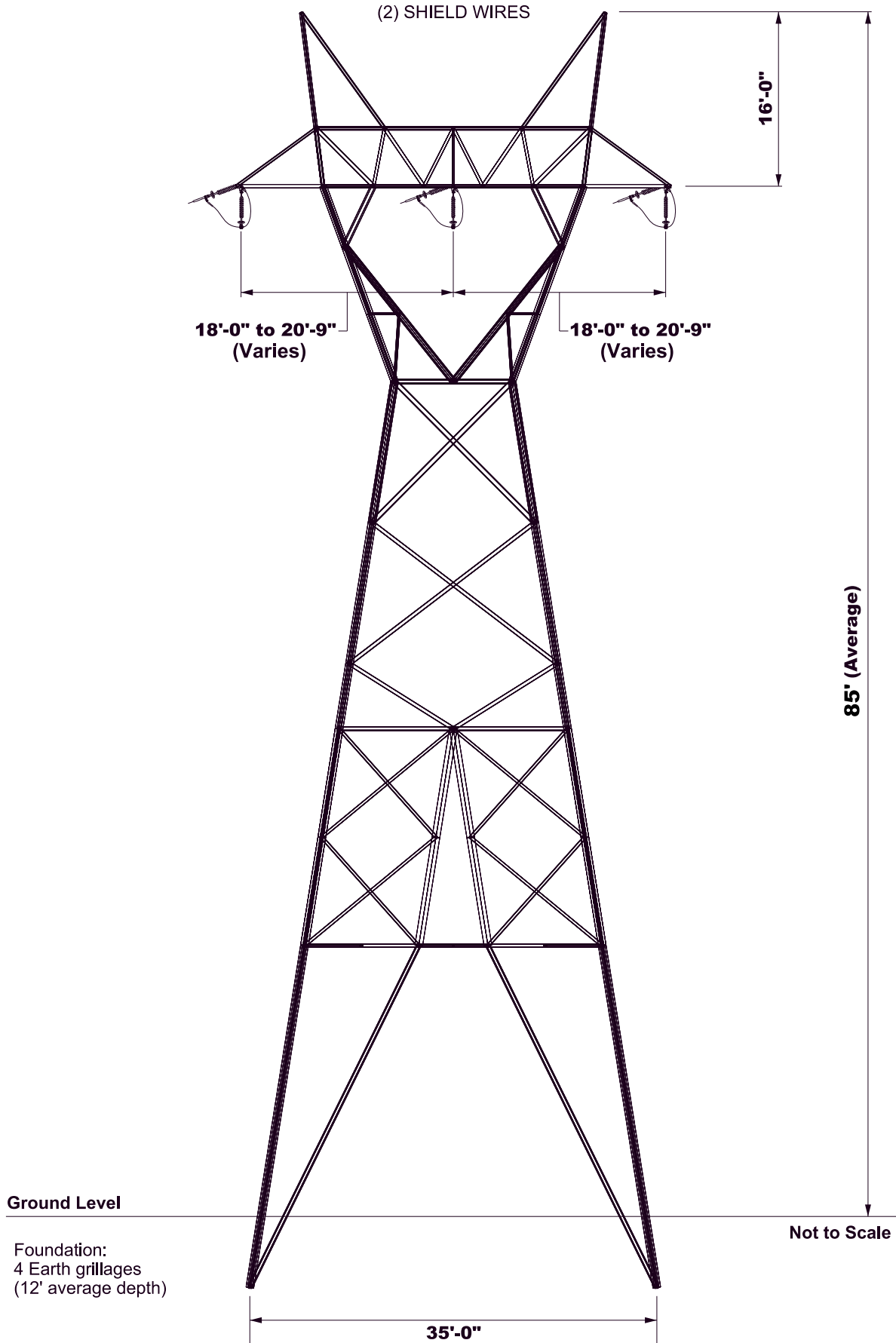
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TYPICAL RIGHT-OF-WAY CROSS SECTION

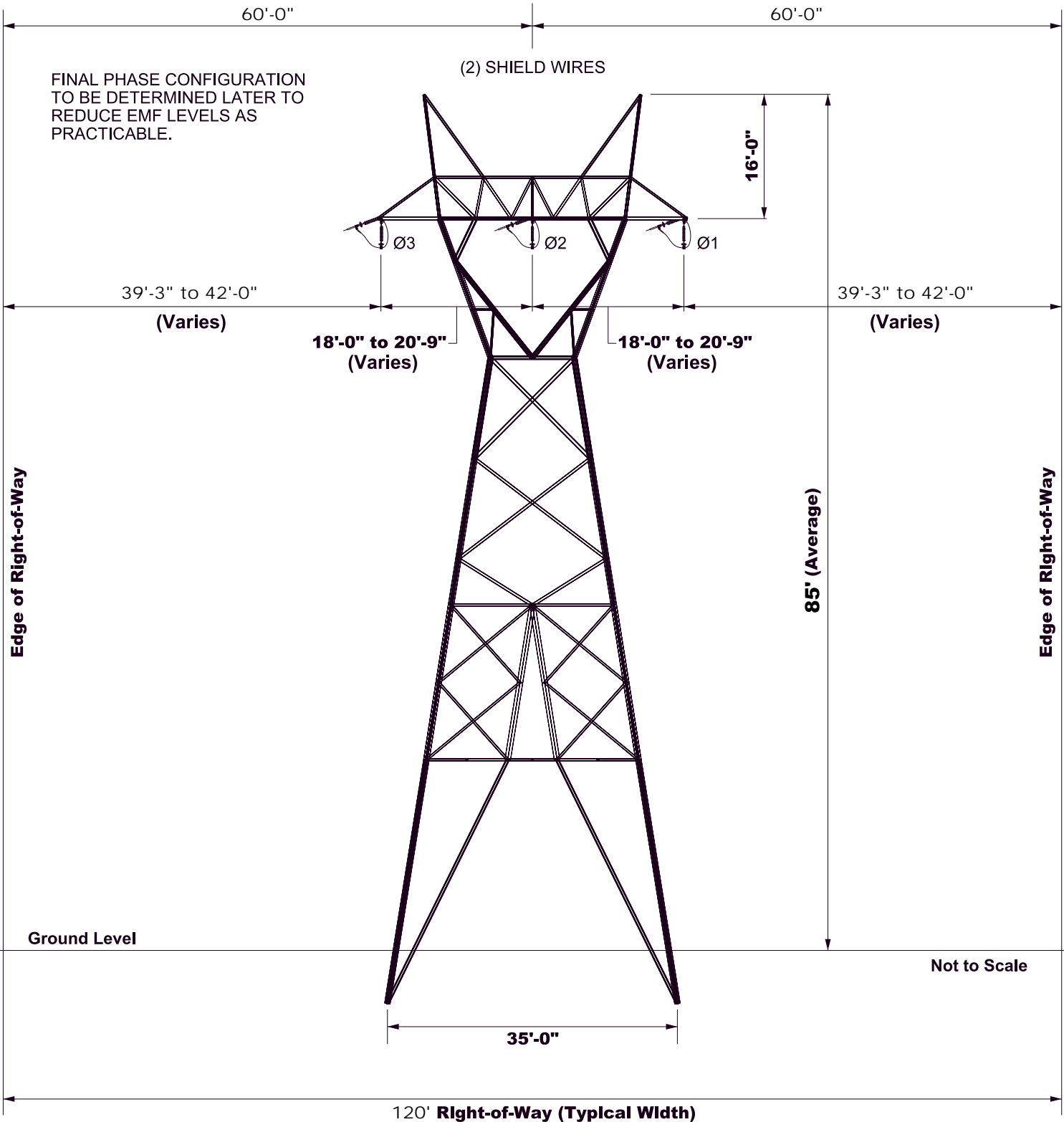


COMPARABLE STRUCTURE PHOTOGRAPH



TYPICAL SCHEMATIC



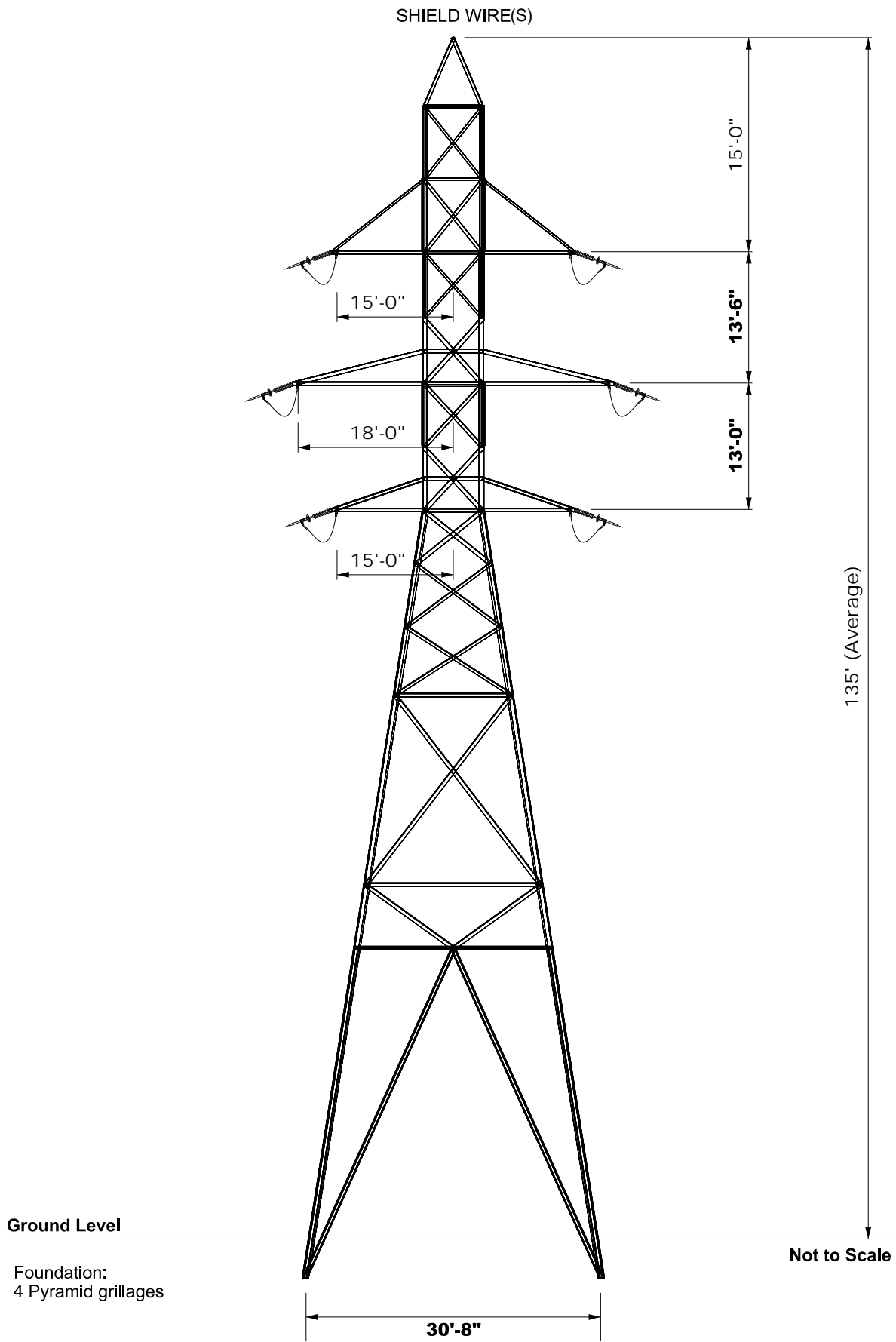


TYPICAL RIGHT-OF-WAY CROSS SECTION

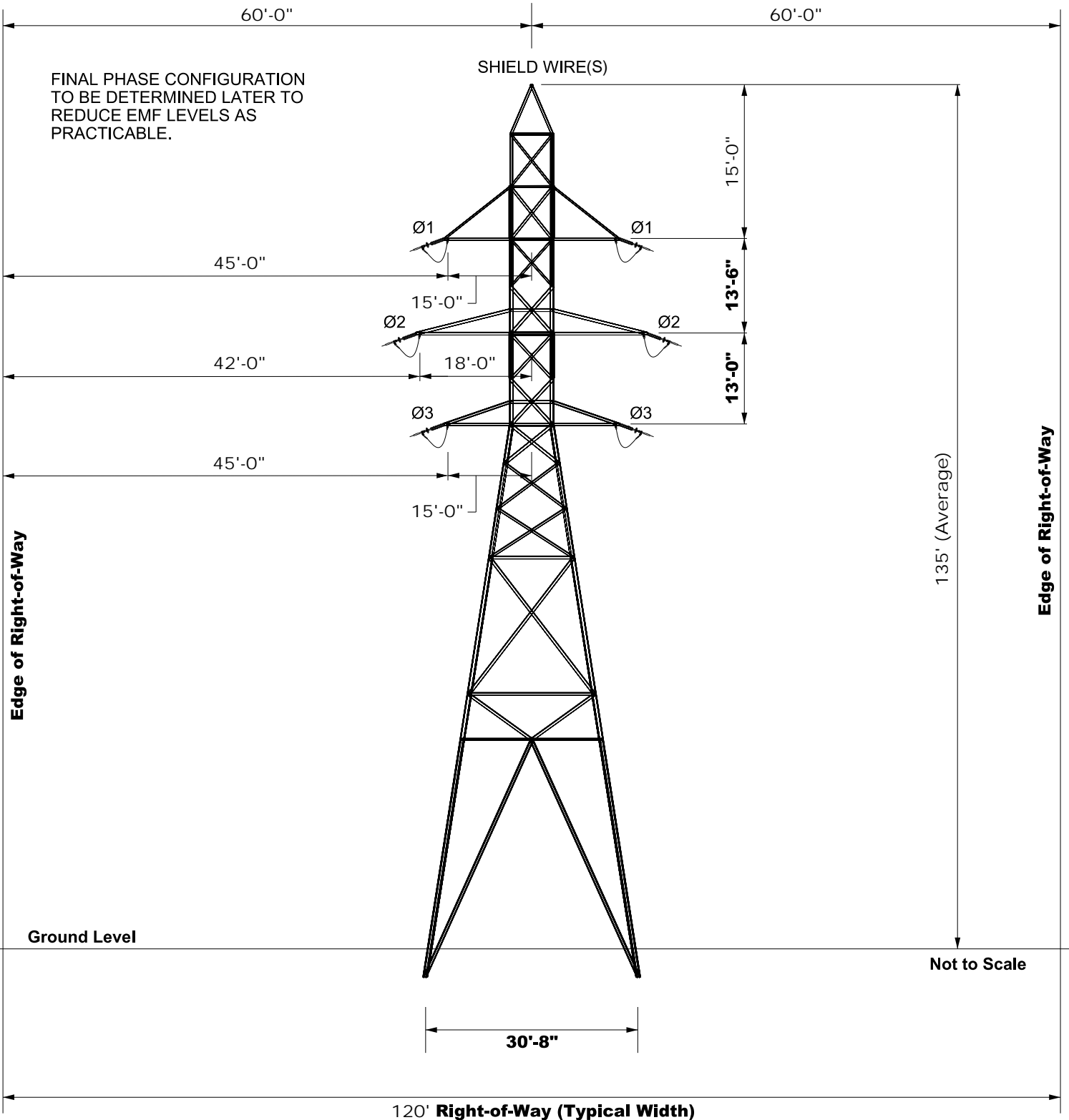


COMPARABLE STRUCTURE PHOTOGRAPH





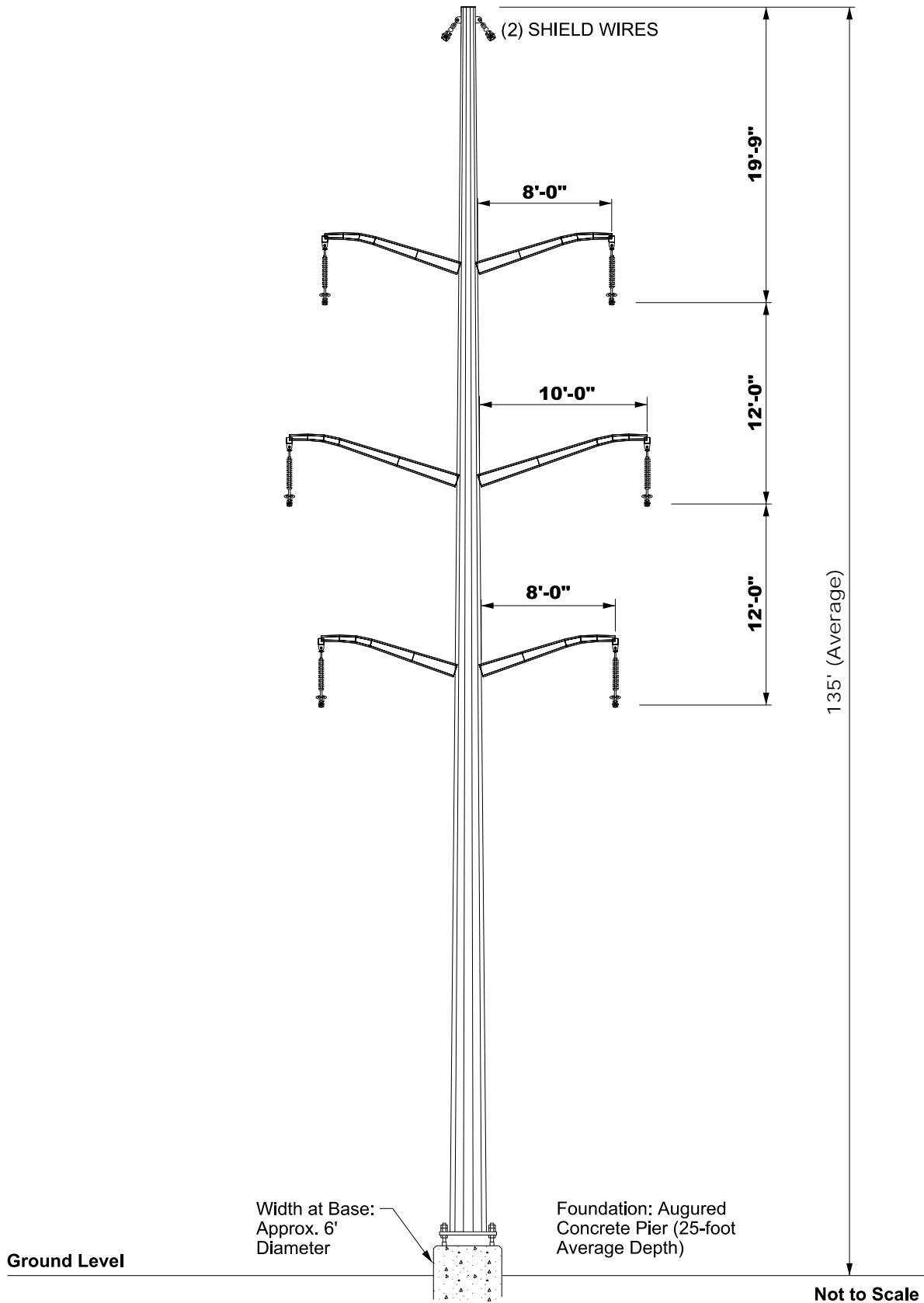
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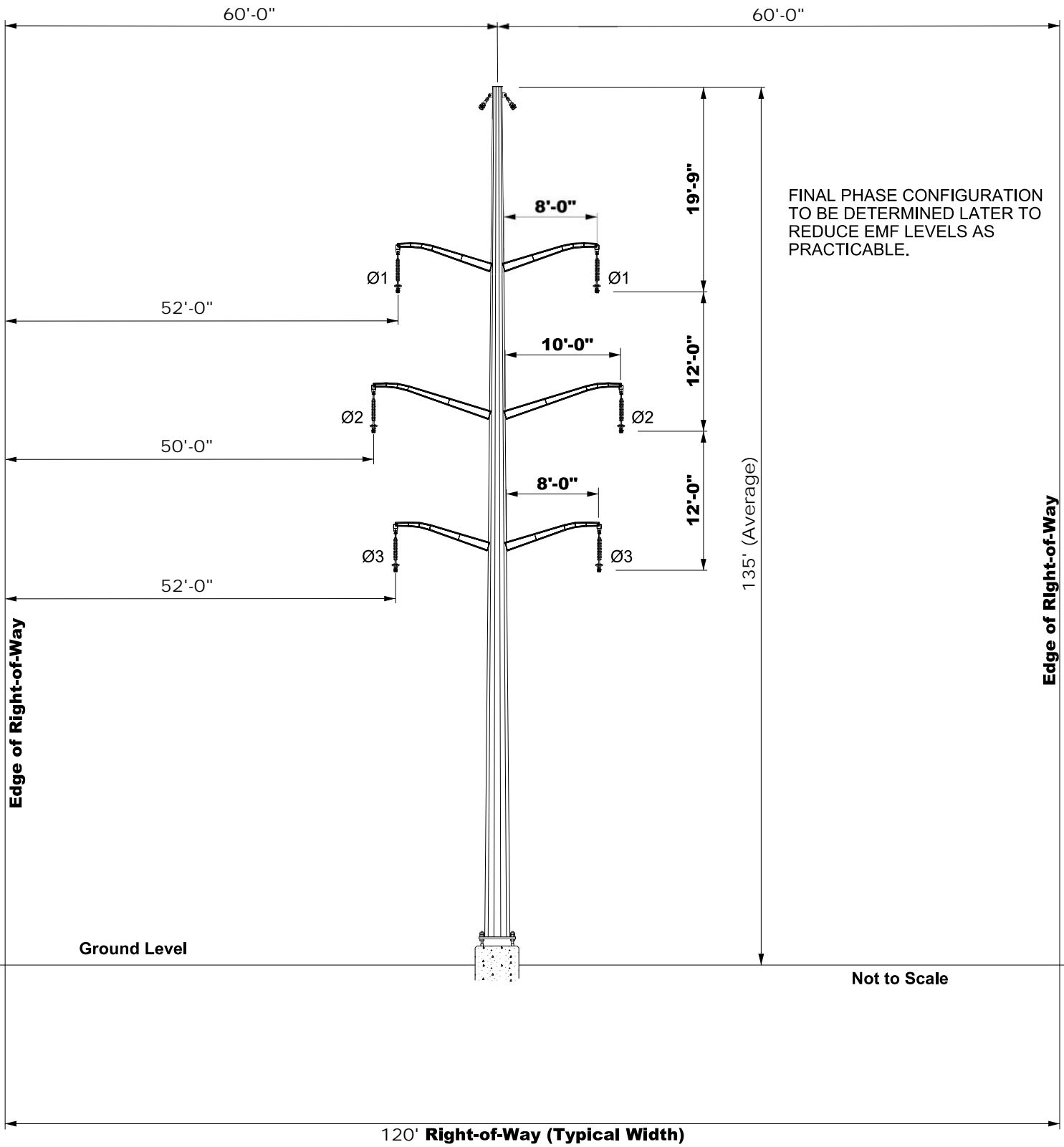
TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE STRUCTURE PHOTOGRAPH



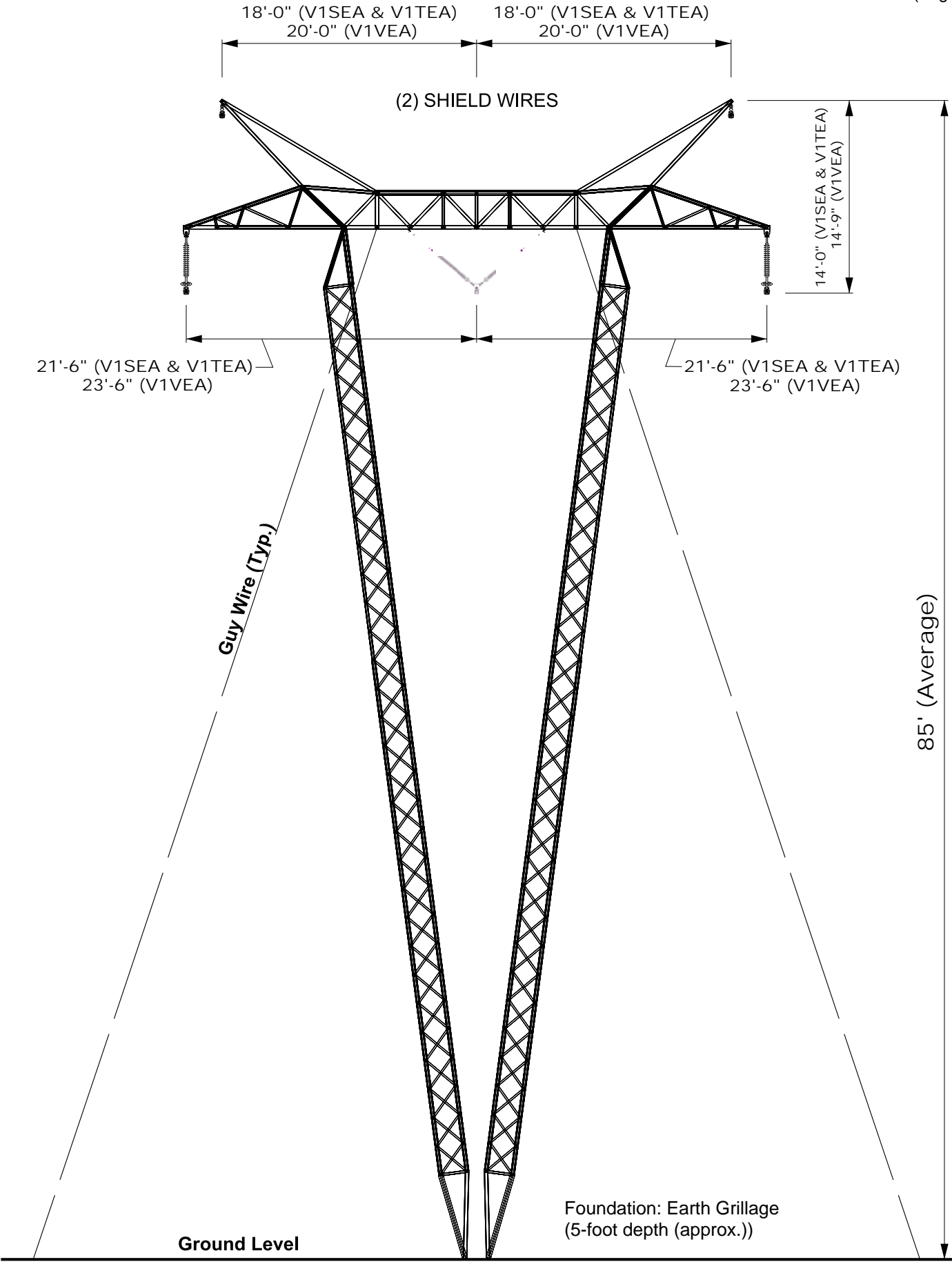
TYPICAL SCHEMATIC



TYPICAL RIGHT-OF-WAY CROSS SECTION



COMPARABLE EXISTING STRUCTURE PHOTOGRAPH



Not to Scale

TYPICAL SCHEMATIC









COMPARABLE EXISTING STRUCTURE PHOTOGRAPH